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YOUR TOP TWO ACTION ITEMS FOR MANAGING ALARMS

UNDER THE JOINT COMMISSION'S NEW NATIONAL PATIENT SAFETY GOAL

ALARM FATIGUE

Patient care and monitoring devices such as pulse oximeters, ventilators, heart monitors, nurse call systems, and infusion pumps can provide critical warning for caregivers when a patient's condition changes. When alarms from these systems work well, patient care and safety are enhanced. However, so many alerts are produced every day (a study[1] at Johns Hopkins Hospital found an average of 350 alarms per bed) that nurses and caregivers can easily become desensitized. This is referred to as "alarm fatigue," and the risk is that valid alarms may be missed or disabled, leading to unnecessary complications and even patient death[2]. Alarm fatigue was the topic of a Joint Commission sentinel event alert[3] in 2013 and is the driving force behind the 2014 national patient safety goal (NPSG): NPSG.06.01.01: Improve the safety of clinical alarm systems[4]. Managing alarms from the variety of care and monitoring systems used today can be a challenging task. Here are two methods to begin tackling clinical alarm safety.

REDUCE THE DIN

One of the root causes of alarm fatigue is the sheer volume of alarm systems. Quantitative analysis of alarm data at Johns Hopkins revealed several avenues through which staff can reduce equipment alarms. One method is to reset device parameters and trigger alerts only when an actionable threshold is reached, reducing false positives. Instituted by Boston Medical Center, one 24-bed cardiac unit cut alarms from an average of 88,000 per week to 10,000[5].

Another tactic, supported by the American Association of Critical-Care Nurses[6], is to change electrodes daily (at Johns Hopkins this led to a 47 percent reduction in total alarms/bed/day).

Electrode maintenance is important to reduce false positives from disconnected leads. Cutting the number of alarms not only helps decrease alarm fatigue, but it also has the bonus of creating a quieter hospital environment for patients.

GO MOBILE WITH NOTIFICATIONS

Besides decreasing the sheer number of alerts, sending secondary notifications directly to providers' mobile devices is another alarm management option to help ensure critical patient conditions are triaged quickly. Using clinical alerting solution to integrate a variety of patient care and monitoring systems with staff's Wi-Fi phones, smartphones, pagers, and/or voice badges speeds notification and response times to promote better patient care. Intelligent software can also act as the first stage of triage by incorporating the facility's pre-set priority levels and using built-in logic to pass along the highest level of alerts first.

Nurse calls can be routed directly to the appropriate on-duty clinicians' mobile devices, bypassing the nursing station. Notifications can also feature specific patient location information and a call-back number to reduce friction. And by integrating with staff assignment systems, nurse call notifications can be delivered only to the appropriate patient care provider, eliminating the need to track him or her down via overhead announcement.

Even better, intelligent software provides escalation for unacknowledged alerts and allows hospitals to maintain a full audit trail of every notification — when it was received, viewed, and responded to. This helps make compliance with Joint Commission guidelines easier.

WORKFLOW EXAMPLES

Patient in pain calls for nurse.

Nurse receives message, hits call-back number embedded in message, and is connected with patient's pillow speaker.

Nurse notifies physician that a new prescription is needed. Physician enters orders remotely.

Nurse is able to quickly deliver pain relief.

Heart attack patient arrives at the hospital.

ED launches code STEMI to alert 30 staff, from imaging technicians to attending cardiologist.

Staff respond with availability, and escalations are sent automatically to alternates if needed.

Coordinated, life-saving treatment is delivered to the patient quickly.

A Quieter Hospital

Taking advantage of mobile devices and sending messages directly to appropriate staff also allows you to reduce overhead paging. Research has shown how important sleep is to patients' mental and physical health, and that a peaceful environment promotes healing. Working toward a quieter hospital can help increase your patient satisfaction scores and potentially decrease length of stay.

SUMMARY

These are just two approaches to beginning the complex task of alarm management, with the goal of reducing alarm fatigue. Quickly notifying providers of actionable alerts can be accomplished with a software solution to prioritize alarms and send them to the appropriate caregiver on his or her smartphone, pager, or other mobile device. Reducing the incidence of false positive alarms that divert attention from the real needs of patients can be addressed with tighter alarm parameters and proper electrode maintenance. All of this can add up to a quieter, safer, more efficient hospital and Joint Commission compliance.

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[1] www.aami.org/htsi/SI_Series/Johns_Hopkins_White_Paper.pdf

[2] www.washingtonpost.com/sf/feature/wp/2013/07/07/too-much-noise-from-hospital-alarms-poses-risk-for-patients/

[3] www.jointcommission.org/assets/1/18/SEA_50_alarms_4_5_13_FINAL1.PDF

[4] www.jointcommission.org/assets/1/18/JCP0713_Announce_New_NSPG.pdf

[5] www.bostonglobe.com/lifestyle/health-wellness/2013/12/23/boston-medical-center-reduces-monitor-alarms-says-care-safer-for-patients-less-stressful-for-staff/szqFan1sE7CgHnfsuT2fEL/story.html

[6] www.aacn.org/wd/publishing/content/pressroom/pressreleases/2013/june-alarm-fatigue-practice-alert.content