

Neuromodulation – Community Integration and Continuum of Care

Course ID 87

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Neuromodulatory strategies have demonstrated significant benefits in the recovery of motor and autonomic function in individuals with chronic spinal cord injury (SCI). The number of studies using transcutaneous and implantable neuromodulatory technologies has grown in the past decade. Reported outcomes includes recovery of voluntary movement, standing, stepping, stabilization of blood pressure regulation and improvements in bladder function following chronic SCI. However, most of these transformative improvements are only present when spinal cord stimulation is active, posing a challenge once individuals complete the intervention in-lab phase of research studies. Further, the publicity around potential multi-systems benefits increases the desire of research participants to request access to additional parameters at the conclusion of their research interventions. This panel will focus on key areas of support needed for the SCI community following participation in neuromodulation studies. Dr. Harkema will discuss strategies to move from spinal cord epidural stimulation proof of principle studies to intersystem studies providing a basis to understand integration of multiple target effect while supporting the SCI community to expand single target use of epidural stimulation. Dr. Morse will discuss management of SCI participants post spinal cord epidural stimulation implantation and need to develop follow-up strategies that support the SCI community after completion of research studies. Ms. Shogren will address key lessons learned from the translation of the NeuroRecovery Network from outpatient hospital setting to community fitness and wellness centers. She will discuss potential opportunities for activity-based training rehabilitation oriented community fitness and wellness centers to support SCI research participants in their home and community integration goals.

Learning Objective 1 Discuss the premises of multi-target integration for neuromodulatory therapies in individuals with chronic SCI.

Learning Objective 2 Discuss the role of physiatrists and the therapy team in the continuum of care for individuals with SCI post neuromodulation study participation.

Learning Objective 3 Discuss pros and cons of community integration and therapeutic integration of neuromodulation technology post study participation.