Clinical Practice Guidelines:
Medical/Nausea and vomiting

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Date	December, 2022
Purpose	To ensure consistent management of patients with nausea and vomiting.
Scope	Applies to Queensland Ambulance Service (QAS) clinical staff.
Health care setting	Pre-hospital assessment and treatment.
Population	Applies to all ages unless stated otherwise.
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Nausea and vomiting

December, 2022

Nausea and vomiting are common nonspecific symptoms that are caused by a myriad of medical conditions. Nausea is defined as an unpleasant sensation of having the urge to vomit, while vomiting (emesis) is an involuntary reflex action that is characterised by the forceful expulsion of stomach contents through the oesophagus and mouth.[1,2] Typically, nausea is a prodrome that precipitates subsequent vomiting, however either symptom can occur independently of the other.[3]

Physiologically, the sensation of nausea occurs due to changes to normal gastric rhythm or vestibular input, while vomiting occurs as a result of retroperistalsis, oesophageal-stomach sphincter relaxation and skeletal muscle contraction[4,5]. The processes that induce nausea and vomiting are primarily mediated by an organised collection of neurons in the medulla oblongata that are connected to multiple afferent and efferent pathways throughout the body. The neurotransmitters acetylcholine, dopamine, histamine and serotonin are involved in these processes and are the target of antiemetic therapy.[6]

The underlying cause of symptoms should be determined prior to administering antiemetics, as depending on the exact processes involved, some medications may be ineffective.

Clinical features

The clinical presentation of nausea and vomiting varies and is dependent on the primary cause.

Common clinical features may include:

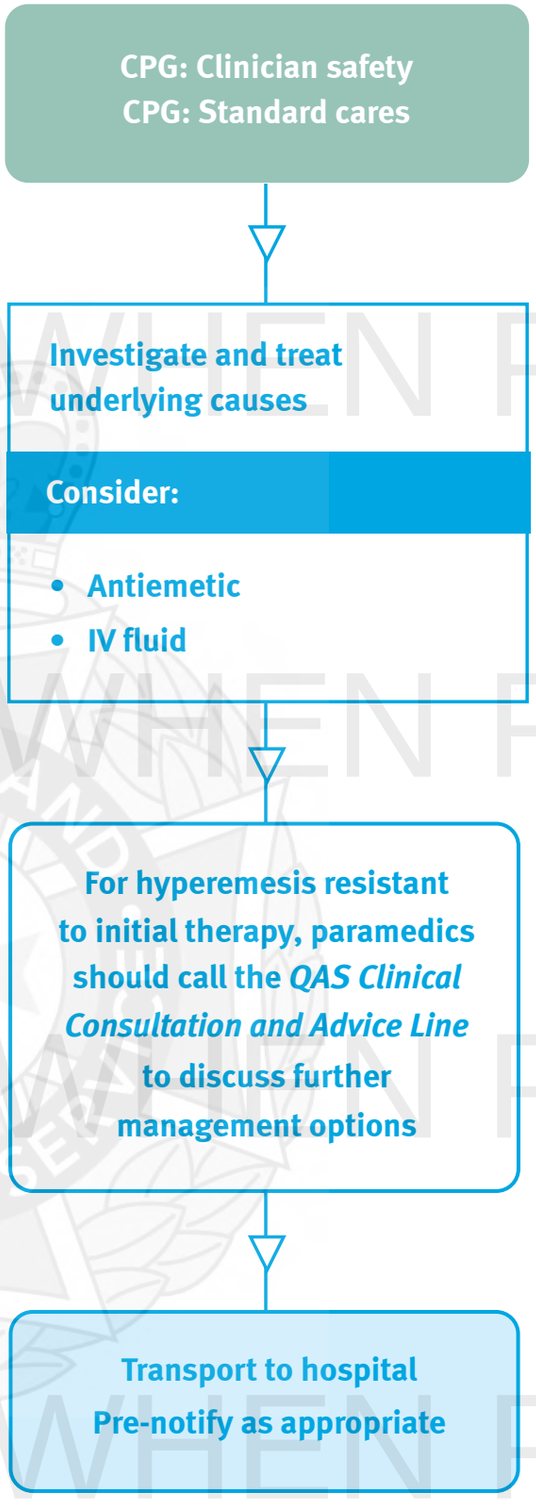
- Hypersalivation
- Retching
- Clamminess
- Sweating
- Pallor
- Abdominal discomfort

Risk Assessment

- When attending patients presenting with these symptoms, the potential risks and benefits of antiemetic therapy should be considered. In cases where patients can tolerate symptoms, standard cares and transport are often the only required interventions.
- If antiemetic therapy is required for isolated symptoms, oral administration is preferred.
- If the cause of symptoms cannot be determined and is undifferentiated, the presence of a serious medical emergency must be considered.

Risk Assessment *(cont.)*

- Administering ondansetron to patients in their 1st trimester of pregnancy is controversial, with contemporary literature indicating administration is associated with an increased risk of cardiac and cleft palate defects.[7,8] Administration should only be considered in extreme and uncontrolled hyperemesis that is resistant to other therapies.



Note: *Clinicians must only perform procedures for which they have received specific training and authorisation by the QAS.*

Additional information

- Due to the neurotransmitter pathways involved, ondansetron is ineffective for nausea and vomiting secondary to vestibular aetiologies (motion sickness).
- Typically, intravenous fluid therapy is not required unless signs of significant dehydration are present.
- Cannabinoid hyperemesis syndrome is an emergent condition that is characterised by recurrent cyclic episodes of nausea and vomiting in chronic cannabis users.[8] This condition is often resistant to standard antiemetic therapies.[9]
- Aromatherapy with isopropyl alcohol is a novel treatment option for patients presenting with nausea. This intervention involves the repetitive inhalation (smelling) of alcohol off a swab and can be initiated as a primary or adjunct therapy.[10,11] This should be done by holding, or instructing the patient to hold the swab approximately 2.5 cm under the nose and take deep inhalations, for a maximum of 60 seconds.[10]