



Scientific/Educational Workshop

Workshop information

Workshop responsables :

Brian O'Neill
Sara da Silva Ramos
Ferry Tomaszuk
Juliane Weicker
Dorothee Schlüter
Carolyn Jones

Workshop title:

Making the most of technology in neuro-rehabilitation: Training and supporting cognitive functions

Workshopgoals:

- Understanding the evidence of effectiveness of the assistive technologies for cognition by cognitive domain, and thereby, acquiring a framework for their prescription
- Understanding the effectiveness of computerised working memory training in various age groups and aetiologies
- Insight into the provision of technologies to meet neuropsychological needs, via cases and research data regarding the support activities of daily living and emotional difficulties in the rehabilitation setting

Abstract :

This workshop is aimed at helping clinicians, managers, service users and carers to make the most of technology to support cognition in their daily lives or practice. The session will be dedicated to assistive technology for cognition, defined as technology which can be used to enable, enhance or extend cognitive function. The focus will be on digital technology, including smart phones and apps, as well as wearable devices and cognitive training software. The session will begin with a review of the evidenced technologies available to support a range of cognitive functions, including attention, memory and emotional regulation.

In addition to compensatory strategies, functional training plays a major role in neuropsychological rehabilitation. The use of computer-assisted therapy has several advantages, e.g. adaptive regulation of difficulty, the realization of highly intense training frequency, motivational aspects as well as a good cost-benefit ratio. Working memory often is impaired as a consequence of brain injury with major impact on everyday functioning and quality of life and we examine evidence of whether training can enhance or rehabilitate working memory. The workshops will investigate this issue by presenting the

current research, addressing under which conditions and for which target group working memory training specifically may be justifiable. The implications for cognitive training more generally are discussed. The workshop will also provide a practical framework for prescribing technology, either as rehabilitation tools to support re-learning, or as a compensatory strategy, based on a person's neuropsychological profile and the impact of cognitive impairment on instrumental activities of daily living. The session will end with case examples taking the participants step-by-step through the process of considering, implementing and evaluating the effectiveness of technology to support cognition.

Speakers:

Brian O'Neill

Juliane Weicker

Sara da Silva Ramos