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ALGORITHM-BASED PROACTIVE RAPID RESPONSE TEAM ROUNDS: DEVELOPING A SAFETY NET FOR PATIENTS AND NURSES

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Introduction: The future of Rapid Response Teams (RRT) is to move from reactive calls to proactive surveillance. The Electronic Medical Record can be optimized to promote nurse-to-nurse education while providing a safety net for the management of hospitalized patients. **Hypothesis:** The use of algorithms within the EMR for Early Warning Scores (EWS) can increase anticipatory nursing interventions for patients at risk for deterioration. **Methods:** The Rothman Severity of Illness Index (RI) is a graphic display of an algorithm based on 26 variables that provides a timeline of the patient's condition throughout hospitalization to support the clinical evaluation of patients to help identify critical changes or slow deteriorations that may be difficult to detect. The RI was implemented in all inpatient areas of a 210-bed teaching hospital in Florida in 2011 to drive proactive 'surveillance' rounding by Rapid Response Team nurses (RRT RN). The RRT RN identifies relevant cases and rounds on 2–4 patients while delegating additional patients to the charge nurse for follow-up and report back to the RRT RN. The reasons and interventions for each patient visit were recorded. **Results:** 206 patient graphs were inspected by RRT RNs over 3 weeks. Surveillance visits were conducted on 162 occasions (average 3.9 visits/12h) and represented a 1013% increase in patient encounters compared with traditional reactive RRT calls (N = 16) during the same period in 2010. Nursing-driven interventions and/or nurse-to-nurse coaching was implemented 89 times (average 2.1 visits/12h) and demonstrated anticipatory nursing care such as prompting calls to providers for relevant assessment findings and lab results (19%, N = 17) and nurse-to-nurse mentorship (59.6%, N = 53) including code status dialogue, documentation inconsistencies, and sepsis screen coaching. **Conclusions:** The use of 'smart' algorithms combined with the clinical experience of RRT RNs effectively increased anticipatory nursing care for patients at risk for deterioration while promoting expertise-sharing among nurses. Further study of the patient safety and quality implications of data-driven proactive rounds is warranted.