

Introduction

Patients hospitalized in Intensive Care Units (ICUs) spend an excessive amount of time on bedrest.

Sustained **immobility** in the ICU has been associated with the following **complications**:

- muscle wasting and weakness
- delirium
- depression
- disability lasting after discharge.

Addressing immobility in the ICU is an important aspect of treatment and **implementing structured mobility protocols** by multidisciplinary teams can help overcome barriers to mobility.

Background and Significance

Prolonged ICU stay creates increased risk for developing **post-intensive care syndrome (PICS)**: a combination of physical, mental, and cognitive changes that prevents return to baseline functioning.

To prevent PICS and to guide clinicians at bedside, the Society of Critical Care Medicine developed practice guidelines and the ICU Liberation ABCDEF Bundle Improvement Collaborative:

- 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

Early Mobility effects:

- ↓ # of days on ventilator
- ↓ ICU length of stay
- ↓ delirium in the ICU
- ↑ t in muscle strength at discharge
- ↑ likelihood of walking at discharge
- ↑ rate of discharge to home

Progressive Mobility Protocol (PMP) at the site:

- ✓ Included in an established Progressive Mobility Policy
- Not introduced to nurses
- Lacking specific patient screening criteria

Scan to view the PMP Patient Chart



Methods

Design: Quality Improvement Project - planning, implementing, and evaluating a modified PMP.

Planning: addition of detailed patient screening criteria to the existing PMP from Hill-Rom's protocol.

Implementation

WEEK 1	WEEK 2	WEEKS 3 & 4	WEEKS 5 & 6
<ul style="list-style-type: none"> Project announced during morning huddles 	<ul style="list-style-type: none"> In-person educational sessions for nurses Review of an online module by nurses Physicians/nurse practitioners & physical therapists notified via email Mobility Charts displayed in every ICU patient room 	<ul style="list-style-type: none"> Active Protocol implementation by nurses Promotion of the PMP during morning interdisciplinary rounds 	<ul style="list-style-type: none"> Data collection: EPIC reports requested from IT: Protocol utilization by nurses (2 weeks before & 2 weeks after QI project) Online survey opened to nurses for feedback

Setting: comprehensive, 27-bed adult ICU of a community hospital in southern New Jersey.

Outcomes Measured and Analysis:

1. **Utilization/Compliance:** comparing rates of daily patient screening with the PMP and completion of interventions before and after QI project.
2. **Feedback** from nurses regarding the PMP via online survey.

Results:

Utilization/Compliance

Time	% of patients with daily Progressive Mobility Levels assessed	% of patients with daily completion of activities
Two weeks before the QI project	14.06%	94.47%
Two weeks after the QI project	41.25%	95.44%

Results: Feedback Data



Discussion

- There was a 193.39% increase in the daily assessments of mobility levels according to the PMP in the two weeks after the protocol implementation
- Although majority of the survey respondents reported understanding the protocol and its importance, approximately half of them did not feel adequately staffed and equipped to routinely implement it in practice.

Implications

Clinical Practice – implementation of PMP increases mobility of patients in the ICU

Policy – PMP is included in the hospital's policy at the site and the project guided nurses in adherence to the policy

Quality and Safety – PMP utilization ensures provision of safe and evidence-based patient care with improved outcomes

Education – initial and periodic reeducation is needed for all staff to increase protocol utilization

Economics – early mobility needs to be routinely implemented to prevent economic burden of complications associated with immobility

Reference List



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