Tonya L. Rich

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EDUCATION

PhD, Rehabilitation Science, 2017

University of Minnesota, Minneapolis, MN Area of Emphasis: Neuroscience Thesis Title: Brain Circuitry, Neuromodulation, and Rehabilitation in Unilateral Cerebral Palsy.

MA, Health and Human Service Administration, 2005

St. Mary's University of Minnesota, Minneapolis, MN Capstone Title: Effective Healthcare Education for Caregivers of Children with Special Needs.

BS, Occupational Therapy, 2000

University of North Dakota, Grand Forks, ND Minors: Gerontology and Psychology

CURRENT CERTIFICATIONS & LICENSES (selected)

Level III Advanced Practitioner and Clinical Educator

Occupational Therapy – State of Minnesota Licensure	2001 – Present
National Board for Certification in Occupational Therapy (NBCOT)	2001 – Present
REDCap Data Management System User	2013 – Present
Vision Therapy Certificate	2021
American Occupational Therapy Association Fieldwork Educator Certificate	2010
Infant Massage Instructor Certification	2010
Vital Stim – Neuromuscular electrical stimulation for dysphagia Certificate	2008
Assisting Hand Assessment Certified Rater	2005
Physical Agents and Modalities Certification	2005
First Aid/CPR	Current

ACADEMIC APPOINTMENTS

Mayo Clinic

PRO Rehab

04/2024 – Present				
7/2020 – 4/2024				
anned)				
9/2012 – 12/2017				
9/2014 – 12/2016				
6/2013 – 8/2017				
6/2012 - 8/2012				
CLINICAL APPOINTMENTS				
2018 – Present				
2004 – 2021				
2019 – 2021				
2014 – 2019				

2006 - 2014

2001 - 2004

1/2001-4/2001

PROFESSSIONAL APPOINTMENTS: Minneapolis VA Health Care System/VISN 23

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Rehabilitation and Extended Care Grand Rounds Planning Committee Member	2019 – Present			
Occupational Therapy Department				
Vision Therapy Workgroup (Member)	2021 – 2024			
Evidenced-Based Review Board (Member)	2019 – 2022			
PROFESSIONAL APPOINTMENTS: VA National				
OT Field Advisory Council – Evidence-Based Practice Workgroup				
Co-Chair	2019 – Present			
OT Field Advisory Council – Member	2022 – Present			
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PROFESSIONAL MEMBERSHIPS

• Minnesota Occupational Therapy Association (MOTA)

AWARDS AND HONORS

University of Minnesota (UMN)

- UMN Center for Neurobehavioral Development Student Travel Award (2016, 2017)
- Marie Louise Wales Occupational Therapy Pediatric Fellowship recipient (2015 2017)
- American Academy of Cerebral Palsy and Developmental Medicine (AACPDM) Student Travel Award (2014, 2015, 2016, 2017)
- UMN Council of Graduate Students Travel Award (2016)
- Minnesota Discovery, Research and InnoVation Economy (MnDRIVE) Fellowship recipient (2014 2015), Project title: Combined Transcranial Direct Current Stimulation and Constraint-Induced Movement Therapy Intervention in Pediatric Hemiparesis
- Merit based Research Assistant Scholarship from the UMN Division of Rehabilitation Sciences (2013 – 2014)
- UMN Leadership and Education in Neurodevelopmental Disabilities (LEND) Pre-Doctoral Fellowship recipient (2013 2014);

RESEARCH AND SCHOLARSHIP

Grants and Contracts

Minneapolis VA Health Care System, 1 IK2 RX004805-01 VA's Rehabilitation Research and Development Career Development Award-2 (CDA-2), Home-based rehabilitation intervention for phantom limb pain in Veterans with lower limb amputations 4/2024 – 3/2029 PI: Tonya Rich, PhD, OTR/L \$1,041,720

National Institutes of Health – National Institute of Neurological Disorders and Stroke 1F31NS134186-01 Examining factors of phantom limb pain through person-centered assessment. 10/1/2023-09/30/2026 PI: Kierra Falbo, CPO Role: Sponsor: Andrew Hansen PhD, Co-Sponsor: Tonya Rich, PhD \$113,584

Rehabilitation & Engineering Center for Optimizing Veteran Engagement & Reintegration (RECOVER) Work is supported by the VA's Rehabilitation Research and Development service through awards to the Minneapolis VA Health Care System.

10/2023-09/2028

PI: Andrew Hansen, PhD, Erin Krebs, MD

Roles: Research Occupational Therapist/Principal Investigator/Assistant Director of Veteran Engagement \$6,294,500

Minneapolis Adaptive Design & Engineering (MADE) Program Minneapolis VA Health Care System 2018-09/2023 PI: Andrew Hansen, PhD Role: Research Occupational Therapist/Principal Investigator

Center for Veteran Research and Education (CVRE) Investigator Award Phantom limb pain and the development of VA-GMI mobile app. 05/2023-08/2023 \$8,424 PI: Tonya Rich, PhD, OTR/L

Minneapolis VA Health Care System, 1 IK1 RX003216-01A2

VA's Rehabilitation Research and Development Career Development Award-1 (CDA-1), Developing Assessments and Interventions for Phantom Limb Pain in Veterans with Amputations 10/2020-09/2022 PI: Tonya Rich, PhD, OTR/L \$224,716

National Institutes of Health: Research Consultant, NIH Grant Number: 1 RC1HD063838-01 Pediatric Hemiparesis: Synergistic Treatment using Repetitive Transcranial Magnetic Stimulation (rTMS) and Constraint Induced Movement Therapy (CIMT) 2009 – 2012 PI: James Carey, PhD, PT \$1.1M Role: Consultant

Gillette Children's Specialty Healthcare: Medical Education and Research Association (MERA) Grant The outcomes of modified constraint induced movement therapy (CIMT) on child attainment of skills and family satisfaction for children with birth brachial plexopathy and hemiplegic cerebral palsy 2006-2013

Co-PI: Tonya Rich, MA, OTR/L and Kelli Moberg, MS, OTR/L \$10,000

INTELLECTUAL PROPERTY

- Mobile app program for chronic pain using graded motor imagery. Disclosure VA ID (2023-398). <u>Rich</u> <u>TL</u>, Truty, T (2023). Jointly disclosed between the University of Minnesota and Minneapolis VA Health Care System.
- Apparatus for MRI compatible tactile stimulator. Disclosure 2022-523. <u>Rich TL</u>, Voss GO, Kenow C. (2022). Invention: 2022-052. Jointly disclosed between the University of Minnesota and Minneapolis VA Health Care System.
- 3. Apparatus for Generating Reproducible Concurrent Stimuli During Functional Magnetic Resonance Imagining (fMRI). <u>Rich TL</u>, Lim KO, Fairhurst SR, Morin S, Voss GO. (2021). Invention: 2022-052. Jointly disclosed between the University of Minnesota and Minneapolis VA Health Care System.
- Just One Thing (JOT): Custom Care Plans. JF, <u>Rich TL</u>, Hughes A, Cates L, MacLennan D. (2021). Invention: 2021-251. Jointly filed between the University of Minnesota and Minneapolis VA Health Care System.
- Pediatric Non-Invasive Brain Stimulation Assessment Documents. Gillick T, Meekins G, <u>Rich TL</u>, Feyma T, Krach L, Pascual-Leone A. (2015). Invention: 20160075. Filed at the University of Minnesota.

Peer-Reviewed Publications

- 1. <u>Rich T</u>, Silva M, O'Donnell F, Theis-Mahon N, Marth L, Saylor E. Exploring maintenance rehabilitation in adults with chronic conditions: A scoping review of the literature. (2024, *Under Review*).
- Falbo KJ, Baca IF, Shaffer JD, Hafner BJ, Krebs EE, Matsumoto ME, Hansen AH, <u>Rich TL</u>. Development and pilot administration of the Amputation-Related Pain and Sensation assessment tool. (2024, *Under Review*).
- <u>Rich T</u>, Phelan H, Gravely A, Falbo K, Krebs E, Finn J, Matsumoto M, Muschler K, Kiecker J, Hansen A. Examining patient reported outcome measures for phantom limb pain: Measurement use in a sample of Veterans with amputation. (2024, *Under Review*).
- 4. Falbo KJ, Macedo FJ, Hackman DE, Hansen AH, <u>Rich TL</u>. A review of reported physiological, psychological, and environmental factors that perpetuate phantom limb pain after amputation. (2024, *Under Review*).
- Falbo K, Phelan H, Hackman D, Vogsland R, <u>Rich T</u>. Graded motor imagery and its phases for individuals with phantom limb pain following amputation: A scoping review *Clin Rehabil*, 2023: Mar;38(3):287-304. doi: 10.1177/02692155231204185.
- 6. <u>Rich TL</u>, Truty T, Muschler K, Gravely A, Marth L, Barrett B, Mortimer D, Hansen AH. Virtual reality game selection for traumatic brain injury rehabilitation: A therapist's wish list for game developers. *Games for Health J*, 2023:12(5). doi: 10.1089/g4h.2022.0174
- <u>Rich TL</u>, Falbo KJ, Phelan H, Gravely A, Krebs EE, Finn JA, Matsumoto M, Muschler K, Olney CM, Kiecker J, Hansen A. Clinician perspectives on post amputation pain assessment and rehabilitation interventions. *Prosthet Orthot Int*, 2023. Oct 3. doi: 10.1097/PXR.00000000000284.
- 8. <u>Rich TL</u>, Phelan HL, Gravely AA, et al. Veteran perspectives on phantom limb pain and non-drug interventions. *J Pain Res.* 2023;16:1391-1400.
- Erbes CR, Ferguson J, Yang K, Koehler-McNicholas S, Polusney MA, Hafner BJ, Heinemann AW, Hill J, <u>Rich T</u>, Walker N, Weber M, Hansen A. Amputation-specific and generic predictors of participation among Veterans with lower limb amputation. *PLOS One*, 2022, July 7. doi.org/10.1371/journal.pone.0270753 PMID: 35797375
- <u>Rich TL</u>, Voss G, Fairhurst S. Matsumoto M, Brielmaier S, Koester K, Netoff TI, Hansen AH, Ferguson JE. Feasibility testing of a novel prosthetic socket sensor system. *Disabil Rehabil*, 2022 July 7. PMID 35797711.
- <u>Rich TL</u>, Marth LA, Brielmaier SM, Kiecker JE, Vogsland RJ, Macedo FJ, Ferguson JE, Hansen AH. Strategies for graded motor imagery for clients with phantom limb pain and cognitive impairment. *Prosthet Orthot Int*. 2022 Mar 25; PubMed PMID: 35333828.
- Bernstein, JPK, <u>Rich T</u>, McKnight S, Mehr J, Ferguson J, & Seelye A. On-Road Driving Test Performance in Veterans: Effects of Age, Clinical Diagnosis, and Driving Pre-Screen Cognitive Measures. *J Safety Res*, 2021; 77:40-45. doi:10.1016/j.jsr.2021.01.005.
- <u>Rich TL</u>, Hicks BC, Dahl AL, Barrett BJ, Bedore B, Sullivan EK. Preliminary experiences in acute Occupational Therapy for in-patients with Coronavirus-19 (COVID-19): Three Case Studies. *Dis and Rehabilitation: Assistive* Technology, 2020; Dec 23. doi:10.1080/17483107.2020.1852326
- Rudolphi T, Storm D, Bonnett K, <u>Rich T</u>. The effect of a combined pelvic floor muscle training and gross motor strengthening program on urinary incontinence in school-aged children with typical development: A descriptive case series. *J Womens Health Phys Therap*, 2020; 44(2), 63-71. doi: 10.1097/JWH.00000000000162
- <u>Rich TL, Nemanich SL</u>, Chen CY, Sutter E, Krach L, Feyma T, Gillick BT. Ipsilateral corticospinal tract excitability contributes to the severity of mirror movements in unilateral cerebral palsy: A case series. *Clin EEG Neurosci*, 2020; Jan 8. doi:10.1177/1550059419899323.
- Nemanich ST, <u>Rich TL</u>, Chen CY, Menk J, Rudser KD, Chen M, Meekins G, Gillick BT. Influence of combined transcranial direct current stimulation and motor training on corticospinal excitability in children with unilateral cerebral palsy. *Frontiers in Human Neuroscience*, 2019; 13:137.doi:10.3389/fnhum.2019.00137. PMID: 31105541
- Nemanich S, <u>Rich T</u>, Gordon A, Friel K, Gillick B. Bimanual skill learning after transcranial direct current stimulation in children with unilateral cerebral palsy: A brief report. *Dev Neurorehabil*, 2019 Apr 3:1-5. doi:10.1080/17518423.2019.1600065

- 18. <u>Rich TL</u>, Gillick B. Electrode placement in transcranial direct current stimulation-How reliable is the determination of C3/C4?. *Brain Sci.* 2019, 9, 69; doi:10.3390/brainsci9030069
- Keller-Ross, M. L., Chantigian, D. P., <u>Rich, T. L.</u>, Chen, M., Chen, C. Y., & Gillick, B. T. (2019). Stability of the cardiovascular response during single-pulse TMS in perinatal stroke. *Brain Stimulation*, *12*(2), 371-373. https://doi.org/10.1016/j.brs.2018.11.010
- 20. <u>Rich TL</u>, Nemanich S, Chen M, Friel K, Feyma T, Krach L, Nawshin T, Meekins G, Gillick B. Transcranial direct current stimulation (tDCS) paired with occupation-centered bimanual training in children with unilateral cerebral palsy: A preliminary study. *Neural Plasticity*, 2018 Nov 5;9610812. doi: 10.1155/2018/9610812
- Gillick B, <u>Rich T</u>, Nemanich S, Chen CY, Menk J, Mueller B, Chen M, Ward M, Meekins G, Feyma T, Krach L, Rudser K. Transcranial direct current stimulation and constraint-induced therapy in cerebral palsy: A randomized, blinded, sham-controlled clinical trial. *Eur J Paediatr Neurol.* 2018 May;22(3):358-368. doi: 10.1016/j.ejpn.2018.02.001
- 22. Lixandrão MC, Stinear JW, <u>Rich Ť</u>, Chen CY, Feyma T, Meekins GD, Gillick BT. EMG breakthrough during cortical silent period in congenital hemiparesis: A descriptive case series. *Braz J Phys Ther.* 2018 Nov 21. pii:S1413-3555(17)30677-9. doi: 10.1016/bjpt.2018.11.002
- 23. Gillick BT, Gordon AM, Feyma T, Krach LE, Carmel J, <u>Rich TL</u>, Bleyenheuft Y, Friel K. Non-invasive brains stimulation in children with unilateral cerebral palsy: A protocol and risk mitigation guide. *Front Pediatr.*, 16 March 2018. https://doi.org/10.3389/fped.2018.00056
- 24. <u>Rich TL</u>, Menk JS, Rudser KD, Feyma T, Gillick BT. Less-affected hand function in children with hemiparetic cerebral palsy: A comparison study to typically developing peers. *Neurorehabil Neural Repair*. November 12, 2017: https://doi.org/10.1177/1545968317739997
- 25. Chen CY, McGee C, <u>Rich TL</u>, Prudente C, Gillick BT. Reference Values of Intrinsic Muscle Strength of the Hand of Adolescents and Young Adults. *J Hand Ther*. 2017 Aug 12. pii: S0894-1130(17)30016-9. doi: 10.1016/j.jht.2017.05.012.
- 26. <u>Rich TL</u>, Menk JS, Rudser KD, Chen M, Meekins GD, Peña E, Feyma T, Bawroski K, Bush C, Gillick BT. Determining electrode placement for transcranial direct current stimulation: A comparison of electroencephalogram versus transcranial magnetic stimulation guided methods. *Clin EEG Neurosci.* 2017 Nov;48(6):367-375. doi: 10.1177/1550059417709177
- 27. Chen CY, <u>Rich T</u>, Cassidy J, Gillick B. Corticospinal Excitability in Children with Congenital Hemiparesis *Brain Sci.* 2016 Oct 20;6(4). pii: E49.
- <u>Rich TL</u>, Menk J, Krach LE, Feyma T, Gillick BT. Repetitive Transcranial Magnetic Stimulation/Behavioral Intervention Clinical Trial: Long-term Follow-Up of Outcomes in Congenital Hemiparesis. *J Child Adolesc Psychopharmacol.* 2016 Sep;26(7):598-605. doi: 10.1089/cap.2015.0157
- <u>Rich TL</u>, Cassidy J, Van Heest A, Carey J, Krach LE, Menk J, Gillick BT. Stability of stereognosis after paediatric Repetitive Transcranial Magnetic Stimulation and Constraint Induced Movement Therapy clinical trial: Brief Report. *Dev Neurorehabil.* 2017 Apr;20(3):169-172. doi: 10.3109/17518423.2016.1139008.
- Gillick BT, <u>Rich TL</u>, Chen M, Meekins G. Case Report of Vasovagal Syncope Associated with Single-Pulse Transcranial Magnetic Stimulation in a Healthy Adult Participant. *BMC Neurol.* 2015; doi: 10.1186/s12883-015-0510-2.
- Gillick BT, Krach LE, Feyma T, <u>Rich TL</u>, Moberg KJ, Menk J, Cassidy J, Kimberley T, Carey JR. Safety of primed repetitive transcranial magnetic stimulation and modified constraint-induced movement therapy in pediatric hemiparesis. *Arch Phys Med Rehabil*. 2014; doi: 10.1016/j.apmr.2014.09.012.
- 32. Gillick BT, Krach LE, Feyma T, <u>Rich TL</u>, Moberg K, Thomas W, Cassidy JM, Menk J, Carey JR. Primed Low-Frequency Repetitive Transcranial Magnetic Stimulation and Constraint-Induced Movement Therapy Randomized Trial for Pediatric Hemiparesis. *Dev Med Child Neurol.* 2014; 56(1):44-52.

Book Chapters

1. Hewitt A, Esler A, Stonach S, Zemanek L, Adler E, Arndt J, Cassidy J, Peyton R. & <u>Rich T</u>. (2016). Other Health Professions. In I.L. Rubin et. al. (Eds) Health Care for People with Intellectual Disabilities Across the Lifespan. ISBN 978-3-319-18096-0. P.2111-2123 13p. Springer International Publishing, Switzerland.

PRESENTATIONS

Invited or Peer-Reviewed Oral Presentations at Local, National, and International Professional Meetings/Conferences

- 1. <u>Rich TL</u>. Optimizing Mentoring Workshop Re-Cap Center for the Improvement of Mentored Experiences in Research. VA OT Fellowship National Community of Practice. April 25, 2024.
- 2. <u>Rich TL</u>. University of North Dakota Doctoral occupational therapy students.
 - a. "The Role of OT in serving persons with lower limb amputation". April 16, 2024
 - b. "Interprofessional Teams in Research" with Andrew Hansen PhD, and Tim Truty. April 5, 2024.
- 3. Rich TL. "Clinical Rehabilitation Scientists: Fusing Research and Clinical Practice"
 - a. University of North Dakota, April 8, 2024
 - b. University of Minnesota, March 1, 2024
- 4. <u>Rich TL</u>. "Human centered design to guide mobile app development for phantom limb pain". UMN Design of Medical Devices. April 10, 2024.
- 5. <u>Rich TL</u>, Heron, M. "Rehabilitation and Guided Imagery Techniques: A rehabilitation superpower for pain treatment". VA Guided Imagery National Community of Practice. January 16, 2024.
- 6. <u>Rich TL</u>. Graded motor imagery mobile app. White House Technology Fair, Washington DC, President Biden attended event. November 7, 2023.
- <u>Rich TL</u>, Shrader C, Virgil B. "The Winds of Change in Rehabilitation: Measuring Engagement as a Key Component to Participation". American Academy of Cerebral Palsy and Developmental Medicine. September 11, 2023.
- 8. <u>Rich TL</u>, Krebs E, Lim K, Falbo K, Hansen A. "The pursuit of innovation for Veterans with phantom limb pain: Leveraging a Veteran- and clinician-informed research agenda". Minneapolis VA Health Care System Research Day. June 7, 2023.
- 9. <u>Rich TL</u>, Marth L. "Mayday! Mayday! Research in OT". VA National OT Webinar, 1st Annual OT Research Day, May 1, 2023.
- 10. <u>Rich TL</u>. "Harnessing the power of OT through research". Pi Theta Epsilon Conference, University of North Dakota and University of Mary, January 28, 2023.
- 11. <u>Rich T</u>. "Day in the life of a clinical researcher". Marquette University's Occupational Therapy Program, March 29, 2021, March 25, 2022.
- Falbo KJ, Phelan H, Hansen AH, Matsumoto ME, <u>Rich TL</u>. "Veteran experience and perceived effectiveness with phantom limb pain treatments". American Academy of Orthotists and Prosthetists, March 1-4, 2023, (Presented by Falbo).
- 13. <u>Rich TL</u>, Marth L. "Graded Motor Imagery-Phantom Limb Pain and Beyond. Bridging research and therapy interventions for complex pain conditions." VA Amputation System of Care Cross Facility Training.
 - a. January 9, 2024, Cleveland VA
 - b. October 28, 2022, San Antonio VA
- 14. Falbo K, Phelan H, Hackman D, Vogsland R, <u>Rich TL</u>. "Graded motor imagery for persons with amputations: A scoping review". Presented by Falbo at VA Research Day, May 12, 2022.
- 15. <u>Rich TL</u>, Marth LA, Kiecker JE, Falbo K, Gravely A, Matsumoto M, Hansen AH. "OT Pain Treatments and Amputation: Bridging the research and clinical practice gap." American Occupational Therapy Association's Federal Section, April 1-2, 2022.
- <u>Rich TL</u>, Falbo K, Phelan H, Gravely A, Finn J, Krebs E, Muschler K, Matsumoto M, Hansen A. "Measuring the impact of phantom limb pain: The clinician and Veteran perspective." American Academy of Orthotists and Prosthetists Annual Meeting and Scientific Symposium, March 2-5, 2022.
- 17. Billings K, Chase R, Hesse S, Marth L, Peterson H, <u>Rich T.</u> "How do I do THAT over video? Teleheath Tools to Enhance OT Practice". VA National OT Webinar. January 20, 2021.
- <u>Rich TL</u>, Mehr J, Ferguson J, Seelye A. "Exploring QI Methodology for Program Improvement". VA National Evidenced Based Practice Webinar. April 15, 2020.

- 19. <u>Rich TL</u>, Bracken HJ, St. Jacque A. "Harnessing Neuroplastic Change through Rehabilitation". Twin Cities Speech Language Pathology Group, November 4, 2019.
- 20. <u>Rich TL,</u> Marth L. "Good, Better, Best Practice: Leveraging OT student and capstone projects". Minnesota Occupational Therapy Association's Annual Conference. October 26, 2019.
- 21. <u>Rich TL</u>, Marth L, Silva M, Voydetich D. "AIIM"ing for best practice: Practical tools and models to facilitate evidenced based OT". VA OT National Call. October 16, 2019.
- 22. <u>Rich T</u>, Mehr J. "Precision Rehabilitation for stroke recovery: Futuristic thinking?" Minneapolis VA Stroke Education Inservice. November 19, 2018.
- 23. <u>Rich T, Palmar S, Stark K. "Non-invasive brain stimulation and motor training: Investigator and interventionist perspectives"</u>. College of St. Benedict, February 13, 2018.
- 24. <u>Rich T</u>, Sterling, H. "Pediatric occupational therapy: Working together to promote activity and participation in persons with neurodevelopmental disabilities". MN Leadership and Education in Neurodevelopmental and Related Disabilities, University of Minnesota, January 25, 2018.
- 25. <u>Rich T</u>, Krach L, Chen CY, Nemanich S, Meekins G, Ward M, Feyma T, Gillick B. "Safety and feasibility of a synergistic non-invasive brain stimulation and constraint-induced movement therapy clinical trial in children with unilateral cerebral palsy" at the American Academy of Cerebral Palsy and Developmental Medicine, September 16, 2017, Montreal, Quebec, Canada.
- 26. Gillick B, <u>Rich T</u>, Chen CY, Nemanich S, Rudser K, Menk J, Ward M, Meekins G, Krach L, Feyma T. "Combined transcranial direct current stimulation and constraint-induced movement therapy intervention in children with unilateral cerebral palsy: Behavioral and neurophysiological findings from a randomized clinical trial" at the American Academy of Cerebral Palsy and Developmental Medicine, September 16, 2017, Montreal, Quebec, Canada (Gillick presented).
- 27. Gillick B, <u>Rich TL</u>, Boxrud M, Madsen M. "Study Recruitment, Enrollment and Retention: Lessons learned from Children" at the Center for Translational Science Institute Career Development Seminar, University of Minnesota, February 28, 2017, Minneapolis, Minnesota.
- Mathiowetz V, De Sam Lazaro S, <u>Rich TL</u>. "Post Post-Professional Education Options for Occupational Therapists: OTD and PhD" panel at the Minnesota Occupational Therapy Association Annual Meeting, October 28, 2016, Bloomington, Minnesota.
- <u>Rich TL</u>. "Pediatric neuroplasticity: Bridging technology and clinical care through research in Non-Invasive Brain Stimulation". Minnesota Occupational Therapy Association, March 16, 2016, St. Paul, Minnesota.
- 30. <u>Rich TL</u>. The Gillick Research Lab: Translational Pediatric Neuromodulation Applications". Early Brain Injury Recovery Lab, Burke Rehabilitation and Research, July 10, 2015.
- <u>Rich TL</u>. Legislative Advocacy Presentation on Funding Cerebral Palsy Research in Pediatric Neuromodulation for Minnesota Representative M. O'Neill (R). University of Minnesota, March 31, 2015.
- 32. Riggs S, <u>Rich TL</u>, Beehler S, Garza O. "Collaborating for Improved Community Health" panel on behalf of the University of Minnesota's Clinical and Translational Science Institute at the Minnesota Council of Non-Profits Annual Conference, November 11, 2014.
- 33. <u>Rich TL</u>, Gormley M, Farber J, and Albright L. Presented multiple lectures for a course titled *Commissioned Training Program on Paediatric Rehabilitation*. An International collaborative effort between the Hong Kong Hospital Authority, Gillette Children's Specialty Healthcare (Dr. Mark Gormley and J. Farber, PT), and Dr. Leland Albright (Africa), December 2012, Hong Kong.
- 34. <u>Rich TL</u>, Bracken HJ. "Challenges with Associated with Feeding Issues for Children", International Pediatric Rehabilitation Collaborative (IPRC) through the Pennsylvania Association of Rehabilitation Facilities (PARF) Webinar, February 2011.

Peer-reviewed Instructional Courses at National Professional Meetings

1. <u>Rich TL</u>, Forst H. "An Evidenced Based Approach to Neurotrauma Care in Pediatrics: The Return to Function" Instructional course at the American Occupational Therapy Association Annual Meeting, April 3-6, 2014, Baltimore, MD.

2. Murr S, <u>Rich TL</u>. "Clinical Practice Points for Therapists: Preschool Aged Children with Motor Impairment" Instructional course at American Academy of Cerebral Palsy and Developmental Medicine (AACPDM) Annual Meeting, Toronto, Canada, September 12-15, 2012.

Peer-reviewed Posters at Local and National Professional Meetings

- Falbo K, Phelan H, Hackman D, Vogsland D, <u>Rich TL</u>. "Graded motor imagery and its phases for individuals with amputation: A scoping review." American Orthotic-Prosthetic Association, September 28 – October 1, 2022, Falbo presenting).
- <u>Rich T</u>, Falbo K, Phelan H, Gravely A, Krebs E, Finn J, Olney C, Matsumoto M, Muschler K, Kiecker J, Hansen A. "Clinician perspectives on non-drug phantom limb pain interventions". American Orthotic-Prosthetic Association (September 28 October 1, 2022, Presented by Falbo).
- 3. <u>Rich TL</u>, Marth LA, Kiecker JE, Falbo K, Gravely A, Matsumoto M, Hansen AH. "OT Pain Treatments and Amputation: Bridging the research and clinical practice gap." American Occupational Therapy Association's Federal Section, April 1-2, 2022.
- 4. <u>Rich TL</u>, Falbo JK, Phelan H, Krebs EE, Finn JA, Gravely AA, Matsumoto ME, Olney CM, Kiecker J, Hansen AH. "Examining multiple perspectives to inform the path forward in treatment of phantom limb pain". VISN 23 Research Symposium, August 10, 2022.
- 5. <u>Rich TL</u>, Falbo JK, Phelan H, Krebs EE, Finn JA, Gravely AA, Matsumoto ME, Olney CM, Kiecker J, Hansen AH. "Examining multiple perspectives to inform the path forward in treatment of phantom limb pain". VA Research Day, May 12, 2022.
- 6. <u>Rich TL</u>, Gravely A, Matsumoto M, Kiecker J, Hansen A. "Measuring the utility of patient-reported outcome measures to assess the functional impact of phantom limb pain", OT Summit of Scholars, June 23-25, 2021.
- 7. <u>Rich T</u>, Phelan H, Matsumoto M, Gravely A, Hansen A, Goldish G, Voss G, Fairhurst S, Egginton J, Looft J, Olney C. "Engaging Veteran stakeholders in early-stage research: The key to developing novel self-management approaches", VA Research Week, June 9-10, 2021.
- 8. <u>Rich TL, Voss GO, Fairhurst SR, Koester KA, Hansen AH, Ferguson JE.</u> "Initial testing of a new socket-fit sensor system", American Orthotic and Prosthetic Association's National Assembly, September 25-28, 2019.
- Nemanich S, Mueller B, <u>Rich T</u>, Chen CY, Gillick B. "Corticospinal tract integrity and motor function in children with unilateral cerebral palsy following a transcranial direct current stimulation and motor training intervention", American Society of Neurorehabilitation's Annual Meeting, November 9-10, 2017, Baltimore, MD. (Nemanich presented).
- <u>Rich T,</u> Chen CY, Feyma T, Meekins G, Ward M, Krach LE, Gillick B. "Child and caregiver perspectives of a combined brain stimulation and constraint-induced movement therapy trial", American Occupational Therapy Association's Annual Conference, March 30-April 2, 2017, Philadelphia, PA.
- Nemanich S, <u>Rich T</u>, Chen CY, Lixandrão M, Meekins G, Feyma T, Ward M, Krach L, Gillick B. "Changes in hand function and motor cortex excitability in children following tDCS and CIMT therapy in children with unilateral cerebral palsy with different patterns of corticospinal organization", Minnesota Neuromodulation Symposium, April 13-14, 2017, Minneapolis, Minnesota. (Nemanich presenting)
- Nemanich S, <u>Rich T</u>, Chen CY, Lixandrão M, Meekins G, Feyma T, Ward M, Krach L, Gillick B. "Changes in hand function and motor cortex excitability in children following tDCS and CIMT therapy in children with unilateral cerebral palsy with different patterns of corticospinal organization", NYC Neuromodulation 2017, January 13-17, 2017, New York, NY. (Nemanich presented)
- <u>Rich TL</u>, Keller-Ross M, Chantigian D, Chen CY, Meekins G, Feyma T, Krach L, Gillick B. "Autonomic nervous system monitoring during transcranial magnetic stimulation: Making a difference in monitoring responses and adverse events in children with hemiparetic cerebral palsy", Institute of Engineering Medicine (IEM) Annual Meeting, September 26, 2016, Minneapolis, MN.
- 14. Chantigian D, <u>Rich TL</u>, Chen CY, Lixandrão M, Gillick B, Keller-Ross M. "Stability of the Autonomic Nervous System During Transcranial Magnetic Stimulation in Pediatric Stroke: Combining Neuroengineering and Biomedical Resources". Institute of Engineering Medicine (IEM) Annual Meeting, September 26, 2016, Minneapolis, MN (Chantigian presenting).

- 15. Lixandrão M, Stinear J, Meekins G, Feyma T, <u>Rich T</u>, Chen CY, Gillick B. "Ipsilesional and Contralesional Cortical Silent Period in Pediatric Stroke: Preliminary Reports". 6th International Conference on Transcranial Brain Stimulation, September 7-10, 2016, Göttingen, Germany (Lixandrão presented).
- 16. <u>Rich T</u>, Chen CY, Lixandrão M, Gillick, BT. "A comparison of paretic and non-paretic hand electromyographic responses with single-pulse transcranial magnetic stimulation testing in children with congenital hemiparesis", Minnesota Neuromodulation Symposium, April 14-15, 2016, Minneapolis, Minnesota.
- Lixandrão M, <u>Rich T</u>, Chen CY, Gillick BT. "Bilateral cortical silent period evoked by transcranial magnetic stimulation in a child with perinatal stroke: understanding cortical inhibitory circuits", Minnesota Neuromodulation Symposium, April 14-15, 2016, Minneapolis, Minnesota. (Lixandrão presented).
- <u>Rich TL</u>, Keller-Ross M, Chantigian D, Chen CY, Meekins G, Feyma T, Krach L, Gillick B. "Autonomic nervous system monitoring during transcranial magnetic stimulation: Making a difference in monitoring responses and adverse events in children with hemiparetic cerebral palsy", American Academy of Cerebral Palsy and Developmental Medicine (AACPDM) Annual Meeting, September 20-24, 2016, Hollywood, FL.
- <u>Rich TL</u>, Krach LE, Feyma T, Gillick BT. "Non-Surgical Brain Stimulation Studies in Children with and without Stroke: The Child and Caregiver's Perspective", American Physical Therapy Association (APTA) IV STEP Conference, July 14-19, 2016, Columbus, OH.
- 20. Groth S, Kubat K, Martin J, Miller T, Morse S, Myhrman K, Tobias A, <u>Rich T</u>, Gillick B, "Localizing the primary motor cortex as a target for transcranial direct current stimulation (tDCS): A comparison of the 10-20 Electroencephalogram (EEG) System and Transcranial Magnetic Stimulation (TMS) methods: Study in Progress." APTA Combined Sections Meeting (CSM) Feb 17-20, 2016 Anaheim, CA. (Groth, Martin, Kubat, Tobias presented).
- <u>Rich TL</u>, Peña E, Feyma T, Meekins G, Sell N, Gillick BT. "Determining the Location of the Primary Motor Cortex in Children: A Comparison of Electroencephalogram (EEG) and Transcranial Magnetic Stimulation (TMS) Techniques", Society for Neuroscience (SfN) Annual Meeting, October 17-21, 2015, Chicago, IL.
- 22. <u>Rich TL</u>, Peña E, Feyma T, Meekins G, Sell N, Gillick BT. "Determining the Location of the Primary Motor Cortex in Children: A Comparison of Electroencephalogram (EEG) and Transcranial Magnetic Stimulation (TMS) Techniques", University of Minnesota William Kennedy Research Symposium, October 16, 2015, Minneapolis, MN. (Meekins presented).
- <u>Rich TL</u>, Menk J, Krach LE, Feyma T, Gillick BT. "Long-term safety follow-up of children and adolescents with stroke following participation in a Repetitive Transcranial Magnetic Stimulation (rTMS) and Constraint Induced Movement Therapy Clinical Trial", AACPDM Annual Meeting, October 21-24, 2015, Austin, TX.
- <u>Rich TL</u>, Feyma T, Krach LE, Gillick BT. "Non-Surgical Brain Stimulation Research in Children with Stroke: The Child and Caregiver's Perspective", Northwestern Pediatric Hemiplegia Symposium, April 25, 2015, Chicago, IL.
- 25. <u>Rich TL</u>, Peña E, Feyma T, Meekins G, Sell N, Gillick BT. "Determining the Location of the Primary Motor Cortex in Children: A Comparison of Electroencephalogram (EEG) and Transcranial Magnetic Stimulation (TMS) Techniques", University of Minnesota Neuromodulation Symposium, April 16-17, 2015, Minneapolis, MN.
- 26. <u>Rich TL</u>, Cassidy JM, Van Heest AE, Krach LE, Carey J, Gillick BT. "Investigation in Pediatric Stereognosis Following 6-Hz Primed Low-Frequency Repetitive Transcranial Magnetic Stimulation (rTMS) and Constraint Induced Movement Therapy (CIMT)", University of Minnesota Neuromodulation Symposium, April 10-11, 2014, Minneapolis, MN.
- Gillick BT, Krach LE, Moberg K, <u>Rich T</u>, Carey JR. "Pediatric Hemiparesis: Repetitive Transcranial Magnetic Stimulation and Constraint-Induced Therapy". AACPDM Annual Conference, September 13, 2012, Toronto, Canada. (Gillick presented).
- Gillick BT, Krach L, <u>Rich T</u>, Moberg K, Carey JR. "Synergistic Treatment using Repetitive Transcranial Magnetic Stimulation and Modified Constraint-Induced Therapy (CIT) in a child with Hemiparesis". APTA Combined Sections, February 9-12, 2011, New Orleans, LA. (Gillick presented).

Local Presentations

- <u>Rich TL</u>, Hudleston D. "Post amputation pain". Minneapolis VA Health Care System Comprehensive Pain Clinic. May 31st, 2023.
- 2. Rich TL, Mehr J, Ferguson J, Seelye A. "Someone Take the Wheel!!" Exploring QI Methodology for Program Improvement". Minneapolis VA Grand Rounds, December 19, 2019.
- 3. Rich TL, Frost K. "Your fantastic elastic brain!". Burrough's Community School, 3rd graders, April 20, 2017.
- 4. Rich TL. "Brain Stimulation in Pediatric Stroke: Child/Family Perceptions and the Influence on Outcomes" at University of Minnesota Rehabilitation Seminar, Minneapolis, Minnesota, December 14, 2015.
- 5. Rich TL. "The Evolution of CIMT" at Capernaum Pediatric Therapy, New Hope, Minnesota, September 26, 2014.
- 6. Rich TL. "I Fit, UFIT, We All Fit Together: Advances in Pediatric Neurorehabilitation" at the Gillette Children's Specialty Healthcare OT Education Evening, November 6, 2014.
- 7. Bracken H, McDonald R, Rich T. "Why Therapy? Capacity, Choice and Engagement" at International Symposium on Lifecare Planning, Minneapolis, Minnesota, September 19, 2014.
- 8. Rich TL, Bracken HJ. "A collaborative approach to supportive feeding", Gillette Children's Specialty Healthcare and United Cerebral Palsy's Education Evening, St. Paul, Minnesota, April 8, 2014.
- 9. Rich TL, Bracken HJ. "It's not just about the food" at ISD 623 Special Education Team, Roseville, Minnesota, August 28, 2013.
- 10. Rich TL, Moberg K, Rounds L. "Pediatric Occupational Therapy" at Anoka Hennepin Technical College, Anoka, Minnesota. March 2013, 2012, 2009, 2008.
- 11. Rich TL, Bracken HJ. "It's not just about the food" at ISD 623 Special Education Team, Roseville, Minnesota, March 27, 2012.
- 12. Rich TL, Moberg K. "The Evolution of Pediatric CIMT" at Gillette Children's Specialty Healthcare 3rd Biennial Pediatric Neurosciences Conference: Moving Forward in the Treatment of Pediatric Neurological Disorders, Minneapolis, Minnesota, May 30- June 1, 2012.
- 13. Rich TL, Bracken HJ, McDonald R, Mitchell N. "Planning Therapy Care and Transition to Adulthood" at the Gillette Children's Specialty Healthcare Conference on Children and Adults Who Have Cerebral Palsy: The Road Map for Advocacy and Medical Care, October 29, 2011.
- 14. Rich TL. "Constraint Induced Movement Therapy- Outcomes in Birth Brachial Plexus Injury" at the Gillette Children's Specialty Healthcare's Birth Brachial Plexus: Evaluation and Management. A Symposium for Care Teams, St. Paul, Minnesota, April 11, 2011.
- 15. Rich TL, Bracken HJ, Thornton B. "The Use of Neuromuscular Electrical Stimulation in Patients with Feeding Issues" at Gillette Children's Specialty Healthcare Grand Rounds, St. Paul, Minnesota, November 2011.
- 16. Rich TL. "Constraint Induced Movement Therapy: A Guide to Clinical Decision Making" at the Gillette Children's Specialty Healthcare Management of Musculoskeletal Conditions in Children and Adolescents, Edina, Minnesota, December 2010.
- 17. Rich TL, Bracken HJ, Larson K. "Feeding Disorders in Children with Special Needs: A Multidisciplinary Approach" at Gillette Children's Specialty Healthcare Minnesota Outreach Conference. Wilmar, Minnesota, November 6, 2009.
- Rich TL, Bracken HJ, Larson K. "Feeding Disorders in Children with Special Needs: A Multidisciplinary Approach" at Gillette Children's Specialty Healthcare Minnesota Outreach Conference. Brainerd, Minnesota, October 21, 2008.
- VanHeest A, Rich TL. "Cerebral Palsy Treatments" at Gillette Children's Specialty Healthcare's Occupational Therapy: An Update on Pediatric Upper Extremity Conditions and Treatments, St. Paul, Minnesota, September 2008.
- 20. Rich TL, Moberg K. "Constraint Induced Movement Therapy" at Gillette Children's Specialty Healthcare's Occupational Therapy: An Update on Pediatric Upper Extremity Conditions and Treatments, St. Paul, Minnesota, September 2008.
- 21. Rich TL. "CIMT: An Evidenced Based Approach to the Art of Occupational Therapy" at Gillette Children's Specialty Healthcare's 1st Biennial Pediatric Neurosciences Conference, May 2008.

22. Rich TL, Bracken HJ, Larson K. "Feeding Disorders in Children with Special Needs: A Multidisciplinary Approach" at Gillette Children's Specialty Healthcare Minnesota Outreach Conference. Willmar, Minnesota, Fall 2007.

FORMAL TRAINING AND EDUCATION IN LEADERSHIP, COMMUNICATION AND MENTORING			
Optimizing Mentoring Workshop	2024		
- Center for the Improvement of Mentored Experiences in Research			
Motivational Interviewing	2013		
 Interviewing strategies for engaging families with chronic health conditions in care planning 			
Insights Transformative Leadership	2013		
-Training on leadership styles and approaches for strengthening interdisciplinary teams			
Effective Facilitator by Leadership Strategies	2012		
-Training in group facilitation for guiding interdisciplinary groups on clinical practice guidelines			
Crucial Conversations	2011		
-Strategies for maintaining open dialogue in decision making to promote group decision making			
Strengths Finders	2009		
–Understanding the strengths of one's self and team members for optimal team functioning			
Coaching for Commitment	2008		
-Coaching-specific strategies to create a supportive, dynamic me	entoring interaction with others		
others	-		