Leading Quality Change One Beat at a Time

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Practice Question

In nurses caring for patients on cardiac monitors does current policy of rhythm interpretation and monitoring as compared to research evidence and institutional best practices provide the safest, highest quality patient outcomes?

Background

An institutional-wide, interdisciplinary, evidenced-based quality initiative was developed to look at current inpatient cardiac monitoring practices and reduce the risk of sentinel events through the identification of best practices.

EBP Model

This project used the Triad model integrating nurse's clinical expertise with the best external research evidence, and took into account clinician and patient preferences in order to deliver quality nursing care.

Evidence

Results of Clinical Nursing Survey (2008)

- 57% of nurses use standby feature daily (monitor does not record and/or alarm).
- 24% of nurses did not feel they could hear monitor alarms when in a patient room.
- 53% of nurses only reviewed patient events on the monitor once or twice in eight hours.
- Many patients are ordered heart monitors with no clear indication.
- Monitors are not continuously watched, therefore a distributed accountability exists.

Results of Observation Data Collection (2008)

- Alarms are silenced without intervention (troubleshoot alarm settings) the majority of the time.
- Nurses were observed focusing on tasks at hand, apparently desensitized to alarms.

Results of Regional/University HealthSystem Consortium(UHC) /ANCC Magnet Best Practice Survey (2008-2010)

- 17 national UHC hospitals surveyed; 16 use a monitor tech and/or pager system to alert staff of arrhythmias.
- 16 Magnet hospitals surveyed; 16 use a monitor tech and/or pager system to alert staff of arrhythmias.
- 7 regional hospitals surveyed; all 7 use a monitor tech and/or pager system to alert staff of arrhythmias.

Review of Literature

Emergency Care Research Institute (2008)

- At a minimum a protocol should exist specifying who is responsible to respond to alarms.
- Nurse-worn pagers: nurses were paged hundreds of times in an eight hour shift causing the same alarm desensitization that audible alarms create.
- Monitor watchers can initiate interventions earlier than staff waiting for alarms to sound.
- Well designed alarm systems, even when used properly, can never replace the consistent vigilance and alertness of someone watching the monitor.

Pennsylvania Patient Safety Advisory (2008)

- Modes and effects analysis showed that patients are not consistently monitored when admitted to telemetry areas.
- Technological solutions are not always effective.
- Implementing new protocols to respond to alarms is essential.

American Heart Association (2004)

- *Practice Standards for Monitoring in Hospital Settings* cites recommendations for the types of patients that should be monitored and for those that should not be monitored.

References

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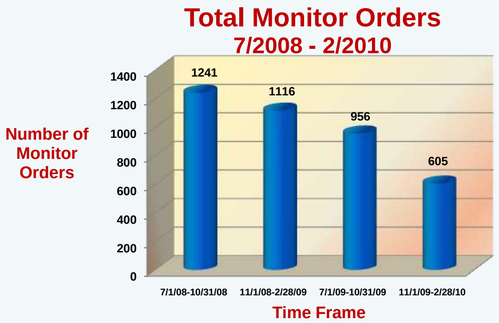
Outcomes

Created a culture of quality and safety by:

- Creating Adult Guidelines for Telemetry Monitoring and user-friendly algorithm.
- Creating financial proposal for monitor techs for FY 2010 and FY 2011.
- Initiating first steps of monitor education by implementing electronic cardiac tool box with resources for interpreting and documenting rhythm strips.
- Removing continuous monitor orders from all electronic order sets.
- Providing education on reassessment of monitors for nursing and physicians including Department of Nursing Education and Practice Councils, Adult Critical Care Committee, Clinical Service Management Council, and Patient Safety Committee.
- Ensuring patients ordered to be monitored are clinically appropriate.



Future Work

UHC Best Practice Search Follow-up

- Collecting data on volume of patients traveling to testing sites on telemetry.
- Brainstorming what fits patient flow (monitor techs to travel, RN's in testing areas, etc.).

Enhancements to Electronic Medical Records for Quality Care Delivery

- Working to replace continuous monitor orders with time limited orders that alert physicians to reassess need (q 24, 48, 72 hrs).