Learning Session Abstract

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Reduction of Serious Harm Events with Practice Change(s) and Implementation of Clinical Education Software

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Background: In early 2017, our cardiac intensive care unit (CICU) on-boarded an intensivist, nurse manager, and nurse educator team to guide practice changes on the unit. The goal was to have 24/7 physician coverage in the unit for close monitoring of patients and to develop a nursing team well versed in cardiac intensive care.

Objectives: The new management team observed workflows, reviewed patient safety outcome rates, and assessed learning needs for staff. Three areas of focus were identified: central line maintenance, pressure injury prevention, and adoption of an education software application to drive practice change on the unit. Unit leadership focused on increasing bundle reliability. They also tailored their interventions to the unique needs of their patient population by going "beyond the bundle."

Methods: An enhanced central venous catheter dressing change protocol was adopted in August 2017, requiring a sterile technique with additional personal protective equipment for the duration of the procedure. The unit educator and team taught the protocol through job instruction training and audited daily to ensure proficiency. In early 2018, the CICU team partnered with wound care to utilize waffle cushions under all postoperative heart patients to prevent pressure injuries. In December 2017, work began developing CICU-specific content for upload into a clinical education software application called Elemeno. The application provides just-in-time education for nurses through short videos and quick reference guides.

Results: Following the dressing change intervention, the unit was central line associated blood stream infection (CLABSI) free for 1 year. Following the pressure injury prevention interventions, the unit went 9 months without a serious harm pressure injury (stages 3, 4, or unstageable). From March 2018 through January 2019, the unit achieved a center line shift on a t-chart of time between all serious harm events (CLABSIs, serious harm pressure injuries, catheter associated urinary tract infections [CAUTIs], venous thromboembolisms [VTEs] National Coordinating Council for Medication Error Reporting and Prevention [NCC MERP]; Category F-I Adverse Drug Events (F-IADEs), falls of moderate or greater harm, and unplanned extubations) (Fig. 1). The center line improved to 29.1 days between serious harm events from 7.3 days at baseline.

Conclusions: The targeted practice changes implemented in the CICU had widespread impact on patient outcomes. Although the team's initial interventions focused on CLABSI and pressure injury prevention, the frequency of all serious harm events in the unit has decreased. Collaboration between disciplines has improved, staff is empowered, and ongoing learning is supported. The team is continuing to optimize Elemeno, using it for contests to award process reliability, collect data, display live bundle reliability, and support new quality improvement interventions.

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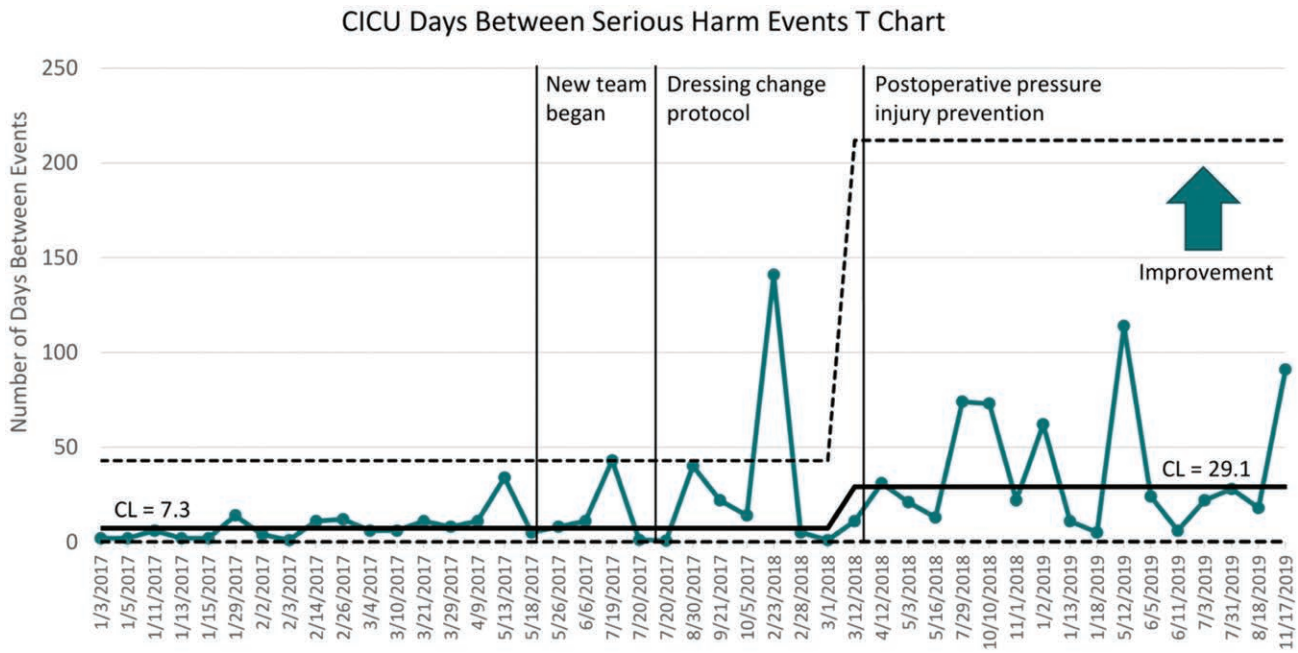

Fig. 1. CICU Days Between Serious Harm Events T-Chart.