

Investigating Stroke Rehabilitation in an Inpatient Rehabilitation Setting

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Key code: morphewm

Project Description & Site

Site: Parkview's Rehabilitation Center located at Parkview Hospital Randallia in Fort Wayne, IN

Project Description: The purpose of this doctoral capstone project was: (1) to understand occupational therapy's role in early stroke rehabilitation, (2) to quantify the effectiveness of occupational therapy services in early stroke rehabilitation, (3) to determine if there is an intervention gap for the stroke population at a local inpatient rehabilitation facility, and (4) to identify the barriers to accessing and implementing evidence-based practices in stroke rehabilitation.

Focused Areas of Study: Clinical Practice Skills, Research Skills, & Education

Areas of Practice: Rehabilitation & Disability (stroke population) , Evidence-Based Practice & Research

Mission & Vision Statements

Mission Statement: To bridge the gap between current practice and evidence-based practice for stroke rehabilitation at a local neurological inpatient rehabilitation facility and to provide the rehabilitation team with the information necessary for successful evidence-based treatment for such population.

Vision Statement: To gain advanced knowledge of the occupational therapist's role in neurological rehabilitation to provide optimal patient care when recovering from stroke, thereby increasing such patients' functional gains and overall quality of life.

Literature Review

Cerebrovascular accident (CVA), or simply stroke, is a leading cause of serious long-term disability in the United States (Legg et al., 2007; Karges & Smallfield, 2009). According to Gillen (2018b), there are over 700,000 stroke cases in the US each year; and as the death rate has been reduced by 35.8% since 2010, there are more people surviving stroke and living with decreased quality of life attributed to post-stroke functional deficits (Wolf & Nilsen, 2015). Due to the high rate of stroke occurrence and the growing population of older adults, there is an increased need for occupational therapists (OTs) to access and implement evidence-based practices to ensure patients with stroke reach optimal outcomes.

Within inpatient rehabilitation facilities (IRFs), OTs provide individualized, client-centered treatment to facilitate patients' return to previous roles and levels of functioning. Occupational therapy (OT) entails the "use of purposeful activity or interventions designed to achieve functional outcomes which promote health, prevent injury or disability, and which develop, improve, sustain or restore the highest possible level of independence" (Legg et al., 2007, p. 922). OTs are trained to assess physical, cognitive, and psychosocial aspects when treating patients, and therefore play a vital role in stroke rehabilitation (Hildebrand, 2015).

Despite extensive literature dissecting stroke interventions in OT, no primary intervention has been found to yield the best functional outcomes (Nilsen et al., 2015). However, many common themes for stroke rehabilitation have been identified throughout the literature. "[OT] practitioners can help people with stroke improve their occupational performance and social participation using many different interventions strategies, including but not limited to remediation or development of skills, use of compensatory strategies, activities modifications, and environmental accommodations." (Wolf et al., 2015, p. 1). A study looking at 954 patients in six rehabilitation hospitals found six common themes of OT intervention: (1) neuromuscular; (2) adaptive/compensatory; (3) musculoskeletal; (4) cognitive/perceptual/sensory; (5) equipment; and (6) education (Latham et al., 2006). Still, more research is needed to better understand what interventions produce the best functional outcomes to improve occupational performance of patients with stroke.

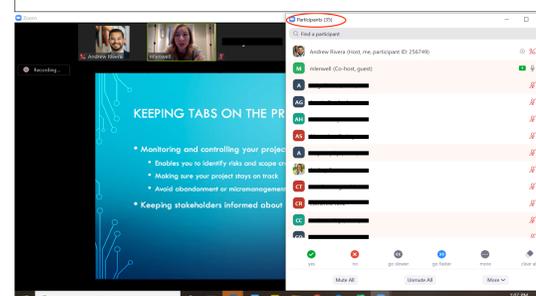
Project Completion and Outcomes

- ❖ Outcome Measure #1: Student will gain advanced knowledge of neurological rehabilitation and common functional deficits associated with stroke by completing a minimum of 180 hours of direct patient observation/treatment
 - ❖ Learning Objective #1: Student will gain clinical experience as an occupational therapist with the stroke population through immersion in an IRF setting by observing and treating patients with stroke
- ❖ Outcome Measure #2: Student will compile a summary for the rehabilitation department staff of findings on the effectiveness of occupational therapy services, current evidence-based practice for the stroke population in an IRF setting, and any intervention-gaps identified.
 - ❖ Learning Objective #2: Student will determine the effectiveness of different occupational therapy interventions to improve patients' functional independence by analyzing admission and discharge Quality Indicator scores for associate OT categories (self care + toilet transfers)
 - ❖ Learning Objective #3: Student will determine current evidence-based practices for early stroke rehabilitation via evidence review
 - ❖ Learning Objective #4: Student will create an expert-reviewed questionnaire regarding the barriers of accessing and implementing evidence-based practice with the stroke population

Deliverables

- ❖ A reflection journal regarding patient subjective report, interventions implemented, patient response to intervention, progress observed, etc. to document 180 hours of patient treatment/observation
- ❖ A documentation review of patients with stroke admitted from October 1, 2019 through February 29, 2020 to investigate the effectiveness of OT interventions based on procedure codes and patient functional gains as measured by the Quality Indicators
- ❖ A comprehensive reference guide to evidence-based stroke rehabilitation (motor / cognitive / psychosocial rehabilitation) for therapy department staff use
- ❖ A presentation directed to current OTD students regarding project overview and specifically current evidence-based stroke rehabilitation interventions
- ❖ An expert-reviewed questionnaire regarding the barriers to accessing and implementing evidence-based practice for stroke rehabilitation in an inpatient rehabilitation setting
- ❖ A written summary of all project findings

Evidence



The image above serves as evidence that the student disseminated the capstone project to >15 attendees. A total of 33 HU OTD students (excluding the capstone student and capstone coordinator) attended in the presentation via Zoom.

Future Implications for OT

Clinical practice implications of this doctoral project are presented in the reference guide deliverable, which outlines a variety of interventions supported by current evidence to enhance the clinical practice of OTs working with the stroke population. OTD student education on stroke rehabilitation should reflect these current evidence-based interventions as well. Upon completion of the evidence review, it is apparent that more research is needed regarding cognitive rehabilitation post-stroke as well as which components of motor rehabilitation (duration, intensity, feedback, etc.) are most effective for achieving optimal outcomes.

KEY REFERENCES: A full reference list is available upon request.