

Rehabilitation Technology Symposium

Harnessing Intensity to Optimize Patient Outcomes



Sheltering Arms Institute
A collaboration with VCUHealth



March 15, 2025

Sheltering Arms Institute: 2000 Wilkes Ridge Dr., Richmond, VA 23233

Physical and Occupational Therapy Professionals • 8am - 5pm

Cost: \$125, **Cost for students:** \$50 (includes box lunch) • **Continuing education:** 9 hours*

Speech Language Pathologists • 8am - 3:30pm

Cost: \$100, **Cost for students:** \$50 (includes box lunch) • **Continuing education:** 7.5 hours*

* Sheltering Arms Institute is designated to provide certified contact hours to physical therapy, occupational therapy, and speech and language pathology clinicians licensed in the state of Virginia. Attendees of different disciplines or licensed in other states will receive a certificate of attendance. Attendees should verify with their licensing body if credit can be utilized toward regulatory requirements.

SYMPOSIUM DESCRIPTION

Course Level: Intermediate

This one-day technology symposium will provide participants with a comprehensive understanding of how rehabilitation technologies can be leveraged to enhance patient outcomes through targeted intensity levels and improved transdisciplinary care. Attendees will explore the integration of advanced rehabilitation technologies into clinical practice, focusing on how these tools can optimize patient engagement, achieve personalized intensity targets, and accelerate recovery. The symposium will also emphasize the role of collaborative care models in enhancing treatment coordination and functional independence. Through expert presentations, interactive discussions and hands-on opportunities, participants will gain actionable insights on incorporating evidence-based technologies to improve patient progress and outcomes across diverse patient populations. Specialized tracks available for PT/OT and SLP.

Upon completion of the symposium, participants will be able to:

- Assess the role of rehabilitation technology in achieving personalized intensity targets.
- Evaluate the integration of advanced rehabilitation technologies into transdisciplinary care models.
- Apply knowledge of rehabilitation technologies to tailor interventions that maximize functional independence.
- Analyze current trends and innovations in rehabilitation technology and impact on patient outcomes.
- Incorporate evidence-based rehabilitation technologies into clinical practice.

Technology demonstrations will include:

- Upper Extremity Arm Weight Support and Robotics
- Body Weight Support Technology
- Robotics Including Exoskeletons
- Functional Electrical Stimulation
- Electrical Stimulation for Dysphagia
- Lingual/Labial Strength Biofeedback
- Respiratory Muscle Strength Trainers
- Functional Gamification Technology

To learn more about Sheltering Arms and our technologies, please visit shelteringarmsinstitute.com



Scan QR for agenda, presenter bios, and registration form

SYMPOSIUM AGENDA

PHYSICAL AND OCCUPATIONAL THERAPY AGENDA

8 - 8:30am

Registration and Welcome

8:30 - 9:30am

Keynote Sponsored by Bioness- Translating
Neuromodulation for Clinical Use
Speaker: Rebecca Martin, OTR/L, OTD

9:30 - 10:15am

Virtual Reality Interventions: PT and SLP
Collaboration

10:15 - 10:30am - *Break*

10:30 - 11:15am

Innovative Use of Overground Robotics in
Outpatient Rehab: Driving Intensity with
Challenging Populations

11:15 - 11:45am

Reinventing Rehabilitation: The Role of Body
Weight Support in Occupational Therapy

11:45am - 1pm - *Lunch provided*

Platform Discussions:

Technology To Go: Utilizing Assistive Technologies
From the Hospital to Home & Technology Use in
the Non-Neurological Patient Populations

1 - 1:45pm

Making Intensity Visible: Leveraging Outcome
Data to Create a Culture of Intensity

1:45 - 2pm - Break

2 - 4:30pm

PT/OT Technology Demonstration

4:30 - 5pm - *Wrap Up*

SPEECH LANGUAGE PATHOLOGY AGENDA

8 - 8:30am

Registration and Welcome

8:30 - 9:30am

Keynote Sponsored by Bioness- Translating
Neuromodulation for Clinical Use
Speaker: Rebecca Martin, OTR/L, OTD

9:30 - 10:15 am

Virtual Reality Interventions: PT and SLP
Collaboration

10:15 - 10:30 am - *Break*

10:30 - 11:15am

Take a Deep Breath: The Role of RMST in
Improving Functional Outcomes

11:15 - 11:45am

SLP Technology Demonstration

11:45am - 1pm - *Lunch provided*

Platform Discussions:

Technology To Go: Utilizing Assistive Technologies
From the Hospital to Home & Technology Use in
the Non-Neurological Patient Populations

1 - 1:45pm

Making Intensity Visible: Leveraging Outcome
Data to Create a Culture of Intensity

1:45 - 2pm - Break

2 - 2:30pm

SLP Technology Demonstration

2:30 - 3pm - *Wrap Up*

PRESENTER BIOGRAPHIES:

Keynote Sponsored by Bioness - Translating Neuromodulation for Clinical Use



KEYNOTE:

Rebecca Martin, OTR/L, OTD

Dr. Rebecca Martin is the Manager of Clinical Research and Education at the International Center for Spinal Cord Injury (ICSCI) at Kennedy Krieger Institute and an assistant professor at The Johns Hopkins University School of Medicine in the Department of Physical Medicine and Rehabilitation.

Dr. Martin received her Bachelors of Science in Occupational Therapy from Boston University and her Occupational Therapy Doctorate from Rocky Mountain University of Allied Health Professions.

Dr. Martin joined Kennedy Krieger in 2005 as a Senior Occupational Therapist in the International Center for Spinal Cord Injury. Since 2010, Dr. Martin has been the Manager of Clinical Research and Education and is responsible for program development, staff training, and oversight of the clinical research program. Dr. Martin speaks nationally on topics related to Activity-Based Rehabilitation; she has taught many continuing education courses for rehabilitation professionals in the areas of neurological pathology, rehabilitation, and research. She has been the principal investigator and co-investigator for grants from the Paralyzed Veterans of America Education Foundation and Department of Defense to develop, promote, and disseminate an activity-based restorative therapy training program and curriculum.

Dr. Martin is the founder and primary investigator at Kennedy Krieger's Neurorehabilitation and Recovery Lab, which focuses on the study of clinically meaningful interventions poised for rapid translation to practice.

Virtual Reality Interventions: PT and SLP Collaboration

Kacey Burrus, PT, DPT attended Ohio State for Physical Therapy school with a specialization in Global Health and was involved with the student-run physical therapy pro bono clinic. After graduating from Ohio State in 2022, she moved to Richmond, Virginia and started working with Sheltering Arms Institute. She participated in the Neurologic Residency Program through VCU-Sheltering Arms Institute and is currently working with both neurologic and orthopedic clients at the Hanover outpatient clinic. Kacey enjoys working with these populations as it allows her to help patients with a variety of diagnoses and impairments. Kacey is also interested in pain neuroscience education and serve as the PNE Ambassador for the Hanover clinic.

Alyssa Dillard, MS, CCC-SLP, CBIS is a dedicated and compassionate Speech Language Pathologist with over a decade of experience in the field. Since 2017, Alyssa has been a part of Sheltering Arms Institute and providing comprehensive speech and language services, specializing and brain injury rehabilitation as a Certified Brain Injury Specialist, reflecting advanced knowledge and commitment to delivering high-quality care to individuals affected by brain injury. Alyssa earned a Bachelor of Science in Communication Sciences and Disorders from James Madison University in 2011, followed by a Master of Science in Speech Language Pathology in 2013. Throughout her career, Alyssa has worked with a diverse range of patients, helping them to achieve meaningful improvements in communication, cognition and quality of life, utilizing continued professional development and staying at the forefront of research and best practices in speech language pathology.

Preeti Verma, MS, PT, Certified Vestibular Specialist is an outpatient therapist at Sheltering Arms in Richmond, VA. Her Clinical practice is focused on treating patients with vestibular and balance disorders. She is one of the principal therapists involved in the development and implementation of the vestibular disorders program and in the writing of a clinical practice guideline for treatment of patients with vestibular and balance disorders. She is also considered a “VR Champion” for the use of the virtual reality based Virtualis system at Sheltering Arms to treat patients with vestibular disorders.

Preeti has previously worked at HealthSouth Rehab Hospital in Richmond VA and in Morgantown WV as well as Virginia Commonwealth University Health Systems. She has also worked at WVU School of Physical Therapy, Morgantown, WV as an Adjunct Professor while teaching physical therapy students the “Rehabilitation” course with emphasis on Vestibular Disorders, Traumatic Brain Injury and Spinal Cord Injury.

Preeti graduated with a BS in Physical Therapy from GS Medical College in Mumbai, India. She obtained her Advanced Masters in Physical Therapy from the Virginia Commonwealth University, Virginia. She has attained her competency certification in “Vestibular Rehabilitation” through the APTA at Emory University Atlanta, Ga.

Innovative Use of Overground Robotics in Outpatient Rehab: Driving Intensity with Challenging Populations

Christina Smith, PT, DPT, Board Certified Neurologic Clinical Specialist, has worked with Sheltering Arms and Sheltering Arms Institute since 2016. She specializes in neurological disorders including stroke, spinal cord injury and Parkinson’s disease. Christina is a level 2 Ekso certified clinician and holds Ekso Indego Trainer Clinic and Trainer Personal certifications. She currently participates as a mentor for the VCU/SAI Neurologic Clinical Specialist Residency program and is a manager of therapy services for the SAI Bon Air Center. Christina attended Virginia Commonwealth University where she received her Doctor of Physical Therapy degree.

Take a Deep Breath: The Role of RMST in Improving Functional Outcomes

Ali Holmes, M.S. CCC-SLP, CBIS, BCS-S is the SLP Advisor for Sheltering Arms Institute. As a member of the clinical science team, she supports the SLP department in mentoring and student programs, knowledge translation, clinical practice guideline use and program development. Prior to that position, she was Speech Pathology Manager at Encompass Health. She has provided diagnostic and therapeutic services to inpatient, day and outpatient adult populations, as well as managed a team of speech pathologists. In her career, she has developed outpatient voice and swallowing programs, and other specialty programs in stroke rehabilitation, pulmonary rehabilitation, tracheostomy management and Parkinson’s disease. Ali has presented to groups throughout the region and at the statewide and national conferences for Speech Pathology as well as rehab medicine. Ali graduated with BS and MS degrees from James Madison University and earned her board certification in swallowing and swallowing disorders in 2024.

Reinventing Rehabilitation: The Role of Body Weight Support in Occupational Therapy

Madeline Runyen, OTR/L, CSRS is the Upper Extremity Recovery Specialist at Sheltering Arms Institute in Richmond Virginia. She received her Masters in Occupational Therapy at Thomas Jefferson University before completing her neurologic residency at The Ohio State University. She enjoys working with patients across the continuum of care, developing hospital-based programs, and implementing evidence-based practice.

Caitlin Wright, MOT, OTR/L, BCPR, CBIS is the Occupational Therapy Advisor at Sheltering Arms Institute. As a member of the clinical science team, she supports the OT department in mentoring and student programs, knowledge translation, clinical practice guideline development and use, program development, and use of evidence-based practice. Prior to that position, she was a full-time clinician in inpatient and outpatient rehabilitation. She has presented at multiple national and state conferences. Caitlin is a graduate of James Madison University.

Technology To Go: Utilizing Assistive Technologies From the Hospital to Home

Amber Walter, PT, DPT, NCS has been a physical therapist since 2007 and currently holds the position of Clinical Science Director at Sheltering Arms Institute where her primary responsibilities include oversight of knowledge translation and clinically-oriented research in a 114-bed freestanding inpatient rehabilitation hospital and 8 outpatient clinics. She has extensive clinical and mentoring experience as a board-certified neurologic clinical specialist in both inpatient and outpatient settings at Sheltering Arms, and she received the Clinical Excellence Award in Neurologic Physical Therapy in 2018 from the Academy of Neurologic Physical Therapy. Amber's previous research experience has been related to locomotor rehabilitation including the use of exoskeletons for persons with spinal cord injuries and stroke and serving as an article review for an Academy of Neurologic Physical Therapy CPG on locomotion. She has presented on rehabilitation outcome measurement, clinical practice guideline implementation, rehabilitation technology, and knowledge translation. She holds a bachelor's degree in psychology from Virginia Commonwealth University, and she graduated with a Doctorate in Physical Therapy from Old Dominion University.

Technology Use in the Non-Neurological Patient Populations

Ali Holmes, M.S. CCC-SLP, CBIS, BCS-S is the SLP Advisor for Sheltering Arms Institute. As a member of the clinical science team, she supports the SLP department in mentoring and student programs, knowledge translation, clinical practice guideline use and program development. Prior to that position, she was Speech Pathology Manager at Encompass Health. She has provided diagnostic and therapeutic services to inpatient, day and outpatient adult populations, as well as managed a team of speech pathologists. In her career, she has developed outpatient voice and swallowing programs, and other specialty programs in stroke rehabilitation, pulmonary rehabilitation, tracheostomy management and Parkinson's disease. Ali has presented to groups throughout the region and at the statewide and national conferences for Speech Pathology as well as rehab medicine. Ali graduated with BS and MS degrees from James Madison University and earned her board certification in swallowing and swallowing disorders in 2024.

William Riddick, PT, DPT, GCS is an outpatient physical therapist and the Outpatient Clinical Leader for the multispecialty program at Sheltering Arms Institute (SAI). He is passionate about serving a diverse patient population, with a specialized focus on limb amputations and geriatrics.

In addition to his clinical role at SAI, Will serves as co-chair of the Amputation Care Special Interest Group within the American Physical Therapy Association (APTA). He is also an adjunct faculty member in the Program for Physical Therapy at Old Dominion University and a regular guest lecturer at Virginia Commonwealth University. Will is actively involved in continuing education development through the Federal Section of the APTA and has previously published research and case studies on the physical therapy management of limb loss and limb difference.

At SAI, Will leads an 8-week collaborative rehabilitation technology course for third-year physical therapy students from Virginia Commonwealth University. The course covers the full spectrum of rehabilitation technologies utilized across multiple disciplines at SAI. His clinical practice incorporates many of these technologies in both evaluative and intervention roles to benefit a wide range of patients.

Making Intensity Visible: Leveraging Outcome Data to Create a Culture of Intensity

Zachary Crump, PT, DPT, NCS has served as a Physical Therapist at Sheltering Arms for the past 13 years. He graduated from Old Dominion University with his Doctor of Physical Therapy in 2010 and became board certified in neurologic physical therapy in 2015. He currently serves as the Locomotor Specialist at the Sheltering Arms Institute- a novel role that involves transdisciplinary collaboration, extra practice coordination, advanced rehab technology coaching, and research creation. In 2021 he received the APTA Virginia John L. Echternach Research Award for top researcher in the state of Virginia. His research involvement includes extra functional electrical stimulation cycling for persons with stroke, heart rate monitor implementation during inpatient rehabilitation, and cardiovascular intensity for walking recovery for persons with sub-acute stroke and spinal cord injury. He lives in Richmond, Virginia with his wonderful wife and 4 amazing children.

Brittnay Grimm, PT, DPT, CBIS serves as a Clinical Lead Physical Therapist on the Brain Injury unit at Sheltering Arms Institute in Richmond, VA. Brittnay received her Doctorate of Physical Therapy from the University of the Sciences in Philadelphia, PA in 2019. From there, she has provided inpatient therapy to a variety of patients with neurological diagnoses with special interest in locomotor training. Her current research pursuits include using advanced rehabilitation technology to optimize function during locomotor recovery while integrating heart rate monitoring for increasing intensity and maximizing outcomes.