Early Progressive Mobility- Letting Go of Bedrest

Jacqueline Clapp BSN, RN  
Lehigh Valley Health Network

Holly Leighton BSN, RN  
Lehigh Valley Health Network

Kimberly McLaughlin BSN, RN  
Lehigh Valley Health Network

Bridget Toy BSN, RN  
Lehigh Valley Health Network

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Published In/Presented At
Early(In-Bed)Mobility Protocol
Letting Go of Bed Rest

- Jacqueline Clapp
- Holly Leighton
- Kimberly McLaughlin
- Bridget Toy
It is always assumed that the first thing in any illness is to put the patient to bed. Hospital accommodation is always measured in beds. Illness is measured by the length of time in bed. Doctors are assessed by their bedside manner. Bed is not ordered like a pill or a purge, but is assumed as the basis for all treatment. Yet we should think twice before ordering our patients to bed and realize that beneath the comfort of the blanket there lurks a host of formidable dangers.

R A Asher 1947
Background/Significance

Much is written in the literature about ICU mobility. We know from prior observation/study in our own unit that increasing the amount of physical therapy presence on the unit resulted in an overall decrease in length of stay.

Unfortunately we could not maintain the extra staff. Therefore we have to ask ourselves, as nurses, how can we make best use of our limited physical therapy resources. The answer: Rethink the concept of bed rest.....begin on admission...even with the sickest of the sick! Design a nurse-friendly protocol to empower nurses to improve outcomes!
PICO QUESTION

What are the effects of a nurse-driven in-bed early mobility protocol as a predictor of improved patient outcomes in a 32 bed medical surgical intensive care unit?

P=Critically Ill Adult Patients on Ventilators

I= Early Mobility Protocol (nurse driven)

C=Standard practice; limited interventions of mobility due to perceived level of critical illness

O=Decrease in vent days/LOS, pressure ulcer occurrence and onset of delirium
TRIGGER?

- Problem Focused Trigger
  - ICU patients due to the nature of their illness are at risk for multiple events
  - Immobility increases this risk
  - Evidence in the literature suggests that early mobility can reduce the risk
  - Early mobility, defined as a mobility program begun when the patient is least able to participate, could potentially improve outcome
MOBILITY IS AN EXTENSIVE TOPIC. IN ORDER TO HELP NARROW THE TOPIC WE IDENTIFIED FOUR AREAS OF EVIDENCE

1. THE PHYSIOLOGY OF IMMOBOLITY
2. BARRIERS TO MOBILITY
3. WHAT IS HEMODYNAMIC INSTABILITY?
4. WHAT DOES IN-BED MOBILITY LOOK LIKE?

- A literature search was completed using CINHAL, EBSCO and PubMed
- Key words: Mobility, Early Mobility, Critical Illness, and Nursing
What does mobility do for the body?

- Counteracts the effects of gravity; i.e. edema
- Keeps muscles and joints robust and healthy
- Keeps calcium inside the bones → stronger bones
- Keeps our organ systems functioning properly
- Helps with digestion and metabolism
- Keeps us alert and improves mood
- Keeps our skin intact
MOBILITY vs. IMMOBOLITY

What are the effects of immobility?

- Fluid shift; edema and venous stasis
- Lung volume decreases; compression atelectasis develops $\rightarrow$ pneumonia
- Muscular-skeletal weakness; muscle strength may decline 1% per day of strict bedrest
- Skin breakdown; impaired wound healing
BARRIERS TO MOBILITY

- 1. TIME
- 2. TRUST
- 3. TOOLS and TECHNOLOGY
Many tasks and procedures; nurses have competing priorities

Nurses need to trust the concept of movement in the midst of perceived instability

Technology is rampant in the ICU; lines, catheters, and tubes….oh my!

Tools-use what we have and is anything missing from our tool chest?
TIME

- Mobilization requires an investment of time and coordination of resources
- Even lateral turns can become complex depending on patient response
- Look at the posted issue of AACN’s Bold Voices for concerns of mobility
Hemodynamic instability is most often identified by nurses as a barrier to mobility.

It is typically characterized by:

- Blood pressure instability
- Bradycardia,
- Tachycardia,
- Systemic hypotension,
- Hypoxemia, and/or hypoperfusion,
- Blood loss,
- Decreased systemic vascular resistance from sepsis,
- Decreased Cardiac output,
- Supportive measures such as extracorporeal circulation.

Brindle 2013
LATERAL TURNS
an issue of trust

- No definitive study exists to validate q 2h turns
- However, this is the standard to which we, as nurses, subscribe
- OBSERVATIONAL STUDY RESULTS
  - 3 separate ICU observed on repositioning pt
  - Only 2.7% of pts were turned every 2 hours
  - 23% pts not repositioned for greater than 8 hrs
    - Standard of care is NOT being met
- Valid reasons do exist for not turning q 2 hours. We need to assure our reasoning is valid
Lateral Turns and Instability
an issue of trust

- **Patient population:** critically ill with and without vasopressors
  - Lateral turn resulted in 8-11% decrease in Svo2 immediately after turn
  - Returned to normal after five minutes

- **Patient population:** 55 male patients after CABG
  - ↑HR and ↓BP and SVO2 after turn
  - Returned to baseline within 10 minutes

- **Wait and observe** 5-10 minutes after turning to measure response; often patients will return to baseline within that time frame
WHAT DOES EARLY MOBILITY LOOK LIKE?

- **Therapeutic Positioning**
  - Lateral Turns/Reverse Trendelenberg
  - Continuous Lateral Rotation Therapy
  - Range of Motion; minimum 15 minutes per shift

- **Head Over Heels**
  - HOB ↑ 30-45°
  - HOB ↑ FOB ↓-chair position

- **Dangle and Dance**
  - Sitting upright; evaluate core strength
  - If two assists are necessary for the patient to stand upright (provided patient was able to do this before onset of critical illness) consult physical therapy
30 Degree Lateral Turn

The Beginning

- Therapeutic positioning; place the patient in a position that will help to maintain joint function
- A 30 degree turn is all that is necessary for a positive effect
- ROM….SHAKE
  - Shoulders
  - Hands
  - Ankles
  - Knees
  - Extremities….feet and hands
  - 15 min every shift
CHAIR POSITION

- Placing pressure against the bottom of the feet...
- Maintains nerve function
- Keeps patient in shape for future ambulation
DANGLE and DANCE

- Dangle at the side of the bed
- Improves core strength
- Prepares for OOB mobility
- Evaluate need for PT consult
Current Practice at LVHN

- Current mobility practices:
  - Driven by physician order
  - Initiation and maintenance dependent on assessed level of critical illness
  - Practices differ from nurse to nurse.
  - Physical therapy resources stretched thin
Proposed Practice Changes

- Replace the term “bed rest” with “Q2hr mobility”
- Empower the nurse to decide for his/her patient how that mobility will occur based on patient status and written protocol
- Fluency Heuristic-the concept that an idea seems more valuable if it is easier to say or think
- All patients have a q2hr mobility plan
## MICU/SICU MOBILITY PROTOCOL

<table>
<thead>
<tr>
<th>Contraindications to Mobility</th>
<th>Screen for Readiness</th>
</tr>
</thead>
<tbody>
<tr>
<td>New onset of arrhythmia</td>
<td>HR&lt;... or &gt;</td>
</tr>
<tr>
<td>Critical hemodynamic instability as evidenced by</td>
<td>SBP</td>
</tr>
<tr>
<td>- active fluid resuscitation</td>
<td>MAP</td>
</tr>
<tr>
<td>- maximum doses of vasopressors</td>
<td>O2 SAT</td>
</tr>
<tr>
<td>- active bleeding</td>
<td>SAS ≤ 4</td>
</tr>
<tr>
<td>Uncontrolled pain</td>
<td></td>
</tr>
<tr>
<td>Agitation: SAS&gt;5</td>
<td></td>
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<tr>
<td>Nausea and/or vomiting</td>
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## IN BED MOBILITY PROTOCOL

<table>
<thead>
<tr>
<th>LEVEL ONE</th>
<th>LEVEL TWO</th>
<th>LEVEL THREE</th>
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<tr>
<td>CLINICAL CRITERIA FOR USE</td>
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Next Steps

- Work with unit-based practice committee to develop a written protocol
- Review with physician leadership
- Disseminate to staff
Implications for LVHN

- The intent of this protocol is to make best use of available resources to improve patient outcomes and increase both patient and staff satisfaction.
Lessons Learned
References
Make It Happen

- Questions/Comments:

Contact Information: