



Measure Information

This document contains the information submitted by measure developers/stewards, but is organized according to NQF's measure evaluation criteria and process. The item numbers refer to those in the submission form but may be in a slightly different order here. In general, the item numbers also reference the related criteria (e.g., item 1b.1 relates to sub criterion 1b).

Brief Measure Information

NQF #: 2681

Corresponding Measures:

De.2. Measure Title: Perioperative Temperature Management

Co.1.1. Measure Steward: American Society of Anesthesiologists

De.3. Brief Description of Measure: 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

1b.1. Developer Rationale: A drop in core temperature during surgery, known as perioperative hypothermia, can result in numerous adverse effects, which can include adverse myocardial ischemia, infarction or dysrhythmia, 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 strongly influenced by intraoperative anesthesia practice and the attention paid to preserving and supporting core body temperature during the case.

S.4. Numerator Statement: 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.

S.6. Denominator Statement: All patients, regardless of age, who undergo surgical or therapeutic procedures under general or neuraxial anesthesia of 60 minutes duration or longer.

S.8. Denominator Exclusions: The measure excludes patients undergoing cardiopulmonary bypass and those patients receiving regional nerve block or monitored anesthesia care without general anesthesia.

De.1. Measure Type: Outcome

S.17. Data Source: Registry Data

S.20. Level of Analysis: Clinician : Group/Practice, Clinician : Individual

IF Endorsement Maintenance – Original Endorsement Date: Sep 03, 2015 **Most Recent Endorsement Date:** Sep 03, 2015

IF this measure is included in a composite, NQF Composite#/title:

IF this measure is paired/grouped, NQF#/title:

De.4. IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results? The measure is not paired or grouped with other measures.

1. Evidence, Performance Gap, Priority – Importance to Measure and Report

Extent to which the specific measure focus is evidence-based, important to making significant gains in healthcare quality, and improving health outcomes for a specific high-priority (high-impact) aspect of healthcare where there is variation in or overall less-than-optimal performance. **Measures must be judged to meet all sub criteria to pass this criterion and be evaluated against the remaining criteria.**

1a. Evidence to Support the Measure Focus – See attached Evidence Submission Form

2014-01-14_Temperature_NQF_MeasSubm_Evidence_FINAL-635568462754068861.docx

1a.1 For Maintenance of Endorsement: Is there new evidence about the measure since the last update/submission?

Do not remove any existing information. If there have been any changes to evidence, the Committee will consider the new evidence. Please use the most current version of the evidence attachment (v7.1). Please use red font to indicate updated evidence.

1b. Performance Gap

Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating:

- considerable variation, or overall less-than-optimal performance, in the quality of care across providers; and/or
- Disparities in care across population groups.

1b.1. Briefly explain the rationale for this measure (e.g., how the measure will improve the quality of care, the benefits or improvements in quality envisioned by use of this measure)

If a COMPOSITE (e.g., combination of component measure scores, all-or-none, any-or-none), SKIP this question and answer the composite questions.

A drop in core temperature during surgery, known as perioperative hypothermia, can result in numerous adverse effects, which can include adverse myocardial ischemia, infarction or dysrhythmia, 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 strongly influenced by intraoperative anesthesia practice and the attention paid to preserving and supporting core body temperature during the case.

1b.2. Provide performance scores on the measure as specified (current and over time) at the specified level of analysis. *(This is required for maintenance of endorsement. Include mean, std dev, min, max, interquartile range, scores by decile. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities include.) This information also will be used to address the sub-criterion on improvement (4b1) under Usability and Use.*

This is a new measure based on an improvement to NQF #0454.

For comparison, information below displays data on the submitted Outcome Perioperative Temperature Management measure as well as data collected on a process Perioperative Temperature Management measure (NQF #0454/PQRS #193).

Submitted Outcome Measure (NACOR Public Use File) – The outcome is determined by finding the measure temperature within the record. For the outcome measure, NACOR mined data collected from groups that submitted temperature measure values for the case. Using the criteria of the measure, NACOR collected the following data:

Year: 2010 (Perioperative Temperature Management – Outcome)

Practices: 2

Facilities: 2

Providers: 238

Cases: 1628

Performance Score Mean: 54.74

Performance Score Std. Deviation: 25.05

Performance Score Min: 0

Performance Score Max: 100

Performance Score Interquartile Range: 28.48

Performance Scores by Decile:

10th Percentile: 20.00

20th Percentile: 33.33

30th Percentile: 45.14

40th Percentile: 50.00

Median: 59.28

60th Percentile: 63.45

70th Percentile: 68.42

80th Percentile: 73.79

90th Percentile: 83.26

Year: 2011 (Perioperative Temperature Management – Outcome)

Practices: 3

Facilities: 3

Providers: 176

Cases: 388

Performance Score Mean: 57.84

Performance Score Std. Deviation: 33.96

Performance Score Min: 0

Performance Score Max: 100

Performance Score Interquartile Range: 45.83

Performance Scores by Decile:

10th Percentile: 0.00

20th Percentile: 25.00

30th Percentile: 50.00

40th Percentile: 50.00

Median: 63.64

60th Percentile: 69.13

70th Percentile: 76.67

80th Percentile: 100.00

90th Percentile: 100.00

Year: 2012 (Perioperative Temperature Management – Outcome)

Practices: 2

Facilities: 2

Providers: 168

Cases: 3,884

Performance Score Mean: 93.89

Performance Score Std. Deviation: 15.63

Performance Score Min: 0

Performance Score Max: 100.00

Performance Score Interquartile Range: 5.19

Performance Scores by Decile:

10th Percentile: 91.90

20th Percentile: 93.69

30th Percentile: 95.29

40th Percentile: 96.17

Median: 96.86

60th Percentile: 97.93

70th Percentile: 98.82

80th Percentile: 100.00

90th Percentile: 100.00

Year: 2013 (Perioperative Temperature Management – Outcome)

Practices: 1

Facilities: 1

Providers: 140

Cases: 4,690

Performance Score Mean: 96.07

Performance Score Std. Deviation: 9.09

Performance Score Min: 0

Performance Score Max: 100.00

Performance Score Interquartile Range: 2.77

Performance Scores by Decile:

10th Percentile : 91.93

20th Percentile: 95.35

30th Percentile: 96.62
40th Percentile: 97.25
Median: 97.97
60th Percentile: 98.35
70th Percentile: 98.78
80th Percentile: 99.20
90th Percentile: 100.00

Data Collected on NQF #0454/PQRS #193 (NACOR Public Use File)

Year: 2010 (Perioperative Temperature Management – Process; NQF #0454/PQRS #193)

Practices: 18

Facilities: 80

Providers: 593

Cases: 32,690

Performance Score Mean: 91.19

Performance Score Std. Deviation: 21.40

Performance Score Min: 0

Performance Score Max: 100.00

Performance Score Interquartile Range: 1.68

Performance Scores by Decile:

10th Percentile: 53.20

20th Percentile: 96.15

30th Percentile: 100.00

40th Percentile: 100.00

Median: 100.00

60th Percentile: 100.00

70th Percentile: 100.00

80th Percentile: 100.00

90th Percentile: 100.00

Year: 2011 (Perioperative Temperature Management – Process; NQF #0454/PQRS #193)

Practices: 40

Facilities: 160

Providers: 1,578

Cases: 89,548

Performance Score Mean: 95.54

Performance Score Std. Deviation: 15.10

Performance Score Min: 0

Performance Score Max: 100.00

Performance Score Interquartile Range: 0.00

Performance Scores by Decile:

10th Percentile: 94.70

20th Percentile: 100.00

30th Percentile: 100.00

40th Percentile: 100.00

Median: 100.00

60th Percentile: 100.00

70th Percentile: 100.00

80th Percentile: 100.00

90th Percentile: 100.00

Year: 2012 (Perioperative Temperature Management – Process; NQF #0454/PQRS #193)

Practices: 57

Facilities: 287

Providers: 2,251
Cases: 155,590
Performance Score Mean: 95.90
Performance Score Std. Deviation: 11.31
Performance Score Min: 0
Performance Score Max: 100.00
Performance Score Interquartile Range: 2.64
Performance Scores by Decile:
10th Percentile: 87.10
20th Percentile: 95.24
30th Percentile: 98.61
40th Percentile: 100.00
Median: 100.00
60th Percentile: 100.00
70th Percentile: 100.00
80th Percentile: 100.00
90th Percentile: 100.00

Year: 2013 (Perioperative Temperature Management – Process; NQF #0454/PQRS #193)

Practices: 99
Facilities: 492
Providers: 4,750
Cases: 247,951
Performance Score Mean: 95.30
Performance Score Std. Deviation: 12.79
Performance Score Min: 0
Performance Score Max: 100.00
Performance Score Interquartile Range: 2.56
Performance Scores by Decile:
10th Percentile: 85.24
20th Percentile: 95.24
30th Percentile: 98.90
40th Percentile: 100.00
Median: 100.00
60th Percentile: 100.00
70th Percentile: 100.00
80th Percentile: 100.00
90th Percentile: 100.00

1b.3. If no or limited performance data on the measure as specified is reported in 1b2, then provide a summary of data from the literature that indicates opportunity for improvement or overall less than optimal performance on the specific focus of measurement.

NACOR has performance data for the outcome measure submitted for endorsement as specified. The outcome is determined by finding the measure temperature within the record. For the outcome measure, NACOR mined data collected from groups that submitted temperature measure values for the case.

Because of the similar nature of the submitted outcome Perioperative Temperature Management measure (Outcome) and NQF #0454/PQRS #193 process Perioperative Temperature Management measure (Process), we reviewed the performance and reliability of each measure (as data was available in NACOR) and believe that endorsement of the outcome measure and uptake by additional providers in public reporting programs, as occurred with the process measure, will, over time, impact performance scores and enhance reliability for the outcome measure as well.

In looking at performance scores for the process measure, the performance rate from 2010 to 2013 increased from 91.19% to 95.30%. Among several factors influencing this reporting, as the measure was endorsed by NQF, adopted by the Physician Quality Reporting System and reporting data to NACOR became more accessible, the number of providers reporting the measure grew by

4,157 (801%) and cases reported increased by 758.5%.

The submitted outcome measure targets a similar population as NQF #0454/PQRS #193 and has a similar intent as the currently-used PQRS #193 measure – a measure that has been in use for several years. NQF #0454/PQRS #193 contained an “or” provision used to allow clinicians two criteria for meeting measure performance: Percentage of patients, regardless of age, undergoing surgical or therapeutic procedures under general or neuraxial anesthesia of 60 minutes duration or longer, except patients undergoing cardiopulmonary bypass, for whom EITHER active warming was used intraoperatively for the purpose of maintaining normothermia, OR at least one body temperature equal to or greater than 36 degrees Centigrade (or 96.8 degrees Fahrenheit) was recorded within the 30 minutes immediately before or the 15 minutes immediately after anesthesia end time.

Recent scientific evidence has noted deficiencies in this measure as originally specified (Steelman VN, Perkhounkova YS, Lemke JH. The gap between compliance with the quality performance measure “Perioperative Temperature Management” and normothermia. Journal for Healthcare Quality 2014.) This paper observed that 5.8% of patients who “passed” the measure were still hypothermic in the Post-Anesthesia Care Unit, and thus at risk for adverse outcomes.

As warming technology has evolved it has become possible for an attentive anesthesia provider to maintain normothermia in any patient under general anesthesia, regardless of surgical conditions, and this is now the expected standard of care. Evidence supports the use of active warming techniques other than forced-air warming. Active warming techniques include warmed IV fluids, warmed irrigation fluids, circulating water garments, circulating water mattresses, radiant heat, gel pad surface warming and resistive heating.

The outcome measure removes active warming from the measure and lowers the threshold for body temperature to 35.5 degrees Centigrade. The change to the numerator and denominator reflects the work of the AMA-PCPI Anesthesiology and Critical Care workgroup. When looking at the outcome measure, the performance rate for the available data and number of institutions submitting data may be indicative of performance and reliability analysis in the future. For the extracted cases, where temperature was recorded within the designated time frame for the submitted measure, we believe a similar growth in reporting and performance will occur.

1b.4. Provide disparities data from the measure as specified (current and over time) by population group, e.g., by race/ethnicity, gender, age, insurance status, socioeconomic status, and/or disability. *(This is required for maintenance of endorsement. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included.) For measures that show high levels of performance, i.e., “topped out”, disparities data may demonstrate an opportunity for improvement/gap in care for certain sub-populations. This information also will be used to address the sub-criterion on improvement (4b1) under Usability and Use.*

This is a new measure based on an improvement of NQF #0454.

For comparison, information below displays data on the submitted Outcome Perioperative Temperature Management measure as well as data collected on a process Perioperative Temperature Management measure (NQF #0454/PQRS #193).

Submitted Outcome Measure (NACOR Public Use File) – The outcome is determined by finding the measure temperature within the record, the data displays disparity data by year. For the outcome measure, NACOR mined data collected from groups that submitted temperature measure values for the case. Collection of data and coding of Medicare patients is incumbent upon the submitter. Using the measure criteria, NACOR collected the following data:

Year: 2010 (Perioperative Temperature Management – Outcome)

Gender: Female =766 , Male=862

Age: <1 = 78, 1-18=821, 19-49=288, 50-64=209, 65-79=174, 80+=58

ASA Physical Status (I-II): 6

ASA Physical Status (III-V): 2

ASA Physician Status Not Reported: 1,620

Year: 2011 (Perioperative Temperature Management – Outcome)

Gender: Female=193, Male=195

Age: <1 = 10, 1-18=155, 19-49=97, 50-64=53, 65-79=56, 80+=17

ASA Physical Status (I-II): 6

ASA Physical Status (III-V): 3
ASA Physician Status Not Reported: 379

Year: 2012 (Perioperative Temperature Management – Outcome)
Gender: Female=2,113, Male=1,771
Age: <1 =1, 1-18=94, 19-49=1,403, 50-64=1,148, 65-79=1,009, 80+=229
ASA Physical Status (I-II): 1,761
ASA Physical Status (III-V): 1,921
ASA Physician Status Not Reported: 202

Year: 2013 (Perioperative Temperature Management – Outcome)
Gender: Female=2,596, Male=2,094
Age: <1 =3, 1-18=133, 19-49=1,690, 50-64=1,448, 65-79=1,487, 80+=229
ASA Physical Status (I-II): 2,202
ASA Physical Status (III-V): 2,440
ASA Physician Status Not Reported: 48

Disparities on NQF #0454/PQRS #193 (NACOR Public Use File) – For Comparison Purposes. The data displayed below constitutes patients coded as Medicare.

Year: 2010 (Perioperative Temperature Management – Process; NQF #0454/PQRS #193)
Gender: Female=17,928, Male=14,761, Not Reported=1
Age: <1 =1, 1-18=3, 19-49=2,054, 50-64=4,144, 65-79=18,329, 80+=8,154, Not Reported=5
ASA Physical Status (I-II): 14,951
ASA Physical Status (III-V): 17,095
ASA Physician Status Not Reported: 644

Year: 2011 (Perioperative Temperature Management – Process; NQF #0454/PQRS #193)
Gender: Female=42,887, Male=35,045, Not Reported=11,616
Age: <1 =3, 1-18=26, 19-49=4,221, 50-64=8,814, 65-79=45,388, 80+=19,474, Not Reported=11,622
ASA Physical Status (I-II): 46,346
ASA Physical Status (III-V): 40,231
ASA Physician Status Not Reported: 2,971

Year: 2012 (Perioperative Temperature Management – Process; NQF #0454/PQRS #193)
Gender: Female=77,193, Male=63,237, Not Reported=15,160
Age: <1 =7, 1-18=39, 19-49=7,403, 50-64=15,762, 65-79=83,970, 80+=33,257, Not Reported=15,152
ASA Physical Status (I-II): 73,859
ASA Physical Status (III-V): 75,420
ASA Physician Status Not Reported: 6,311

Year: 2013 (Perioperative Temperature Management – Process; NQF #0454/PQRS #193)
Gender: Female=134,079, Male=110,460, Not Reported=3,412
Age: <1 =25, 1-18=90, 19-49=13,290, 50-64=28,274, 65-79=146,945, 80+=55,909, Not Reported=3,418
ASA Physical Status (I-II): 101,592
ASA Physical Status (III-V): 142,947
ASA Physician Status Not Reported: 3,412

1b.5. If no or limited data on disparities from the measure as specified is reported in 1b.4, then provide a summary of data from the literature that addresses disparities in care on the specific focus of measurement. Include citations. Not necessary if performance data provided in 1b.4

We expect that the disparities data for the new measure will closely correlate with the data provided in 1b.4, since the new measure assesses the same population of patients.

2. Reliability and Validity—Scientific Acceptability of Measure Properties

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. **Measures must be judged to meet the sub criteria for both reliability and validity to pass this criterion and be evaluated against the remaining criteria.**

2a.1. Specifications The measure is well defined and precisely specified so it can be implemented consistently within and across organizations and allows for comparability. eMeasures should be specified in the Health Quality Measures Format (HQMF) and the Quality Data Model (QDM).

De.5. Subject/Topic Area (check all the areas that apply):

Cardiovascular : Coronary Artery Disease, Cardiovascular : Coronary Artery Disease (AMI), Infectious Diseases (ID), Surgery, Surgery : General Surgery, Surgery : Perioperative and Anesthesia

De.6. Non-Condition Specific(check all the areas that apply):

Safety, Safety : Complications, Safety : Healthcare Associated Infections

De.7. Target Population Category (Check all the populations for which the measure is specified and tested if any):

Children, Elderly, Populations at Risk, Populations at Risk : Dual eligible beneficiaries, Populations at Risk : Individuals with multiple chronic conditions, Populations at Risk : Veterans, Women

S.1. Measure-specific Web Page (Provide a URL link to a web page specific for this measure that contains current detailed specifications including code lists, risk model details, and supplemental materials. Do not enter a URL linking to a home page or to general information.)

http://www.aqihq.org/files/2015-01-08_Outcome_Periooperative_Temperature_Management_Measure.docx

S.2a. If this is an eMeasure, HQMF specifications must be attached. Attach the zipped output from the eMeasure authoring tool (MAT) - if the MAT was not used, contact staff. (Use the specification fields in this online form for the plain-language description of the specifications)

This is not an eMeasure Attachment:

S.2b. Data Dictionary, Code Table, or Value Sets (and risk model codes and coefficients when applicable) must be attached. (Excel or csv file in the suggested format preferred - if not, contact staff)

No data dictionary Attachment:

S.2c. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.

No, this is not an instrument-based measure Attachment:

S.2d. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.

S.3.1. For maintenance of endorsement: Are there changes to the specifications since the last updates/submission. If yes, update the specifications for S1-2 and S4-22 and explain reasons for the changes in S3.2.

No

S.3.2. For maintenance of endorsement, please briefly describe any important changes to the measure specifications since last measure update and explain the reasons.

S.4. Numerator Statement (Brief, narrative description of the measure focus or what is being measured about the target population, i.e., cases from the target population with the target process, condition, event, or outcome) DO NOT include the rationale for the measure.

IF an OUTCOME MEASURE, state the outcome being measured. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

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.

S.5. Numerator Details (All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)

IF an OUTCOME MEASURE, describe how the observed outcome is identified/counted. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

G9771: At least one body temperature greater than or equal to 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

G9772: Documentation of one of the following medical reason(s) for not achieving at least one body temperature greater than or equal to 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.)

G9773: At least one body temperature measurement greater than or equal to 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

S.6. Denominator Statement (Brief, narrative description of the target population being measured)

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

S.7. Denominator Details (All information required to identify and calculate the target population/denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b.)

IF an OUTCOME MEASURE, describe how the target population is identified. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

CPT® Code for Procedure:

00100, 00102, 00103, 00104, 00120, 00124, 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, 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, 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, 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

CPT Category II Code:

CPT® II 4255F: Duration of general or neuraxial anesthesia 60 minutes or longer, as documented in the anesthesia record

S.8. Denominator Exclusions (Brief narrative description of exclusions from the target population)

The measure excludes patients undergoing cardiopulmonary bypass and those patients receiving regional nerve block or monitored anesthesia care without general anesthesia.

S.9. Denominator Exclusion Details (All information required to identify and calculate exclusions from the denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes

with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b.)

The measure excludes patients undergoing cardiopulmonary bypass and those patients receiving regional nerve block or monitored anesthesia care without general anesthesia: 00561, 00562, 00563, 0056, 00567, 00580, 01958, 01960, 01967, 01991, 01992, CPT Codes with –QS Modifier

S.10. Stratification Information (Provide all information required to stratify the measure results, if necessary, including the stratification variables, definitions, specific data collection items/responses, code/value sets, and the risk-model covariates and coefficients for the clinically-adjusted version of the measure when appropriate – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format with at S.2b.)

The measure is not stratified.

S.11. Risk Adjustment Type (Select type. Provide specifications for risk stratification in measure testing attachment)

No risk adjustment or risk stratification

If other:

S.12. Type of score:

Rate/proportion

If other:

S.13. Interpretation of Score (Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score)

Better quality = Higher score

S.14. Calculation Algorithm/Measure Logic (Diagram or describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; time period for data, aggregating data; risk adjustment; etc.)

Step 1 - Identify event to see "relationship to desired outcome"; Inadvertent or unexpected or unintended drop in core temperature during surgery (perioperative hypothermia) in patients, regardless of age, who undergo surgical or therapeutic procedures under general or neuraxial anesthesia of 60 minutes or longer

Step 2 - Determine total population - subtract "denominator exclusions" from "denominator statement"

Step 3 - Use the total population determined in Step 2 as the denominator

Step 4 - Determine number of patients who meet inclusion criteria - subtract "denominator exceptions" from "numerator statement"

Step 5 - Divide the number of patients who meet inclusion criteria (determined in Step 4) by denominator (Step 3)

Step 6 - Multiply result from Step 5 by 100 to calculate the percentage

The measure does not include aggregating data.

Risk Adjustment – The measure is not risk-adjusted.

S.15. Sampling (If measure is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.)

IF an instrument-based performance measure (e.g., PRO-PM), identify whether (and how) proxy responses are allowed.

The measure is not based on a sample.

S.16. Survey/Patient-reported data (If measure is based on a survey or instrument, provide instructions for data collection and guidance on minimum response rate.)

Specify calculation of response rates to be reported with performance measure results.

The measure is not based on a survey.

S.17. Data Source (Check ONLY the sources for which the measure is SPECIFIED AND TESTED).

If other, please describe in S.18.

Registry Data

S.18. Data Source or Collection Instrument (*Identify the specific data source/data collection instrument (e.g. name of database, clinical registry, collection instrument, etc., and describe how data are collected.)*)

IF instrument-based, identify the specific instrument(s) and standard methods, modes, and languages of administration.

Measure data was collected by the National Anesthesia Clinical Outcomes Registry (NACOR) of the Anesthesia Quality Institute. Data was also gathered from NACOR to compare this measure with a similar measure previously endorsed by NQF and currently used in the Physician Quality Reporting System (PQRS).

S.19. Data Source or Collection Instrument (*available at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)*

No data collection instrument provided

S.20. Level of Analysis (*Check ONLY the levels of analysis for which the measure is SPECIFIED AND TESTED*)

Clinician : Group/Practice, Clinician : Individual

S.21. Care Setting (*Check ONLY the settings for which the measure is SPECIFIED AND TESTED*)

Inpatient/Hospital, Outpatient Services

If other:

S.22. COMPOSITE Performance Measure - Additional Specifications (*Use this section as needed for aggregation and weighting rules, or calculation of individual performance measures if not individually endorsed.*)

The measure is not a composite performance measure.

2. Validity – See attached Measure Testing Submission Form

2014-01-14_Temperature_MeasSubm_MeasTesting_FINAL.docx

2.1 For maintenance of endorsement

Reliability testing: If testing of reliability of the measure score was not presented in prior submission(s), has reliability testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.

2.2 For maintenance of endorsement

Has additional empirical validity testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.

2.3 For maintenance of endorsement

Risk adjustment: For outcome, resource use, cost, and some process measures, risk-adjustment that includes social risk factors is not prohibited at present. Please update sections 1.8, 2a2, 2b1,2b4.3 and 2b5 in the Testing attachment and S.140 and S.11 in the online submission form. NOTE: These sections must be updated even if social risk factors are not included in the risk-adjustment strategy. You MUST use the most current version of the Testing Attachment (v7.1) -- older versions of the form will not have all required questions.

3. Feasibility

Extent to which the specifications including measure logic, require data that are readily available or could be captured without undue burden and can be implemented for performance measurement.

3a. Byproduct of Care Processes

For clinical measures, the required data elements are routinely generated and used during care delivery (e.g., blood pressure, lab test, diagnosis, medication order).

3a.1. Data Elements Generated as Byproduct of Care Processes.

Generated or collected by and used by healthcare personnel during the provision of care (e.g., blood pressure, lab value, diagnosis, depression score), Abstracted from a record by someone other than person obtaining original information (e.g., chart abstraction for quality measure or registry)

If other:

3b. Electronic Sources

The required data elements are available in electronic health records or other electronic sources. If the required data are not in electronic health records or existing electronic sources, a credible, near-term path to electronic collection is specified.

3b.1. To what extent are the specified data elements available electronically in defined fields (i.e., data elements that are needed to compute the performance measure score are in defined, computer-readable fields) Update this field for **maintenance of endorsement**.

No data elements are in defined fields in electronic sources

3b.2. If ALL the data elements needed to compute the performance measure score are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources. For **maintenance of endorsement**, if this measure is not an eMeasure (eCQM), please describe any efforts to develop an eMeasure (eCQM).

This will be an ideal e-measure as penetration of electronic healthcare records into the Post Anesthesia Care Unit increases. Currently about 25% of surgical facilities are using EHRs, and could gather data for this measure in automated fashion. The remaining 75% are using paper records, and performance on this measure must be captured by a coder/abstractor. The critical data are patient temperatures recorded in the Post Anesthesia Care Unit. This is a routine vital sign which will be captured at least once for every patient (if normal) or repeatedly over time (if abnormal or the patient at risk for hypo- or hyper-thermia) and will make it much easier to collect, either electronically or through manual abstraction.

3b.3. If this is an eMeasure, provide a summary of the feasibility assessment in an attached file or make available at a measure-specific URL. Please also complete and attach the NQF Feasibility Score Card.

Attachment:

3c. Data Collection Strategy

Demonstration that the data collection strategy (e.g., source, timing, frequency, sampling, patient confidentiality, costs associated with fees/licensing of proprietary measures) can be implemented (e.g., already in operational use, or testing demonstrates that it is ready to put into operational use). For eMeasures, a feasibility assessment addresses the data elements and measure logic and demonstrates the eMeasure can be implemented or feasibility concerns can be adequately addressed.

3c.1. Required for maintenance of endorsement. Describe difficulties (as a result of testing and/or operational use of the measure) regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues.

If instrument-based, consider implications for both individuals providing data (patients, service recipients, respondents) and those whose performance is being measured.

The measure includes a routine vital sign which will be captured at least once for every patient (if normal) or repeatedly over time (if abnormal or the patient at risk for hypo- or hyperthermia) and will make it relatively easy to collect.

3c.2. Describe any fees, licensing, or other requirements to use any aspect of the measure as specified (e.g., value/code set, risk model, programming code, algorithm).

There are no fees, licensing, or other requirements to use any aspect of this measure.

4. Usability and Use

Extent to which potential audiences (e.g., consumers, purchasers, providers, policy makers) are using or could use performance results for both accountability and performance improvement to achieve the goal of high-quality, efficient healthcare for individuals or populations.

4a. Accountability and Transparency

Performance results are used in at least one accountability application within three years after initial endorsement and are

publicly reported within six years after initial endorsement (or the data on performance results are available). If not in use at the time of initial endorsement, then a credible plan for implementation within the specified timeframes is provided.

4.1. Current and Planned Use

NQF-endorsed measures are expected to be used in at least one accountability application within 3 years and publicly reported within 6 years of initial endorsement in addition to performance improvement.

Specific Plan for Use	Current Use (for current use provide URL)
Public Reporting	
Payment Program	
Regulatory and Accreditation Programs	
Quality Improvement (Internal to the specific organization)	

4a1.1 For each CURRENT use, checked above (update for maintenance of endorsement), provide:

- Name of program and sponsor
- Purpose
- Geographic area and number and percentage of accountable entities and patients included
- Level of measurement and setting

NA

4a1.2. If not currently publicly reported OR used in at least one other accountability application (e.g., payment program, certification, licensing) what are the reasons? (e.g., Do policies or actions of the developer/steward or accountable entities restrict access to performance results or impede implementation?)

ASA intends to retire NQF #0454/PQRS #193 and replace that measure with this submitted measure instead. This will improve its adoption and use in several reporting and accreditation programs.

4a1.3. If not currently publicly reported OR used in at least one other accountability application, provide a credible plan for implementation within the expected timeframes -- any accountability application within 3 years and publicly reported within 6 years of initial endorsement. (Credible plan includes the specific program, purpose, intended audience, and timeline for implementing the measure within the specified timeframes. A plan for accountability applications addresses mechanisms for data aggregation and reporting.)

ASA and AQI/NACOR intend to allow Eligible Professionals to report this measure via the Physician Quality Reporting System, Qualified Clinical Data Registry reporting mechanism beginning in 2015. ASA has submitted this measure to CMS for inclusion in PQRS 2016. The measure was included as a Measure Under Consideration by the Measure Applications Partnership in December 2014.

4a2.1.1. Describe how performance results, data, and assistance with interpretation have been provided to those being measured or other users during development or implementation.

How many and which types of measured entities and/or others were included? If only a sample of measured entities were included, describe the full population and how the sample was selected.

4a2.1.2. Describe the process(es) involved, including when/how often results were provided, what data were provided, what educational/explanatory efforts were made, etc.

4a2.2.1. Summarize the feedback on measure performance and implementation from the measured entities and others described in 4d.1.

Describe how feedback was obtained.

4a2.2.2. Summarize the feedback obtained from those being measured.

4a2.2.3. Summarize the feedback obtained from other users

4a2.3. Describe how the feedback described in 4a2.2.1 has been considered when developing or revising the measure specifications or implementation, including whether the measure was modified and why or why not.

Improvement

Progress toward achieving the goal of high-quality, efficient healthcare for individuals or populations is demonstrated. If not in use for performance improvement at the time of initial endorsement, then a credible rationale describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

4b1. Refer to data provided in 1b but do not repeat here. Discuss any progress on improvement (trends in performance results, number and percentage of people receiving high-quality healthcare; Geographic area and number and percentage of accountable entities and patients included.)

If no improvement was demonstrated, what are the reasons? If not in use for performance improvement at the time of initial endorsement, provide a credible rationale that describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

NA

4b2. Unintended Consequences

The benefits of the performance measure in facilitating progress toward achieving high-quality, efficient healthcare for individuals or populations outweigh evidence of unintended negative consequences to individuals or populations (if such evidence exists).

4b2.1. Please explain any unexpected findings (positive or negative) during implementation of this measure including unintended impacts on patients.

No unintended negative consequences to individuals or populations were identified during testing.

4b2.2. Please explain any unexpected benefits from implementation of this measure.

5. Comparison to Related or Competing Measures

If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure.

5. Relation to Other NQF-endorsed Measures

Are there related measures (conceptually, either same measure focus or target population) or competing measures (conceptually both the same measure focus and same target population)? If yes, list the NQF # and title of all related and/or competing measures.

Yes

5.1a. List of related or competing measures (selected from NQF-endorsed measures)

0454 : Perioperative Temperature Management

5.1b. If related or competing measures are not NQF endorsed please indicate measure title and steward.

NQF #0454 was withdrawn by the American Society of Anesthesiologists (ASA) in May 2014 during the maintenance process. NQF #0454 includes: Percentage of patients, regardless of age, undergoing surgical or therapeutic procedures under general or neuraxial anesthesia of 60 minutes duration or longer, except patients undergoing cardiopulmonary bypass, for whom either active warming was used intraoperatively for the purpose of maintaining normothermia, OR at least one body temperature equal to or greater than 36 degrees Centigrade (or 96.8 degrees Fahrenheit) was recorded within the 30 minutes immediately before or the 15 minutes

immediately after anesthesia end time”.

The submitted outcome measure removes active warming from the measure and drops the threshold for body temperature to 35.5 degrees Centigrade. ASA believes that the measure should focus on patient outcomes and compliance with a process of care (i.e., use of specific warming devices) should not be used. Literature has also demonstrated that a temperature of >35.5C is associated with improved outcomes.

5a. Harmonization of Related Measures

The measure specifications are harmonized with related measures;

OR

The differences in specifications are justified

5a.1. If this measure conceptually addresses EITHER the same measure focus OR the same target population as NQF-endorsed measure(s):

Are the measure specifications harmonized to the extent possible?

No

5a.2. If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden.

NQF #0454 was withdrawn by the American Society of Anesthesiologists (ASA) in May 2014 during the maintenance process. The Surgery Steering Committee noted that there were substantial differences between the process measure (NQF #0454) and the Outcome measure (as submitted here). NQF #0454 includes: Percentage of patients, regardless of age, undergoing surgical or therapeutic procedures under general or neuraxial anesthesia of 60 minutes duration or longer, except patients undergoing cardiopulmonary bypass, for whom either active warming was used intraoperatively for the purpose of maintaining normothermia, OR at least one body temperature equal to or greater than 36 degrees Centigrade (or 96.8 degrees Fahrenheit) was recorded within the 30 minutes immediately before or the 15 minutes immediately after anesthesia end time”. The submitted outcome measure removes active warming from the measure and drops the threshold for body temperature to 35.5 degrees Centigrade. ASA believes that the measure should focus on patient outcomes only and compliance with a process of care (i.e., use of specific warming devices) should not be used. Literature has also demonstrated that a temperature of >35.5C is associated with improved outcomes. The measure includes a routine vital sign which will be captured at least once for every patient (if normal) or repeatedly over time (if abnormal or the patient at risk for hypo- or hyperthermia) and will make it relatively easy to collect.

5b. Competing Measures

The measure is superior to competing measures (e.g., is a more valid or efficient way to measure);

OR

Multiple measures are justified.

5b.1. If this measure conceptually addresses both the same measure focus and the same target population as NQF-endorsed measure(s):

Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality); OR provide a rationale for the additive value of endorsing an additional measure. (Provide analyses when possible.)

The measure is not competing with another NQF-endorsed measure.

Appendix

A.1 Supplemental materials may be provided in an appendix. All supplemental materials (such as data collection instrument or methodology reports) should be organized in one file with a table of contents or bookmarks. If material pertains to a specific submission form number, that should be indicated. Requested information should be provided in the submission form and required attachments. There is no guarantee that supplemental materials will be reviewed.

No appendix Attachment:

Contact Information

Co.1 Measure Steward (Intellectual Property Owner): American Society of Anesthesiologists

Co.2 Point of Contact: Matthew, Popovich, m.popovich@asahq.org, 202-289-2222-316

Co.3 Measure Developer if different from Measure Steward: [American Society of Anesthesiologists](#)

Co.4 Point of Contact: [Matthew, Popovich, m.popovich@asahq.org, 202-289-2222-316](#)

Additional Information

Ad.1 Workgroup/Expert Panel involved in measure development

Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.

The AMA-PCPI-convened the Anesthesiology and Critical Care Workgroup developed the submitted measure. PCPI measures are developed through cross-specialty, multi-disciplinary work groups. All medical specialties and other health care professional disciplines participating in patient care for the clinical condition or topic under study are invited to participate as equal contributors to the measure development process. In addition, the PCPI strives to include on its work groups individuals representing the perspectives of patients, consumers, private health plans, and employers. This broad-based approach to measure development ensures buy-in on the measures from all stakeholders and minimizes bias toward any individual specialty or stakeholder group. All work groups have at least two co-chairs who have relevant clinical and/or measure development expertise and who are responsible for ensuring that consensus is achieved and that all perspectives are voiced.

The AMA-PCPI Anesthesiology and Critical Care Workgroup consisted of the following experts involved in measure development:

Alexander A. Hannenberg, MD, Co-chair – American Society of Anesthesiologists
Andrew J. Patterson, MD, PhD, Co-chair – American Board of Anesthesiology
William R. Andrews, MD, MS – American College of Chest Physicians
Rebecca A. Aslakson, MD, PhD – American Academy of Hospice and Palliative Medicine
Daniel R. Brown, MD, PhD – Mayo Clinic
Neal H. Cohen, MD, MPH, MS – American Society of Anesthesiologists
Peggy Duke, MD – American Society of Anesthesiologists
Heidi L. Frankel, MD – American College of Surgeons
Lorraine M. Jordan, BSN, MS, PhD – American Association of Nurse Anesthetists
Jeremy M. Kahn, MD, MS – American Thoracic Society
Jason N. Katz, MD, MHS – American College of Cardiology
Gerald A. Maccioli, MD – American Society of Anesthesiologists
Catherine L. Scholl, MD – Texas Medical Association
Todd L. Slesinger, MD – American College of Emergency Physicians
Victoria M. Steelman, PhD, RN – Association of Perioperative Registered Nurses
Avery Tung, MD – Society of Critical Care Medicine

In preparation for measure submission, the ASA also convened a Measure Expert Panel (MEP) who reviewed the measure specifications and were asked to rate their agreement with the following statement: "The scores obtained from the measure as specified will prove an accurate reflection of quality and can be used to distinguish good and poor quality." The results were displayed in 2b2.3.

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Measure Developer/Steward Updates and Ongoing Maintenance

Ad.2 Year the measure was first released: 2014

Ad.3 Month and Year of most recent revision: 01, 2015

Ad.4 What is your frequency for review/update of this measure? Annual

Ad.5 When is the next scheduled review/update for this measure? 01, 2016

Ad.6 Copyright statement: 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.

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

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

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Ad.7 Disclaimers: The Measures are not clinical guidelines, do not establish a standard of medical care, and have not been tested for all potential applications.

Ad.8 Additional Information/Comments: NA