

**Quality ID #463: Prevention of Post-Operative Vomiting (POV) – Combination Therapy (Pediatrics) – National Quality Strategy Domain: Effective Clinical Care**

**2018 OPTIONS FOR INDIVIDUAL MEASURES:**  
**REGISTRY ONLY**

**MEASURE TYPE:**  
Process

**DESCRIPTION:**  
Percentage of patients aged 3 through 17 years, who undergo a procedure under general anesthesia in which an inhalational anesthetic is used for maintenance AND who have two or more risk factors for post-operative vomiting (POV), who receive combination therapy consisting of at least two prophylactic pharmacologic anti-emetic agents of different classes preoperatively and/or intraoperatively

**INSTRUCTIONS:**  
This measure is to be submitted **each time** any procedure including surgical, therapeutic or diagnostic under an inhalational general anesthetic is performed during the performance period. There is no diagnosis associated with this measure. It is anticipated that eligible clinicians who provide the listed anesthesia services as specified in the denominator coding will submit this measure.

**Measure Submission:**  
The listed denominator criteria is used to identify the intended patient population. The numerator options included in this specification are used to submit the quality actions allowed by the measure. The quality-data codes listed do not need to be submitted for registry submissions; however, these codes may be submitted for those registries that utilize claims data.

**DENOMINATOR:**  
All patients, aged 3 through 17 years, who undergo a procedure under general anesthesia in which an inhalational anesthetic is used for maintenance AND who have two or more risk factors for POV

**Definition:**

**Risk factors for POV-**

- Surgery ≥ 30 minutes
- Age ≥ 3 years
- Strabismus surgery
- History of POV or Post-Operative Nausea and Vomiting (PONV) in patient, parent or sibling

**Denominator Criteria (Eligible Cases):**

Patients aged 3 through 17 years on date of encounter

**AND**

**Patient procedure during the performance period (CPT):** 00100, 00102, 00103, 00104, 00120, 00124, 00126, 00140, 00142, 00144, 00145, 00147, 00148, 00160, 00162, 00164, 00170, 00172, 00174, 00176, 00190, 00192, 00210, 00211, 00212, 00214, 00215, 00216, 00218, 00220, 00222, 00300, 00320, 00322, 00350, 00352, 00400, 00402, 00404, 00406, 00410, 00450, 00454, 00470, 00472, 00474, 00500, 00520, 00522, 00524, 00528, 00529, 00530, 00532, 00534, 00537, 00539, 00540, 00541, 00542, 00546, 00548, 00550, 00560, 00562, 00563, 00566, 00567, 00580, 00600, 00604, 00620, 00625, 00626, 00630, 00632, 00635, 00640, 00670, 00700, 00702, 00730, 00731, 00732, 00750, 00752, 00754, 00756, 00770, 00790, 00792, 00794, 00796, 00797, 00800, 00802, 00811, 00812, 00813, 00820, 00830, 00832, 00840, 00842, 00844, 00846, 00848, 00851, 00860, 00862, 00864, 00865, 00866, 00868, 00870, 00872, 00873, 00880, 00882, 00902, 00904, 00906, 00908, 00910, 00912, 00914, 00916, 00918, 00920, 00921, 00922, 00924, 00926, 00928, 00930, 00932, 00934, 00936, 00938, 00940, 00942, 00944, 00948, 00950, 00952, 01112, 01120, 01130, 01140, 01150, 01160, 01170, 01173, 01200, 01202, 01210, 01212, 01214, 01215, 01220,

01230, 01232, 01234, 01250, 01260, 01270, 01272, 01274, 01320, 01340, 01360, 01380, 01382, 01390, 01392, 01400, 01402, 01404, 01420, 01430, 01432, 01440, 01442, 01444, 01462, 01464, 01470, 01472, 01474, 01480, 01482, 01484, 01486, 01490, 01500, 01502, 01520, 01522, 01610, 01620, 01622, 01630, 01634, 01636, 01638, 01650, 01652, 01654, 01656, 01670, 01680, 01710, 01712, 01714, 01716, 01730, 01732, 01740, 01742, 01744, 01756, 01758, 01760, 01770, 01772, 01780, 01782, 01810, 01820, 01829, 01830, 01832, 01840, 01842, 01844, 01850, 01852, 01860, 01916, 01920, 01922, 01924, 01925, 01926, 01930, 01931, 01932, 01933, 01935, 01936, 01951, 01952, 01953, 01958, 01960, 01961, 01962, 01963, 01965, 01966, 01991, 01992

**AND**

Patient received inhalational anesthetic agent: 4554F

**AND**

Patient exhibits 2 or more risk factors for post-operative vomiting: G9954

**AND NOT**

**DENOMINATOR EXCLUSION:**

Cases in which an inhalational anesthetic is used only for induction: G9955

**NUMERATOR:**

Patients who receive combination therapy consisting of at least two prophylactic pharmacologic anti-emetic agents of different classes preoperatively and/or intraoperatively

**Definition:**

**Anti-emetics Therapy** - The recommended pharmacologic anti-emetics for POV prophylaxis in pediatric patients at risk of POV include (but may not be limited to):

- 5-hydroxytryptamine (5-HT<sub>3</sub>) receptor antagonists (recommended as the first choice for prophylaxis for POV in children)
- Dexamethasone
- Antihistamines
- Butyrophenones

*Definition 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.*

**Numerator Instructions:** Denominator exceptions should be determined or confirmed at the date of the denominator eligible procedure.

**Numerator Options:**

***Performance Met:***

Patient received combination therapy consisting of at least two prophylactic pharmacologic anti-emetic agents of different classes preoperatively and/or intraoperatively (G9956)

**OR**

***Denominator Exception:***

Documentation of medical reason for not receiving combination therapy consisting of at least two prophylactic pharmacologic anti-emetic agents of different classes preoperatively and/or intraoperatively (e.g., intolerance or other medical reason) (G9957)

**OR**

***Performance Not Met:***

Patient did not receive combination therapy consisting of at least two prophylactic pharmacologic anti-emetic agents of different classes preoperatively and/or intraoperatively (G9958)

## **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 and has demonstrated effective prophylactic regimes based on these risk factors, and demonstrated high variability in this outcome across individual centers and providers. Between 62-73% of children experience POV when prophylactic anti-emetics are not administered.<sup>i</sup> Beyond the discomfort associated with the condition, POV is a comorbidity which can cause significant postoperative complications, including dehydration and postoperative bleeding.<sup>ii</sup> In several studies, incidence of POV decreased significantly in children receiving combination therapy compared to control groups not receiving combination therapy for POV.<sup>iii,iv,v</sup> 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. A separate measure is needed for pediatric patients because the risk factors and recommended prophylaxis are different from adults.

## **CLINICAL RECOMMENDATION STATEMENTS:**

Society for Ambulatory Anesthesia (SAMBA) recommendations:

Administer prophylactic antiemetic therapy to children at increased risk for POV; as in adults, use of combination therapy is most effective.

All prophylaxis in children at moderate or high risk for POV should include combination therapy using a 5-HT<sub>3</sub> antagonist and a second drug. Because the effects of interventions from different drug classes are additive, combining interventions has an additive effect in risk reduction.

## **COPYRIGHT:**

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 PCPI® Foundation (PCPI®) or ASA. Neither ASA, nor the American Medical Association (AMA), nor the AMA-convened Physician Consortium for Performance Improvement® (AMA-PCPI), now known as the PCPI, nor their members shall be responsible for any use of the Measures.

**The AMA's and AMA-PCPI'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.

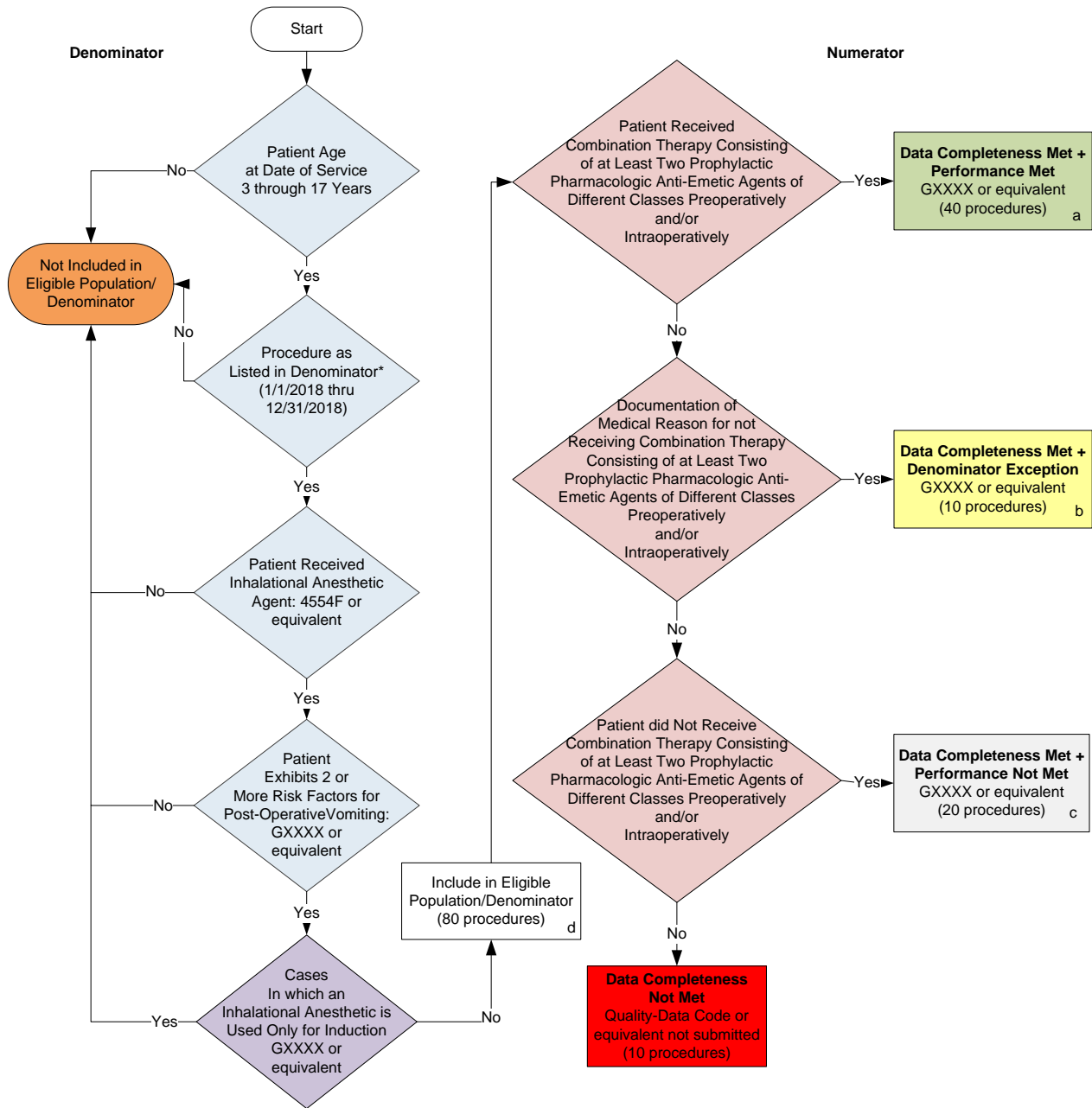
**THE MEASURES AND SPECIFICATIONS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND.**

© 2017 PCPI® Foundation and American Society of Anesthesiologists. All Rights Reserved.

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. ASA, the AMA, the PCPI and its members and former members of the AMA-PCPI disclaim all liability for use or accuracy of any Current Procedural Terminology (CPT®) or other coding contained in the specifications.

CPT® contained in the Measures specifications is copyright 2004-2018 American Medical Association. LOINC® copyright 2004-2018 Regenstrief Institute, Inc. SNOMED CLINICAL TERMS (SNOMED CT®) copyright 2004-2018 The International Health Terminology Standards Development Organisation (IHTSDO). ICD-10 is copyright 2018 World Health Organization. All Rights Reserved.

**2018 Registry Flow for Quality ID #436:  
Prevention of Post-Operative Nausea and Vomiting (PONV)- Combination Therapy (Pediatrics)**



**SAMPLE CALCULATIONS:**

**Data Completeness=**  

$$\frac{\text{Performance Met (a=40 procedures)} + \text{Denominator Exception (b=10 procedures)} + \text{Performance Not Met (c=20 procedures)}}{\text{Eligible Population / Denominator (d=80 procedures)}} = \frac{70 \text{ procedures}}{80 \text{ procedures}} = 87.50\%$$

**Performance Rate=**  

$$\frac{\text{Performance Met (a=40 procedures)}}{\text{Data Completeness Numerator (70 procedures) - Denominator Exception (b=10 procedures)}} = \frac{40 \text{ procedures}}{60 \text{ procedures}} = 66.66\%$$

\*See the posted Measure Specification for specific coding and instructions to submitted this measure.  
 NOTE: Submission Frequency: Procedure  
 CPT only copyright 2017 American Medical Association. All rights reserved.  
 The measure diagrams were developed by CMS as a supplemental resource to be used in conjunction with the measure specifications. They should not be used alone or as a substitution for the measure specification.

## 2018 Registry Flow for Quality ID

### #T459: Prevention of Post-Operative Nausea and Vomiting (PONV)-Combination Therapy

Please refer to the specific section of the Measure Specification to identify the denominator and numerator information for use in submitting this Individual Specification. This flow is for registry data submission.

1. Start with Denominator
2. Check Patient Age:
  - a. If the Age is 3 through 17 years of age on Date of Service and equals No during the Performance Period, do not include in Eligible Patient Population. Stop Processing.
  - b. If the Age is 3 through 17 years of age on Date of Service and equals Yes during the Performance Period, proceed to check Procedure Performed.
3. Procedure Performed:
  - a. If Procedure as Listed in the Denominator equals No, do not include in Eligible Patient Population. Stop Processing.
  - b. If Procedure as Listed in the Denominator equals Yes, proceed to check Patient Received Inhalation Anesthetic Agent.
4. Check Patient Received Inhalational Anesthetic Agent:
  - a. If Patient Received Inhalational Anesthetic Agent equals No, do not include in Eligible Patient Population. Stop Processing.
  - b. If Patient Received Inhalational Anesthetic Agent equals Yes, proceed to check Patient Exhibits 3 or More Risk Factors for Post-Operative Nausea and Vomiting.
5. Check Patient Exhibits 3 or More Risk Factors for Post-Operative Nausea and Vomiting:
  - a. If Patient Exhibits 3 or More Risk Factors for Post-Operative Nausea and Vomiting equals No, do not include in Eligible Patient Population. Stop Processing.
  - b. If Patient Exhibits 3 or More Risk Factors for Post-Operative Nausea and Vomiting equals Yes, proceed to check Cases in which an Inhalational Anesthetic is Used Only for Induction.
6. Check Cases in which an Inhalational Anesthetic is Used Only for Induction
  - a. If Cases in which an Inhalational Anesthetic is Used Only for Induction equals No, include in Eligible Population.
  - b. If Cases in which an Inhalational Anesthetic is Used Only for Induction equals Yes, do not include in Eligible Population.
7. Denominator Population:
  - a. Denominator Population is all Eligible Patients in the Denominator. Denominator is represented as Denominator in the Sample Calculation listed at the end of this document. Letter d equals 80 procedures in the Sample Calculation.
8. Start Numerator

9. Check Patient Received at Least Two Prophylactic Pharmacologic Anti-Emetic Agents of Different Classes Preoperatively and/or Intraoperatively:
  - a. If Patient Received at Least Two Prophylactic Pharmacologic Anti-Emetic Agents of Different Classes Preoperatively and/or Intraoperatively equals Yes, include in Data Completeness Met and Performance Met.
  - b. Data Completeness Met and Performance Met letter is represented in the Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter a equals 40 procedures in the Sample Calculation.
  - c. If Patient Received at Least Two Prophylactic Pharmacologic Anti-Emetic Agents of Different Classes Preoperatively and/or Intraoperatively equals No, proceed to Documentation of Medical Reason(s) for Not Receiving at Least Two Prophylactic Pharmacologic Anti-Emetic Agents of Different Classes Preoperatively and Intraoperatively.
10. Check Documentation of Medical Reason(s) for Not Receiving at Least Two Prophylactic Pharmacologic Anti-Emetic Agents of Different Classes Preoperatively and/or Intraoperatively:
  - a. If Documentation of Medical Reason(s) for Not Receiving at Least Two Prophylactic Pharmacologic Anti-Emetic Agents of Different Classes Preoperatively and/or Intraoperatively equals Yes, include in Data Completeness Met and Denominator Exception.
  - b. Data Completeness Met and Denominator Exception letter is represented in the Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter b equals 10 procedures in the Sample Calculation.
  - c. If Documentation of Medical Reason(s) for Not Receiving at Least Two Prophylactic Pharmacologic Anti-Emetic Agents of Different Classes Preoperatively and/or Intraoperatively equals No, proceed Patient did Not Receive at Least Two Prophylactic Pharmacologic Anti-Emetic Agents of Different Classes Preoperatively and/or Intraoperatively
11. Check Patient did Not Receive at Least Two Prophylactic Pharmacologic Anti-Emetic Agents of Different Classes Preoperatively and/or Intraoperatively:
  - a. If Patient did Not Receive at Least Two Prophylactic Pharmacologic Anti-Emetic Agents of Different Classes Preoperatively and/or Intraoperatively equals Yes, include in Data Completeness Met and Performance Not Met.
  - b. Data Completeness Met and Performance Not Met letter is represented in the Data Completeness Rate in the Sample Calculation listed at the end of this document. Letter c equals 20 procedures in the Sample Calculation.
  - c. If Patient did Not Receive at Least Two Prophylactic Pharmacologic Anti-Emetic Agents of Different Classes Preoperatively and/or Intraoperatively equals No, proceed to Data Completeness Not Met.
12. Check Data Completeness Not Met:
  - a. If Data Completeness Not Met equals No, Quality Data Code or equivalent not submitted. 10 procedures have been subtracted from the Data Completeness Numerator in the Sample Calculation.

**SAMPLE CALCULATIONS:**

**Data Completeness=**

$$\frac{\text{Performance Met (a=40 procedures)} + \text{Denominator Exception (b=10 procedures)} + \text{Performance Not Met (c=20 procedures)}}{\text{Eligible Population / Denominator (d=80 procedures)}} = \frac{70 \text{ procedures}}{80 \text{ procedures}} = 87.50\%$$

**Performance Rate=**

$$\frac{\text{Performance Met (a=40 procedures)}}{\text{Data Completeness Numerator (70 procedures) - Denominator Exception (b=10 procedures)}} = \frac{40 \text{ procedures}}{60 \text{ procedures}} = 66.66\%$$