Utilizing Outcome Measures and Standardized Assessments in Post-Stroke Rehab

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Author Disclosure
No relevant financial relationships with any commercial interests
No investigational or unlabeled products will be discussed or used

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Audrey received her Bachelors of Science in Education- Communication Disorders from the University of Nebraska Kearney as well as her Masters of Science in Education- Speech Language Pathology. 
Audrey received her Certificate of Clinical Competence from the American Speech Language and Hearing Association and has practiced Speech Language Pathology in a variety of settings. 
Audrey has enjoyed evaluating and treating patients in skilled nursing facilities, acute care facilities, inpatient rehabilitation units, outpatient clinics, and home health. 
Audrey has served as a Clinical Mentor for the CHI Health, Health Care Career Camps for four years as well as teaching/mentoring CDIS students from the University of Nebraska Lincoln and Kearney as a Clinical Instructor.
Stacie Christensen, PT, DPT, is currently a Physical Therapist for Kearney Physical Therapy at CHI Health Good Samaritan in Kearney Nebraska. She serves as the lead therapist on the inpatient rehab unit where she has served for the past 9 years. Stacie received her Bachelors of Science in Health Sciences - Pre-physical therapy from Chadron State College in 2006, then her Doctorate of Physical Therapy from University of Nebraska Medical Center in 2008. She is trained and certified in Neuro-IFRAH since 2012. Stacie has practiced physical therapy in a variety of settings including acute care, outpatient, skilled nursing and inpatient rehab. Stacie serves as a Clinical Lab Instructor for the University of Nebraska Medical Center - Kearney Campus assisting primarily in neurological physical therapy as well as functional mobility training. She has served as a clinical instructor to many PT and PTA students over the past 11 years, mentoring students from many programs across the region.
Objectives

• Define outcome measures and standardized assessments/tests.
• Identify barriers to consistent clinical use of these measures
• Identify gaps in current therapy practice (PT/OT/ST) in standardizing care
• Understand current recommendations and PT clinical practice guidelines
• Outline next steps in each discipline to encourage standardized/consistent use of outcome measures and assessments
Standardized Assessments

- WHY????
  - Objectively measure a patient’s changes over time/monitor pt status

- Communication

- Compare outcomes (patient and facilities)

- Recognize areas for additional research
Outcome Measure vs Standardized Assessment

• Outcome Measure
  • A measure of the quality of medical care, the standard against which the end result of the intervention is assessed

• Standardized Assessment/Test
  • A test, whose reliability has been established by obtaining an average score of a significantly large number of individuals for use as a standard of comparison
Outcome Measures
Most Frequently Used

• Functional Outcome Measures
• Clinically Derived Outcome Measures
• Proprietary Outcome Measures

So let’s break it down …
Functional Outcome Measures

- Measures that describe a patient’s functioning, activities, and/or participation in ADL’s.
- Examples
  - Functional Independence Measures (FIM)
  - ASHA’s National Outcome Measurement System (NOMS)
  - Voice Handicap Index (VHI)
  - Overall quality of life (QoL)
  - Berg Balance Test
  - 10 Meter Walk Test
  - AM-PAC
  - Executive Function Performance Test
Clinically Derived Outcome Measures

• Standardized tools that have been normed and validated for the target population
• Examples
  • Western Aphasia Battery (WAB)
  • The Test of Problem Solving (TOP)
  • The Aspiration-Penetration Scale
  • Postural Assessment Scale for Stroke (PASS test)
  • Allen Cognitive Level Screen
  • Stroke Impact Scale
Proprietary Outcome Measures

- Organization-Specific software or customized outcome measurement tools
- Examples
  - The Rehab Outcome Measures (ROMS)
  - Lifeware
  - SmartTx by Casamba
  - Mini-Mental State Exam
  - Brain Injury Visual Assessment Battery for Adults (biVABA)
Barriers

- Time
- Cost
- Equipment
  - Perceived Patient Burden
- Attitude/Knowledge/Skill of Therapist

(Moore et al., 2018)
Physical Therapy Outcome Measure

Utilizing a Clinical Practice Guideline to Standardize Care
PT standardized tests

- LE motor/sensory function (strength, ROM, tone, sensation, edema)
- Balance
- Gait (speed, tolerance)
- Coordination
- Fear of falling
PT standardized tests

- What are we using?
  - BERG
  - 10 Meter Walk Test
  - PASS
  - FIST
  - Tinetti/POMA
  - AM-PAC (6 clicks)

- What do YOU use?
Clinical Practice Guideline

• “A Core Set of Outcome Measures for Adults With Neurologic Conditions Undergoing Rehabilitation”

• Academy of Neurologic Physical Therapy (ANPT)
• Grant from APTA
• Published 2018

(Moore et al., 2018)
Clinical Practice Guideline

• Use Evidence-based recommendations to guide clinical decision-making

• Enhance the quality of care and decreased variation in practice

• Common set of OM/SA allows
  • better communication along the continuum of care
  • direct comparison of interventions

(Moore et al., 2018)
Clinical Practice Guideline

• Goal to establish recommendations for OM to be utilized for
  • Adults
  • ALL Neurological conditions
  • Across the continuum of care

• Extensive review and rating of evidence in constructs of
  • Balance
  • Gait
  • Transfers
  • Patient Stated Goals

(Moore et al., 2018)
Clinical Practice Guideline

• Breaking down the barriers
  • PT’s ask for SA to be <30 min, and under $100
  • Included SA required to be <20 min, and FREE

• Only the best (Review of evidence)
  • Good/Excellent psychometric properties
  • Valid across all neuro patients and published in regards to at least 2 diagnosis
  • Relevant to target areas

(Moore et al., 2018)
Clinical Practice Guideline

Action Statement 1

• Static and Dynamic Sitting and Standing Balance

• Berg Balance Scale
  • Minimal equip
  • FREE
  • <20 min

(Moore et al., 2018)
Clinical Practice Guideline
Action Statement 2

• Walking Balance
  • Functional Gait Assessment
    • Minimal equip
    • FREE
    • <20 min

(Moore et al., 2018)
Clinical Practice Guideline

Action Statement 3

- Balance Confidence
  - Activities-specific Balance Confidence Scale
    - Pen/Pencil
    - FREE
    - 5-10 min

(Powell and Myers, 1995)
(Moore et al., 2018)
Clinical Practice Guideline
Action Statement 4

- Walking Speed
  - 10 meter Walk Test
    - Minimal equip
    - FREE**
    - <5 min

(Benzo and Karpman, 2014)

(Moore et al., 2018)
Clinical Practice Guideline
Action Statement 5

- Walking Distance
  - 6-Minute Walk Test
    - Minimal equip
    - FREE*
    - <10 min

(Moore et al., 2018)
Clinical Practice Guideline

Action Statement 6

- Transfers
  - 5 Times Sit-to-Stand
    - Minimal Equip
    - FREE*
    - Minutes
  - Others:
    - Include type, assist, equipment, adaptations, time

(Moore et al., 2018)
Clinical Practice Guideline

Action Statement 7

- Documentation

- Addressing Patient Specific goals
  - Both Admit and Discharge

- Goal Attainment Scale

(Moore et al., 2018)
Clinical Practice Guideline
Action Statement 8 & 9

• Use
  • For neurological patients use CPG tests
  • If unable to perform score “0”
  • Perform minimum of Admit and D/C

• Education
  • Involve Patient/Family

(Moore et al., 2018)
Occupational Therapy
Outcome Measures

What are they? What should we use?
OT standardized tests

- Self-care/ADLs
- UE motor/sensory function (strength, ROM, tone, sensation, edema)
- Coordination
- Executive Function/Cognition
- Vision
- ***IADLs (kitchen, laundry, child care, med management etc)
OT standardized tests
(what are we using?)

- Self-care
  - FIM
- AM-PAC: Daily activity
- Executive Function Performance Test (EFPT)
- Performance Assessment of Self-Care Skills (PASS)
- MANY more
OT tests and measures
(what are we using?)

• Motor Function
  • Action Research Arm Test
  • Wolf Motor Function Test

• MMT, Grip, Pinch
• PROM>AAROM>AROM
• Modified Ashworth Scale
OT tests and measures
(what are we using?)

- Coordination
  - Nine Hole Peg Test
  - Box and Block Test
  - Finger-nose test
  - Rapid alternating movement test
OT tests and measures
(what are we using?)

- Cognition (in coordination with ST)
  - Short Blessed Test
  - Moca
  - Mini-Mental status exam
  - Trail Making Test
  - Allen cognitive

- Vision
  - Brain Injury Visual Assessment Battery for Adults (biVABA)
  - Motor-Free Visual Perception Test (MVPT)
OT - What’s next

• “An Evidence Based Occupational Therapy Toolkit for Assessment and Treatment of Upper Extremity Post Stroke”

• Canada
• April 2015
  (aota.org, 2019)
Speech Therapy Outcome Measures

What are they and what do we glean from them?
In a survey of 2,048 healthcare based SLPs completed by ASHA in 2013…

• Fewer than half (40%) of healthcare based SLPs include outcome measures in their documentation.
• Outcome measures were most commonly used in rehab hospitals (84%)
• The FIM and the ASHA NOMS were the most commonly reported functional outcome measures.
Frequency of Use

- Yes: 59.78%
- No: 40.22%
Distribution by Type of Outcome Measures Used
We’ve Got Work to Do!

- To provide an educated recommendation, to the appropriate next level of care, we need to be administering outcome measures that can flow through the continuum of care.
  - For SLPs the most obvious, and most used currently, is the ASHA NOMS
The ASHA NOMS

• American Speech Language And Hearing Association National Outcome Measures
  • The key to NOMS is the use of ASHA's Functional Communication Measures (FCMs). FCMs are a series of disorder-specific, seven-point rating scales designed to describe the change in an individual's functional communication and/or swallowing ability over time.
Functional Communication Measures

NOMS FCMs User Guide
Functional Communication Measures in Adult Healthcare

- Alaryngeal Communication
- Attention
- Augmentative-Alternative Communication
- Fluency
- Memory
- Motor Speech
- Pragmatics
- Problem Solving
- Reading
- Spoken Language Comprehension
- Spoken Language Expression
- Swallowing
- Voice
- Voice following Tracheostomy
- Writing
What did G Codes Teach Us?

UGHHHHHHHH!!!!!!

Or maybe not…
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<th>Modifier Impairment Limitation Restriction</th>
<th>NOMS LEVEL</th>
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Stroke Patients Outcomes

Acute-Hospital-Data-Report.pdf
NOW WHAT?

Something is better than NOTHING
Now What?

• Choose a SA and GET STARTED
  • Quick
  • Free
• Useful across CONTINUUM OF CARE
• Applicable to patient and goals
Now What?

• Document

• Repeat, Repeat, Repeat
Now What?

rehabmeasures.org
(Shirley Ryan Ability Lab)
# StrokEDGE II Recommendations

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Thank you

Questions???
References

References


Therapeutic Effects of Mechanical Horseback Riding on Gait and Balance Ability in Stroke Patients - Scientific Figure on ResearchGate. Available from: https://www.researchgate.net/figure/Components-of-Berg-Balance-Scale-BBS28_tbl1_235364658 [accessed 10 Jun, 2019]
