

# COURAGE KENNY RESEARCH

Spring 2023

VOL. 1, ISSUE 5

JUNE 1, 2023

## Top Stories in This Issue



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**Reading after TBI - A New Project**

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## Recognizing Rob Kreiger, PhD



Rob Kreiger PhD, Senior Scientific Advisor for CKRC is retiring on June 30th of this year. He'll be moving to a casual position to help finish the analysis of data for various grant projects. He was first employed at Allina in 1996 as a Quality Engineer working in performance improvement. More recently, he was a consultant with the Courage Center on a major CMS grant exploring innovative care delivery models for disability patients. His latest tenure at the CKRI is with the Courage Kenny Research Center where he focused on measurement theory for clinical interventions, analytical methods development, and data interpretation. His plans for retirement include travel, and renewed involvement with community environmental activism. The CKRC will host a retirement celebration for Rob later in June.

## Introducing our 2023 Research Therapists



### **Carolyn Holm, PT, DPT**

We are excited to introduce you to Carolyn Holm, one of the Research Therapists joining the Courage Kenny Research team in 2023.

### **Tell us about yourself**

I am a PT at United Hospital working in both inpatient rehab and acute care. I have a passion for working with the neuro population but also enjoy the variety of being able to float to other hospital units.

In my free time, I enjoy spending time with my husband, 2 daughters, and golden retriever. I love running, biking, and hiking and try to get out to the mountains each year for a backpacking adventure.

### **Why did you want to be a Courage Kenny Research Therapist?**

I really enjoyed my research experiences in PT school and was excited about the opportunity to get involved in research again at CKRI. I have always loved new learning, and the research therapist position seemed like a great way to learn about all that goes into evidence that we use as clinicians.

### **Tell us about your experience so far**

The experience so far has been great! I am really enjoying the challenge of learning a new skill set. After 14 years as a clinician, it's been really fun to use my skills in a new way.

I have had the opportunity to be involved with learning the consenting process and building data collection tools, as well as spending time doing literature review and data entry. The team has been very welcoming, and I'm thankful for the great mentoring I have received already.

We are very excited to have Carolyn working with us this year!

## Introducing our 2023 Research Therapists

### Natalie Becker, M.S., CCC-SLP



We are excited to introduce you to Natalie Becker, who has come on-board as a Research Therapist joining the Courage Kenny Research team this year!

#### **Tell us about yourself**

I transitioned to a role in the resource pool in August 2022. Prior to that I worked for 9 years in the Transitional Rehab Program (TRP) in Golden Valley and 2 years in Forest Lake and Stillwater locations. In the TRP, neurocognitive disorders from acquired brain injuries became my primary area of interest and expertise.

Outside of work, I enjoy backpack camping, being at the lake, gardening (indoor and outdoor), and bicycling. I converted my front lawn to a native pollinator garden last summer which was a lot of work but has had the desired outcome -- I've attracted so many critters (hummingbirds, swallowtails, etc.) to my previously barren north Minneapolis yard. TBD if the garden can withstand the test of our new Bernedoodle puppy Sally! If my houseplants are any indicator, the prognosis isn't great.

#### **Why did you want to become a Courage Kenny Research Therapist?**

To learn and share knowledge. Being in the same position for nearly a decade, I was feeling a bit stagnant and was ready to get out of my comfort zone. I wanted to be in an environment where I could immerse myself in new learning around a group of inquisitive-minded individuals - but wasn't ready to commit to working toward a PhD, especially since I had such a limited understanding of the research process.

I feel we in the clinical world are often too separated from research, when in actuality we should be using current research to drive our practice. I'm hoping to help bridge that gap. In my role in the resource pool, I feel I have a unique opportunity to liaise between research and clinical practice and share the knowledge I've gained with SLPs across the system.

#### **Tell us about your experience so far**

I feel very fortunate to get a behind-the-scenes look at the research process-- funding, IRBs, SOPs, consents, etc.-- so many areas I knew almost nothing about before I started. Despite the complexity, this experience is also making the research process seem a little less daunting and mystifying, making me feel that someday I might be able to return to academia.

I am grateful for the opportunity to contribute to the very exciting research being conducted, albeit in a small way, including work with the Compass Course for Persistent Concussions Symptoms and Reading after TBI. I am definitely meeting my goal of getting out of my comfort zone and learning something new every day.

We are very excited to have Natalie working with us this year!

#### **The Research Therapist Position**

As part of our ongoing strategy, we have collaborated with CKRI managers to continue the Research Therapist appointment, which provides opportunities to for CKRI clinicians to work alongside CK Research staff as we contribute to rehabilitation research. It also allows us to continue to learn from their experience and expertise to ensure our efforts are focused on needs that are clinical relevant and implementable. Both Carolyn and Natalie work one day a week with Courage Kenny Research.

## Reading after Traumatic Brain Injury: Preliminary Development of a Guiding Model for Assessment and Treatment

We are excited to partner with the Allina Health Foundation on a new study for individuals who have experienced moderate to severe traumatic brain injury. In this study, we are looking to describe reading experiences of adults with a traumatic brain injury, including their reading habits as well as perceived barriers and facilitators. Additionally, we are looking to validate a test developed by the study Principal Investigator, Katy O'Brien, PhD CCC-SLP, and better understand changes in reading following brain injury.



Annually, around 2.8 million emergency department visits occur in the US related to traumatic brain injury (TBI). Due to both cognitive and visual deficits, complaints about reading are common amongst people who have experienced a TBI, regardless of severity. In a recently conducted study, it was found that reading comprehension and reading speed are greatly impacted by any TBI. While this may not be unexpected, there is little information about how particular factors may influence reading after TBI.

Many studies have been done on how reading occurs in younger populations, who may be developing reading skills for the first time, but no major studies have been conducted on adults who are looking to regain their reading capacity after traumatic brain injury. This study is both looking at better understanding the nature of reading changes for participants, and validating a new test to help people report the problems they may be having so that clinicians can more quickly and easily determine how to help them reach their reading goals.

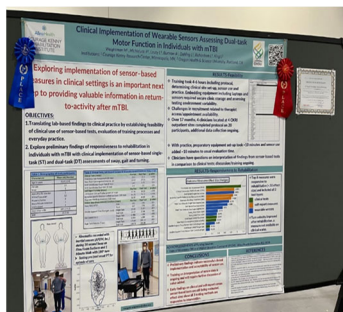
The Courage Kenny Research Team conducting this study includes Natalie Covington, Kristina Kath, Rob Kreiger, Natalie Becker, and Katy O'Brien (PI). Yalian Pei, an assistant professor at Syracuse University, is also collaborating with Dr. O'Brien on this study. Regulatory support is provided by Max Klaiman and Payton Kaiser. Funding is provided by the Allina Health Foundation.

### A look at 2023 to date

We are excited to share some of the exciting things that have happened already in 2023!

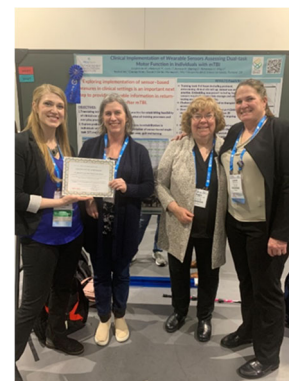
#### Dual Awards Received at the American Physical Therapy Association's Combined Section Meeting (CSM) in San Diego, CA, on February 24<sup>th</sup>, 2023!

A first place poster award was received by our study team from the Brain Injury Special Interest Group of the Neurology Section, and a Second place poster award was awarded by the Technology Special Interest Group.



This poster was presented by Lynnette Leuty, PT, DPT, NCS from Abbott Northwestern, Laura Richardson, PT, DPT, GCS at Edina Centennial Lakes, along with the Principal Investigator Maggie Weightman, PT, PhD.

Other partners on this project are Amanda Burtraw and Beth Wittry at United Hospital, Lindsay Dahling at Hastings, and Patrick Michielutti with CKRC.



Maggie Weightman PT, PhD also presented a platform talk to the Federal Section of the APTA on work from the Department of Defense grant that she collaborates on with her military and civilian partners. The talk was titled ***Preliminary Findings for a Modified Illinois Agility Test in both Civilian and Military Adults***. This talk was presented on 2/24/2023.

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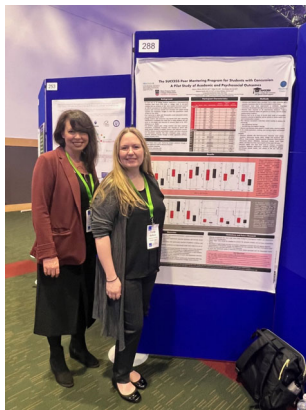
## A look at 2023 to Date (continued)



### MN Spinal Cord Injury Model System opens 3 new projects at Courage Kenny

As part of the Minnesota Spinal Cord Injury Model System of Care, Courage Kenny Research has opened three new modular projects so far this year! These projects will be available to patients at Abbott Northwestern Hospital and/or Courage Kenny Golden Valley.

The first new project, *Is Meeting the Spinal Cord Injury Physical Activity Guidelines Associated with Health-Related and Psychosocial Outcomes?*, is being led by Principal Investigator Mary Radomski, OTR/L, PhD. Dr. Amanda DeRasmi, DO, is leading the MENTOR project, *Validation of MENTOR tool to describe bowel dysfunction in inpatient rehabilitation setting and facilitate management across the 1st year post-injury* at CKRI Golden Valley. The third modular project, being coordinated through Shirley Ryan Ability Lab and led by Dr. Radomski, is investigating the *Role of Spasticity in Predicting Functional Recovery following Spinal Cord Injury*. We look forward to providing these studies to our patients with Spinal Cord injuries!



### Katy O'Brien presents at the World Congress on Brain Injury in Dublin, Ireland

The 14th World Congress on Brain Injury was hosted from March 29<sup>th</sup> until April 1<sup>st</sup>, 2023, in Dublin, Ireland. At the congress, Katy O'Brien presented three different posters. She is pictured here with collaborator Tracey Wallace, MA CCC-SLP, from Shepherd Center.

Her posters each involved aspects of concussion rehabilitation. One was about the SUCCESS peer mentoring program for students with concussion. She also presented on speech-language pathology rehabilitative services for people with concussions. Finally, she presented on reading in college students with mild traumatic brain injury— a

project which, in part, is being investigated further in her upcoming Reading after TBI study here at Courage Kenny.

Additionally, Natalie Covington, PhD, authored five posters also presented at the conference (see Page 5 for selected presentations).

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## 2023 Publications and Presentations

### Publications year-to-date:

**Radomski MV, Anheluk M, Carroll GL, Kath K, Kreiger R, Zola J.** Feasibility of a Group-Based Purpose Renewal Intervention for Cancer Survivors Via Zoom. *OTJR: Occupational Therapy Journal of Research*. 2023;0(0). doi:10.1177/15394492231156119

Kemp, A. M., Wallace, T., **O'Brien**, K. H. (2023). Reconceptualizing recovery after concussion: A phenomenological exploration of college student experiences. *American Journal of Speech-Language Pathology*, 32(2S), 867-882.

Pei, Y., Kemp, A. M., & **O'Brien**, K. H. (2023). A systematic review and meta-analysis of student perspectives and outcomes following return to learn after concussion. *Journal of School Health*. Online ahead of print.

Fino PC, **Michielutti P**, Pelo R, Parrington L, Dibble LE, Hoppes CW, Lester M, **Weightman MM**, & King LA. A hybrid assessment of clinical mobility test items for evaluating individuals with mild traumatic brain injury. *Journal of Neurologic Physical Therapy*. In Press.

Pei, Y., & **O'Brien**, K. H. (accepted). Development and Initial Validation of the Sources of Reading Self Efficacy Scale for College and University Students (SOURCES-C). *Journal of Research in Reading*.

## 2023 Presentations and Publications (continued)

### Selected presentations:

**Weightman MM, Leuty L, Michielutti PG, Burtraw A, Dahling L, Richardson L,** King LA. Clinical Implementation of Wearable Sensors Assessing Dual-task Motor Function in Individuals with mTBI. Abstract for Poster Presentation accepted for APTA Neurology Section Combined Sections Meeting, San Diego 24 February 2023. (Lynnette Leuty and Laura Richardson presented).

**Weightman MM,** Hoppes CW, Parrington L, Fino PC, Dibble LE, Lester ME, Antonellis P, King LA. Preliminary Findings for a Modified Illinois Agility Test in both Civilian and Military Adults. Platform Presentation at APTA Federal Section at Combined Sections Meeting, San Diego 23 February 2023.

**O'Brien, K.H.,** Pei, Y., Kemp, A.M., Gartell, R., & Wallace, T. (2023, March). The SUCCESS peer mentoring program for Students with concussion: A pilot study of academic and psychosocial outcomes. International Brain Injury Association World Congress. Dublin, Ireland.

**O'Brien, K.H.,** Pei, Y., Kemp, A.M., Gartell, R., Gore, R., & Wallace, T. (2023, March). Speech-language pathology rehabilitative services following concussion: An exploratory study of person-centered goals. International Brain Injury Association World Congress. Dublin, Ireland.

Pei, Y. & **O'Brien, K.H.** (2023, March). Reading in college students with mild traumatic brain injury. International Brain Injury Association World Congress. Dublin, Ireland.

**Covington, NV,** McCurdy, R., & Duff, M.C. (2023, March). Simultaneous Coordination of Multiple Memory Systems in Adults with Moderate-Severe Traumatic Brain Injury. International Brain Injury Association World Congress. Dublin, Ireland.

Mitchell, J., **Covington, N.V.,** Morrow, E., de Riesthal, M., & Duff, M.C. (2023, March). Memory and Traumatic Brain Injury: Assessment and Management Practices of Speech-Language Pathologists." International Brain Injury Association World Congress. Dublin, Ireland.

**O'Brien, K.H.** (2023, May). Reading after Acquired Brain Injury: Utility of Reading Models in Designing Assessment and Treatment Approaches. Invited webinar to the Twin Cities Speech Language Pathologists.

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### Courage Kenny Research Staff

Ned Tervola, MA, LAT ATC - Interim Manager

Natalie Becker, MS CCC-SLP - Research Therapist

Natalie Covington, PhD CCC-SLP - Rehabilitation Scientist, University of Minnesota

Laura Gilchrist, PT PhD - Rehabilitation Scientist, St. Catherine University

Carolyn Holm, PT DPT - Research Therapist

Kristina Kath, BS - Research Specialist

Max Klaiman, BA - Project Manager

Robert Kreiger, PhD - Senior Scientific Advisor

Katy O'Brien, PhD CCC-SLP - Senior Scientific Advisor

Mary Vining Radomski, PhD OTR/L - Senior Scientific Advisor

Anna Schulte, MPH - Research Specialist

Margaret M. (Maggie) Weightman, PT PhD - Senior Scientific Advisor, Physical Therapist

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#### Mission:

Our mission is to conduct innovative, relevant clinical research that advances the field and improves rehabilitative care provided to people served by Courage Kenny Rehabilitation Institute and Allina Health.