Queensland Health

Queensland Community Pharmacy Scope of Practice Pilot

Acute Nausea and Vomiting - Clinical Practice Guideline

Guideline Overview

Pilot and professional obligations

- Initial patient eligibility and suitability for management within the scope of the pilot
- Patient informed consent
  - Pilot participation
  - Financial
  - Pharmacist communication with other health practitioners
- Professional standards
- Privacy
- Documentation and record keeping
- Interprofessional communication

Gather information and assess patient's needs

- Patient history
- Physical examination
  - Hydration status
  - Abdominal examination
- Consider possible causes of nausea and vomiting

Management and treatment plan

- Identify, treat or remove cause
- Supportive management for gastroenteritis
- Pharmacotherapy
  - 24 hours of specified oral antiemetics

Confirm management is appropriate

- Contraindications and precautions
- Drug interactions
- Pregnancy and lactation

Communicate agreed treatment plan

- Individual product and medicine use (dosing and duration)
- Supportive care, including the importance of rehydration
- How to manage adverse effects
- The impact of vomiting on the absorption and effectiveness of other regular medications
- When to seek further care and/or treatment

Refer when

Refer to a medical practitioner if:

- The patient has 'red flag' warning signs
- The patient is aged under 18 years
- The patient has diabetes or is immunocompromised
- The patient has recently returned from overseas
- The nausea and vomiting are post-operative, radiation-induced or suspected to be drug-induced
- Intramuscular administration of an antiemetic is indicated
- The nausea and vomiting is chronic (defined by 4 weeks or more of symptoms) (4)
- The patient has recurring episode of acute nausea and vomiting
- The symptoms have not resolved within 24-48 hours of first commencing
- The patient's condition and/or symptoms worsen.

Treat (if clinically appropriate) and concurrently refer

- The patient is pregnant
  - Standard pharmacist care may be offered concurrently to referral to a medical practitioner or pregnancy care provider

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‘Red flag’ warning signs at patient presentation that necessitate referral to a medical practitioner:

- Prolonged vomiting (longer than 24-48 hours)
- Patient looks very unwell/very drowsy
- Significant recent weight loss
- Abdominal distension or tenderness
- Rectal bleeding
- Green, bile or blood/’coffee grounds’ vomit
- Fever, neck stiffness, confusion
- Severe headache, altered or loss of consciousness
- Isolated vomiting, lack of nausea (nausea without vomiting is not uncommon)
- History of head injury/trauma
- Increased blood glucose levels.

Key points

- It is essential to consider the clinical context when assessing patients with nausea and vomiting, including the possibility of life-threatening causes, before developing an individualised management plan [1, 2].
- Causes of nausea and vomiting can stem from the gastrointestinal (GI) tract, the central nervous system (CNS), or result from a systemic condition, and can often be attributed to an identifiable cause, most commonly acute gastroenteritis, food poisoning or other toxins, migraine, cannabis use, motion sickness or pregnancy [1, 3].
- An oral antiemetic may be considered for symptom relief, although spontaneous improvement of acute nausea and vomiting is likely [1].

When applying the information contained within this clinical practice guideline, pharmacists are advised to exercise professional discretion and judgement. The clinical practice guideline does not override the responsibility of the pharmacist to make decisions appropriate to the circumstances of the individual, in consultation with the patient and/or their carer.

Refer when

- The patient has 'red flag' warning signs
- The patient is aged under 18 years
- The patient has diabetes or is immunocompromised
- The patient has recently returned from overseas
- The nausea and vomiting are post-operative, radiation-induced or suspected to be drug-induced
- Intramuscular administration of an antiemetic is indicated
- The nausea and vomiting is chronic (defined by 4 weeks or more of symptoms) [4]
- The patient has recurring episode of acute nausea and vomiting
- The symptoms have not resolved within 24-48 hours of first commencing
- The patient's condition and/or symptoms worsen.

Treat (if clinically appropriate) and concurrently refer:

- The patient is pregnant

Gather information and assess patient's needs

The assessment approach focuses on identifying the cause (or excluding significant underlying diseases) with a view to expectant management or directing specific treatment.

Patient history

Sufficient information should be obtained from the patient to identify the likely cause of the nausea/vomiting, and assess the safety and appropriateness of any recommendations and medicines.

The patient history should consider:

- age
- pregnancy and lactation status (if applicable)
- nature, severity and frequency of symptoms
- food and/or drink consumed in the last 24 hours
- onset and duration of symptoms, including timing in relation to eating/drinking
- recent head trauma or injury
- similar symptoms in close contacts
- exposure to toxins, poisons, bites or stings
- recent travel
- other symptoms e.g., chest pain or heartburn, headache, dizziness, fever, abdominal pain, last bowel motion, diarrhoea, constipation, dysuria, or frequency of urination
- precipitating and relieving factors
- underlying medical conditions e.g., diabetes or recent surgery
- current medications (including prescribed medicines, vitamins, herbs, other supplements, and over-the-counter medicines), including initiation of new medicines

- medication tried to treat current symptoms
- alcohol and drug history, including recent illicit drug or alcohol use.

Examination

- Where appropriate, conduct assessment of vital signs.
- Assess hydration status as per the Therapeutic Guidelines: Gastrointestinal – Assessment of acute gastroenteritis [5].
- Examine for abdominal tenderness or distention, particularly areas where hernias commonly present excluding the groin.

Consider possible causes of nausea and vomiting

A non-exhaustive list of possible causes of acute nausea and vomiting are presented in Appendix 1. When in doubt of the cause of the nausea and vomiting, the pharmacist should refer the patient to a medical practitioner.

Management and treatment plan

Before starting treatment, it is important to identify, treat or remove the cause of the nausea and vomiting, and ensure adequate hydration [6].

Pharmacist management of acute nausea and vomiting includes:

- **supportive management for gastroenteritis:**
    - Including oral rehydration therapy to prevent or correct dehydration, in accordance with the Therapeutic Guidelines: Acute gastroenteritis [5].

- **pharmacotherapy:**
    - In accordance with the Therapeutic Guidelines: Nausea and vomiting, excluding ondansetron,[1,2,3] [1], limited to 24 hours supply of oral regimens for schedule 4 medicines.

NB1: Prochlorperazine is available as a Schedule 3 medicine limited to a pack size of 10 tablets (5 mg). If there is a need for further medication, the patient should be referred to a medical practitioner.

NB2: Promethazine is available as a Schedule 3 in a pack size of 25 or 50 tablets (25 mg).

NB3: Ondansetron is indicated for the prevention and treatment of nausea and vomiting induced by cytotoxic therapy and radiotherapy, and the prevention of post-operative nausea and vomiting. Its use for any other indication is 'off-label' and not included in the Pilot.

Confirm management is appropriate

Pharmacists must consult the Therapeutic Guidelines, Australian Medicines Handbook and other relevant references to confirm that the treatment recommendation is appropriate, including for:

- contraindications and precautions
- drug interactions
- pregnancy and lactation.

Communicate agreed management plan

Comprehensive advice and counselling (including supporting written information when required) as per the Australian Medicines Handbook and other relevant references, should be provided to the patient regarding:

- individual product and medicine use e.g., dosing and frequency
- supportive care, including the importance of rehydration
- how to manage adverse effects
- the impact of vomiting on the absorption and effectiveness of other regular medications
- when to seek further care and/or treatment, including recognising 'red flags' and dehydration.

It is the pharmacist's responsibility to ensure the suitability and accuracy of any resources and information provided to patients (and parents/caregivers if applicable) and to ensure compliance with all copyright conditions.

The agreed management plan should be shared with members of the patient's multidisciplinary healthcare team, with the patient's consent.

Clinical review

Clinical review with the pharmacist is generally not required. If the condition does not improve or resolve within 24-48 hours, the patient should be advised to see a medical practitioner for further investigation.

Pharmacist resources

- Therapeutic Guidelines:
  - Nausea and vomiting
  - Acute gastroenteritis
- Australian Medicines Handbook - Antiemetics
- MSD Manual (Professional version):
  - Nausea and vomiting
  - Acute abdominal pain
- SOMANZ - Guideline for the Management of Nausea and Vomiting in Pregnancy and Hyperemesis Gravidarum
- Queensland Health and Royal Flying Doctors Service (Queensland branch) - Primary Clinical Care Manual 11th edition 2022
- Australian Family Physician (RACGP) - Nausea and vomiting in adults: A diagnostic approach.
- Food safety:
  - Outbreak management
  - Make a food safety complaint online

Appendix 1 - Possible causes of nausea and vomiting

Causes of nausea and vomiting [1, 3, 7, 8]		
Condition	**Presentation and suggestive findings**	**Action**
Gastrointestinal disorders		
Adynamic ileus	• Abdominal distention • Increased risk after surgery (up to 72 hours post-surgery) • Severe illness of electrolyte abnormality	Referral to a medical practitioner if suspected.
Bowel obstruction	• Abdominal distention, severe constipation and tympany to percussion • Vomiting is often bilious • History of abdominal surgery (visible surgical scars) or hernia	Immediate referral to a medical practitioner (including emergency service) is required if suspected.
Gastroenteritis – viral or bacterial/ food poisoning	• Vomiting accompanied by diarrhoea • Normal abdomen when examined • Food poisoning apparent based on history	Self-limiting – May be managed under this guideline. For suspected food poisoning, consider notification to local public health unit or make a food safety complaint online.
Gastroparesis	• Vomiting of partially digested food within a few hours of consumption • Often occurs in people with diabetes or after abdominal surgery	Referral to a medical practitioner is required if suspected.
Hepatitis	• Mild to moderate nausea (sometimes vomiting) over many days • Jaundice • Malaise • Slight liver tenderness is sometimes present	Referral to a medical practitioner is required if suspected.
Peritonitis or other acute abdominal condition e.g., pancreatitis, appendicitis	• Severe abdominal pain that may be vague and nauseating (visceral), sharp and localised (somatic) or pain perceived distant to its source (referred) • Other warning signs (see Page 1) may be present	Immediate referral to a medical practitioner (including emergency service) is required if suspected.

Causes of nausea and vomiting [1, 3, 7, 8]		
Toxic ingestion including alcohol	• Generally apparent based on history	Immediate referral to a medical practitioner (including emergency service) is required if suspected.
Central nervous system disorders		
Cannabis use (cannabis hyperemesis syndrome)	• Ongoing nausea, vomiting and indigestion that occurs with chronic cannabis use	Symptoms resolve after stopping cannabis use and may be relieved with a hot shower. Referral to a medical practitioner and other services if required
Closed head injury or concussion	• Generally apparent based on history	Immediate referral to a medical practitioner (including emergency service) is required if suspected.
CNS haemorrhage	• Sudden onset of headache • Change in mental status • Meningeal signs including photophobia, neck stiffness and seizures may be present	Immediate referral to a medical practitioner (including emergency service) is required if suspected.
CNS infection e.g., meningitis	• Gradual onset of headache • Change in mental status • Meningeal signs including photophobia, neck stiffness and seizures may be present • Petechial rash may be present	Immediate referral to a medical practitioner (including emergency service) is required if suspected.
Increased intracranial pressure	• Headache • Change in mental status • Focal neurological deficits sometimes present	Immediate referral to a medical practitioner (including emergency service) is required if suspected.
Labyrinthitis	• Vertigo, nystagmus with symptoms worsened by motion • Tinnitus sometimes present	Referral to a medical practitioner is required if suspected.
Migraine	• Headache, with or without aura or photophobia • Patient will usually have a history	Standard pharmacy treatment and referral

Causes of nausea and vomiting [1, 3, 7, 8]		
		to a medical practitioner.
Motion sickness	• Generally apparent based on history	Standard pharmacy treatment.
Systemic conditions		
Advanced cancer, chemotherapy or radiation exposure	• Apparent based on history	Referral to a medical practitioner is required.
Diabetic ketoacidosis (DKA)	• History of diabetes, although may occur without a known history of diabetes • Polyuria, polydipsia, hyperventilation, abdominal pain and/or impaired consciousness • Significant dehydration often present • Patients with diabetes should be advised to check their blood glucose levels and test ketones in blood or urine [9]	Immediate referral to a medical practitioner (including an emergency service) is required if this is suspected, including if ketones are 0.6 or higher.
Drug adverse effect or toxicity	• Generally apparent based on history • Assess severity and probable cause	If nausea and vomiting is a known adverse effect, referral to the original prescriber is required. If suspected overdose or serious reaction, immediate referral to a medical practitioner (including emergency services) is required.
Liver or renal failure	• Generally apparent based on history • Asterixis • Jaundice in advanced liver disease often present • Uremic odour in renal failure often present	Immediate referral to a medical practitioner (including emergency services) is required if suspected.
Severe pain	• Multiple causes and presentations	Immediate referral to a medical practitioner (including emergency services) is required.

Causes of nausea and vomiting [1, 3, 7, 8]		
Addisonian (acute adrenal) crisis	• History of adrenal insufficiency, trauma, acute stress, illness or recent surgery, or abrupt cessation of glucocorticoid therapy • Symptoms of acute circulatory failure (hypotension, confusion) • Other symptoms may include weakness, loss of consciousness, dizziness, fever, sudden onset of pain in lower back or legs, high heart rate	Immediate referral to a medical practitioner (including emergency services) is required.
Other causes		
Pregnancy	• Can occur at any time of the day or night. May be triggered by food or odours • Patient may not be aware they are pregnant	Referral to a medical practitioner is required and non-pharmacological therapies may be recommended as standard pharmacist care.
Urinary Tract Infection	• Generally apparent based on history • Presence of dysuria, urinary urgency and frequency • Suprapubic tenderness or discomfort	Referral to a medical practitioner or an appropriate pharmacy service is required.

References

1. Therapeutic Guidelines: Gastrointestinal (Nausea and vomiting). Melbourne: Therapeutic Guidelines Limited; 2021 [cited 2022 September 23]. Available from: https://tgldcdp.tg.org.au/viewTopic?topicfile=c_GIG_Assessment-and-causes-of-nausea-and-vomitingtopic_1.
2. Queensland Health and Royal Flying Doctor Service (Queensland Section). Primary Clinical Care Manual. Cairns: Office of Rural and Remote Health, Queensland Government; 2022 [cited 2022 September 23]. Available from: https://www.health.qld.gov.au/__data/assets/pdf_file/0011/1160003/PCCM_11th_ed.pdf.
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5. Therapeutic Guidelines: Gastrointestinal (Acute gastroenteritis). Melbourne: Therapeutic Guidelines Limited; 2021 [cited 2022 September 23]. Available from: https://tgldcdp.tg.org.au/viewTopic?etgAccess=true&guidelinePage=Gastrointestinal&topicfile=c_GIG_Assessment-of-acute-gastroenteritistopic_1&guidelinename=Gastrointestinal&sectionId=c_GIG_Assessment-of-acute-gastroenteritistopic_1#c_GIG_Assessment-of-acute-gastroenteritistopic_1.
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7. Metz A, Hebbard G. Nausea and Vomiting in Adults: A diagnostic approach. Australian Family Physician. 2007;36(9).
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