

Courage Kenny Research

ANNUAL REPORT

2019



Our Goal

Conduct state of the art research to develop knowledge that optimizes rehabilitation outcomes and full societal participation for people served by Allina Health and all people with acute or chronic disability.

Courage Kenny Research Staff

Nilanjana Banerji, MS, PhD

Clinical research director

Ginger Carroll, MS, OT/L, CPPM

Research coordinator

Nancy Flinn, PhD, OTR/L

Senior scientific adviser

Kristina Kath, BS

Research analyst coordinator

Thomas Kelley, MA

Data analyst

Maxwell Klaiman, BA

Clinical research regulatory specialist

Robert Kreiger, PhD

Senior scientific adviser

Stacey Rabusch, BS, CCRC

Research coordinator

Mary Vining Radomski, PhD, OTR/L

Interim director, Senior scientific adviser

Emily Sanville, MPH

Clinical research regulatory specialist

Margaret (Maggie) Weightman, PT, PhD

Senior scientific adviser, Physical therapist



For the past five years and through 2019, Dr. Nilanjana Banerji served as Director of Courage Kenny and Neuroscience research. During her tenure, Courage Kenny research has grown in breadth and substance, which is evidenced by the list of 2019 studies, publications, and presentations included at the end of this report. In February 2020, Dr. Banerji returned to a full-time focus on the rapidly-growing neuroscience research department, which created an opportunity for me to step in as Interim Director of Courage Kenny research. The entire Courage Kenny research team and all the clinicians with whom we partner are deeply grateful for Dr. Banerji's leadership and contributions.

I stepped into the role of Interim Director because of one longstanding and overarching conviction: research is a powerful form of advocacy, if not the most powerful form. Our commitment to research says to our patients, community, and colleagues that we are not satisfied with what we now know and that we insist on finding new ways to help people with acute or chronic disability experience the full and satisfying lives that we all want. I invite you to continue to partner with the Courage Kenny research team to make that aspiration a reality.

Sincerely,

A handwritten signature in black ink that reads "Mary Vining Radomski". The signature is written in a cursive, flowing style.

Mary Vining Radomski
Interim Director

Research Highlights

Concussion

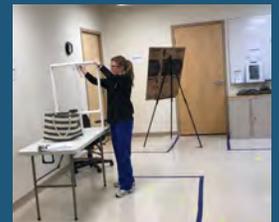
A study that evaluates use of a combination of thinking and physical activity (dual-task) as an intervention to help people who have had a mild concussion resume their daily activities.

PI: Maggie Weightman, PT, PhD



A multi-tasking test that can be used for test-retest is developed for the U.S. Department of Defense to help assure service members can safely return to duty after a mild brain injury.

PI: Mary Vining Radomski, PhD, OTR/L



A multi-site study that evaluates use of wearable sensors during dual-task turning activities to provide information in addition to measures currently used and can be used to measure change after rehabilitation for service members who have sustained a mild brain injury.

PI: Maggie Weightman, PT, PhD



Well-being

A multidisciplinary research team with members from CKRI and Virginia Piper Cancer Institute evaluates the efficacy of a purpose renewal intervention for women after breast cancer treatment.

PI: Mary Vining Radomski, PhD, OTR/L



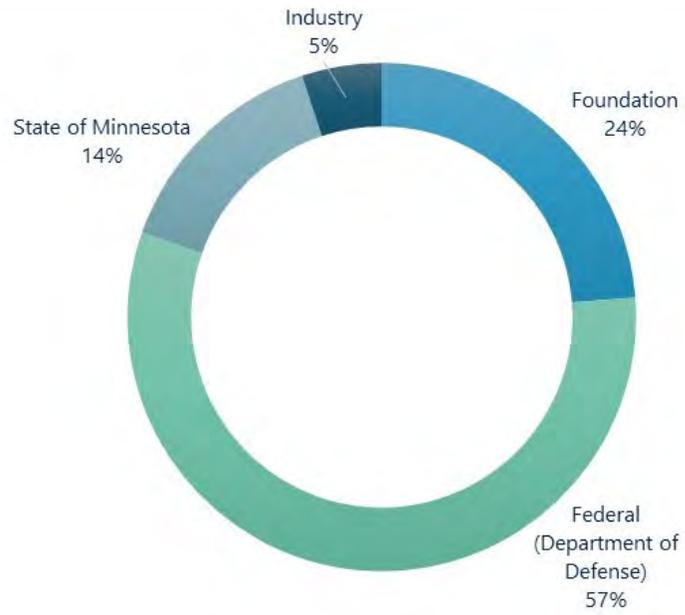
Community Mobility

A CKRI clinician researcher explores the relationship between manual wheelchair propulsion speed, maneuverability, and endurance with community participation.

PI: Amber Wacek, DPT

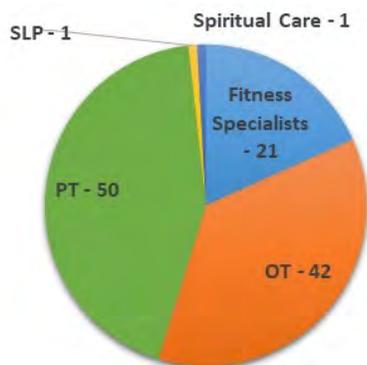


Study Funding Sources

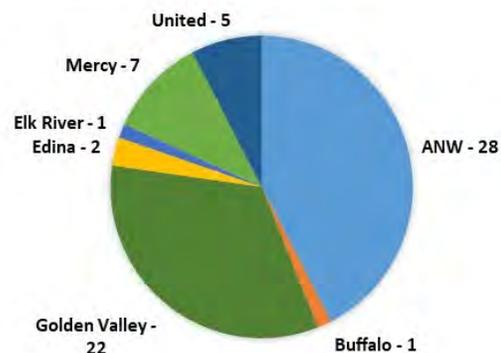


CKRI Clinical Staff Professional Development

CKRI clinical staff involved in research as Study Team Members and as Members of the Courage Kenny Research Network



CKRI staff by discipline



CKRI staff by location

Sharon Gowdy Wagener, OTD, presenting research findings at the American Occupational Therapy Association Annual Conference



CKRI Clinical Programs Support

Programs supported:

CKRI Stroke & Spinal Cord Injury Programs

- Gait Guidelines established to increase effectiveness of Physical Therapy intervention
- Upper Extremity Rehabilitation Guidelines established to increase consistency in effective intervention for CKRI patients across the continuum of care
- Fitness Guidelines established for implementation of consistent practices across the CKRI continuum of care
- Provided expertise and consultation to Stroke and Spinal Cord Injury Committees

Community-Based Programs - Surveys mailed to approximately 200 clients monthly



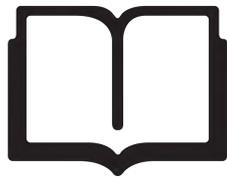
15

Active studies



519

Participants enrolled

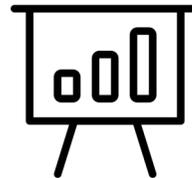


6

Papers

3

Book chapters



14

Presentations -
local & national

Quotes:

“Thought it may be interesting for you to know that during my study participation, I realized where I was having additional issues that I was fortunate enough to bring back to the brain injury program as an area of improvement. Your study was helpful to me and I was not expecting that.”

- Research Participant

“The Courage Kenny Research Center team has helped me actively contribute to the development of evidence-based care. My involvement in this study has increased my confidence in our treatment approach and allowed me to share our work at both the national and local levels.” - CKRI clinician

“I have had the honor and pleasure of working with the CKRC on a couple projects in the past few years. Becoming involved with the research group can be reenergizing and a pleasant break from our day to day positions. I think they are an unrecognized part of the employee engagement team—don't hesitate to become involved!” - CKRI clinician

Studies

ABLE POWER - Activity Based Locomotor Exercise Program: Wait-list controlled Research; PI: Nancy Flinn, PhD, OTR/L; Funded by: Courage Kenny Foundation; Total grant amount: \$48,700

Active Powered Prosthesis (APEX) for Spinal Cord Injury; PI: Jennifer Theis, MS, OT/L; Funded by: Abilitech Medical/National Institutes of Health grant; Total funded amount (CK research): \$8,424

Breath Reset - PI: Nancy Flinn, PhD, OTR/L; Funded by: Courage Kenny Foundation; Total grant amount: \$59,494

Charge of Quarters Duty - Alternate Form; PI: Mary V. Radomski, PhD, OTR/L; Funded by: Department of Defense; Total grant amount: \$247,960

Compass Course Efficacy Study - Reclaiming life purpose after breast cancer; PI: Mary V. Radomski, PhD, OTR/L; Funded by: Abbott Northwestern Foundation; Total grant amount: \$96,358

Compass Course: Reclaiming life purpose after breast cancer (Feasibility study); PI: Mary V. Radomski, PhD, OTR/L; Funded by: Engelsma Family Foundation/Abbott Northwestern Foundation; Total grant amount: \$41,509

Exploring the Role of Combined Cognitive and Motor Dual-task Assessment and Rehabilitation for Individuals with Residual Symptoms after mTBI; PI: Maggie Weightman, PT, PhD; Funded by: State of Minnesota Office of Higher Education; Total grant amount: \$119,200

Exploring the Role of Combined Cognitive and Motor Dual-task Assessments for Individuals with Residual Symptoms after mTBI: Normative Data; PI: Maggie Weightman, PT, PhD; Funded by: State of Minnesota Office of Higher Education; Total grant amount: \$42,000

Fibrosis Study: A Preliminary Feasibility Study Evaluating an Improved Tool for Grading Soft Tissue Fibrosis; PI: Laura Franco, PT, OCS

The Front-Desk Duty Multitasking Test for Adults with Mild Stroke: A Pilot study; PI: Mary V. Radomski, PhD, OTR/L; Funded by: Courage Kenny Foundation; Total grant amount: \$71,238

Grace Notes; PI: Peggy Thompson, BCC, MFA; Funded by: Courage Kenny Foundation; Total grant amount: \$38,238

Objective Dual-Task Turning Measures for Return-to-Duty Assessment; PI: Maggie Weightman, PT, PhD; Funded by: Department of Defense; Total grant amount (CK research): \$441,941

PLAY LONG - Longitudinal study of the effect of Sports and Recreation participation for young children with physical disabilities; PI: Nancy Flinn, PhD, OTR/L; Funded by: Courage Kenny Foundation; Total grant amount: \$26,300

Wheelchair Speed and Community Integration; PI: Amber Wacek, DPT; Funded by: Courage Kenny Foundation; Total grant amount: \$28,200

The WISE Trial - Walking Improvement for SCI with Exoskeleton; PI: Maggie Weightman, PT, PhD; Funded by: Ekso Bionics, Inc.; Total funded amount: \$380,000

Publications and Presentations

Publications

Hutchison, N. A., Deval, N., **Rabusch, S.**, **Rich, H.**, **Kelley, T.**, **Flinn, N.**, & **Banerji, N.** (2019). Physical Therapy–Based Exercise Protocol for Cancer Patients: Evaluating Outcomes for Cardiopulmonary Performance and Cancer-Related Fatigue. *Physical Medicine & Rehabilitation Journal*.

Marshall, T.J., Alfano, C.M., Sleight, A.G., Moser, R.P., Zucker, D.S., Rice, E.L., Silver, J.K., Raj, V.S., Fu, J.B., Padgett, L.S., Lyons, K.D., **Radomski, M.V.**, McKenna, R., Pergolotti, M. (2019). Consensus-Building efforts to identify best tools for screening and assessment for supportive services in oncology. *Disability and Rehabilitation*, 19, 1-9. doi: 10.1080/09638288.2018.1555621.

Newman, R. M., Alfano, C. M., **Radomski, M. V.**, Pergolotti, M., Wolf, T. J., Sleight, A. G., ... Lyons, K. D. (2019). Catalyzing Research to Optimize Cancer Survivors' Participation in Work and Life Roles. *OTJR: Occupation, Participation and Health*, 39(4), 189–196. doi: 10.1177/1539449219844749.

Prim, J. H., Favorov, O. V., Cecchini, A. S., Scherer, M. R., **Weightman, M. M.**, & Mcculloch, K. L. (2019). Clinical Utility and Analysis of the Run-Roll-Aim Task: Informing Return-to-Duty Readiness Decisions in Active-Duty Service Members. *Military Medicine*, 184(5-6). doi: 10.1093/milmed/usy425

Radomski, M. V., **Swenson, K. K.**, **Anheluk, M.**, **Zola, J.**, **Kreiger, R.**, **Rabusch, S.**, & **Zust, B. L.** (2019) The feasibility of a purpose-renewal intervention after treatment for early stage breast cancer: A brief report, *Journal of Psychosocial Oncology*, doi:10.1080/07347332.2019.1692990

Radomski M.V., **Anheluk M.**, **Carroll G.**, **Zola J.** Cancer. (in press). In D. Dirette & S. Guttman (Eds). *Occupational therapy for physical dysfunction*, 8 th edition. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins.

Radomski M.V., Giles G.M. (in press). Cognitive intervention. In D. Dirette & S. Guttman (Eds), *Occupational Therapy for Physical Dysfunction*, 8th edition. Philadelphia, PA: Lippincott Williams & Wilkins.

Radomski M.V. (in press). Social participation. In B. Braveman & R. Newman (Eds), *Enabling performance and participation for cancer survivors across the life course*. Bethesda, MD: AOTA Press.

Wagener, S. G., & **Kreiger, R.** (2019). Participation and quality of life for persons with oculomotor impairments after acquired brain injury. *British Journal of Occupational Therapy*, 82(8), 475–484. doi: 10.1177/0308022619827262

Presentations

Blaes, A.; **Radomski, Mary.** Post-treatment cancer survivorship Care Seminar: Research & Best Practices. Gilda's Club Twin Cities/Firefly Sisterhood, St. Louis Park, MN, April 2019.

Carroll, Ginger; Takimoto, Romina. Front Desk Duty: Validation of a Novel Multitasking Performance-Based Test on Adults with Mild Stroke. American Occupational Therapy Association Annual Conference, New Orleans, LA, April 2019.

Harvison, Kyle W.; Takehiro, Teri; Pocrnich, Christine; Michielutti, Patrick; King, L.A.; Weightman, Margaret M. Dual-task Rehabilitation for Individuals with Chronic Symptoms after Concussion: A Case Series in a Non-Athlete Population. Poster presentation (1143115), American Congress of Rehabilitation Medicine, Chicago, IL, 5 November 2019.

Radomski, Mary; Newman, R.M.; Sleight, A.G.; Lyons, K.D. Research examining cancer survivors' participation in life roles: Implications for OT practice and research. American Occupational Therapy Association Annual Conference, New Orleans, LA, April 2019.

Radomski, Mary. Finding meaning after a breast cancer diagnosis: Reflections on transitions, identity, and purpose in life. Breast Cancer Recovery: Sharing the Knowledge. Woodbury, MN, June 2019.

Radomski, Mary. Development and equivalence of an alternate form of the Charge of Quarters Duty Test, a multitasking test to inform duty readiness after concussion. Military Health System Research Symposium, Orlando, FL, August 2019.

Publications and Presentations

Presentations (cont'd)

Radomski, Mary; Carroll, Ginger, Meyers, Amy; Takimoto, Romina. Multitasking Assessment of Executive Dysfunction after Acquired Brain Injury: Emerging Research and Practice Implications, Minnesota Occupational Therapy Association, St. Paul, MN, 26 October 2019.

Thompson, Peggy. Grace Notes – Advancing spiritual well-being for clients with acquired brain injury. Minnesota Brain Injury Alliance, Minneapolis, MN, April 2019.

Thompson, Peggy. Grace Notes – Advancing spiritual well-being for clients with acquired brain injury. American Professional Chaplains Conference, Orlando, FL, June 2019.

Wagener, Sharon. Participation and Quality of Life for Persons with Oculomotor Impairments after Acquired Brain Injury (ABI). American Occupational Therapy Association Annual Conference, New Orleans, LA, April 2019.

Weightman, Margaret M. Dual-task Testing as a Component of Return-to-Duty Assessment, Symposium presentation at the American Physical Therapy Association's Combined Sections Meeting, Federal Section, in Washington DC, Part of Symposium: Scherer M.R., Lester M., Weightman M.M., King L., McCulloch K. Functional Return to Duty Decision-making Post mTBI and Musculoskeletal Injury, 26 January 2019.

Weightman Margaret M., Michielutti Patrick G., Fino P.C., King L.A.; Exploring Dual-Task Cost with Increasingly Complex Motor Tasks in Healthy Athletic Adults. Platform presentation, Federal Section, APTA Combined Sections Meeting, Washington DC, January 2019.

Weightman, Margaret M.; Takehiro, Teri; Pocrnich, Christine; Michielutti, Patrick; Fino, P.C.; King, L.A. Poster Presentation, Exploring the Role of Combined Cognitive and Motor Dual-task Assessment and Rehabilitation for Individuals with Residual Symptoms after mTBI. Poster Presentation, Military Health System Research Symposium, Orlando FL, 20 August 2019.

Weightman, Margaret M.; Michielutti, Patrick, Fino, P.C.; King, L.A. Exploring dual-task cost with increasingly complex motor tasks in healthy adults and individuals with concussion residual symptoms. Platform Presentation, Military Health System Research Symposium, Orlando FL, 20 August 2019.

