Measure #430: Prevention of Post-Operative Nausea and Vomiting (PONV) – Combination Therapy –
National Quality Strategy Domain: Patient Safety

**2017 OPTIONS FOR INDIVIDUAL MEASURES:**
REGISTRY ONLY

**MEASURE TYPE:**
Process

**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

**INSTRUCTIONS:**
This measure is to be reported **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 Reporting:**
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-based submissions; however, these codes may be submitted for those registries that utilize 
claims data.

**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.

**Denominator Criteria (Eligible Cases):**
Patients aged ≥ 18 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, 00166, 00170, 00172, 00174, 00176, 
00190, 00192, 00210, 00211, 00212, 00214, 00215, 00221, 00216, 00218, 00220, 00222, 00300, 00320, 00322, 
00324, 00350, 00352, 00400, 00402, 00404, 00406, 00410, 00450, 00470, 00472, 00474, 00500, 
00520, 00522, 00524, 00528, 00529, 00530, 00532, 00534, 00537, 00539, 00540, 00541, 00542, 00546, 
00548, 00550, 00560, 00566, 00580, 00600, 00604, 00620, 00625, 00626, 00630, 00632, 00635, 00640, 
00670, 00700, 00702, 00710, 00740, 00742, 00750, 00752, 00754, 00756, 00760, 00770, 00790, 00792, 00794, 00796, 
00797, 00800, 00802, 00810, 00820, 00830, 00832, 00834, 00836, 00840, 00842, 00844, 00846, 00848, 
00851, 00860, 00862, 00864, 00865, 00866, 00868, 00870, 00872, 00873, 00880, 00882, 00900, 00904, 
00906,
00908, 00910, 00912, 00914, 00916, 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, 01180, 01190, 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, 01466, 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, 01682, 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, 01924, 01925, 01926, 01930, 01931, 01932, 01933, 01935, 01936, 01951, 01952, 01961, 01962, 01963, 01965, 01966

AND
Patient received inhalational anesthetic agent: 4554F
AND
Patient exhibits 3 or more risk factors for post-operative nausea and vomiting: 4556F

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.

Numerator Options:
Performance Met: Patient received at least 2 prophylactic pharmacologic anti-emetic agents of different classes preoperatively and/or intraoperatively (G9775)

OR

Denominator Exception: Documentation of medical reason for not receiving at least 2 prophylactic pharmacologic anti-emetic agents of different classes preoperatively and/or intraoperatively (e.g., intolerance or other medical reason) (G9776)

OR

Performance Not Met: Patient did not receive at least 2 prophylactic pharmacologic anti-emetic agents of different classes preoperatively and/or intraoperatively (G9777)
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. 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.

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

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2017 Registry Individual Measure Flow

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

**SAMPLE CALCULATIONS:**

Data Completeness =
Performance Met (a=4 procedures) + Denominator Exception (b=1 procedure) + Performance Not Met (c=2 procedures) = 7 procedures = 87.50%

Performance Rate =
Performance Met (a=4 procedures) / Eligible Population / Denominator (d=8 procedures) = 4 procedures
Data Completeness Numerator (7 procedures) - Denominator Exception (b=1 procedure) = 6 procedures

*See the posted Measure Specification for specific coding and instructions to report this measure.

**NOTE:** Reporting Frequency: Procedure

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2017 Registry Individual Measure Flow

#430: 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 reporting this Individual Measure.

1. Start with Denominator

2. Check Patient Age:
   a. If the Age is greater than or equal to 18 years of age on Date of Service and equals No during the measurement period, do not include in Eligible Patient Population. Stop Processing.
   b. If the Age is greater than or equal to 18 years of age on Date of Service and equals Yes during the measurement period, proceed to check Patient Encounter.

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, include in Eligible population.

6. 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 8 procedures in the sample calculation.

7. Start Numerator

8. Check Patient Received at Least Two Prophylactic Pharmacologic Anti-Emetic Agents of Different Classes Preoperatively or Intraoperatively:
   a. If Patient Received at Least Two Prophylactic Pharmacologic Anti-Emetic Agents of Different Classes Preoperatively 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 4 procedures in Sample Calculation.

c. If Patient Received at Least Two Prophylactic Pharmacologic Anti-Emetic Agents of Different Classes Preoperatively 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.

9. Check Documentation of Medical Reason(s) for Not Receiving at Least Two Prophylactic Pharmacologic Anti-Emetic Agents of Different Classes Preoperatively and Intraoperatively:
   a. If Documentation of Medical Reason(s) for Not Receiving at Least Two Prophylactic Pharmacologic Anti-Emetic Agents of Different Classes Preoperatively and 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 1 procedure 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 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 Patient did Not Receive at Least Two Prophylactic Pharmacologic Anti-Emetic Agents of Different Classes Preoperatively and Intraoperatively:
    a. If Patient did Not Receive at Least Two Prophylactic Pharmacologic Anti-Emetic Agents of Different Classes Preoperatively and 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 2 procedures in the Sample Calculation.
    c. If Patient did Not Receive at Least Two Prophylactic Pharmacologic Anti-Emetic Agents of Different Classes Preoperatively and Intraoperatively equals No, proceed to Data Completeness Not Met.

11. Check Data Completeness Not Met:
    a. If Data Completeness Not Met equals No, Quality Data Code or equivalent not reported. 1 procedure has been subtracted from the data completeness numerator in the sample calculation.

### SAMPLE CALCULATIONS:

**Data Completeness**

\[
\text{Performance Met (a=4 procedures)} + \text{Denominator Exception (b=1 procedure)} + \text{Performance Not Met (c=2 procedures)} = 7 \text{ procedures} = 87.50\%
\]

\[
\text{Eligible Population / Denominator (d=8 procedures)} = \text{8 procedures}
\]

**Performance Rate**

\[
\text{Performance Met (a=4 procedures)} = 4 \text{ procedures} = 66.66\%
\]

\[
\text{Data Completeness Numerator (7 procedures) - Denominator Exception (b=1 procedure)} = 6 \text{ procedures}
\]