



Complete Summary

TITLE

Anesthesiology and critical care: percentage of patients, regardless of age, undergoing surgical or therapeutic procedures under general or neuraxial anesthesia of 60 minutes duration or longer 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 30 minutes immediately before or the 15 minutes immediately after anesthesia end time.

SOURCE(S)

American Society of Anesthesiologists, Physician Consortium for Performance Improvement®. Anesthesiology and critical care physician performance measurement set. Chicago (IL): American Medical Association; 2007 Oct. 21 p. [5 references]

Measure Domain

PRIMARY MEASURE DOMAIN

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

SECONDARY MEASURE DOMAIN

Does not apply to this measure

Brief Abstract

DESCRIPTION

This measure is used to assess the percentage of patients, regardless of age, undergoing surgical or therapeutic procedures under general or neuraxial anesthesia of 60 minutes duration or longer 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.

RATIONALE

Anesthetic-induced impairment of thermoregulatory control is the primary cause of perioperative hypothermia. Even mild hypothermia (1-2 degrees Centigrade below normal) has been associated in randomized trials with a number of adverse consequences, including: increased susceptibility to infection, impaired coagulation and increased transfusion requirements, cardiovascular stress and cardiac complications, post-anesthetic shivering and thermal discomfort. Several methods to maintain normothermia are available to the anesthesiologist in the perioperative period; various studies have demonstrated the superior efficacy of forced-air warming and warm water garments*.

*The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure:

Preoperative Patient Management

Assessment: Identify patient's risk factors for unplanned perioperative hypothermia. Measure patient temperature on admission. Determine patient's thermal comfort level (ask the patients if they are cold). Assess for other signs and symptoms of hypothermia (shivering, piloerection, and/or cold extremities).

Interventions: Institute preventive warming measures for patients who are normothermic (normothermia is defined as a core temperature range from 36 degrees Centigrade to 38 degrees Centigrade [96.8 degrees Fahrenheit to 100.4 degrees Fahrenheit]). A variety of measures may be used, unless contraindicated. Passive insulation may include warmed cotton blankets, socks, head covering, limited skin exposure, circulating water mattresses, and increase in ambient room temperature (minimum 68 degrees Fahrenheit to 75 degrees Fahrenheit). Institute active warming measures for patients who are hypothermic (defined as a core temperature less than 36 degrees Centigrade). Active warming is the application of a forced air convection warming system. Apply appropriate passive insulation and increase the ambient room temperature (minimum 68 degrees Fahrenheit to 75 degrees Fahrenheit). Consider warmed intravenous (IV) fluids. (American Society of PeriAnesthesia Nurses [ASPAN])

Intraoperative Patient Management

Assessment: Identify patient's risk factors for unplanned perioperative hypothermia. Determine patient's thermal comfort level (ask the patients if they are cold). Assess for other signs and symptoms of hypothermia (shivering, piloerection, and/or cold extremities). Monitor patient's temperature intraoperatively.

Intervention: Implement warming methods. (ASPAN)

Maintenance of body temperature in a normothermic range is recommended for most procedures other than during periods in which mild hypothermia is intended to provide organ protection (e.g., during high aortic cross-clamping). (American College of Cardiology/American Heart Association [ACC/AHA])

PRIMARY CLINICAL COMPONENT

Perioperative temperature management; active warming; forced are warming; warm water garments; body temperature

DENOMINATOR DESCRIPTION

All patients, regardless of age, undergoing surgical or therapeutic procedures under general or neuraxial anesthesia of 60 minutes duration or longer (see the related "Denominator Inclusions/Exclusions" field in the Complete Summary)

NUMERATOR DESCRIPTION

Patients 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

***Note:** For purposes of this measure, "active warming" is limited to the following modalities only: forced-air warming, warm water garments.

Evidence Supporting the Measure

EVIDENCE SUPPORTING THE CRITERION OF QUALITY

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence

Evidence Supporting Need for the Measure

NEED FOR THE MEASURE

Unspecified

State of Use of the Measure

STATE OF USE

Current routine use

CURRENT USE

Internal quality improvement

Application of Measure in its Current Use

CARE SETTING

Hospitals

PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Physicians

LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Individual Clinicians

TARGET POPULATION AGE

All patients regardless of age

TARGET POPULATION GENDER

Either male or female

STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

Characteristics of the Primary Clinical Component

INCIDENCE/PREVALENCE

Unspecified

ASSOCIATION WITH VULNERABLE POPULATIONS

Unspecified

BURDEN OF ILLNESS

Unspecified

UTILIZATION

Unspecified

COSTS

Unspecified

Institute of Medicine National Healthcare Quality Report Categories

IOM CARE NEED

Getting Better

IOM DOMAIN

Data Collection for the Measure

CASE FINDING

Users of care only

DESCRIPTION OF CASE FINDING

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

DENOMINATOR SAMPLING FRAME

Patients associated with provider

DENOMINATOR INCLUSIONS/EXCLUSIONS

Inclusions

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

Exclusions

Documentation of one of the following medical reason(s) for not using active warming intraoperatively for the purpose of maintaining normothermia OR achieving at least one body temperature equal to or greater than 36 degrees Centigrade (or 96.8 degrees Fahrenheit) recorded within the 30 minutes immediately before or the 15 minutes immediately after anesthesia end time:

- intentional hypothermia
- not indicated due to anesthetic technique: peripheral nerve block without general anesthesia, OR monitored anesthesia care

RELATIONSHIP OF DENOMINATOR TO NUMERATOR

All cases in the denominator are equally eligible to appear in the numerator

DENOMINATOR (INDEX) EVENT

Therapeutic Intervention

DENOMINATOR TIME WINDOW

Time window is a single point in time

NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions

Patients 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

***Note:** For purposes of this measure, "active warming" is limited to the following modalities only: forced-air warming, warm water garments.

Exclusions

None

MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

NUMERATOR TIME WINDOW

Episode of care

DATA SOURCE

Administrative data
Medical record

LEVEL OF DETERMINATION OF QUALITY

Individual Case

PRE-EXISTING INSTRUMENT USED

Unspecified

Computation of the Measure**SCORING**

Rate

INTERPRETATION OF SCORE

Better quality is associated with a higher score

ALLOWANCE FOR PATIENT FACTORS

Unspecified

STANDARD OF COMPARISON

Internal time comparison

Evaluation of Measure Properties

EXTENT OF MEASURE TESTING

Unspecified

Identifying Information

ORIGINAL TITLE

Measure #3: perioperative temperature management.

MEASURE COLLECTION

[The Physician Consortium for Performance Improvement® Measurement Sets](#)

MEASURE SET NAME

[Anesthesiology and Critical Care Physician Performance Measurement Set](#)

SUBMITTER

American Medical Association on behalf of the American Society of Anesthesiologists and the Physician Consortium for Performance Improvement®

DEVELOPER

American Society of Anesthesiologists
Physician Consortium for Performance Improvement®

FUNDING SOURCE(S)

Unspecified

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FINANCIAL DISCLOSURES/OTHER POTENTIAL CONFLICTS OF INTEREST

Conflicts, if any, are disclosed in accordance with the Physician Consortium for Performance Improvement® conflict of interest policy.

ENDORSER

National Quality Forum

INCLUDED IN

Ambulatory Care Quality Alliance

ADAPTATION

Measure was not adapted from another source.

RELEASE DATE

2007 Oct

MEASURE STATUS

This is the current release of the measure.

SOURCE(S)

American Society of Anesthesiologists, Physician Consortium for Performance Improvement®. Anesthesiology and critical care physician performance measurement set. Chicago (IL): American Medical Association; 2007 Oct. 21 p. [5 references]

MEASURE AVAILABILITY

The individual measure, "Measure #3: Perioperative Temperature Management," is published in the "Anesthesiology and Critical Care Physician Performance

Measurement Set." This document and technical specifications are available in Portable Document Format (PDF) from the American Medical Association (AMA)-convened Physician Consortium for Performance Improvement® Web site: www.physicianconsortium.org.

For further information, please contact AMA staff by e-mail at cqi@ama-assn.org.

NQMC STATUS

This NQMC summary was completed by ECRI Institute on January 2, 2008. The information was verified by the measure developer on January 11, 2008.

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