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### Improving Patient Safety Through Increased Awareness of Alarm Fatigue D9 Pulmonology & Our Children's House

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### PICO/Clinical Question

Does providing an educational tool to nurses regarding alarm fatigue awareness help improve overall safety in the pediatric inpatient setting?

### Clinical Issues and Importance

- Alarms play an important role in warning clinicians of a change in the health status of a patient. Often times, multiple alarms for various patients can be loud and cause overstimulation and fatigue.
- Studies have indicated that "80%-99% of alarms in hospitals are false or clinically insignificant" – which causes a distraction to actual harmful alarms that signify a change in a patient's health status (Fernandes et al., 2020).
- Alarm fatigue is an issue that can cause desensitization in detecting vital sign changes that are essential for patient safety. We found that as nurses, we need to find a way to prevent alarm fatigue to ultimately improve patient safety (Ruskin & Hueske-Kraus, 2015).



### Research/Literature Review

- In one study, when nurses were asked about how to improve alarm perception, "proper staffing and education were the measures most suggested" (Lee et al., 2021).
- In another study, resource materials were used including "staff participation in developing education posters with weekly unit-specific alarm data, reading and discussing articles on the negative impact of alarm fatigue, and exploring best practice alarm management strategies, such as alarm customization" (Allan, 2018). The post survey showed "nurse knowledge of alarm fatigue, customization of alarm settings, and awareness of nuisance alarms improved" (Allan, 2018).
- Another study was done where nurses' knowledge of alarm management was assessed before and after implementing an educational program (Aysha et al., 2019). The nurses were assessed after receiving education "in order to test the effectiveness of the program on nurses' knowledge, performance, nurse's fatigue, and patient outcome" (Aysha et al., 2019). Ultimately, "the present study showed a significant improvement of knowledge scores among studied nurses immediately after the nursing intervention program compared with their pretest score" (Aysha et al., 2019).

### Clinical Practice Implications

- Creating an educational tool will increase awareness on what alarm fatigue is, how it impacts both staff and patients, and ways to reduce the effects of alarm fatigue.
- The use of a flyer and/or short presentation during staff meetings will bring nurse's attention to alarm fatigue concerns.
- Through the reduction of alarms, staff will experience less burnout and overstimulation.
- Patient safety will be promoted by reducing the number of non-critical alarms so staff can better respond to patient's needs.



### Recommendations

- Implementation of an educational tool for nurses about alarm fatigue and conduct a survey post education.
- Synthesize data from surveys regarding alarms and patient safety events.
- Expand education to other clinicians and/or units if the education proves to be effective.

