Introduction to the Special Issue for Journal of Pediatric Neuropsychology: Topical Issues for Pediatric Neuropsychologists

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I am pleased to present the six articles in this special issue that discuss a wide range of topical issues for pediatric neuropsychologists. Four articles in this special issue discuss various neuropsychological disorders and present information that can be useful in either transitioning back into the school or for supporting accommodations for children and adolescents with neuropsychological deficits. The fifth article discusses what an independent educational evaluation can accomplish and how it can be used constructively to assist schools in developing appropriate interventions. As more and more pediatric neuropsychologists consult with school districts around genetic, neurocognitive, and developmental disorders, it is important to provide educators with information about emerging research around these disorders as well as appropriate accommodations. The training for many educators has not included information about brain development, the effects of genetic disorders on learning, or the appropriate treatments.

The article on concussions was designed to provide information about the newest empirical findings on concussions, how concussions can affect functioning, and the possible gender differences in how concussions are expressed. This is an emerging area of knowledge, and to keep up to date can be difficult for many neuropsychologists who have busy practices. In addition, most educators have a faulty understanding of concussions and frequently underestimate the effects that concussions can have on cognitive functioning. Moreover, children and adolescents who have had multiple concussions will often show more signs, require additional time for

recovery, and may have co-occurring anxiety and depressive symptoms. While most neuropsychologists are aware of these difficulties, it is important to be able to translate our findings for educators. I have spoken to several educators who felt the child/adolescent was malingering when in fact the deficits were real. This article was meant to be shared with educators and other professionals who may be working with children and adolescents with head injuries.

Dr. Bledsoe's intriguing and informative article on the effects of radiation on recovery from brain tumors is a critical review of 18 articles concerning treatment. One of the major findings was that the timing of radiation treatment has a major effect on white matter development particularly for younger children. These findings suggest a possible relationship from the white matter anomalies and neurocognitive sequelae. Brain tumors also can affect other variables such as school absences, stress in the home, and peer relationships. The correlation between radiation treatment, white matter involvement, and neurocognitive deficits is not well established and needs further study. These findings from this review point to the fact that more research is needed to determine the long-term effects of brain tumors particularly in the areas of learning and memory. There is contradictory evidence at this time with some children recovering well while others have difficulty. The difficulty may also be subtle and missed by educators and medical professionals; hence, the need for a comprehensive neuropsychological assessment.

Dr. Pierpont writes an excellent article discussing Noonan's syndrome. Noonan's syndrome is a relatively rare genetic disease, and many practitioners may not see more than one of these children in their practice unless they are in a major academic health center. Dr. Pierpont provides an excellent overview of the rasopathies, the genetics of rasopathies (including Noonan syndrome), and the neuropsychological and neurocognitive sequelae of these disorders. She also provides

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a great blueprint for the appropriate assessment of these children. Finally, Dr. Pierpont provides information about quality of life, mental health issues, adaptive behavior, and educational treatments. This article provides invaluable information for the practitioner and can be shared with educators as they work with these children.

Drs. Musielak and Fine wrote a review of neuroimaging with perinatally acquired HIV comparing more recent results from 2012 with findings prior to the antiretroviral medication and new treatments. While most of the neuroimaging studies concentrated on white matter differences, it is important to note that the findings do not seem to be consistent across studies. What was consistent was the finding of neurocognitive differences in these children compared to controls with children with perinatally acquired HIV performing more poorly. One drawback for many of the studies was the lack of neurological evaluation of these children, the lack of control groups to determine what differences were present, the under-reporting of when the child was scanned, and the wide age range of children in many of the studies. Another issue that was identified in this review was the limited assessment provided to these children focusing mainly on executive functioning and motor skills rather than also looking at attention, memory, cognition, and reasoning. This article concludes by discussing other variables that may affect a child's development, both educationally and neurologically. These aspects include stress in the home, financial difficulties, nutrition, educational supports, and many others. The article pinpoints the need for neuroimaging and HIV studies to be more ecologically valid and to provide better guidelines for treatment beyond the medical field.

The fourth article in this special issue by Boys et al. evaluated the neuropsychological functioning of children with fetal alcohol spectrum disorders (FASD) within a large metropolitan school district. This article takes a unique approach by surveying and interviewing professional educators within the school district as to the functioning (neuropsychologically, socially, and emotionally) of children with FASD. The second main aim of this study was to describe an interagency collaboration program and then to evaluate whether this collaboration was helpful in developing appropriate treatments. It was gratifying to realize that educators really want additional information about FASD and were readily able to implement

interventions and educational accommodations for these children when provided additional information and support. It was also apparent from the survey that neuropsychological reports that had been completed at a university clinic were not always shared with educators. This information provided a platform to increase communication between schools and the University as well as to assure a long-term relationship and interagency collaboration.

The final article for this special issue is by Dr. Richard Ziegler and discusses independent educational evaluations (IEE). IEEs are more frequently requested by school districts and parents to evaluate what needs a child has in an objective manner. As such, pediatric neuropsychologists develop guidelines for these types of assessments and need to be cognizant of the laws governing such evaluations. Dr. Ziegler lays out in a very understandable manner the way that IEEs are most useful and how to meet the mandates of the law. He deftly describes the difference between a psychoeducational assessment and a neuropsychological assessment. This article would be very helpful to be shared with school psychologists, school administration officials, and parents in order to understand what elements are important for an IEE, what it consists of, and what the laws that govern the use of an IEE are. He also provides a list of possible questions for the interview of educators. Such a list can help the educators structure their answers, be prepared for the interview, and relieve some of the anxiety that often accompanies an IEE. He also discusses that an IEE can lead to further fruitful collaboration between the neuropsychologist and the educators/school district.

It is my hope that these articles will provide a blueprint for pediatric neuropsychologists working with the schools to assist children with rare genetic diseases, concussions, HIV, FASD, and brain tumors. It is also hoped that the discussion of IEEs can serve to assist neuropsychologists in working with schools. Many neuropsychologists do not receive formal training in educational laws and school district procedures. They may also not have formal training in developing interventions that may be of assistance to the children with whom they work. These articles provide ideas and references for further investigation in these areas. The reviews point out the areas in our knowledge that are sadly lacking and which professors may wish to further investigate.