Traumatic brain injury (TBI) is a federally recognized disabling condition which involves behavioral and academic difficulties. Dysfunction varies with the type and location of injury and with the age of the child. School personnel traditionally have had little exposure to TBI, and there is great potential for problems to occur due to lack of knowledge of legal requirements, miscommunication, and territoriality issues. Assessment procedures, including tests of intelligence, academic achievement, and social/emotional functioning, are conducted by a multidisciplinary team to determine the special services that may be needed. Determination of appropriate placement should be dependent upon individual characteristics of the child. Individualized Education Program objectives should be developed initially for achievement over short periods of time, to best chart recovery of function and modify the program to suit the child's needs. Parental input should be actively sought and used when constructing objectives. Modifications in teaching style and methods, testing, behavior management techniques, length of lessons and homework assignments, and student expectations may be necessary. Suggestions are offered to help schools adjust to the TBI child, and a table lists barriers to serving children with TBI. (JDD)
Barriers to Serving Children with Traumatic Brain Injury in the Public Schools: Problems and Solutions

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Running Head: Barriers in the Schools

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Barriers in the Schools

Abstract

Public schools have the reputation of being difficult and obstructional when dealing with the special needs students. This problem is compounded when children with traumatic brain injury (TBI) enter a public school because of lack of knowledge about TBI, the invisibility of TBI, and the cost in time, effort, equipment, and staff education required to appropriately and legally serve such children. This article discusses potential problems faced by children with TBI, their parents, and their schools, as well as offering solutions to dealing with those problems.
Serving children with TBI in the public schools: Problems and solutions

Model Scenario

Charles, an 8-year old boy, enters the front door of his elementary school tentatively. It's been 4 months since he was last here; that was before the automobile accident in which he suffered severe closed head injuries. He has spent those past 4 months in a hospital rehabilitation program aimed at getting him as ready for this day as he can be. His teacher and the physical therapist from the rehab team visited here a month ago. They told his principal and teachers about what had happened to him and about how he is a little different than he had been before - about how he sometimes gets lost and angry, forgets what he is doing, and has trouble concentrating, even though he has not visible scars or overt "handicap," and about how much progress he has made since the accident. His rehab teacher and the therapist said the teachers and his friends were all happy that he was returning. Charles' parents, his rehab teacher, his therapist, and his doctor had met with his second grade teachers, the special education teacher, the school nurse, and the principal to talk about how best to help him adjust to being in school again. His second grade teacher, school nurse, and special education teacher even came to see him in the rehab school to see how he was doing. Charles will
spend part of his day in the special education room so that
the special education teacher, with help from the district
specialist in head injury, can help him with his work and
behaviors. His mother and father are going to be helping
out once a week in his second grade classroom and special
education room until the end of the year. His teacher and
therapist from the rehab hospital will come to school about
once a month to see how he is doing.

Charles' principal greets him at her office door, says
how glad she is to see him, and walks Charles and his
parents to his second grade classroom.

Legal and Financial Considerations of Special Education

The public school system is required to educate and
serve all children with disabilities, whether those
disabilities are acquired or congenital in nature.
According to the 1975 Education for All Handicapped Children
Act (EAHCA), also known as Public Law 94-142, all
handicapped children ages 3-21 are entitled to (1) a free
and appropriate public education, (2) an education in the
least restrictive environment, (3) appropriate and non-
baised testing to determine educational needs, (4) access to
appropriate related services, (5) an individualized
education plan, (6) services provided by qualified and
trained personnel, (7) due process procedures, and (8)
access to all of these services no matter the extent of
their disability (known as the "zero reject" rule). PL94-142 also includes provisions for the funding of such services. The enactment of PL99-457 (Amendments to Part H of PL94-142) extended the age range to include children 0-3. On October 31, 1990, EAHCA was amended and its name changed to the Individuals with Disabilities Education Act (IDEA). Traumatic Brain Injury was added as a category under which children could receive special services.

All of these required special education services are very costly. Pupil to teacher ratios are lower in special education classrooms, so teachers must be hired per pupil. Specialized equipment and materials are often needed. Related services are often expensive. Physical modifications to existing buildings may be necessary. If the child in question is not able to receive services deemed most appropriate in the public schools, then private facilities must be contracted at the expense of the public school system. Add to all of these considerations the fact that the number of children qualifying for special education services is growing (due to factors such as higher rates of identification, and medical advances that increase the likelihood that medically fragile children will live to school age), and many school districts nationwide find themselves in serious financial difficulty due in large part to the cost of special education. Although federal funds
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arc tied to the number of special education students in a school district, these funds are insufficient to cover costs, and the school district must use funds from other areas to supplement the federal monies. Resistance to paying for more special education services and programs is common in many districts not because they wish to underserve the handicapped, but because they are financially strapped. Nevertheless, public schools are required to provide a free and appropriate public education to all handicapped children, regardless of the extent of the handicapping condition or the cost of the required services.

TBI as a handicapping condition

Traumatic brain injury is one of the specific handicapping conditions covered by IDEA. Children with TBI often display behaviors that appear similar to those seen in children who are classified as mentally retarded, learning disabled, emotionally disturbed, or developmentally delayed. Previous to the 1997 changes to PL94-142 children with TBI were often served in special education classrooms for those with mental retardation (if the resulting dysfunctions involve academic and adaptive skills), learning disabilities (if the resulting dysfunctions are mostly academic) or emotional disturbance (if the dysfunctions are mostly social/behavioral/emotional in nature), or were not served at all, "falling through the cracks" (Savage & Carter,
1991; Waaland, 1991). TBI is quite different from mental retardation, learning disabilities, developmental delays, and emotional disturbance in the nature of the dysfunction, appropriate treatment, and prognosis.

Dysfunction resulting from TBI varies with the type and location of injury, and with the age of the child, and may easily involve behavioral and academic difficulties. The timeline of recovery from TBI is variable, and may involve a change in and recovery of functioning that will be more rapid than special education teachers in the public school are used to seeing in their pupils. Disabilities due to head injury may be situation-specific, coming into play when the child is in a noisy and busy room, using multiple materials concurrently, required to make quick decisions, on the playground, or walking through the school alone. Children with TBI often recall what they were able to do before their head injury and recognize themselves as disabled. They may have an acquired seizure disorder. They may also, in many cases, have no visible injury as even the severest of closed head injuries may leave no tell tale scarring or other visible markers. Some even refer to closed head injury as a "silent epidemic." The failure to have a visible sign may add to difficulties in receiving services since the child looks the same as before the accident. Additionally, they may return to their home school after having spent some time
in a rehabilitation setting designed specifically to serve their needs, and staffed with professionals trained in treatment and education of children with TBI. Adjusting to the new limits of their abilities and to a new setting in which little is known about TBI and its sequelae may result in emotional difficulties for the child and family members for which counseling and/or therapy is warranted. (Additional factors affecting family adjustment also may be present.) These difficulties are compounded, as noted, by the fact that children who have experienced head injury will often appear outwardly as they did before their injury, misleading those around them into thinking the child will function as before the injury. The child may even have few major behavioral changes, but the dysfunctions they do have are real and have the potential to affect drastically their lives both in and out of school. Cohen and Titonis (1985) note that the student with intact verbal skills who is physically normal but has cognitive deficits is the most likely to be the victim of higher teacher expectations. In contrast, the child with TBI who has physical and verbal evidence of their trauma may have their cognitive abilities seriously underestimated.

Potential Problems in the Public Schools

Problems encountered in the public schools by children with TBI and their families are quite similar to problems
encountered by many children and families attempting to receive appropriate special education services. On-site personnel including administrators, school psychologists, educational diagnosticians, counselors, teachers, and staff traditionally have had little exposure to children with head injury in either their professional training or experience. (A survey by Savage found that only 5% of special education teachers had received information about severe head injury in their undergraduate programs, and 8% had received such information in graduate school [Savage & Carter, 1991]). There is great potential for problems to occur that are due to lack of knowledge about what the law requires, miscommunication, lack of knowledge and training, and issues related to territoriality.

Appropriate assessment of current level of functioning

Before a child can receive special education services, an educational need that can be met with such services must be established. This is usually done through assessment procedures conducted by qualified personnel who make up a multi-disciplinary team (MDT). Included on the MDT may be such people as the school nurse, counselor, diagnostician, psychologist, administrator, speech therapist, and special
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and regular education teachers. For children with TBI it would be advisable to include team members and teachers from the rehabilitation hospital, physical and occupational therapists, and a clinical neuropsychologist on the MDT.

Procedures used in the schools for psychological and academic assessment typically involve administration of tests of intelligence, academic achievement, and social/emotional health and functioning. Other measures may be included depending on the suspected nature of the disability. Such tests may not be appropriate for assessment of children with head injury, depending on the normative sample and the types of abilities assessed. Scores earned on such tests by children with TBI require different interpretation than scores earned by children without history of head injury. Although diagnosticians know that an intelligence test score measures the functioning of a child on the day of testing, and that such scores may vary slightly from day to day, such scores are usually interpreted as having some value in predicting future school performance by measuring the academic potential of the child. With children who have TBI, intelligence test scores indicate only their functioning on that particular day and in that particular situation. No predictions for future performance can or should be made from such scores, due to the artificial nature of the
testing situation, simplicity of test questions, and the general inadequacy of formal testing to measure the functioning of the child in a more realistic and natural environment where their functioning tends to disintegrate (Baxter, Coho, & Ylvisaker, 1985; Cohen, Joyce, Rhoades, & Welks, 1985). Achievement test scores may indicate that a child with TBI is functioning academically at grade level and should be placed in the regular classroom. These students may not function as average students, even if test scores indicate they should be able to do so, performing unevenly and unpredictably instead (Cohen & Titonis, 1985). Classroom observations by a diagnostician and school nurse knowledgeable about TBI and its sequelae, as well as reports from the rehabilitation hospital teacher and team members, will be very important in determining how well the child with TBI can be expected to function in the regular classroom. Neuropsychological testing, with which many educational diagnosticians and school psychologists are unfamiliar, should always be included in an assessment of children with a history of head injury. The school district may have to negotiate a contract with a clinical neuropsychologist to obtain such testing. In addition, children who receive head injuries after the age of 12 should have a vocational assessment completed and appropriate programming should be undertaken (Cockrell,

**Appropriate programming and placement**

Aside from problems with assessment, problems with programming and appropriate placement in the least restrictive environment may arise, especially if the members of the MDT charged with developing an appropriate educational program are not knowledgeable about TBI. Timetables for recovery of functioning vary from patient to patient. It is essential that IEP goals and objectives are developed initially for achievement/completion over short periods of time (4-6 weeks), not over 6 months or a year as is traditionally done, to best chart recovery of function and modification of a child's program to suit his/her needs (Savage & Carter, 1991). Initially, modification of the length of a student's day may be necessary. Children coming out of a hospital setting may fatigue easily and require a place to rest during the day (Cockrell, Chase, & Cobb, 1990). Appropriate related services such as occupational, physical, and speech therapy, specialized transportation, and medical services the child may require should be addressed in the IEP. Extended school year services may be necessary to prevent regression and loss of skills.

Input from the child's parents regarding programming is often not sought by school personnel. Parents are the most familiar with their children and with how TBI has affected
their daily living skills. Parental input should be actively sought and used when constructing an IEP. Schools may not write "generic" IEP's for each special education student. Legally, all programs are to be individualized and their goals and objectives must be based on the student’s current level of functioning, not on what the special education teacher usually teaches. Children with TBI display such variable dysfunctions that individualization of their educational programs is extremely important, and parent input is vital.

In the child’s classroom, modifications in teaching style and methods, testing, behavior management techniques, length of lessons and homework assignments, and student expectations may be necessary. Diagnostic-prescriptive teaching should be the rule when dealing with any special education student. Task-analysis may be helpful for some students with TBI. Specialized equipment to aid the child with TBI in their education may also be necessary. If the child would benefit educationally from the assistance of an adult aide, parents may request one in the IEP. Should the child have a seizure disorder, teachers will need to be instructed about how the child manifests the seizures, and how to respond should a seizure occur. If medication needs to be administered while the child is in school, instruction should be undertaken to inform teachers about medication...
schedules and possible side effects of that medication.

Enactment of specialized treatment plans that schools are not accustomed to providing (e.g., cognitive rehabilitation) such as may be encountered when developing an IEP for a child with TBI often will be more costly than programs existing within the district. As noted earlier school districts can be somewhat resistant to paying for such special plans because of district-wide (and state-wide) competition for limited financial resources. Cost is a formidable barrier to the development of in-school programs for children in need of special services. Resentment is common from directors of other programs that are not federally mandated, and for which funding is not guaranteed (e.g., gifted and talented programs, kindergarten programs), on-site administrators, regular education teachers, and parents of children not receiving special education services. Their collective sentiments can be expressed strongly enough to be felt at the district level. Specialists writing IEPs often are instructed by district-level personnel how not to write goals and objectives to save the district money, regardless of what may be most appropriate for the child in question.

Children with TBI are frequently much more distractible and impulsive than other children. Modification of classrooms to minimize auditory and visual distractions may
be necessary. When out in the school at large their distractibility may lead them to wander, forgetting where they were originally going and what they were doing. Their inability quickly and successfully to process social cues in unstructured situations combined with impulsivity and lack of internal controls may lead to conflicts with their peers. It will be essential for school personnel to be aware of the possibility that such behavior is not intentional and not volitional. The invisibility of the disabilities caused by TBI may lead adults in charge to forget the underlying reasons for a child’s seeming noncompliance. Inappropriate discipline may be a frequent problem.

Children with TBI often display behavioral changes as a result of their head injury. Specific behavioral problems that may be evident will need to be addressed in the IEP. Techniques combining cognitive approaches and behavior modification will need to be employed when dealing with these sorts of problems. Cohen, Joyce, Rhoades, and Welks (1985) note that children with TBI do not usually benefit from a traditional behavior modification approach because this system relies heavily on an individual’s ability to pick up cues from the positive actions of others, to understand cause-effect relationships, to remember information, to generalize from one situation to another, and to control impulsive responses or
reactions, all areas in which children with TBI may possibly have difficulty (p. 400). Some types of head injury, such as damage to the posterior hippocampus, even result in nonresponsiveness to the traditional "laws" of operant conditioning, the central tenet of behavior modification. A more direct approach will have a greater chance of success. Since many schools use variations of traditional behavior modification in their classrooms and school-wide, a realization that a student with TBI may not be able to function successfully within such a system will need to be considered and likely will encounter significant resistance. Public schools are great believers in developing behavior plans for entire student bodies. In actuality, schools are not in the business of attending to individual problems and needs, but instead see their task as one of teaching children to think and behave in a standard, socially acceptable manner. It is rare for children to have individualized behavior plans unless they are seriously emotionally disturbed or conduct disordered. Resistance to implementing such plans is also strong, as many teachers perceive such children as "bad" and in need of punishment rather than planned intervention. School faculty and staff who are requested to recognize a child with the invisible
problem of TBI as having different "reasons" for misbehavior and therefore as needing a different response and correction plan may see such a plan as overly indulgent, and as expending too much energy on the problems of one child.

PL94-142 states that each child is entitled to an education in the least restrictive environment. Public school personnel often balk at this requirement when it is determined by the placement team that the least restrictive environment for a child with handicaps is the regular classroom. Teaching a room full of children without handicaps is a challenge. When a child requires special consideration, medical interventions, active reinforcement, help in planning and staying on task, modification of lessons and teaching techniques, extra teacher time in preparation of lessons, monitoring, and reporting to parents, etc. it may be understandable that regular education teachers do not support fully the reality of least restrictive environment. However, if a child with TBI can be served successfully in the regular classroom with modifications and support services, that is where the child belongs. Being in the regular classroom may help facilitate the re-acquisition of more normal behaviors and friendships. Social skills are often disrupted by head injury and need to be reacquired or at least honed. Modeling by other nondysfunctional children is an important method to make
available to children with TBI.

Children in regular classrooms are exposed to more information in a wider variety of formats than children in special education classrooms. A child with TBI may or may not be able to attend successfully in a regular classroom due to the high level of activity and plethora of distractors routinely found there. Determination of appropriate placement should be a new decision for each child, dependent upon individual characteristics of the child.

Should a child be unable to maintain successful performance (academic and behavioral) in the regular classroom with modifications and support services, it may be necessary to have the child spend part or all of the day in a special education classroom. The focus for a child with TBI should be eventual reintegration into the regular classroom milieu as long as being there is a positive experience in which success is experienced. With the current drain on school district funds due to special education, more and more students who used to be served in special education rooms are being served in regular classrooms with support services from consulting specialists.

**Ongoing monitoring of progress**

Monitoring the progress of the child with TBI is a team effort and requires an increase in the time school personnel
spend in communicating with the child's parents, rehabilitation team (who should continue to monitor the child's progress after release from the hospital), therapists, and doctors. It can also be expected that non-school personnel, including parents and various therapists, will be involved in the day to day activities of the child, and will be present on the school's campus. Just as the school personnel will need to be educated about TBI, non-school personnel may need to be educated about how a school works, and how they as non-school personnel can best help in the education of the child with TBI. Provided all parties work together for the welfare of the child without "claiming turf" or declaring superiority, problems of territoriality should be kept to a minimum.

Parents can be expected to increase their demands for communication from school personnel regarding the progress of their child. Parents need to understand that, although the school is required to serve the needs of their child, and they as parents have an obligation and right to see to it that their child is appropriately served, the school is also required to serve the needs of the other children attending that facility. Attempts by both parents and school personnel to be reasonable and understanding will go a long way to avoiding conflict. The school is required to inform parents of their right to due process if the parents
believe their child is not being served appropriately. No changes in their child's placement and/or program may be made without the parent's written consent. If parents are uncertain about their rights, the rights of their child, the appropriateness of the program outlined in the IEP, school compliance with the IEP, or any other aspect of their child's education they should contact a parent advocate to assist them. Advocates should be well-versed in the federal and state laws regarding special education, and in the way their particular school district deals with special education. The offices of most urban school districts will be able to supply parents with names of local advocates. In rural areas, a state level advocacy office may need to be involved by the parents. Organizations such as Advocacy, Inc. are willing to help in most areas.

Some modifications that will need to be made to accommodate a child with TBI are addressed at the district level. Modification of the building to assure the child can navigate within the school, provision of special equipment and special personnel (special education aide), and paying for medical services and private schooling (if either or both are deemed necessary by the MDT) are all considerations that will be handled at the district level and will cost extra money. Some resistance may therefore be expected when requests are made for costly accommodations and
modifications. Knowledge of the high costs should not stop parents from pursuing services that are needed by their child, but it should prevent them from making requests that will not serve to further their child's education in a meaningful way. Consideration of what is best for a child does not mean that everything that may possibly serve some child somewhere should be requested. Only those services that will help the specific needs of the individual child concerned should be sought. Communication between district personnel, school personnel, rehabilitation personnel, and parents will be crucial to the successful identification and implementation of services necessary for an appropriate education for the child with TBI.

Other Ways to Help Schools Adjust to a Child with TBI

The model scenario at the beginning of this article illustrated some of the actions that can be taken to help schools adjust to serving a child with TBI in as painless a way as possible. Some suggestions follow.

(1) Rehabilitation and hospital personnel should visit the school site well before the child is to reenter the school. An assessment of potential problems regarding the physical layout of the school should be completed and recommendations made for modifications.

(2) School personnel who will be directly involved with the child should visit the child in the rehabilitation
center before release to meet with specialists and to see first-hand how the child is functioning.

(3) The rehabilitation and hospital personnel should in-service teachers, administrators, and staff about TBI in general and about this child’s needs in particular.

(4) Written information concerning head injury should be made available to the school diagnostician, counselor, teachers, site administrator, staff, and director of special education services at the district level.

(5) Specific information from the rehabilitation center/hospital regarding the child’s medical condition, medication regimen, diagnostic/assessment outcomes, and educational progress since the injury should be forwarded to the appropriate personnel at the school.

(6) Parents would be well-advised to seek the services of a parent advocate knowledgeable in special education law and procedures to ensure fair and legal treatment of their child. Agencies such as Advocacy, Inc. exist largely for this purpose.

(7) Parents should be persistent and firm, but not belligerent, in their requests of the school.

(8) Parents should take an active role in the education of their child, and not expect the school to do it all on their own. If parents wish to be kept informed and
considered active partners in their child's education, they need to put forth effort to maintain communication, respond to school requests, attend meetings, and follow through at home.

(9) The school should be prompt in their implementation of modifications. Any delays should be disclosed to the parents with expected completion dates included.

(10) School personnel should be accommodating to parent requests to visit their child's classroom and participate in educational planning. Parent requests for meetings and information should be met.

(11) Communication between school, parents, and rehabilitation team members should be on-going and as positive as possible.

(12) Keeping in mind that the welfare of the child is what is most important will help keep participants in the special education process focused and headed in the right direction.

Children with TBI present a particular challenge to the public schools in terms of knowledge about TBI, willingness and capacity to serve the child appropriately, and use of the team approach to educating children with special needs. When school personnel, medical personnel, and the child's family work together in an on-going manner to attain the best possible educational situation for the child with TBI,
then at the very least the child should receive an educationally and behaviorally appropriate individualized education.
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