THE COST OF RESPONDING TO CLINICAL ALARMS IN THE HOSPITAL ENVIRONMENT

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Abstract

BACKGROUND: Alarm fatigue is currently at the forefront of healthcare because of its immediate patient safety hazards. Alarm fatigue is defined as sensory overload experienced by healthcare professionals from exposure to an excessive number of alarms (Sendelbach, Funk 2013). Alarm fatigue desensitizes healthcare workers, namely nurses, to the abundance of patient alarms, which is troublesome for patient safety because it may lead to delayed or missed responses by the nursing staff. Prior research on solutions to alarm fatigue have primarily focused on reducing the frequency of alarms.

INTRODUCTION: Nurses are subject to an overwhelming number of clinical alarms each shift in hospitals on medical-surgical floors, leading to alarm fatigue, compromised patient safety and compromised patient care.

OBJECTIVE: The purpose of this study is to quantify the cost, in terms of time and other variables, of responding to clinical alarms at the bedside in attempt to quantify the relative value of alarms. This cost involves the time it takes to address the alarm, the time it takes to perform other tasks for the patient while in the room, and the interruption in nursing workflow that answering the alarm causes.

METHODS: Data was collected on 20 nurses who were observed for 4 hour intervals. During the observation periods, data was recorded about the time and actions spent addressing clinical alarms. The type of alarm, how the nurse was notified of the alarm, whether the nurse was interrupted during a critical task, the amount of time the nurse spends in a patient’s room per alarm, whether the alarm was actionable or not, what the nurse did regarding the alarm and what other non-nursing activities the nurse did for the patient while in the room was all recorded.

ANTICIPATED RESULTS: Results will include the most frequent type of alarms and types of alarm notification, the average amount of time that nurses spend responding to alarms, and the average amount of time that nurses spend performing non-nursing activities because they entered the room to check on a clinical alarm. These results will be used to analyze the relative value of clinical alarms.