<table>
<thead>
<tr>
<th>Time</th>
<th>Presentation Order</th>
<th>Presenter</th>
<th>Title</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gabrielle Romano</td>
<td>Gabrielle Romano, PT; Vanessa Lee, PT; Sheena MacFarlane, PT</td>
<td>Physical Therapy Interventions with a Patient After Orthotopic Heart Transplantation in the Acute Care Setting: A Case Report</td>
<td>Temple University Hospital</td>
</tr>
<tr>
<td>2</td>
<td>Caitlyn Anderson</td>
<td>Caitlyn Anderson, PT, DPT, NCS, GCS, Brandon Bigelow, SPT, Demetrios DeValk, SPT, Tanner Helgeson, SPT</td>
<td>A Closer Look at Covid-19: The Global Rehabilitation Response for Patients Hospitalized with Moderate to Severe Disease</td>
<td>University of Wisconsin-Milwaukee</td>
</tr>
<tr>
<td>3</td>
<td>Kyle J. Wikfors</td>
<td>Kyle J. Wikfors, PT, DPT, NCS</td>
<td>Neurological complications in an adult patient treated with extracorporeal membrane oxygenation (ECMO) after double lung transplant – recovery is more than just breathing exercises – a case study</td>
<td>New York Presbyterian Columbia Irving Medical Center</td>
</tr>
<tr>
<td>12:15PM - 1:15PM</td>
<td>Juliana Cooper</td>
<td>Juliana Cooper, PT; Amanda Del Rosario, OT/RL</td>
<td>Standardization of Education for Occupational and Physical Therapists Caring for Patient with Mechanical Circulatory Device Support (ECMO, IABP, &amp; Impella)</td>
<td>Sharp Healthcare</td>
</tr>
<tr>
<td>5</td>
<td>Tammy Camelli</td>
<td>Tammy Camelli DNP, CNP AC-PN, Jean Christopher CNS, MSN, Stephanie Noland, PT, DPT, Katie Clark, OT, Katy Howell, RN, BSN, Micah Baird, MD, Christopher Page-Goetz, MD, FAAP, Mira Brown, MS</td>
<td>Early mobility in the Pediatric intensive care unit (PICU): Impact of standardized program</td>
<td>Akron Children's Hospital</td>
</tr>
<tr>
<td>6</td>
<td>Mazin Ali Mahmoud</td>
<td>Mazin Ali Mahmoud, M.D., Omar Ahmed Abdou Almadaaw, M.D., Arooj Fatima, M.D., Renee D. Stapleton, M.D., Ph.D., Daren Heyland, M.D., MSc, FRCP, Victor D. Dinglas, MPH, Dale M. Needham, M.D., Ph.D.</td>
<td>Change in Repeated 6-Minute Walk Distance Tests Near Time of Hospital Discharge for Acute Respiratory Failure Patients</td>
<td>Johns Hopkins University, School of Medicine</td>
</tr>
<tr>
<td>7</td>
<td>Emily Kavanaugh</td>
<td>Emily Kavanaugh, PT, DPT, MBA</td>
<td>Case study as demonstration of methodology for patients with severe ICU-Acquired weakness and cognitive impairment for successful extubation and functional progression</td>
<td>First Health of the Carolinas</td>
</tr>
</tbody>
</table>

**Vote for your Favorite Poster Presentation from Saturday, November 5, 2022 – PM Session [here]**
Physical Therapy Interventions with a Patient After Heart Transplantation (HT) in the Acute Care Setting: A Case Report

Gabrielle Romano, PT, DPT; Vanessa Lee PT, DPT, DPT, CCS; Sheena Macfarlane, PT, DPT, CCS

1 – Temple University Hospital, Physical Medicine and Rehabilitation, Philadelphia, PA; 2 – Messiah University, School of Graduate and Professional Studies, Mechanicsburg, PA; 3 – Rutgers University, The State University of NJ - Doctor of Physical Therapy Program, NJ

Introduction and Background:
- The frequency of heart transplantation in the United States has increased by 39% over the last 10 years.
- Most research for PT after HT addresses outpatient cardiac rehabilitation; there is limited research in acute care setting.
- PURPOSE: Describe the PT interventions, plan of care, and associated outcomes in an acute care setting for a patient after HT.

Case Report:
- 60-year-old male received a HT
- PT was initiated 3 days postoperatively
- Total acute care PT course included 14 sessions over 22 days
- Outcome measures used: JH-HLM, 6MWT, Berg Balance Scale

Discussion:
Acute care PT is feasible, safe, and effective to improve functional capacity and aerobic capacity as demonstrated by the patient in this case. This case report describes PT practice for HT recipients in the acute care setting, including intervention prescription, progression, and use of outcome measures. It can be used to inform future practice and research.

Figure 1: PT Findings and Interventions Post Heart Transplant

PT Evaluation Findings:
- Impaired postural awareness
- Poor seated balance requiring Min A to Mod A
- Decreased proximal muscle strength
- Sitting tolerance: 12 minutes
- Unable to complete sit to stand transfer

1st week (4 sessions)
- Function:
  - Edge of bed training
  - Out of bed to chair
  - Pre-gait activities
  - Strength:
    - Seated exercise, 1 set, fatigue-limited
    - Focus on lower extremity muscle groups

2nd week (5 sessions)
- Function:
  - In-room and household distance ambulation
  - RPE 13-15
- Strength:
  - Seated and standing, 1-2 sets
  - 11-14 RPE
  - Added upper extremity muscle groups

3rd Week (5 sessions)
- Function:
  - Community distance ambulation
  - Stair training
  - RPE 13-15
- Strength:
  - Added external resistance
  - Continued RPE of 11-14
- Balance training:
  - Static exercises in standing

Final PT session:
- Walked 612 feet (187 meters)
- Berg Balance Scale: 35/56
- Discharge Recommendations:
  - Home PT
  - Rollator
  - Home safety education

Education Topics:
- Sternal precautions, Breathing re-training, Use of RPE scale, Warm up and cool down exercises, Home Exercise Program, Fall prevention program, & Assistive device use

Chart 1: Functional Improvement in JH-HLM Score

Chart 2: Improvement in Ambulation Distance on 6MWT

Legend:
- PT: physical therapy
- HT: heart transplantation
- MDC: minimal detectable change
- MDC: minimal clinically important difference
- JH-HLM: Johns Hopkins Highest Level of Mobility
- 6MWT: Six Minute Walk Test
- RPE: Rating of Perceived Exertion
A Closer Look at Covid-19: The Global Rehabilitation Response for Patients Hospitalized with Moderate to Severe Disease

Brandon Bigelow¹, SPT, DJ De Valk², SPT, Tanner Helgeson³, SPT
Faculty Advisor: Cathlyn Anderson⁴, PT, DPT, NCS, GCS
¹University of Wisconsin-Milwaukee

Background

Recommendations for physical therapy (PT) rehabilitation protocols for patients (pts) hospitalized with Covid-19 continues to demonstrate extreme variability, especially those with moderate to severe disease. Additionally, regional differences in Covid-19 response may play a role in decreased congruity of practice.

Purpose

The goal of this search is to review existing literature stemming from different regions regarding:
- PT intervention selection and rationale
- Discharge (DC) destinations
- Utilization of outcome measures
To observe trends and provide best practice recommendations

Methods

The Population, Intervention, Comparison and Outcome (PICO) method was used. Four authors independently screened titles and abstracts of all studies.

Studies were eligible if:
1. Pts were hospitalized due to Covid-19 and participated in PT
2. Pts were categorized as moderate, severe, or critical
3. The article was written in English. Two separate searches were conducted between October 2021 and March 2022 to reflect the emerging nature of information. Of the 139 total papers identified, 35 met inclusion criteria.

Results

- 18/35 articles outlined interventions beyond early mobilization.
- 17/35 articles documented outcome measure use, with just 7/35 using American Physical Therapy Association (APTA) recommended measures for Covid-19.
- Discharge recommendations with skilled rationale were listed in 8/35 studies, ranging from discharge to home to a rehabilitation center for regular PT.
- Top locations for dissemination of research were Italy, the United States (US), United Kingdom (UK), and China.

Discussion

PT services were accepted to be beneficial across all hospital settings with promotion of early mobilization
Key medical chart review and mobilization protocols to guide specific intervention selection were not discussed.
Active Cycles of Breathing technique, inspiratory muscle training, and prone positioning were common ventilatory strategies performed globally.
Lack of DC destination recommendations with skilled rationale was surprising and may play a role in the now high prevalence of post-Covid and post-ICU syndromes.
US-authored publications used 0 APTA recommended OMIs. The top OM used globally was the 6-minute walk test followed by equal utilization of the Functional Independence Measure (FIM), MRC sum score, and Modified Barthel index.

Conclusion

Limited evidence exists to guide clinicians in managing pts with are critically ill with Covid-19 despite an expanding body of literature. Future, pointed research is warranted to provide recommendations specific to the pathophysiology of Covid-19 and continuum of care.

References Code

Figure 1

Figure 2

Figure 3
Global Map of References by Location

Table 1
Infection rates among most popular article retrieval locations

<table>
<thead>
<tr>
<th>Location</th>
<th>Infection Rates</th>
<th>Articles Retrieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy</td>
<td>16.3 Million</td>
<td>8</td>
</tr>
<tr>
<td>United States</td>
<td>80.0 Million</td>
<td>7</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>22 Million</td>
<td>4</td>
</tr>
<tr>
<td>China</td>
<td>0.748 Million</td>
<td>4</td>
</tr>
</tbody>
</table>
Neurological complications in an adult patient treated with extracorporeal membrane oxygenation (ECMO) after double lung transplant – recovery is more than just breathing exercises – a case study

Kyle J. Wikfors, PT, DPT, NCS
Department of Physical Therapy, New York Presbyterian Columbia University Irving Medical Center, New York, NY

Background & Purpose
Lung transplant remains an important therapeutic option for individuals with advanced pulmonary disease. Neurological complications including stroke (CVA) as well as critical illness polyneuropathy/myopathy (CIP/CIM) are common in patients after transplant.1,2 These complications contribute to increased hospital stay and early morbidity and mortality.1,2 They are also frequently seen in patients requiring ECMO support, which is commonly used in patients after transplant.1,2 Early mobilization in the intensive care unit (ICU) is safe and feasible for patients after lung transplant; however there is limited data regarding the clinical implications of neurological complication after lung transplant including the effect on physical therapy (PT) plan of care and interventions.1 This purpose of this case study was to report the role of PT in the recovery of a patient with unique neurological complications after lung transplant.

Case Description
Patient Background:
• 50-year-old female
• Lives in a 4th floor walk-up apartment with her spouse
• Prior level of function: Independent with supplementary oxygen

Chief Complaint:
• Transplant status

Plan Of Care:
• Lung transplant
• Post Medical History:
  • Congestive heart failure
  • Pulmonary hypertension
  • Ventricular septal defect
  • Eisenmenger’s syndrome

Post-Operative Complications:
• Intra-op bleeding requiring ECMO
• Respiratory failure with prolonged mechanical ventilation
• Recurrent MSSA
• AF
• Left abdominal infarct
• TIA
• Critical illness polyneuropathy/myopathy

PT Examination (12/13/2021)
ROM: Within normal limits
Strength:
• Right upper extremity: 1/5 throughout
• Left upper extremity: 1/5 throughout
• Right lower extremity: 0/5 throughout
• Left lower extremity: 0/5 throughout

Sensation: Within normal limits, except:
• Light touch impaired below right knee and left ankle
• Pin prick: intact throughout

Proprioception: impaired below ankle bilaterally

Cognition: AADLs, short term memory loss, lethargic, follows one-step commands

Hospital Course
11/16/2021
Double lung transplant & ECMO cannulation.

11/19/2021
Cerebral and claudectomy.

12/4/2021
ECMO decannulation.

12/13/2021
PT in initial evaluation.

01/02/2022
CT scan with age indeterminate left thalamic lesion.

01/17/2022
Admitted to step-down unit.

02/22/2022
Trachostomy decannulated.

04/22/2022
Admitted to rehab unit.

06/02/2022
Re-admitted to step-down unit. PT re-evaluation completed.

06/04/2022
Stroke code called for altered mental status and facial droop.

06/14/2022
Patient found to be in P4 ICU closure.

06/25/2022
Patient admitted to rehab unit.

Figure 1: Patient hospital course consisting of 23 days in the cardiac/thoracic ICU, step-down unit, and inpatient rehab unit, respectively.

Discussion
Neurological complications including stroke, CVA, and CIP/CIM may present simultaneously after lung transplant resulting in increased patient disability and hospital length of stay.1,6 In conclusion, this case study highlights how these complications may effect patient recovery as well as the PT plan of care and intervention in the ICU and acute care settings, specifically demonstrating use of environmental adaptations and clinical expertise in neurological and cardio pulmonary practice areas.

Clinical Implication
Clinicians should note that neurological complications are common after lung transplant and ECMO support. PT intervention should be fortified to accommodate for the impairments that come with these complications.

References

Appendix
Table 1: AM-PAC “6 Clicks” case scenario in initial evaluation, in evaluation, and in discharge, respectively.

<table>
<thead>
<tr>
<th>Date</th>
<th>AM-PAC “6 Clicks” Case Scenario</th>
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<tr>
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<tr>
<td>12/13/2021</td>
<td></td>
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<tr>
<td>06/25/2022</td>
<td></td>
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</table>

Figure 2: Vitals: Total (19) ICU standing hand and arm evaluation from 12/20/2021 to 4/7/2022.
INTRODUCTION

- The acute Occupational Therapy (OT) and Physical Therapy (PT) departments at Sharp lacked standardized education or mobility protocols for working with patients with mechanical circulatory support (MCS) devices.
- The COVID-19 pandemic and changes to the UNOS cardiac transplant criteria led to increased numbers of patients on MCS. Historically, patients were kept on bedrest for the entirety of device support.
- Literature states prolonged bedrest and lack of mobility contribute to increased muscle wasting, risk of skin breakdown, and decreased independence. (1)

OBJECTIVE

- Develop and implement evidence-based standardized mobility protocols, education, and competencies for OT/PT staff who care for critically ill patients with MCS devices.
- Increase staff self-efficacy (GSE scores) when working with this population.
- Increase knowledge and confidence among OT/PT staff to facilitate successful implementation of an evidence-based mobility program for patients who otherwise would have experienced prolonged bedrest.

METHODS

Collaboration with hospital MCS team, cardiopulmonary team, and with MCS specialists and OT/PTs around the country to develop standardized evidence-based mobility protocols

Mobility protocols developed through this project:
- UI Extra-corporeal membrane oxygenation (ECMO)
- Femoral ECMO
- Axillary/subclavian intra-aortic balloon pump (IABP)/Impella
- Femoral IABP/Impella

Competencies developed:
- UI ECMO (Figure 1)
- Femoral ECMO
- Femoral IABP/Impella
- Axillary/subclavian IABP/Impella

Staff training provided:
- IABP/Impella class
- ECMO class
- One to one mentorship with completion of competency check-off for each of the four populations listed above

Data collection:
- Pre- and post-education knowledge test
- Pre-, post-, and 3-month follow-up using the validated General Self-Efficacy Scale (2)

RESULTS

Following standardized training, the ECMO and IABP/Impella cohorts demonstrated increases in self-efficacy, with mean GSE scores increasing from:
- 29.4 (pre-class) to 35.3 (3 month follow-up) for Impella/IABP
- 31.9 (pre-class) to 35.1 (3 month follow-up) for ECMO

GSE Scores: IABP/Impella

![Figure 2: First femoral IABP patient mobilized at Sharp](image)

Staff knowledge scores improved from 60.8% to 87.5% (ECMO) and 53.8% to 77.5% (IABP/Impella).

CONCLUSIONS

Implementation of standardized mobility protocols, staff training, and one to one mentorship resulted in increased staff knowledge of safe management of patients with MCS devices. Additionally, increased GSE scores demonstrate improvements in staff's perceptions of self-efficacy. In turn, these increases in knowledge and confidence in applying this information allowed the team to implement an evidence-based mobility program for patients who otherwise would have experienced prolonged bedrest.

Future opportunities exist to look at early mobility and the correlations to delirium prevention and hospital LOS.

REFERENCES


CONTACT INFO

If interested in expanded project reference list, please contact:
- juliana.cooper@sharp.com
- amanda.delrosario@sharp.com
Early Mobility In The Pediatric Intensive Care Unit (PICU): Impact Of A Standardized Program
Tammy Carnelli DNP, CPNP AC-PC, Katie Clark, MOT, OTR/L, Stephanie Noble, PT, DPT, Kathryn Howell BSN, RN, CCRN-K, CPN, Jean Christopher, MSN, APRN-CNS, FCNS, Micah Baird, MD, Christopher Page-Goertz MD, FAAP, Miraides Brown, MS
Akron Children’s Hospital, Akron, Ohio

Background:
Children admitted to a Pediatric Intensive Unit (PICU) require life-sustaining, complex therapies. Consequently, many critically ill children are sedated, restrained, and confined to prolonged periods of bedrest. Immobility is associated with short and long-term outcomes negatively impacting a patient’s functional recovery and quality of life.

Critically ill children remain immobilized due to lack of awareness of negative consequences and lack of pediatric specific mobilization guidelines. Assessment and treatment by physical therapy, occupational therapy, and speech language pathologist are often delayed until the child has encountered a prolonged admission.

Survival rates among children of critical illness have significantly increased resulting in an increase in new morbidity, longer hospital stays, increased readmission rate, and children not at functional baseline by 6 months post PICU discharge.

Objectives:
-To describe early practice of physical therapy (PT), occupational therapy (OT), speech language pathology (SLP) consultation and patient engagement of early mobility activity prior to a standardized program.
-To evaluate change in consultation of PT/OT/SLP practice with a standardized early mobility program.
-To determine if PT/OT/SLP evaluation for rehabilitation need occurs earlier in the PICU length of stay post standardized early mobility program implementation.
-To measure the frequency in which critically ill children engage in early mobility activities by PICU admission day 3 with a standardized early mobility program.

Methods:
-Retrospective analysis of data within the electronic health record
-Data collected from early mobility January 1, 2016, through December 31, 2017, compared with post early mobility January 1, 2020, through December 31, 2021.
-This timeframe was chosen to avoid the Hawthorne effect because it marks a time in which early mobility was not addressed frequently in this PICU and after implementation of early mobility program.
-Inclusion Criteria:
-All patients admitted to the PICU
-Exclusion Criteria:
-None

Demographics
-Age
-Gender

Variables

PT/OT/SLP consult orders placed during PICU admission
PT/OT/SLP consult orders placed by PICU hospital day 3
Patient engagement of early mobility activities by PICU hospital day 3

Early mobility activities are defined as: out of bed, standing, up to chair, ambulate, bed in chair position, dangle at edge of bed. Floor play on mat, hold, heidce, sedate commode

Categorical data are described as count (%) and compared using Chi-square test. Continuous data are presented as mean(SE) and compared between pre and post intervention time points using independent samples t-test. All statistical analyses were performed in SAS (version 9.4; SAS Institute Inc., Cary, NC, USA). A p value of < 0.05 was statistically significant.

Results:

Procedure:
-The early mobility program was inspired by the PICU URI Early mobility program implemented at Johns Hopkins Children’s Center.
-Specific early mobility activities are determined by severity of illness. As status improves, mobility activities are advanced.

-Every patient admitted to this PICU receives an order for PT, OT, and SLP consultation when the PICU admission order set is utilized. The order becomes active on PICU hospital day one.

-The PT, OT, and SLP screen patients for functional rehabilitation needs within 24 hours of order placement. Patients without acute rehab needs are identified using the screening protocol to ensure resource efficiency. However, all patients remain on the PT, OT, and SLP consultation list should the patient’s rehab needs change during their length of stay.

-All ICU staff received didactic and hands on education for early mobilization in July 2019.
-The standardized early mobilization program began in August 2018.

Discussion:
-The emergence of the COVID-19 pandemic in early 2020 resulted in unanticipated deviations from the early mobility program.

-PT/OT/SLP consultations occurred more frequently and earlier in the PICU admission in the post implementation period allowing for earlier identification of critically ill pediatric patients rehabilitation needs and treatment.

-While there is a noted increase in patient mobilization, the percentage change is an inadequate representation of mobilization of critically ill pediatric patients in this PICU due to the difficulty of capturing mobility activities relative to thousands of granular data points and the various nursing documentation practices.

-The increase of PT/OT/SLP orders and mobilizations of critically ill pediatric patients demonstrates the value of formulating practice through validated education and program.

Conclusion:
Including a standardized early mobility program in PICU admission order set with screening protocols can increase the percentage of consultations for PT, OT, and SLP evaluations of critically ill pediatric patients resulting in earlier identification of rehabilitation needs. Providing staff education and hands on training to complement a standardization of early mobility programs can increase the percentage of critically ill pediatric patients safely engaging in early mobility activities. There were no adverse events or unplanned device removal during early mobility activities.

References:

Table 1: Sample Sizes Pre & Post Early Mobility Program

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Percent</th>
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<tr>
<td>Pre</td>
<td>2056</td>
<td>43.6</td>
</tr>
<tr>
<td>Post</td>
<td>2056</td>
<td>43.6</td>
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Table 2: Demographics By Gender

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<tr>
<td></td>
<td>392</td>
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<tr>
<td>Post</td>
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<tr>
<td></td>
<td>413</td>
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Table 3: Time To PT/OT/SLP Consultations Pre & Post Early Mobility Program

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<thead>
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<th>Time To PT/OT/SLP Consultations</th>
<th>Pre</th>
<th>Post</th>
<th>Total</th>
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<tr>
<td>1-7 days</td>
<td>57</td>
<td>105</td>
<td>162</td>
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<tr>
<td>8-14 days</td>
<td>16</td>
<td>31</td>
<td>47</td>
</tr>
<tr>
<td>&gt;14 days</td>
<td>3</td>
<td>5</td>
<td>8</td>
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</table>

Table 4: Demographic Patient Activity Within The 1st 2 Days Of PICU Admissions Pre & Post Early Mobility Program

<table>
<thead>
<tr>
<th>Group</th>
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<tbody>
<tr>
<td>Activity</td>
<td>2056</td>
<td>43.6</td>
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Table 5: Day Of PICU Admission PT/OT/SLP Consultations Replaced

<table>
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<tr>
<th>Day Of PICU Admission</th>
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<th>Post</th>
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<tr>
<td>1</td>
<td>105</td>
<td>195</td>
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<tr>
<td>2</td>
<td>31</td>
<td>47</td>
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<tr>
<td>&gt;2</td>
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Change in Repeated 6-Minute Walk Distance Tests Near Time of Hospital Discharge for Acute Respiratory Failure Patients

Background

- 6-minute walk test (6MWT) assesses functional exercise capacity
- Commonly used in evaluating acute respiratory failure (ARF) survivors after hospital discharge
- Little known about 6MWT in ARF prior to hospital discharge, including its variability at this point in patient recovery

Objectives

- To evaluate change in 6MWT distance in ARF survivors who had test performed on 2 separate occasions close to discharge

Methods

- Data from participants with two 6MWT at Johns Hopkins site of ongoing ICU rehab trial (NEXIS trial; NCT03021902), with IRB approval & consent
- Eligibility criteria included:
  - Critically ill adult >18 years old
  - Expected to require respiratory support for ≥48 hr (mech vent, high flow oxygen, or non-invasive vent)
  - Expected ICU stay >4 days after randomization
- 25 meters = minimum clinically important difference (MCID) in 6MWT for ARF survivors (CHEST 2015;147:1316-1326)
- 6MWT performed as per ATS/ERS, except only 1 test per assessment

Results

4 (11%) of 33 ARF survivors unable to perform test
12 of 33 patients (36%) completed two 6MWT

Patient Characteristic N=12

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Count</th>
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<tbody>
<tr>
<td>Age, mean ± SD</td>
<td>57 ± 10</td>
</tr>
<tr>
<td>Male, n (%)</td>
<td>8 (66%)</td>
</tr>
<tr>
<td>White, n (%)</td>
<td>11 (91%)</td>
</tr>
<tr>
<td>Days between two tests, Median (IQR)</td>
<td>5 (3, 7)</td>
</tr>
</tbody>
</table>

Results – First & Second 6MWT

<table>
<thead>
<tr>
<th>Measurement</th>
<th>First 6MWD in meters, Median (IQR)</th>
<th>Percent predicted, Median (IQR)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>107 (66, 109)</td>
<td>18% (14%, 19%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Second 6MWD in meters, Median (IQR)</th>
<th>Percent predicted, Median (IQR)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>179 (124, 202)</td>
<td>30% (20%, 36%)</td>
</tr>
</tbody>
</table>

Increase in 6MWT Distance

No. patients with ↑ in 6MWT >25 meters: 11 (92%)
Increase in 6MWT (second vs. first), median (IQR):
- 71 (30, 100) meters
- 12% (5%, 17%) percent predicted
- 90% (44%, 110%) change as % of first 6MWT

Conclusion

- Physical recovery for ARF survivors is dynamic near the time of hospital discharge
- Relatively large increase in 6MWT with repeated test near hospital discharge
- Despite improvement (>25 meter MCID), 6MWT is substantially lower than population norms, with a small minority of patients unable to perform 6MWT at hospital discharge
- Multi-center studies with larger sample size needed for greater precision and generalizability of these preliminary results

Funding Source: This work is funded by the National Institutes of Health (NIH) with additional support from Baxter International Inc. and EnableMe/RECK MOTOMed
Case Study as Demonstration of Methodology for Patients With Severe ICU-AW and Cognitive Impairment for Successful Extubation and Functional Progression

Emily L Kavanaugh, PT, DPT, MBA, CCS, First Health of the Carolinas Moore Regional Hospital

Abstract

The purpose of this case study is to demonstrate the implementation of graded closed chain partial weight-bearing exercise and gravity-assisted long-sitting as key therapeutic interventions to generate foundational core and extremity strength in the patient population with ICU acquired weakness (ICU-AW), delirium, and prolonged mechanical ventilation toward successful extubation and progression of functional mobility.

Methods and Materials

A case report format featuring Patient J was utilized since she was able to self-consent to this case study [including photos] once alert within her ICU stay.

1. Intro. pt lethargic, opens eyes briefly to name only, even with raising HOB.
2. PAAROM extremities supine w/ neuro-facilitation of 1 step commands, tapping.
3. Footplate moved in to DF neutral, HiRFom bed moved into reverse trendelenburg for PWB through BLE. Repeat of facilitated UE ROM, patellar tapping and cueing pressing of biceps into extension that facilitates rote BLE exs. Max assist of trunk to longest in same bed position (occasionally rote BLE ext noted). Attempts to slowly decrease trunk support noting any rote trunk activity. Sp02, HR, RR monitored for signs of fatigue as well as pt attempt to lay back supine. Repeat trials x 3 with trunk sit time tolerated increasing each bout. Charlike position to rest/sit x goal 1-2hrs, BUE support but no head pillow to promote awake, indie head support.
4. Although pt remains lethargic, responsive to name only, more active engagement for AAROM Use in reverse trendelenburg and pt responds to footplate PWB with cued B LE extension. Longest mini modA and able to hold trunk min/vig. Awakens/eyes open during sit trials. Able to tolerate up 3-5mins of trunk sitting on each 3/3 bouts. Charlike position to rest/sit goal 2+ hrs, BUE support, no head pillow. Monitored for sxs of fatigue.
5. Pt following simple cues partial time; pt eyes are open >75% session. Longsit for trunk warmup in reverse trendelenburg ->short sit EOBS min mod A. Able to progress to close sup of trunk; loses trunk balance w/ attempted AROM LEs.
6. Progress to sit EOBS 15mins w/ seated AAROM LEs, close sup/vacilice cues of trunk. Max A SPOT OOB to chair. Left upright w/ BUE support w/ family member present.
7. After progress to sit close sup, and B knee ext 3/5, progress to sit/stand practice from raised->lowered bed heights. Progress stalls as pt becomes more medically compromised again and declines to death.

Results

The methodology demonstrates a progression that facilitates a functional progression and alertness with graded activity without triggering any startle responses, or undo fatigue in comparison to supine to sitting EOB. Moreover, this technique is repeatedly achievable with 1 therapist, even in cases of limited resources, therefore progressing patients safely and effectively.

Fig 1 - pt in supine leg press position; increased w/ reverse Trendelenburg for PWB.

Fig 2 - Longest to short sit EOB

Conclusions

Use of this technique facilitates alertness, trunk control, and overall functional mobility at earlier and faster rates within and between sessions than ROM and maximal x 2dependent assisted mobility in this complicated population alone.

Of note, within a broader conversation of health equity, the methodology: can be key in maximizing earlier functional recovery rates and minimizing associated deficits in patients with ICU-AW even in cases of limited personnel or capital equipment resources.

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References