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# The Power of Patient Centered Outcomes in Rehabilitation Learning Health Systems

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## **Jason Beneciuk, PT, DPT, PhD, MPH**

Dr. Beneciuk is a Research Associate Professor in the Department of Physical Therapy at the University of Florida and Clinical Research Scientist at Brooks Rehabilitation. He has been supported by the National Institutes of Health, the Patient-Centered Outcomes Research Institute, the Center on Health Services Training and Research, and the Foundation for Physical Therapy Research. His research interests focus on musculoskeletal pain, psychologically informed physical therapy, implementation science, and health services research. He teaches evidence-based practice in the entry-level Doctor of Physical Therapy program at the University of Florida. Dr. Beneciuk currently serves as an Associate Editor for Physical Therapy and Rehabilitation Journal (PTJ) and International Editorial Review Board member for the Journal of Orthopaedic and Sports Physical Therapy (JOSPT). In 2021, Dr. Beneciuk was a recipient of the Eugene Michels New Investigator Award by the American Physical Therapy Association. Dr. Beneciuk is a current CoHSTAR Faculty Fellow.

## **Julia Carpenter, MA, CCC-SLP, BC-ANCDS**

Dr. Carpenter is the Clinical Practice Leader for Speech-Language Pathology and a Research Speech-Language Pathologist in the Center for Aphasia Research and Treatment at the Shirley Ryan AbilityLab. Julia works with speech-language pathologists across the system of care to implement evidence-based assessments and interventions, works on various research projects, and provides interventions in the organization's Intensive Comprehensive Aphasia Program. She has worked with speech-language pathologists and interdisciplinary teams on implementation and use of clinical outcome measures, including both performance-based and patient-reported measures in various levels of care. She co-leads the American Congress of Rehabilitation Medicine (ACRM)'s Rehabilitation Treatment Specification System (RTSS) Electronic Health Record Taskforce.

## **Margaret French, PT, DPT, PhD, NCS**

Dr. French is an Assistant Professor in the Department of Physical Therapy and Athletic Training at University of Utah. She received her DPT degree at Emory University and her PhD in Biomechanics and Movement Science at the University of Delaware. Dr. French's research leverages learning health systems to understand variability in outcomes and healthcare utilization after stroke in order to improve the value of post-stroke rehabilitation. In this line of

work, she combines her expertise in informatics, neurorehabilitation, and data science to address challenges facing clinical teams and our healthcare system.

**Dr. Patricia Grady-Dominguez, PhD, OTR/L**

Dr. Grady-Dominguez is an occupational therapist and rehabilitation researcher specializing in measure development and validation. After earning her PhD from Colorado State University in 2022, Patricia began a postdoctoral fellowship where she has focused on integrating her passion for measurement with a vulnerable population – children with disorders of consciousness after severe brain injury. Patricia is committed to leveraging assessment data to enhance rehabilitation outcomes, emphasizing the importance of data transparency and comprehensibility for clinicians, patients, and families. Patricia’s work also seeks to understand how nuanced assessment data and insights into recovery trajectories can influence clinical decision-making.

**J. Leigh Harris, PT, DPT**

Dr. Harris is a Physical Therapist and Manager of Clinical Quality and Education with AdventHealth Sports Med and Rehab in the Central, East & West Florida Division. She received her Bachelor of Science in Physical Therapy from the University of Central Florida in 1997, and her transitional Doctorate degree in 2011 through Arcadia University. Leigh has practiced in Orthopedic and Sports Medicine patient care settings for more than 20 years. She is a past presenter at CSM and a member of APTA’s Health Systems Network (formerly, Council for Health Systems). Leigh is an integral member of AdventHealth Sports Med & Rehab’s Clinical Leadership Operations team, leader of their Clinical Ambassador Program, and is an administrative leader for outcomes, clinical quality, research, and clinical education for AdventHealth Sports Med & Rehab. Leigh is passionate and focused on driving best practice implementation, standardization of care, and utilization of outcomes data to improve quality of care in a large health system.

**Erin Holve, PhD, MPP, MPH**

Dr. Holve serves as Chief Officer, Research Infrastructure and Innovation, at the Patient-Centered Outcomes Research Institute (PCORI). In this role Erin executes strategies to advance patient-centered comparative clinical effectiveness research methods and study design; develops and leads a team that will deliver on PCORI’s vision of a large, efficient, and patient-centered clinical data research infrastructure; and leads strategies to advance training and knowledge for patient-centered outcomes research. Previously, Erin was Director of the Health Care Reform and Innovation Administration within DC Medicaid, where she was responsible for creating, implementing, and testing new delivery systems and payment models with the goal of improving care, outcomes, health equity, and value. Erin also chaired the DC Health Information Exchange Policy Board and the District’s policy and investments in digital health. She has more than twenty years of experience in health policy and health services research and is a [widely published and cited author](#) of reports and peer-reviewed articles on health system design, health insurance access, as well as health IT. Dr. Holve holds a Ph.D. in health services research from the Johns Hopkins School of Public Health and master’s degrees in public health and public policy from the University of California, Berkeley.

**Maggie Horn, PT, MPH, PhD**

Dr. Horn is an Assistant Professor in the Department of Orthopaedic Surgery, Division of Doctor of Physical Therapy, with a secondary appointment in the Department of Population Health Sciences at Duke University. She is clinically trained as a Physical Therapist and scientifically trained as a Rehabilitation Scientist and Epidemiologist from the University of Florida. Her research program focuses on understanding the multifactorial experience in patients with musculoskeletal pain by examining patient, provider, and health system-level outcomes. She has expertise in leveraging the electronic health records (EHR) and informatics principles to undertake large scale, embedded clinical research.

**Stephen Hunter PT, DPT, OCS, FAPTA**

Dr. Hunter received his Bachelor of Arts in physical therapy from University of Utah in 1984, and his clinical doctorate in 2008. He is board certified in orthopedic physical therapy. Currently, Stephen continues to treat patients and is the director of Internal Process Control for Intermountain's rehabilitation services. He leads a team of 4 internal process control coordinators who work to establish a culture of quality and standardize evidence-based care across all rehabilitation disciplines and services. He is the past president of NARA (National Association of Rehabilitation Providers and Agencies). He supports research efforts including data collection and clinical implementation. Examples include investigations on Total Knee Arthroplasty (TKA) and low back pain (LBP) resulting in recent publications (Minick 2022, Caplin 2022) and three randomized LBP trials (Brennan 2006, Fritz 2014, Delitto 2020). He was the lead clinical author for a review publication developing a care guideline for TKA for physical therapists (Jette 2020).

**Joshua Johnson, PT, DPT, PhD**

Dr. Johnson is a physical therapist researcher with appointments at the Duke University School of Medicine as an Assistant Professor in the Division of Physical Therapy—Department of Orthopaedic Surgery—and the Department of Population Health Sciences. He is also the Clinical Research Lead for the Duke University Health System Department of Rehabilitation and a member of the Duke Clinical Research Institute. His work seeks to better understand and improve rehabilitation care delivery using the learning health system framework, with overlap between data science and implementation science. Prior to joining the faculty at Duke in January 2024, Dr. Johnson was the Director of PM&R Outcomes Research at Cleveland Clinic. His PhD training was at the University of Utah. He holds a Doctor of Physical Therapy degree from Arcadia University and Bachelors degree in Athletic Training from Brigham Young University.

**Michael P. Johnson, PT, PhD**

Dr. Johnson is President of the Home Health Practice at BAYADA Home Health Care in Moorestown, NJ. The Home Health Practice, one of eight (8) specialty practices at BAYADA, is comprised of over 100 offices in 22 states that provide care to nearly 29,000 clients weekly through a multidisciplinary team approach delivered by over 3,500 clinicians and staff. The

practice focuses primarily on geriatric home care services under the Medicare Program. Starting in 2024, Dr. Johnson accepted a new role at BAYADA as Chief Researcher, Home Care Innovation where he is responsible for building an infrastructure that will support collaborative research efforts across all eight (8) specialty practices, partnering with academic researchers and policy makers, to advance the quality and accessibility of care in the home.

Dr. Johnson has served as a member of the National Advisory Council for the Agency for Healthcare Research and Quality (AHRQ), a Steering Group member for the AQA Alliance, and as a consultant on the development and testing of quality measurements for use in the Physician Quality Reporting System (PQRS). He has also served in multiple elected and appointed roles within the American Physical Therapy Association (APTA) over the past 30 years, including as a member of the Scientific Advisory Panel (SAP) for the Center on Health Services Training and Research (CoHSTAR).

#### **Lisa Juckett, PhD, OTR/L**

Dr. Juckett is an Associate Professor Occupational Therapy in the School of Health and Rehabilitation Sciences at The Ohio State University. Dr. Juckett's research bridges the gap between empirical discoveries and the use of these discoveries in real-world practice settings. Specifically, Dr. Juckett's research examines the factors and strategies that influence evidence-based practice adoption, primarily in organizations that serve older adults. Active involvement of community and clinical partners is a hallmark characteristic of Dr. Juckett's research, resulting in collaborations with local, regional, and national aging service organizations – entities that provide immensely valuable care to the older adult community.

#### **Claire Z. Kalpakjian, PhD, MS**

Dr. Kalpakjian is an Associate Professor and Associate Chair for Research in the Department of Physical Medicine and Rehabilitation at the University of Michigan Medical School (UM PM&R). She is a biopsychosocial scientist with a clinical background in rehabilitation psychology and 30 years of experience of research and service to diverse populations of persons with disabilities. Dr. Kalpakjian is the faculty co-lead of the UM PM&R Learning Health System, working collaboratively with diverse clinical teams to transform into learning communities by evaluating their current practices, engaging in consensus building around changing and standardizing those practices, and selecting clinically relevant patient-reported outcome measures to complement clinical evaluation.

#### **David Kohns DO, PT**

Dr. Kohns completed both a Pain Medicine Fellowship and a Physical Medicine and Rehabilitation Residency at the University of Michigan, prior to joining the Michigan Medicine Spine Program. His research interests are in the areas of nociplastic (widespread) pain and health system approaches to the management of patients with chronic pain. Dr. Kohns is the physician lead for the Michigan Medicine Spine Program's Learning Health System.

**Nik Koscielniak, Ph.D., MPH, MSOT, OTR/L**

Dr. Koscielniak is a Program Officer at the Patient-Centered Outcomes Research Institute (PCORI) in Research Infrastructure and Innovation. He manages a portfolio of research and infrastructure awards related to PCORnet®, the National Patient-Centered Clinical Research Network. Dr. Koscielniak has studied clinical data infrastructures and implementation science in support of a national integrated Learning Health System (LHS) and supports efforts in this space at PCORI. Dr. Koscielniak received his Ph.D. in Health Infrastructures and Learning Systems from the University of Michigan in the Department of Learning Health Sciences where he trained as an implementation scientist and studied determinants of clinical data practices and missingness in health systems. His previous research focused on building Learning Health System infrastructure for pediatric specialty health services and care transitions. He has published in JAMIA Open, Physical Therapy, and Learning Health Systems. Dr. Koscielniak is also a licensed and registered Occupational Therapist, holds a BA in Anthropology from the University of Missouri, and a MSOT and MPH from Washington University in St. Louis.

**Allan J. Kozlowski, Ph.D., B.Sc (PT)**

Dr. Kozlowski is currently an independent consultant in rehabilitation services research and implementation. Dr. Kozlowski received his B.Sc. in physical therapy in 1991 and his PhD in Rehabilitation Sciences in 2010, both from the University of British Columbia. He practiced as a physical therapist and rehabilitation manager in work disability prevention before completing his doctorate in Rehabilitation Sciences. Dr. Kozlowski completed his postdoctoral fellowship at the Center for Rehabilitation Outcomes Research at Rehabilitation Institute of Chicago and the Center for Healthcare Studies at Northwestern University, in which he constructed individual growth models for FIM Instrument scores for persons with spinal cord injuries and traumatic brain injuries. He has also held fixed-term faculty positions in the Department of Rehabilitation Medicine at the Icahn School of Medicine at Mount Sinai, and most recently in the Department of Epidemiology and Biostatistics at Michigan State University – College of Human Medicine. In this latter position, Dr. Kozlowski also served as the Director of Outcomes Research at the John F. Butzer Center for Research & Innovation, Mary Free Bed Rehabilitation Hospital. Dr. Kozlowski has authored more than 35 articles on topics including modeling of rehabilitation outcomes as individual trajectories of change, psychometric properties of measurement instruments, and exoskeleton-assisted walking. He has also instructed courses in longitudinal modeling, measurement in clinical practice, and physical therapy clinical skills.

**Mindi R. Manes, PhD**

Dr. Manes is Director of the Brooks Rehabilitation Center for Outcomes Analytics and Research (COAR), a department dedicated to advancing evidence-based and data-driven methods to support improved rehabilitation care and outcomes at Brooks Rehabilitation. Dr. Manes' research centers on the integration of health informatics, data science, and research methodologies to enhance the Brooks' Learning Health System (LHS). Specifically, her focus is on examining health care utilization, quality, disparities, and outcomes as patients' navigate through the post-acute care continuum. Prior to joining the research team, Dr. Manes managed the analytics department within the Brooks Center for Data Solutions. In this role, Dr. Manes

partnered in development of data infrastructure and led the implementation of statistical and data visualization software across the system. In 2024, Dr. Manes was selected into the first Learning Health Systems Training to Improve Disability and Chronic Condition Care (LeaHD) LHS Scientist Program cohort. As a LHS Scientist, Dr. Manes is partnered with Johns Hopkins University, focusing on Precision Rehabilitation: Using high information content measurement to personalize rehabilitation interventions across the healthcare continuum.

**Tim Marshall, Ph.D., MHA, MS, ACSM/ACS-CET**

Dr. Marshall is the Senior Director, Analytics & Insights for Ivy Rehab Network, which consists of over 560+ clinics across 15+ states. In this role, Dr. Marshall leads a team of data analysts and data scientists and provides strategic guidance and analytic support across Ivy's different operational and clinical teams to improve clinical operations and patient outcomes. Dr. Marshall earned his PhD in Health Science, specializing in Movement Science, and a Masters of Healthcare Administration from Seton Hall University. Dr. Marshall also earned a Masters of Science in Exercise Science degree from Kean

**Linda Resnik, PT, PhD, FAPTA**

Dr. Resnik is a Professor in the Department of Health Services, Policy and Practice, Brown University and a VA RR&D funded Research Career Scientist at the Providence VA Medical Center. Since 2004, Dr. Resnik has worked to educate physical therapists on the importance of HSR and the methodologies for use in observational study designs and quality improvement and through publications and presentations at National meetings. She has led the Leadership and Administration core of the Center on Health Services Research and Training (CoHSTAR) since its inception in 2015. Dr Resnik also led a VA HSR&D funded initiative to develop a Guidebook for collaborative human subjects research activities across the VA and Department of Defense (DoD), and was first author of the Guidebook and its revision bringing together a diverse group stakeholders from across government agencies to create a comprehensive Guide to research administration and conduct across complex environments.

**Ryan Roemmich, PhD**

Dr. Roemmich is an Assistant Professor in the Center for Movement Studies at the Kennedy Krieger Institute and in the Department of Physical Medicine and Rehabilitation at the Johns Hopkins University School of Medicine. He is a human movement scientist interested in rehabilitation of persons with neurologic damage and/or disease. His educational background spans engineering, biomechanics, and neuroscience. He and his laboratory focus on research following three central themes: 1) facilitating precision rehabilitation by combining electronic health records and real-world data, 2) developing clinical applications of computer vision technologies, and 3) developing new technologies and approaches for improving gait rehabilitation.

**Chloe Slocum, MD, MPH**

Dr. Slocum is a practicing spinal cord injury physician, Associate Chair for Quality and Assistant Professor at Harvard Medical School's Department of Physical Medicine and Rehabilitation, and Director of Health Policy at Mass General Brigham Spaulding Rehabilitation Network. Her

clinical work centers around optimizing long-term health for individuals with paralysis and her research is focused on assessing functional outcomes following rehabilitation, access to high-quality primary and specialty care, and systems of health care delivery across the post-acute care continuum for individuals with disabilities. Dr. Slocum has published research on functional outcomes following traumatic spinal cord injury and has lectured nationally on topics ranging from spinal cord injury outcomes to health policy and payment reform to clinician well-being.

**Brocha Z. Stern, PhD, OTR, CHT**

Dr. Stern is an Assistant Professor in the Department of Orthopaedic Surgery and the Institute for Healthcare Delivery Science in the Department of Population Health Science and Policy at the Icahn School of Medicine at Mount Sinai. She is a health services researcher and a 2023-2024 LeaRRn Scholar at Intermountain Health. She has a particular interest in clinical applications of patient-reported outcome measures to support high-quality, person-centered, and equitable care.

**Mary Stilphen PT, DPT**

Dr. Stilphen is the Senior Director for Cleveland Clinic Rehabilitation and Sports Therapy. Over the past 14 years, she led the integration and consolidation of rehabilitation services across a health system consisting of 11 hospitals, 70 outpatient therapy centers, and over 1,400 therapy professionals. This re-engineering project included the successful development of a unified electronic documentation, productivity, compliance and billing platforms. She led the effort to establish a system-wide standardized approach to the collection of patient reported outcome measures. Featured in this effort was the development of “6 Clicks” a patient reported outcome tool that is now widely used in acute hospital settings across the country.

**Daniel Young, PT, DPT, PhD**

Dr. Young completed his Doctor of Physical Therapy training at Creighton University in 2002 and his PhD in Public Health at the University of Nevada, Las Vegas in 2014. He is currently an Associate Professor in the Department of Physical Therapy at the University of Nevada, Las Vegas and holds an appointment as an Adjunct Associate Professor in the Johns Hopkins School of Medicine, Department of Physical Medicine and Rehabilitation where collaborates with the Johns Hopkins Activity and Mobility Promotion (JH-AMP) program. His research aims to combat the immobility harm experienced by patients in the hospital through better understanding of the access to, outcomes from, and costs associated with inpatient rehabilitation efforts.