

## **Symposium: Overcoming challenges in assessing cognition in children and adults with cerebral palsy**

Organized by: Ro Julia Robotham

Chair: Kristine Stadskleiv

Cognitive impairments are common in individuals with cerebral palsy (CP). The type and severity of impairments vary strongly and there is no direct relationship between severity of motor impairment and degree of cognitive impairment. This symposium addresses challenges related to neuropsychological assessments of individuals with severe motor, communicative and visual perceptual difficulties and how cognition is systematically assessed in Norway/Sweden. Insights are relevant for acquired brain injury also.

### Presentation 1

**Title:** Adapted neuropsychological assessment of children and adults with severe speech and motor impairments

**Presented by:** Kristine Stadskleiv, Assistant Professor, University of Oslo, Norway

**Abstract:** There is great variability in type and severity of cognitive impairments among individuals with CP. Individual assessments of cognition are necessary to enable interventions that are personalized and based on individual strengths and challenges. However, in the group with the most severe speech and motor impairments, cognitive functioning is often estimated rather than assessed. This approach is problematic not only for the individual, but may lead to incorrect assumptions about the frequency of cognitive impairments in population-based epidemiological studies. A framework for adapting assessments to reliably assess cognition in individuals with severe speech and motor impairments will be presented. Video examples will be used to illustrate how computerized eye-gaze technology may be used. The neuropsychological profiles of a representative, geographical cohort, where adapted assessment was used will be presented, alongside a review of the literature on cognitive functioning in children with CP.

### Presentation 2

**Title:** Visual impairments in cerebral palsy: terminology, prevalence and related clinical considerations

**Presented by:** Ro J. Robotham, Assistant Professor, University of Copenhagen, Denmark

**Abstract:** CP has been associated with deficits related to most aspects of visual processing. Visual impairments are common in this population, but the type and severity of impairments vary strongly. A key challenge in the literature is the lack of consistency in terminology used to describe visual impairments following atypical cerebral development or caused by early brain injury on the one hand, and following late acquired brain injury on the other hand. While terms such as Cerebral Visual Impairment or Cortical Visual Impairment are commonly used in the CP literature, they are absent in the late acquired brain injury literature. Inconsistencies in use of terminology will be discussed. Then, an overview of types of visual impairments described in the population of individuals with CP will be presented, as well as some of the

consequences of such impairments. Finally, the importance of carrying out appropriate assessments of such functions will be discussed.

### Presentation 3

**Title:** Towards systematic monitoring of cognition in children and adults with cerebral palsy in the Nordic countries

**Presented by:** Ann I. Alriksson-Schmidt, Associate Professor, Lund University, Sweden

**Abstract:** In 2013, the Nordic CP user organization CP-Norden contacted the Swedish national registry and follow-up program for CP (CPUP) and urged inclusion of systematic assessments of cognition. According to CP-Norden, cognition significantly affects day-to-day lives but is rarely addressed. A workgroup of Scandinavian experts was convened to develop an assessment battery/schedule entitled CPCog. CPCog was introduced in Sweden and Norway in 2015. In this seminar, CPCog will be outlined, the implementation process will be discussed, and results from CPCog will be presented. Furthermore, the development of the, soon to be launched, CPCog-Adult, will be discussed. The implementation of CPCog has been relatively slow. A survey was recently performed regarding opinions of CPCog and barriers/facilitators related to implementing the program. Psychologists and habilitation managers were surveyed in both Sweden and Norway. Norway also surveyed parents of children with CP. Results from the survey will be presented.