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## National Institutes of Health: Clinical Research & Clinical Practice Skills in Occupational Therapy

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# National Institutes of Health: Clinical Research & Clinical Practice Skills in Occupational Therapy

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## Introduction

- This capstone aimed to highlight focus areas of research and clinical practice skills as it pertains to the occupational therapy (OT) profession.
- The goal of this capstone was to learn more about research in the field of OT and contributed to at least three ongoing research projects at the National Institutes of Health (NIH) while simultaneously enhancing clinical practice skills using evidence-based practice.
- Current literature suggests a constant need for growth in research production for the field of OT; although the literature and research addressing the efficacy of OT has grown during the profession's relatively short lifespan, there continues to be a great need as we update our practices (Andresen et al., 2006; Stein & Söderback, 2006).

## Literature Review



- OT research contributes to evidence-based protocols and dissemination of materials that allow us to assign efficacy to our approaches; research is a systematic investigation that includes research development, testing, and evaluation for generalizable knowledge (Ottenbacher, 1987; Helgoy et al., 2020; Nass et al., 2009).
- Research can provide outcomes of treatment, public health interventions, functional abilities, patterns of care, and health care costs and use are ultimately what shape the healthcare system in which all practitioners provide treatment (Nass et al., 2009).
- Providing and promoting research on both effective and non-effective research interventions is especially important in occupational therapy, focusing on a body of literature that supports our holistic efforts.

### What do OTs consider barriers to their participation in research?

Lack of Time, Money, & Skills	Limited Support from Management & Peers	Gap in Self-efficacy due to poor digestibility	Lack of access evidence-based research
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- Research opportunities throughout the United States are sparse and often require personal time investment from the OT practitioner; although the NIH requires OT engagement in research, OTs are seldom the directors of protocols regardless of their data contributing to the primary outcome of a NIH initiated study.

## Site Description

The NIH is the nations largest hospital devoted to clinical research, with a mission to seek fundamental knowledge to enhance health, lengthen life, and reduce illness and disability worldwide. With 200 inpatient beds and 93 day hospital stations, the NIH campus recruits participants to study and treat diagnoses that fit into specific ongoing research protocols established by the institution and their respective principal investigators.

Within the NIH, occupational therapists conduct research and clinical practice at the Clinical Center in the Rehabilitation Medicine Department (RMD). Occupational therapists at the NIH serve as and provide the following:

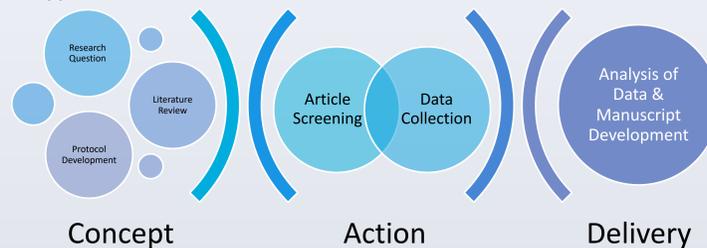
Associate Investigators in Clinical Research	Clinical Consultation, Assessment, & Treatment	Collaborative Efforts with a Variety of Disciplines	Lead & Execute Community Outreach Initiatives
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From <https://www.training.nih.gov/learn-about-nih/>

## Needs Assessment

- Systematic approaches to OT led research and contributing to existing and newly launched research projects were the assessed needs after interviewing my mentor.
- While access to research is available, there was a great need for guidance on utilization of resources provided at NIH as well as how to collect, analyze, and convey data outcomes in scientific writing.
- Additionally, balancing research with clinical care is understandably difficult, and managing time while maintaining occupational balance became a secondary focal point when providing guidance on a systematic approach to OT-led research.



## Capstone Project

### Research

- Contribution to pilot study during development of outcome metrics and methodology of gathering data prior to the studies first participant.
- Development and production of 2 OT led research manuscripts (Scoping Review & Case Series).
- Scoring OT administered assessments from participants from various research protocols.
- Coordination of meetings with other professions regarding various progression of research, including physicians, physical therapists, speech therapists, exercise physiologists, recreational therapists, and nurses.

### Project Development & Implementation

- Providing a systematic approach to OT led research, highlighting the various steps from question development, data extraction, all the way to a final manuscript. (for 2 manuscripts).
- Providing guidance and education on resources that NIH clinicians have access to in order to further their research goals and easier gather evidence to support their research through the biomedical librarian.

### Clinical Research

- Discussion of Implications
- Data Extraction and Analysis
- Literature Review

### Clinical Practice

- Multidisciplinary Communication
- Clinical Notes
- Rounds
- Patient Care

### Clinical Practice Skills

- Clinical practice skills with patients considered & included in the Case Series.
- Patients with Progressive Multifocal Leukoencephalopathy and Underlying Immunodeficiencies (HIV/AIDS, MS, SLE, RA, SCID).
- Exposure and practice with lymphedema, oncology, and brain tumor resections.

### Education

- Presentation on Financial Literacy to adolescents with rare conditions staying at the NIH Children's Inn
- Providing resources for nursing regarding various sling uses and applications when provided by rehab
- Providing Resources to RMD regarding Progressive Multifocal Leukoencephalopathy and the functional implications regarding treatment under current NIH research treatment protocols

## Learning Objectives

### Capstone Goals

- Completed a scoping review on Anomalous Health Incidents (AHI) as well as considered related literature to compared diagnoses of functional neurological disorder (FND), posttraumatic stress disorder (PTSD), and functional balance disorder, in collaboration with the NIH Library for protocol development and literature review.
- Produced a retrospective case series of 3 patients with Progressive Multifocal Leukoencephalopathy (PML), including a literature review and first draft of manuscript.
- Developed clinical practice skills and an understanding of addressing function for patients with a diagnosis of PML from an OT perspective.
- Produced a draft of a poster on the findings of AHI Scoping Review

### 16-Week Overview

3 Educational Resources	Financial Literacy PowerPoint, Interactive Learning Experience Game, and Educational Brochure for Future Patients. PML Case Series with Detailed List of Current NIH Protocols and Their Implications on Function. Sling signs and Transfer Education for Neurology Nursing Floor.
2 Publishable Manuscripts	Anomalous Health Incidents (AHI; Havana Syndrome) Scoping Review (Still Working). Progressive Multifocal Leukoencephalopathy Case Series.
4 Rare Conditions	PML, Kaposi Sarcoma, NF2, & SCID PML Patient Caseload
4 RMD Research Projects	Arteritis Pilot Study, TBI Study, DC Cooks Study, Sexual Health Study
Several Weekly Meetings	Lead Physician Meetings, Team Meetings (patient by patient; rehabilitation team), Lupus Consortium, Mentor Meetings
16 Clinical Rounds	Neurology Floor Rounds

## Implications

- Implementation of systematic approach to OT led research for occupational therapists desiring to conduct their own research, guiding them with the necessary skills to produce evidence with their collected data at the NIH.
- Educational materials developed for rehabilitation to easily consult and educate nursing on sling use for shoulder subluxation precautions; materials also produced to continue community outreach initiatives at the Children's Inn for transitioning young adults.
- Personal leadership development in research and rehabilitation team collaboration.
- Personal growth in Research and Clinical Practice skills as they pertain to institutional clinical research, protocols, and the various stages of the research process; empowering me to become a clinician researcher.
- Personal fostering of continued research opportunities for AHI scoping review and presentation on PML to RMD after capstone experience.
- Contributing to existing data detailing the expertise of OT, promoting the profession for increased referrals and ultimately benefiting the patients we serve by adding to efficacy of our services.
- Contributing to empowerment of research in OT for OT practitioners, thus fostering future researchers to contribute to the literature of OT efficacy that overall aids in the betterment of our patients.

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References available upon request.