



## CLINICAL GUIDELINE

# Peri-operative Patient Warming Guideline

A guideline is intended to assist healthcare professionals in the choice of disease-specific treatments.

Clinical judgement should be exercised on the applicability of any guideline, influenced by individual patient characteristics. Clinicians should be mindful of the potential for harmful polypharmacy and increased susceptibility to adverse drug reactions in patients with multiple morbidities or frailty.

If, after discussion with the patient or carer, there are good reasons for not following a guideline, it is good practice to record these and communicate them to others involved in the care of the patient.

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<b>Approval Group:</b>	Acute Services Division Clinical Governance Forum

### Important Note:

The Intranet version of this document is the only version that is maintained. Any printed copies should therefore be viewed as 'Uncontrolled' and as such, may not necessarily contain the latest updates and amendments.

**Every patient requiring surgery will have their temperature monitored and recorded at regular agreed intervals and the appropriate intervention implemented to ensure they maintain or achieve a CORE temperature above 36.0°C or an EAR temperature above 35.0°C. (Scottish Patient Safety Program)**

**Temperature should be measured using:**

- Covidien Genius 2 probe which is correctly calibrated and set to read CORE or EAR temperature.
- Other measures of core temperature include nasopharyngeal probe, urinary catheter or PA catheter.

**On the ward or in the admission lounge:**

- All patients will be given information on the importance of staying warm and asked to inform staff if they feel cold. Staff should check the patient's temperature and should raise the ambient room temperature if possible, or provide additional blankets and clothing.

**Pre-operatively:**

- All patients will have their EAR temperature measured on arrival in theatre reception. This should be recorded on the peri-operative care plan. The anaesthetist should be notified of any patient with an EAR temperature less than 35.0°C or greater than 36.5°C. A decision will be made by the anaesthetist if the patient requires pre-operative forced air warming.
- Identify each individual patient's risk factors for unplanned peri-operative hypothermia. (This should be highlighted and discussed at the surgical brief.)

**Higher risk if any two of the following apply:**

- ASA grade II to V (the higher the grade, the greater the risk)
- Preoperative EAR temperature below 35.0°C
- Undergoing combined general and regional anaesthesia
- Undergoing major or intermediate surgery with an expected long procedural duration
- At risk of cardiovascular complications
- Patient's with a BMI below normal and surgical procures that will expose a large body surface
- Those at extremes of age

**Intra-operatively all patients should be kept warm by:**

- Limiting exposure of the patient as much as possible.
- If available, use fluids from a thermostatically controlled warming cabinet (maximum temperature being 41.0°C) and only run through when ready to use.
- All surgical irrigation fluids should be warmed in a thermostatically controlled cabinet.

**For surgery lasting more than 60 minutes, or if other risk factors present:**

- Warming blanket appropriately selected, or thermal drapes/ thermal hats if available.

**If blood, blood products or large volumes of fluid expected to be administered:**

- Fluid warming insert.

**Patient temperature should be measured and recorded as soon as practical after transfer into theatre.**

- The temperature should be measured and recorded at least every 30 minutes to 1 hour for the duration of surgery.

**If the EAR temperature is below 35.0°C or falling consider:**

- Increasing the temperature of the warming blanket.
- Raising the ambient theatre temperature.
- Limiting exposure of the patient with blankets, surgical drapes etc.
- Use of a foil hat.
- Warming the intravenous fluids.

**References:**

- 1) NICE, Inadvertent Perioperative hypothermia, April 2008, Accessed on 31/03/14.
  - 2) Health Protection Scotland; <http://www.documents.hps.scot.nhs.uk/hai/infection-control/evidence-for-care-bundles/literature-reviews/ssi-review.pdf>; Accessed 01/05/14.
- September 2014, Anaesthetic Best Practice Group GG&C • Review date 2022