AN ALARMING RATE OF UNNECESSARY MONITORING IN THE PRACTICAL USE OF THE LATEST STANDARDS OF ELECTROCARDIOGRAPHY (PULSE) TRIAL

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Background: Continuous electrocardiographic (ECG) monitoring is ubiquitous in hospitals. An unintended consequence of the increasingly widespread use of monitoring is a cacophony of alarms, 72-99% of which are false. Frequent false alarms have caused staff to ignore or deactivate alarms, which has resulted in sentinel events. A contributor to this alarm fatigue may be unnecessary ECG monitoring. The American Heart Association Practice Standards for ECG Monitoring specify indications and time frame for monitoring. Our purpose was to determine the proportion of patients on a monitor with no indication for monitoring.

Methods: This analysis is part of the PULSE Trial, a multi-site randomized clinical trial addressing ECG monitoring. PULSE research nurses visited cardiac units in 17 hospitals. They reviewed medical records of current patients to determine if they had a Class I or II indication for arrhythmia, ST-segment ischemia, and/or QTc interval monitoring, and noted if the patient was being monitored.

Results: During the first 2 phases of our ongoing 3-phase study, the research nurses made 4,678 observations on 3,250 patients. Of those on a monitor, 26% had no indication for monitoring.

Conclusions: The number of alarms produced by this over-monitoring is likely substantial. Eliminating unnecessary monitoring should result in a decrease in alarm burden, with a higher proportion of clinically meaningful alarms and a faster response time - ultimately reducing sentinel events related to alarm fatigue.