Quality ID #424 : Perioperative Temperature Management
– National Quality Strategy Domain: Patient Safety
– Meaningful Measure Area: Preventable Healthcare Harm

2021 COLLECTION TYPE:
MIPS CLINICAL QUALITY MEASURES (CQMS)

MEASURE TYPE:
Outcome – High Priority

DESCRIPTION:
Percentage of patients, regardless of age, who undergo surgical or therapeutic procedures under general or neuraxial anesthesia of 60 minutes duration or longer for whom at least one body temperature greater than or equal to 35.5 degrees Celsius (or 95.9 degrees Fahrenheit) was achieved within the 30 minutes immediately before or the 15 minutes immediately after anesthesia end time

INSTRUCTIONS:
This measure is to be submitted **each time** any procedure including surgical, therapeutic or diagnostic is performed under general or neuraxial anesthesia during the performance period. There is no diagnosis associated with this measure. It is anticipated that Merit-based Incentive Payment System (MIPS) eligible clinicians who provide the listed anesthesia services as specified in the denominator coding will submit this measure.

Measure Submission Type:
Measure data may be submitted by individual MIPS eligible clinicians, groups, or third party intermediaries. The listed denominator criteria are used to identify the intended patient population. The numerator options included in this specification are used to submit the quality actions as allowed by the measure. The quality-data codes listed do not need to be submitted by MIPS eligible clinicians, groups, or third party intermediaries that utilize this modality for submissions; however, these codes may be submitted for those third party intermediaries that utilize Medicare Part B claims data. For more information regarding Application Programming Interface (API), please refer to the Quality Payment Program (QPP) website.

DENOMINATOR:
All patients, regardless of age, who undergo surgical or therapeutic procedures under general or neuraxial anesthesia of 60 minutes duration or longer

Denominator Instructions:
The anesthesia time used for this measure should be the time recorded in the anesthesia record.

Denominator Criteria (Eligible Cases):
All patients, regardless of age
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, 00326, 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, 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, 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, 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, 01924, 01925, 01926, 01930, 01931, 01932, 01933, 01935, 01936, 01951, 01952, 01961, 01962, 01963, 01965, 01966

AND

Anesthesia of 60 minutes duration or longer: 4255F

AND NOT

DENOMINATOR EXCLUSIONS:

Monitored Anesthesia Care (MAC): G9654

OR

Peripheral Nerve Block (PNB): G9770

NUMERATOR:

Patients for whom at least one body temperature greater than or equal to 35.5 degrees Celsius (or 95.9 degrees Fahrenheit) was achieved within the 30 minutes immediately before or the 15 minutes immediately after anesthesia end time

Numerator Options:

Performance Met:	At least 1 body temperature measurement equal to or greater than 35.5 degrees Celsius (or 95.9 degrees Fahrenheit) achieved within the 30 minutes immediately before or the 15 minutes immediately after anesthesia end time **(G9771)**
OR	
Denominator Exception:	Documentation of medical reason(s) for not achieving at least 1 body temperature measurement equal to or greater than 35.5 degrees Celsius (or 95.9 degrees Fahrenheit) within the 30 minutes immediately before or the 15 minutes immediately after anesthesia end time (e.g., Emergency cases, Intentional hypothermia, etc.) **(G9772)**
OR	
Performance Not Met:	At least 1 body temperature measurement equal to or greater than 35.5 degrees Celsius (or 95.9 degrees Fahrenheit) not achieved within the 30 minutes immediately before or the 15 minutes immediately after anesthesia end time, Reason Not Given **(G9773)**

RATIONALE:

A drop in core temperature during surgery, known as perioperative hypothermia, can result in numerous adverse effects, which can include adverse myocardial outcomes, subcutaneous vasoconstriction, increased incidence of surgical site infection, and impaired healing of wounds. The desired outcome, reduction in adverse surgical effects due to perioperative hypothermia, is affected by maintenance of normothermia during surgery.

Unintended perioperative hypothermia occurs in up to 20% of surgical patients. An observational cohort study in a pediatric setting found that more than 50% of children experienced intraoperative hypothermia. Pediatric patients undergoing major surgery were at greater risk of intraoperative hypothermia.

CLINICAL RECOMMENDATION STATEMENTS:

Evidence-Based Clinical Practice Guideline for the Promotion of Perioperative Normothermia: Second Edition; American Society of PeriAnesthesia Nurses (ASPAN), 2010

Preadmission/Preoperative Recommendations

Assessment: Assess for risk factors for perioperative hypothermia (Class I, Level C); Measure patient temperature on admission (Class I, Level C); Determine patient's thermal comfort level (Class I, Level C); Assess for signs and symptoms of hypothermia (Class I, Level C); Document and communicate all risk factor assessment findings to all members of the anesthesia/surgical team (Class I, Level A)

Interventions: Implement passive thermal care measures (Class I, Level B); Maintain ambient room temperature at or above 24 degrees Celsius (Class I, Level C); Institute active warming for patients who are hypothermic (Class IIb, Level B); Consider preoperative warming to reduce the risk of intra/postoperative hypothermia (Class IIb, Level B)

Intraoperative Recommendations

Assessment: Identify patient's risk factors for unplanned preoperative hypothermia (Class I, Level C); Frequent intraoperative temperature monitoring should be considered in all cases (Class I, Level C); Assess for signs and symptoms of hypothermia (Class IIb, Level C); Determine patient's thermal comfort level (Class IIb, Level C); Document and communicate all risk factor assessment findings to all members of the anesthesia/surgical team (Class I, Level A)

Interventions: Limit skin exposure to lower ambient environmental temperatures (Class I, Level C); Initiate passive warming measures (Class I, Level C); Maintain ambient room temperature from 20-25 degrees Celsius based on Association of periOperative Registered Nurses (AORN) and architectural recommendations (Class I, Level C); Patients undergoing a procedure with an anticipated anesthesia time greater than 30 minutes (Class I, Level C) and/or who are hypothermic preoperatively (Class I, Level A), and/or patients at risk for hypothermia (Class I, Level C) or at increased risk for suffering its complications (Class I, Level C) – Forced air warming should be implemented (Class I, Level A); There is evidence to suggest that alternative active warming measures may maintain normothermia when used alone or in combination with forced air warming (Class IIb, Level B). These warming measures include: Warmed IV fluids (Class IIa, Level B), Warmed irrigation fluids (Class IIb, Level B), Circulating water garments (Class IIb, Level B), Circulating water mattresses (Class IIb, Level B), Radiant heat (Class IIb, Level B), Gel pad surface warming (Class IIa, Level B), Resistive heating (Class IIa, Level B) (ASPAN, 2010)

Guideline on Perioperative Cardiovascular Evaluation and Management of Patients Undergoing Noncardiac Surgery; American College of Cardiology/American Heart Association Task Force on Practice Guidelines, 2014

Maintenance of normothermia may be reasonable to reduce perioperative cardiac events in patients undergoing noncardiac surgery (Class IIb Recommendation, Level of Evidence B)

COPYRIGHT:

The Measure is not a clinical guideline, does not establish a standard of medical care, and has not been tested for all potential applications.

The Measure, 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 Measure for commercial gain, or incorporation of the Measure into a product or service that is sold, licensed or distributed for commercial gain.

Commercial uses of the Measure require a license agreement between the user and ASA be responsible for any use of the Measure.

The PCPI's and AMA's significant past efforts and contributions to the development and updating of the Measures are acknowledged.

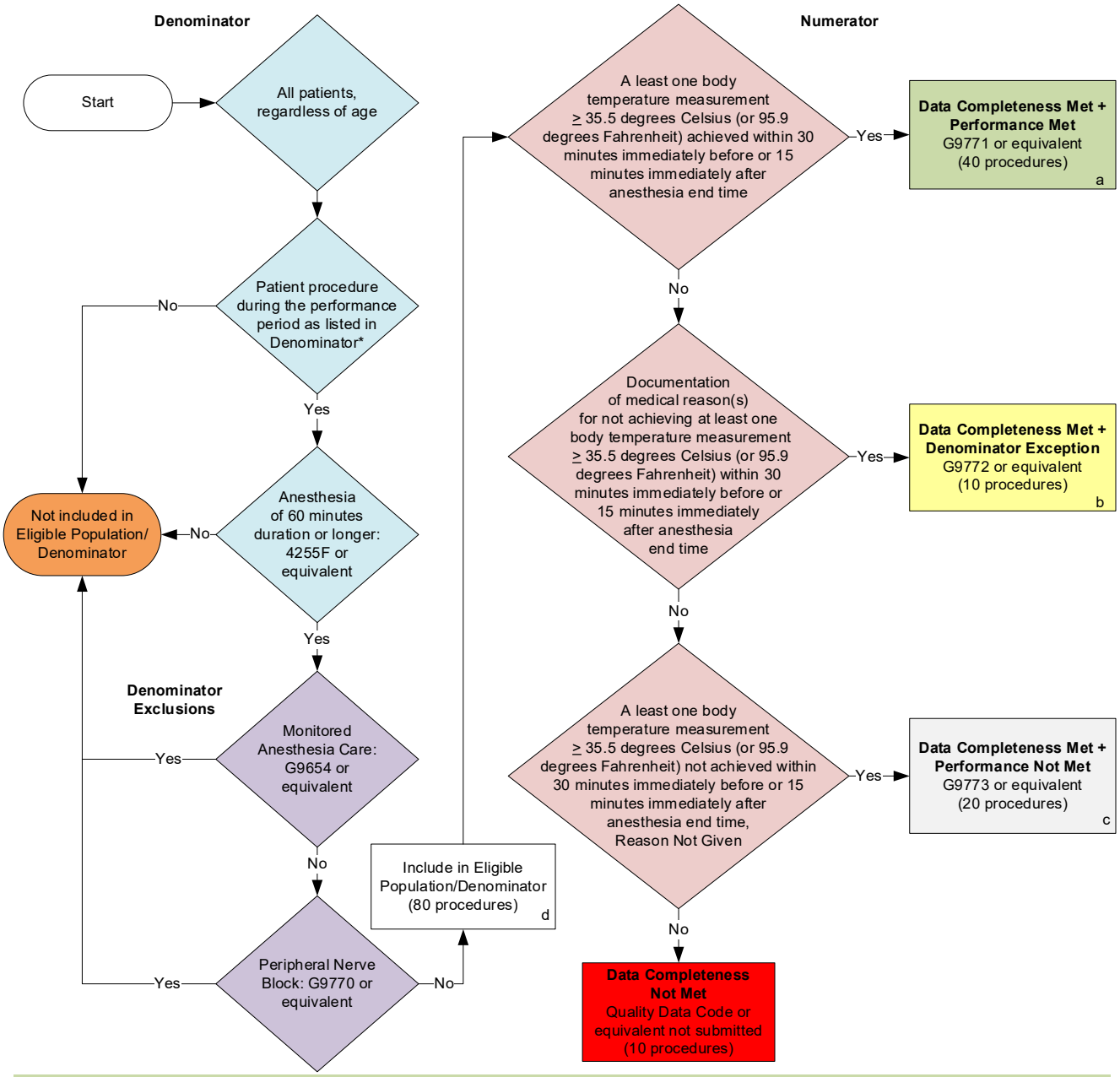
ASA is solely responsible for the review and enhancement ("Maintenance") of the Measure as of July 1, 2020.

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

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

2021 Clinical Quality Measure Flow for Quality ID #424: Perioperative Temperature Management

Disclaimer: *Refer to the measure specification for specific coding and instructions to submit this measure.*



SAMPLE CALCULATIONS

Data Completeness=

Performance Met (a=40 procedures) + Denominator Exception (b=10 procedures) + Performance Not Met (c=20 procedures) = 70 procedures = **87.50%**

Eligible Population / Denominator (d=80 procedures) = 80 procedures

Performance Rate=

Performance Met (a=40 procedures) = 40 procedures = **66.66%**

Data Completeness Numerator (70 procedures) – Denominator Exception (b=10 procedures) = 60 procedures

*See the posted measure specification for specific coding and instructions to submit this measure.

NOTE: Submission Frequency: Procedure

2021 Clinical Quality Measure Flow Narrative for Quality ID #424: Perioperative Temperature Management

***Disclaimer**: Refer to the measure specification for specific coding and instructions to submit this measure.*

1. Start with Denominator

2. *All patients, regardless of age*

3. Check *Patient procedure during the performance period as listed in Denominator**:

    a. If *Patient procedure during the performance period as listed in Denominator** equals No, do not include in *Eligible Population/Denominator*. Stop processing.

    b. If *Patient procedure during the performance period as listed in Denominator** equals Yes, proceed to check *Anesthesia of 60 minutes duration or longer*.

4. Check *Anesthesia of 60 minutes duration or longer*:

    a. If *Anesthesia of 60 minutes duration or longer* equals No, do not include in *Eligible Population/Denominator*. Stop processing.

    b. If *Anesthesia of 60 minutes duration or longer* equals Yes, proceed to check *Monitored Anesthesia Care*.

5. Check *Monitored Anesthesia Care:*

    a. If *Monitored Anesthesia Care* equals Yes, do not include in *Eligible Population/Denominator*. Stop processing.

    b. If *Monitored Anesthesia Care* equals No, proceed to check *Peripheral Nerve Block*.

6. Check *Peripheral Nerve Block*:

    a. If *Peripheral Nerve Block* equals Yes, do not include *in Eligible Population/Denominator*. Stop processing.

    b. If *Peripheral Nerve Block* equals No, include in the *Eligible Population/Denominator*.

7. Denominator Population:

    a. Denominator Population is all Eligible Procedures 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 *At least one body temperature measurement greater than or equal to 35.5 degrees Celsius (or 95.9 degrees Fahrenheit) achieved within 30 minutes immediately before or 15 minutes immediately after anesthesia end time*:

    a. If *At least one body temperature measurement greater than or equal to 35.5 degrees Celsius (or 95.9 degrees Fahrenheit) achieved within 30 minutes immediately before or 15 minutes immediately after anesthesia end time* equals Yes, include in *Data Completeness Met and Performance Met*.

        - *Data Completeness Met and Performance Met* 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.

b. If *At least one body temperature measurement greater than or equal to 35.5 degrees Celsius (or 95.9 degrees Fahrenheit) achieved within 30 minutes immediately before or 15 minutes immediately after anesthesia end time* equals No, proceed to check *Documentation of medical reason(s) for not achieving at least one body temperature measurement greater than or equal to 35.5 degrees Celsius (or 95.9 degrees Fahrenheit) within 30 minutes immediately before or 15 minutes immediately after anesthesia end time*.

10. Check *Documentation of medical reason(s) for not achieving at least one body temperature measurement greater than or equal to 35.5 degrees Celsius (or 95.9 degrees Fahrenheit) within 30 minutes immediately before or 15 minutes immediately after anesthesia end time*:

    a. If *Documentation of medical reason(s) for not achieving at least one body temperature measurement greater than or equal to 35.5 degrees Celsius (or 95.9 degrees Fahrenheit) within 30 minutes immediately before or 15 minutes immediately after anesthesia end time* equals Yes, include in *Data Completeness Met and Denominator Exception*.

        - *Data Completeness Met and Denominator Exception* 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.

    b. If *Documentation of medical reason(s) for not achieving at least one body temperature measurement greater than or equal to 35.5 degrees Celsius (or 95.9 degrees Fahrenheit) within 30 minutes immediately before or 15 minutes immediately after anesthesia end time* equals No, proceed to check *At least one body temperature measurement greater than or equal to to 35.5 degrees Celsius (or 95.9 degrees Fahrenheit) not achieved within 30 minutes immediately before or 15 minutes immediately after anesthesia end time, Reason Not Given*.

11. Check *At least one body temperature measurement greater than or equal to to 35.5 degrees Celsius (or 95.9 degrees Fahrenheit) not achieved within 30 minutes immediately before or 15 minutes immediately after anesthesia end time, Reason Not Given*:

    a. If *At least one body temperature measurement greater than or equal to to 35.5 degrees Celsius (or 95.9 degrees Fahrenheit) not achieved within 30 minutes immediately before or 15 minutes immediately after anesthesia end time, Reason Not Given* equals Yes, include in *Data Completeness Met and Performance Not Met*.

        - *Data Completeness Met and Performance Not Met* is represented in the Data Completeness in the Sample Calculation listed at the end of this document. Letter c equals 20 procedures in the Sample Calculation.

    b. If *At least one body temperature measurement greater than or equal to to 35.5 degrees Celsius (or 95.9 degrees Fahrenheit) not achieved within 30 minutes immediately before or 15 minutes immediately after anesthesia end time, Reason Not Given* equals No, proceed to check *Data Completeness Not Met*.

12. Check *Data Completeness Not Met*:

    a. If *Data Completeness Not Met*, the Quality Data Code or equivalent was not submitted. 10 procedures have been subtracted from the Data Completeness Numerator in the Sample Calculation.

Sample Calculations

Data Completeness equals Performance Met (a equals 40 procedures) plus Denominator Exception (b equals 10 procedures) plus Performance Not Met (c equals 20 procedures) divided by Eligible Population/Denominator (d equals 80 procedures). All equals 70 procedures divided by 80 procedures. All equals 87.50 percent.

Performance Rate equals Performance Met (a equals 40 procedures) divided by Data Completeness Numerator (70 procedures) minus Denominator Exception (b equals 10 procedures). All equals 40 procedures divided by 60 procedures. All equals 66.66 percent.

*See the posted measure specification for specific coding and instructions to submit this measure.

NOTE: Submission Frequency: Procedure

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.