

Introduction to Special Issue

Assessment, treatment and service issues for students with traumatic brain injury

Each year in the US approximately 1.4 million individuals sustain a traumatic brain injury (TBI) [<http://www.cdc.gov/ncipc/tbi/default.htm>]. Worldwide, brain injury is the leading cause of death and disability [<http://www.internationalbrain.org>]. For many, the return to their home, community, or job involves going back to school. For children this means returning to primary or secondary education settings, whereas for young and older adults, this means continuing the college education that was interrupted or returning to college to learn new skills because of disability. The contributors of this special issue of *NeuroRehabilitation* present evidence of ecologically valid assessment and intervention with direct implications for students with TBI, and they identify service-related issues when students with TBI go to school.

Standardized, impairment-based assessment provides information about decontextualized deficits after TBI, yet ecologically valid assessment is critical for professionals to create functional treatment goals. More and more clinical researchers are developing systematic ways to evaluate functional tasks and activities within useful contexts. Turkstra, Williams, Tonks and Frampton describe the social cognition, emotion recognition, and theory of mind deficits of adolescents with TBI and the challenges of assessing these high-level pragmatic communication abilities. They provide data from three assessment tasks and identify which one best differentiates adolescents with TBI from their uninjured peers. Cook, Chapman and Levin describe a naturalistic assessment task for children ages 8 to 16 with preliminary data to support its usefulness in identifying self-regulatory deficits in complex tasks. These findings suggest that children with TBI may use a “bottom-up” approach that could be context and task dependent. In the third article in this issue, MacLen-

nan and MacLennan describe a unique solution to assessing college readiness in post-deployed veterans using a college simulation. These authors present three individuals who participated in the college simulation and describe their long-term decisions about college and career paths. In the final article about assessment, Proctor and Zhang remind us of the importance of considering students' racial/ethnic makeup when assessing cognition. These authors tested three groups of university students, African Americans, European Americans and Latino/a Americans, using two well-known standardized tests of executive functions. While some differences emerged, the authors help us interpret these findings and warn us about applying “normative” cut-offs and profile language to individuals who represent groups that were not included in the normative sampling.

The second set of articles in this issue focus on intervention and services for students with TBI. DePompei, Gillette, Goetz, Xenopoulos-Oddsson, Bryen and Dowds describe the results from *in vivo* clinical trials using personal data assistants (PDAs) and in depth follow-up studies of PDAs and Smartphones for children and young adults with TBI and developmental disabilities. Based on their findings, these authors provide an intervention plan for training the use of PDAs.

Unfortunately, not all individuals with TBI receive school-based services once discharged from hospital rehabilitation programs. Glang, Todis, Thomas, Hood, Bedell, and Cockrell describe a study that employed quantitative and qualitative methods to determine the factors that influence those identified and receiving school services. Injury severity and transition communication between the hospital and school play critical roles in who gets school-based services. Transition services are part of the holistic cognitive rehabilitation

program for children described by Marcantuono and Prigatano. Based on the holistic rehabilitation program for adults with TBI, these authors describe a modified version of this for children who go from inpatient rehabilitation to outpatient rehabilitation and then to school. Unlike school-age children with TBI who have parental advocates, college students with TBI have to advocate for themselves to receive disability services. Kennedy, Krause, and Turkstra end this issue of *NeuroRehabilitation* with the results of an anonymous on-line survey of adults who attended college after having sustained a TBI. Adults who reported more residual cognitive and psychosocial consequences from TBI also reported more academic-related challenges (studying, in-class experiences, time management, psychosocial aspects). Unfortunately, nearly half of respondents had not accessed disability student services.

Unlike more traditional hospital-based cognitive rehabilitation services, the assessment and treatment of individuals with TBI who are returning to school has yet to be systematized through evidence-based practice guidelines. The contributors in this issue have provided readers with much to consider as we move towards evidence-based, contextually valid assessment

and treatment for students with TBI. As this occurs, we would be wise to create to best practice protocols for seamless transitions from hospital to home to primary, secondary or post-secondary education for all students with TBI.

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