

Clinical Teaching Impact Report: Alarm Fatigue

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Purpose:

The purpose of this report is to give an assessment of the impact that has occurred during the implementation process of reducing alarm fatigue, in the intensive care unit.

Introduction:

Alarm fatigue has been a growing priority for health care during recent years due to the relationship with patient safety. During April of 2013, the Joint Commission published Medical Device Alarm Safety in Hospitals (Petersen & Costanzo, 2017). The sentinel event alert addressed 98 alarm related events which included 80 deaths, 13 patients who suffered from permanent damage and 5 extended hospital stays, all associated with alarm fatigue (Petersen & Costanzo, 2017). Clinical alarms are vastly utilized throughout the hospital setting, especially in intensive care units. Common clinical alarms can be heard from a variety of devices such as ventilators, intravenous pumps, pulse oximetry, electrocardiographic alarms, sequential compression devices, call bells and fall prevention devices. Even though clinical alarms are supposed alert nurses to changes in patient's physiological status or safety, a study conducted by the American Association of Critical-Care Nurses found that 80 to 99% of electrocardiographic alarms were irrelevant to the patient's status (Petersen & Costanzo, 2017). With a countless amount of excessive "false" alarms, nurses and other healthcare providers can develop desensitization towards clinical alarms. The result of desensitization can potentially lead to the development of alarm fatigue, which can consequence increase the risk of adverse and sentinel event for patients (Petersen & Costanzo, 2017). While observing, during a shift on the intensive care unit, it became evident that teaching about alarm fatigue was necessary due to the amount of "false" alarms and the desensitized reactions of staff members.

Implantation:

All healthcare providers, in the hospital setting, are susceptible to alarm fatigue. Some providers may already or are currently experiencing this phenomenon, as noted while making observations on the unit. So, what can be done to identify problems and causes of alarm fatigue? Initially, a survey was administered to staff regarding what they believe what alarm fatigue is and what causes it. In addition to their suggestions of ways to reduce "false" alarms on the unit. Also, newly hired staff members were asked about setting parameters on the monitors and if physician's order was required to adjust the parameters. During this surveying of staff, it became apparent areas of education that were lacking about alarm fatigue, which developed the objective points needed for teaching.

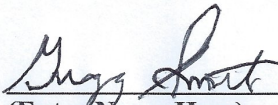
Objectives for teaching included recognizing alarm fatigue by verbalizing 2 signs and symptoms of alarm fatigue that the nurse recognizes in themselves, listing 3 potentials way to reduce unnecessary alarms and demonstrate on the monitoring system how to adjust parameters and listing 3 potential ways alarm fatigue puts patients at risk for harm. Key points that were discussed during the teaching of alarm fatigue included work place disruption from alarms, desensitization, list of different devices utilized on the unit that can alarm, skills demonstration on how to readjust parameters on the monitors or volumes and what can ultimately occur to patients' due to alarm fatigue. An important aspect to alarm fatigue is identification of nurse's awareness about desensitization which was greatly discussed in length during the presentation on the unit. Overall, the implementation process took about 2 months and the following results or impact occurred.

Results:

While there are still “false” alarms occurrences on the unit, which there is one recent incident of an oxygenation saturation monitor that continuously sounded, that comes to mind. The overall frequency of alarms has decreased. A post implementation questionnaire was released to staff members asking about their feelings of the teaching process and if they see a difference in recognizing alarm fatigue in themselves, along with, if they have seen a decrease in the amount of alarms. The majority of the staff feels the implementation of adjusting parameters, with a physician’s order, and appropriate teaching about the disposable pulse oxygenation monitors has made a difference. With a decrease in “false” alarms, patient’s safety and overall well-being has improved. In the intensive care unit, it is important for patients to have regular sleep-wake cycles. This was difficult for some, due to the high rate of alarms sounding because parameters were not set to the individual patient. Instead, the parameters were set to what is expected to be “normal” or within defined limits. There has been less complaints, from patients who can verbally express themselves, about unnecessary interruptions in sleep. Patient safety was a huge factor driving this clinical teaching project. While a sentinel event has not occurred on this unit, from alarm fatigue, it is always a possibility. Staff is now more alert and acknowledging alarms when they do sound, rather than ignoring or waiting for someone else to say something about an abnormal heart rate or blood pressure. Overall, the clinical project is believed to be a success.

Continuing the impact:

Like most units, turnovers will always occur. With new staff being hired, it is important to continue the education about alarm fatigue, ways to reduce unnecessary alarms and how alarm fatigue can affect our patients. So how can we educate new staff? The next step to continue our reduction of alarm fatigue, should include teaching provided by the preceptor for new hires. Implementation can be measured through a check-off or knowledge based questions, which the preceptor must sign off the orientee on. Continuing education among staff is key for success.

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Reference

Petersen, E. M., & Costanzo, C. L. (2017). Assessment of clinical alarms influencing nurses' perceptions of alarm fatigue. *Dimensions of Critical Care Nursing*, 36(1), 36-44.
Doi:10.1097/DCC.0000000000000220