

To Touch or Not to Touch: That is the Question Using the Evidence to Change Thermometry Practice



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PICO Question

In PACU patients do temperatures obtained with the temporal artery and no touch thermometers compare favorably to temperatures by an oral electronic thermometer?

Significance/Evidence Summary

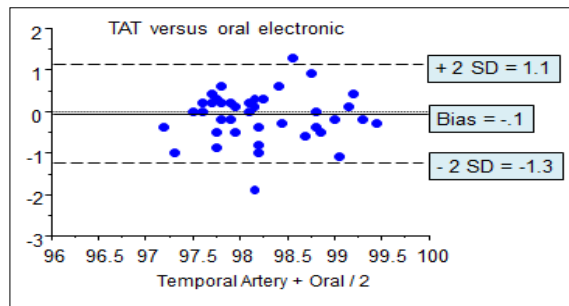
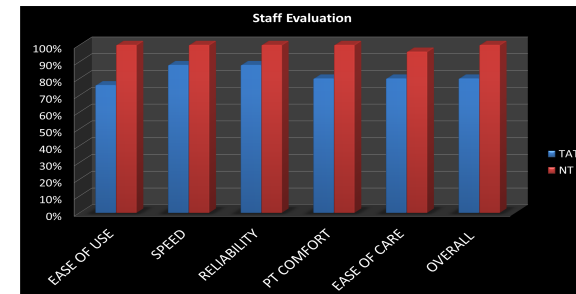
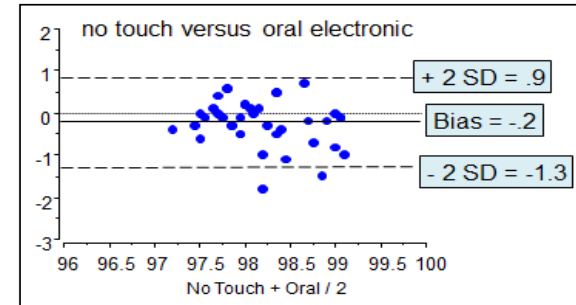
- The American Society of Peri-Anesthesia Nurses (ASPN), Does not fully support the use of tympanic thermometers in PACU
- Our PACU staff are hesitant to use tympanic devices and to use alternative means such as oral thermometry, which is not always appropriate in are requesting an alternative device.
- Current practice in our Post Anesthesia Care Unit (PACU) is tympanic thermometers.
- The aims of this project were:
 - 1) to determine if a temporal artery thermometer (TAT)³ and a no touch forehead thermometer (NT)⁴ compare favorably to an oral thermometer and
 - 2) allow the PACU nurses to determine their thermometer preference, and recommend a practice change

Methodology

- Prior to discharge from the PACU, forty patients had their temperature recorded, using each method: oral electronic, tympanic and temporal artery, and no touch forehead.
- After completion of trial, PACU staff completed a product evaluation to determine which device they preferred.

Results or Implications

- Accepted a priori values for agreement between the test and reference standards are $\leq \pm 0.6$ degrees for Bias and $\leq \pm 1.0$ degrees for precision.
- Results for both the TAT and no touch were within acceptable values, and therefore did compare favorably to the oral electronic mode.



Recommendations

- Research on these devices should be done on immediate post operative patients to determine accuracy and reliability on potentially hypothermic patients.

References

1. Hooper V.D, et.al. ASPAN's Evidence-Based Clinical Practice Guidelines for the Promotion of Perioperative Normothermia: Second Edition. Journal of Perianesthesia Nursing, 2010; 25(6): 346-365.
2. Bridges E, Thomas K. Noninvasive measurement of body temperature in critically ill patients. Critical Care Nurse. 2009; 29(3): 94-97.
3. Exergen temporal artery thermometer Model TAT5000
4. Thermomedics Caregiver Non-contact thermometer Model PRO-TF3000