Title:
Decreasing the Inappropriate Use of Telemetry in a Community Hospital

Jennifer E. Matney, DNP
School of Nursing, Bouve College of Health Sciences, Northeastern University, Boston, MA, USA
Eliot DeSilva, MD, MPH
Hospital Medicine of Exeter, Exeter Hospital, Exeter, NH, USA

Session Title:
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References:
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Society of Hospital Medicine. (2013). Five things physicians and patients should question. http://www.choosingwisely.org/societies/society-of-hospital-medicine-adult/

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Abstract Summary:
This presentation will describe a quality improvement project undertaken to decrease alarm fatigue and inappropriate use of telemetry in non-critically ill hospitalized patients by implementing process changes to improve adherence to published American Heart Association guidelines.

Learning Activity:

LEARNING OBJECTIVES	EXPANDED CONTENT OUTLINE
Learner will be able to identify what constitutes appropriate use of telemetry.	Review of American Heart Association guidelines for telemetry.

Learner will be able to describe the effects to patients and the health care system of overutilization of telemetry.	Review of literature on effects of over utilization of telemetry such as alarm fatigue.
Learner will understand the elements of an action plan to decrease utilization of telemetry.	Review of project methodology and intervention.

Abstract Text:

Background and Significance: It has been reported that cardiac monitoring (telemetry) in the hospital setting is widely overused when evaluated according to established guidelines by the American Heart Association (AHA) (Funk, et al., 2010). This has led to an overabundance of distracting alarms, unnecessary testing and alarm fatigue leading to potential negative consequences for patients (Sendelbach & Funk, 2013; Knight, Pelosi, Michaud, Strickberger, & Morady, 1999). The Society of Hospital Medicine (SHM), in partnership with the Choosing Wisely® Campaign, has recommended implementation of a protocol that will govern the continuation of telemetry outside of the critical care setting (2013). Despite recommendations to reduce telemetry, it continues to be over-utilized in many hospitals across the country (The Joint Commission, 2013). To date, there are few studies that demonstrate benefits to implementation of a plan to reduce telemetry.

Purpose and Goal: The purpose of this project was to improve patient safety by decreasing alarm fatigue and unnecessary testing. The goal was to implement a process to decrease the use of telemetry in non-critical care patients in a community hospital.

Methodology: A retrospective chart review was undertaken to assess the daily indication for telemetry based on documentation by providers and nurses which was then compared to AHA guidelines. This review provided a baseline rate of adherence to guidelines during a 3-month period from 200 adult (18+ yrs.) patients on telemetry, on medical-surgical units, that were managed by the hospitalist service of a community hospital. The baseline data was culled from the year preceding the intervention and another review was performed from the same 3-month period of the successive year, after the intervention was fully implemented. Variables examined were: age, gender, diagnosis, telemetry rhythm and ectopy, daily indication for telemetry, occurrence of code blue or rapid response and length of stay. The primary intervention was an educational session combined with work flow changes consisting initially of revising the computer-based telemetry order.

Analysis: Data were entered into and analyzed by EpiInfo which generated descriptive statistics of the sample for the pre-intervention period and the post-intervention period respectively. Then, in bivariate analysis, the proportion of appropriately-ordered telemetry days was compared between the two periods using a chi-square test for significance and a threshold for significance of $p=0.05$. Data contemporaneously collected by nursing supervisors was also analyzed to calculate overall telemetry utilization rates during the same timeframes as the chart reviews listed above.

Results: In progress.

Implications for Future: If this project successfully demonstrates improved institutional adherence to established guidelines, it is anticipated that there will be resultant improvements in patient safety by reducing alarm fatigue as well as cost savings. Sustaining and augmenting these changes will require ongoing surveillance and further improvements in work flow.