Physical and Occupational Therapy in Prevention and Rehab

Presented At

SPRCH Conference Program

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Course Outline

• Creation of a safe patient handling program

• Categories and purposes of lift equipment

• Benefits and challenges of using lift equipment for caregivers, therapists and patients

• Therapeutic application of lift equipment

• Documentation Tips for Therapists

• Case Studies

• Closing Remarks

• Questions/Discussion
Course Objectives

• Understand how and why the Nursing and Therapy Assessment Tool was developed

• Understand key players of a safe patient handling program

• Understand what types of equipment/slings/accessories are available.

• Understand how the use of lift equipment can help prevent injuries in caregivers

• Understand how the use of lift equipment can help prevent injuries to patients

• Understand how therapists can assess the patient and therapeutically integrate the lift equipment into treatment sessions.

• Discuss therapy documentation tips.

• Discuss benefits and limitations for both patient and clinician.
How many pounds do YOU think caregivers lift in an average work day?
Patient Handling Program

On an average day, approximately 1800#/shift (ANA)
Creation of a Safe Patient Handling Program

• Core Team Members:
  – Administration
    – Provide financial support and additional resources necessary to implement and sustain a program
    – Calculate cost v. benefit of a safe lifting program
  – Nurses
    – Address nursing needs when mobilizing patients
    – Provide feedback on space considerations within patient rooms
    – Identify patient mobility challenges as a means of finding appropriate solutions which are safe for the care provider and patient
  – Occupational and Physical Therapists
    – Provide expertise in assessment of patient mobility, function and strength
    – Evaluate practicality and utilization of equipment
    – Identify patient mobility challenges as a means of finding appropriate solutions which are safe for the care provider and patient
  – NMH Safety Department/ Ergonomic specialists
    – Collaborate to determine safe equipment for all staff
  – Lift Equipment Vendors
    – Collaborate with above healthcare providers to offer/ develop the right equipment
Implementation of a Safe Patient Handling Program

- Capital Budget approval for purchase of equipment
- Lift equipment protocol created
- Defining metrics to determine success of project
- Implementation on “Pilot” units to determine equipment and system improvement opportunities prior to hospital wide roll-out
- Identifying differences in end-user goals (i.e. nursing v. therapy)
- Protocol development for availability and maintenance of lift equipment, slings and other accessories
- Protocol development for patient care documentation
- Lift equipment training and competency for all patient care staff (Nurses, PCT, Transport, Therapy)
- Super-user Training as resources for all departments
- Staff buy-in and culture change (ongoing issue)
Creation of Assessment Tools for Nursing and Therapy

- **Nursing Bedside Assessment Tool:**
  - Developed by therapists and nurses in order to direct nurses to consistently choose lift equipment that is most beneficial and safe for patient based on their current mobility level.

<table>
<thead>
<tr>
<th>Sequence</th>
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</thead>
<tbody>
<tr>
<td>Dangle</td>
</tr>
<tr>
<td>Sit</td>
</tr>
<tr>
<td>Kick and March</td>
</tr>
<tr>
<td>Stand</td>
</tr>
<tr>
<td>Step and Back</td>
</tr>
<tr>
<td>Ambulate</td>
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*Sequence may not start at Dangle if you visually know the patient is capable of doing more.*
Nursing Bedside Assessment Tool
Creation of Assessment Tools for Nursing and Therapy

- Therapy Reference Guide
  - Developed by therapists to assist rehab professionals to select the least restrictive lift equipment in order to progress the patient therapeutically
  - Considered precautions associated with specific patient populations (i.e. THA, spine, cardiac, etc...)
<table>
<thead>
<tr>
<th>Activity</th>
<th>Total Assistance (FIM Level 1): The patient performs less than 25% of the activity</th>
<th>Max Assist (FIM Level 2): The patient performs between 25 and 49% of the activity</th>
<th>Mod Assist (FIM Level 3): The patient performs between 50 and 74% of the activity</th>
<th>Min Assist: (FIM Level 4) The patient performs 75% or more of the activity</th>
<th>CGA: The patient does not require the therapist to assist to achieve completion of a task; however the therapist has their hands placed on the patient to be able to provide increased assistance should the pt require.</th>
</tr>
</thead>
</table>
| Bed Mobility (lateral, turning, etc) | • Turn Straps with TL; Reposheet with TL  
• Lateral Transfer Air Assisted Device | • Turn Straps with TL; Reposheet with TL  
• Lateral Transfer Air Assisted Device | • Turn Straps with TL as needed | • N/A | • N/A |
| Supine to Sit at EOB               | • HB Standard Sling with TL; HillRom Bed in Sit Position | • HB Standard Sling with TL; HillRom Bed in Sit Position | • Ambulation Vest with TL | • N/A | • N/A |
| Sit at EOB (static/dynamic)       | • Sit/Stand Vest with SS if meet criteria  
• Ambulation Vest or Walking Pant with TL | • Sit/Stand Vest with SS if meet criteria  
• Ambulation Vest or Walking Pant with TL | • Sit/Stand Vest with SS if meet criteria  
• Ambulation Vest or Walking Pant with TL | ‘safety net’ due to fall risk | ‘safety net’ due to fall risk |
| Sit to Stand/ Stand Pivot Transfer | • Ambulation Vest or Walking Pant with TL  
• Sit/Stand Vest with SS if meet criteria | • Ambulation Vest or Walking Pant with TL  
• Sit/Stand Vest with SS if meet criteria | • Ambulation Vest or Walking Pant with TL  
• Sit/Stand Vest with SS if meet criteria | ‘safety net’ due to fall risk | ‘safety net’ due to fall risk |
| Standing Balance (static/ dynamic) | • Sit/Stand Vest with SS if meet criteria  
• Ambulation Vest or Walking Pant with TL | • Sit/Stand Vest with SS if meet criteria  
• Ambulation Vest or Walking Pant with TL | • Use as ‘safety net’ as needed | ‘safety net’ due to fall risk | ‘safety net’ due to fall risk |
| Walking                           | • Ambulation Vest or Walking Pant with TL  
• N/A | • Ambulation Vest or Walking Pant with TL  
• N/A | • Use as ‘safety net’ as needed  
• Gait Belt | ‘safety net’ due to fall risk  
• Gait Belt | ‘safety net’ due to fall risk  
• Gait Belt / n/a |

**Patient Handling Equipment**

<table>
<thead>
<tr>
<th>Total Lifts</th>
<th>Lateral Transfer/Repo Aids</th>
<th>Repositioning Sheets</th>
<th>High Back Sling</th>
<th>Sit/Stand Vest/ Sling</th>
<th>Turn Straps Gait Belts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ceiling Total Lifts</td>
<td>Patient Handling Equipment</td>
<td>Sliding Board</td>
<td></td>
<td>Ambulation Slings &amp; Walking Pants</td>
<td></td>
</tr>
</tbody>
</table>
Benefits/ Challenges of Using Lift Equipment

Caregivers:

• Benefits:
  – Reduce potential of injury to caregiver when lifting or moving patients
  – Reduce potential of injury to patient when being moved
  – Increase the time patient is out of the bed
    – Decreased decubiti
    – Possibility for decreased PNA, empyema, and hospital acquired “super bugs” due to decreased length of stay from faster mobilization using lifts
    – Decreased risk of falls, particularly going from bed<>toilet
  – Increased level of independence in all ADLs and mobility at time of D/C due to faster mobilization/decreased time spent in bed
Benefits/ Challenges of Using Lift Equipment

Caregivers

• Challenges:
  – Culture Change of Staff
  – Staff “buy-in” of benefits
  – Learning time
Benefits/ Challenges of Using Lift Equipment

Patients:

• Benefits:
  – Decreased risk of falls or injury while being moved/ transferred by caregivers
  – Potential for increased level of independence in all ADLs and mobility at time of D/C due to faster mobilization/decreased time spent in bed
  – Increased dignity for the patient with fewer caregivers required to assist, especially for personal hygiene

• Challenges:
  – Fear of using lift equipment
Benefits/ Challenges of Using Lift Equipment

Therapists:

• **Benefits**
  – Reduce potential of injury to therapist when lifting or moving patients
  – Reduce potential of injury to patient when mobilizing with therapy
  – Potential ability to progress patients faster due to ability to mobilize earlier

• **Challenges**
  – Ability to accurately assess assistance level patient requires during activity
  – Documentation to support need for continued therapy
Lift Equipment at NMH

- Total Lifts: Portable total lifts, ceiling lifts (440-1100 lbs)
- Sit<>Stand lift (440 lbs)
- Lateral Transfer Device (no weight limit)
Sling Selection at NMH

- High Back Total Lift Sling
- Sit to Stand Vest (Safety Vest)
- Ambulation Vest (Master Vest)
- Walking Pants (Lift Pants)
Common Indications/Contraindications in the Acute Care Setting

- Dependency level
- Patient height & weight
- Cognition
- Pain level
- Hip dislocation precautions
- Weight Bearing status of lower extremities
- Tube Feedings/Head of Bed elevation
- Ventilators, trachs
- Chest Tubes
- Sternotomy Precautions
- LVAD wires

- Paralysis/Paresis
- Confidence level of patient in abilities
- Contractures
- Craniotomy precautions/Extra-ventricular Drains
- Vital Signs: Hypo/hypertension, Oxygen saturation
- Chemistry (Hemoglobin, INR, potassium, etc...)
- Metastatic Disease
- Seizure Precautions
- Post Caesarian-Section
Application of Lifts

Common Therapeutic Interventions Completed with Lift Equipment:

- ROM
- Static sitting balance
- Dynamic sitting balance
- Sit to stand transfer
- Static standing balance
- Dynamic standing balance
- Toilet transfer
- Functional mobility to/from restroom for transfers and activities
- Gait training

- UE/LE dressing
- UE/LE bathing
- Oral/facial hygiene
- Perineal hygiene
- UE Exercises
- Fine motor coordination
- Gross motor coordination
- Weight-shifting activities
- Dynamic reaching activities
Lift Equipment in use
Lift Equipment and Sling Activity Guide

Range Of Motion

- Total Lift (ceiling or portable)
  - Total Lift Sling
  - Repositioning Sheet
  - Turning Straps

Dependent- Max Assistance (FIM 1-2)
Lift Equipment and Sling Activity Guide

BED MOBILITY

• Total Lift
  – Total Lift Sling
    – Max – Mod Assist (FIM 2-3)
  – Master Vest
    – Mod- Min Assist (FIM 3-4)

• Sit to Stand Lift
  – Sit to Stand Vest
    – Mod- Min Assist (FIM 3-4)
Lift Equipment and Sling Activity Guide

SITTING

• Total Lift
  – Total Lift Sling
    – Max Assist (FIM 2)
  – Master Vest
    – Max- Min Assist (FIM 2-4)

• Sit to Stand Lift
  – Sit to Stand Vest
    – Max- Min Assist (FIM 2-4)
Lift Equipment and Sling Activity Guide

STANDING

• Total Lift
  – Master Vest
    – Max- Min Assist (FIM 2-4)
  – Lift Pants
    – Max- Min Assist (FIM2-4)

• Sit to Stand lift
  – Sit to Stand Vest
    – Max- Min Assist (FIM2-4)
Lift Equipment and Sling Activity Guide

AMBULATION

- Total Lift
  - Master Vest
    - Max- Min Assist (FIM2-4)
  - Lift Pants
    - Max- Min Assist (FIM2-4)
Documentation

• Must show that patient is progressing with therapy

• Provide documentation that patient is using a mechanical lift in addition to physical assistance for functional activities

• Specifically document grading of activities to demonstrate how patient is progressing functionally with lift equipment
• Level of assistance required during sitting, transfers, standing, and/or ambulation.
• Purpose of the lift equipment (i.e. safety, balance, high fall risk, decreased strength, knee buckling, etc…)
• If patient is able to initiate the transfer or ambulation
• Incorporation of UE and LE muscle groups during sitting balance, transfer or ambulation.
Common areas of Documentation with use of Lift Equipment

• Activities of Daily Living
  – UE/LE dressing
  – UE/LE bathing
  – Oral/facial hygiene
  – Perineal hygiene

• Transfers
  – Initiation of transfer
  – Level of assist required for transfer

• Sitting/ Standing Balance
  – UE support
  – Level of assist required for balance
  – If patient is able to self-correct or attempt to self-correct balance

• Functional Mobility/ Gait Training
  – Initiation of stepping
  – Balance
  – Assistance required to advance lower extremities for stepping pattern
  – Weight bearing
  – Weight shifting

• Functional Activity
  – Fine motor coordination
  – Gross motor coordination
  – Functional tasks

• Assessment
  – Increased activity tolerance
  – Increased strength
  – Increased difficulty of activities performed while in lift
  – Improved balance
Case Study Intervention

- Patient with residual proximal weakness status-post Posterior Spinal Fusion. Patient is 6’2”, weighing greater than 250 lbs.
  - Intervention for functional mobility: Golvo total lift used with lift pants to assist in ambulation. Patient able to use side arms on lift like a walker for support.
  - Intervention for ADL at the edge of bed: Golvo total lift used with Master Vest to provide UB stability and “safety net” for patient during dynamic sitting as pt addresses lower body dressing and bathing (pants, socks, shoes) with and without adaptive equipment.

- Outcome:
  - Patient able to progress safely and quickly with mobility to a rolling walker and SBA for all short distance ambulation and functional transfers by challenging static and dynamic balance in lift prior.
  - Patient able to perform all lower body dressing and bathing at time of discharge without adaptive equipment with distant supervision and modified techniques for some residual upper extremity weakness in bilateral shoulders as he was able to learn to self-correct loss of balance in sitting and challenge core strength with lift.
  - Psychosocial outcome: Patient was very excited and amazed that he had progressed so far in such a short duration and stated that it truly affected his life.

- Patient discharged home requiring SBA from family for functional ambulation using rolling walker and supervision to complete all ADL. Patient’s length of stay was ~8 days.
Case Study:
Golvo

Patient is a 65 year old female, 5’4”, 215 lbs, BMI 35. Patient is status-post L1-L5 PSF wearing Aspen TLSO brace when OOB.

Patient requires Max Assist for Bed mobility and SBA for static sitting balance. Patient stood with Max A for 30 seconds before knees buckled. Pt is now fearful to attempt standing again. You are treating this patient and would like to safely stand and attempt ambulation, how would you proceed?

•
• **Key Points:**

• **What type of sling would be most appropriate?**
  - Lift Pants
    - S/p spine surgery
    - Wearing TLSO

• **Best position for application of sling?**
  - Patient’s sitting balance is Stand By Assist, therefore, sitting EOB with feet flat on floor is best position for application as patient can maintain their own balance.

• **Instructions to patient**
  - Educate patient on what to expect when coming into a standing position
Case Study: Sabina

Patient is a 80 year old male status-post L CVA with R sided hemiparesis. 0/5 strength R UE, 2/5 R LE.

Patient follows 80% of one step commands and requires Mod Assist for Bed mobility. For static sitting balance, he displays heavy retropulsion and requires Mod Assist. You are alone in the room with the patient and would like to attempt standing in the safest manner, how would you proceed and what lift would you use?
• Key Points:

• How would you proceed?
  – Seek assistance from another care provider
  – 2nd person to assist with sling application as patient is retropulsive and requires Mod A for static sitting
  – 2nd person would also assist with the stabilization of the flaccid R UE

• What sling would you use?
  – Safety Vest
  – Allows you to work with patient at edge of bed for sitting balance, or work on standing activities
Thank You

Questions?