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Category: Quality improvement (Systematic and continuous actions leading to measurable improvement in health care service and/or health status)

Title: Reducing Non-Critical Telemetry Alarm Activations: A Continuous Quality Improvement Project

ABSTRACT BODY

Background: Inpatient telemetry is vital to the safety of hospitalized patients. Excessive telemetry alarm activations are a source of fatigue, stress, and distraction to hospital staff. Adverse events have been reported in association with excessive alarms. As a result, we sought to decrease the number of total non-critical alarms in an effort to reduce distraction from more serious arrhythmias.

Aim: To reduce and maintain the number of total non-critical central telemetry alarms on our cardiology wards at a large tertiary referral center by 50% within a nine-month period.

Methods: We formed a multidisciplinary team of stakeholders to review and modify our telemetry parameters. Several parameters were determined as non-critical by cardiovascular disease specialists. Quarterly post-intervention data are obtained from Philips North America and compared to baseline data in a longitudinal fashion.

Results: Review of our baseline data (March-May 2019) revealed a total of 405,954 alarm activations. Thresholds for pauses, premature beats, pulse ranges, brief non-sustained arrhythmias and atrial fibrillation were modified. First quarter data revealed a total of 196,455 alarms (51% reduction), Figure 1. All deaths are reviewed by one of the co-authors (EP) and none were attributable to changes in alarm settings.

Conclusion: Careful modification of telemetry alarm settings results in a significant reduction in total alarms and percentage of non-critical alarms.

Clinical Implications: My study will help cardiovascular clinicians to make meaningful changes to central telemetry monitoring parameters and thresholds in an effort to reduce excessive alarm activations that may be a source of fatigue, distraction, and missed adverse events fo