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

2016 PQRS OPTIONS FOR INDIVIDUAL MEASURES:
REGISTRY ONLY

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 reporting period. There is no diagnosis associated with this measure. It is anticipated that clinicians who provide the listed anesthesia services as specified in the denominator coding will submit this measure.

Measure Reporting via Registry:
CPT codes, CPT Category II codes, and patient demographics are used to identify patients who are included in the measure’s denominator. The listed numerator options are used to report the numerator of 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 encounter during the reporting 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, 00326, 00350, 00352, 00400, 00402, 00404, 00406, 00410, 00450, 00454, 00470, 00472, 00474, 00500, 00502, 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, 00647, 00700, 00702, 00704, 00740, 00750, 00752, 00754, 00756, 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, 00902, 00904,
00906, 00908, 00910, 00912, 00914, 00916, 00918, 00920, 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, 01520, 01522, 01550, 01552, 01554, 01570, 01580, 01582, 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 intraoperatively (4558F)

**OR**

**Medical Performance Exclusion:**

Documentation of medical reason for not receiving at least 2 prophylactic pharmacologic anti-emetic agents of different classes preoperatively and intraoperatively (e.g., intolerance or other medical reason) (4558F with 1P)

**OR**

**Performance Not Met:**

Patient did not receive at least 2 prophylactic pharmacologic anti-emetic agents of different classes preoperatively and intraoperatively (4558F with 8P)
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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2016 Registry Individual Measure Flow
PQRS #430: Prevention of Post-Operative Nausea and Vomiting (PONV)- Combination Therapy

**SAMPLE CALCULATIONS:**

**Reporting Rate**

\[
\text{Reporting Rate} = \frac{\text{Performance Met} (a=4 \text{ procedures}) + \text{Performance Exclusion} (b=1 \text{ procedure}) + \text{Performance Not Met} (c=2 \text{ procedures})}{\text{Eligible Population} / \text{Denominator} (d=8 \text{ procedures})} = 87.50\%
\]

**Performance Rate**

\[
\text{Performance Rate} = \frac{\text{Performance Met} (a=4 \text{ procedures})}{\text{Reporting Numerator} (r=7 \text{ procedures})} = 66.66\%
\]

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

NOTE: Reporting Frequency: Procedure

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2016 Registry Individual Measure Flow
PQRS #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. Encounter Performed:
   a. If Encounter as Listed in the Denominator equals No, do not include in Eligible Patient Population. Stop Processing.
   b. If Encounter as Listed in the Denominator equals Yes, proceed to check Patient Received Inhalation Anesthetic Agent.

4. Check Patient Received Inhalational Anesthetic Agent:
   a. 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 Reporting Met and Performance Met.
b. Reporting Met and Performance Met letter is represented in the Reporting Rate 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 Reporting Met and Performance Exclusion.

   b. Reporting Met and Performance Exclusion letter is represented in the Reporting Rate 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 Patient did Not Receive 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 Reporting Met and Performance Not Met.

   b. Reporting Met and Performance Not Met letter is represented in the Reporting Rate and Performance 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 Reporting Not Met.

11. Check Reporting Not Met:

   a. If Reporting Not Met equals No, Quality Data Code or equivalent not reported. 1 procedure has been subtracted from the reporting numerator in the sample calculation.

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### SAMPLE CALCULATIONS:

- Reporting Rate:
  
  \[
  \text{Performance Met (a=4 procedures)} + \text{Performance Exclusion (b=1 procedure)} + \text{Performance Not Met (c=2 procedures)} = 7 \text{ procedures} = \frac{87.50\%}{8 \text{ procedures}}
  \]

- Performance Rate:
  
  \[
  \text{Performance Met (a=4 procedures)} = 4 \text{ procedures} = \frac{66.66\%}{8 \text{ procedures}}
  \]

- Reporting Numerator:
  
  \[
  (7 \text{ procedures}) - (1 \text{ procedure}) = 6 \text{ procedures}
  \]