



PONV-05 Review - February 24, 2025

Review Measure Specification by selecting this [link](#)

Feedback from Measure Reviewer(s)

Dr. Joseph Ruiz, MD Anderson Cancer Center

Review of new literature (Published 01/2022)

No new consensus guidelines published. Last iteration of Consensus Guidelines for the Management of Postoperative Nausea and Vomiting was published in 2020.

Systematic review of RCTs showing decreased incidence of PONV with perioperative benzodiazepine administration.

Au E, Zhao K, Belley-Cote E, et al. The effect of perioperative benzodiazepine administration on postoperative nausea and vomiting: a systematic review and meta-analysis of randomised controlled trials. Br J Anaesth. 2024;132(3):469-482. <https://www.ncbi.nlm.nih.gov/pubmed/38177006>

Meta-analysis showed a reduction in PON, POV, and PONV relative to controls after midazolam administration at induction (evidence A1). There was no significant difference in PONV between midazolam and ondansetron given 30 minutes before the end of surgery. However, this is not recommended due to the possibility of sedation-related adverse events. Midazolam combined with other antiemetics had increased efficacy over single-agent therapy. Lower and higher dose midazolam showed no difference in PONV efficacy for prophylaxis efficacy. The incidence of PONV was significantly reduced after administration at the end of surgery. Midazolam 2 mg given 30 minutes before the end of surgery decreased PONV and was as effective as ondansetron 4 mg. Limited data suggest that midazolam has similar efficacy to ondansetron in treating established PONV.

Gan, Tong J. MD, MBA, MHS, FRCA, et al.. Fourth Consensus Guidelines for the Management of Postoperative Nausea and Vomiting. Anesthesia & Analgesia 131(2):p 411-448, August 2020. | DOI: 10.1213/ANE.0000000000004833

Multiple studies with other therapies such as acupuncture, aromatherapy, music, etc but are unable to be captured in MPOG.

Appropriateness of rationale

PONV-05 seems appropriate. Majority of hospitals participating in MPOG are performing below 90% benchmark and this is in control of the anesthesia care team.

Evaluation of inclusion/ exclusion criteria

Appropriate

Evaluation of definition of success or flagged cases

Appropriate

Other feedback

Dr. Ruiz's Recommendation for PONV-05

	Dr. Ruiz
Keep as is: no changes at all	<input type="checkbox"/>
Modify: changes to measure specifications (see below)	<input checked="" type="checkbox"/>
Retire: eliminate entirely from dashboard and emails	<input type="checkbox"/>

Comment

Include midazolam in the recommended pharmacologic antiemetics

MPOG Coordinating Center Comments

1. Consider minimum duration for propofol infusion
2. Review updated PONV guidelines this year for additional recommendations
3. Are there perspectives on the elderly population?

Relevant paragraph from BJA systematic review and meta-analysis of randomised controlled trials:

The Fourth Consensus Guidelines for the Management of Postoperative Nausea and Vomiting recommend the use of multimodal prophylaxis (i.e. two or more interventions) in adults undergoing anaesthesia with at least one risk factor.⁵ Despite evidence of benefit, the guidelines recommended against the use of midazolam because of concerns about possible adverse effects.⁵ However, little evidence suggests that the use of midazolam or other benzodiazepines is associated with harm. Our group recently published a systematic review and meta-analysis that evaluated the effect of perioperative benzodiazepines on postoperative delirium, intraoperative awareness, perioperative mortality, and length of stay. This meta-analysis of 34 RCTs and nine observational studies found that perioperative benzodiazepines may have little or no effect on postoperative delirium, perioperative mortality, or intensive care unit or hospital length of stay, based on very uncertain evidence. Further, we identified that perioperative benzodiazepines may have a modest protective effect on intraoperative awareness.¹³ Given the consistent evidence of benefit, uncertain evidence of harm, and overall moderate quality of evidence, we believe that future guideline iterations should consider this updated evidence.



Current PONV-05 Performance
All MPOG Institutions
February 2024 - December 2024



