

Presenter: Sallie Baxendale

7:20 - 8:50am

Saturday, 4th February, 2023
Town & Country Ballroom B**Abstract & Learning Objectives:**

The role of the neuropsychologist in epilepsy surgery programs has evolved considerably over the past decade. In addition to gatekeeping against catastrophic outcomes, the preoperative neuropsychological assessment is also used to predict the nature and extent of likely postoperative cognitive change and to guide the preparation of prospective candidates accordingly. This workshop will introduce the concepts of contraindication, complication and cost with respect to cognitive outcomes following traditional and newer, less invasive forms of epilepsy surgery. We will explore how neuropsychological data can be integrated with the findings from the wider presurgical evaluation to assess the cognitive risk in each of these categories, with a particular focus on functional and structural imaging techniques. Finally we will look at ways in which information about risks to cognitive function can be shared with both fellow clinicians and patients at each stage along the surgical pathway. Upon conclusion of this course, learners will be able to:

1. Recognize the distinction between cognitive contraindications, complications and costs in cognitive outcomes following epilepsy surgery
2. Summarize the latest developments in non invasive epilepsy surgery investigations and techniques and their implications for neuropsychological function
3. Apply neuropsychological data to predict postoperative cognitive outcomes and use these predictions to prepare surgical candidates for any anticipated changes.

CE Workshop 12: Magnetic Resonance Spectroscopy for in vivo Assessment of Neurochemistry in Neuropsychology Research

Presenter: Jamie Near

7:20 - 8:50am

Saturday, 4th February, 2023
Pacific Ballroom A**Abstract & Learning Objectives:**

Magnetic resonance spectroscopy (MRS) is an imaging technique closely related to magnetic resonance imaging (MRI) that allows non-invasive measurement of tissue chemistry and metabolism in vivo. One important application of MRS is in the human brain, where few alternative methods for neurochemical/metabolic measurement are available. MRS has demonstrated clinical value in several brain conditions, including the diagnosis and staging of cancers, neurodegenerative diseases, and creatine deficiency disorder. But beyond its clinical value, MRS has tremendous potential as a research tool. In the context of neuropsychological research, MRS provides an important tool to help understand how neurochemistry and metabolism are associated with everyday cognitive functions including sensory and motor function, perception, memory, decision making, and mood.

In this educational workshop, I will focus on magnetic resonance spectroscopy and its use in neuropsychology research. I will begin by introducing the basics of how MRS data are collected, processed, and analyzed. I will discuss the advantages of MRS as well as its limitations. Finally, I will provide a selected summary of current literature involving the use of MRS in neuropsychological research.

Upon conclusion of this course, learners will be able to:

1. Describe how magnetic resonance spectroscopy experiments are conducted, including methods of data acquisition, processing, analysis and interpretation.
2. List examples from recent literature of how MRS has been used in neuropsychological research.
3. Apply and devise new experiments involving the use of MRS for neuropsychological research.

Invited Symposium 4: Innovations in Infant, Toddler, and Young Child Neuropsychological Models of Care

Chair: Natasha N. Ludwig

**Presenters: Peter Anderson,
Gwendolyn Gerner, H. Gerry Taylor,
Tricia Williams**

9:00 - 10:30am
Saturday, 4th February, 2023
Pacific Ballroom A

Abstract & Learning Objectives:

The neuropsychology of babies, toddlers, and young children is a rapidly evolving frontier within our discipline. While there is an inaccurate perception among referral sources that neuropsychological services are not useful before school-age, pediatric neuropsychologists are especially well-suited to identify delay or dysfunction in the years before school entry (Baron and Anderson, 2012). Patterns of neurodevelopmental strengths and weaknesses can be detected very early on in development and used to make inferences about brain-behavior relationships integral for guiding treatment across a number of medical and neurodevelopmental diagnoses. As such, there is a need to foster ongoing clinical interest and expertise and promote the utility of neuropsychological services within this age range. The INS Babies, ToddlerS, and Young children (BITSY) SIG was recently developed to bring together scientists and clinicians from across the world who conduct research and provide neuropsychological services within this age range to foster collaboration and learning. A priority of the BITSY SIG is not only to promote awareness of the novel needs of this age range, but to consider historical and ongoing disparities in service access, representation in research, and neuropsychological practice.

For this inaugural BITSY SIG symposium, four members of the SIG will discuss innovations in infant, toddler, and young child neuropsychological models of care. This topic was developed in direct response to survey results from the first BITSY SIG meeting held during INS 2022, indicating the need for the development and refinement of clinical approaches that incorporate diverse perspectives as well as training opportunities in models of care for very young children. As such, speakers will cover innovations in neuropsychological service models from the prenatal period to formative early years that are inclusive of diverse neurological and neurodevelopmental populations commonly

served by neuropsychologists including spina bifida, prematurity, hypoxic-ischemic encephalopathy (HIE), congenital heart disease (CHD), autism (ASD) and attention-deficit/hyperactivity disorder (ADHD). The first talk will highlight the unique role of the neuropsychologist in prenatal and infant consultation, whereas the second talk will focus on the state of the field with regard to the utility of neuroimaging in neonatal populations and the integration of this tool in neuropsychological care. The third talk will discuss early screening and assessment models in a diverse range of conditions within an interdisciplinary setting. The final talk will illustrate a novel neuropsychological intervention designed with and for the empowerment of caregivers for young children impacted by neurological and neurodevelopmental conditions. The unifying theme across the talks is how unplanned discoveries and acute observations of children and families during the critical early years have led to these inclusive care models that prioritize family preferences, values, and culture. Upon conclusion of this course, learners will be able to:

1. Summarize several novel models of neuropsychological care for infants, toddlers, and young children.
2. Recognize ways in which neuropsychologists work within interdisciplinary teams to serve infants, toddlers, and young children and their families.
3. Apply these models of care to your conceptualization of the scope of neuropsychological services available for infants, toddlers, and young children.

**Symposium 12: Ebbinghaus' Legacy:
Neuropsychological Studies of Long-
Term Forgetting**

9:00 - 10:30am
Saturday, 4th February, 2023
Town & Country Ballroom B

Chair

Margaret O'Connor
Harvard Medical School, Boston, USA