Temperature Measurement in Acquired Brain Injury Patients in Neuroscience Critical Care: A Review & Benchmarking Initiative Towards Standardization

De Guzman, IM | Jabeens, PJ | Ouirrhim, J | Roberts, L

INTRODUCTION

Temperature is one of the fundamental parameters directing clinical management in Acute Brain Injury & Critical Care patients (Faulk & Meadows, 2013). It is vital that a uniform route is ensured in temperature assessment to maintain precision and facilitate stark comparability (Hooper et al., 2013).

Different thermometers often produce disparate readings which can lead to detrimental repercussions, especially on patients on targeted temperature therapy (McCullum & Higgins, 2012).

As a response to an NPSA guidance stating that the method for taking patient temperature must be clearly identified (NICE, 2007), we endeavoured to review the current practice in thermometry usage in neurocritical care and trauma units across the NHS.

METHOD

We contacted 31 out of 47 (66%) qualifying NHS major trauma and neurological care centres to ask about their current procedures in temperature measurements for ABI patients.

We compared the five primary thermometry sites being used in routine and continuous temperature surveillance, as well as the capability of such centres to measure brain temperature. We revealed nurses whether they had noticed discrepancies in temperature readings, which lead to inaccuracies and potential incidents.

RESULTS

According to the survey, most units use the tympanic route in routine monitoring and the rectal route in continuous observation. It was also discovered that only 16% of the surveyed units have the capability of measuring brain temperature, in patient cooling, the Arctic Sun is the leading device of choice used by 40% of the centres. It has also been found that 43% of the units have had incidents related to temperature reading discrepancies which have led to actual/potential patient harm. Lastly, the study revealed that only 28% of the neurocritical care centres have policies on overall temperature monitoring and management in ABI patients. This reveals how important it is for clinicians to constantly rethink temperature management in ABI cases.