

Project Submission:
2009 Delaware Valley Patient Safety Award

BRYN MAWR HOSPITAL

*“Improved Alarm Management
through Centralized Monitoring”*

**The Health Care Improvement Foundation
2009 Delaware Valley Patient Safety Award**

Abstract:

Many facilities experience the challenge of providing safe quality cardiac monitoring on telemetry units with staff who are increasingly desensitized from alarm saturation. This Magnet Hospital identified the need for change to enhance patient safety and quality of care while improving staff work environment. To enhance safety and quality, nursing teamed with technology experts to select the most current fail safe product available that adapted to organizational culture and provided best practice.

Staff and team communication coupled with technology integration created the essential connection between the patient bedside and a centralized monitor room. The Hill-Rom Nurse call system provided this unique connection essential in creating this strong communication link which was crucial in facilitating the integration of the new team member, the monitor technician demonstrating a reliable source of communication of alarms.

Integration of additional patient care areas to Centralized Monitoring afforded the opportunity to raise the standard of cardiac monitoring and patient safety outside of the telemetry unit. A seamless process was developed to maintain a continuum of cardiac monitoring during patient dialysis treatments. The Emergency Room area was also identified as a high risk area of alarm management due to the steady flow of patient activity, varying degree of patient acuity and potential for alarm saturation. The integration of this department raises the level of surveillance of patients at the first point of entry in the hospital, a time of great vulnerability. The post op Labor and Delivery patient is monitored during their post anesthesia period. Pediatric patients will be monitored maintaining a standard of care of the Pediatric patient from Emergency room to Pediatric Unit.

The development of a Centralized Monitor Room supported with a strong communication structure and engaged experienced staff has successfully enriched our patient outcomes.

Objectives:

1. Apply integration of technology with staff commitment to quality and patient safety achieving best practice of centralized monitoring.
2. Evaluate opportunities to improve alarm management of the Cardiac monitored patient in the hospital setting.
3. Understand communication and technology applications which when combined with multi-disciplinary team collaboration achieve effective safe cardiac monitoring and team satisfaction.

Title: Improved Alarm Management through Centralized Monitoring.

Goals:

- Improved patient safety and alarm management in the cardiac monitoring setting.
- Identify opportunities for improved patient safety through additional integration of cardiac monitoring in patient care areas and application of centralized monitoring with additional devices related to patient care.
- Standardize Centralized Monitoring Process through out health system.

Baseline Data

Alarm notification in the telemetry setting was managed through pocket device beepers and centralized monitors on patient care units. Staff demonstrated a level of alarm saturation which led to a desensitized response to alarms creating a risk for patients. The “Leads off” alarm caused by monitoring interruption compounded this vulnerability creating a need for change.

Interventions

- Design Centralized Monitor Room in an Ergonomic manner to support technology and staff safely and efficiently.
- Develop clear process and policies through staff collaboration supporting a safe approach to monitoring patient cardiac status and communicating activity to appropriate caregiver.
- Staff Monitor Room with competent individuals with demonstrated experience and strong competent skills.
- Educate staff in newly developed process and support transition fostering acceptance and engagement of staff.
- Strong support from leadership team through rounding and visibility.
- Evaluate process and redesign aspects with staff input fostering success and practice adaptation.
- Continuous quality measures and process improvement facilitating sustainability.

Results

- Created instant alarm response from monitor room to bedside caregiver through technology integration.
- Standardized safe cardiac monitoring practice throughout telemetry by development of policy and procedures in Centralized Monitoring.
- Developed Centralized Monitoring Communication policy linking technology to staff and process.
- Implemented Emergency Broadcast system to mobilize staff to cardiac emergencies on telemetry units.
- Implemented verification process to support JCAHO patient identification safety goal compliance.
- Promoted positive multi-disciplinary team relationships through creative integration and educational opportunities leading to team performance (“Roadshow”).
- Improved patient documentation related to shift to shift interpretation reviews and charting.
- Increased surveillance of cardiac monitoring of patients through integration of Dialysis, Emergency Room, Labor and Delivery and Pediatrics.
- Decreased alarm saturation of staff in work environment.

- Developed standardized report process shift to shift between monitor technicians and nursing staff assuring a safe hand off and team collaboration.

How this Initiative may be replicated throughout the region:

This process improvement can be easily replicated utilizing any cardiac monitoring technology. Although the Hill-Rom Nurse Call System makes the communication link unique, other tools of communication can be substituted with a positive effect. The development of clear processes and procedures communicated to staff through education, staff compliance and accountability through strong supportive leadership creates an environment of success.