Learning from Case Studies: Grand Rounds in Pediatric Neuropsychology

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Grand rounds provide an opportunity to share approaches to single case conceptualization and educate participants about the link between established literature in the field and clinical findings and recommendations. This is particularly important in pediatric neuropsychology as it is a relatively new field and because children, who are on such a rapid developmental pathway, seldom fit a single classic diagnosis and even those who do have many individual differences. The life context of each child differs along with the family support systems and just the daily activities of the family. All of these variables interact in ways often unknown to bring a greater uniqueness to the pediatric patient than is often seen with more mature patient populations. All of the academic learning in the world cannot replace the clinician in assessing and balancing all of these characteristics in conjunction with the evidence-based literature, and another way to learn to achieve this balance is through the medium of the case study. As we have found in our own labs as well, unique cases often give rise to the refinement of our research agendas and even pose new avenues of scientific inquiry—the scientist-practitioner model works in applied clinical science as much as in clinical practice. Discussions of both rare and prototypical cases provide learning opportunities for established clinicians and researchers as well as pediatric neuropsychologists in training. Elements of case studies are commonly used in doctoral, internship, and

postdoctoral training programs, even when they are not formally presented. A professor may share salient features of a previous case or an amalgam of cases when discussing an applied evidence-based topic to help the learner understand the pragmatic features of the lecture or didactic. Case studies in pediatric neuropsychology should demonstrate an investigation of behavior relevant to topical theoretical issues and/or the relationship between central nervous system functioning and behavior. The purpose of this special issue was to assemble case studies that illustrate how pediatric neuropsychological assessment can inform diagnosis and intervention via providing unique information about the neurological and psychiatric status of the child.

This special issue contains seven case studies that present an array of approaches to case conceptualization in pediatric neuropsychology. Although patients with diverse backgrounds, diagnoses, risk, and resiliency factors are presented in this special issue, the reader will notice the format of the articles share some commonalities. Indeed, an additional goal of this special issue was to present a format for the submission of future case studies to the *Journal of Pediatric Neuropsychology*. Submitted case studies may vary somewhat but in general should include:

1. Single cases or a small number of similar cases unsuitable for quantitative analysis, of pediatric patients where a unique learning opportunity has arisen. In some instances, an amalgam of cases could be discussed to illustrate an emerging or prototypical practice, technique, or approach.
2. A thorough review of the relevant literature. This could include published information about the child's diagnosis or suspected diagnosis, neurological and neuroimaging findings, relevant medical conditions or medications, educational considerations, or pertinent issues in the child's psychosocial history. In essence, authors should consider

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a discussion of any literature that informed the approach to case conceptualization, assessment, diagnosis, and treatment recommendations.

3. A discussion of the patient's relevant history. This may include information from observations, a review of records, the child's medical treatment, previous assessment results, and psychosocial, educational, vocational, and legal histories. Medical, neurological, and neuroimaging findings should be included if available.
4. Results and discussion of neuropsychological assessment results. Authors may include a discussion about rationales for selection of measures. It is important to make it clear that findings rely on the analysis of behavior based on data.
5. Discussion of treatment recommendations and how results of the previous steps contributed to this decision making process.
6. A summary or conclusion integrating the information from the case and why it is important this information be conveyed to others in the profession.

All case studies submitted to the *Journal of Pediatric Neuropsychology* undergo peer-review. Submissions should be made electronically following the instructions for authors found on the journal homepage (<http://www.springer.com/psychology/neuropsychology/journal/40817>). Potential authors should carefully review the section marked "research using human participants and/or animals," especially for information regarding informed consent for any submitted case studies.

The first article in the special issue, "congenital pediatric dementia: a case study of mitochondrial myopathy, encephalopathy, lactic acidosis, and stroke-like episodes (MELAS) syndrome," (Puig and Semrud-Clikeman, this issue) highlights the role pediatric neuropsychologists can play in helping to treat serious medical problems. This case study will be invaluable to both new and experienced practitioners working with children and adolescents with progressive impairment. Readers will find the authors meet their goals to "inform practitioners about this rare disorder, to begin a thoughtful discussion about considerations specific to the evaluation of children with dementing disorders, and to offer recommendations to support these individuals in their daily life." (Puig and Semrud-Clikeman, this issue). Pediatric neuropsychologists will also find this article as a primer on MELAS and are encouraged to consult this case study if they treat a patient with this condition.

The second article "the importance of performance validity assessment in pediatric neuropsychological evaluations," considers one of the most important topics in our field. Although well-established in the adult/geriatric literature, the research on performance validity testing (PVT) continues to emerge in the pediatric neuropsychological literature. McCaffrey and

Lynch (this issue) discuss two cases emphasizing the use of these measures in pediatric neuropsychological assessment. McCaffrey and Lynch also argue that it is not acceptable to gauge the validity of test data from observation alone in pediatric patients. Readers still uncertain about the use of PVTs with children will benefit from the review of literature and conclusions drawn by McCaffrey and Lynch.

Prenatal alcohol exposure is a preventable, yet one of the more common, causes of severe neurocognitive dysfunction in children. The third case study, "fetal alcohol spectrum disorders: a case study," by Glass and Mattson (this issue) present a composite case of a nine-year-old female diagnosed with fetal alcohol spectrum disorder (FASD). In addition to being thorough and informative about FASD, readers will benefit from the detailed background information, test results, diagnostic interpretation, and treatment recommendations provided. Another strength of this manuscript is the information about the individual educational plan (IEP) meeting and subsequent development of an IEP. There is also an important discussion about access to services.

In the fourth case study, Mucci et al. (this issue) discuss an adolescent with medulloblastoma who had previously undergone resection and chemotherapy, had a recurrence, and then received resection, chemotherapy, and cranial radiation. Mucci et al. point out that the survival rate of medulloblastoma brain tumors is over 70% in children although late effects are evident. This relatively high survival rate and potential long-term effects on neurodevelopment requires the assessment and intervention of pediatric neuropsychologists. Serial assessment results are provided along with a detailed discussion from their present evaluation. The authors discuss the neuropsychological literature on medulloblastoma, including treatment and complications. This review of the literature is very thorough, and it is highly recommended for practitioners with all levels of experience who work with children with medulloblastoma.

In the fifth case study, "a complex case of tri-lingual, tri-cultural, biracial & multiple medical comorbidities," Puente, Mejia, and Kuwabara present the case of a 12-year-old female with a history of cardiovascular concerns and seizures. As the authors note, the pediatric neuropsychology research on working with culturally diverse children is not keeping pace with the increasing diversity in the USA. The authors describe a thorough battery of tests and discuss the relevance of cultural, language, and environmental factors in the consideration of neurological problems. This manuscript will likely make a valuable contribution to any graduate or post-graduate training program in neuropsychology given the increasing importance of understanding the principles of working with culturally diverse children. Puente et al. summarized, "Furthermore, most of the cultural research has been conducted within the adult population, limiting the ability to generalize to pediatric cross-cultural neuropsychology. Nevertheless, cultural

resources pertaining to adults can provide a theoretical framework, and with case studies such as the present one, have the ability to shed light on new discoveries and overcome practices involving suboptimal, ethnocentric pediatric neuropsychological evaluations.”

In the next article, Llorente et al. (this issue) review the legal and neuropsychological factors affecting unaccompanied immigrant children in the USA. Pediatric neuropsychologists who are interested in forensic evaluations need to be familiar with legal issues affecting a variety of children. Llorente et al. present the case of a female child who experienced trauma associated with her unaccompanied immigration to the USA. Emphasizing the importance of this type of work, Llorente et al. (this issue) wrote “it appears as if specific immigrant groups may be at greater psychological risk than others, namely those who have experienced chronic and severe trauma and unaccompanied children. It also appears as if specific risk and resiliency factors exist that are able to diminish or exacerbate poor psychological outcomes after unaccom-

panied immigration including familial dysfunction and support, parental psychological health, individual personality characteristics and temperament, and environmental factors (e.g., peer and community support and context of immigrant reception).”

The final manuscript in this special issue is a pediatric neuropsychological case study of childhood absence epilepsy. Hall (this issue) reviews the literature on childhood absence epilepsy and provides detailed information about the case, including background information, behavioral observations, neurobehavioral status examination, test results, and diagnostic impressions. A highlight of this case study is the way Hall presents the numerous recommendations which can easily be adapted into a report by pediatric neuropsychologists.

Another hope for this issue is that you will be inspired to bring your interesting cases to the profession where they provide a lesson for us all and can help us understand the developing brain that has been compromised and the complexities and uniqueness of circumstances so often present in pediatric patients.