Early Mobility in the ICU 11/11/2015
Early Mobility in the ICU: Patient/Provider/Team Perspectives

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Conflicts of Interest

• While speaking as a patient, I speak as a patient with critical illness
  – Not as a representative of Duke University
• I have been hospitalized in dozens of health systems across the country
  – My story is an indictment of the system, not one system
  – One system has made advances that have greatly impacted my care
Objectives

• Review the Importance of Early Mobility
  – As a patient
  – As a health system

• Discuss the nuts and bolts of Implementing Early Mobility
NADH

My Illness

[Diagram showing mitochondrial electron transport chain with an arrow indicating an impairment at Complex I.]
My Illness
Physiologic Consequences
Patients with Chronic Illness

My Illness: The Toll

- >50 Intubations
- A tracheostomy
- CLABSI:
  - Staph Epi
  - MRSA
  - Candida
- VAP with Shock/ARDS
- DVT

https://miscetceteradotcom.files.wordpress.com/2014/04/invisible_disability_stickers-r449f8209b2e24f9e99cbbfda6d03ece2_v9i40_8byvr_324.jpg
One ICU admission- A journey

Elective Surgery- post-operative ICU stay
Readmission: Intubation
Pain related to tracheal suctioning in awake acutely and critically ill adults: A descriptive study

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Accepted 16 May 2007
Consequences of ICU Care: Restraints

<table>
<thead>
<tr>
<th>Protective Restraint Physician Orders</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nursing’s Recommendation For Site Of Restraint:</strong></td>
</tr>
<tr>
<td>Upper extremities: [ ] Left [ ] Right [ ] Bilateral</td>
</tr>
<tr>
<td>Lower extremities: [ ] Left [ ] Right [ ] Bilateral</td>
</tr>
<tr>
<td>[ ] Torso [ ] Bed (appropriate for enclosed restraint) (Refer to nursing notes for indications and alternatives of less-restrictive interventions.)</td>
</tr>
</tbody>
</table>

| **Physician Order:** Based on my clinical assessment of the patient, I have concluded that protective restraints should be initiated/continued as specified until the indications are no longer present or through the following calendar day, whichever occurs earlier. |
| MD Signature: ___________________________ ID#: ___________________________ |
| Date: ___________________________ Time: ___________________________ |
| **Renew Order:** |
| **Ordering Practitioner:** ___________________________ |
| **Associate Receiving Order:** ___________________________ |
| Date: ___________________________ Time: ___________________________ |

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Consequences of ICU Care: Restraints


Consequences of ICU: NG Tube

http://www.atitesting.com/ati_next_gen/skillsmodules/content/nasogastric-intubation/images/NG_salem_sump.jpg
Consequences of ICU care: NGT

http://img15.deviantart.net/b83a/i/2004/145/9/e/bloody_nose.jpg
Consequences of ICU Care: Other things we “do” to patients

“On top of everything else, I would really HATE for you to get pneumonia......”
Paranoia

https://loretob1group2.files.wordpress.com/2012/09/paranoia1.png
ICU care: Torture begets torture?

Themes of Fears: ICU Survivors

Held as a Prisoner

“I was locked up...and everytime I tried to get out, that person would try and stick me with a pitchfork”

Being Drowned

“I’d wake up...well like somebody is holding your head underwater or strangulating [you]”

Rape/Assault

1Heart & Lung: The Journal of Acute and Critical Care, 2014; 43(5): 427-431
2Johns Hopkins Medicine, February 26, 2013
http://www.hopkinsmedicine.org/news/media/releases/ptsd_symptoms_common_among_icu_survivors
Consequences of ICU care: Noise

- 50 dB
- 75 dB
- 104 dB

Critical Care 2009; 13 (2): 208
The Resulting Stand-Off
Sleep Deprivation
Sleep Deprivation in the ICU

1. Common Complaints of Patients in ICU
2. Even when appearing asleep, there is sleep fragmentation
3. Sleep Deprivation and Delirium look similar in the Brain (neurohormonal/chemical)
4. May provoke each other

A solution
Impact of Mobility on Delirium/MV

Lancet 2009; 373:1874-1882
Impact of Mobility on LOS

CCM 2008; 36:2238-43
Impact of Mobility On Function @ DC

Lancet 2009; 373:1874-1882
Impact of Mobility on HrQOL (LTO)

http://images.sodahead.com/polls/001952959/1418959979_Jury_Box_answer_3_xlarge.jpeg
Are you Believers?
Implementation—The Journey

Implementation - Who

Implementation—What

Step 1: PROM each extremity (x5) for patients RASS -3 to -5
Implementation—What

Step 1: PROM each extremity (x5) for patients RASS -3 to -5

Step 2: MOVE Safety Screen
(Myocardial, Oxygenation, Vasopressors, Engaged)
Implementation—What

ASK YOURSELF THESE SAFETY QUESTIONS
If you answer “NO” to ALL of these safety questions progress to purple box

M: MYOCARDIAL
- New MI indicated by EKG or elevated cardiac enzymes (may progress activity level 24 hours after cardiac enzymes peak)
- New antiarrythmic agents added within the last 12 hours
- New unstable dysrhythmia within the last 12 hours
- Changes to Flolan (epoprostenol sodium) or Veletri dosing within the last 30 minutes

O: OXYGENATION
- Sustained desaturation <88% or patient specific goal
- Increases in ventilator support within the last 4 hours
- Current ventilator settings FiO2 >80%, PEEP >16, and plateau pressures >30
- Oxygen requirements of FiO2 100% in non-ventilated patients

V: VASOPRESSORS (If on vasopressors, RN will monitor the patient during ambulation activities)
- Two or more vasopressors
- Increase in vasopressors requirements over the last 4 hours
- New vasopressors added in the last 4 hours
- Dopamine >5mcg/kg/min, Norepinephrine >0.1mcg/kg/min, Phenylephrine >2 mcg/kg/min

E: ENGAGED (RASS −2 to +2)
- Acute stroke > 72 hours without Neurology clearance
- Cervical or Spinal Injury without clearance from Neurology and/or Orthopedics
Implementation—What

Step 1: PROM each extremity (x5) for patients RASS -3 to -5

Step 2: MOVE Safety Screen
(Myocardial, Oxygenation, Vasopressors, Engaged)

Step 3: Begin Mobility
## Implementation—What

<table>
<thead>
<tr>
<th>RASS</th>
<th>-2</th>
<th>-1 TO +2</th>
<th>-1 TO +2</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOAL</td>
<td>Upright Sitting Movement against gravity</td>
<td>Increase upper body strength</td>
<td>Ambulate and perform ADLs</td>
</tr>
<tr>
<td>MOBILIZATION</td>
<td>OT/PT consults</td>
<td>AROM q shift</td>
<td>OOB and ambulate q shift</td>
</tr>
<tr>
<td></td>
<td>PROM, AAROM, AROM</td>
<td>Sit to stand activity</td>
<td>AROM q shift</td>
</tr>
<tr>
<td></td>
<td>Chair position in bed</td>
<td>OOB and ambulate q shift</td>
<td>Patient <em>performs</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Patient <em>assists</em> with U/LE self care</td>
<td>U/LE self care</td>
</tr>
</tbody>
</table>
Natural History of QI within a System

2

Days
Weeks
Months
Years
Implementation:
Implementation - Major Road Blocks

1. Fear for Ourselves
Implementation - Major Roadblocks

2. Fear for Patients

http://1.bp.blogspot.com/-JuBSgU1UQE4/UaKaIyQra2I/AAAAAAAAAHE/cpbjyo04XCw/s1600/do-no-harm.png
Implementation - Roadblocks

3. Seeing Each other’s Perspective

IT IS REALLY CONFUSING!!!!!
Implementation- Keys to Success

Implementation- Keys to Success
1. Combine QI Efforts

SYNERGY

1 + 1 = 3

Wake Patient (SAT)  Move Patient
Implementation - Keys to Success

2. Mobility is Part of Nursing Assessment (and it has been for years)
Implementation - Keys to Success
3. Mobility is a Nursing Skill, not mandate

✔ Teach Skill
✔ Give Credit for Learning (CEU)
✔ Maintain Skills
✔ Let Nurses Use Their Skills

http://i.ytimg.com/vi/_HTk748b3cM/maxresdefault.jpg
Implementation - Keys to Success

5. Incorporate into rest of day (do all day, not 1x)
Implementation- Keys to Success
6. We’re all in this together: key 4 transition
Implementation- Keys to Success

7. Allow for local ICU adaptation
Conclusion

• Early Mobility is Important
  – To Both Patients
  – And Health Systems (Quality Markers)

• Implementation is Possible when there are advocates for Change