Current Perceptions on Use of Outcome Measures in the Pediatric Acute Care Setting

Kelsey Pauley, PT, DPT, MA
Pediatric Physical Therapy Resident
University of Washington
Seattle Children’s Hospital
Objectives

- Understand the importance of outcome measures to guide clinical decision making in the pediatric population
- Identify current use of outcome measures in acute care therapy
- Identify barriers that limit use of outcome measures in acute care therapy
- Develop hypotheses and future strategies to incorporate outcome measures more frequently in pediatric physical therapy practice
Why use outcome measures?

- Guide to Physical Therapy Practice 3.0
- Outcomes are defined as “the actual results of implementing the plan of care that indicate the impact on functioning”
- Outcome measures directed towards activity and participation demonstrate the value of physical therapy in helping individuals achieve their identified goals
Why use outcome measures

- **Focus on evidence-based practice**
- **Barriers reported in the evidence**\(^1\)\(^-\)\(^4\)
  - Time constraints
  - Lack of knowledge and skills
  - Inappropriateness of measures to suit a child’s needs
- **Focus on relationship and family needs**
  - “Measurement as a mutual goal-oriented activity facilitating informed practice and decision making”\(^3\)
  - Design of effective interventions to increase measure use
  - Education on usefulness of measurement process
Clinical Decision Making

- Establishing baseline and outcome status
  - Provides a means to quantify change in function
  - Use of outcome measures throughout the episode of care as part of periodic examination

- Conclusion of episode of care
  - Discharge recommendations
  - Therapy recommendations
  - School recommendations

- Participation!
  - Child-family centered care, strengths-based, goal-oriented, collaborative, ecological, self-determined, and capacity building\(^5\)
Where do we begin?
Survey of Current Use

- Understand current use of outcome measures at Seattle Children's Hospital in the acute care setting
- Google survey sent to all physical therapists on acute care setting
- Questions regarding
  - Which outcome measures they primarily use
  - Current barriers to use of outcome measures
  - How they document and use information to determine clinical decision making
Results
Percentage of therapists working on service

Please select the service you spend the majority of your time working:

9 responses

- CAN: 55.6%
- CON: 22.2%
- Split evenly: 22.2%
Most commonly used outcome measures

Please select all of outcomes measures listed below that you have used within the last 2 weeks.

8 responses

- Manual muscle testing: 8 (100%)
- Range of motion (goniometry): 8 (100%)
- Functional Gait Assessment: 2 (25%)
- Pediatric Balance Scale: 2 (25%)
- Berg Balance: 3 (37.5%)
- Timed Up and Go: 1 (12.5%)
- Functional Reach: 0 (0%)
- 2-Minute Walk Test: 2 (25%)
- Dynamic Gait Test: 1 (12.5%)
- 30-second sit to stand: 1 (12.5%)
- AMPAC 6-clicks: 0 (0%)
- Modified Borg: 2 (25%)
- Modified Ashworth Scale: 2 (25%)
Frequency of use

Aside from ROM and MMT, how many times have you used an outcome measure listed or any other measures in the last month?

9 responses
Of the outcome measures above, which outcome measures/s do you use most frequently?

- DGI (Dynamic Gait Index)
- Pediatric Balance Score
- Modified Borg
- TUG (Timed up and go)
- 30 second sit to stand
- Modified Ashworth
- Manual Muscle testing
Are there any outcome measures that you routinely use that are not on this list? If so, which ones?

- Short form of BOT-2
- 10 second sit to stand
- Pediatric Modified Total Neuropathy Scale
- Peabody Developmental Motor Scales-2
Frequency of use within an episode of care

On average, how often do you use the same outcome measure within an episode of care?

8 responses

- 50%: Once
- 37.5%: Twice
- 12.5%: 3-4 times
- 0%: More than 5 times
Reference of findings

When using an outcome measure, do you refer the data to normative values?
8 responses

- Yes: 62.5%
- No: 37.5%
Description of use

Which of the following best describes the way in which you use outcome measures that have normative values (choose all that apply):

8 responses

- I do not typically use outcome measures... 4 (50%)
- I use the outcome measure as a pre and... 1 (12.5%)
- I use the outcome measure as an evaluat... 3 (37.5%)
- I only use the outcome measure to compa... 1 (12.5%)
- I use the outcome measure for reimburse... 0 (0%)
How would you suggest improving the current EMR to better facilitate use of outcome measures?

- Norms provided as a drop down
- Templates in EMR
- Functional outcome measures- more applicable for parent education
Why you choose to not use outcome measure

If you choose to not use an outcome measure, what is the reason?
8 responses

- Time constraints: 6 (75%)
- Inappropriate to use with patient/case: 8 (100%)
- Poor infrastructure/EMR difficulty: 1 (12.5%)
- Lack of materials: 4 (50%)
- Lack of confidence administering outcome: 6 (75%)
- Poor patient compliance/cooperation: 1 (12.5%)
Satisfaction

On a scale 1-5, with one being not satisfied at all, and 5 being extremely satisfied, how satisfied are you with your current use of outcome measures in your practice? 8 responses

- 1: 2 (25%)
- 2: 3 (37.5%)
- 3: 3 (37.5%)
- 4: 0 (0%)
- 5: 0 (0%)
What suggestions do you have for improved/increase use of outcome measures in your practice?

- Access to supplies, premade kits
- EMR updates
- Short-forms
- More frequent in-services to refresh
- More pertinent outcome measures for populations
- Easy references available
- Markers for 6MW
In what assessment categories do you wish there were more outcome measures available that are appropriate for your patients/caseload?

8 responses
Chart review
Chart review

● Reviews 7 patients over 3 months on acute care
● Length of stay ranged from 1 day to 36 days
● Diagnoses
  ○ S/p left foot reconstruction
  ○ Neuroblastoma s/p tumor resection
  ○ Cystic fibrosis
  ○ Idiopathic intracranial hypertension
  ○ S/p functional L-sided hemispherectomy
  ○ Congenital scoliosis s/p halo gravity traction
  ○ S/p exploratory laparotomy, Meckel’s diverticulectomy
Chart review

- Most commonly used outcome measures:
  - Modified Borg, 6-minute walk test, Pediatric Balance Scale, MMT
- Outcome measures used in 3/7 patients
- Patients who did not have outcome measure performed were discharged within 1-3 days from evaluation or were transferred to a different unit/service
- Repeated measure (6-minute walk test) for patient with long term stay (36 days)
Takeaways from survey and future implications
Takeaways

- Outcome measures are being used inconsistently in the pediatric acute care setting, with common barriers including:
  - EMR limitations
  - Confidence/knowledge of outcome measure
  - Time

- Outcome measures are infrequently being used multiple times within an episode of care

- Therapists are currently reporting low satisfaction of their current use of outcome measures

- Normative values are infrequently being used

- Outcome measures may not be appropriate for population
Future Implications

- Research and analysis on current barriers to outcome measure use—after new EMR is implemented
- Tracking of outcome measure use
- Trial of implementation of a single outcome measure
  - Education and in-services
  - Supplies and kits accessible
  - Track use
- Identification of appropriate outcome measures for pediatric acute care
  - AMPAC 6-clicks?
  - Developmental ages
  - Participation
References:

References:

Special Thanks!

- Brooke Fitterer, PT, DPT, PCS
- Cathy Graubert, PT
- Heather Feldner, PT, PhD, PCS
- Celeste Steggall, PT, DPT