

EVIDENCE-BASED CARDIAC MONITORING OF THE MEDICAL PATIENT

Rachel Oribello RN, MSN; Joe Clement MS, RN, CNS (Coach)
San Francisco General Hospital and Trauma Center
Rachel.oribello@sfdph.org

Purpose

The aim of this project is to standardize cardiac monitoring through the implementation of strategies to improve patient flow, thus decreasing the number of emergency room hours and number of telemetry hours of low risk patients and increasing the number of patient transfers from critical care units.

Background

San Francisco General Hospital's medical-surgical, telemetry unit (5D) overlooks current AHA standards for ECG monitoring, leading to ineffective use of telemetry monitoring. Several barriers are evident when the demand for telemetry monitoring exceeds 5D's maximum supply of 16 monitored telemetry beds. The over-use of monitoring stable, low risk patients results in the accumulation of telemetry patients in the ED and inability to downgrade critical care patients. Benchmark data was extracted from the total number of telemetry hours between July 2009 and September 2009. Summary of research findings shows inclusion, exclusion, and discharge criteria are effective and should be implemented for effective use of cardiac monitoring.

Methods

To evaluate the project's aim, comparisons were made among the average number of patient telemetry hours per month by primary medical team. Beginning April 1, 2010, night shift telemetry nurses identified and reported to day shift nurses appropriate patients for discontinuing telemetry monitoring using telemetry removal guidelines. Day shift nurses notified physicians by text page every morning. Physicians were encouraged to write orders to discontinue telemetry within a timely manner. Telemetry nurses also used telemetry admission criteria to screen patients for appropriate telemetry use.

Results

In July to September 2009, the average number of patient telemetry hours by all physician teams was 60 hours. In April 2010, the average number of patient telemetry hours by all physician teams decreased to 48 hours. Other outcomes that may have been affected include shorter admission days, and increased number of admissions from ED and transfers from critical care.

Conclusion

Based on the project's results, these interventions should be sustained on 5D. Major challenges included physician buy-in, nursing compliance with completing worksheets and data collection. A major success was learning the process of data analysis using pivot tables and charts. Limitations included lack of resident empowerment to make order decisions, other unit and hospital-wide initiatives, and non-sustainable current data collection method. Monthly staff and hospital-wide committee meetings may be a vehicle for disseminating results.

References

Dhillon, S., et al. (2009). "Telemetry monitoring guidelines for efficient and safe delivery of cardiac rhythm monitoring to noncritical hospital patients." Critical Pathways in Cardiology 8(3): 125-126.

Drew, B., et al. (2004). "Practice standards for electrocardiographic monitoring in hospital settings." Circulation Journal of the American Heart Association 110: 2721-2746.

Henriques-Forsythe, M., et al. (2009). "Is telemetry overused? Is it as helpful as thought?" Cleveland Clinic Journal of Medicine 76(4): 368-372.

Goldman, L. (2001). "Telemetry of not telemetry: a great leap forward or a waste of resources?" The American Journal of Medicine 110: 67-68.

Key words: cardiac monitoring, telemetry, electrocardiography