



Targeted Temperature Management (TTM) in Post Resuscitative Care for Cardiac Arrest Patients

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Background

Sudden cardiac arrest accounts for 15% of mortality in industrialized nations. Once circulation has been restored, post resuscitation care with TTM prevent further damage to the brain tissue and other organ systems.

➤ Full interprofessional collaboration is crucial to effective team function and improved patient outcomes.

➤ Simulated situations teach not only specific tasks, but also improve interprofessional teamwork behaviors.

Purpose

This project implemented a pilot simulation to:

- 1) improve knowledge of the Targeted Temperature Management (TTM) guideline, and
- 2) Improve interprofessional team collaboration after participation in a simulation.

Methods

In a 650 bed academic institution with a 56 bed ED, and two out of five adult ICUs, 6 simulations were conducted with four-to-six clinicians (RNs and MDs). Participants completed a pretest, short class, a TTM simulation, a post-simulation debriefing, and a post-test.

Results (N=20)

- ✓ TTM knowledge improved significantly between pre and post-test scores ($p \leq 0.001$).
- ✓ Perceived interprofessional team competencies also improved significantly ($p = 0.003$).
- ✓ There was a perfect correlation for clinical experience of four-to-ten years in the knowledge score of TTM and feelings of working in interprofessional teams.

Practice Implications

- ❖ Most participants felt the simulation helped them to understand TTM and how to use it in the clinical setting.
- ❖ The results show knowledge improved with the pilot.
- ❖ The location of the simulation in the hospital and overall fidelity had little to no impact on the overall results.
- ❖ Staffing constraints affected participants' ability to participate in the simulation.
- ❖ The teams wanted to focus on TTM during the debriefing and not on teamwork aspects.
- ❖ A structured and validated tool based on interprofessional literature should be used in the future to define different aspects of teamwork and allow more reflection and discussion for participants to collaborate better in the clinical setting.
- ❖ Using a multi-day format in the future will enhance the experience. One day can focus on TTM with more challenging scenarios, and the other day focus explicitly on interprofessional teams.
- ❖ This project demonstrates the DNP-prepared APRN's ability to use simulations to engage staff process improvement activities and challenge the status quo of individual clinicians.

