

**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

## Discussant

Mieke Verfaellie  
Boston University Medical School, Boston, USA

### Summary Abstract:

Most clinical and research investigations of memory focus on consolidation of information over relatively brief intervals of time (i.e., minutes, hours). However, in everyday life we are most interested in retaining experiences for much longer periods of time (days, weeks, years). Studies in cognitive psychology demonstrate that the survival of an engram is influenced by a variety of factors including contextual aspects at time of initial learning, the age of an event, frequency and distribution of exposure to the memory over time and, of course, the amnesic capacity of the learner. In the current symposium we examine the durability of new memories as well those from the past. Presentations focus on medical factors, such as epilepsy and stroke, that result in acceleration of memory loss. The longevity of old memories is examined in relation to age-related decline and the onset of dementia. Findings from these studies enhance our understanding of the cognitive and neural underpinnings of consolidation and, hence, they inform our ability to remember our past.

**Keyword 1:** amnesia

**Keyword 2:** memory disorders

**Keyword 3:** cognitive neuroscience

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## 1 Forgetting and its Measurement: Do Patient Groups differ?

Michael D Kopelman  
King's College, London, United Kingdom

**Objective:** The intricacies and difficulties in measuring forgetting rates, both in healthy participants and in clinical patients, have been intensively investigated since the 1970s. In recent years, there has been a revival of interest in 'long-term' forgetting rates, particularly in transient epileptic amnesia (TEA) and temporal lobe epilepsy (TLE), and some 'old' lessons have had to be re-learned.

**Participants and Methods:** Studies of long-term forgetting in patient groups will be reviewed, together with variables that influence different patterns of forgetting. In particular, I will report findings from two recent studies of TLE, as well as other related investigations.

**Results:** Studies indicate that an impairment in memory 'acquisition', rather than differences in 'long-term' forgetting, appear critical in amnesic disorders, sometimes associated with differences in 'early' forgetting on recall memory measures only. An exception may be the effect of seizures, whether in consequence of epilepsy or ECT, which sometimes, but not always, appears to accelerate forgetting rates. Another important finding has been the pronounced variability in forgetting rates, both between individuals within a patient group and within individuals tested on separate occasions, making inferences from single-case studies problematical.

**Conclusions:** Findings will be interpreted in the light of these observations.

**Categories:** Memory Functions/Amnesia

**Keyword 1:** amnesia

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## 2 Long Term Forgetting for News Events: Does Event Frequency Matter?

Margaret G O'Connor  
Harvard Medical, Boston, Massachusetts, USA

**Objective:** Health providers frequently probe patients' recall of current and/or remote news items to determine the extent of memory loss. Impaired memory for transient events (i.e., in the news for a circumscribed time) may provide information regarding the onset of cognitive impairment. We utilized the Transient News Events Test (TNET) to explore how memory changes over time in older adults with cognitive impairment (CI) and non-cognitively impaired (NCI) individuals. We hypothesized that CI individuals would demonstrate reduced memory for transient events. We investigated the role of semantic and episodic memory on TNET performance.

**Participants and Methods:** Participants completed the TNET as part a comprehensive neuropsychological evaluation. Analyses included t tests to evaluate group differences for TNET performance, and correlations between