chemotherapy or high dose intravenous methotrexate or cytarabine. Additionally, survivors who do not receive CNS-directed therapies are also at elevated risk for cognitive impairment following cancer therapy that disrupts systemic organ function vital to brain health, e.g., cardiac, pulmonary or endocrine function. Risk for cognitive impairment is further exacerbated by adverse events during cancer therapy (e.g., severe infection, recurrent general anesthesia) and health behaviors following cancer therapy (e.g., physical activity, sleep). The type and severity of cognitive impairment in long-term survivors of pediatric cancer may evolve and grow over time, with emerging evidence suggesting some survivors are at risk for accelerated cognitive aging and early onset dementia. Over the course of the survivor's lifespan, the prevalence and impact of cognitive deficits will be determined by a complex interaction between premorbid development and environment, cancer therapy and clinical care, and post-treatment recovery and physical health. The timing and type of these events will dictate the approach to screening and monitoring for cognitive impairment, and will determine the best course for therapeutic intervention to facilitate future cognitive and emotional health.
Upon conclusion of this course, learners will be able to:
1. Describe direct and indirect sources of cognitive impairment in long-term survivors of pediatric cancer
2. Discuss how cognitive impairment may change over the lifespan of survival following treatment for pediatric cancer
3. Identify modifiable targets for interventions to facilitate cognitive health in long-term survivors of pediatric cancer

CE Workshop 05: Technology and Cognition: Examining new trends and opportunities for neuropsychology

Presenter: Maria T. Schultheis

1:00 - 4:00pm
Wednesday, 1st February, 2023
Town & Country Ballroom C

Abstract & Learning Objectives:
Advances in technologies continue to offer new opportunities for understanding brain functioning and brain-behavior interactions. The clinical application of these technologies continues to require the understanding of both the benefits and limitations of integrating these novel methodologies. This workshop will provide an overview of several emerging and established technologies in neuropsychological assessment and rehabilitation. This will include discussion of portable brain imaging technologies, neuromodulation technologies, virtual reality simulation and various brain-computer interface devices. In addition, we will discuss how clinical application of these novel devices offer opportunities for growing knowledge in new areas of analysis (i.e., machine learning analysis) and interdisciplinary collaborations.
Upon conclusion of this course, learners will be able to:
1. Identify 3 technologies that are currently employed in neuropsychological research
2. Assess the strengths and weakness of novel technologies for brain-behavior interface
3. Examine current clinical applications of neuromodulation technologies and portable brain-imaging technologies

CE Workshop 06: The Cumulative Burden of Congenital Heart Disease Across the Lifespan: Implications for Neuropsychologists in Pediatrics Through Geriatrics

Presenters: Adam R. Cassidy, Jacqueline H. Sanz, Kelly R. Wolfe

1:00 - 4:00pm
Wednesday, 1st February, 2023
Town & Country Ballroom D

Abstract & Learning Objectives:
The heart and the brain are inextricably linked across development by overlapping genetic programs and transacting physiologies that exist long before birth and endure throughout the lifespan. Congenital heart disease (CHD) refers to a diverse array of conditions in which structural heart development is atypical. Of the roughly 1 million babies born with CHD each

https://doi.org/10.1017/S1355617723000838 Published online by Cambridge University Press

year, some 40,000 are born with a “critical” form of CHD that will require intensive surgical intervention within the first year of life. As recently as the 1980s, children born with some forms of critical CHD did not survive; palliation was their only option. This has changed dramatically over the past 30-40 years. Driven by momentous breakthroughs in medical science and technology, approximately 80-95% of children born with CHD today will reach adulthood.

But increased survival is only a part of the CHD story. Indeed, like extreme prematurity, leukemia, and many other previously fatal medical conditions with which neuropsychologists are familiar, increases in longevity among CHD survivors have come with increasing recognition of the many challenging transitions and cumulative medical, neurobehavioral, and psychosocial burdens inherent to “living with CHD.”

CHD begins to alter expected brain development in utero with evidence of structural, volumetric, and metabolic differences documented as early as the second or third prenatal trimester. Brain dysmaturation, in turn, increases one’s risk for further acquired brain injury and gives rise to a range of neurobehavioral deficits and psychosocial difficulties that consistently rank among the most salient threats to quality of life among children, adolescents, and adults with CHD.

More recently, as survival into adulthood has become increasingly common for individuals with CHD, we have also begun to more fully appreciate the cascading impact and cumulative neuropsychological burden of CHD across the lifespan, which impact a range of long-term outcomes such as educational and occupational attainment, living independently, and risk for dementia.

In short, CHD can no longer reasonably be considered a child or pediatric condition, but rather a lifespan condition with the potential to adversely impact neurobehavioral and psychosocial outcomes in different ways and at different times across infancy, childhood, adolescence, and adulthood.

Over a series of talks presented by a panel of recognized neuropsychologists and experts in CHD, this symposium aims to review the neuropsychology of CHD across the lifespan and to present an integrative lifespan developmental neuropsychological model of CHD that eschews prevailing “child” vs. “adult” distinctions. Each presentation will address a salient developmental epoch (prenatal-early childhood, school-age/adolescence, and adulthood/geriatric timeframes) and will include a comprehensive review of the extant literature pertaining to relevant neuroanatomical and neurodevelopmental/neuropsychological considerations for individuals with CHD during each epoch. Transitions, of which there are myriad for individuals living with CHD (e.g., from acute inpatient care to stepdown unit care; from inpatient to outpatient settings; from early intervention to the school system; from childhood to adolescence; from adolescence to young adulthood; from pediatric to adult CHD care), will feature prominently throughout the symposium, as will recommendations for competent, developmentally-informed clinical neuropsychological management and intervention planning throughout the lifespan.

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

1. Describe the mechanisms by which congenital heart disease (CHD) impacts brain development and functioning across the lifespan (from infancy to older adulthood).
2. Discuss neurodevelopmental/neuropsychological sequelae of CHD for children, adolescents, and adults.
3. Explain the role of clinical neuropsychologists in evaluating, supporting, and optimizing the neuropsychological trajectories of individuals with CHD across the lifespan.

Poster Session 01: Medical | Neurological Disorders | Neuropsychiatry | Psychopharmacology

2:45 - 4:00pm
Wednesday, 1st February, 2023
Town & Country Foyer

1 Exploratory Factor Analysis of the Core Neurocognitive Syndrome in Agenesis of the Corpus Callosum

Enya Valentin[1], Lynn K Paul[2], Warren S Brown[1]
[1]Travis Research Institute, Fuller Graduate School of Psychology, Pasadena, CA, USA.

https://doi.org/10.1017/S1355617723000838 Published online by Cambridge University Press