The top 10 things you need to know about patient warming, for procurement experts.

Maintaining body temperature and keeping patients warm during surgery is vital. To find out how best to protect patients during surgery, read our top 10 things you need to know.

1

It is important for the outcome of surgery for patients to maintain body temperature.

Humans maintain a core body temperature close to 37°C. The temperature of the skin is normally 2–4°C cooler than the core temperature. This difference is maintained through thermoregulation. If core body temperature deviates from normal by too much, then metabolic functions deteriorate. Temperature below 36°C is considered hypothermic.[1]

2

Anaesthesia disrupts the ability to maintain body temperature.

Anaesthesia, both general and regional (spinal/epidural), disrupt thermoregulation and allow the warm core blood to flow to the skin, where it cools. This process causes the core temperature to fall by up to 1.6°C within the first hour of anaesthesia![2]

3

Operating rooms are cold!

Further to this, operating theatres are kept at approximately 21°C. Patients are exposed to this cool environment and once anaesthetised, are unable to move. The result is their core temperature continues to fall.

4

If patients become hypothermic, the risk of adverse complications is greatly increased.

Perioperative hypothermia increases the patient's risk of developing many adverse complications. These include increased blood loss, increased pain, increased risk of surgical site infection, and increased risk of cardiac disturbances.[3]

5

Hypothermia increases the cost to the healthcare system.

It is well documented that the negative effects of hypothermia add significant increased costs to the healthcare system, such as prolonged length of stay, cost of blood products, cost of treating wound infections, and increased re-admissions.[3,4]

6

Warming systems must be effective.

An effective warming system needs to warm as much of the patient's body surface area as possible. Manufacturers should be able to provide evidence to demonstrate the efficacy of their system. The measure of an effective forced-air warming blanket, is one that has a uniform temperature across the blanket and visible perforations which allow the warm air to flow over the patient's skin, transferring heat to a greater surface area.[5,6,7]

7

Some patients are harder to warm than others.

There are multiple positions and situations in surgery, where large areas of the patient's body must be exposed, and these patients can be difficult to actively warm. Having multiple types of forced air warming blanket is critical. Underbody warming, specialty blankets, and conformable blankets are necessary in addition to traditional upper, lower and full body blankets, to warm patients in all positions.

8

Convective systems are more effective than conductive.

Conductive systems only warm the patient where they make contact with the patient, while convective forced-air systems warm a larger surface area by blowing warm air over the patient's skin. Over body blankets also reduce heat loss by insulating the patient at the same time.[8,9]

9

Guidelines recommend that patients are actively warmed before anaesthesia.

This helps to reduce the impact on the patient's core temperature when the warm core blood flows to the skin. Patients should also be actively warmed during surgery using forced-air warming.[10,11,12]

10

Guidelines recommend that the patient's core body temperature is measured.

This should be done throughout the perioperative journey. The device used should provide a direct measure of core temperature, not an estimate.[10,11,12]

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