Decreasing Ventilator Days in Medical Intensive Care Unit by Implementing ABCDEF Bundle
Purpose of the Project

The aim of this project is to implement the evidence based ABCDEF bundle to help decrease ventilator days in Medical Intensive Care Unit (MICU).
ABCDEF Bundle

A - assess, prevent, and manage pain
B - both spontaneous awakening and breathing trials
C - choice of analgesia and sedation
D - Delirium: assess, prevent, and manage
E - early mobility and exercise
F - family engagement and empowerment
Clinical Problem

• In 2021, the MICU did not consistently meet the target goal of the ventilator length of stay index of 0.99.
Multiple Factors have been Identified:

- Lack of confidence by healthcare team
- Over sedation
- Absence of a comprehensive, standardized, and consistent approach
- Practice variation between ICU attendings
Summary of Supporting Literature

Barnes Daly et al. (2017), Hsieh et al. (2019), and Sosnowski et al. (2018) concluded the evidence-based practice ABCDEF bundle is easy to implement and showed improvement in short- and long-term outcomes such as:

- duration of mechanical ventilation (p value < 0.001),
- length of ICU stay (p value = 0.028),
- improved survival (p value < 0.001),
- more days free of delirium and coma (p value < 0.001).
Strategy & Implementation

Ventilator Liberation Task Committee
MICU Collaborative
Literature Review
PDSA Method
Education Roll Out
Real Time Audits with Feedback
P. D. STUDY. A.

Monitoring compliance:
• Sedation vacation
• Titrations matching RASS
• Reviewing respiratory notes
• PT/OT Written order
Outcomes

MICU 12 months Ventilator Length of Stay Trend Index in 2022

DNP Project GO LIVE 9/19/22
Implications for Practice

By adopting all elements of the evidence-based ABCDEF bundle:

- Interprofessional team can decrease ventilator length of stay days in MICU.
- Contribute to nursing clinical quality outcomes by reducing use of restraints, delirium, ICU acquired pressure ulcers.
- Improve knowledge, collaboration, and confidence in the decision-making process to improve patient outcomes.
- Continue to monitor for sustainability via chart audits, and providing re-education as needed in real time.
- Consider system wide role out in patient’s EMR.
I would like to thank Dr. Tracy Montesa, Dr. Kathryn Rugen for providing guidance and support through this project, and MICU staff for their outstanding work to contributing in improving our patient outcomes.
References


