B10: Solution to Complex Drive Systems with the ALS Population

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Learning objectives:

1. Discuss specific features and two situations when modified proportional controls are indicated for ALS patients based on the disease progression.
2. Discuss specific features and two situations when non-traditional drive controls are indicated for ALS patients based on the disease progression.
3. Discuss specific features and two situations when non-proportional controls are indicated for ALS patients based on the disease progression.

Session description:

Amyotrophic lateral sclerosis (ALS), also known as Lou Gehrig's Disease, is a progressive neurodegenerative disease involving loss of both upper and lower motor neurons resulting in limb muscle weakness, muscle atrophy, speech and swallowing difficulties and respiratory compromise. The progression of symptoms can be rapid, average, or slow. Life expectancy from symptom onset can range widely but is typically referenced to be 3-5 years and there is no known cure for ALS at this time.

The management of patients with ALS has changed and improved dramatically in the past 20 years. Power mobility plays a large role in the current care for these patients. When choosing the appropriate power mobility device and drive controls needs to be carefully evaluated and chosen based on the patient's abilities, disabilities, rate of disease progression, and anticipated changes in the future.

Several ALS patients will be presented in this course - each presenting with varied symptoms, level of function, abilities and rate of progression. Specifics regarding complex drive systems for the different stages of ALS will be discussed.

Content references:

1. Reference 1: Radunovic, A., Mitsumoto, H., & Leigh, P.N. Lancet (2007). Clinical care of patients with amyotrophic lateral sclerosis. Neuro, 6, 913-25.
2. Gordan, P.H. (2013). Amyotrophic lateral sclerosis: An Update for 2013 Clinical Features, Pathophysiology, Management and Therapeutic Trials. Aging and Disease, 4, 296-310.
3. Bello-Haas, V., Kloos, A.D., and Mitsumoto, H. (1998). Physical Therapy for a Patient Through Six Stages of Amyotrophic Lateral Sclerosis. Physical Therapy, 78, 1312-1324.