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# Establishing and Evaluating Nurses' Knowledge and Perceptions of the Effectiveness of an Inpatient STEMI Protocol

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# ESTABLISHING AND EVALUATING NURSES' KNOWLEDGE AND PERCEPTIONS OF THE EFFECTIVENESS OF AN IN-PATIENT ST-SEGMENT ELEVATION MYOCARDIAL INFARCTION PROTOCOL AT A COMMUNITY HOSPITAL

Katty Guevara, ARNP

## Problem and Purpose

Prior to this initiative there was no established process or protocol for the management and transfer of in-patient ST-Segment Elevation Myocardial Infarctions (STEMIs) at our institution, a community hospital without percutaneous coronary intervention (PCI) capabilities. Unstructured management of in-patient STEMIs can pose a serious risk to patients. According to O'Gara et al., 25%- 40% of myocardial infarctions are STEMIs and from those, 5% to 6% are in-hospital STEMI cases (2013). In-hospital STEMIs have shown to have worse outcomes than out-of-hospital STEMIs. According to Dai et al (2014), fewer inpatient STEMIs received PCI and on those that did receive it, reperfusion time was longer as well as longer time from symptom onset to EKG.

In the calendar year 2014, there were 8 in-patient STEMIs identified at the community hospital where the study was conducted. All 8 cases had delayed identification of a STEMI, longer symptom to EKG time, and only 3 of the 8 cases were transferred to a PCI facility for reperfusion therapy. All 3 cases that were transferred had a delayed transfer time (> 90 minutes) of STEMI identification, which is the national standard of care.

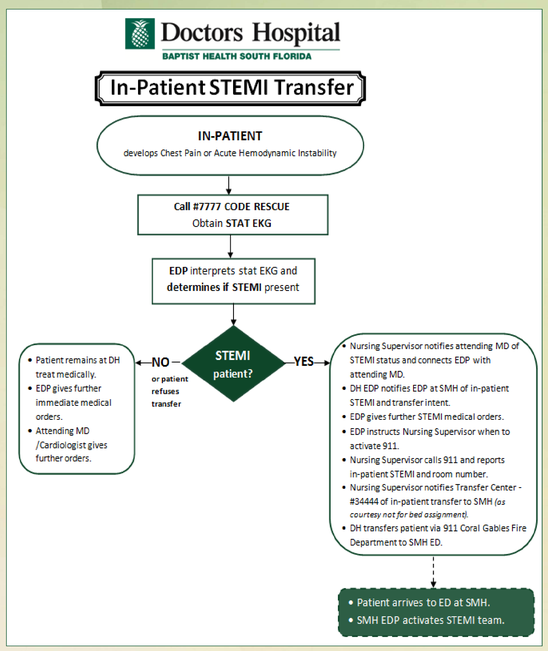
The purpose of this project was to develop a protocol to standardize practice and delivery of care to hospitalized patients that develop a STEMI at a community hospital without PCI capabilities.

## Sample

A convenience sample of day and night shift nurses that attended a non mandatory in-patient STEMI educational session were included.

The study included nurses from various specialties including:

- Medical–Surgical
- Telemetry
- Post-anesthesia Care Unit (PCU)
- Intensive Care Unit (ICU)




## Methods

- The PI collaborated with the inpatient units' clinicians to establish a schedule for non mandatory in-patient STEMI educational sessions.
- Nurses were recruited via email using the distribution list for all nurses at this hospital, flyers were posted in all common areas on the nursing units and a verbal script was read at the beginning of all educational sessions.
- All documents were assigned a unique code and distributed in individual packets.
- Nurses attending the class were consented via cover letter and asked to voluntarily and anonymously complete a 5-10 minute pretest, posttest, short demographic questionnaire and perception survey.
- Once the pretest and demographic were collected, the 10 minute in-patient STEMI educational session commenced. After the educational session, the posttest and perception survey were collected.
- After completion of the educational session, the pre-coded posttest and perception surveys were completed by the consenting participants and collected in a separate circulating folder.

## Results

- A total of 49 nurses completed all study documents entirely.
- Varying specialties were included from both shifts, 24 (47.1%) dayshift nurses and 27 (52.9%) night shift nurses.
- There were 43 (84.3%) female participants and 8 (15.7%) male participants.
- The pretest (76.2±14.47) mean was significantly lower than the mean of the post-test (82.6±10.58) (p=.003).
- After this educational session 49 (94%) of the participants felt more confident on how to manage an in-patient STEMI.

The nurses agreed/strongly agreed that the in-patient STEMI algorithm/protocol:

| | |
|---|---|
| is clear and easy to follow | 50 (96%) |
| helps them manage in-patient STEMIs more accurately | 48 (96%) |
| improves and standardizes management of in-patient STEMIs | 50 (96%) |
| reduces management and treatment uncertainty | 48 (94%) |
| will facilitate timely transfer of in-patient STEMIs to a PCI capable facility | 49 (94%) |
| will yield improved patient outcomes by reducing patient management uncertainty and providing added resources | 48 (100%) |
| reduces potential delay in treatment | 49 (100%) |

## Conclusions & Implications for Practice

This study indicates the in-patient STEMI protocol and algorithm assists the nurses to better care for their patients. Periodic education to increase staff knowledge will reinforce the importance of using the protocol and algorithm to guide the care and transfer of these critical patients.

## References

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