

IDENTIFYING HIGH-RISK PATIENTS OUTSIDE THE INTENSIVE CARE UNIT USING AN EARLY WARNING SCORE: MEDICAL-SURGICAL UNIT PILOT AND ELECTRONIC HOSPITAL-WIDE ROLL OUT

BACKGROUND

- Failure to rescue refers to hospitalized patients who experienced negative outcomes because a deterioration in status was not recognized.
- The Institute for Health Care Improvement says early warning systems should be used to monitor all patients in the acute care setting:
 - Early recognition of deterioration
 - Ensure timely escalation of care
- Most hospitalized patients who experienced a cardiopulmonary arrest exhibited a change in clinical parameters in the hours preceding the arrest.
- Early warning systems (EWS) provide clear criteria, prompt nurses to score the patient, and take prescribed action to address patients' needs.

PURPOSE

- St Joseph Hospital (SJO) did not use an early warning system (EWS) score to alert the bedside nurse or Rapid Response Team.
- 22% of SJO code blue events occurred outside of the ICU for FY 2018.
- Aim was to implement an EWS scoring system and reduce the number of code blue events outside of the ICU.

LIMITATIONS

- Our hospital-wide roll out was on February 17, 2020. COVID-19 outbreak started shortly after, altering the unit census, nursing priorities and patient population.

REFERENCES

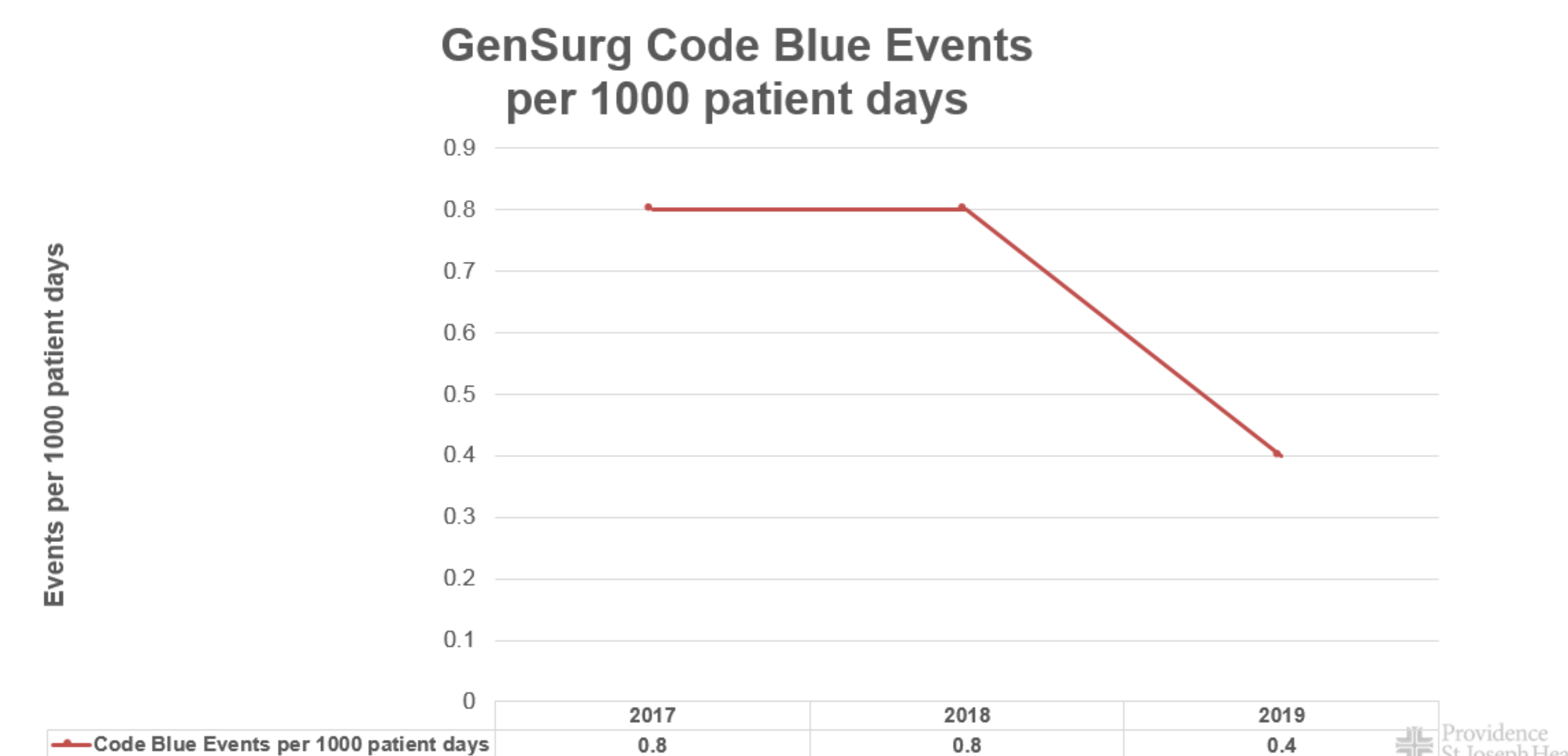
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METHODS

- An 8-month evidence-based quality improvement project of a non-electronic EWS tool in a 30-bed medical-surgical unit that served as pilot implementation for the hospital. The following questions were explored: does use of an EWS tool aid in...
 - earlier activation of the RRT?
 - earlier treatment and/or escalation of patient care, preventing code blue events?
- After the pilot, an electronic EWS tool was rolled out hospital-wide and code blue and RRT data was reviewed.

Score	3	2	1	0	1	2	3
Respiration Rate	≤8		9-11	12-20		21-24	≥25
Oxygen Saturation	≤91	92-93	94-95	≥96			
Any Supplemental O2		Yes		No			
Temperature	≤95°F		95.1-96.8°F	96.9-100.4°F	100.5-102.2°F	≥ 102.3	
Systolic Blood Pressure	≤ 89	90-100	101-110	111-219			≥ 220
Heart Rate	≤ 40		41-50	51-90	91-110	111-130	≥ 131
Level of Consciousness				Alert			Voice, pain or Unresponsive

Gen Surg Pilot Results (May 1, 2019 to December 31, 2019)



RESULTS AND OUTCOMES

- Gen-Surg Pilot:
 - 2018 code blue events averaged 0.8 per 1,000 patient days.
 - Since pilot implementation, code blue events averaged 0.4 per 1,000 patient days, a 50% decrease.
 - Doubled emergent rapid response calls.
 - Higher numbers of interventions on unit.
 - Increased patient transfers to higher level of care.
 - Increased tracking of high-risk patients.
- Hospital-wide electronic roll out showed no significant reduction in code blue events in other non-critical care units.
- Gen-Surg continued to experience a significant decrease in codes with no code blue events from March-May 2020.
- Code blue records review from March-May 2020 demonstrated multiple errors in calculation of the EWS score.
- If EWS score been calculated appropriately, 5 out of the 8 codes (62%) would have scored a 6 or higher, warranting activation of the RRT.

IMPLICATIONS FOR PRACTICE

- Additional education needs to be provided to the non-critical areas on the electronic scoring of the EWS.
- Once education is provided, further rapid response and code blue data needs to be collected.

CONCLUSIONS

- Results of the pilot validated the promise of using non-electronic EWS tools prior to transition to an electronic EWS. More data needs to be obtained to validate hospital-wide decrease in code blue events.