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Guest Editorial

Introduction to the special issue on pediatric educational re-entry after TBI

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Each year approximately 895,000 U.S. children ages 0–19 years sustain a traumatic brain injury (TBI) requiring hospitalization or emergency treatment, a rate of 1,092 per 100,000 population (Children's Safety Network, 2023). The effects of TBI on children can be life altering, affecting every aspect of functioning including academic performance, cognitive ability, behavioral changes, and social functioning (Babikian et al., 2015; Haarbauer-Krupa et al., 2021; Jones et al., 2019). In 1990, the Education for All Handicapped Children Act of 1975 was reauthorized as the Individuals with Disabilities Education Act (IDEA) with TBI added as a disability category. Since the 1990 reauthorization, over three decades ago, there has been an increased focus on the needs of children who sustain TBI when they return to school (RTS) and sports. The research in this area, however, has largely been descriptive in nature centered on transition from hospital to schools and developing responsive systems of support for re-entry to school (Dettmer et al., 2014; Gioia et al., 2015).

In this special issue of *NeuroRehabilitation*, we asked leading researchers in childhood TBI from around the world to share their work related to RTS after TBI. While contributing authors address the topic from a variety of perspectives and research methods, a unifying theme emerged suggesting the profession needs a more responsive and coordinated approach to educational service delivery for students with TBI. Presented below are the key insights that emerged from this special issue.

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First, most of the focus on TBI in school settings has been on educators; there are few occasions in which the perspectives of families with a child with TBI are taken into consideration. McCart et al. conducted a longitudinal qualitative study to better understand the experiences of students and parents with the education system following TBI. Participants identified a number of factors that contribute to conflict in home-school relationships, including a lack of student tracking from year to year, lack of educator training about TBI, and conflicting views between educators and parents about students' needs. McCart et al. conclude that improving educator training in TBI can facilitate parent-professional partnerships and improve student outcomes. The study's findings point to both the need for more consistent and comprehensive educator training on working with students with TBI and their families.

There is broad agreement that schools play a crucial role in the rehabilitation of students with TBI; however, the effectiveness of that role hinges a great deal on whether educators are using evidence-based strategies and interventions. Clasby et al. conducted a systematic review to evaluate the effectiveness of school-based supports following TBI. Their conclusions indicate that although a variety of approaches exist, including psychoeducation, behavioral scripts, and attention training, the evidence-base for individual interventions for students with TBI is limited, with meager convincing data to guide policy or practice. More robust experimental evaluation of educational interventions for TBI is warranted to address this gap in knowledge and establish with confidence what rehabilitative practices work with students with TBI.

There is a need for improved access to school support services, particularly for children with TBI from minority backgrounds. Jimenez et al.'s review of the literature on RTS post-TBI found that for the past 22 years, few participants with TBI were recruited from racial and ethnic minority backgrounds or from poor and rural communities. Transgender and non-binary youth were also not represented in the research base. Because vulnerable and diverse populations are at increased risk for sustaining a TBI and experiencing poor outcomes, these students need better representation in TBI studies so that we can better understand the nuances of their experiences.

Structured and consistent care coordination across medical, educational and family systems is a key component of effective RTS approaches. Lundine et al. conducted a qualitative study investigating the perspectives of medical, educational and family stakeholders about barriers and facilitators to care coordination as students RTS. Findings revealed several important challenges to address to improve care coordination: gaps in knowledge, poor collaboration and communication between systems and care providers, and inadequate legislative and policy frameworks. Recommendations include creating protocols that emphasize intentional collaboration between systems, developing and implementing top-down policy and identifying sources of funding to support care coordination.

Another way to improve educational services for students with TBI is to ensure all students who need special education services are appropriately identified. Because many students with TBI are not treated in a hospital or doctor's office, the requirement for medical documentation for special education eligibility under the TBI category can prevent a child from being identified under the appropriate disability category. The use of guided credible history interviews, as explained by McCart, Unruh et al., provides a legal alternative for school-based multi-disciplinary teams to bypass the need for official medical documentation in the eligibility determination process. The use of a credible history approach is strongly supported by educational administrators, general and special education teachers as well as specialists (e.g., school psychologists, speech/language pathologists). Guided credible history interviews are now part of the official state of Oregon Administrative Rules to guide public school administrative operations and demonstrate the importance for state level legislative action to change policy to address the needs of children with TBI.

The need for improved inter-professional communication was the primary theme identified by Gomez et al. These authors conducted focus groups with caregivers, educators, healthcare providers, and athletic trainers to explore communication patterns between educators and healthcare professionals when a student returns to school post-concussion. Themes emerging from the focus groups included (a) the lack of effective and clear communication between healthcare providers and school personnel, (b) parents who were strong advocates had improved communication with healthcare professionals and accessed more accommodations for their children, (c) non-school professionals and families were often confused about who was the point of contact at the school, and (d) athletes with concussion have very different RTS experiences than nonathletes. Gomez et al. suggest that the RTS process would improve by increasing concussion education for all stakeholders and standardizing communication between medical and educational staff.

Because parents are significant school partners, their perceptions of schools and how they operate can be extracted to gain crucial insights into the effectiveness of the return to school process. The experiences and perspectives of parents of students with TBI in the United Kingdom are shared in Bennett et al.'s qualitative study. In this study, participants articulated the many challenges faced when their child returned to education (RtE). Parents emphasized the need for strong and open communication between professionals, educators, and the family. Further, they emphasize the importance of clinicians and educators holding the child and their new unique educational needs at the center of instructional planning. Their findings stress that consistent, well-defined pathways for RtE are needed, with involvement and investment from both health and education systems.

Empirically validated educational support programs are critical for addressing the cognitive, social, behavioral, and academic issues that emerge after a TBI. Three such programs are described in the final three articles. Ciccia et al. at the School Transition after Traumatic Brain Injury (STATBI) lab, are at the baseline stage of conducting a longitudinal study to describe cognitive, social, and health outcomes for students with TBI who participate in a formal RTS project evaluating the effects of the BrainSTEPS program. Ciccia et al.'s article provides an overview of the BrainSTEPS program and a descriptive analysis of participants' baseline data before exposure to the BrainSTEPS intervention.

Avery et al. examined the effect of Return to Learn Implementation Bundle for Schools (RISE Bundle) on high school adoption of a student-centered return to learn program. Out of the 14 high schools in Washington State that enrolled, 10 successfully completed implementation. Self-reported concussion knowledge increased post intervention. The authors concluded that establishing return-to-learn (RTL) programs facilitated provision of tailored accommodations. Further, perceived variation and inequalities in RTL care, particularly in rural and urban high schools of varying sizes, were reduced.

Finally, Ippolito et al. describe the evaluation of the SCHOOLFirst website, which was designed to train Canadian pre-service teachers on how to support students who have sustained concussions. The team found that preservice teacher's knowledge and confidence surrounding the RTS process increased after using the SCHOOLFirst website. Participants also reported high levels of satisfaction with the website, as well as strong intent to use it in the future when supporting a student post-concussion. Each of these formal programs (STATBI, RISE and BrainSTEPS) show promise in improving educator knowledge and self-efficacy about TBI and demonstrate preliminary effects on improving school-based services for students with TBI.

Over the past two decades 11 states have implemented Return to School laws that mandate support for students when they return to school following TBI. There has been an abundance of research highlighting the needs of children who sustain TBI when they return to school. Additionally, there are websites, professional training, tools and instructional materials available to support professionals who support these students on a daily basis. Yet, the work by authors in this special issue address the same issues identified years ago by early researchers in childhood TBI (see, for example, Blosser & Pearson, 1997; Blosser & DePompei, 1991; Glang et al., 1997; Harris & DePompei, 1997; Ylvisaker et al., 1991). While there have been tremendous improvements in bringing awareness and training about TBI to educators in public schools, we still know very little about how to improve communication and coordinated care between schools and medical/health organizations. We also have limited understanding or information about effective interventions for students with TBI. This special issue describes many of these challenges and highlights key approaches for developing more effective support systems for these students. As practices slowly change to align with research we must work to increase awareness and strive to improve outcomes for children with TBI.

We hope you enjoy this issue and find useful information that you can apply to your work and practice.

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