

ParaMetric

Core Body Temperature (CBT) Measurement for EMS Providers

Hypothermia and hyperthermia are critical health conditions that pose several risks:

Heat Stroke

Respiratory Distress

The Lethal Triad

Blood Clotting



Hypothermia

Blood Acidification

And with...

4.3 M

Patients affected by hypo/hyperthermia annually^a

\$14.5 B

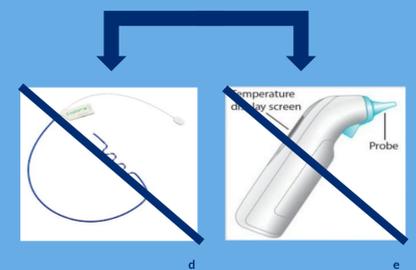
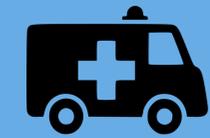
Annual associated healthcare costs^{b,c}

We need core body temperature (CBT) monitoring.

However, current methods of prehospital CBT measurement are:

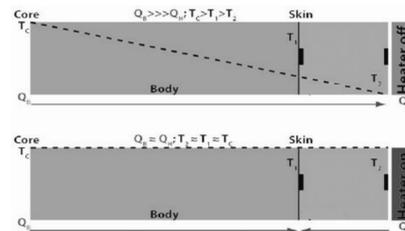
- Inaccurate
- Invasive
- Disruptive of EMS protocols

Therefore, EMS providers need a more effective CBT measurement tool.



The ParaMetric device:

Utilizes zero heat flux, which heats the skin to reach thermal equilibrium with the core body temperature^f

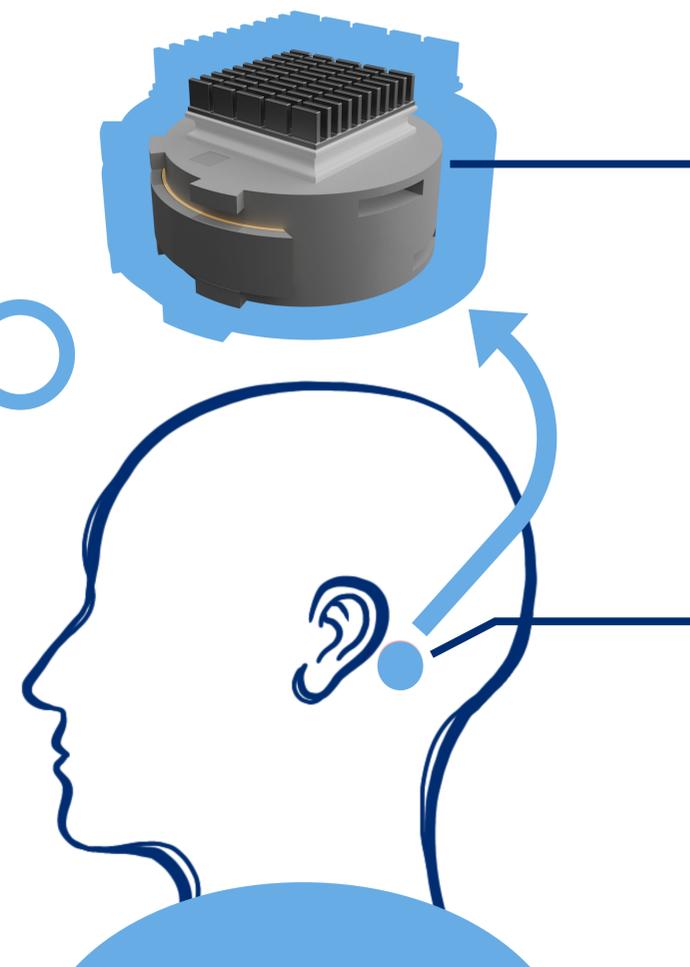


Affordably implementable for EMS systems

Non-invasive, small, and easy to use

Accurate to within 0.4 °C

Innovative control system for fast measurements



1" diameter,
0.5" height

Measures
automatically

Applied to back of ear
by EMS providers

- Citations
- French, L. National Association of State EMS Officials releases stats on local agencies, 911 calls. EMS1 <https://www.ems1.com/ambulance-service/articles/national-association-of-state-emergency-officials-releases-stats-on-local-agencies-911-calls-1PQTH4K2olpauR1/> (2020).
 - Ong, A. W. et al. Characteristics and outcomes of trauma patients with ICU lengths of stay 30 days and greater: a seven-year retrospective study. Crit. Care 13, R154 (2009).
 - Hospital and Surgery Costs – Paying for Medical Treatment. <https://www.debt.org/medical/hospital-surgery-costs/>.
 - Measuring body temperature using a tympanic thermometer. Nursing Times. (2020, September 14). <https://www.nursingtimes.net/clinical-archive/assessment-skills/measuring-body-temperature-using-a-tympanic-thermometer-2-14-09-2020/>.
 - Esophageal Temperature Probe. Life Systems Medical. (n.d.). <https://www.lifesytems.com.au/circ-esophageal-temperature-monitoring/>.
 - Brandes, I., Peri, T., Bauer, M., & Brauer, A. (2014, November 12). Evaluation of a novel noninvasive continuous core temperature measurement system with a zero heat flux sensor using a manikin of the human body. https://www.researchgate.net/publication/268232419_Evaluation_of_a_novel_noninvasive_continuous_core_temperature_measurement_system_with_a_zero_heat_flux_sensor_using_a_manikin_of_the_human_body