Combining Initiatives: Safe Patient Handling, Early Mobility, and Fall Prevention, Oh My!

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Speakers and Disclosures:

• Margaret Arnold receives consulting fees, honorariums, and stipends through Inspire Outcomes, LLC.

• Jennifer McIlvaine has no relevant financial relationships.

Course Description:
Physical Therapists in acute care hospitals face multiple, concurrent initiatives aimed at improving the care and safety of patients. Numerous, singularly-focused initiatives, however, can lead to staff indifference and poor compliance.

There is opportunity to integrate Safe Patient Handling, Early Mobility, and Fall Prevention initiatives into one comprehensive patient care program. This lecture will review the benefits of all initiatives and how one, large university based health system has combined them into a comprehensive program for acute care patients across all disciplines.

Objectives:
1. Describe the role of Safe Patient Handling in both Early Mobility and Fall Prevention programs.
2. Discuss benefits of assessing and categorizing patient mobility levels for acute hospitalization.
3. Demonstrate uses of low and high technology patient handling equipment and devices to progress mobility for an ICU level patient.
4. Identify opportunities to combine like and overlapping hospital-wide patient care initiatives.

Program Silos

Fall Prevention
Early Mobility
Safe Patient Handling and Mobility

Resource Utilization

• Preparation for and attendance at meetings
• Prevention strategy
• Implementation strategy and planning
• Root cause analysis and brainstorming when there is a failure of process
• Training and Education
• Material resources
• Data collection and PDSA initiatives
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Goals of Initiative Integration

- Maximize efficiency of resources
- Achieve consistent terminology across initiatives and disciplines
- Maximize effectiveness of interventions
- Improve integration of patient care initiatives for care planning
- Improve quality of care for the patient
- Reduce likelihood of injury to either patient or caregiver

Falls in Hospitals

- >700,000 patients a year are hospitalized because of a fall injury
- Fall injuries are among the 20 most expensive medical conditions.
- Over 140,000 patients fall per year in hospitals
- Bouldin et al., 2013
- Average rate of 3.56 falls per 1000 patient days
- 26% resulted in a serious injury
- On average a fall will increase LOS 6-12 days per fall
- Increased cost of care ~ $13,000 per fall
- Bouldin et al., 2013
- Some sources report up to $35,000 cost per fall (AHRQ)

Risk Factors for Falls

- Previous Falls
- Multiple Meds
- Confusion
- Disorientation
- Weakness
- Balance and gait impairments
- Incontinence or frequent urination
- Mobility devices
- Tethered devices such as IV poles
- Vision
- Orthostatism or other physiological causes

Assessment of Fall Risk

- Morse
- Hendrichs II
- Stratify
- Tinetti
- BERG
- Dynamic Gait Index
- Timed Up and Go

Components to Consider

- Specificity of fall risk measure
- Relatability to plan of care
- Nursing versus therapist fall risk assessment
- Competing patient care initiatives
- Ceiling effect
- Dilution of impact
- Ease of use versus usefulness to prevent falls
- Actions based on scores

Impact of Immobility

- Every system affected
- Weakness
- Delirium and disorganized thinking
- Balance and gait impairment
- Incontinence
- Depressed neurological function (reflexes, reaction time)
- Pain and anxiety
- Isolation and dis-engagement
Assessment of Mobility

- There are over 20 different assessment tools
- Most common include
  - Functional Independence Measure (FIM) or subset of FIM
  - Physical Function ICU test (PFIT)
  - Functional Status Score for ICU (FSS)
  - Acute Care Index of Function
  - Perme ICU mobility Scale

Variability of measured components

- Specificity
- Weighting and capture of all contributing factors
- Ability to measure meaningful change over time (Sensitivity)
- Ease versus complexity to complete
- Multi-disciplinary use and interpretation
- Actions based on scores

Mobility Prevents Falls

EM programs have shown:
- Decreased weakness
- Decreased Delirium
- Decreased pressure ulcers
- Decreased time on a ventilator
- Improved time to functional milestones
- Increased function at discharge
- Increased chance of DC home or Rehab

Point Prevalence Studies

- Variable reports of patient mobility Out of bed
- <25% of patients in 116 ICU were OOB
- Only 8% of patients with ETT tube were OOB
- Another study found that no mechanically ventilated patients were ambulated and only 25% of all ICU patients stood

Connecting Mobility and Fall Prevention

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The scope of the problem

Study of 45 patients’ activity levels during hospitalization
Spent <3% of the day standing or walking versus at least 20 of the 24 hours per day lying in bed.
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**Therapist Barriers to Mobility**
- Resources (Staff, time, equipment)
- Patient size, weight and dependency, sedation
- Productivity requirements
- Fear of adverse events
- Training

**Patient Barriers to Mobility**
- Fear of falling
- Anxiety and pain
- Lack of confidence in caregiver
- Do not want to fail in front of therapist
- Indignity of needing people to help (especially in bariatric patients)

**Risks of Manual Handling**
Cumulative impact of lifting >35lbs

**Impact of Therapist Injuries**
- 90% lifetime prevalence of therapist injuries
- Impact:
  - Decreased Quality of Life outside of work
  - Altered work practice or setting
  - Altered treatment Interventions

**Safe Mobility Prevents Falls**
And prevents therapist injury

**The Role of Safe Patient Handling and Mobility**
- Safe Patient handling programs reduce injuries by > 70% on average
- Opportunities for mobility across the continuum of care
- Interdisciplinary use
- Nursing use different from Therapy use
- Fall prevention interventions should include safe patient mobility activities
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**SPHM Equipment & the Mobility Continuum**

- Passive
- Gait-Assist/Fall Arrest Systems
- Cane
- Crutches
- Walker
- Stand & Raising Aids
- Stand-up Beds
- Friction Reducing Devices

**Safe Patient Handling Solutions**

- Spectrum of equipment solutions to overcome barriers

**Previous Safe Patient Handling Program**

- Minimal Manual Lift Environment (MMLE)
- Policy
- Some equipment
- Coach model (1-5 per unit)
- Not well incentivized or enforced
- Staff injuries

**Combining Initiatives**

**Previous Early Mobility Program**

- ABCDE Bundle
- Awakening
- Breathing Trial
- Coordination
- Delirium Assessment and Management
- Early Exercise and Progressive Mobility
- MOVE Criteria
- Activity Based on RASS score
- Exercise protocols

**Fall Bundle**

1. Room Signature
2. Door Signs
   a. At risk
   b. Fallen since admission
3. Standardized Assessment: Maestro
4. Yellow Color:
   - Arm bands
   - Socks
5. Rounding with a Purpose
6. Patient/Family Education
7. Communication:
   - Bedside handoffs: check bed alarm is set
   - Plan of Care
   - Safety Reporting System
8. Post-Fall Huddle within 1 hour after fall. Fall survey conducted with all area nursing leadership and staff.
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**Patient Safety Initiatives**

- Safe Patient Handling & Movement
- Early Mobility
- Fall Prevention

**SPHM ANA Interdisciplinary Standards**

1. Culture of Safety
2. Sustainable SPHM Program
3. Ergonomic Design Principles
4. SPHM Technology
5. Education, Training, and Maintaining Competence
6. Patient-Centered Assessment
7. Reasonable Accommodation and Post-Injury Return
8. Comprehensive Evaluation System

**Results of Benchmarking Survey**

- Safe Patient Handling policy
- Metrics—injury data and worker’s compensation cost
- Champion/peer leader model
- Communication—EHR vs. board in patient room
- Annual budget—varies
- Program managed by FTE

**Foundation**

- Policy
  - Patient handling >35 lb
  - “All HCWs will avoid High Risk Patient Handling Tasks whenever possible, with the exception of emergency situations.”
  - Training
  - Equipment maintenance and storage
- Role Descriptions
  - Facility Coordinator
  - Unit Champion
  - Unit Coach
  - Unit Manager

**Duke MOVES Structure**

**Results of Benchmarking Survey**

- Equipment needs based on unit risk assessments
- Equipment is purchased by units
- No rewards programs
- Re-validate skills annually
- Clinic staff do not assist & no equipment available
- Lift teams
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Equipment Standard for Intensive/Critical Care Units

Equipment Standard for Step-Down Units

Equipment for Medical/Surgical Units

Additional Equipment:

Mobility Assessment

- ANA Standard 6: Assessing patients to plan care for their individual needs
- Differences between therapy and nursing
- Banner Mobility Assessment Tool

<table>
<thead>
<tr>
<th>Mobility Level</th>
<th>Does patient have activity order?</th>
<th>Safety Screen</th>
<th>Is it safe to move patient?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility Level 1</td>
<td>Bedfast/Dependent</td>
<td>Transfer aid or transfer self</td>
<td></td>
</tr>
<tr>
<td>Mobility Level 2</td>
<td>Moderately dependent</td>
<td>Can come to sitting position but unable stand or transfer</td>
<td></td>
</tr>
<tr>
<td>Mobility Level 3</td>
<td>Minimal assistance required</td>
<td>Can bear weight and may require assistive device(s)</td>
<td></td>
</tr>
<tr>
<td>Mobility Level 4</td>
<td>Independent</td>
<td>Can move and transfer self and requires no patient handling assistance</td>
<td></td>
</tr>
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Communication

- All handoffs
- Bedside at change of shift: RN and NCA
- Upon transfer from unit/department to unit/department
- Signage
- Door
- White Board recommended
- Plan of Care
- Collaborate closely with PT/OT to create a plan that includes therapy goals

Training

- Linking to Values—Safety, Excellence, Teamwork
- Patient safety = Staff safety
- Toolkit for Champions
- All resources on-line
- Videos

PT Role

- PTs have a strong influence on patient mobility in hospitals
- Leaders in patient safety initiatives
- Change therapy culture
- adhere to 35 lb lift recommendation
- patient and family education
- manage expectations
- Collaborate with nursing staff

References:


References:


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References:

- Romero J, Rello A, Jofre S, MK Fitzpatrick, Promoting a Safe Patient Handling Culture in an Acute Care Hospital to Decrease Work-Related Injuries and Improve Quality Indicators, Poster, SPHN Conference 2009, Hospital University of Pennsylvania.

References:

- Dai B, Ware W, & Guillen C. A structural equation model relating physical function, pain, impaired mobility (IM) and falls in older adults. Archives of Gerontology and Geriatrics, 2012; 55: 645-652.