ALARM MANAGEMENT WITHIN HARTFORD HOSPITAL

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Overview

• What is alarm fatigue?
• Total Joint Commission statements
• Initiatives Hartford Hospital is taking
• Outcomes
• Plan for the future
Alarm Fatigue

• Background
  • Research has shown that at least 72% of alarms are false which leads to alarm fatigue

• What is alarm fatigue?
  • Sensory overload

• Why is Hartford Hospital concerned with alarm fatigue?
  • Patient Safety
    • Desensitization can lead to missed alarms or a delayed response to alarms

• Effect on clinical staff
The Joint Commission

• **2003**: The Joint Commission set a National Safety Patient Goal to improve effectiveness of clinical alarms

• **2004**: Alarm management was removed as a National Safety Patient Goal and became a Joint Commission accreditation requirement

• **2013**: The Joint Commission publishes *Sentinel Event Alert*

• **2014**: Joint Commission releases National Patient Safety Goal on Alarm Management

• **2016**: As of January 1st, 2016, hospitals are expected to develop and implement policies to manage alarms and educate staff
Hartford Hospital Initiatives

• Form a multidisciplinary team for Alarm Management Committee
• Conduct staff education
• Conduct EKG electrode trial
• Intensive Care Unit trial default change
• Plan for future improvements
Multidisciplinary Team

- A multidisciplinary team was created as part for the Alarm Management Committee
  - Biomedical Engineering, Clinical Engineers
  - Nurse Educators
  - Nurse Managers
  - Cardiologist
  - Respiratory Therapist
- Receive input from both clinical and non-clinical departments
- Make decisions to increase safety for patients and benefit caregivers regarding alarms
Staff Education

- Clinical Engineer and Clinical Nurse Specialist spearheading the Alarm Management Committee created educational video on alarm fatigue
- Increase patient administrative associate (PAA) and patient care assistants (PCA) awareness on nuisance alarms/artifacts
- Empower nurses and other clinical staff to begin alarm customization
Intensive Care Unit Trial

- Default High Heart Rate on patient monitors were changed from 120 bpm to 130 bpm
- Tachycardia alarm was reduced from audible alarm to message alarms
- Results have begun being recorded with BedMaster server

Figure 1: BedMaster Data Acquisition
ICU Trial Results

• Results from the changing the defaults on the patient monitors, as well as switching the alarms from audible to message showed that there has been no negative feedback from nursing units

• Once data is collected from trial and analyzed, percent of alarm reduction for the unit will be noted
Electrode Trial

- Propose 3 arms of investigation to reduce excessive alarming
- Consider issues regarding trial
  - Cost
  - Skin integrity
- Do a delta comparison regarding alarm changes
- Investigate packaging instructions on electrodes for appropriate storage practices
- Create document to monitor patient skin irritation
Electrode Trial Timeline

- November 1\textsuperscript{st} data with no intervention will begin getting collected
- End of November, data collection will begin for electrode changes of every 5 days
- End of December, data collection will begin for daily electrode changes

Figure 3: 3M Electrode
Future Parameters

- Expand ICU trial, pending results, to other care units
- Investigate tailoring other default parameters without putting patients at risk
- New GE patient monitoring platform which helps minimize nuisance alarms
- Continue staff education
- Connect with other committees in the future
- Begin to explore non-clinical nuisance alarms
- Encourage more frequent alarm history recording and alarm customization
References


Questions?
Thank You!