Prevention of Post-Operative Nausea and Vomiting (PONV) – Combination Therapy

**Description:** Percentage of patients, aged 18 years and older, who undergo a procedure under an inhalational general anesthetic, AND who have three or more risk factors for post-operative nausea and vomiting (PONV), who receive combination therapy consisting of at least two prophylactic pharmacologic antiemetic agents of different classes preoperatively or intraoperatively.

**Denominator:** All patients, aged 18 years and older, who undergo any procedure including surgical, therapeutic or diagnostic under an inhalational general anesthetic, AND who have three or more risk factors for PONV.

**Definition:** PONV Risk factors – The following are Risk factors for Post-Operative Nausea and Vomiting:

- Female gender
- History of PONV
- History of motion sickness
- Non-smoker
- Intended administration of opioids for post-operative analgesia. This includes use of opioids given intraoperatively and whose effects extend into the post anesthesia care unit (PACU) or post-operative period, or opioids given in the PACU, or opioids given after discharge from the PACU.

**Numerator:** Patients who receive combination therapy consisting of at least two prophylactic pharmacologic anti-emetic agents of different classes preoperatively or intraoperatively.

**Definition:** Anti-emetics Therapy - The recommended first- and second-line classes of pharmacologic anti-emetics for PONV prophylaxis in patients at moderate to severe risk of PONV include (but are not limited to):

- NK-1 Receptor Antagonists
- 5-Hydroxytryptamine (5-HT3) Receptor Antagonists
- Glucocorticoids
- Phenothiazines
- Phenylethylamines
- Butyrophenones
- Antihistamines
- Anticholinergics

**NOTE:** The foregoing list of medications/drug names is based on clinical guidelines and other evidence. The specified drugs were selected based on the strength of evidence for their clinical effectiveness. This list of selected drugs may not be current. Physicians and other health care professionals should refer to the FDA’s web site page entitled “Drug Safety Communications” for up-to-date drug recall and alert information when prescribing medications.

**Rationale:** Postoperative nausea and vomiting (PONV) is an important patient-centered outcome of anesthesia care. PONV is highly dis,satisfying to patients, although rarely life-threatening. A large body of scientific literature has defined risk factors for PONV; demonstrated effective prophylactic regimes based on these risk factors, and demonstrated high variability in this outcome across individual centers and providers.1,2 Further, a number of papers have shown that performance can be assessed at the level of individual providers -- the outcome is common enough that sufficient power exists to assess variability and improvement at this level.3
**Clinical Recommendation Statements**: The following evidence statements are quoted verbatim from the referenced clinical guidelines: Society for Ambulatory Anesthesia (SAMBA) PONV Prophylaxis Recommendations: Administer prophylactic therapy with combination (≥ 2) interventions/multimodal therapy in patients at high risk for PONV


2 Singla NK, et al. Phase II study to evaluate the safety and efficacy of the oral neurokinin-1 receptor antagonist casopitant (GW679769) administered with ondansetron for the prevention of postoperative and postdischarge nausea and vomiting in high-risk patients. *Anesthesiology*. 2010;113(1):74-82.


**Composition of the Group that Developed the Measure**:

**Work Group Members**: Alexander A. Hannenberg, MD, Co-chair; Andrew J. Patterson, MD, PhD, Co-chair; William R. Andrews, MD, MS; Rebecca A. Aslakson, MD, PhD; Daniel R. Brown, MD, PhD; Neal H. Cohen, MD, MPH, MS; Peggy Duke, MD; Heidi L. Frankel, MD; Lorraine M. Jordan, BSN, MS, PhD; Jeremy M. Kahn, MD, MS; Jason N. Katz, MD, MHS; Gerald A. Maccioli, MD; Catherine L. Scholl, MD; Todd L. Slesinger, MD; Victoria M. Steelman, PhD, RN; Avery Tung, MD

**Work Group Staff**: Meredith Herzog, American Board of Medical Specialties; Maureen Amos, American Society of Anesthesiologists; Mark Antman, DDS, MBA, American Medical Association; Elvia Chavarria, MPH, American Medical Association; Jodie Dvorkin, MD, MPH, American Medical Association; Kendra Hanley, MS, American Medical Association; Jennifer Heffernan, MPH, American Medical Association; Toni Kaye, MPH, American Medical Association; Kimberly Smuk, RHIA, American Medical Association; Elvira L. Ryan, MBA, BSN, RN, The Joint Commission

**Copyright Statement**: The Measures are not clinical guidelines, do not establish a standard of medical care, and have not been tested for all potential applications. The Measures, while copyrighted, can be reproduced and distributed, without modification, for noncommercial purposes, e.g., use by health care providers in connection with their practices. Commercial use is defined as the sale, license, or distribution of the Measures for commercial gain, or incorporation of the Measures into a product or service that is sold, licensed or distributed for commercial gain.

Commercial uses of the Measures require a license agreement between the user and the American Medical Association (AMA), [on behalf of the Physician Consortium for Performance Improvement® (PCPI®)] or American Society of Anesthesiologists (ASA). Neither the AMA, ASA, PCPI, nor its members shall be responsible for any use of the Measures.

The AMA’s, PCPI’s and National Committee for Quality Assurance’s significant past efforts and contributions to the development and updating of the Measures is acknowledged. ASA is solely responsible for the review and enhancement (“Maintenance”) of the Measures as of May 15, 2014.

ASA encourages use of the Measures by other health care professionals, where appropriate.

THE MEASURES AND SPECIFICATIONS ARE PROVIDED “AS IS” WITHOUT WARRANTY OF ANY KIND.

© 2014 American Medical Association and American Society of Anesthesiologists. All Rights Reserved. Applicable

FARS/DFARS Restrictions Apply to Government Use.

Limited proprietary coding is contained in the Measure specifications for convenience. Users of the proprietary code sets should obtain all necessary licenses from the owners of these code sets. The AMA, ASA, the PCPI and its members disclaim all liability for use or accuracy of any Current Procedural Terminology (CPT®) or other coding contained in the specifications.