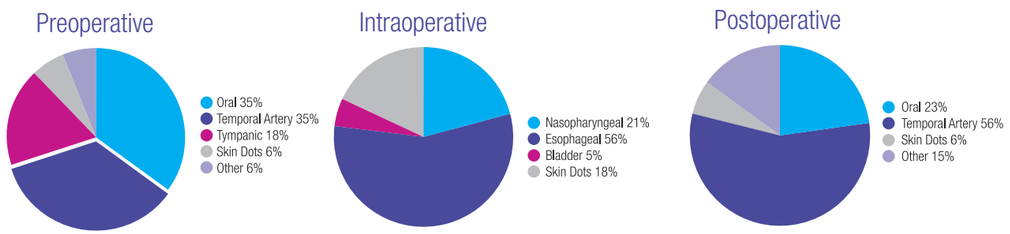
Standardization is key to improving efficiency

Due to technology limitations, hospitals are forced to stock and use multiple temperature monitoring systems. Any combination of products is used on a single patient throughout the perioperative journey. Each method introduces variation due to accuracy and technique.

Standardizing with one temperature monitoring product eliminates the hassle and costs associated with purchasing, stocking and managing multiple products for the same use. The SpotOn system improves efficiency through each phase of the perioperative journey, as it reduces the number of steps required for clinicians to adequately monitor patient temperature.

Product usage by perioperative segment[2]



On average, a hospital will stock five different temperature monitoring devices to meet the varying clinical needs of the perioperative patient.[3]

SpotOn system ordering information

Product	Part Number	Sizes	Units
3M™ SpotOn™ Control Unit	37000	**Dimensions of Control Unit:** 9.3 cm (3.7 in) high, extendable to 11.4 cm (4.5 in) high 7.1 cm (2.8 in) wide, 4.3 cm (1.7 in) deep **Weight of Control Unit:** 128 g (4.5 oz) **Length of the Sensor Cable:** 400 cm (158 in)	1/case
3M™ SpotOn™ Sensor	36000	**Dimensions of Sensor:** 4.1 cm (1.6 in) diameter, 0.5 cm (0.2 in) thick	25/case

www.spotontemperature.com

1 Eshraghi, Y., & Sessler, D. I. Exploratory Method-Comparison Evaluation of a Disposable Non-Invasive Zero Heat Flow Thermometry System. 2012 American Society of Anesthesiologists Annual Meeting. A63.
2 Key Group Survey, data on file with Arizant/3M; data reported by Anesthesiologists.
3 AORN 2012 Survey of AORN Nurses. Data on file with Arizant/3M.

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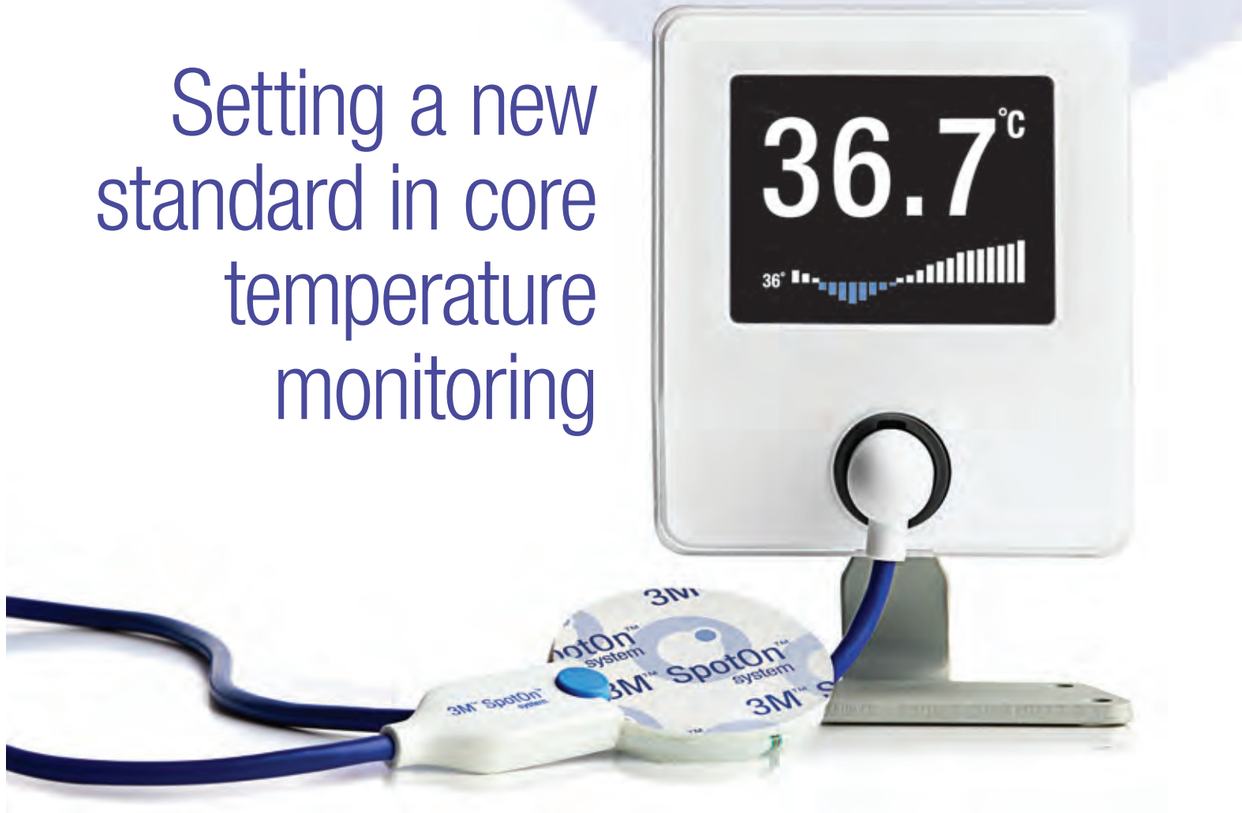
Introducing the 3M™ SpotOn™ Temperature Monitoring System

Setting a new standard in core temperature monitoring



A revolution in temperature monitoring

The 3M™ SpotOn™ system is a non-invasive, accurate core temperature monitoring system that continuously measures patient temperature with an affordable single-use sensor, providing standardization with one consistent temperature monitoring method throughout the perioperative process.

Designed by the creators of 3M™ Bair Hugger™ therapy, the SpotOn system simplifies the existing temperature monitoring process while delivering accurate patient temperatures normally associated with more invasive systems like esophageal, bladder, rectal or PA catheters.

Standardizing with one temperature monitoring system can help improve consistency, reduce opportunity for error and eliminate the duplication of effort required to purchase and carry multiple products. The SpotOn system provides clinicians with a single temperature monitoring method that can be used through each phase of the perioperative journey, improving clinical efficiency by streamlining the patient temperature monitoring process.

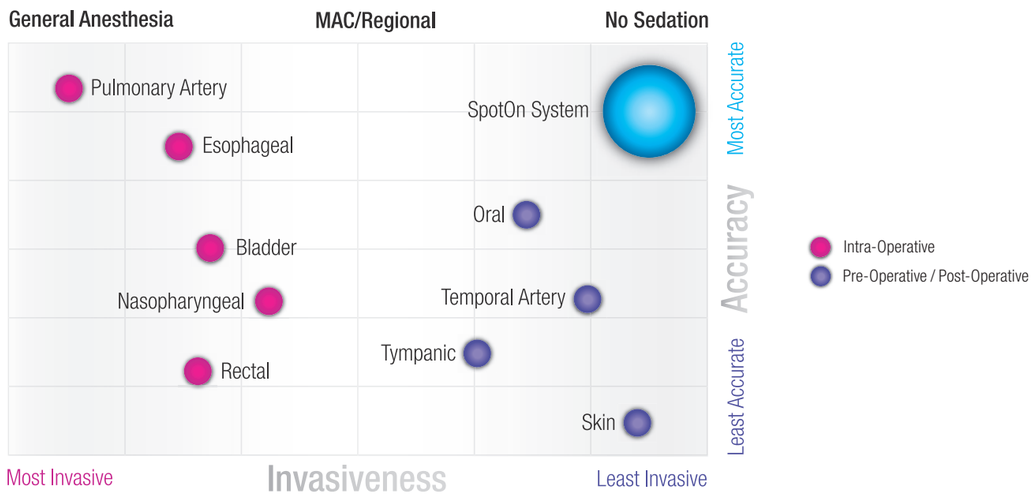
In addition, the SpotOn system also ensures optimization of warming modalities by accurately confirming patients are normothermic.

The clinical need

Current technologies are unable to non-invasively measure core body temperature:

- Most invasive devices accurately measure core body temperature, but are limited to operating room use.
- Non-invasive devices mostly estimate core body temperature.
- Wide variations exist in method and technique for measuring patient temperature.

The SpotOn system provides a non-invasive, accurate temperature measuring method that can be used perioperatively and in any type of anesthesia.



Easy. Non-Invasive. Continuous. Accurate and Consistent.

Non-invasive technique:
A single-use sensor is placed on the patient's forehead before surgery and is worn throughout the perioperative journey.

Continuous:
The temperature is always displayed. A memory chip within the sensor allows a two hour continuous visual representation of the patient temperature trend on the control unit of the SpotOn system.

Accurate:
In a clinical trial comparing the SpotOn system to pulmonary artery catheters, the SpotOn system bias was less than 0.23°C.[1]

Consistent:
The sensor stays on the patient, as it is disconnected from the sensor cable and reconnected at each point of care, eliminating the variability associated with clinician technique and use of multiple monitoring devices.

The SpotOn system is compatible with all patient monitors that accept YSI-400 type inputs.

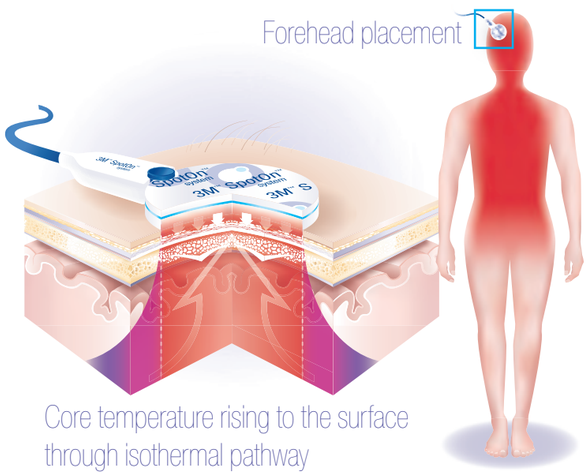
How it works

A technology that is anything but skin deep:

Unlike passive skin surface temperature sensors, the SpotOn system's single-use sensor consists of a thermal insulator adjacent to the skin which is covered by a flex circuit. Once connected to the SpotOn control unit, the flex circuit actively regulates its temperature to create a zone of perfect insulation - a condition where heat loss to the environment is eliminated.

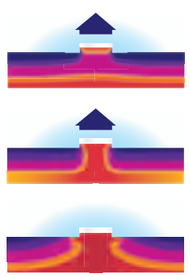
Bringing the core temperature to the surface

Creating a zone of perfect insulation eliminates heat loss to the environment, resulting in the formation of an isothermal pathway. Through this pathway, the patient's core temperature rises to the skin surface where it can be non-invasively measured, captured and continuously reported.



Formation of the isothermal pathway

When the skin is covered with a "perfect insulation," heat is prevented from leaving the body under the sensor.



Start of pathway formation

Pathway forming

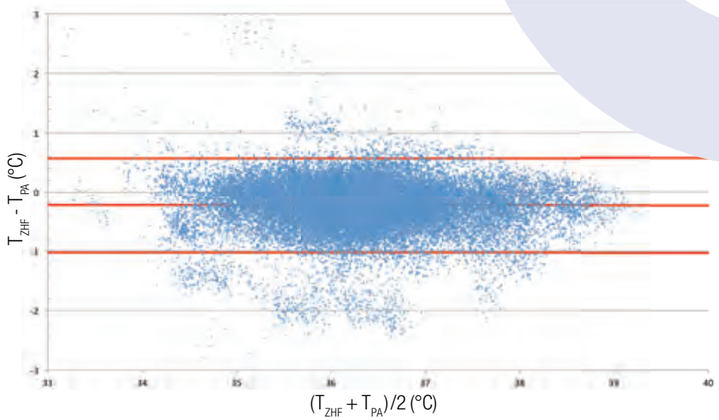
Complete pathway

Over several minutes, the isothermal pathway forms under the sensor, bringing the core temperature to the surface.

Clinical results confirm core temperature

Cardiac Trial Data - 105 subjects; 35,717 data pairs
Mean Error (T_{ZHF}-T_{PA}) = -0.23°C; 95% LOA = ±0.8°C

Prototype Zero Heat Flux Thermometer



A recent Arizant-sponsored cardiac study compared the SpotOn system with simultaneous measurements from a pulmonary artery catheter in 105 patients scheduled for non-emergent cardiac surgery. Temperatures were recorded at one-second intervals, excluding the period of cardiopulmonary bypass, and for four postoperative hours. The SpotOn system and pulmonary artery temperatures were compared with Bland and Altman statistics. The SpotOn system core temperature readings were in agreement with pulmonary artery temperature, with a bias of less than 0.23°C.[1]