

NQF-ENDORSED VOLUNTARY CONSENSUS STANDARDS FOR HOSPITAL CARE

Measure Information Form
Collected For:
CMS Voluntary Only
The Joint Commission - Retired

Measure Set: Surgical Care Improvement Project (SCIP)

Set Measure ID#: SCIP-Inf-10

Performance Measure Name: Surgery Patients with Perioperative Temperature Management

Description: Surgery patients for whom either active warming was used intraoperatively for the purpose of maintaining normothermia or who had at least one body temperature equal to or greater than 96.8° Fahrenheit/36° Celsius recorded within the 30 minutes immediately prior to or the 15 minutes immediately after *Anesthesia End Time*.

Rationale: Core temperatures outside the normal range pose a risk in all patients undergoing surgery. According to the Clinical Guidelines for the Prevention of Unplanned Perioperative Hypothermia by the American Society of PeriAnesthesia Nurses (ASPAN, 2009), published research has correlated impaired wound healing, adverse cardiac events, altered drug metabolism, and coagulopathies with unplanned perioperative hypothermia. A study by Kurtz, et al (1996), found that incidence of culture-positive surgical site infections among those with mild perioperative hypothermia was three times higher than the normothermic perioperative patients. In this study, mild perioperative hypothermia was associated with delayed wound closure and prolonged hospitalization. In a meta-analysis of outcomes and costs, Mahoney and Odom (1999), demonstrated that hypothermia is associated with a significant increase in adverse outcomes, including an increased incidence of infections. The authors also concluded that hypothermia is associated with an increased chance of blood products administration, myocardial infarction, and mechanical ventilation. These adverse outcomes resulted in prolonged hospital stays and increased healthcare expenditures.

Type of Measure: Process

Improvement Noted As: An increase in the rate.

Numerator Statement: Surgery patients for whom either active warming was used intraoperatively for the purpose of maintaining normothermia or who had at least one body temperature equal to or greater than 96.8° Fahrenheit/36° Celsius recorded within the 30 minutes immediately prior to or the fifteen minutes immediately after *Anesthesia End Time*.

Included Populations: Not applicable

Excluded Populations: None

Data Elements:

Temperature

Denominator Statement: All patients, regardless of age, undergoing surgical procedures under general or neuraxial anesthesia of greater than or equal to 60 minutes duration.

Included Populations:

An *ICD-9-CM Principal Procedure Code* of selected surgeries (as defined in Appendix A, Table 5.10 for ICD-9-CM codes).

Excluded Populations:

- Patients who have a Length of Stay greater than 120 days
- Patients whose ICD-9-CM principal procedure occurred prior to the date of admission
- Patients whose length of anesthesia was less than 60 minutes
- Patients who did not have general or neuraxial anesthesia
- Patients with physician/APN/PA documentation of *Intentional Hypothermia* for the procedure performed

Data Elements:

- *Admission Date*
- *Anesthesia Type*
- *Anesthesia End Date*
- *Anesthesia Start Date*
- *Anesthesia End Time*
- *Anesthesia Start Time*
- *Discharge Date*
- *ICD-9-CM Principal Procedure Code*
- *Intentional Hypothermia*

Risk Adjustment: No

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical record documents. Some hospitals may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunities for improvement at the point of care/service. However, complete documentation includes the principal or other ICD-9-CM diagnosis and procedure codes, which require retrospective data entry.

Data Accuracy: Variation may exist in the assignment of ICD-9-CM codes; therefore, coding practices may require evaluation to ensure consistency.

Measure Analysis Suggestions: In analyzing any unexpected measure rates for SCIP-Inf-10, hospitals may find it useful to examine the consistency with which temperatures are documented after surgery. Inconsistent documentation will reduce the hospital's score.

Sampling: Yes, please refer to the measure set specific sampling requirements and for additional information see the Population and Sampling Specifications Section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

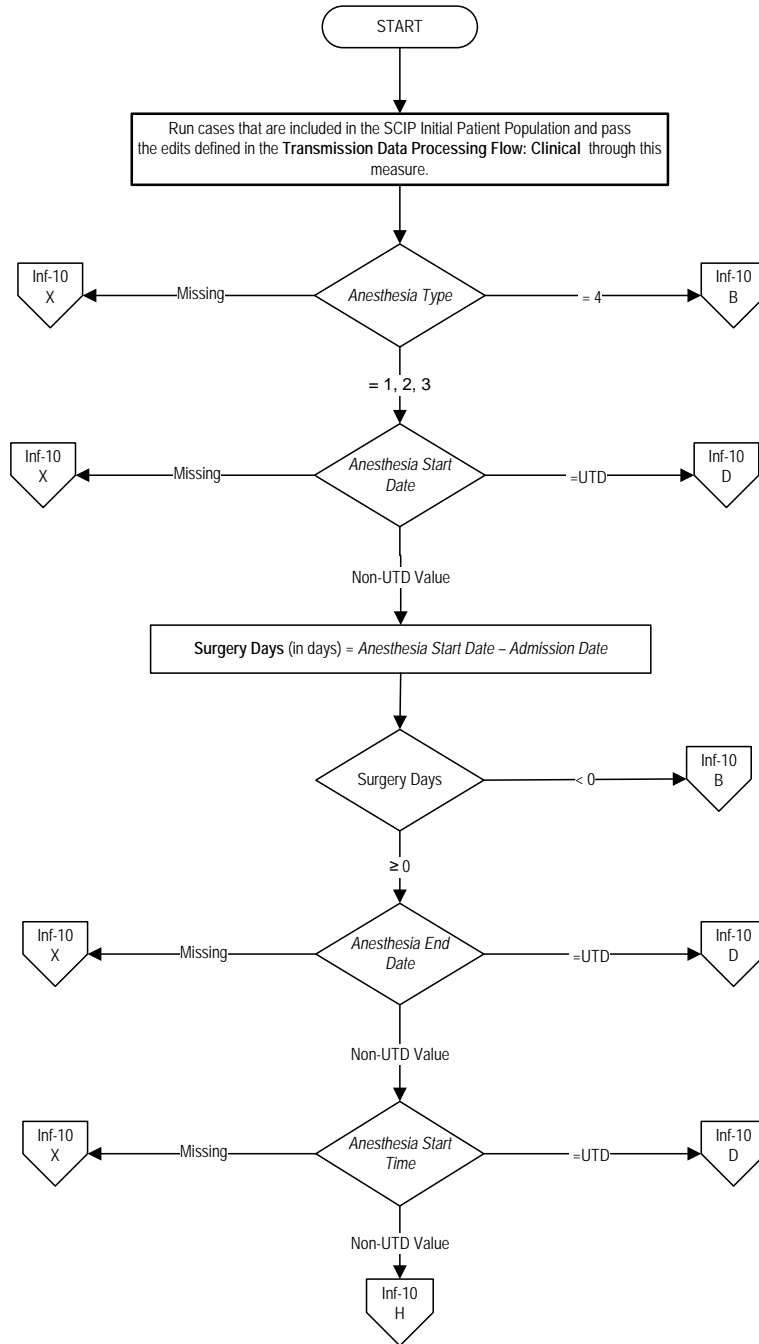
Selected References:

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- Hooper V: Perioperative thermoregulation: A survey of clinical practices. Paper presented at the Consensus Conference on Perioperative Thermoregulation, ASPAN, Bethesda, MD, 1998. PMID: 15096446.
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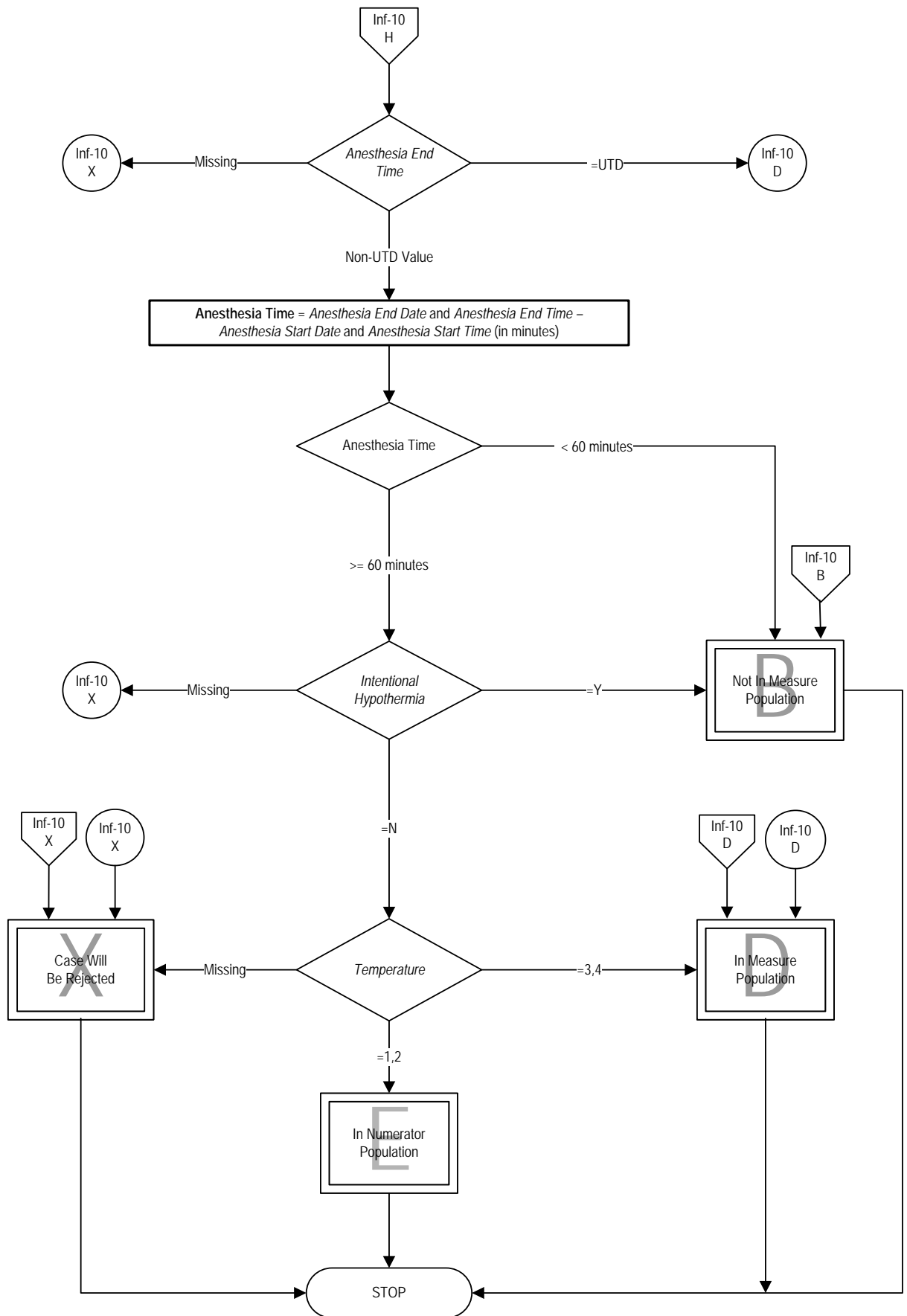
SCIP-Inf-10: Surgery Patients with Perioperative Temperature Management

Numerator: Surgery patients for whom either active warming was used intraoperatively for the purpose of maintaining normothermia or who had at least one body temperature equal to or greater than 96.8° F/36° C recorded within the 30 minutes immediately prior to or the fifteen minutes immediately after *Anesthesia End Time*.

Denominator: All patients, regardless of age, undergoing surgical procedures under general or neuraxial anesthesia of greater than or equal to 60 minutes duration.



Variable Key:
Surgery Days
Anesthesia Time



SCIP-Infection (Inf)-10: Surgery Patients with Perioperative Temperature Management

Numerator: Surgery patients for whom either active warming was used intraoperatively for the purpose of maintaining normothermia or who had at least one body temperature equal to or greater than 96.8 degrees Fahrenheit (F)/36 degrees Celsius (C) recorded within the 30 minutes immediately prior to or the fifteen minutes immediately after Anesthesia End Time.

Denominator: All patients, regardless of age, undergoing surgical procedures under general or neuraxial anesthesia of greater than or equal to 60 minutes duration.

Variable Key: Surgery Days, Anesthesia Time

1. Start processing. Run cases that are included in the Surgical Care Improvement Project (SCIP) Initial Patient Population and pass the edits defined in the Transmission Data Processing Flow: Clinical through this measure.
2. Check Anesthesia Type
 - a. If Anesthesia Type is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If Anesthesia Type equals 4, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
 - c. If Anesthesia Type equals 1, 2, or 3, continue processing and proceed to Anesthesia Start Date.
3. Check Anesthesia Start Date
 - a. If the Anesthesia Start Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If the Anesthesia Start Date equals Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.
 - c. If the Anesthesia Start Date equals a Non Unable to Determine value, continue processing and proceed to Surgery Days calculation.
4. Calculate Surgery Days. Surgery Days, in days, is equal to the Anesthesia Start Date minus the Admission Date.
5. Check Surgery Days
 - a. If the Surgery Days is less than zero, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.

- b. If the Surgery Days is greater than or equal to zero, continue processing and proceed to Anesthesia End Date.
6. Check Anesthesia End Date
 - a. If the Anesthesia End Date is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If the Anesthesia End Date equals Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.
 - c. If the Anesthesia End Date equals a Non Unable to Determine value, continue processing and proceed to Anesthesia Start Time.
7. Check Anesthesia Start Time
 - a. If the Anesthesia Start Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If the Anesthesia Start Time equals Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.
 - c. If the Anesthesia Start Time equals a Non Unable to Determine value, continue processing and proceed to Anesthesia End Time.
8. Check Anesthesia End Time
 - a. If the Anesthesia End Time is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If the Anesthesia End Time equals Unable to Determine, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.
 - c. If the Anesthesia End Time equals a Non Unable to Determine value, continue processing and proceed to the Anesthesia Time calculation.
9. Calculate Anesthesia Time. Anesthesia Time, in minutes, is equal to the Anesthesia End Date and Anesthesia End Time minus the Anesthesia Start Date and Anesthesia Start Time.
10. Check Anesthesia Time
 - a. If Anesthesia Time is less than 60 minutes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
 - b. If Anesthesia Time is greater than or equal to 60 minutes, continue processing and proceed to Intentional Hypothermia.
11. Check Intentional Hypothermia
 - a. If Intentional Hypothermia is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.

- b. If Intentional Hypothermia equals Yes, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Stop processing.
 - c. If Intentional Hypothermia equals No, continue processing and check Temperature.
12. Check Temperature
- a. If Temperature is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Stop processing.
 - b. If Temperature equals 3 or 4, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Stop processing.
 - c. If Temperature equals 1 or 2, the case will proceed to a Measure Category Assignment of E and will be in the Numerator Population. Stop processing.