DOM Faculty sponsor (name and title)	Arun Kannappan, Assistant Professor
Primary Contact	Arun Kannappan, Arun.Kannappan@ucdenver.edu
DOM Division	Pulmonary Sciences and Critical Care Medicine
Other team members (optional; not limited to DOM Faculty)	Stakeholders: Physicians, APPs, Respiratory therapists, ICU Nursing staff
Title	ICU Liberation with EPIC Partnership

Abstract 4.

Background:

For the past decade, the Society of Critical Care Medicine's ICU liberation campaign has been incorporated to reduce ICU length of stay and post-ICU related morbidity. The ABCDEF bundle used by the campaign to addressed different domains of ICU care for each letter. Despite accepting these evidence based measures as standard of care, our compliance with certain portions ABCDEF bundle remains low.

This project will focus on two facets of the ABCDEF bundle – "B" for both SATs and SBTs and "D" for the assessment, prevention and treatment of delirium.

Daily spontaneous awakening trails (SATs) and spontaneous breathing trials (SBTs) are the cornerstone of the ICU liberation bundle for mechanically ventilated patients in which sedation infusions are stopped to facilitate a pressure support SBT. If the patient passes both the SAT and SBT, the clinician teams are prompted to consider extubation. This reduces both ICU stay and ventilator associated complications. The current state of SATs and SBTs in the University MICU is in disarray without clear protocol, ownership or accountability. Physicians, respiratory therapists and nursing staff are siloed into their own portions with inadequate communication. Furthermore, documentation is sparse and poorly visible in EPIC.

Additionally, unrecognized delirium can lead to lasting neurocognitive and psychiatric effects after the patient leaves the ICU. The SCCM recommends use of a delirium score to assess patients in the ICU, especially those who are non-verbal and on mechanical ventilators. Our current practice recommends using the CAM-ICU score but this is not readily documented in an easy to read place in EPIC. In addition, we are finding that it is not routine practice for nurses to assess CAM-ICU; usually the patient is scored if there is a concern or if requested by the physician. These lapses contribute to delirium being under-recognized and treatment delayed.

Project Description:

This project will improve our utilization of the ABCDEF ICU Liberation bundle, focusing on SATs/SBTs and Delirium domains, and increase compliance to >80% in 6-8 months' time in the University of Colorado Medical ICU. We will identify champions from multiple disciplines (physicians, APPs, RT, pharmacy and nursing) to help us identify where best in work-flow to institute these practices and how to ensure buy-in from staff through education and empowerment. The crux of the project is utilization of EPIC - we will work to make the elements of the ABCDEF bundle readily visible in the patient flowsheet for all staff and improve our daily rounding checklists for prompting. This will improve our informatics and assessment of compliance with the bundle by querying EPIC's inputted data. Our hope is to develop a process in the medical ICU with EPIC support that can be readily disseminated across the University of Colorado campus with customizability to meet each unit's needs.

By incorporating a multi-disciplinary team and instituting standardized protocols with the use of EPIC's robust data collection and processing capabilities, we can improve the care for ICU patients through reduction of ICU days, reduction of ventilator associated complications and reduction in neurocognitive and psychiatric morbidity.

AIM Statement:

This project will improve our utilization of the ABCDEF ICU Liberation bundle, focusing on SATs/SBTs and Delirium domains, and increase compliance to >80% in 6-8 months' time in the University of Colorado Medical ICU to then have a product that can be disseminated throughout the University of Colorado ICUs and help our ICU patients through reduction of ICU days, reduction of ventilator associated complications and reduction in neurocognitive and psychiatric morbidity.

Project Needs:

Coaching; Project Management; Graphic analysis (example: pareto and control charts); Data Support (EPIC, Vizient, PowerBI, COMPASS)