Too Sick to Mobilize?

Society of Critical Care Medicine: Controversies in Critical Care
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Disclosure

I have no actual or potential conflict of interest in relation to this program/presentation.
Objectives

- Discuss the safety and feasibility of early mobilization in patients requiring mechanical ventilation.

- Identify barriers to early mobilization and strategies to successfully mobilize patients requiring mechanical ventilation.
The secret of change is to focus all of your energy, not on fighting the old, but on building the new.

- Socrates
Key Concepts

Evidence-Based Benefits of Early Progressive Mobility:

• Decreased duration of mechanical ventilation

• Improvement in overall physical functioning

• Decreased ICU and hospital LOS

• Decreased incidence of delirium
Key Concepts

- Mechanical ventilation is not an exclusion for mobility
- Mobility in the ICU is a multidisciplinary process
- Mobility in the ICU is patient & family centered
Early Mobility and Exercise

Within the ABCDE-F bundle, the E element, Early Mobility and Exercise, focuses on understanding the physical deficits that ICU survivors face, and identifying strategies for successful implementation of early mobilization programs.

Implementation Tools
- Implementing the E element of the ABCDE-F bundle
- Barriers to Early Mobility
- Comparison of Three ICU Early Mobility Quality Improvement Projects
- Daily Mobility Assessment and Treatment
- Multidisciplinary Approach to Early Mobilization in the ICU
- Treatment Lessons Learned

The key question to ask during rounds is: Did the patient achieve maximal mobility activity or exercise today? If mobility activity or exercise is falling short, it is important to determine the reasons. Some factors to consider are:

- Was the patient walking before extubation?
- Is the patient hemodynamically stable?
- Is the patient awake?

Also take into account the following aspects before mobilizing a patient in the ICU:

- Neurologic (level of alertness)
- Cardiac (hemodynamic stability and vasoactive medications)
- Pulmonary (ventilation/oxygenation needs)
- Risk versus benefit
- Guidelines versus protocols (lower absolute contraindications, importance of interdisciplinary collaboration)
“Early mobilization in the critical are unit; A review of adult and pediatric literature.”

Results:

- Literature indicates early mobilizations is safe and feasible in critically ill patients including mechanically ventilated patients.

- Cameron S. *Journal of Critical Care*. 2015; 30:664-672

“Safety of physical therapy interventions in critically ill patients: A single-center prospective evaluation of 1110 intensive care unit admissions.”

Results:

- 5267 physical therapy sessions were performed

- Initiation of physical therapy occurred at a median of 2 days after admission

- 553 (50%) of patients were male with median age of 57%

- 87% were ambulatory prior to hospitalization

- 60% received mechanical ventilation

- Number of physiological abnormality or potential safety event = 34

Sricharoenchai MD T. *Journal of Critical Care*. 2014; 29:395-400
Safety & Feasibility

“Early activity is feasible and safe in respiratory failure patients.”

**Results:**

- 1,449 activity events in 103 patients
- Sit on bed: 233 (16%)
- Sit in chair: 454 (31%)
- Ambulate: 762 (53%)

Patients with an endotracheal tube in place:

- 593 activity events
- 249 were ambulatory (42%)

There were < 1% activity-related adverse events


Early Physical and Occupational Therapy in Mechanically Ventilated, Critically Ill Patients: A Randomized Controlled Trial

**Results:**

- 104 patients on mechanical ventilation
- Intervention group: OT/PT median of 1.5 days after intubation
- Control group: OT/PT median of 7.4 days after intubation
- 1 adverse event with no harm to patient in 498 mobility sessions

Barriers

• Culture change
• Process
• Equipment
• People
Strategies

Culture Change:

- Mobility is a critical component of the plan of care
- Mobility is addressed early and often
- Mobility is no longer the exception but the rule
- Share the evidence, benefits, and outcomes
- Update and streamline MD order sets
Strategies

Process:

- Data collection prior to implementation
- Design a program/protocol focused on safety
- Clearly identify inclusion and exclusion criteria
- Include all stakeholders
Strategies

Equipment:

- Readily available
- Ease of use
Strategies

People:

- Enlist support of hospital and unit leadership
- Identify unit champions
- Establish a multidisciplinary mobility team
- Thorough education for all staff
Hidden Opportunities

- Grants
  - Employee Health

- Quality Improvement Projects
  - Best Care Initiatives

- Hospital committees
  - ICU Operations Committee
The implementation of progressive mobility in the ICU aligns with the goals for UTMB Best Care Initiatives including decreasing length of stay, decreasing hospital acquired conditions, and increasing patient and family satisfaction.
WILL IT BE EASY?
NOPE.
WORTH IT?
ABSOLUTELY.
UTMB Team
References


-Cameron S. Journal of Critical Care. 2015; 30:664-672


http://www.iculiberation.org/Mobility/Pages/early-mobility.aspx.