 **Schedule**

 2:00 pm – Poster Hall opens

 6:00 pm – Interactive time with presenters

 7:00 pm – Evidence-based presentations

Research Day Evidence-based Presentations

**The Use of a Clinical Practice Guideline to More Effectively Treat Vestibular Hypofunction**

Vestibular hypofunction may occur unilaterally or bilaterally. Unilateral vestibular hypofunction is most often caused by vestibular neuritis or labyrinthitis. The primary symptoms associated with unilateral hypofunction are vertigo, gaze instability, and postural instability. Although the cause of bilateral vestibular hypofunction may be idiopathic, the use of ototoxic medications can result in this disorder. Spinning vertigo is seldom present with bilateral hypofunction. However, it often results in oscillopsia and severe balance problems. PURPOSE: The primary purpose of this presentation is to provide participants with the most current evidence-based interventions for treating vestibular hypofunction.

***Bonni Kinne, PT, MSPT, DHSc*** *received a bachelor’s degree in biomedical sciences from Western Michigan University in 1984, a master’s degree in exercise science from Western Michigan University in 1985, a master’s degree in physical therapy from Grand Valley State University in 1994, and a doctoral degree in health sciences from A.T. Still University in 2015. She has been teaching continuing education courses around the country since 1996. Since that time, she has developed 8 different vestibular rehabilitation courses. In addition, she has given multiple peer-reviewed platform and poster presentations at the state, national, and international levels. She became a member of the Vestibular Disorders Association in 1994 and became nationally certified in vestibular rehabilitation in 2007. She has developed a hospital-based vestibular rehabilitation program and has completed several vestibular rehabilitation research projects. She works full-time as an associate professor at Grand Valley State University.*

**Promoting High-Quality Evidence-Based Practice In Rare Neurodegenerative Diseases: Huntington’s Disease As A Model**

Clinical decision making regarding physical therapy (PT) treatment for individuals with rare neurodegenerative diseases can be challenging given the paucity of available evidence. Although it is common for clinical practice guidelines to draw on results from large-scale randomized controlled trials to make recommendations, consideration of a wider range of designs is needed in rare diseases. Without this consideration, it is likely that recommendations for rare diseases will be set back while the necessary evidence to support clinical practice is generated.

PURPOSE: This course will focus on Huntington’s disease (HD), which is marked by motor, cognitive and psychological impairments, and shares many similarities with other neurodegenerative diseases. HD will be used as an illustrative example of the need for the development and application of clinical guidelines for physical therapy assessment and treatment of individuals with rare diseases, for which research is often limited.

***Nora Fritz, PT, DPT, PhD, NCS*** *is an Assistant Professor of Physical Therapy and Neurology at Wayne State University.  She directs the Neuroimaging and Neurorehabilitation Laboratory and is interested in developing novel interventions to improve mobility and function in persons with Neurologic disorders. She is committed to the development of Clinical Practice Guidelines, and has contributed to the recently published Locomotor CPG, led an international effort to develop a CPG for Exercise in Huntington's Disease which was published in 2020 and is currently working with the Academy of Neurologic Physical Therapy to develop a CPG for Balance and Falls in Neurologic populations.*

**Lumbar Disc Degeneration: The Further We Look Back, The Further Forward We Can See**

Lumbar disc degeneration (LDD) is a common orthopedic condition with known biomechanical and physiologic changes. This presentation will consider whether or not current orthopedic PT interventions are reflective of the scientifically proven byproducts of LDD. PURPOSE:The purposes of this presentation are to review the historical bench science research on discogenic instability, the role of the disc as a pain generator, the current science regarding the combined biomechanical and physiologic phases of LDD, and relate the bench science to PT practice.

** ***Doug Creighton, PT, DPT, MS, OCS, FAAOMPT holds certifications in two different systems of manual therapy. He has been in clinical practice since 1985, and a full-time faculty member at Oakland University since 1998. His teaching responsibilities are spread across both the entry-level and post-profession programs. He****teaches across both the basic science and orthopedic curriculum including musculoskeletal Imaging, Arthrology, a cadaver-based anatomy course, which looks at joint surface shape and orientation, capsular anatomy, and in-depth exploration of degenerative changes including chondral defects, arthritic and spondylotic hypertrophy, and degenerative disc narrowing. He is also responsible for an orthopedic Examination and Therapeutic Exercise course. His post-professional teaching occurs in Oakland University's orthopedic manual physical therapy program where he, John Krauss, and Melodie Kondratek provide both didactic and residency-based education for their students. Dr. Creighton has developed an orthopedic examination textbook and a therapeutic exercise textbook. He has published work related to radiological confirmation of lumbar foraminal opening with therapeutic positioning, diagnostic ultrasound imaging of vertebral artery blood flow during upper and lower cervical manual therapy interventions, and various levels of  research which has looked at both manual and exercise intervention for orthopedic pain and motion impairments in patients with orthopedic degenerative spinal and extremity conditions*.