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Improving Telemetry Utilization in an Inpatient Hospital Setting

Background: Telemetry is a cardiac monitor that continuously records heart activity and monitors abnormal rhythms. Most current clinical indications are limited to 48 hours maximum, but telemetry monitoring service (TMS) is commonly used for a greater duration. This leads to resource exploitation that may create limitations of the resource and also comes with economic burden. Limiting usage to appropriate indications and durations can reduce overall costs and improve profit margin for the hospital and also cut down on unnecessary burden for patients. Through our study, we aim to decrease TMS overuse.

Methods: The study was done at Beaumont Hospital Royal Oak. It involved gathering TMS utilization data before and after the intervention. One PSA cycle was completed. A root cause analysis showed that TMS was most commonly utilized in patients with arrhythmias, hypoxia, electrolyte imbalances and continued past the recommended timeframe. We placed small (3x3") placards with TMS indications and proper durations in corners of computer monitors at the local workstations on certain floors (6 north and 9 north). These workstations are commonly used by physicians to review their patients. The placards served as a reminder to review proper TMS usage. We gathered TMS utilization data for 1-month before and after the intervention to evaluate TMS use and hence impact of intervention.

Results: Pre-intervention average TMS duration was 60 hours and after intervention, average duration was 85 hours with standard deviation of 5.13 and 4.1 respectively. Two sample t-test was significant for a p-value of 0.001.

Conclusion: Our study did not achieve the goal to decrease unnecessary TMS orders to optimize the utilization. We believe our study may have been confounded by the COVID-19 pandemic as these patients often required longer durations of TMS. We would recommend utilizing a team-based approach including engaging nursing in the process in order to decrease overutilization of TMS