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Traumatic Brain Injury: Transition and Intervention
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Overview of Traumatic Brain Injury

The Individuals with Disabilities in Education Act defines traumatic brain injury as an acquired injury to the brain caused by an external physical force. The injury results in total or partial functional disability or psychosocial impairment, or both, that adversely affects a child’s educational performance. The term applies to open or closed head injuries resulting in impairments in one or more areas, such as cognition; language; memory; attention; reasoning; abstract thinking; judgment; problem-solving; sensory, perceptual, and motor abilities; psychosocial behavior; physical functions; information processing; and speech. The term does not apply to brain injuries that are congenital or degenerative, or to brain injuries induced by birth trauma (IDEA, 2004).

Ohio’s educational definition of traumatic brain injury is not restricted to injuries resulting from external trauma. Ohio’s definition includes conditions such as strokes, tumors, and injuries caused by surgeries. This expansion of the federal definition allows more children with brain injuries to be identified under the TBI category for the purpose of receiving special educational services.

Because of advancements in medical technology, many children with severe brain injuries now survive and these survivors often experience significant neurobehavioral morbidity (Yeates, 2000). Thus, trauma survival requires the development of programs and interventions to meet the long-term needs of these individuals (Fletcher-Janz & Kade, 2007). However, despite the need for specialized service delivery, relatively few students with head injuries are identified under the TBI label. Data from 2007 indicate only 23,805 students received special education services under the TBI category (IDEA, 2007) although actual incident rates are much higher (National Trauma Registry). It is likely that more than 130,000 school-age children with TBI have functional limitations that are significant enough to warrant special education services (Giang, Tyler, Pearson, Toidis & Morivant, 2004). In Ohio, approximately 3,750 children sustain a TBI each year, 450-600 of which are moderate to severe. However, as of December of 2007, the Ohio Department of Education reported only 1166 children total served under the TBI category in Ohio’s schools. Clearly, children with TBI are under-identified in Ohio’s schools.

Failure to appropriately identify and understand the unique needs of students with brain injuries may reduce the likelihood of their educational needs being met. When children who have sustained brain injuries return to school, their teachers may not be aware of the child’s injuries and subsequent educational needs, particularly if there is a lack of communication between hospital/rehabilitation, parents, and school. Giang and colleagues (2004) surveyed parents whose children have sustained a TBI and found that lack of school staff knowledge of TBI and its effects was the primary reason for dissatisfaction with their children’s instructional services.

Transition planning

The transition from a hospital or rehabilitation back to school can be a particularly difficult time for students who have sustained TBIs. There is often a lack of communication between the hospital and school,
poor coordination of paperwork and processes, and a misunderstanding of the child’s post-injury skills and abilities. This is often the parents’ first introduction to the world of special education services and the school’s first (known) experience dealing with a child with a head injury. It is essential to have a plan in place before the child transitions from hospital/rehabilitation back to home and school.

One person (e.g., the school psychologist) should serve as a designated facilitator/case manager for the transition from hospital/rehabilitation back to school, as well as for subsequent evaluations and interventions. A core team comprised of the school psychologist, parents, teachers, director of special education, school nurse, other support personnel (OT, PT, SLP, parent mentor), and the hospital rehab team should meet prior to re-entry. The rehab team would then present the child’s current medical condition and make recommendations for the student’s return to school after the TBI. The team would use all available information to determine eligibility for special education services and educational needs prior to the child’s re-entry to school in order to ensure a smooth transition from hospital to school. A hospital-based neuropsychological evaluation, which diagnoses learning or behavior disorders caused by altered brain functioning or development, may be used as part of this process. The school-based evaluation will then focus on academic skills and context-specific information, such as ecological assessment of classroom variables.

In addition to concerns related to appropriate service for children transitioning from hospital or rehabilitation back to school, many children with pre-existing head injuries are already in Ohio schools. These might be the result of shaken baby syndrome, early childhood accidents, summer sports injuries, and so forth. Certain types of injuries have delayed consequences and therefore educational problems may not be apparent until a child is presented with growing demands (Ylvisaker, 1993). School psychologists must ensure appropriate identification of these students who may be unidentified or misidentified under another label. Thus, whenever a child is being evaluated or reevaluated for special education services, the school psychologist should consider traumatic brain injury as a possible cause for academic or behavioral problems. Questions about head injuries should be included in parent interviews (“Has your child ever lost consciousness?... ” been admitted to hospital after hitting his or her head?”... “had brain surgery?”). In all head injury cases, if a disability under IDEIA is not suspected, an alternative educational plan (504 plan, intervention plan) should be considered, if appropriate.

School-based interventions

Survivors of brain injuries present a unique constellation of deficits in terms of attention, memory, executive functions, behavior regulation, and “patchy” academic skills (some higher level skills may be retained while lower level skills are lost). Further, the child presents as a “moving target” because there are changes over time with recovery and variability in outcomes. After a traumatic brain injury, cognitive deficits and emotional issues often impact academic performance. Academic achievement testing may show little change in performance while actual classroom performance is significantly diminished. Common educational problems may include tiredness and fatigue; irritability and impulsivity; aggressive or passive behavior; inappropriate social behavior; forgetfulness and distractibility; difficulty following directions; poor organizational skills; and declines in classroom grades (Wolcott, Lash, & Pearson, 1995). Thus, school-based intervention plans must take the above problems into consideration and employ active experimentation to identify the best plan for each student.

Using the problem-solving process as a template, school teams can determine which interventions will best address cognitive (and subsequent academic) deficits. It is essential to put ample post-injury supports and services in place (i.e., “Tier 3” levels of support), especially for moderate to severe injuries. The most rapid recovery takes place in the first few months post-injury; thus, educators will want to take advantage of the closing window of opportunity to maximize impact of interventions. Based on
Traumatic Brain Injury Continued from Page 3....

frequent progress monitoring data, the team can determine how and when to decrease services. Re-teaching, development of compensatory strategies, environmental modifications, and modified teaching approaches are all methods which can improve functioning in the short and long-term. Strategies such as curriculum-based measures are ideal for frequent progress monitoring because such measures are sensitive to uneven progress patterns. There are few empirically-validated interventions for students with TBI; thus, school teams will want to draw from research-based interventions for specific areas of deficit, such as attention, memory, executive functions, and academic skills (reading, math, written language).

School psychologists can also use functional behavior assessments and behavior intervention plans to address social and behavioral deficits that are often evident post-TBI. It is generally recommended to avoid interventions that rely solely on contingency management (rewards and consequences), particularly if the behavior problem is due to a skill deficit rather than a performance deficit. The child may no longer be capable of performing the appropriate behavior without active re-teaching of skills or compensatory strategies.

Counseling can help a child cope with his or her altered state of identity and personal expectations, changes in friendships, and stress within families. The school psychologist might use brief counseling sessions to help monitor social and emotional circumstances and assist the student in addressing identified difficulties. Counseling sessions might focus on the development of specific strategies the child might use when confronted with decisions, problems, and difficult situations.

Students with newly acquired TBIs may make rapid changes; therefore, goals and objectives may be revisited and revised every 4-6 weeks rather than annually. The case manager must ensure that these periodic reviews are held frequently and that regular communication between school staff, parents, medical personnel, and any outside therapists is maintained.

Prevention Strategies

TBI is sometimes referred to as a “silent epidemic” because most individuals do not know about brain injury or its consequences and impact on behavior. For example, minor blows to the head or “concussions” are often not perceived as brain injuries, yet 15% of these individuals will have chronic problems post-injury.

In addition to learning about transition and intervention strategies for students who have sustained a TBI, school psychologists can become more involved in specific head injury prevention initiatives. Many of these can be carried out in the school setting, such as the Impact Concussion Management Program (www.impacttest.com) and the CDC’s “Heads Up: Concussion in Youth Sports” initiative (www.cdc.gov/concussion/HeadsUp/youth.html). Finally, the school psychologist might develop partnerships with community agencies or athletic programs to implement a helmet awareness program.

References


