Thermal Management of the Peri-Operative Name of Policy: **Patient Policy Number:** 3364-125-28 THE UNIVERSITY OF TOLEDO MEDICAL CENTER **Department:** Nursing Service **Approving Officer: Chief Nursing Officer Responsible Agent:** Nursing Director, Endoscopy and Surgical **Effective Date:** 6/1/2023 Support Services Scope: Initial Effective Date: 12/10/2009 POH/PACU Minor/technical revision of existing policy New policy proposal Major revision of existing policy Reaffirmation of existing policy

(A) Policy Statement

The perioperative clinicians will maintain normothermia for the surgical patient in the pre-op, intra-op, and post operative setting. (American Society of Perianesthesia Nurses, 2020).

(B) Purpose of Policy

To standardize the thermal care of the surgical patient throughout the perioperative process.

(C) Procedure

- 1. ASSESSMENT: Will be identical for each phase of the perioperative process, the minimum assessment requirements are;
 - Measure patient's temperature on admission to all phases of care, and prior to discharge from PACU.
 - Identify patient risk factors for hypothermia; i.e., general or neuraxial anesthesia, elderly.
 - Determine patients thermal comfort level (ask the patient if he/she is cold? If yes, even with a normal temperature (over or = to 36.0C) the clinician will follow the hypothermic pathway.
 - Observe for signs/symptoms of hypothermia (shivering, piloerection, and or cold extremities). If yes, the clinician will follow the hypothermic pathway.

2. INTERVENTION:

- Refer to addendum; "Promotion of Perioperative Normothermia" Algorithm. Follow the appropriate pathway for each phase of the surgical process.
- Passive warming measures: warm blankets, socks, head covering and limited skin exposure.
- Active warming measure: forced air warming system (Bair Hugger), warm fluids, increased room temperature.
- Monitor temperature every 15 minutes until normothermia is achieved.

3. OUTCOMES:

• The patient's core temperature will be maintained at or above 36.0 C (96.8 F) for all peri-operative phases. *Refer to the addendum for phase specific expected outcomes in addition to the above listed.*

Reference: American Society of PeriAnesthesia Nurses. *Standards of Perianesthesia Nursing Practice 2019-2020*. Cherry Hill, NJ: ASPAN; 2019

Approved by:		Review/Revision Date: 8/27/2012 2/17/2015 5/1/2017 7/1/2020 6/1/2023
/s/ Kurt Kless, MSN, MBA, RN, NE-BC Chief Nursing Officer Review Policy & Standard Committee, 2/2015, 5/2017, 7/2020,	Date	
6/2023 Review/Revision Completed by Michelle Mallett, MSN, RN, CNOR, Director of Surgical Services		Next Review Date: 6/1/2026
Policies Superseded by This Policy:		

It is the responsibility of the reader to verify with the responsible agent that this is the most current version of the policy.

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THERMAL MANAGEMENT FLOW CHART

Preoperative Patient Management

Identify patient risk factors for hypothermia

Measure patient's temperature on admission

Determine patients thermal comfort level (ask the patient if he/she is cold)

Observe for signs/symptoms of hypothermia (shivering, piloerection, and or cold extremities

Patient Normothermic

Institute preventative warming measures:

Passive insulation (apply warm cotton blankets, socks, head covering, and limit skin exposure)

Increase ambient room temperature (minimum 20°-24°C or 68°-75°F)

Patient Hypothermic

Institute active warming measures:

Apply forced air warming system

Apply passive insulation

Increase ambient room temperature (minimum 20°-24°C or 68°-75°F)

Intraoperative Patient Management

Assessment

Identify patient risk factors for hypothermia

Monitor patient's temperature (see guideline)

Determine patient's thermal comfort level (ask patient if he/she is cold)

Observe for signs/symptoms of hypothermia (shivering, piloerection, and/or cold extremities)

Interventions

Passive insulation (apply warm cotton blankets, socks, head covering, and limit skin exposure)

Increase ambient room temperature (minimum 20°-24°C or 68°-75°F)

Institute active warming measures: apply forced air warming system

Warm fluids: intravenous and irrigants

Humidify and warm gases (anesthetic)

Expected Outcomes

The patient's core temperature should be maintained at 36°C (96.8°F) or above during the intraoperative phase unless hypothermia is indicated

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Postoperative Patient Management: Phase I PACU

Assessment

Identify patient's risk factors for hypothermia

Measure patient's temperature on admission

Determine patient's thermal comfort level (ask patient if he/she is cold)

Observe for signs/symptoms of hypothermia (shivering, piloerection, and/or cold extremities)

Patient Normothermic

Institute preventative warming measures:

Passive insulation (apply warm cotton blankets, socks, head covering, and limit skin exposure)

Increase ambient room temperature (minimum 20°-24°C or 68°-75° F)

Measure temperature prior to discharge

Assess thermal comfort level on admission and every 30 minutes (ask patient if he/she is cold)

Observe for signs/symptoms of hypothermia (shivering,

piloerection, and/or cold extremities)

Patient Hypothermic

Institute active warming measures:

Apply forced air warming system

Passive insulation (apply warm cotton blankets, socks, head covering, and limit skin exposure)

Increase ambient room temperature (minimum 20°-24°C or 68°-75° F)

Warm fluids: intravenous

Humidify and warm gases - oxygen

Monitor temperature every 30 minutes until normothermia

is achieved

Expected Outcomes

Patient's minimum temperature will be 36°C (96.8°F) prior to discharge from PACU

Patient describes an acceptable level of warmth

Signs/symptoms of hypothermia will be absent

Postoperative Patient Management: Phase II PACU (ASU)

Assessment

Identify patients risk factors for hypothermia

Measure patient's temperature on admission

Determine patient's thermal comfort level every 30 minutes (ask patient if he/she is cold)

Observe for signs/symptoms of hypothermia (shivering, piloerection and/or cold extremities)

Patient Normothermic

Institute preventative warming measures:

Passive insulation (apply warm cotton blankets, socks, head covering, and limit skin exposure)

Increase ambient room temperature (minimum 20°-24°C or 68°-75° F)

Patient Hypothermic

Institute active warming measures:

Apply forced air warming system

Apply passive insulation

Increase ambient room temperature (minimum 20°-24°C or 68°-75° F)

Expected Outcomes

Patient's minimum temperature will be 36°C core prior to discharge from

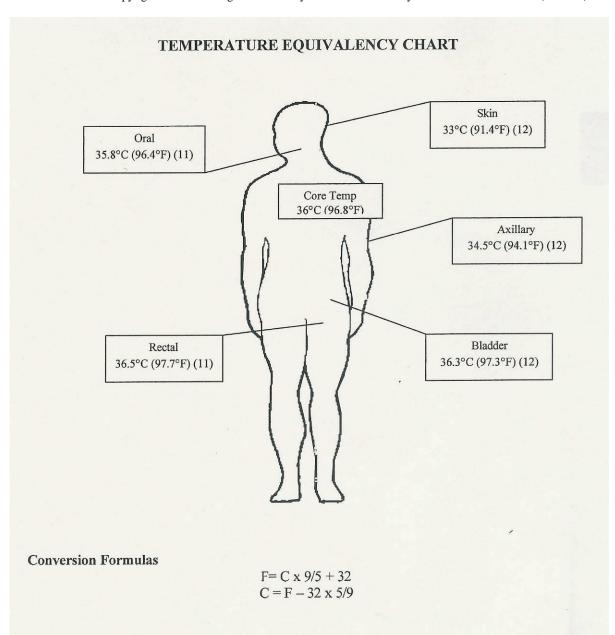
Phase II PACU (ASU)

Patient describes an acceptable level of warmth

Signs/symptoms of hypothermia will be absent

Patient should describe methods of maintaining normothermia at home.

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Core Temperature Measurement Sites – Pulmonary artery, Tympanic membrane*, Nasopharynx, and Esophagus.

Sites that Estimate Core Temperature - Oral, axillary, skin, bladder and rectum*.

^{*}Rectal temperatures are equal to core temperature when the patient is normothermic. Rectal temperatures become unreliable measurement when temperature flux is anticipated. (29)

^{*}Accuracy of tympanic temperatures can vary depending on the instrument, operator, and the patient.