

ALARM MANAGEMENT: DECREASING ALARM FATIGUE AND NOISE LEVELS IN A PEDIATRIC PACU

Team Leaders: Sereniti Young BS BSN RN CCRN, Deborah Dell BSN RN CCRN CPN
The Johns Hopkins Hospital - Charlotte R. Bloomberg Children's Center, Baltimore, Maryland
Team Member: Kimberly Letnaunchyn RN CCRN

Background Information:

- Alarm fatigue remains a complicated, multifaceted problem that affects both nurses and patient safety on a daily basis.
- Professional organizations such as ECRI, Joint Commission, AACN and ASPAN have identified alarm fatigue as a major health care issue and are recommending strategies to reduce alarm fatigue and improve patient safety.
- The Pediatric post anesthesia care unit (PACU) at The Johns Hopkins Hospital (JHH) had an average 4000 physiologic monitor alarms per day.
- Staff have identified that the unit's overall noise level and potential for missed alarms is a major concern when caring for children recovering from anesthesia, especially those with obstructive sleep apnea, who are at a higher risk for respiratory compromise, desaturation, airway obstruction, laryngospasm, and narcotic overdose.
- Based on review of weekly alarm data, the JHH pediatric PACU has proposed patient safety improvements to the work environment.

Objective:

- Decrease the unit's noise level and alarm burden thereby improving staff response to alarms and staff satisfaction.

Implementation:

1. Conducted a literature search of alarm fatigue
2. Reviewed unit monitor alarm data
3. Determined pre and post unit decibel levels at pre-determined intervals before and after changes were made
4. Surveyed unit staff at two points in time: pre and post implementation of a bundled set of interventions that were aimed at reducing alarm fatigue to assess opinions of noise level, alarm fatigue and staff satisfaction
5. Reviewed weekly alarm data that identified trends and measure alarms per day
6. Monitor unit event reports and Rapid Response Team calls to identify potential missed events
7. Present summary of results to staff

Statement of Successful Practice:

- After educating staff on appropriate alarm management and making the bundled set of targeted interventions, the Pediatric PACU noise level and alarm fatigue were reduced
- Staff satisfaction was improved per survey

Implications:

- After the implementation of alarm management best practices, patient safety was improved. Pediatric PACU staff reported a decrease in alarm fatigue.
- There was an improved alarm response due to a decrease in alarm burden and unit noise. Patient safety was improved with a reduction of missed patient events.