

# Clinical Resource Guide: Nausea/Vomiting Management in Hospice

## INTRODUCTION TO NAUSEA & VOMITING

Nausea and vomiting are distressing symptoms that can be experienced at the end-of-life, often with differing etiologies, requiring a deep understanding to effectively manage and provide comfort to the hospice patient. Comprehensive management of nausea and vomiting can significantly improve patient quality of life by resulting in experience improved comfort. This guide has been designed to equip the hospice care team with the knowledge and strategies necessary to assess, limit and effectively manage the symptoms of nausea and vomiting through the development of a patient-specific treatment regimen.

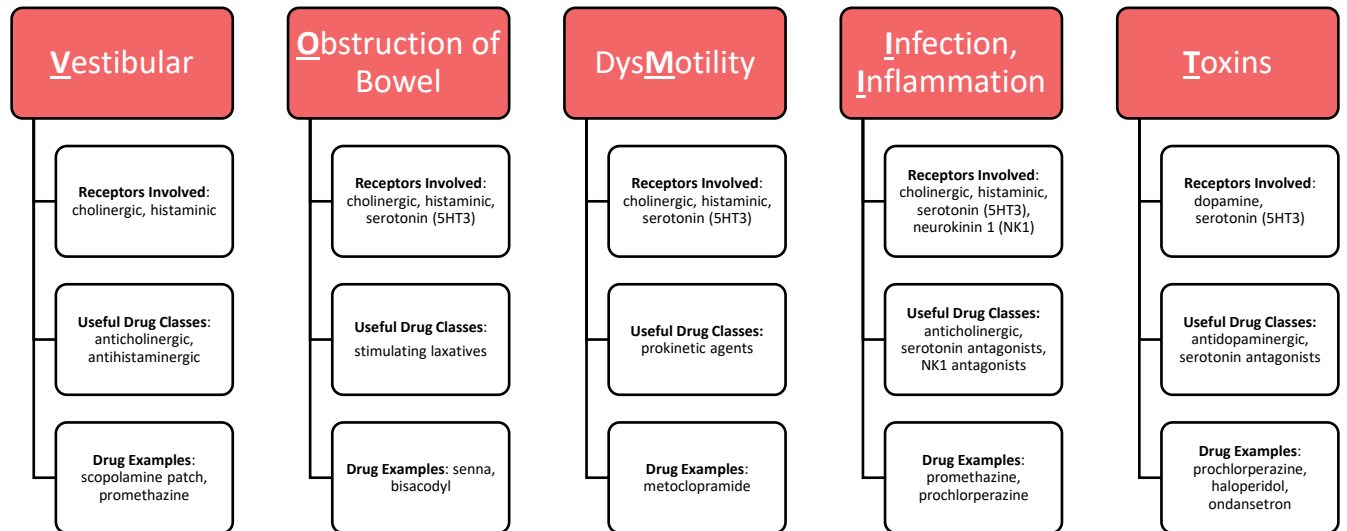
### Pharmacist Corner Objectives

- 1.) List five potential causes for nausea/vomiting
- 2.) Recognize signs that a patient may be suffering from total nausea
- 3.) Design an appropriate treatment regimen (including pharmacologic and nonpharmacologic treatment) to manage a given patient's nausea and vomiting based on etiology

## PREVALENCE OF NAUSEA & VOMITING

- As many as 71% of palliative care and hospice patients will develop nausea and vomiting
- 40% of patients will experience these symptoms in the last six weeks of life
- Approximately 20-30% of patients with advanced cancer experience nausea
- Up to 33% of patients with end stage renal disease experience nausea and vomiting
- Increased frequency in patients with gynecological, esophageal, stomach or breast tumors
- Metastases to the lung, pleura or mediastinum result in increased likelihood of experiencing nausea and vomiting

**CAUSES OF NAUSEA & VOMITING**



**MEDICATION-RELATED CAUSES OF NAUSEA AND VOMITING**

Medication-Related Causes of Nausea and Vomiting	
Medication Class	Specific Examples
<b>Chemotherapy</b>	NCCN Clinical Practice Guidelines (full list)
<b>Analgesics</b>	opioids, nonsteroidal anti-inflammatories
<b>Antiarrhythmics</b>	digoxin, quinidine
<b>Antibiotics</b>	Penicillin, cephalosporins
<b>Antiparkinsonians</b>	bromocriptine, levodopa
<b>Anticonvulsants</b>	phenytoin, carbamazepine
<b>Antihypertensives</b>	nifedipine
<b>Diabetes Medications</b>	metformin
<b>Iron Supplements</b>	ferrous sulfate, ferrous gluconate
<b>Phosphodiesterase Enzyme Inhibitor</b>	theophylline

## ASSESSING OF NAUSEA AND VOMITING

<b>Precipitating</b>	<ul style="list-style-type: none"> <li>What (if anything) aggravates or triggers nausea/vomiting?</li> </ul>
<b>Palliating</b>	<ul style="list-style-type: none"> <li>What (if anything) alleviates nausea/vomiting?</li> <li>What has the patient (or team) tried to treat their symptoms? Has it been effective?</li> </ul>
<b>Quality</b>	<ul style="list-style-type: none"> <li>How do they describe their nausea/vomiting?</li> </ul>
<b>Recent changes</b>	<ul style="list-style-type: none"> <li>Have there been any recent changes (e.g., new medications) and can these be related to the start of symptoms?</li> </ul>
<b>Severity</b>	<ul style="list-style-type: none"> <li>How do they rate their nausea/vomiting? Consider 0-10 scale</li> </ul>
<b>Symptoms</b>	<ul style="list-style-type: none"> <li>Are they experiencing any other associated symptoms?</li> <li><i>Examples:</i> dyspepsia, early satiety, constipation, diarrhea, flatus, headache, confusion, fever</li> </ul>
<b>Temporal</b>	<ul style="list-style-type: none"> <li>When did symptoms start?</li> <li>Are symptoms constant or intermittent</li> <li>Are symptoms worse at a particular time of day? After meals?</li> </ul>
<b>You</b>	<ul style="list-style-type: none"> <li>How do the patient's symptoms affect their quality of life?</li> </ul>

## MANAGEMENT OF NAUSEA AND VOMITING

Nonpharmacologic Treatment Strategies		
acupressure, acupuncture	relaxation exercises	avoiding triggers (odors, foods)
good oral care	clear liquids, sipped slowly	small, frequent meals

Pharmacologic Treatment Strategies			
Dopamine Antagonists			
Medication	Starting Dose	Indications	Adverse Effects
Prochlorperazine	10mg PO q6h 25mg rectally q12h	<ul style="list-style-type: none"> <li>Opioid-induced nausea/vomiting</li> <li>Gastroparesis/ileus, functional obstruction</li> <li>Unknown etiology</li> </ul>	<ul style="list-style-type: none"> <li>Extrapyramidal symptoms/movement disorders</li> <li>QTc prolongation</li> </ul>
Haloperidol	0.5-1mg PO/SC/IV q12h		
Metoclopramide	5-10mg PO/SC/IV q6h		
Olanzapine	5mg PO qHS		

Histamine Antagonists			
Medication	Starting Dose	Indications	Adverse Effects
Dimenhydrinate (Dramamine®)		<ul style="list-style-type: none"> <li>Vestibular, motion sickness, or related to movement.</li> <li>Nausea/vomiting of pregnancy</li> </ul>	<ul style="list-style-type: none"> <li>Sedation</li> <li>Confusion</li> </ul>
Diphenhydramine (Benadryl®)	25-50mg PO/SC/IV PO q6h		
Meclizine (Antivert®)	25-50mg PO q6h		
Promethazine (Phenergan®)	25mg PO/PR q6h 12.5-25mg IV q6h		
Serotonin Antagonists			
Medication	Starting Dose	Indications	Adverse Effects
Ondansetron	4mg PO/SC/IV q6h	<ul style="list-style-type: none"> <li>Chemotherapy-induced nausea/vomiting</li> </ul>	<ul style="list-style-type: none"> <li>Constipation</li> <li>QTc prolongation</li> </ul>
Acetylcholine Antagonists			
Medication	Starting Dose	Indications	Adverse Effects
Scopolamine (Transderm Scop®)	1 patch q72 hours	<ul style="list-style-type: none"> <li>Vestibular nausea</li> <li>Adjuvant to control symptoms of malignant bowel obstruction</li> </ul>	<ul style="list-style-type: none"> <li>Sedation</li> <li>Blurred vision</li> <li>Urinary retention</li> <li>Dry mouth</li> <li>Constipation</li> <li>Delirium</li> </ul>
Glycopyrrolate (Robinul®)	0.2-0.4mg SC q6h prn 1-2mg PO q6h prn		
Benzodiazepines			
Medication	Starting Dose	Indications	Adverse Effects
Lorazepam (Ativan®)	0.5-1mg PO/SC/IV q8h	<ul style="list-style-type: none"> <li>Anticipatory nausea</li> <li>Anxiety-induced nausea</li> </ul>	<ul style="list-style-type: none"> <li>Confusion</li> <li>Sedation</li> <li>Delirium</li> </ul>
Corticosteroids			
Medication	Starting Dose	Indications	Adverse Effects
Dexamethasone (Decadron®)	4mg PO q12-24h	<ul style="list-style-type: none"> <li>Chemotherapy-induced</li> <li>Increased intracranial pressure</li> <li>Meningeal irritation (brain mets)</li> <li>Unknown etiology</li> </ul>	<ul style="list-style-type: none"> <li>Anxiety</li> <li>Delirium</li> <li>Insomnia</li> </ul>
Cannabinoids			
Medication	Starting Dose	Indications	Adverse Effects
Dronabinol (Marinol®)	5mg PO 1-3 hours before chemotherapy, then 5-10mg PO q4h prn	<ul style="list-style-type: none"> <li>Chemotherapy-induced nausea/vomiting</li> </ul> <p><i>Generally less effective than other antiemetics with more side effects</i></p>	<ul style="list-style-type: none"> <li>Confusion</li> <li>Dizziness</li> <li>Sedation</li> <li>Ataxia</li> </ul>

Other Agents			
Medication	Starting Dose	Indications	Adverse Effects
Octreotide (Sandostatin®)	100mcg SC/IV q8h	<ul style="list-style-type: none"><li>Inoperable bowel obstruction</li></ul>	<ul style="list-style-type: none"><li>Hypertension</li><li>Excessive sweating</li></ul>

## SUMMARY

Nausea and vomiting are prevalent (and distressing) in the hospice patient population, but a thorough assessment can result in implementation of an effective treatment plan. The goal is to identify the cause of the nausea and to select a targeted regimen including pharmacologic and nonpharmacologic strategies. As noted in the indications for use above, ondansetron has a much narrower scope than what is reflected by how it's prescribed. After initiating therapy, patients should be reassessed regularly to determine efficacy and tolerability of antiemetic regimen. For questions regarding patient-specific scenarios, please call BetterRX for a Clinical Pharmacy Consultation.

## References

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- 16.) Dronabinol. In: Lexi-Drugs Online. Hudson, OH : Lexi-Comp, Inc.