Implementing a Nurse-Driven Mobilization Protocol for Patients on Mechanical Ventilation

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INTRODUCTION

The absence of a protocol for mobilizing patients on mechanical ventilation is a local problem at St.Francis-Emory Healthcare. Postponing until after extubation leads to problems of prolonged weakness, re-intubation and significant long-term loss of muscle

PROBLEM

A needs assessment found that there are no protocols in place for mobilizing patients on mechanical ventilation, which is a standard of care. This is a cultural problem in this facility.

AIM and OBJECTIVES

Evaluate the impact of a nurse-driven early mobilization (EM) program on reducing ventilator days and rate of re-intubation.

Specifically adult patients on ventilator.
Measurable reduction of ventilator days
Attainable reduction of HARMS
Realistic goals benefitting outcomes.
Time frame of three-months .

FRAMEWORK

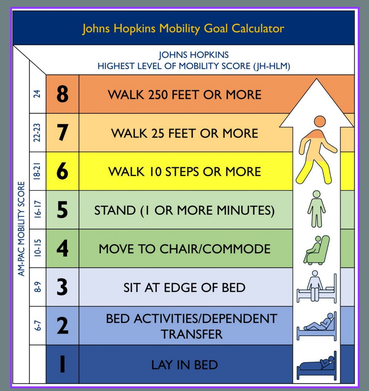
Dorothea Orem's theory of self-care: patient's ability to perform all functions necessary for health, safety, well-being.

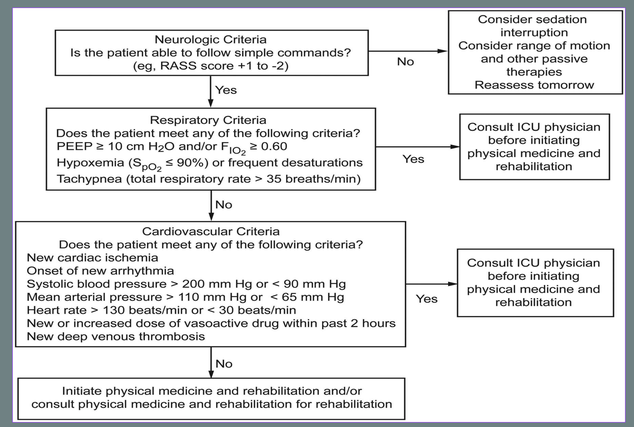
METHODS

Setting: Medical ICU
Participants: Adult patients on mechanical ventilation; ICU staff, RT, PT
Design: Quality Improvement project
Data collection: survey, chart review

Plan- staff meetings, goals identified
Do- pre/post staff surveys, chart reviews
Study- objective and subjective data
Act- adapt and adopt- start with bed mobility

The multidisciplinary team will enable patients to maintain strength through progressive mobilization





RESULTS

Qualitative data: Staff surveys noting patient improvement associated with mobilization.

Quantitative data:

Preventable HARMS August-December 2021

	August	September	October	November	December
Sepsis	2.584	2.449	2.072	1.4	0.258
CLABSI	0	0	0	0.233	0
HAUTI	0.235	0.204	0.46	0.933	0
HAP	1.175	1.02	0.921	0.933	1.549
Pressure Injury	0.705	1.224	0.921	2.566	0.258
Sepsis Survival	67.83	69.26	79.01	86.73	
Mortality Index	1.686	1.433	0.9 94	0.793	
Readmission	0.878	0.615	1.135	0.684	

Mobilized patients and outcomes January-March 2022

Patients Mobilized	January	February	March
Number of patients mobilized (any level of mobilization)	5	13	18
Successfully extubated	2	11	14
Reintubated	2	2	1
Required Tracheostomy	1	1	2
Back to baseline chronic vent requirements	0	1	1
Expired patient	2	0	1

PATIENT DATA

Patient Sex:
Male=20; Female=16
Patient Age:
Mean 61; Median 63; Mode 63
Days on Ventilator (not chronic vent)
Mean 6; Median 5; Mode(s) 2,3,5

DISCUSSION- IMPLICATIONS FOR PRACTICE

- EM is associated with reduced duration of vent days, rate of reintubation, hospitalization and healthcare cost.
  - -Limited by staffing and COVID-19 pandemic
  - –Future goals of advancing to full mobility

CONCLUSION:

1-Reduced ventilator & sedation-associated complications and HARMS
2-Improved quality of life for patients after ICU liberation
3-Improved staff engagement, patient outcomes, and job satisfaction.

References: Johns Hopkins Medicine. (2020); Nydahl, et al. (2017); Ostermann, M., & Sprigings, D. (2017), Society of Critical Care Medicine. (2020); Taito, S., et al.(2016).