

CADTH Reference List

# Guidelines Regarding Split Dosing of Ondansetron and Dimenhydrinate for Patients in Hospital

June 2022

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**Cite As:** *Guidelines Regarding Split Dosing of Ondansetron and Dimenhydrinate for Patients in Hospital.* (CADTH reference list). Ottawa: CADTH; 2022 Jun.

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**Funding:** CADTH receives funding from Canada's federal, provincial, and territorial governments, with the exception of Quebec.

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## Key Messages

- No evidence-based guidelines were identified about the use of split doses of ondansetron for patients in hospital with nausea or vomiting.
- No evidence-based guidelines were identified about the use of split doses of dimenhydrinate for patients in hospital with nausea or vomiting.

## Research Questions

1. What are the evidence-based guidelines regarding the use of split doses of ondansetron for patients in hospital with nausea or vomiting?
2. What are the evidence-based guidelines regarding the use of split doses of dimenhydrinate for patients in hospital with nausea or vomiting?

## Methods

### Literature Search Methods

A limited literature search was conducted by an information specialist on key resources including MEDLINE, Embase, the Cochrane Database of Systematic Reviews, the International HTA Database, the websites of Canadian and major international health technology agencies, as well as a focused internet search. The search strategy was comprised of both controlled vocabulary, such as the National Library of Medicine’s MeSH (Medical Subject Headings), and keywords. The main search concepts were antiemetics and dosing. A supplemental search was conducted for concepts ondansetron and dimenhydrinate. CADTH-developed search filters were applied to limit retrieval to guidelines. Where possible, retrieval was limited to the human population. The search was completed on June 9, 2022 and limited to English-language documents published since January 1, 2017. Internet links were provided, where available.

### Selection Criteria

One reviewer screened literature search results (titles and abstracts) and selected publications according to the inclusion criteria presented in Table 1. Full texts of study publications were not reviewed. Open access full-text versions of evidence-based guidelines were reviewed when available.

**Table 1: Selection Criteria**

Criteria	Description
<b>Population</b>	Patients in the hospital with nausea or vomiting
<b>Intervention</b>	Q1: Ondansetron provided as a split/ top-up dose (e.g., half the dose given immediately, and the other half given an hour later) Q2: Dimenhydrinate provided as a split/ top-up dose
<b>Comparator</b>	Not applicable
<b>Outcomes</b>	Q1: Recommendations regarding the use of split/ top-up doses of ondansetron (e.g., should nurses provided split/ top-up doses of ondansetron, how much time should elapse between doses) Q2: Recommendations regarding the use of split/ top-up doses of dimenhydrinate (e.g., should nurses provided split/ top-up doses of dimenhydrinate, how much time should elapse between doses)
<b>Study designs</b>	Evidence-based guidelines

Q = question

## Results

No relevant evidence-based guidelines were identified about the use of split doses of ondansetron for patients in hospital with nausea or vomiting. No relevant evidence-based guidelines were identified about the use of split doses of dimenhydrinate for patients in hospital with nausea or vomiting.

References of potential interest that did not meet the inclusion criteria are provided in Appendix 1.

## References

### Guidelines and Recommendations

No literature identified.

## Appendix 1: References of Potential Interest

### Previous CADTH Reports

1. Ondansetron in Patients Requiring Anti-Emetics: A Review of Clinical Effectiveness, Cost-Effectiveness, and Guidelines. Ottawa (ON): CADTH. 2020. <https://www.cadth.ca/ondansetron-patients-requiring-anti-emetics-review-clinical-effectiveness-cost-effectiveness-and>. Accessed 10 Jun 2022.

### Guidelines and Recommendations – Not Specific to Split Dosing of Antiemetics

2. Gan TJ, Belani KG, Bergese S, et al. Fourth Consensus Guidelines for the Management of Postoperative Nausea and Vomiting. *Perioperative Medicine*. 2020;131(2):411-448. <https://anesthesia.gr/wp-content/uploads/2020/07/2020-Fourth-Consensus-Guidelines-for-the-Management-of-Postoperative-Nausea-and-Vomiting.pdf>. Accessed 10 Jun 2022.  
*See: “When PONV prophylaxis has failed, patients should receive antiemetic treatment from a different pharmacological class to the PONV prophylaxis. Administering repeated dose of antiemetics from the same class within 6 hours does not confer additional therapeutic benefit when compared to placebo (evidence A2).<sup>368,369</sup> If more than 6 hours has elapsed, administration of a second dose of 5-HT3 receptor antagonist or butyrophenone may be considered if no other alternatives are available.<sup>368</sup>” (page 429)*