



The Intensive Connection

Target Temperature Management (TTM) Survey – who, why, how, when?

Since the publication of the landmark trials showing improved neurological outcome in post cardiac arrest patients who were cooled to 33-34°C, the practice became widespread with ICUs purchasing cooling devices such as surface blankets and intravascular cooling catheters. The publication of the TTM trial in 2013 by Nielsen et al. dramatically changed the landscape. An ESICM taskforce was put together to survey the practice of temperature management amongst the critical care fraternity.

The online survey covered areas such as indications for temperature management, duration, method, the use of standard operating procedures (SOPs)/protocols etc.

A total of 722 responses were received with representation from all continents. Unsurprisingly, the majority of respondents were from European countries. A variety of hospital types were represented – university hospital, university-affiliated as well as non-university hospitals.

The vast majority of respondents (92%) applied some form of temperature management strategy for patients with post anoxic coma. Of these, half targeted a temperature of between 34 to 36°C with a smaller proportion targeting a lower target.

A majority of those who responded do not use TTM for traumatic brain injuries or as a treatment for intracranial hypertension. Neither was there a role for TTM in the peri-operative phase of surgery.

The majority of respondents had a SOP/protocol when instituting TTM, which usually only commences in the ICU setting. The use of SOP/protocol ensured a more consistent approach to the delivery of treatment in this patient population group.

Although intra- and endo-vascular cooling devices are available in the market and are utilised by respondents, the majority use much less invasive and simple procedures such as surface blankets/pads and ice packs to initiate and maintain temperature management.

During the rewarming phase, the majority do so at a rate of 0.5°C/hr

The findings of this survey should prompt reflection amongst clinicians and colleagues on their own practice when it comes to targeted temperature management. A compendium of SOPs and protocols is being put together to promote sharing and collaboration amongst the critical care community.