Integration of Physical Activity Measures into Clinical Practice for Children and Youth with Cerebral Palsy

**Purpose:** This breakfast seminar will describe two successful programs that measure mobility performance utilizing portable accelerometry and patient report tools.

**Learning Objectives**
With the knowledge gained from this breakfast session participants will
1. Gain an understanding of typical walking activity (WA) levels in children and youth with cerebral palsy as compared to typically developing youth (TDY)
2. Describe differences in WA for youth with CP by age groups and disability levels.
3. Develop knowledge-based skills in methods to measure and interpret (WA) for children and youth with cerebral palsy.
4. Understand the resources necessary to utilize activity monitoring in clinical practice.

**Format**

**Background:** (5 minutes) Review existing literature on walking activity (WA) in youth with CP as compared to typically developing youth (TDY) and it's association with health.

**Methods:** (15 minutes) Describe the clinical protocols used at two tertiary care centers.

**Case Studies:** (15 minutes) Walking activity before and after therapy and surgical interventions

**Long-term Outcomes:** (10 minutes) Data from surgical, orthotic, injection therapy and treadmill training interventions.

**Questions / Discussion:** (15 minutes)

Course Summary:

This breakfast seminar is directed towards surgeons and rehabilitation professionals who care for ambulatory children and youth with cerebral palsy. We will describe clinical measurement protocols from two different tertiary care centers who utilize portable devices to capture habitual walking activity (WA). We will present experiences in device selection and clinical protocol development, including processes to examine data accuracy, reliability and validity. We will present data to discuss differences in WA between surgical candidates and literature reports of WA in children and youth with CP. Case studies will illustrate the feasibility and utility of clinical data collection for youth with CP. Cases will show how data sharing among surgeons, therapists, and families can support efforts to enhance walking mobility. Preliminary data on outcomes of WA following orthopedic surgery, orthotic use, injection therapy, and treadmill training will facilitate discussion about rehabilitation interventions.
References


