

Exploring Signals, Pathways, and Networks: Dr. Julie Schwertfeger's Pathway from Clinical Leader to Clinical Neuromodulation Researcher

Advances in imaging and technology inspired Julie Schwertfeger, PT, PhD, DPT, MBA, CBIST, to advance her training and move from clinical leadership to a research faculty position. In her current position as tenure track Assistant Professor in Physical Therapy at Louisiana State University Health - Shreveport (LSUHS), she is advancing the use of data about signals, pathways, and networks to improve recovery trajectories for people with stroke and traumatic brain injury (TBI). However, when she began her career as a physical therapist working with individuals with spinal cord injury at the Hines VA Medical Center in Illinois, Dr. Schwertfeger would never have guessed how her career would evolve over the years.



She was invited to interview and accepted a role at Kindred Long-Term Acute Care Hospital by an Illinois colleague she met through her participation in the Illinois chapter of the APTA. This role evolved over seven years to include rehabilitation management, survey readiness, and program improvement. Dr. Schwertfeger's work at Kindred developed her knowledge of rehabilitation of adults with disorders of consciousness (DOC), ventilator weaning, and the power of interdisciplinary specialty care for patients with complex medical care needs. At Kindred, Dr. Schwertfeger developed a moderate intensity mobility program using portable ventilators and respiratory training and support for all therapy team members that improved ventilator weaning rates, as well as an evidence-based DOC rehabilitation program that improved discharges to rehabilitation and home.

News of her DOC and ventilator weaning rehabilitation programs reached recruiters from the Rehabilitation Institute of Chicago (RIC, now Shirley AbilityLab). Dr. Schwertfeger began a clinical management position where she led in the development of therapy registry staffing, expanded weekend coverage, established a Rehabilitation Stroke Disease Specific Certification, and served as the liaison to the Neuroscience Institute at the Alexian Brothers partnership, where she participated in the start-up of one of the first Comprehensive Stroke Centers in Illinois. Her leadership role at RIC afforded her opportunities to work on research, and she assisted in the development of, and served as a site PI on, one of the first PCORI contracts awarded to the Center for Rehabilitation Outcomes Research. This first project focused on the feasibility of collecting patient reported outcomes during inpatient neurorehabilitation. Her work on improving the standardization of measurement data across the RIC alliances, which she presented to upper leadership, was an early step informing how RIC harnesses longitudinal outcomes data from across sites. Dr. Schwertfeger's growing use of data and side work on research signaled the need to find a role where research was a part of her core job description.

Before leaving RIC, Dr. Schwertfeger developed a rich 'neural network' of researchers in stroke and neurorehabilitation through her role organizing rehabilitation research fly-ins to Congress as the Federal Affairs Liaison for the American Physical Therapy Association's Academy of Research through. The fly-ins continued through part of her time as core academic faculty at Rosalind Franklin University and culminated in increasing funding and visibility of rehabilitation research across NIH Centers as part of the 21st Century Cures Act, signed into law in 2016. Helping researchers talk about the value of research in terms legislators related to also helped her deepen her love of inquiry and clinical research.

The energy infusion and success Dr. Schwertfeger had with researchers across the country signaled it was time to complete a PhD to become eligible for a position where research was a integral part of her faculty role. While teaching as core faculty at Rosalind Franklin University and completing her PhD, her future research pathway became clearer through work as a site PI on [the STRONG study](#). This study enrolled patients within 10-days of acute stroke and followed the recovery trajectories for one year, and it included biomarker collection in addition to physical and self-reported measures. Dr. Schwertfeger's dissertation work on an under-studied [self-management model tailored to people with stroke](#) and stroke care partners provided the next step on the path to dedicated research development as a primary part of her professional work.

The next step was a Research Fellowship in Advanced TBI/polytrauma where Dr. Schwertfeger learned and applied neuromodulation in clinical populations ranging from disorders of consciousness to community-dwelling individuals with mild TBI. In addition, she designed transcranial direct current stimulation (tDCS) research studies, assisted in engaging patients in playing serious games for balance recovery after TBI, and administered Battlefield Acupuncture for pain and anxiety. Exploring the right role through professional and personal networks led to a move from her lifelong home of Chicago to Louisiana State University Health - Shreveport (LSUHS) in November 2024. There, she currently serves as tenure track Assistant Professor in Physical Therapy with half of her time protected for research and the other half teaching in the PhD program and providing clinical assessments in acute and outpatient clinics.

This brings us to Louisiana, where Dr. Schwertfeger is the PI and coordinator for the [Vivistim Registry for Rehabilitation after Stroke using Paired VNS \(GRASP\)](#). The site enrolled the first participant one day after IRB approval and activation. In addition to developing collaborative research and grants related to stroke and TBI, Dr. Schwertfeger engages in clinical assessments and treatment at interdisciplinary functional neurosurgery and neurology clinics and in the faculty outpatient clinic. Having a presence within the clinics is valuable for coordinating the recruitment system. Most recently, Dr. Schwertfeger was recognized by the LSU Health Sciences Foundation Shreveport with a Healer Award for her role in her patient Clint's recovery from traumatic spinal cord injury. [This recent YouTube video](#) highlights Clint's story and his care team's role in recovery. In mid October, she was selected to participate in the 2026 Training in Grantsmanship for Rehabilitation Research (TIGRR) Workshop in January, which will enhance her grant writing skills to advance treatment standards to improve long-term outcomes for people living with impairments from stroke and other acquired brain injuries.

Likely, some of her TIGGR workshop mentors and peers will be people who are also leaders within ASNR.

Selecting the position in Physical Therapy at LSUHS was the obvious choice due to visionary leadership (Sharon Dunn, PT, PhD, two-term APTA President and past fly-in participant), designation as a Level I Trauma Center, a Safety Net Hospital, a Comprehensive Stroke Center, a leading neurology and neurosurgery training program, and a recent track record of focused development of clinical research funding (the most recent news is a [\\$7.5 M NSF Grant](#) to establish The Center for Post-Transcriptional Regulation on September 24, 2025). This role has allowed Dr. Schwertfeger to leverage her strengths and brings fulfillment through solving complex clinical problems in neurorehabilitation that demand multiple specialties, collaborative research, and leadership committed to supporting research advancement.

Over the past several years as she underwent this major career transition, ASNR has been an important community for Dr. Schwertfeger. She joined ASNR in 2019 and was excited to connect with others who shared her passion for neurorehabilitation research. During her research postdoctoral fellowship, she published a [review paper on the use of transcranial direct current stimulation](#) with fellow ASNR member and past presenter, Sangeetha Madhavan, PT, PhD. In 2024, Dr. Schwertfeger joined Marika Demers, PhD, Amelia Cain, PT, DPT, NCS, and Jessica Cassidy, DPT, PT, PhD, to co-present the Professional Development Symposium, “How to Integrate Qualitative Methods Into Your Neurorehabilitation Research”, at ASNR’s Annual Meeting. This session was a collaborative effort that grew from discussions during prior ASNR Annual Meetings and the Motor Behavior in Neurorehabilitation Lab journal club led by Carolee Winstein, PT, PhD, and Clarissa Martinez, DPT, PT, MS. It is a delight to share that a pending publication, a scoping review manuscript, and a new project continue to develop and disseminate clinical research with ASNR colleagues, and Dr. Schwertfeger is excited to be identifying new collaborators to expand her neural research network, one of whom is Chen Lin, MD, MBA, a past ASNR presenter and [Transport2](#) investigator who is the Chair of Neurology at LSUHS.