

Revitalizing a Targeted Temperature Management (TTM) Program in a Community Hospital

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Purpose and Scope

- ❑ Purpose
 - Improve delivery of TTM at Mease Countryside Hospital (MCH).
- ❑ Scope
 - Phase II: Revitalization of MCH's TTM infrastructure through a longitudinal quality improvement project.

Background

- ❑ Each year, nearly 600,000 people suffer a sudden cardiac arrest (SCA) in the U.S..
- ❑ Survival ranges from 5.5 - 24%
- ❑ Anoxic brain injuries (ABI) account for two-thirds of SCA related deaths.
- ❑ The economic burden of SCA is estimated at \$35 billion annually.
- ❑ TTM has emerged as a safe/cost effective strategy to improve functional survival by 2-3 fold after SCA.
- ❑ Result of Phase I showed:
 - A 6% TTM utilization rate among eligible patients at MCH.
 - No statistical difference in survival in the TTM cohort (41 vs 42%).
 - NMBAs were overused (92%)
 - Elderly patients were disproportionately excluded from TTM.
- ❑ Phase I of this longitudinal quality improvement project recommended TTM infrastructure revitalization to improve the consistency and delivery of care and ultimately improve the functional survival of SCA victims.

Objectives

- ❑ The goals of Phase II were to develop an evidence-based TTM protocol and standardized workflow process consistent with national guidelines.
- ❑ The overarching aim of this longitudinal quality improvement project is to improve functional survival of SCA victims within the community hospital setting.

Setting

- ❑ MCH is a 311-bed community hospital in Safety Harbor, FL that treats approximately 58,000 patients annually.
- ❑ TTM patients are treated in MCH's emergency department and two 14 bed intensive care units.

Methods

- ❑ The theoretical framework for this project was the Donabedian Quality Improvement Model.
- ❑ An integrative literature review was performed, and critically appraised using the Johns Hopkins Nursing Evidence-Based Appraisal tool. Results showed:
 - TTM is safe and effective following SCA.
 - The use of evidence-based protocols and standardization of care improves TTM outcomes.
 - There is no single comprehensive clinical guideline.

Multiphase Implementation

Phase I: Evaluation

Evaluated current TTM program and outcomes

Phase II: Infrastructure Revitalization

- I. A multidisciplinary team of key stakeholders from MCH was assembled to develop a shared vision for the project.
- II. A comprehensive protocol was synthesized from national guidelines and high-quality evidence.
- III. A workflow process was designed to promote consistency of TTM care.

Phase III: Education & Implementation

Provide staff education and implement the protocol

Phase IV: Re-evaluation

Evaluate the impact on functional survival

Discussion

- ❑ The project was evaluated by an assessment of the capacity of the work to influence quality by the faculty supervisor, end users, and MCH leaders.
- ❑ Several challenges and limitations arose during the project:
 - Limited access to critical care providers at MCH
 - Due to the complexity of the project, staff education had to be reassigned to Phase III.

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Overview of TTM Workflow and Protocol

