

Case Study:

CCM Integration and Standardized Protocols Improve Throughput, Mechanical Vent Days, Length of Stay, and Mortality

Partnership Background

A hospital with a 38-bed Intensive care unit had several areas of concern, including admissions from the emergency department to the ICU, mechanical ventilator days, and length of stay within the department.

Goals

- Streamline ED to ICU throughput
- Reduce mechanical ventilator days
- Decrease departmental LOS

Strategy

First, we established a joint Critical Care Operations Committee, improving communication and partnership between the critical care, emergency, and hospital medicine service lines, nursing and respiratory care teams, clinical pharmacy and case management and offering a clear avenue for collaboration between patient care departments.

SCP created and implemented standardized Spontaneous Awakening and Breathing Protocols on all mechanically ventilated patients, including education and bedside training of ICU nursing and respiratory care teams. In partnership with the hospital, they also implemented formalized daily Interdisciplinary Rounds to address daily goals of care and ensure best practices were in place. The decision to extubate a patient was determined during this time.

Through improved collaboration between the ED clinicians and nursing teams, all ICU admission requests were seen within 30 minutes of notification, allowing for assessment of ICU admission appropriateness and ensuring the ED team was supported with clinical guidance and ICU-specific order set implementation.

Impact

The integrated partnership between SCP and the hospital was instrumental in creating open dialog to improve communication, cooperation, and care coordination between emergency, hospital, and critical care medicine clinical staff in order to implement new processes.

Within 90 days, the program saw significant results and has been able to sustain and build upon the initial improvements.

90- Days

- 7.4% reduction in mortality for all ICU patients
- 2.09 day decrease in average vent days
- 1.54 day decrease in average ICU days
- 2.41 decrease in average inpatient days
- 2.5 hour (50% reduction) decrease in emergency department ICU hold times

180- Days

- 9.5% reduction in mortality for all ICU patients
- 2.1 day decrease in average vent days
- 1.54 day decrease in average ICU days
- 2.15 decrease in average inpatient days
- **Lives saved as of 180 days - 99**



9.5%

REDUCTION IN MORTALITY
FOR ALL ICU PATIENTS



2.1

DAY DECREASE IN
AVERAGE VENT DAYS



1.54

DAY DECREASE IN
AVERAGE ICU DAYS



2.15

DECREASE IN AVERAGE
INPATIENT DAYS



99

LIVES SAVED AS OF 180 DAYS