An Evidence-Based Quality Improvement Project for Early Mobility in the ICU

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Introduction

- ***Problem:***
- Immobility cultures and negative perceptions toward early mobility in ICUs nationwide cause several detrimental outcomes in adult mechanically ventilated (MV) patients[1-7]
  - Impaired neuromuscular function
  - ICU-acquired weakness
  - Cognitive impairment
  - Psychological disabilities
  - Increased MV duration
  - Increased ICU and hospital lengths of stay
  - Decreased long-term survival rates
  - Poorer quality of life
- 58% of MV patients develop ICU-acquired weakness, which is defined as an acute onset of functional impairment, when they are not provided with early mobility[1,8].
- Profound long-term reduction in functional status can be observed one to five years after ICU discharge[2].

Purpose

- ***Purpose:*** To address the profound repercussions of immobility in MV patients in the MICU by implementing an interdisciplinary early mobility protocol
- ***Objectives:***
  1. Develop an evidence-based mobilization safety screeningtool for RN use in order to increase the percentage of patients screened by RNs for safe mobilization by 50%
  2. Increase the percentage of patients that participate in early mobility by 50%
  3. Identify nurses' perceptions on ease, safety, and confidence and knowledge toward early mobility and provide education to positively shift these perceptions to create a culture of mobility

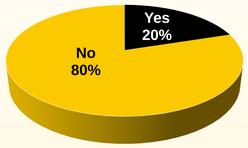
Methods

- IRB approval was received from Mercy Medical Center and the University of Iowa: not human subject's research
- ***Setting:*** Mercy Medical Center 20-bed MICU
- ***Population:*** Adults > 18 years of age, mechanically ventilated patients in the MICU
- ***Literature Review:*** 32 articles (RCTs, prospective cohort studies, systematic reviews) met inclusion criteria.
  - Early mobility = ↑ in the level of mobility patients attain while in the ICU & ↓complications associated with immobility[2,6,7]
- ***Implementation:*** Initial RN Perceptions survey, implementation of safety screening tool, continuing education, mobility champions, electronic monthly updates, continuous feedback, Final RN Perceptions survey, presentation of the project's outcomes, & incentives
- ***Outcomes Data:*** EMR chart audits (baseline data 3 months prior to implementation), Qualtrics survey (before & after implementation)

Outcomes

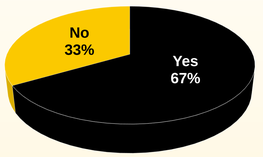
- ***Outcome 1:***
  - Before introduction of the safety screening tool, PT were the only providers screening MV patients for safe mobilization
  - The modified safety screening tool was utilized by RNs only[7,8]

% of Patients Safety Screened Pre-Implementation



n = 30

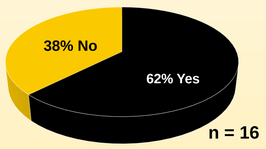
% of Patients Safety Screened Post-Implementation



n = 30

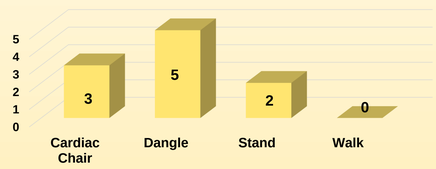
- ***Outcome 2:***
  - Zero patients received early mobility prior to implementation of this project
  - Out of the patients deemed safe for mobilization, 62% (n=10) participated in early mobility

% of Patients Eligible & Participated in Early Mobility

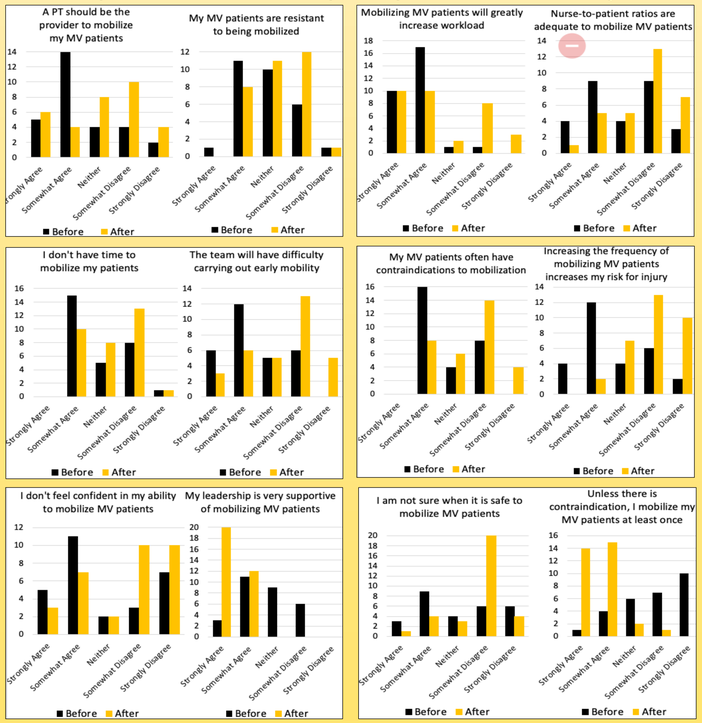


n = 16

Level of Mobility



- ***Outcome 3:***
  - Modified RN Survey: John's Hopkins AMP[9]
  - ***Pre- & Post-Implementation:*** Survey response rate > 80%
  - Focused on RN Perceived Ease, Safety, and Confidence and Knowledge toward early mobility
  - General positive shift in RN perceptions toward early mobility



Evaluation

Objective 1: Develop an evidence-based mobilization safety screening tool for RN use in order to increase the percentage of patients that are screened by RNs for safe mobilization by 50%	• The number of patients screened for early mobility increased by 47% • The safety screening tool was successfully utilized by RNs and more MV patients were screened after the tool was implemented
Objective 2: Increase the percentage of patients that participate in early mobility by 50%	• 62% (n=10) of the patients deemed safe for early mobility participated in such • RNs more motivated to get their patients moving & initiated more discussions about early mobility with the interdisciplinary team
Objective 3: Identify nurses' perceptions on ease, safety, and confidence/knowledge toward early mobility and provide education to positively shift these perceptions to create a culture of mobility	• Perceptions surrounding early mobility became more positive • Some perceptions shifted to negative due to understaffing and increased nurse-to-patient ratios

Conclusions

- **Sustainability:** RNs will continue to utilize the safety screening tool and lead the interdisciplinary team in identifying patients who can safety mobilize
- When this mobility culture sustains it will promote ventilator and ICU liberation, a decrease in ICU-acquired weakness, and rid other detrimental effects of immobility[3-6,10].
- **Dissemination:** I plan to submit a manuscript to the *Nursing in Critical Care* Journal and share my project with my new collogues

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