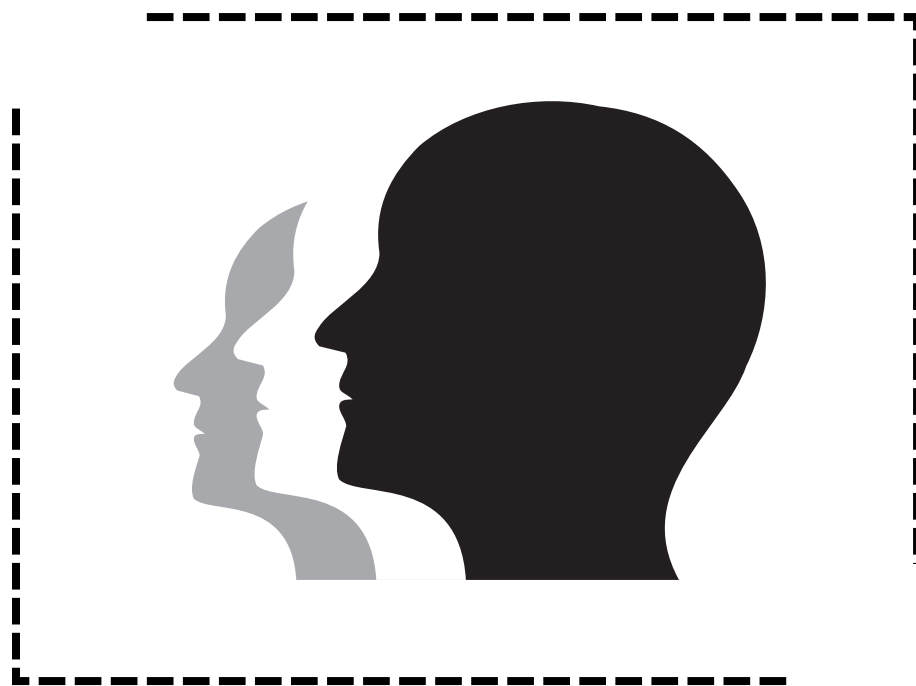


Special Education Evaluation and Services for Students with Traumatic Brain Injury: A Manual for Minnesota Educators



Minnesota
Department
of **Education** 

Division of Special Education

1500 Highway 36 West
Roseville, Minnesota 55113-4266

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**Special Education Evaluation and Services for Students with Traumatic Brain
Injury:
A Manual for Minnesota Educators (Revised 2003)
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Special Education Evaluation and Services for Students with Traumatic Brain Injury: A Manual for Minnesota Educators (Revised 2003) has been written to assist individuals responsible for educating students with a traumatic brain injury (TBI). The manual is divided into five parts:

**Part I
Introduction and Definitions**

**Part II
Traumatic Brain Injury as a Disability**

**Part III
Referral, Eligibility and Evaluation of the Student with TBI**

**Part IV
Instructional Strategies for the Student with TBI**

**Part V
Appendices:**

TBI Summary Sheet
References and Recommended Readings
Educational Resources
Community Resources
Minnesota State Agencies
National Organizations

**Part VI
Black Line Masters**

The manual is organized to assist the reader in identifying content specific information. Providing an appropriate education for students with TBI requires teamwork among educators, families, agencies, and communities. Because of the long-term nature of the deficits resulting from TBI, a continuum of services must be available to assure that professionals in one arena become conversant with those in other areas of specialization. The needs of students with TBI may be extensive. Coordinated teamwork will help students with TBI in reaching their maximum potential as members of society.

Portions of this manual are excerpted from documents produced by the following organizations (permission granted):

Virginia Department of Education and the Rehabilitation Research and Training Center on Severe Traumatic Brain Injury, Richmond, Virginia

Guidelines for Educational Services for Students with Traumatic Brain Injury

Bureau of Education for Exceptional Students: Florida Department of Education

What We Know About Educating Students with Traumatic Brain Injury

Utah State Office of Education

Guidelines for Serving Students with Traumatic Brain Injury

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Introduction

The frequency of traumatic brain injury (TBI) in children and youth is staggering. Each year in the United States, as many as one million children and youth will sustain brain injuries as a result of motor vehicle accidents, falls, sports, and abuse. The largest group of individuals who sustain a traumatic brain injury fall within the 15-24 year old age group, but the frequency is nearly as high for youngsters under 15 years of age.

In 1984, the State of Minnesota officially recognized the needs of persons with brain injuries and established a task force to study those needs. The task force submitted a report to the Commissioner of the Department of Human Services (DHS) in December of 1985. DHS completed a survey of County Human Service units to determine if community services were being provided to persons with brain injury. These studies resulted in the creation of a program within the DHS Long Term Care Division to oversee the coordination of services to persons with brain injury.

In 1991, re-authorization of the Federal Education for All Handicapped Children's Act, renamed the Individuals with Disabilities Education Act (IDEA), included traumatic brain injury as a separate disability category in special education. Soon after, special educators and advocates in Minnesota expressed a need to address services for students with traumatic brain injury. In 1993, the Minnesota Department of Education convened a work group of educators, parents, and experts in the field of brain injury to develop a definition of traumatic brain injury and criteria to determine eligibility for special education services as required by IDEA. In 1995, a subcommittee of this work group prepared a manual to help educators assess and serve students with TBI. This manual was updated in 2000, at which time Minnesota educators were serving 335 students identified under the primary disability category of TBI (as compared to 49 students in 1992, when child count statistics for this category were first collected). With this current manual revision in 2003, the MDE state child count for the Special Education Category of Traumatic Brain Injury has increased to 447 students, and is reflective of an annual 10% increase in this category since 1992.

Definitions

Federal Definition:

"TRAUMATIC BRAIN INJURY" means an acquired injury to the brain caused by an external physical force, resulting in total or partial functional disability or psychosocial impairment, or both, that may adversely affect 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; speech and language; memory; attention; reasoning; abstract thinking; judgment; problem-solving; sensory, perceptual and motor abilities; psychosocial behavior; physical functions; and information processing. The term does not apply to brain injuries that are congenital or degenerative, or brain injuries induced by birth trauma. (34 CFR: 300.7 [b] [12])

State Definition:

"TRAUMATIC BRAIN INJURY" means an acquired injury to the brain caused by an external physical force, resulting in total or partial functional disability or psychosocial impairment, or both, that may adversely affect a child's educational performance and result in the need for special education and related services. The term applies to open or closed head injuries resulting in impairments in one or more areas, such as: cognition, speech/language, memory, attention, reasoning, abstract thinking, judgment, problem-solving, sensory, perceptual and motor abilities, psychosocial behavior, physical functions, and information processing. The term does not apply to brain injuries that are congenital or degenerative, or brain injuries induced by birth trauma. (M.R. 3525.1348)

Analysis of this definition identifies two key factors to consider in making a determination that a student who has experienced a traumatic brain injury may be eligible for special education services:

1. Initially, there must be medical documentation that an 'external physical force' has injured the student's brain. There are children who have brain impairments as a result of infection, cerebral vascular accidents (stroke), brain tumors, or poison. These causes may have significant educational implications; however, these children should not be considered as having a traumatic brain injury as defined by Minnesota Rule. Eligibility in other categories could be considered by the team depending upon the educational needs and special education qualification process for eligibility.
2. In addition, there must be evidence that this injury has caused a functional impairment that adversely affects the student's educational performance. This evidence is determined through the special education evaluation process. Section 504 of the Rehabilitation Act should be considered if the brain injury is mild and minor accommodations are felt to be sufficient in meeting needs in the general education setting.

Related Terminology

Head Injury: Defined as damage to any part of the head. It is a broad term that encompasses injury from internal accidents such as stroke or external forces such as a blow to the head. It can include injuries to the face, scalp, skull or brain.

Open Head Injury: An injury in which the brain tissue is penetrated from the outside, as with an obvious wound to the head, such as a gunshot wound or a crushing of the skull. The injury tends to result in localized damage and somewhat predictable impairments based on locale and degree of damage.

Closed Head Injury: An injury in which there is no open wound to the head, with damage caused by a blunt blow to the head or an acceleration/deceleration of the brain within the skull. The injury results in more diffuse damage with variable and unpredictable consequences.

Traumatic Brain Injury (TBI): An acquired injury to the brain caused by an external physical force, resulting in total or partial functional disability and/or psychosocial impairment. Causes may include motor vehicle accidents, falls, bike accidents, sports-related injuries, assaults and child abuse.

Acquired Brain Injury (ABI): A more general term that includes all types of traumatic and non-traumatic injury to the brain. Causes may include head injury; anoxic injuries caused by accidents, such as choking; near drowning; infections such as meningitis and encephalitis; strokes; tumors; metabolic disorders such as insulin shock and liver or kidney disease; and toxicity from chemical agents.

Mild TBI: Synonymous with post-concussion syndrome. The condition is present with a brief loss or no actual loss of consciousness. Symptoms include dizziness, headache, nausea, vomiting, lethargy, irritability, difficulty with concentration or remembering the injury. Ninety percent of injuries resolve their symptoms within days to several weeks.

Moderate TBI: Loss of consciousness up to 24 hours. Neurological signs may include bleeding, skull fracture, or contusions; 33 to 50% of individuals with moderate TBI have lifetime problems.

Severe TBI: Coma duration exceeds 24 hours. Multiple problems can exist for a lifetime for up to 80% of those with severe TBI.

Definitions of BRAIN INJURY

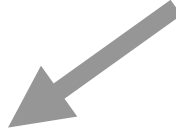
Congenital Brain Injury
(Prior to/During Birth)



**Consider other
Categories**

(Does not meet MN definition
of TBI)

Acquired Brain Injury
(After Birth)

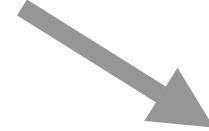


Traumatic Brain Injury

Caused By:

- Motor Vehicle Crashes
- Falls
- Bicycle Injuries
- Recreational Vehicle Crashes
- Child Abuse
- Brain Surgery

(Meets MN Definition of TBI)



Non-traumatic Brain Injury

Caused By:

- Anoxic Injury
- Infection
- Stroke
- Toxins
- Tumors

Consider other Categories

(Does not meet MN definition of TBI)

Understanding the Brain

The brain is an incredibly complex and vulnerable organ, and virtually controls everything we do and say. The brain is made up of microscopic neurons held in place by a jelly-like substance. Chemicals in the form of neurotransmitters allow neurons to rapidly and efficiently send, receive, and store information. At birth, the brain contains all the neurons it will ever have, many of which will not be retained as the brain ages and reaches adult maturity. Through a process known as "pruning" the brain actually loses the neuronal connections that are less used, and forms strong connections in the synaptic circuits that have been used the most. This process is both constant and immediate; synaptic connections can form in a matter of hours or days.

Experience, particularly throughout childhood, 'sculpts' the brain. Immature neurons are often likened to a sapling; with time and activity, these cells will later develop into lush, mature 'trees', connected to each other through a complex network of roots and branches. As the brain works, these neuron cells will develop synapses and dendrites, enabling the cells to handle more and more information. This process transforms into what we call 'learning', and includes the ability to process and recall information, problem solve, analyze, create, and communicate. This learning process continues throughout a person's lifetime, although neurons that are not utilized by the individual do not develop and are eventually pruned away.

What Happens When the Brain is Injured

Despite the fact that the brain is cushioned by cerebral-spinal fluid and encased within the skull, the brain can be easily damaged by shaking, falls, blows or other violent events. Often, many neuron cells are irreversibly destroyed; others remain alive but exist in a vulnerable state, sometimes for days or even months after the injury. Damage to the brain often results in localized injury to specific areas of the brain, injury to blood vessels that supply oxygen to the brain and regulate blood flow, and disruption to neuro-chemicals. Brain injuries in children are often diffuse, meaning that the injury can affect many areas and functions within the brain. Since areas of the brain are interconnected, damage to any part of the system can often result in cognitive, motor, sensory, emotional, and behavioral changes. The organization of the brain is complex, but it is known that certain areas regulate specific functions. When an injury occurs to that part of the brain, specific deficits can often be predicted.

Frontal lobe damage is often seen in a traumatic brain injury, and is significant in that it often results in problems with behavior regulation and executive functions, such as organization, initiation, focused attention, inhibition, etc. Frontal lobe damage also contributes to delayed onset of symptoms, which can be problematic.

Impact Injuries

When a fall, vehicle crash or other similar accident causes a brain injury, the brain is damaged by both the direct impact and the movement of the brain inside the skull, resulting in stretching, contusions and lacerations of the brain tissue. When the brain is forcibly rocked forward and backward within the skull, neuron cells shear above the brain stem and deep within the brain itself, and brain tissue is slammed against the inner surface of the skull. Injury resulting from the initial movement is called *coup* (acceleration); the *contre-coup* (deceleration) defines the area of injury occurring in the opposite part of the brain as a result of the secondary movement. This is often the site of the more serious damage. In many injuries, the frontal and temporal lobe areas are most vulnerable to damage because of general location and the fact that the inner skull surface of this area is rough and can cause a great deal of surface damage to brain tissue. Diffuse damage to the brain can result even when there is no loss of consciousness. The brain may not fully recover from damage caused by impact, skull surface contact and shearing, and the child's ability to learn may be significantly affected by these injuries.

Brain Reaction to Injury

Following a brain injury, there may be a biochemical reaction in the brain, depending on the severity of the injury. The neuron cells begin to absorb water, which then causes swelling in the brain. Damage to the veins or arteries may cause bleeding within the brain. Either condition may cause a dangerous increase in pressure inside the skull, possibly exacerbating the existing injury; immediate medical attention is often required.

Severity of Injury

Brain injuries are often medically categorized as mild, moderate, or severe, depending upon the length of time the child is unconscious and/or the length of post traumatic amnesia (period of time following an injury in which child exhibits a loss of day-to-day memory for recent events). The most serious injuries result in unconsciousness or coma. As an initial measure of severity and outcome prediction, children will often be evaluated with the Glasgow Coma Scale, the Ranchos Los Amigos Coma Scale, or the more recently developed Disability Rating Scale. Children with moderate to severe injuries almost always incur some long-term consequences in regard to functional impairment. It should also be noted that some injuries may not lead to coma, but may still have significant cognitive or behavioral consequences. After a mild injury, symptoms such as headache, nausea, dizziness, disorientation, confusion, agitation, and fatigue are common. Such symptoms generally improve quickly, but for some individuals, may persist for weeks or months. In some cases, a "mild" injury may result in long-term cognitive and/or behavioral problems.

Age at Time of Injury

While young children may physically recover more quickly from serious accidents than adults, the long-term cognitive and/or behavioral problems are often more pronounced. Generally speaking, the younger the child, the more profound the long-term effects will be. Injury to a developing brain alters the ongoing development. Although previously learned information is often retained, new learning may be difficult. Younger children do not have the same knowledge base to build upon and may experience greater difficulty mastering new skills.

Because childhood injuries occur when brains are still developing, some deficits may not be apparent until later in life when those developmental skills are required. It is recommended that both documentation of the brain injury and monitoring over time for delayed consequences is addressed.

KEY FACTS

- Each child with a traumatic brain injury presents a unique learning and behavioral profile.
- When there is physical trauma to the brain, the damage is often diffuse.
- The frontal and temporal lobe areas of the brain are particularly vulnerable to injury.
- The child's age at the time of injury influences the outcome. The younger the child, the more profound the effects may be.
- Injuries to a developing brain may result in delayed consequences. Anticipate and prepare for possible later learning problems.

Diagram of the Brain

Frontal lobe

Personality, judgment, reasoning, problem solving, and inhibition. Perhaps the highest cortical functions are the function of this lobe. An area designated for language comprehension called Broca's area is contained within the left frontal lobe hemisphere.

Parietal lobe

The right side affects left-side motor function, including: strength, coordination, and sensation. The left side affects right-side motor function.

Occipital lobe

This is the primary visual area where the brain receives the visual "picture" from the eyes and interprets it.

Cerebellum

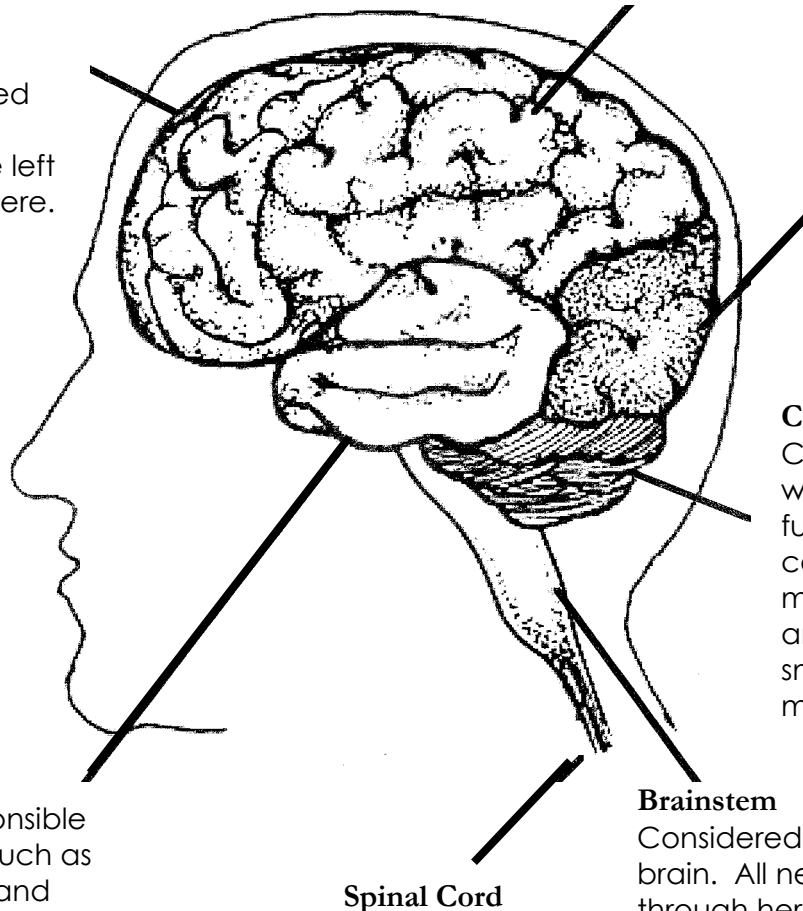
Chiefly involved with muscle function, the cerebellum helps maintain balance and provide smooth directed movements.

Temporal Lobe

The right side is responsible for perceptual skills such as spatial relationships and visual organization. The left side controls expressive language and is called Wernicke's area. Although memory is a function of the brain as a whole, memory is strongly language based. Damage to the temporal lobe significantly affects these skills.

Brainstem

Considered the stalk of the brain. All nerve fibers pass through here, including the cranial nerves. The brainstem performs sensory, motor, and reflex functions. Of primary importance are the vital nerve centers that control heart action, blood vessel diameter, and respiration.



Comparing Traumatic Brain Injury To Other Primary Special Education Categories

Until the TBI Category was included as part of Minnesota Rule, youth with brain injuries often did not meet criteria for services under special education categories. Students with mild brain injury (e.g. post-concussive syndrome) often were determined to be ineligible for services due to limitations of standardized educational tests in measuring deficits in motivation, information processing, and organization. For individuals who did meet criteria for eligibility in areas such as specific learning disability, emotional/behavioral disorders, or cognitive impairment, educational practices often conflicted with the individual's needs for flexible scheduling, altered expectations, and integrated therapies. It became clear over time that eligibility and program decisions based on existing categorical programs did not meet the multiple and changing needs of students with mild, moderate or severe traumatic brain injuries.

Although students with a traumatic brain injury may appear to have similar deficits when compared to other students with disabilities, they in fact have unique learning styles and educational requirements. The student's needs are best addressed under the TBI category.

Some unique differences seen with traumatic brain injury and some implications for their educational programming include:

- (1) Students with moderate or severe brain injury may score in the significantly sub-average intellectual functioning range on standardized tests but typically have an uneven cognitive profile. They also demonstrate unique sensory, motor, and learning problems.
- (2) Many students with brain injury score within normal limits on tests of intelligence but show uneven cognitive skills resembling students with specific learning disabilities. Both types of students may benefit from similar teaching strategies: task analysis, multi-sensory teaching, compensatory strategies, teaching to strengths, and an emphasis on meta-cognition. However, students with brain injury are distinguished by their ability to retain information or quickly regain skills learned *before* the injury, but are impaired in their ability to learn *new* information. Their learning profile is not only varied but can contain large gaps. For example, the student with TBI may quickly reacquire basic reading or arithmetic skills learned prior to injury but may struggle to retain new information.
- (3) Students with TBI may display depression, anxiety, social withdrawal, severe mood swings, and other symptoms characteristic of children with severe emotional or behavioral disorders. The cause and remedy for these symptoms are distinctly different from those for psychiatric disorders. Damage to areas of the brain involved with emotions are coupled with the student's reaction to his/her diminished skills, and may intensify emotional reactivity.

Traumatic Brain Injury as a Disability

(4) Students with Attention Deficit Hyperactivity Disorder (ADHD) and brain injury share similarities in their impulsive, inattentive behavior, and their responses to similar intervention strategies. However, unlike students with ADHD, students with TBI may have *reduced* activity or energy, consistent memory problems and decreased initiative that impairs the ability to learn strategies. The student with TBI may also be unresponsive to many cues, cognitive strategies, and insight-oriented approaches that may prove useful for the student with ADHD.

(5) In contrast to the stable cognitive course of children with developmental disabilities, students with TBI may show erratic cognitive progression. In the early months following a brain injury, a student may experience confusion, disorientation, and limited control that is atypical of students who are developmentally delayed. Many students show striking gains in the first several years following an injury, only to "grow into" learning problems during later stages of development.

(6) Following a brain injury, a student with TBI may appear as he/she was before; however, there may be changes not readily apparent to others. Parents may be reluctant to accept the permanent nature of the disability and may attribute problems to pre-injury personality (e.g. "He always had a bad temper."). Teachers may also blame a student's reduced initiative and attention on 'laziness', 'poor motivation', or 'special treatment in the hospital'. In fact, these behaviors are often characteristic of a student with an injury to the frontal lobe of the brain.

Summary: Similarities and Differences Between TBI and Other Primary Special Education Categories

TBI and Developmental Cognitive Disorders (DCD):

- Similarities
 - Moderate to severe TBI may yield significantly low IQ scores
 - Confusion and disorientation
- Differences
 - Students with TBI typically:
 - Have an uneven cognitive profile
 - Demonstrate unique sensory, motor, and learning problems
 - Follow erratic cognitive progress
 - Demonstrate early gains, but this may be overshadowed by later learning problems

TBI and Specified Learning Disabilities (SLD):

- Similarities
 - May score within normal limits (IQ) but show uneven cognitive skills
 - Benefit from similar teaching strategies
- Differences
 - Students with TBI may regain pre-injury information and skills quickly, but have difficulty learning and retaining new information

Traumatic Brain Injury as a Disability

TBI and Emotional and Behavioral Disorders (EBD):

- Similarities
 - Depression, anxiety, social withdrawal, severe mood swings, etc.
 - Emotional centers of the brain can be affected
- Differences
 - Causes and management of inappropriate behaviors are distinctly different
 - With TBI, reaction to diminished skills may intensify emotional reactivity

TBI and Attention Deficit Hyperactivity Disorder (ADHD- Multiple Categories)

- Similarities
 - Impulsive, inattentive behavior
 - Responsive to similar intervention strategies
- Differences
 - Students with TBI typically:
 - Have reduced energy, memory problems, decreased initiative
 - Are less responsive to cues
 - Are less responsive to insight-oriented strategies

Common Questions

1) What happens to the brain when it sustains a traumatic injury, and how does this affect learning?

Brain tissue is very fragile and has a consistency like gelatin, while the inside of the skull has a rough, bony surface. When an external force injures the head, the brain moves around in the skull (acceleration/deceleration), tearing, ripping and bruising of brain tissue as it comes into contact with this rough surface. Tearing or shearing of tissue deep in the brain may occur as well. There also may be widespread damage within the cortex that can impair any number of functions in unusual patterns and may be associated with disorders in attention, concentration, and efficient information processing.

2) What about brain injuries resulting from external and/or secondary causes, but are not as clearly defined as other more common causes of TBI? (e.g. Shaken Baby Syndrome, brain surgery)

Some injuries are more straightforward than others in terms of how they apply to Minnesota criteria under the TBI Category. If educators are uncertain about how TBI criteria can be applied to individual situations, they should revisit the state definition and take all factors into consideration. In the case of shaken baby syndrome (SBS), it is now a commonly accepted diagnosis under the category of TBI in that a brain injury to an infant/toddler has occurred involving external physical force (severe shaking perpetrated by another individual). In the case of medically necessary brain surgery and resulting secondary brain injury, it is generally agreed that such injury, although unavoidable, is external in nature and could be considered under the category of TBI.

3) Medical diagnoses made in reference to TBI are sometimes vague and ill-defined, such as 'possible' or 'probable' head injury, concussion, subdural hematoma, or other medical terminology. What specific terms are needed for acceptable documentation of a medically verified traumatic brain injury?

The very nature of brain injury can make the medical diagnostic process a sometimes difficult and challenging task for physicians. When injuries are moderate or severe, the process is often straightforward. When injuries are mild, there is likelihood that there will be insufficient or no medical documentation, and a lack of acknowledgement that there may be some short or long term educational problems. It is the educator's role to assist the family in following up with their physician to establish or clarify the diagnosis. There are no specific terms required for acceptance of a medical diagnosis of TBI, although it is generally recommended that the term, 'traumatic brain injury' is used in the written documentation. Written documentation may include a formal signed letter or medical dictation with the doctor's name and title. Secondary references, i.e. a reference to the medical diagnosis included in a neuro-psychologist's report, is not acceptable. There is no formal time limit, suggesting that a medical diagnosis made years ago may still serve

Traumatic Brain Injury as a Disability

as adequate documentation. However, it is strongly hoped that educational teams will encourage parents to provide updated medical information to be included in any evaluation process.

Educators should remember to procure an information release form from the student's parents/guardians if they become actively involved in communicating with the physician. A team may also want to consider using the **Medical Documentation Form** when requesting further information from a physician; this form can be found in the Black Line Masters section of this manual.

- 4) A student's medical records indicate that there is documentation of a TBI and related medical care and/or hospitalization two months ago. However, the physician made a statement at the time of discharge that the patient has fully recovered with no indication of any cognitive or behavioral concerns. Yet school staff and parents have noted that the student has had problems with memory, concentration, organization, fatigue and depression. Grades are dropping, and parents are concerned. Can the school conduct a special education evaluation and consider qualification under the TBI category?**

Yes. There is current medical documentation that a brain injury did occur, and there are sufficient concerns in the school setting to warrant a special education evaluation. If the evaluation results indicate that there is a functional impairment attributable to the TBI, the team should then consider qualification under this category.

Although physicians are required to provide written documentation of a TBI diagnosis, it is the *special educator's* responsibility to determine if there are related educational needs, and the *educational team's* responsibility to determine qualification for special education services under the TBI category.

- 5) A student has no medical documentation of a past TBI, but an interview with a parent (or other anecdotal evidence) suggests that there was a previous TBI. The student's learner profile and educational needs also seem to suggest the presence of a brain injury. Can the student still be considered for qualification under the TBI Category?**

Not unless a physician provides documentation of a TBI. Parents/guardians may want to discuss this issue with their physician to determine the best course of action. Educational personnel may want to support these efforts by obtaining a release of information and providing the physician with academic/behavioral data and observations from the school setting.

- 6) A knowledgeable point of contact should facilitate the school reintegration process. Who could serve as that point of contact?**

A Physical/Health Disabilities (P/HD) teacher, special education teacher, school nurse, speech/language clinician, or school counselor could serve in this role. It is essential that this individual understands the unique characteristics of TBI, and the special considerations required for a successful reintegration of the student from

Traumatic Brain Injury as a Disability

hospital/rehabilitation setting to school. Furthermore, this individual may be required to seek additional support and/or coordinate efforts at the local school level to address student needs. Some typical issues for a student may include: interpreting and applying neuropsychological evaluation results to the educational setting; determining a safe and appropriate schedule; identifying accommodations and adaptations within the environment and curriculum; and providing factual information to others and clearing up misconceptions about TBI.

7) At what point should an initial evaluation be conducted?

If the child/youth has not yet been discharged from the hospital or rehabilitation facility, the TBI specialist should maintain close contact with the family and medical team to determine a probable timeline for discharge. The team may want to consider initiating the special education evaluation process prior to discharge to assure a smooth transition from hospital to school, particularly if the student will require significant accommodations and/or special education services. The educational team will want to avoid unnecessary duplication in the evaluation process, and should consider incorporating some or all of the neuropsychological evaluation that is typically completed prior to discharge from the hospital. Neuro-psychologists typically evaluate cognition and behavior and use norm-referenced standardized evaluation tools. Additional components of a special education evaluation could also be completed outside of the school setting, such as an observation of the student in an educational/therapy session in the hospital/rehabilitation clinic, parent interview, and file review. In such situations, anticipated needs in the school setting and the likelihood of a changing recovery will need to be taken into account.

8) How frequently should a student with a TBI be re-evaluated?

Since recovery from TBI can be sporadic and unpredictable, periodic re-evaluation is important in order to monitor progress, review instructional objectives, and revise programs. Rapid changes in many areas of the student's functioning during the first year after injury require more frequent evaluations to avoid basing intervention strategies and accommodations on outdated information. However, over-testing can also result in frustration for the student without significant results. Decisions regarding type and frequency of evaluations must be carefully considered by the team.

9) How might a school district demonstrate that a teacher or other professional has competencies and knowledge in the area of traumatic brain injury?

Professional competencies in the area of TBI have been developed and are available for review on the Minnesota Department of Education's website.

An individual who has met these competencies has:

- attended workshops and staff development activities on the topic of TBI
- demonstrated knowledge of TBI by accurately interpreting Minnesota definition and eligibility criteria

Traumatic Brain Injury as a Disability

- demonstrated understanding of recommended TBI evaluation tools, checklists, accommodations, educational strategies, instructional methods, and awareness of community resources

10) Why should a student be identified with TBI as the primary disability category as compared to another category?

If a student has a functional disability or psychosocial impairment as a direct result of a traumatic brain injury, it is important to recognize and document the primary event that created this impairment. This acknowledges that the individual may not have had a disability prior to the injury. It may also support the family's efforts to access community services and agencies that assist individuals with TBI. It should also be noted that some primary categories (including TBI) have exclusionary statements embedded in their criteria that refer to previously existing conditions. This should also be taken into account when evaluating and qualifying a student for special education services.

Possible Problems Following a Traumatic Brain Injury

Although each brain injury is unique, changes in physical ability, learning, behavior and personality are common. Frequently reported problems include:

Cognitive/Learning Changes	Social/Emotional and Behavioral Changes	Physical/Sensory Changes
concentration	anxiety	speech production
attention	agitation	swallowing
communication	mood swings	seizure disorder
writing skills	depression	vision
memory	self-centered	fatigue
problem-solving	impulsivity	motor skills
reading/math skills	grief/loss	sensory impairment
insight	low self-esteem	
perception	restlessness	
planning	lability	
judgment	lack of motivation	
sequencing	lack of inhibition	
orientation	vulnerability	
organization	peer relationships	

Community Resources

To better assist families in meeting the needs of their child and to provide an effective transition from school to adult settings, educators need to be aware of community resources that are designed to support children and youth with brain injuries and their families.

- **The Brain Injury Association of Minnesota** is a chartered affiliate of the Brain Injury Association of America, and is a non-profit organization that provides support and information to persons with brain injury and their families. Their mission is to create a better future for these individuals through brain injury prevention, research, education and advocacy. The Association sponsors classes, support groups, and informational meetings throughout the state of Minnesota, and will assist families in identifying community resources.

Phone (Metro office): 612-378-2742

In-State Brain Injury Help Line: 1-800-669-6442

Website: www.braininjurymn.org

Email: info@braininjurymn.org

- **Minnesota Rehabilitation Services (RS)** provides services to eligible individuals with disabilities who need assistance to prepare for, obtain or maintain employment. Priority for services is given to individuals with severe disabilities. RS is a statewide program. The RS counselor is a resource for vocational assessment, vocational counseling and planning, job training and placement, and identification of community resources that provide vocational support services. Students with disabilities often apply for RS services when they are ready to make post high school plans. To find out more information about RS services, call (651) 296-5616 in the Twin Cities Metro area, or 1-(800) 328-9095 in Greater Minnesota and ask for the phone number of your local RS office. The TDD/TTY number is (651) 296-3900.
- **Home and Community Based Services Programs** for children with special needs and their families are funded by the Minnesota Department of Human Services and accessed through County Human Services Programs. These programs provide funding for services that are necessary for an individual to remain in the community and avoid placement in more restrictive settings, such as nursing homes. Some individuals with

Traumatic Brain Injury as a Disability

traumatic brain injury may be eligible for services provided through the TBI waiver. These services include respite care, assistive living, behavioral programming, case management, cognitive rehabilitation, family counseling, independent living skills, personal care attendant services (PCA), and prevocational services. For more information, call the intake office at your County Human Services Program. For Hennepin County, call (612) 348-4500. For Ramsey County, call (651) 266-3622.

- **Additional community resources** may include community education programs, volunteer programs, and service clubs, and are listed in local directories.

Referral

Referrals come from a variety of sources, including parents, teachers, school nurses, or the medical or rehabilitative communities. A referral must include medical documentation of a TBI diagnosis by a physician, to be kept in the student's due process file. A form entitled, 'Medical Documentation Form' is included in this section and in the Black Line Masters Section of this manual, and is a useful documentation tool for physicians when communicating with school staff.

School Re-Entry

When a child is hospitalized as a result of a moderate or severe traumatic brain injury, the recovery process can be a long and arduous one for the child and family. It is extremely important that the health care professionals, parents and school staff work closely together throughout this period to assure a smooth re-integration from hospital to home and school. This manual includes a medical discharge documentation form and two re-entry communication protocols that a team may want to consider, and can be found in the following pages as well as the Black Line Masters Section. The collaborative team should develop a realistic timeline in regard to discharge, special education evaluation, and school re-entry. Identification of related roles and responsibilities of team members are also critical components of a re-entry process. For additional information, refer to 'Hospital to School: Working Together'; a booklet developed by Gillette Children's Specialty Healthcare, the Minnesota Department of Education, and the Brain Injury Association of Minnesota. This booklet is available by contacting any of these agencies.

**Medical Discharge Documentation For
School/Childcare Re-entry: Traumatic Brain Injury**

(Please send home with family at point of discharge, and fax to child's school.)

Date: _____

RE: (Child's name) _____

Medical Record Number: _____

Date of Birth: _____

Dear School or Child Care Provider,

This child has sustained a minor/mild brain injury and has been seen in the emergency room and/or hospitalized on the following date(s): _____. The child is being discharged today. Specific information and recommendations regarding a return to school or a childcare program are documented below.

Resume school/childcare program (Check one): homebound half day full day

Duration (Give dates): _____

Transportation (Check one): regular lift bus bus seatbelt helmet

Physical education class (Check one): resume regular class modify

If modified, list restrictions: _____

Contact sports (Check one): resume modify

If modified, list restrictions: _____

Presenting educational problems related to brain injury: _____

If additional information is needed about this child's return to school or childcare, contact:

(Name) _____ (Phone) _____

Physician's Name (if different from above)

Suggested Re-entry Protocol I

Student: _____ School/Grade: _____

Date of Injury: _____ Parent Name/Phone #: _____

- **Immediately Following Traumatic Brain Injury**

A school representative (TBI specialist, special education case manager, or school nurse) is assigned as the contact person by the administrator. The school representative will:

- Contact parent(s) to:
 - Inquire about their child's condition
 - Obtain release for hospital contact (get release to and from school)
- Contact the child's case manager at the hospital to:
 - Discuss the school's re-entry issues/questions
- Meet with the child's classroom teacher(s) to:
 - Inform them of the child's condition
 - Obtain/review current educational records

- **After Student's Condition Has Stabilized**

The school representative will:

- Contact the hospital case manager to:
 - Obtain information regarding the child's condition
 - Determine if/when to send school work

- **Prior To Discharge From Hospital**

The school representative will:

- Visit with student and rehabilitation staff
- Obtain copies of hospital evaluations **and** documentation of the medical diagnosis of TBI
- Conduct or arrange for inservice in school to:
 - Provide specific information about the student's condition
 - Provide general information about TBI
 - Discuss potential modifications, i.e., ramp, wheelchair, lighting

- **Immediately After Hospital Discharge**

The school representative will:

- Contact parent(s) to:
 - Determine when the child will be getting post-acute rehabilitative care
 - Set a tentative date for return to school, if no further rehabilitation is being provided
- Follow-up with hospital case manager
 - Get update on discharge condition/special needs, i.e., tracheostomy, ambulation
- Establish an educational team and designate a case manager (if different from representative)

The team will:

- Develop a tentative plan for school reentry (consider need for environmental modification, 504 Plan, special education evaluation)

- **Arrival At School**

The team will:

- Assign personnel to conduct initial evaluation and give feedback to teachers and parents
- Further modify classroom environment to meet student's needs

- **After First Weeks At School**

The team will:

- Reassess the student's needs and modify educational plan accordingly
- Maintain contact with parents and teacher

Suggested Re-entry Protocol II

Hospital and School Collaboration

Collaboration between the hospital, school and family is critical for a smooth transition of the young person with a brain injury. The following protocol, with family involvement and permission, is recommended.

1. The parent or a hospital representative calls the school district (representatives could include a director of special education, a traumatic brain injury resource person, or a Physical/Health Disabilities (P/HD) teacher to inform the district of a potential student with a traumatic brain injury that may require accommodations/modifications.
2. The school district identifies a resource person to serve as the hospital contact and to coordinate the school's preparation for the student's return. This resource person needs to be knowledgeable about TBI.
3. The resource person communicates with the appropriate school personnel (nurse, special education, regular education, and administration) regarding the student.
4. School staff, hospital staff and family continue to communicate throughout the student's hospitalization.
5. The resource person and selected school personnel (e.g., special education teacher, related service staff) attend a hospital discharge conference to gather information and obtain appropriate release of information to understand the student's needs. The educational team may want to consider initiating a special education evaluation at this time, so that the evaluation process is concurrent with school re-entry. A team member may also want to schedule an observation of the student in the hospital setting to coincide with this meeting.
6. The resource person contacts the special education director to arrange for paraprofessional support, special busing or alternative placement as needed.
7. The resource person meets with the parents and school staff to discuss the student's needs.
8. The school resource person or a hospital representative provides inservice with school staff and/or classmates, as needed or requested by parents or student.
9. The student re-enters school with the evaluation in process or services are in place. This may include an IEP or 504 Plan and necessary accommodations clearly documented.

A timely return to school is beneficial. Schools can customize a student's day to ease the transition and accommodate factors such as ongoing fatigue.

Eligibility Process

To determine eligibility for qualification of special education services under the TBI Category, a team must first assure that there is medical documentation of the traumatic brain injury completed by a physician, and kept in the student's school file. The team must then verify that there is a functional impairment attributable to the TBI that adversely affects the student's educational performance in one or more listed areas. This is determined through a comprehensive special education evaluation.

A multi-disciplinary evaluation team may include the following people: a parent, a trained and licensed professional who is knowledgeable in the area of traumatic brain injury, a licensed special education teacher, school nurse, school psychologist, DAPE teacher, general education teacher, therapist, and other appropriate related service providers. The eligibility criteria for TBI as written in Minnesota Rule 3525.1348 can be found on the following pages, as well as a streamlined TBI Criteria Checklist.

Role of the TBI Specialist

Although there is no specific teacher licensure for the Traumatic Brain Injury Category in Minnesota, a licensed special education teacher must be involved in identifying, evaluating, and serving students with TBI. The team must also include an education professional who is knowledgeable and has had training in the area of educating students with TBI; these knowledge and skill areas are clearly defined in the Minnesota TBI Competencies, which are available for viewing on the Minnesota Department of Education website.

Eligibility Criteria

3525.1348 Traumatic Brain Injury Entrance Criteria

The team shall determine that a pupil is eligible and in need of special education and related services if the pupil meets the criterion in item A and in items B and C as documented by the information gathered according to item D:

A. There is documentation by a physician of a medically verified traumatic brain injury.

B. There is a functional impairment attributable to the traumatic brain injury that adversely affects educational performance in one or more of the following areas: intellectual-cognitive, academic, communication, motor, sensory, social-emotional/behavioral, and functional skills/adaptive behavior. Examples of functional impairments, which may adversely affect educational performance, are:

(1) intellectual-cognitive, such as, but not limited to, impaired:

- (a) attention or concentration;
- (b) ability to initiate, organize, or complete tasks;
- (c) ability to sequence, generalize, or plan;
- (d) insight/consequential thinking;
- (e) flexibility in thinking, reasoning, or problem-solving;
- (f) abstract thinking;
- (g) judgment or perception;
- (h) long-term or short-term memory;
- (i) ability to acquire or retain new information;
- (j) ability to process information.

(2) academic, such as, but not limited to:

- (a) marked decline in achievement from pre-injury levels;
- (b) impaired ability to acquire basic skill (reading, written language, mathematics);
- (c) normal sequence of skill acquisition which has been interrupted by the trauma as related to chronological and developmental age.

(3) communication, such as, but not limited to:

- (a) impaired ability to initiate, maintain, restructure, or terminate conversation;

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- (b) impaired ability to respond to verbal communication in a timely, accurate or efficient manner
- (c) impaired ability to communicate in distracting or stressful environments;
- (d) impaired ability to use language appropriately (requesting information, predicting, analyzing, or using humor);
- (e) impaired ability to use appropriate syntax;
- (f) impaired abstract or figurative language;
- (g) perseverative speech (repetition of words, phrases, or topics);
- (h) impaired ability to understand verbal information;
- (i) impaired ability to discriminate relevant from irrelevant information;
- (j) impaired voice production/articulation (intensity, pitch, quality, apraxia, or dysarthria).

(4) motor, such as, but not limited to, impaired:

- (a) mobility (balance, strength, muscle tone, or equilibrium);
- (b) fine or gross motor skills;
- (c) speed or processing or motor response time;
- (d) sensory/perceptual motor skills;

(5) sensory, such as, but not limited to, impaired:

- (a) vision (tracking, blind spots, visual field cuts, blurred vision, or double vision);
- (b) hearing (tinnitus, noise sensitivity, or hearing loss).

(6) social-emotional-behavioral, such as, but not limited to:

- (a) impaired ability to initiate or sustain appropriate peer or adult relationships;
- (b) impaired ability to perceive, evaluate, or use social cues or context appropriately;
- (c) impaired ability to cope with over-stimulating environments, low frustration tolerance;
- (d) mood swings or emotional lability;
- (e) impaired ability to establish or maintain self-esteem;
- (f) denial or deficits affecting performance;
- (g) poor emotional adjustment to injury (depression, anger, withdrawal, or dependence);
- (h) impaired ability to demonstrate age-appropriate behavior;
- (i) impaired self-control (verbal or physical aggression, impulsivity, or disinhibition);
- (j) intensification of preexistent maladaptive behaviors or disabilities.

(7) functional skills-adaptive behavior, such as but not limited to, impaired:

- (a) ability to perform developmentally appropriate daily living skills in school, home, leisure,

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- or community setting (hygiene, toileting, dressing, eating);
 - (b) ability to transfer skills from one setting to another;
 - (c) orientation (place, time, situations);
 - (d) ability to find rooms, building, or locations in a familiar environment;
 - (e) ability to respond to environmental cues (bells, signs);
 - (g) ability to follow a routine;
 - (h) ability to accept change in an established routine;
 - (i) stamina that results in chronic fatigue.
- C. The functional impairments are not primarily the result of previously existing:
- (1) visual, hearing, or motor impairments;
 - (2) emotional/behavioral disorders;
 - (3) mental retardation;
 - (4) language or specific learning disabilities;
 - (5) environmental or economic disadvantage;
 - (6) cultural differences.
- D. Documentation of a functional impairment in one or more of the areas in item B must, at a minimum, include one source from Group One and one source from Group Two:
- (1) GROUP ONE:
 - (a) checklists;
 - (b) classroom or work samples;
 - (c) education/medical history;
 - (d) documented, systematic behavioral observations;
 - (e) interviews with parents, student, and other knowledgeable individuals.
 - (2) GROUP TWO:
 - (a) criterion-referenced measures;
 - (b) personality or projective measures;
 - (c) sociometric measures;
 - (d) standardized assessment measures (academic, cognitive, communication, neuro-psychological, or motor).

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Referral, Eligibility, and Evaluation of the Student with TBI

- Initial
 Re-evaluation

TBI Criteria Checklist

Student's Name _____ DOB _____ Grade _____

School _____ Evaluation Summary Meeting Date _____

In order for a student to be eligible for special education and related services under the category of TBI, Item A, and Items B and C, as documented by the information gathered according to Item D, must be met.

A. Yes No

- There is documentation by a physician of a medically verified traumatic brain injury in the student's school file.

AND

B. Yes No

- There is a functional impairment attributable to the traumatic brain injury that adversely affects educational performance in one or more of the following areas:

- ___ intellectual-cognitive
- ___ academic
- ___ communication
- ___ motor
- ___ sensory
- ___ social-emotional-behavioral
- ___ functional skills-adaptive behavior

AND

C. Yes No

- The functional impairments are **NOT** primarily the result of previously existing:

- ___ vision, hearing, or motor impairments
- ___ emotional-behavioral disorders
- ___ mental retardation
- ___ language or specific learning disabilities
- ___ environmental or economic disadvantage
- ___ cultural differences

D. Yes No

- Information/data to document a functional impairment in Item B must, at a minimum, include one source from Group One and one source from Group Two:

Group One

- ___ checklists
- ___ classroom or work samples
- ___ educational/medical history
- ___ documented, systematic behavioral observations
- ___ interviews with parents, student, and other knowledgeable individuals

Group Two

- ___ criterion-referenced measures
- ___ personality or projective measures
- ___ sociometric measures
- ___ standardized assessment measures (academic, cognitive, communication, neuropsychological or motor)

(Developed by ISD #1, Minneapolis Schools)

Evaluation Overview

Special education evaluation of students with TBI poses many challenges. Results will affect eligibility for services and educational programming. In order to be considered, the student must have a documented medical diagnosis of traumatic brain injury before a special education evaluation is initiated. The evaluation is then conducted to determine the existence of educational needs related to the brain injury. If a student has been recently evaluated in a clinical or medical setting as a result of a traumatic brain injury, this information should be considered and incorporated into the school evaluation.

The special education evaluation team should include a special education professional who is knowledgeable and has training in the area of traumatic brain injury. In addition to the parent(s), other team members may include a licensed special education teacher, school nurse, school psychologist, D/APE teacher, general education teacher, and other appropriate related service providers.

Traditional psychometric tests may provide useful information, but must be used with caution as test scores may not reflect the student's educational needs and/or dysfunctions displayed in the classroom. The student's ability to carry out day-to-day tasks in the classroom and educational environment should be the primary focus of the evaluation. Many teams also choose to conduct a functional academic evaluation, which includes interviews and observations in the areas of organization, study skills, work completion, and interaction/functional communication skills. The checklists included in this section of the manual may prove helpful when conducting a functional evaluation.

Since recovery from TBI can be sporadic and unpredictable, periodic re-evaluation is important in order to monitor progress, review instructional objectives, and revise programs. Rapid changes in many areas of the student's functioning during the first year after injury may require more frequent evaluations to avoid basing intervention strategies and accommodations on outdated information. However, over-testing can also result in frustration for the student without significant results. Decisions regarding type and frequency of evaluations must be carefully considered by the team.

Evaluation Requirements

An appropriate evaluation needs to include a minimum of one or more evaluation tools or measures in groups 1 and 2 under part D of the TBI Eligibility Criteria.

D. Documentation of a functional impairment in one or more of the areas in item B must, at a minimum, include one source from Group One and one source from Group Two:

(1) GROUP ONE:

- (a) checklists;
- (b) classroom or work samples;
- (c) education/medical history;
- (d) documented, systematic behavioral observations;
- (e) interviews with parents, student, and other knowledgeable individuals.

(2) GROUP TWO:

- (a) criterion-referenced measures;
- (b) personality or projective measures;
- (c) sociometric measures;
- (d) standardized evaluation measures (academic, cognitive, communication, neuropsychological, or motor).

Evaluation of a student with a traumatic brain injury has several functions, including the following:

- To determine a baseline for behavior
- To identify changing patterns of student performance
- To isolate subtle impairments
- To assess cognitive abilities
- To identify barriers to independent and productive functioning
- To provide essential periodic review

Domains of Evaluation and Some Indicators for TBI

To meet Minnesota eligibility criteria for TBI, a student must demonstrate a functional impairment attributable to the traumatic brain injury that adversely affects educational performance in one or more of the nine domains listed below. A functional impairment is the inability to function in activities and/or complete tasks in an age-appropriate educational setting.

The following nine domains of evaluation should be addressed to determine a functional impairment in one or more areas. Listed under each area are some indicators of functional impairments that may result from a traumatic brain injury.

1) Intellectual/Cognitive Functioning Indicators:

- Distractibility, poor concentration, and poor impulse control (disinhibition)
- Poor memory affecting encoding, retention, and retrieval of information
- Visual-spatial problems affecting part-whole reasoning, integration, and synthesis
- Impaired judgment, conceptual reasoning, and organizational skills
- Slow processing speed and slow output of information affecting performance timed tests

2) Academic Performance Indicators:

- Impaired word recognition (dyslexia) or reading comprehension
- Confusion with math calculations, especially applications (dyscalculia)
- Poor retention of facts in content subjects, such as history and science
- Errors in mechanics and fluent expression of written language (dysgraphia)
- Difficulty integrating and applying new information

3) Communicative Status Indicators:

- Oral motor dysfunction affecting articulation or swallowing
- Comprehension problems or inefficiently processing language
- Dysfluent speech or problems retrieving words from memory
- Pragmatic language deficits in conversation, turn-taking, and social rules

4) Motor Ability Indicators:

Gross Motor

- Extreme weakness (paresis) or total paralysis of one or both sides
- Reduced muscle tone (hypotonia) or rigidity
- Muscle contractions or spasticity
- Poor balance or ataxia

Fine Motor

- Reduced motor dexterity and tremors impairing cutting, drawing, or writing skills
- Problems with motor planning (dyspraxia) impairing dressing or assembly skills
- Problems with written output (dysgraphia) affecting written communication

5) Sensory Status Indicators:

Hearing

- Partial or total hearing loss in one or both ears
- Difficulty understanding spoken language in a noisy environment
- Development of a 'ringing sound' (tinnitus)

Vision

- Partial or total vision loss
- Visual field cuts (blind spots or areas)
- Impaired visual tracking (affecting reading, writing, driving, etc.)
- Visual blurring or double vision (diplopia)
- Unusual sensitivity to light

Other

- Unusual sensitivity to smells, tastes, tactile sensations

6) Health/Physical Status Indicators:

- Physical limitations (restrictions from physical education, fatigue)
- Medical problems (seizures, motor spasticity, headaches, pain, dizziness or vertigo)
- Medication needs (anticonvulsant, antidepressant, psycho-stimulant medications)
- Requires assistive devices (e.g. wheelchair, positioning tools, writing board, computer software)

7) Emotional and Social Development, and Behavior Skills Indicators:

- Agitated, depressed, anxious, or labile behaviors
- Immature, insensitive, or inappropriate behaviors
- Poor or unrealistic perceptions of self or abilities
- Low frustration tolerance and/or persistence

8) Functional Skills Indicators:

- Problems in self-care (dressing, hygiene, feeding)
- Inability to work independently
- Inability to generalize information from one setting to another
- Problems orienting to time and place
- Difficulties with transitions or changes in routine

9) Vocational, Occupational Potential, and Secondary Transition Indicators:

Jobs and Job Training

- Limited occupational interests
- Behavior/attitude interfering with employment
- Limited job seeking or interview skills

Post-Secondary Training

- Unrealistic goal setting
- Lack of awareness of post-secondary options
- Impaired self-advocacy skills and awareness of needs/accommodations

Community Participation

- Problems accessing reliable transportation
- Limited knowledge of legal rights
- Limited knowledge and access to community services

Home Living

- Difficulties with medical management (self-administration of medication, making doctor appointments, etc.)
- Difficulties with money management, completing forms, understanding contractual agreements
- Difficulties with locating housing, maintaining a home (cleaning, repairs, etc.)

Recreation and Leisure

- Limited knowledge and access to recreation/leisure options in community

Test Selection and Considerations

Comprehensive batteries of tests are not especially useful for evaluating students in the early stages of recovery. A student with a traumatic brain injury should be evaluated using a variety of tests that tap the full range of significant cognitive variables. Tests that have sensitivity to subtle impairments need to be used for individuals with minor head trauma. An assortment of tests and instruments are available for evaluating specific areas of potential deficits. The validity, reliability, and relevancy of these instruments vary widely.

Global intelligence and achievement tests help define general mental functioning. These instruments are often not sensitive to small deficits and to more elusive problems such as memory. Performance-based measures of intelligence are able to detect deficits in the areas of time-dependent motor abilities, subtle aspects of language, attention and memory. A neuropsychological examination can provide a comprehensive picture of the cognitive functions that are vital for learning. In addition, the results can assist teams in predicting outcomes and in selecting programming and remediation targets.

Observation, interview, and review of the student's history are critical components of the special education evaluation. Information about the student's pre-injury status can help with interpretation of post-injury assessments. The student's individual characteristics of age, attention, and recovery phase must be considered when selecting assessment instruments. Assessment of everyday competencies, while often neglected, may be valuable for determining level of functioning.

The *TBI Checklist*, the *TBI Observation/Interview Form*, and the *TBI Criteria Worksheet* included in this section are examples of tools used to evaluate daily living skills. These tools can provide useful information for determining eligibility and for program planning. For reproduction purposes (of these forms), see Part VI: Black Line Masters.

TBI Checklist

The *Traumatic Brain Injury Checklist* is a tool that can be used to evaluate daily living skills in a variety of areas. Some of the areas included in the *TBI Checklist* are: 1) attending to and maintaining an activity, 2) absorbing and retaining information, 3) organizational and planning skills, and 4) impulse control. The *TBI Checklist* can be completed by anyone who is involved with the student with the traumatic brain injury. This may include teachers, coaches, counselors, parents and the student. It is recommended that more than one person rate a student to identify patterns of behavior that may be related to certain activities and/or settings. For further information on scoring and interpretation of the *TBI Checklist*, see page 44.

Referral, Eligibility and Evaluation of the Student with TBI

TBI Observation/Interview Form

This form may be used as a tool to record information gathered from group interviews and to document observations. It may also be used to compile and summarize information generated from other checklists and/or worksheets. (Form found on pages 52-54 of this manual and in Part VI: Black Line Masters.)

TBI Criteria Worksheet

The *TBI Criteria Worksheet* is another tool that has been developed to informally assess the presence of educational needs in the areas of cognition, academics, communication, motor, sensory, health/physical, social/emotional/behavioral, and functional skills. It can be used as an observation or interview tool, or simply as a way to develop a general student profile. (Form found on pages 55-56 of this manual and in Part VI: Black Line Masters.)

When conducting interviews or asking others to complete checklists/ worksheets, remember to include such nontraditional team members as coaches, counselors, hall/lunch/playground supervisors, etc. The information from the checklists should then be summarized as part of the total evaluation. (For information on interpretation of the *TBI Checklist*, the *TBI Observation/Interview Form*, or the *TBI Criteria Worksheet*, see page 43.)

Limitations of Testing

The nature of the test instrument or the design of the testing situation can limit usefulness of evaluation data. Achievement test scores are often inflated estimates of the student's ability to function in the regular classroom. Most evaluations provide estimates of optimal, rather than typical levels of performance.

Optimal test results are obtained when the following conditions are present:

- Environment is free from distractions
- Short tests are given in brief sessions
- Clear instructions and examples are used
- Highly structured tasks are assessed
- Examiner has an encouraging style

Due in part to testing conditions, formal testing may mask post-traumatic cognitive deficits. Pressures on the student for quantity and rate are often reduced in the test setting. Generalization of skills or concepts to new settings is rarely assessed. Even under ideal assessment conditions, it is difficult to know how well a student will be able to perform outside the testing situation. Simulated real-life stressors during some parts of testing can provide information on how well the student performs under time and performance pressures, environmental distractions, and peer pressure.

Evaluation Instruments for Students With TBI

The following list includes tools which can be used by neuro-psychologists, rehabilitation specialists, and special education evaluators. This list is not exhaustive and is included for the purpose of education rather than for endorsement. Due to performance variability in structured versus unstructured settings, observation in a variety of school settings provides an excellent compliment to formal evaluation. For an initial evaluation, include a minimum of one or more tools or measures from Group 1 and Group 2 under Part D of the TBI eligibility criteria.

The list is arranged in order of the domains addressed during an evaluation. Tools have been placed under the most appropriate performance area.

A special education evaluation of a student with traumatic brain injury may address any of the nine areas. The student's presenting problems should indicate which areas require evaluation. It may not be necessary to evaluate a student in all areas.

Intellectual Functioning

Cognition/Intelligence

- Bayley Scales of Children's Abilities
- McCarthy Scales of Children's Abilities
- Wechsler Preschool and Primary Scale of Intelligence (Third Edition)
- Wechsler Intelligence Scale for Children (Fourth Edition)
- Wechsler Adult Intelligence Scale (Third Edition)
- Stanford-Binet Intelligence Scales (Fourth Edition)
- Detroit Test of Learning Aptitude (Primary and 3)
- Kaufman Assessment Battery for Children

Nonverbal Problem-Solving, and Abstract Reasoning

- Wisconsin Card Sorting Test
- Leiter International Performance Scale
- Columbia Mental Maturity Scale
- Test of Nonverbal Intelligence

Referral, Eligibility, and Evaluation of the Student with TBI

Visual/Perceptual Motor Tasks

- Gardner Test of Visual Perceptual Skills
- Hooper Visual Organization Test
- Motor-Free Visual Perception Test- Revised Attention and Impulse Control
- Bender Visual Motor Gestalt Test
- Beery Developmental Test of Visual Motor Integration-Revised

Attention and Impulse Control

- Attention Deficit Disorders Evaluation Scale, Connors Rating Scale
- Detroit Test of Learning Aptitude (Primary and 3)
- Behavior Assessment System for Children

Memory and New Learning

- Wide Range Assessment of Memory and Learning: Measures of immediate auditory and visual memory, new learning, and delayed recall
- Stanford-Binet (4th Edition): Memory area
- Kaufman Assessment Battery for Children, McCarthy Scales of Children's Abilities, and Wechsler Scales: Select subtests
- Wechsler Memory Scale (Revised): Measures of immediate auditory and visual memory, new learning, and delayed recall for late adolescents and adults
- California Verbal Learning Test
- Test of Memory and Learning (TOMAL)
- Learning Efficiency Test (LET)

Academic Performance

- Basic Achievement Skills Individual Screener
- Kaufman Test of Educational Achievement
- Peabody Individual Achievement Test (Revised): Nonverbal
- Woodcock Johnson Psycho-Educational Battery III(Revised): Tests of Achievement
- Gray Oral Reading Test
- Gates-MacGinitie Reading Test
- Stanford Diagnostic Reading Test
- Wide Range Achievement Test (Revised, 1 and 2)
- KeyMath Diagnostic Arithmetic Test

Communicative Status

- Test of Language Competence
- Token Test for Children
- Test of Early Language Development
- Test of Language Development
- Test of Written Language (Revised)
- Test of Adolescent Language (TOAL-2)
- Clinical Evaluation of Language Fundamentals (Revised) (CELF-R)
- Test of Auditory Comprehension of Language (Revised)
- Test of Adolescent Language (TOAL-2)
- Clinical Evaluation of Language Fundamentals (Revised) (CELF-R)
- Test of Auditory Comprehension of Language (Revised)
- Assessing Semantic Skills through Everyday Themes (ASSET)
- Let's Talk Inventory for Children
- Test of Word Finding
- Test of Pragmatic Language
- Test of Problem Solving (Elementary and Adolescent)
- One-word Receptive Vocabulary Test (Gardner or PTVF): Word identification
- One-word Expressive Vocabulary Test (Gardner or Boston)

Motor Ability

- Dynamometer Test: Grip strength
- Finger-Oscillation Test: Speed
- Purdue (Sequin) or Grooved Pegboard Task: Psychomotor dexterity
- Peabody Developmental Motor Scales
- Battelle Developmental Inventory
- Bruininks-Oseretsky Test of Motor Proficiency

Sensory Status

Auditory

- Speech-Sounds Perception Test: Identifies verbally-presented nonsense words (primarily left temporal lobe)
- Woodcock-Fristoe-Johnson Test of Auditory Discrimination: Discriminates among phonetically-similar word patterns in quiet and in background noise

Vision/Hearing Screening

- Obtain current vision and hearing information from the school nurse, other medical personnel or through records.

Health/Physical Status

- Review medical records, health history, and current health status.

Emotional and Social Development, Behavioral Skills

- Child Behavior Checklist: Parent Report and Teacher Report (Achenbach)
- Personality Inventory for Children: Parent Report
- Youth Self-Reported Personality/Adjustment: Clinical or psychiatric problems assessed by the Million
- Minnesota Multiphasic Personality Inventory, and Youth Self-Report measures; Personality style or self-concept assessed by the Child Personality Questionnaire, High School Personality Questionnaire, Piers Self-Concept Scale, and other developmentally normed rating scales

Functional Skills

- TBI Checklist*
- TBI Criteria Worksheet*
- TBI Observation/Interview Form*
- Vineland Scales of Adaptive Behavior
- School Function Evaluation
- AAMD Adaptive Behavior Scale
- Tests for Everyday Living (TEL)

Vocational, Occupational Potential, and Secondary Transition

- Enderle-Severson Transition Rating Scale
- Transition Behavior Scale (McCarney)
- Reading-Free Vocational Interest Inventory
- Interest Determination, Exploration, and Assessment System (IDEAS)
- Transition Planning Assessment and Worksheet (Boyer-Stephens)
- Inventory for Client and Agency Plan (ICAP)
- Becker Work Adjustment Profile
- Transition Checklists developed by individual districts

(For more information on these and other vocational evaluation tools, contact the Transition Specialist at the Minnesota Department of Education at (651) 582-8515.

(* Included in this manual.)

Transition Evaluation for Traumatic Brain Injury

Transition planning is important at all stages of a student's education, especially when planning for the transition from high school to post-secondary education or community employment. Under Minnesota Rule, the Individual Education Plan (IEP) must address transition needs before a student with a disability reaches the age of 14 or grade 9. These transition areas include job training, home living, recreation and leisure, community participation and post-secondary education. The transition evaluation must be relevant to the student's vocational needs which may include work experience and job skills. Some additional IEP team members may be included, such as vocational education staff, community agency representatives and/or a rehabilitation service counselor.

A transition or functional vocational evaluation of students with a traumatic brain injury is an ongoing process. Evaluation begins with transition planning, vocational placement and ongoing support services. An initial evaluation is conducted to establish a baseline and to identify the student's strengths, abilities, and limitations relevant to vocational planning, placement, and work performance. Neuro-psychological evaluations may be used as part of an initial transition evaluation to identify strengths and limitations in cognitive, motor, and/or behavioral functioning.

A transition evaluation requires gathering and analyzing information from a variety of sources and evaluating the student's performance in environments such as a real work setting. Standardized tests should be supplemented by situational observations, on-the-job evaluations and community based evaluations/work trials that focus on work skills.

Areas for ongoing, functional vocational evaluation of a student with TBI may include, but are not limited to:

- Awareness and appraisal of work abilities and deficits
- Attention and concentration
- Ability to set vocational goals
- Ability to utilize compensatory skills
- Interpersonal skills and work behaviors
- Adapting to varying work demands
- Management of personal and self-care skills
- Emotional control
- Work performance and work skills

Referral, Eligibility and Evaluation of the Student with TBI

- Self reliance in mobility/transportation
- Planning, organizing, and initiation of tasks
- Ability to generalize and transfer skills
- Problem solving
- Psychomotor skills and physical functioning
- Learning style and capacity for new learning
- Perceptual abilities
- Need for an availability of social supports
- Memory
- Need for extended support on the job (long-term supports)

Individual and group vocational counseling are helpful in building and supplementing social supports, in addition to identifying and developing the skills necessary for positive vocational adjustment. Topics for vocational counseling may include: the impact of the student's TBI on vocational planning and goals; identification and exploration of career interests, aptitudes, and work values; career planning; development of realistic career choices; employer expectations; community expectations; development of interpersonal skills; and identification and utilization of vocational and social supports.

Interpretation of Results

Interpretation of evaluation information should be carefully completed by trained and knowledgeable special education personnel, and defined within the framework of the actual school environment. Environmental variables that may have influenced test results either positively or negatively should be included. Results of testing can be viewed as a student's present level of functioning and not necessarily as predictors of future performance. Neuro-psychological reports are considered an integral component of the education planning process. If special education staff have any questions about the content, interpretation, or recommendations of such reports, it is suggested that they contact the neuro-psychologist who conducted the evaluation or someone in the school or district that is knowledgeable about neuro-psychology.

TBI Criteria Worksheet, TBI Observation/Interview Form

Information gathered from the use of these tools should be considered subjective and should never be used in isolation from other evaluation tools. Information may be particularly useful in defining a student profile of strengths and needs, and in identifying factors that have an impact on educational programming.

Indicators, trends, and interpreted results derived from these observation worksheets and checklists should be reviewed by the team along with all other formal and informal assessment measures/procedures. The team should always include a person with training and experience in assessing and interpreting evaluation data and in working with students with TBI.

Traumatic Brain Injury Checklist

Trained, licensed and knowledgeable personnel should carefully review the information obtained from this checklist. The following steps will assist in evaluating and interpreting the results.

1. Using the rating scale shown on the first page, the individual completing the checklist responds to each of the items by checking the column which best reflects the student's status. When scoring the results, the numbers are tallied for each category, and a corresponding score and percentage is calculated (see scoring sheet on page 50). Results from one or more raters can be tabulated, either individually or mathematically averaged.
2. When analyzing the tallied responses for each category, the most points possible (number on the bottom) represents the most severe and frequent occurrences of the behavior. By comparing the student's total points per category to this number and then calculating a percentage, the relative significance of the problem may be determined. A student who receives a score of 40% or more of the possible points may have a significant problem in that particular area depending upon analysis of the behaviors involved. For example, in the first section (Orientation and Attention to Activity) the total possible score is 24. If a student receives 10 or more points in this section, this total section score could be considered significant. Consider the classroom or specific environment the checklist rating reflects as well as the time of day the student was observed, as well as the expectations of the setting and the staff.
3. Computed percentages can be plotted and displayed on the accompanying graph. This data can be visually presented in a number of ways; a) individual percentages for each category by multiple respondents, or b) averaged percentages. It should be noted that the TBI Checklist (and other checklists included in this manual) are not normed or standardized as evaluation instruments.

Note: To reproduce additional copies of this Traumatic Brain Injury Checklist, see Part VI: Black Line Masters.

Traumatic Brain Injury Checklist

Name of Student: _____

Name of Individual Completing Form: _____

Date: _____

Directions: Please rate the student's behavior (in comparison to same-age classmates) by placing an X in the appropriate column below.

(0)	(1)	(2)	(3)	Numbers are for scoring purposes only. Please indicate frequency of each behavior by marking an X in the appropriate column.
Not at all	Occasionally	Often	Very Severe and/or Frequent Problems	
				A. Orientation and Attention to Activity
				Confused with time (day, date), place (classroom, bathroom, schedule changes), and personal information (birth date, address, phone schedule)
				Seems to be "in a fog"
				Stares blankly
				Appears sleepy or to fatigue easily
				Fails to finish things started
				Cannot concentrate or pay attention
				Daydreams or gets lost in thoughts
				Inattentive, easily distracted
				B. Starting, Changing and Maintaining Activities
				Confused or requires prompts about where, how or when to begin assignment
				Doesn't not know how to initiate or maintain conversation
				Confused or agitated when moving from one activity, place, or group to another
				Stops mid-task (math problem, worksheets, story, or conversation)
				Perseverates on certain topics of behaviors
				Gives up quickly on challenging tasks

Traumatic Brain Injury Checklist

(0)	(1)	(2)	(3)	Numbers are for scoring purposes only. Please indicate frequency of each behavior by marking an X in the appropriate column.
Not at all	Occasionally	Often	Very Severe and/or Frequent Problems	
C. Absorbing and Retaining Information				
				Forgets things that happened even the same day
				Problems with learning new concepts, facts, or information
				Cannot remember simple instructions or rules
				Forgets classroom materials, assignments, and deadlines
				Forgets information learned from day to day (does well on quizzes, but fails test covering several weeks of learning)
D. Language Comprehension and Expression				
				Confused with idioms (“climbing the walls”) or slang
				Unable to recall word meaning or altered meaning (homonym or homographs)
				Unable to comprehend or breakdown instructions and request
				Difficulty understanding complex or lengthy discussion
				Processes information at a slow pace
				Difficulty finding specific words(may describe but not label)
				Stammers or slurs words
				Difficulty fluently expressing ideas (speech disjointed, stops midsentence)
E. Visual-Perceptual Processing				
				Cannot track when reading, skips problems, or neglects a portion of a page of written material
				Orients body or materials in unusual positions when reading or writing
				Gets lost in halls and cannot follow maps or graphs
				Shows left-right confusion

Traumatic Brain Injury Checklist

(0)	(1)	(2)	(3)	Numbers are for scoring purposes only. Please indicate frequency of each behavior by marking an X in the appropriate column.
Not at all	Occasionally	Often	Very Severe and/or Frequent Problems	
F. Visual-motor Skills				
				Difficulty copying information from board
				Difficulty with notetaking
				Difficulty with letter formation or spacing
				Slow, inefficient motor output
				Poor motor dexterity (cutting, drawing)
G. Sequential Processing				
				Difficulty with sequential steps of task (getting out materials, turning to page, starting an assignment)
				Confuses the sequence of events or other time-related concepts
H. Problem-Solving, Reasoning, and Generalization				
				Fails to consider alternatives when first attempts fails
				Does not use compensatory strategies (outlining or underlining)
				Problems understanding abstract concepts (color, emotions, math and science)
				Confusion with cause-effect relationships
				Unable to categorize (size, species)
				Problems making inferences or drawing conclusions
				Can state facts, but cannot integrate or synthesize information
				Difficulty applying what is known to new or different situations
I. Organization and Planning Skills				
				Difficulty breaking down complex tasks (term papers, projects)
				Problems organizing materials
				Problems distinguishing between important and unimportant information
				Difficulty making plans and setting goals
				Difficulty following through and monitoring plans
				Set unrealistic goals

Traumatic Brain Injury Checklist

(0)	(1)	(2)	(3)	Numbers are for scoring purposes only. Please indicate frequency of each behavior by marking an X in the appropriate column.
Not at all	Occasionally	Often	Very Severe and/or Frequent Problems	
J. Impulse or Self-Control				
				Blurts out in class
				Makes unrelated statements or responses
				Acts without thinking (leaves class, throws things, sets off alarms)
				Displays dangerous behavior (runs into street, plays with fire, drives unsafely)
				Disturbs other pupils
				Makes inappropriate or offensive remarks
				Shows compulsive habits (nail biting, tapping)
				Hyperactive, out - of - seat behavior
K. Social Adjustment and Awareness				
				Acts immature for age
				To dependent on adults
				Too bossy or submissive with peers
				Peculiar manners and mannerisms (stands too close, interrupts, unusually loud,
				Fails to understand social humor
				Fails to correctly interpret nonverbal social cues
				Difficulty understanding the feelings and perspective of others
				Does not understand strengths, weaknesses and self presentation
				Does not know when help is required or how to get assistance
				Denies any problems or changes resulting from injury
L. Emotional Adjustment				
				Easily frustrated by tasks or if demands not immediately met
				Becomes argumentative, aggressive, or destructive with little provocation
				Cries or laughs too easily
				Feels worthless or inferior
				Withdrawn, does not get involved with others
				Becomes angry or defensive when confronted with changes resulting from injury
				Apathetic and disinterested in friends or activities
				Makes constant inappropriate sexual comments and gestures
				Unhappy or depressed affect
				Nervous, self-conscious, or anxious behavior

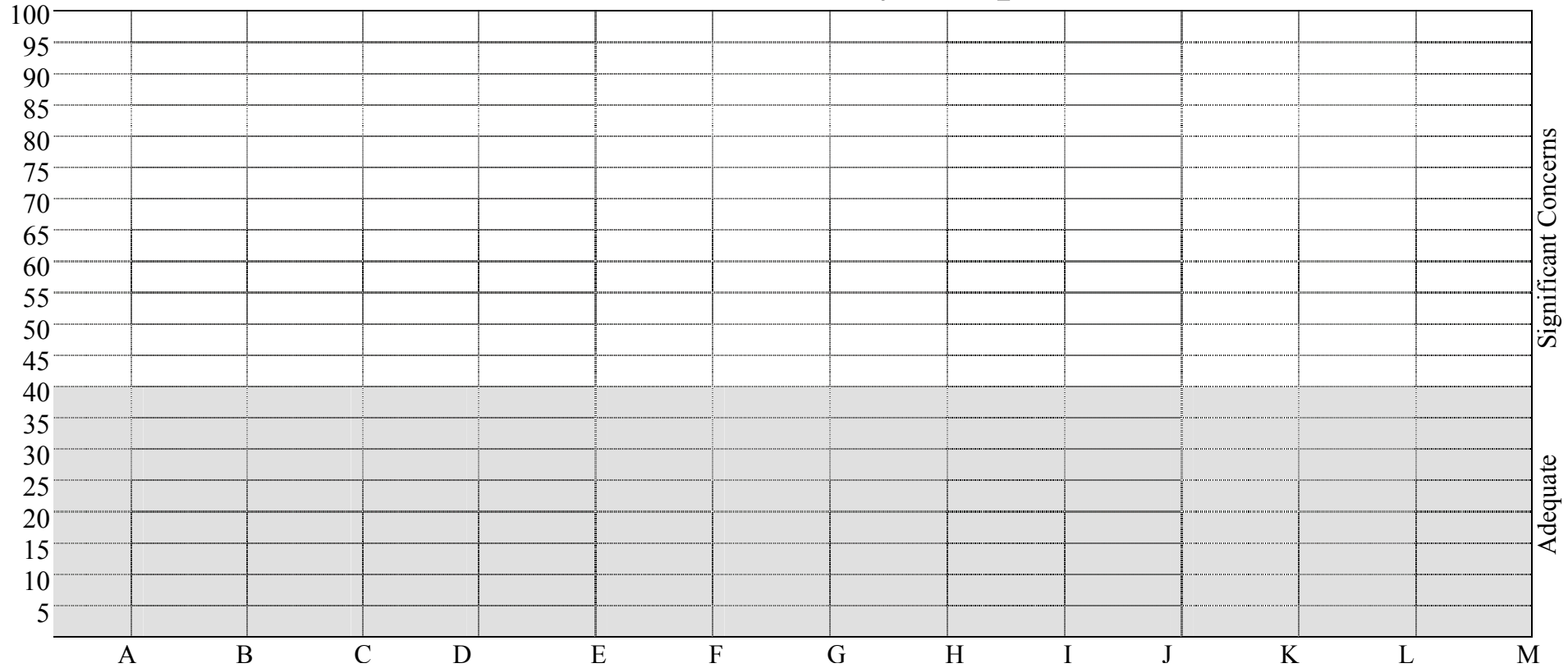
Traumatic Brain Injury Checklist

(0)	(1)	(2)	(3)	Numbers are for scoring purposes only. Please indicate frequency of each behavior by marking an X in the appropriate column.
Not at all	Occasionally	Often	Very Severe and/or Frequent Problems	
				M. Sensorimotor Skills
				Problems with smell, taste, touch, hearing or vision
				Problems with visual acuity, blurring or tracking
				Problems with tactile sensitivity (e.g., cannot type or play an instrument without watching hands)
				Problems with oromotor (e.g., swallowing), fine motor or gross motor skills
				Poor sense of body in space (loses balance, negotiating obstacles)
				Motor paralysis or weakness on one or both sides
				Motor rigidity (limited range of motion), spasticity (contractions) and ataxia (erratic movements) circle one
				Difficulty with skilled motor activities (dressing, eating)
Waaland and Bohannon, 1992				

TBI Checklist Summary Table

	40% Reference	Rater 1 %	Rater 2 %	Rater 3 %	Rater 4 %	Rater 5 %	Average %
A. Orientation and Attention to Activity	9.6	/ 24	/ 24	/ 24	/ 24	/ 24	/ 24
B. Starting, Changing and Maintaining Activities	7.2	/ 18	/ 18	/ 18	/ 18	/ 18	/ 18
C. Absorbing and Retaining Information	6	/ 15	/ 15	/ 15	/ 15	/ 15	/ 15
D. Language Comprehension and Expression	10.8	/ 27	/ 27	/ 27	/ 27	/ 27	/ 27
E. Visual-Perceptual Processing	4.8	/ 12	/ 12	/ 12	/ 12	/ 12	/ 12
F. Visual-motor Skills	6	/ 15	/ 15	/ 15	/ 15	/ 15	/ 15
G. Sequential Processing	2.4	/ 6	/ 6	/ 6	/ 6	/ 6	/ 6
H. Problem-Solving, Reasoning, and Generalization	9.6	/ 24	/ 24	/ 24	/ 24	/ 24	/ 24
I. Organization and Planning Skills	7.2	/ 18	/ 18	/ 18	/ 18	/ 18	/ 18
J. Impulse or Self-Control	9.6	/ 24	/ 24	/ 24	/ 24	/ 24	/ 24
K. Social Adjustment and Awareness	12	/ 30	/ 30	/ 30	/ 30	/ 30	/ 30
L. Emotional Adjustment	12	/ 30	/ 30	/ 30	/ 30	/ 30	/ 30
M. Sensorimotor Skills	9.6	/ 24	/ 24	/ 24	/ 24	/ 24	/ 24

TBI Checklist Summary Graph



- A. Orientation and Attention to Activity
- B. Starting, Changing and Maintaining Activities
- C. Absorbing and Retaining Information
- D. Language Comprehension and Expression
- E. Visual-Perceptual Processing
- F. Visual-motor Skills
- G. Sequential Processing

- H. Problem-Solving, Reasoning, and Generalization
- I. Organization and Planning Skills
- J. Impulse or Self-Control
- K. Social Adjustment and Awareness
- L. Emotional Adjustment
- M. Sensorimotor Skills

Raters:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

TBI Observation/Interview Form

Student's Name _____ DOB _____ School _____

(Of the information gathered in interview, star [★] behaviors actually observed.)

Interview Date _____ Observation Date(s) _____

Person(s) Interviewed _____ Observation Setting _____

Completed by _____ Completed by _____

Title _____ Title _____

HEALTH STATUS (Information as known by teacher/staff/parents)

- Staff/Student Knowledge of Diagnosis:
- Medication:
- Health Plan:
- Emergency/Safety Procedures:
- Attendance:

ORGANIZATION SKILLS (Document significant discrepancies when compared to peers)

- Materials: (Has materials when needed, physical organization of space)
- Written Work: (Organized on page in sequential manner)
- Thoughts: (Tells thoughts of stories sequentially—beginning, middle, and end—stays on topic)

Referral, Eligibility and Evaluation of the Student with TBI

TBI Observation/Interview Form (*Continued*)

STUDY SKILLS

- Self-Initiates:
- Displays On-Task Behavior:
- Follows Directions:
- Completes Homework:
- Participates in Group Activities:

WORK COMPLETION

- Number of Assignments Given _____ Assignments Turned In _____ Assignments Late _____

INDEPENDENCE

- Work Completion: (Unassisted, adult assisted, peer assisted)
- Movement Through School Environment:
- Clothing/Bathroom/Lunchroom:
- Motoric Management of Materials: (Books, notes, pencil, scissors, desk, locker)
- Level of Self-Advocacy:

Referral, Eligibility and Evaluation of the Student with TBI

TBI Observation/Interview Form (*Continued*)

FUNCTIONAL LEVEL OF ACADEMIC PERFORMANCE (Daily classroom performance in relation to peers)

- Reading:
- Math:
- Written Language:
- Other:

PEER INTERACTION

- Student with Peers:
- Peers with Student:

INTERFERING BEHAVIORS

- Distracting to Self or Others:
- Aggressive Behavior:

MAIN CONCERNS AND/OR STRENGTHS

- Parents:
- General Education Teacher/Other Staff:

(Developed by ISD #625, St. Paul Schools)

TBI CRITERIA WORKSHEET

(This document may be used to fulfill Item D, Group One of the criteria)

Student's Name _____ School _____ Grade _____

Completed by _____ Subject Taught _____

Check any behaviors you have observed, and record specific concerns related to the student's ability to function independently in the school environment.

INTELLECTUAL/COGNITIVE

- | | |
|---|--|
| <input type="checkbox"/> difficulty initiating tasks | <input type="checkbox"/> doesn't problem-solve |
| <input type="checkbox"/> off-task behavior | <input type="checkbox"/> forgets information/materials/rules |
| <input type="checkbox"/> easily distracted | <input type="checkbox"/> difficulty learning new concepts |
| <input type="checkbox"/> doesn't bring materials to class | <input type="checkbox"/> impulsive |
| <input type="checkbox"/> doesn't use work time efficiently | <input type="checkbox"/> difficulty with organization |
| <input type="checkbox"/> doesn't follow directions | <input type="checkbox"/> gives up quickly on challenging tasks |
| <input type="checkbox"/> doesn't understand abstract concepts | <input type="checkbox"/> assignment quality unsatisfactory |
| <input type="checkbox"/> processes information slowly | |

ACADEMIC

- | | |
|--|---|
| <input type="checkbox"/> change in achievement from pre-injury | <input type="checkbox"/> written assignments disorganized/off-topic |
| <input type="checkbox"/> inadequate academic progress | <input type="checkbox"/> unable to complete assignments by due date |
| <input type="checkbox"/> "gaps" in basic knowledge | <input type="checkbox"/> difficulty breaking down large, complex |
| <input type="checkbox"/> difficulty integrating/applying new information | <input type="checkbox"/> tasks |

COMMUNICATION

- | | |
|--|---|
| <input type="checkbox"/> difficulty conversing with adults/peers | <input type="checkbox"/> perseverates on words, phrases, topics |
| <input type="checkbox"/> difficulty expressing ideas fluently | <input type="checkbox"/> confused by multiple meanings of words |
| <input type="checkbox"/> doesn't ask for clarification or assistance | <input type="checkbox"/> difficulty understanding lengthy discussions |
| <input type="checkbox"/> confused by idioms, slang | <input type="checkbox"/> speech not easily understood by others |
| <input type="checkbox"/> frequently off-topic | |

MOTOR

- | | |
|--|---|
| <input type="checkbox"/> motor paralysis or weakness | <input type="checkbox"/> unable to access some areas of school environment |
| <input type="checkbox"/> poor balance | <input type="checkbox"/> unable to manage materials (books, folders, locks) |
| <input type="checkbox"/> limited strength/endurance | <input type="checkbox"/> difficulty with tracking, copying, note-taking |
| <input type="checkbox"/> difficulty in writing, drawing, cutting | <input type="checkbox"/> difficulty completing written tasks |

Referral, Eligibility and Evaluation of the Student with TBI

SENSORY

- _____ difficulty with visual acuity
 - _____ difficulty with hearing
 - _____ difficulty with visual perceptions (misses words on a page: difficulty using maps, graphs; skips problems)
 - _____ unusual sensitivity to sounds, ringing in the ears, etc.
 - _____ loss of sensation (numbness, tingling, lack of hot/cold discrimination)
-
-
-

HEALTH/PHYSICAL

- _____ complains of headaches
 - _____ complains of dizziness
 - _____ stares blankly
 - _____ unusual movements
 - _____ becomes fatigued/needs rest times
 - _____ seems in a fog, confused
-
-
-

SOCIAL, EMOTIONAL, BEHAVIORAL

- _____ responses or statements are off-topic
 - _____ disinterested in friends, activities
 - _____ makes inappropriate or offensive remarks
 - _____ fails to understand nonverbal cues
 - _____ easily provoked to anger
 - _____ denies problems or changes from injury
 - _____ unhappy or depressed affect
 - _____ poor peer relationships
 - _____ displays poor judgment
 - _____ fails to understand social humor
 - _____ peculiar mannerisms
 - _____ doesn't understand feelings of others
 - _____ cries or laughs too easily
 - _____ easily frustrated
 - _____ unrealistic view of strengths/weaknesses
 - _____ acts immature for age
 - _____ doesn't ask for needed accommodations
-
-
-

FUNCTIONAL

- _____ requires assistance with personal cares
 - _____ disinterested in friends, activities
 - _____ makes inappropriate or offensive remarks
 - _____ fails to understand nonverbal cues
 - _____ easily provoked to anger
 - _____ denies problems or changes from injury
 - _____ unhappy or depressed affect
 - _____ poor peer relationships
 - _____ displays poor judgment
 - _____ fails to understand social humor
 - _____ peculiar mannerisms
 - _____ doesn't understand feelings of others
 - _____ cries or laughs too easily
 - _____ frustrated
 - _____ unrealistic view of strengths/weaknesses
 - _____ acts immature for age
 - _____ doesn't ask for needed accommodations
-
-
-

Please list any accommodations or modifications you routinely make for this student in your class:

(Developed by Anoka-Hennepin Schools, Independent District #11)

Observable Behaviors and Strategies

This section is to be used in conjunction with the Traumatic Brain Injury Checklist in the Evaluation Section of these guidelines. The following suggestions are provided to assist teachers with selection of appropriate instructional strategies.

A. Orientation and Attention to Activities

Observable Behavior:

- Confused with time (e.g., day, date); place (e.g., classroom, bathroom, schedule changes); and personal information (e.g., birth date, address, phone, and schedule)
- Seems “in a fog” or confused
- Stares blankly
- Appears sleepy, or fatigues easily
- Fails to finish things started
- Cannot concentrate or pay attention
- Daydreams or gets lost in thoughts
- Inattentive, easily distracted

Strategies:

- Provide an uncluttered, quiet environment.
- Provide printed or pictorial charts, schedules, or classroom maps that describe routines and rules of expected behaviors. Review before each session and as needed throughout the day. These items may be kept in a notebook that travels with the student.
- Maintain consistent staff, room arrangement, and materials.
- Label significant objects and areas; provide name tags for staff.
- Redirect undesirable behavior by focusing student’s attention on tasks that are interesting enough to break the pattern of disruptive or perseverative responses. (Note: Do not use this technique if the student’s behavior is attention seeking. Consultation with a behavior specialist may be indicated.)
- Teach student to look for permanent landmarks and name the landmarks when they see them.
- Have student verbalize how to get to a specific place before starting or while moving.
- Use a buddy system.

Instructional Strategies for the Student with TBI

- Remove unnecessary distractions. Initially, limit background noise and gradually increase to a normal level.
- Provide visual cues (e.g. Have a sign on student's desk with the work or pictured symbol for behaviors such as LOOK or LISTEN. Point to the sign when student is off-task.).
- Limit the amount of information on a page.
- Adjust assignments to the length of student's attention span.
- Focus student's attention on specific information: "I'm going to read a story and ask WHO is in the story."
- Demonstrate a new task, repeat instructions and ask the student to repeat instructions. If this is unsuccessful, vary the activities so that less similar activities follow each other.
- Noise and confusion from large numbers of students changing classes may be distracting and may not allow the student to find the class until the halls are clear. Allow the student to leave a few minutes early from each class.
- Redirect the student's attention as soon as his/her attention drifts away from the assignment. Gradually lengthen time of on-task behavior by strengthening the intervals of time that a student receives reinforcement (e.g., social praise, tangibles).
- Use clearly defined objectives that are meaningful for the student.
- Use short and concise instructions and assignments.
- Reward on-task behavior; avoid punishing behavior that results from extreme distractibility.
- Use novel, unusual, relevant, or stimulating activities.
- Provide well-placed rest periods or breaks to minimize the effects of mental fatigue or stamina problems.
- Closely monitor time of day, medications, and fatigue factors. Confer with physicians to determine the feasibility of adjusting medication times so as not to conflict with instructional time.
- Be alert for attention drifts and redirect the student to task when necessary.
- Explore a variety of cueing systems (e.g., verbal cues, gestural cues, or signs at the study site that remind the student to stay on task).
- Use verbal strategies, such as inserting questions within a lesson and directing the student's attention to the task and topic.
- Use tasks specifically designed to help the student focus his/her attention (e.g., simple maze learning tasks or letter/number cancellation tasks, emphasizing speed, accuracy, and the self-instructions that might promote heightened attention to task; help the student to transfer this improved, self-directed attending skill into the classroom environment).

B. Starting, Changing, and Maintaining Activities

Observable Behavior:

- Confused or requires prompts about where, how, or when to begin assignment
- Doesn't know how to maintain conversation (e.g., walks away)
- Confused or agitated when moving from one activity, place, or group to another
- Stops mid task (e.g., math problem, worksheets, story, or conversation)
- Unable to stop or perseverates on inappropriate strategies, topics, or behaviors
- Gives up quickly on challenging tasks

Strategies:

- Begin the day by reviewing the schedule and highlighting any changes in the activities.
- Prepare the student for daily transitions with reminders of the next activity several minutes in advance.
- 'Walk through' transitions with the student (e.g., return the reading text to the desk, take out the math book, and move to the appropriate area for the math lesson).
- Encourage the student to refer to printed or pictorial schedules with changes of activities, materials, or lesson locations.
- Teach the student to model peer behavior.
- Explain the purpose of the lesson; relate following directions to functional, everyday situations, such as assembling a model car or reading a recipe.
- Review printed or pictorial description to assist the student in better understanding what is expected of him/her.
- Explain several examples to help individual get started.
- Review pictorial or printed rules of behavior before each lesson: "Look, listen, raise your hand."
- Praise student once he or she has begun a task. Remind student that he or she is capable of completing the activity.
- Role-play what to say when initiating social contacts with peers.
- Emphasize closure of activities by giving student jobs such as collecting papers, cleaning up materials, or writing in their log books.
- Encourage student to observe the behavior of others as tasks end.
- List steps to the task and check them off when completed; emphasize where they are in relation to the final step.
- List end-of-session behaviors: "Put your papers in the blue box, return to your desk."

C. Taking In and Retaining Information

Observable Behavior:

- Forgets things that happened, even the same day
- Problems learning new concepts, facts, or information
- Cannot remember simple instructions or rules
- Forgets classroom materials, assignments, and deadlines
- Forgets information learned from day to day (e.g., does well on quizzes, but fails tests covering several weeks of learning)

Strategies:

- Provide time at the end of a session for student to tell personal stories or jokes.
- Include pictures or visual cues with oral information, since this multi-sensory input strengthens this information and provides various ways to recall it.
- Try to make the material to be learned significant and relevant to the student.
- Give meaning to rote data to enhance comprehension and learning.
- Regularly summarize information as it is being taught.
- Have the student over-learn material.
- Couple the new information with previously learned information.
- Teach the student to use one or more of the following techniques: visual imagery, "chunking" techniques (e.g., organizing information into easily retrieved segments), association techniques, mnemonic devices (e.g., acronyms, repetition and rehearsal techniques).
- Use verbal rehearsal. After the visual or auditory information is presented, have the student "practice" it (e.g., repeat it) and listen to themselves as they act on it.
- Limit the amount of information presented so that student can retain and retrieve it.
- Provide a matrix for the student to refer to if he or she has difficulty recalling information
- Have the student take notes or record information on tape.
- Underline key words in a passage for emphasis.
- Provide a log book to record assignments or daily events.
- Provide a printed or pictured schedule of daily activities, locations, and materials needed.
- Role-play or pantomime stories to be remembered, such as who, what, when.
- Have student gesture or role-play. The student may be able to act out a situation but not have adequate verbal language to describe it.
- Provide visual or auditory cues: "Is it ___ or ___ ?" or give the beginning sound of a word.
- Include written multiple choice cues or pictures in worksheets.
- Teach students to compensate for word-finding problems by describing attributes

D. Language Comprehension and Expression

Observable Behavior:

- Confused with idioms (e.g., “climbing the walls”) or slang
- Unable to recall word meaning or altered meaning (e.g., homonym or homographs)
- Unable to comprehend or breakdown instructions and requests
- Difficulty understanding “Wh” questions: who, what, where, when, and why
- Difficulty understanding complex or lengthy discussions
- Processes information at a slow pace
- Difficulty finding specific words (may describe but not label)
- Stammers or slurs words
- Difficulty expressing ideas fluently (speech disjointed, stops mid sentence)

Strategies:

- Limit amount of information presented – perhaps one or two sentences.
- Use more concrete language.
- Teach the student to ask for clarification or for information to be given at a slower rate.
- Use pictures or written words to cue students. Use a picture of a chair and the written word ‘sit’ if you want the students to exhibit that behavior.
- Pair manual signs, gestures, or pictures with verbal information.
- Act out directions. If the student is to collect papers and put them in a designated spot, demonstrate how this should be done.
- Use cognitive mapping. Diagram ideas in order of importance or sequence to clarify content graphically. This helps students to see part-whole relationships.
- Limit the amount of information presented. Give the student instructions or other verbal information in appropriately small chunks or units.
- Present verbal information at a relatively slow pace with appropriate pauses for processing time and with repetition if necessary.
- Limit the amount of extraneous or background noise when listening and understanding are critical.
- State information in concrete terms. Use pictures or visual symbols if necessary.
- Have the student sit close to the teacher with an unobstructed view.
- To ensure comprehension, teach the student to ask questions about the instructions or materials presented.
- Teach the student to request slower or repeated presentations if the material is presented too rapidly.

Note: Many of the strategies listed under memory and attending can be used also to improve language comprehension.

E. Visual-Perceptual Processing

Observable Behavior:

- Cannot track when reading, skips problems, or neglects a portion of a page of written material
- Orients body or materials in unusual positions when reading or writing
- Gets lost in halls and cannot follow maps or graphs
- Shows left-right confusion

Strategies:

- Describe the visual instructional material in concrete terms.
- Provide longer viewing times or repeat viewings when using visual instructional materials.
- Facilitate a systematic approach to reading by covering parts of the page.
- Place arrows or cue words left to right on the page to orient the student to space. Teach the student to use the cues systematically to scan left to right.
- Provide large print books or use books on tape.
- Move the student closer to visual materials or have the materials enlarged.
- Place materials within the student's best visual field. Consult with an ophthalmologist or occupational therapist about possible visual-perceptual problems.

F. Visual-Motor Skills

Observable Behavior:

- Difficulty copying information from the board
- Difficulty with note taking
- Difficulty with letter formation or spacing
- Slow, inefficient motor output
- Poor motor dexterity (cutting, drawing)

Strategies:

- Use large paper.
- Use raised line paper.
- Use textured paper (raised lines), or paper with black lines on white.
- Provide visual clues for beginning and end of lines. Place a green dot in the left margin and a red dot in the right margin.
- If not able to do handwriting worksheets with peers, practice letter or shape formation using materials appropriate for muscle strength and endurance. For example, writing with fingers can be done with finger paint, crazy foam, shaving cream, or sand trays. More resistance is offered by writing with a pencil in a clay tray.
- Cursive handwriting may be inappropriate for a student with limited endurance and stability (cursive requires a sustained, fluid motion, while manuscript allows for frequent breaks and repositioning). Students should be taught to read cursive but be allowed to continue to write in manuscript.
- The student may benefit from extra time to complete written tests and assignments.
- Be certain that the assigned activity must be in written form before denying the student the opportunity to participate in other class activities or assigning completion for homework.
- Alter length of written responses. Permit student to write shorter compositions than classmates.
- Let student underline answers on worksheets rather than copying them onto a blank space.
- Let student answer questions in one or two words rather than a complete sentence.
- Because of issues related to processing, positioning and head movements, far point copying may not be appropriate for some students. Provide a near-point model at the student's desk.

Instructional Strategies for the Student with TBI

- A vertical paper holder may be useful to hold the model in front of the student.
- Some students are not able to copy the same amount as peers. If copying can be limited, do so. If not, allow the student to copy what he/she can and have another student copy an extra set of notes for him/her with special NCR notetaker paper, or arrange to have copies made after class.
- Older students often are responsible for note taking as a means of extending textbook information. This may present more difficulty to the student with a disability than mere copying. As mentioned earlier, a near point model or a photocopy of the teacher's notes can be supplied.
- When handwriting modifications such as those listed above have not been successful, alternative means of written communication may need to be considered. Among these are laptop word processors, computers, and calculators. Familiarity with these keyboards should be encouraged at an early age. Commercial word processing programs are available for this purpose.
- Depending on the severity of the disabling condition, adaptive equipment may be needed to facilitate use of the keyboard. Such equipment may include key guards, which fit over the keyboard and prevent the student from striking more than one key at a time, and other alternative assistive technology devices.
- Laptop word processors and computers with printers are available in all schools and can be utilized by students with disabilities for written assignments, as well as communication. If a student cannot use the traditional computer keyboard with adaptations, expanded keyboards, visual scanners, and voice recognition software may be necessary.
- While alternatives to writing may improve legibility and accuracy, they will not necessarily increase speed. It may still be necessary to provide the student with more time to complete written assignments.
- Allow student to write or highlight in textbooks, or consider using commercially available highlight tape.
- Provide student with an extra set of textbooks to keep at home.

G. Sequential Processing

Observable Behavior:

- Difficulty with sequential steps of task (getting out materials, turning to page, starting an assignment)
- Confuses the sequence of events or other time-related concepts

Strategies:

- Limit the number of steps in a task.
- Present part of a sequence and have student finish it.
- Show or discuss one step of the sequence (lesson) at a time.
- Give general cues with each step: "What should you do first? What should you do second?"
- Have student repeat multi-step directions and listen to themselves before attempting a task.
- Provide pictures or a written sequence of steps to remember: Tape a cue card to the desk with words or pictures of materials needed for a lesson, then expand original written directions. For example, if the direction was 'Underline the words in each sentence in which *ou* or *ow* stands for the vowel sound', change this to:
 - "read the sentence;"
 - "underline *ou* and *ow* words;"
 - "read the underlined words;"
 - "find the two words that have the same vowel sounds", and
 - "write these two words on the lines below the sentence."
- Tell student how many steps are in a task: "I'm going to tell you three things to do." Hold up three fingers.
- Act out a sequence of events to clarify information.
- Provide sample items describing how to proceed through parts of a worksheet.
- Number the steps in written directions and have the student cross off each step as it is completed.
- Teach student to refer to directions and/or look at what other peers are doing if they are unsure of the task.

H. Problem Solving, Reasoning, and Generalization

Observable Behavior:

- Fails to consider alternatives when first attempt fails
- Does not use compensatory strategies (outlining or underlining)
- Problems understanding abstract concepts (color, emotions, math, and science)
- Confusion with cause-effect relationships
- Unable to categorize (size, species)
- Problems making inferences or drawing conclusions
- Can state facts but cannot integrate or synthesize information
- Difficulty applying what is known in different or new situations

Strategies:

- Teach the structure or format of a task (e.g., how to complete a worksheet or mathematics problem).
- Maintain a known format and change the content of a task to help students see a relationship. Two pictures are presented and student must say if they are in the same category, or have the same initial sound. A worksheet format requires filling in blanks with words or numbers.
- Change the format of the task. Have student solve mathematics facts on a worksheet as well as on flash cards.
- Have completed sample worksheets in a notebook serve as models indicating how to proceed.
- Demonstrate how skills can be used throughout the day. Discuss how student relies on the clock or a schedule to get up in the morning, begin school, or catch a bus.
- Role-play situations that simulate those which student may encounter, emphasizing the generalization of specific skills taught. Completing school assignments and going to the store may involve the same strategies (e.g., making a list or asking for help).
- Develop a problem solving guide to help student through the stages of problem solving (e.g., identify the problem; acquire relevant information for solving the problem; generate several possible solutions; list pros and cons for each solution; identify the best solution; create a plan of action; evaluate the effectiveness of the plan). Raise questions about alternatives and consequences.
- Allow the student to bring up relevant real-life problems that are appropriate for group discussion. Promote brain-storming about alternative solutions and their usefulness.

Instructional Strategies for the Student with TBI

- Introduce roadblocks and complications to enhance “detouring” skills and to encourage flexibility.
- Provide ongoing, non-judgmental feedback.
- Provide concrete dialogue.
- Be certain expectations are clear and understood.
- Ask the student to explain his/her understanding of what he/she has just heard or understands regarding a situation.
- Rephrase oral communication if student does not understand.

I. Organization and Planning Skills

Observable Behavior:

- Difficulty breaking down complex tasks (term papers, projects)
- Problems organizing materials
- Problems distinguishing between important and unimportant information
- Difficulty making plans and setting goals
- Difficulty following through with and monitoring plans
- Sets unrealistic goals

Strategies:

- Attempt to limit impulsive responses by encouraging the student to take “thinking time” before he/she answers.
- Have student organize information by using categories (e.g., who, what, when, where). This strategy can be used in an expanded form to write a story.
- Teach student a sequence of steps to aid in verbal organization. Have the student use cue cards with written pictured steps when formulating an answer.
- Focus on one type of information at a time.
- Decrease rambling by having student express a thought “in one sentence.”
- Limit the number of steps in a task.
- Provide part of a sequence and have the student finish it.
- Give cues, such as, “Good, now what would you do?”
- Structure thinking processes graphically (e.g., with time lines, outlines, flow charts, graphs).
- Use categories to focus on one topic at a time.
- Identify the main idea and supporting details. Categorize the details (e.g., using who, what, when, where, and why questions). Teach the student to do the same when reading or listening to lecture material.

J. Impulse or Self-Control

Observable Behavior:

- Blurts out in class
- Makes unrelated statements or responses
- Acts without thinking (leaves class, throws things, sets off alarms)
- Displays dangerous behavior (runs into street, plays with fire, drives in an unsafe manner)
- Disturbs other pupils

Strategies:

- Place unnecessary materials out of sight or out of reach.
- Discuss rules and their importance at the beginning of the lesson.
- Explain how student's impulsive acts (e.g., calling out) disturb others.
- Role-play appropriate responses (e.g., raising hand). Place a sign on the student's desk with a picture of a hand and point to this when the student interrupts.
- Employ 'stop-action' technique. Immediately stop student from disrupting an activity, encourage him or her to verbalize an alternative behavior, and have the student follow through appropriately.
- Provide time at the end of a session for student to tell personal stories or jokes.
- Assure the student that he or she has sufficient time to complete tasks and need not 'hurry through' them. If needed, break a large task down into smaller tasks
- Recognize that the student will have difficulty "taking turns and sharing." Try to alleviate those situations when possible. If that is not possible, attempt to reduce the stress with a remark such as, "We have plenty of time before we have to get started, so take your time sharpening your pencils."

K. Social Adjustment and Awareness

Observable Behavior:

- Acts immature for age
- Too dependent on adults
- Too bossy or submissive with peers
- Peculiar manners and mannerisms (stands too close, interrupts, unusually loud, poor hygiene)
- Fails to understand social humor
- Fails to correctly interpret nonverbal social cues
- Difficulty understanding the feelings and perspective of others
- Does not understand strengths, weaknesses, and self presentation
- Does not know when help is required or how to get assistance
- Denies any problems or changes resulting from injury

Strategies:

- Make student aware of what he or she can and cannot do. Expand tasks that are done successfully by adding one step that will be "harder."
- Encourage student to recognize when help is needed and how to best access help from others in an appropriate manner.
- Attach cue cards to desk. "Raise your hand for help."
- Decrease daydreaming that results from an inability to proceed by asking direct questions or by providing cue cards. "Are you stuck?" "Is that clear?"
- Model desired behavior. Role-play situations.
- Review directions or sample items.
- Provide a written sequence to follow and thus circumvent memory problems and anxiety.
- Assure student that he or she can complete the task.
- Select only a portion of the task or short assignments to be completed independently.
- Point to a sign "Return to work" when student stops working.
- Use a timer intermittently and reward student who is working when it rings.
- Provide additional time for student who works slowly to complete tasks.

L. Emotional Adjustment

Observable Behavior:

- Easily frustrated by tasks or if demands not immediately met
- Becomes argumentative, aggressive, or destructive with little provocation
- Cries or laughs too easily
- Feels worthless or inferior
- Withdrawn, does not get involved with others
- Becomes angry or defensive when confronted with changes resulting from injury
- Apathetic and disinterested in friends or activities
- Makes constant inappropriate sexual comments, gestures, or actions
- Unhappy or depressed affect
- Nervous, self-conscious, or anxious behavior

Strategies:

- Emphasize what the individual can do and point out progress that has been made. Compare recent past and present work.
- Chart achievement of goals to build self-confidence.
- Limit perseverative behavior by using verbal directions (e.g., "Erase only once") or by focusing attention on less threatening or more socially appropriate tasks.

M. Sensorimotor Skills

Observable Behavior:

- Identified problems with smell, taste, touch, hearing, or vision
- Problems with visual acuity, blurring, or tracking
- Problems with tactile sensitivity (e.g., can't type or play an instrument without watching hands)
- Identified problems with oral-motor (e.g., swallowing), fine motor, or gross motor skills
- Poor sense of body in space (e.g., loses balance, negotiating obstacles)
- Motor paralysis or weakness of one or both sides
- Motor rigidity (e.g., limited range of motion), spasticity (e.g., contractions), and ataxia (e.g., erratic movements)
- Difficulty with skilled motor activities (e.g., dressing, eating)

Strategies:

- Building site should include ramps or level spaces to allow the student in a wheelchair easy access to entering/exiting the building. A fire/emergency exit plan should be established with necessary modifications.
- Ramps should have a slope of one foot length per inch of rise. A level space of at least three feet must be available for resting at each 30 foot interval of ramp.
- Walkways should allow safe mobility in a wheelchair from bus to building.
- Students should open doors independently if possible. A physical therapist can provide consultation or teach the child this skill if possible.
- Restrooms should be accessible. This may require the use of toilet rails, wider stalls, raised toilet seats, and more space for maneuverability.
- A student in a wheelchair should be able to reach the paper towel dispenser, trash can, soap dispenser, and sink. Pipes under the sink should be insulated if a student in a wheelchair is using the sink.
- A water fountain or sink with cup should be accessible in the area of the student's class.
- A public telephone should be accessible if it is available for other students.
- Lockers should be accessible to the student in a wheelchair. Height of the locker depends on the student's size, balance, and flexibility. Consider using commercially available adjustable locker shelving. It is helpful to have a locker where student is, as much as possible, in the same area of the building. Locks with keys or push-button locks may be better than combination locks for some students.

Instructional Strategies for the Student with TBI

- Consult the building principal and physical therapist if assistance is needed to make modifications.
- Seat belts, car seats, and/or harnesses should be provided on a special education bus.
- Bus driver may discharge/pick up student at a location that provides maximum independence for the student. A curb or stationary step may be used to assist the student who has difficulty climbing steps.
- Getting on and off the bus in a safe manner is required, at the same time recognizing the need for maximum independence.
- If the student needs a seat belt or harness and can otherwise ride a regular bus, the transportation department can equip the bus to be used with a seat belt or harness.
- The student may need some individualized adult support on a field trip. This may be the parent, a volunteer, or an aide from the school. The special education department may be contacted if these individuals are not available.
- The site of a field trip should be studied prior to the trip to determine any possible problems (e.g. accessibility of bathrooms, terrain, distance).
- If a student will be unable to walk the entire distance included on a trip and he/she does not have a wheelchair or other mode of mobility, securing a wheelchair for the day can be a temporary solution.
- Classroom should be set up so the student can easily move to his/her desk, teacher's desk, and other settings or environments.
- Secondary classes should be scheduled with as little distance between classes or movement between floors as possible.
- The student may need to leave class early to get to his/her next class and avoid crowded halls.
- A basket may be added to the side of a student's wheelchair or to his/her walker to carry books and materials. A backpack is helpful for some ambulatory students or a buddy may need to carry his/her books.
- Use a table of the correct height where forearms comfortably rest flat on the table when sitting erect.
- Use only the necessary amount of side and back support.
- If a belt is necessary, use it around the pelvis so that it doesn't impair breathing.
- Support the student's feet so that the hips and knees are at a 90-degree angle.
- Prevent incorrect positioning, such as knees crossed.
- The trunk and head should be as straight as possible.

Instructional Strategies for the Student with TBI

- If a student has an unusual grip on a pencil, do not immediately try to change his/her grip. This grip may be a reflection of unstable positioning. Children will often use a tight grip on a pencil or pen as a means of gaining postural stability.
- Pencil grips may be useful with some students to provide pencil stability. Commercial grips can be purchased. They can also be made from clay, Plaster of Paris, masking tape, or rubber bands.
- The writing utensil affects the quality of written work equally as much as the skill in executing the various handwriting strokes. When selecting a writing instrument, keep in mind that a pencil or crayon requires the most physical strength because they provide the most resistance. If you see that a student is having difficulty using these instruments, try having him or her write with a flair or ballpoint pen, which provides less resistance.
- Tape or secure paper to desk, or use dycem to prevent paper from sliding on desk surface.

Accommodating the Elementary and Secondary Classroom

The following two checklists, *Accommodating the Elementary Classroom For a Student with Traumatic Brain Injury* and *Accommodating the Secondary Classroom For a Student with Traumatic Brain Injury*, are tools that my provide classroom teachers and staff with a list of appropriate accommodations and/or modifications for the student with traumatic brain injury. These should be reviewed periodically and revised to reflect any changes in the student's performance in the school environment.

Instructional Strategies for the Student with TBI

Accommodating the Elementary Classroom Checklist

For a student with Traumatic Brain Injury

Student _____ Teacher _____ Date of Birth _____ Date _____

Presenting concern: _____

<p>Change the Teaching Mode:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Repeat directions <input type="checkbox"/> Increase active participation <input type="checkbox"/> Teacher circulate around room <input type="checkbox"/> Provide visual prompts(board/desk) <input type="checkbox"/> Provide immediate feedback (student corrects own work) <input type="checkbox"/> Teach semantic mapping <input type="checkbox"/> Use frequent review of key concepts <input type="checkbox"/> Teach to current level of ability <input type="checkbox"/> Speak more slowly or loudly <input type="checkbox"/> Re-teach <input type="checkbox"/> Use peer tutor <input type="checkbox"/> Use small group instruction <input type="checkbox"/> Use simple sentences <input type="checkbox"/> Use individualized instructions <input type="checkbox"/> Pause frequently <input type="checkbox"/> Discuss errors and how made <input type="checkbox"/> Use cooperative learning <input type="checkbox"/> Utilize instructional assistant <input type="checkbox"/> Other: _____ <p>Modify the School Settings:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Post class rules <input type="checkbox"/> Give preferential seating <input type="checkbox"/> Change to another class <input type="checkbox"/> Change schedule (more difficult classes in the morning) <input type="checkbox"/> Post daily schedule <input type="checkbox"/> Reduce distractions <input type="checkbox"/> Modify length of school day <input type="checkbox"/> Provide time for frequent breaks <input type="checkbox"/> Provide place for quiet time <input type="checkbox"/> Maintain consistent schedule 	<p>Adapt Instructional Materials:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Reduce length of assignments <input type="checkbox"/> Use easier materials <input type="checkbox"/> Use aids (calculator, word processor) <input type="checkbox"/> Underline or highlight words <input type="checkbox"/> Change skill/task <input type="checkbox"/> Use manipulative materials <input type="checkbox"/> Use color-coded text <input type="checkbox"/> Use books-on-tape <input type="checkbox"/> Use graphic organizers (visual/spatial displays) <input type="checkbox"/> Modify testing mode/setting <input type="checkbox"/> Other: _____ <p>Enhance Home/School Relations:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Parent conference every _____ <input type="checkbox"/> Daily/weekly reports home <input type="checkbox"/> Parent contract <input type="checkbox"/> Home visits on _____ <input type="checkbox"/> Other: _____ <p>Modify Student's Behavior</p> <ul style="list-style-type: none"> <input type="checkbox"/> Re-teach expected behavior <input type="checkbox"/> Increase student success rate <input type="checkbox"/> Learn to recognize signs of stress <input type="checkbox"/> Give nonverbal cues to discontinue behavior <input type="checkbox"/> Reinforce positive behavior (4:1) <input type="checkbox"/> Use mild, consistent consequences <input type="checkbox"/> Set goals with student <input type="checkbox"/> Use schoolwide reinforcement with target student <input type="checkbox"/> Use group or individual counseling <input type="checkbox"/> Teach student to attend to advance organizers at beginning of lesson 	<ul style="list-style-type: none"> <input type="checkbox"/> Provide opportunities to role play <input type="checkbox"/> Other: _____ <p>Resources Needed:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Fine motor training <input type="checkbox"/> Gross motor training <input type="checkbox"/> Speech and language specialist <input type="checkbox"/> Other (including past) teachers <input type="checkbox"/> Resource teachers <input type="checkbox"/> Resource specialist <input type="checkbox"/> School psychologist <input type="checkbox"/> Student study team <input type="checkbox"/> Child Development Specialist <input type="checkbox"/> Principal/assistant principal <input type="checkbox"/> Rehab facility <input type="checkbox"/> Other: _____ <p>Provide Support (buddy system):</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain disabilities to other students <input type="checkbox"/> Teach peers how to be helpful <input type="checkbox"/> Position appropriately <input type="checkbox"/> Point out similarities to previous work <input type="checkbox"/> Teach sequencing skills <input type="checkbox"/> Teach study skills <input type="checkbox"/> Teach visual imagery <input type="checkbox"/> Write assignments in daily log <input type="checkbox"/> Encourage requests for clarification, repetition, etc. <input type="checkbox"/> Teach memory strategies <input type="checkbox"/> Elicit responses when you know student knows the answer <input type="checkbox"/> Allow extra time <input type="checkbox"/> Other: _____
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Instructional Strategies for the Student with TBI

Accommodating the Secondary Classroom Checklist

For a student with Traumatic Brain Injury

Student _____ Teacher _____ Date of Birth _____ Date _____

Presenting concern: _____

<p>Change the Teaching Mode:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Repeat directions <input type="checkbox"/> Increase active participation <input type="checkbox"/> Teacher circulate around room <input type="checkbox"/> Provide visual prompts(board/desk) <input type="checkbox"/> Provide immediate feedback (student corrects own work) <input type="checkbox"/> Teach semantic mapping <input type="checkbox"/> Use frequent review of key concepts <input type="checkbox"/> Teach to current level of ability <input type="checkbox"/> Speak more slowly or loudly <input type="checkbox"/> Re-teach <input type="checkbox"/> Use peer tutor <input type="checkbox"/> Use small group instruction <input type="checkbox"/> Use simple sentences <input type="checkbox"/> Use individualized instructions <input type="checkbox"/> Pause frequently <input type="checkbox"/> Discuss errors and how made <input type="checkbox"/> Use cooperative learning <input type="checkbox"/> Utilize instructional assistant <input type="checkbox"/> Other: _____ <p>Modify the School Settings:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Post class rules <input type="checkbox"/> Give preferential seating <input type="checkbox"/> Change to another class <input type="checkbox"/> Change schedule (more difficult classes in the morning) <input type="checkbox"/> Post daily schedule <input type="checkbox"/> Reduce distractions <input type="checkbox"/> Modify length of school day <input type="checkbox"/> Provide time for frequent breaks <input type="checkbox"/> Provide place for quiet time <input type="checkbox"/> Maintain consistent schedule <input type="checkbox"/> Other: _____ 	<ul style="list-style-type: none"> <input type="checkbox"/> Use easier materials <input type="checkbox"/> Underline or highlight words <input type="checkbox"/> Change skill/task <input type="checkbox"/> Use manipulative materials <input type="checkbox"/> Use color-coded text <input type="checkbox"/> Use books-on-tape <input type="checkbox"/> Use graphic organizers (visual/spatial displays) <input type="checkbox"/> Modify testing mode/setting <input type="checkbox"/> Other: _____ <p>Enhance Home/School Relations:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Parent conference every _____ <input type="checkbox"/> Daily/weekly reports home <input type="checkbox"/> Parent contract <input type="checkbox"/> Home visits on _____ <input type="checkbox"/> Other: _____ <p>Modify Student's Behavior</p> <ul style="list-style-type: none"> <input type="checkbox"/> Re-teach expected behavior <input type="checkbox"/> Increase student success rate <input type="checkbox"/> Learn to recognize signs of stress <input type="checkbox"/> Give nonverbal cues to discontinue behavior <input type="checkbox"/> Reinforce positive behavior (4:1) <input type="checkbox"/> Use mild, consistent consequences <input type="checkbox"/> Set goals with student <input type="checkbox"/> Use key students for reinforcement of target student <input type="checkbox"/> Use group or individual counseling <input type="checkbox"/> Teach student to attend to advance organizers at beginning of lesson <input type="checkbox"/> Provide opportunities to role play <input type="checkbox"/> Teach student the grading system <input type="checkbox"/> Other: _____ 	<p>Resources Needed:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Fine motor training <input type="checkbox"/> Gross motor training <input type="checkbox"/> Speech and language specialist <input type="checkbox"/> Other (including past) teachers <input type="checkbox"/> Resource teachers <input type="checkbox"/> Resource specialist <input type="checkbox"/> School psychologist <input type="checkbox"/> Student study team <input type="checkbox"/> Counselor <input type="checkbox"/> Principal/assistant principal <input type="checkbox"/> Rehab facility <input type="checkbox"/> Other: _____ <p>Provide Support</p> <ul style="list-style-type: none"> <input type="checkbox"/> Use Peer-partner (buddy system) <input type="checkbox"/> Explain disabilities to other students <input type="checkbox"/> Teach peers how to be helpful <input type="checkbox"/> Position appropriately <input type="checkbox"/> Point out similarities to previous work <input type="checkbox"/> Teach sequencing skills <input type="checkbox"/> Teach study skills <input type="checkbox"/> Teach visual imagery <input type="checkbox"/> Write assignments in daily log <input type="checkbox"/> Encourage requests for clarification, repetition, etc. <input type="checkbox"/> Teach memory strategies <input type="checkbox"/> Elicit responses when you know student knows the answer <input type="checkbox"/> Allow extra time <input type="checkbox"/> Develop objective grading system using daily participation as a percentage of weekly and final grades <input type="checkbox"/> Schedule regular meetings for all staff to review progress and maintain consistency <p>Other: _____</p>
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Appendix A: Traumatic Brain Injury Services in the Educational Setting

The frequency of traumatic brain injury (TBI) in children and teens is staggering. Each year in the United States, as many as one million children and youth will sustain traumatic brain injuries from motor vehicle accidents, falls, sports, and abuse. The largest group of traumatic brain injured individuals fall within the 15-24 year old age group, but the frequency is nearly as high for youngsters under 15 years of age.

Definition

Minnesota Rule 3525.1348 defines Traumatic Brain Injury as an acquired injury to the brain caused by an external physical force, resulting in total or partial functional disability or psychosocial impairment, or both, that may adversely affect a child's educational performance and result in the need for special education and related services. The term applies to open or closed head injuries resulting in impairments in one or more areas, such as: cognition, speech/language, memory, attention, reasoning, abstract thinking, judgment, problem solving, sensory, perceptual and motor abilities, psycho-social behavior, physical functions, and information processing. The term does not apply to brain injuries that are congenital or degenerative, or brain injuries induced by birth trauma.

Two key factors to consider when determining whether a student may be eligible for special education support include the following:

- There must be medical documentation stating that the student's brain has been injured by an "external physical force." Children who have a brain injury as a result of infection, cerebral vascular accidents (stroke), brain tumors, or poison may have significant educational needs, but do *not* meet state TBI criteria. Eligibility in other categories could be considered by the team, depending on the presenting problems.
- There *must be* evidence that this injury has caused a functional impairment that adversely affects the student's educational performance. This evidence is determined through the evaluation process. Section 504 of the Rehabilitation Act may be considered when making minor accommodations for a student with mild brain injury.

Referral

Referrals come from a variety of sources including parent(s), teachers, school nurses, special education teachers and/or the medical or rehabilitative community. A referral must include medical documentation of a TBI diagnosis by a physician. This documentation must be kept in the student's due process file.

Licensure

Although there is currently no teacher licensure for the Traumatic Brain Injury category in Minnesota, Professional Competencies have recently been developed and can be found on the Minnesota Department of Education Website. As a result, it is strongly recommended that the team include a special education teacher who demonstrates the knowledge and skills outlined in the TBI Competencies. A Physical/Health Disabilities teacher would be considered an excellent candidate, given their training and experience in the area of TBI.

Eligibility Criteria

The team shall determine that a pupil is eligible and in need of special education and related services if the pupil meets the criterion in item A *and* in items B and C as documented by the information gathered according to item D:

- A. There is documentation by a physician of a medically verified traumatic brain injury.
- B. There is a functional impairment attributable to the traumatic brain injury that adversely affects educational performance in *one or more* of the following areas: intellectual/cognitive, academic, communication, motor, sensory, social-emotional/behavioral, and functional skills/adaptive behavior.
- C. The functional impairments are *not* primarily the result of previously existing:
 - 1. visual, hearing, or motor impairments
 - 2. emotional/behavioral disorders
 - 3. mental retardation
 - 4. language or specific learning disabilities
 - 5. environmental or economic disadvantage
 - 6. cultural differences

Appendix A: TBI Services

D. Documentation of a functional impairment in one or more of the areas in item B must, at a minimum, include one source from Group One and one source from Group 2:

1. GROUP ONE

- a. checklists
- b. classroom or work samples
- c. education/medical history
- d. documented, systematic behavioral observations
- e. interviews with parents, student, and other knowledgeable individuals

2. GROUP TWO

- a. criterion-referenced measures
- b. personality or projective measures
- c. sociometric measures
- d. standardized assessment measures (academic, cognitive, communication, neuropsychological, or motor)

Evaluation

A multi-disciplinary evaluation team may include the following people: a licensed special education teacher knowledgeable in traumatic brain injury, a school nurse, a school psychologist, a DAPE teacher, a general classroom teacher, a therapist, and other appropriate related service providers.

Further Information

Contact Deb Williamson, State TBI Specialist at the Minnesota Department of Education, (612) 638-1532 for more information, or refer to the Minnesota TBI manual entitled, **Special Education Evaluation and Services for Students with Traumatic Brain Injury: A Manual for Minnesota Educators (Revised 2003)**.

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Appendix C: Educational Resources

Minnesota State TBI Specialist

Deb Williamson: (612) 638-1532
Metro ECSU
4001 Stinson Blvd. Suite 210
St. Anthony, MN 55421
FAX: (612) 638-0811
Email: deb.williamson@state.mn.us

State Low Incidence Supervisor

Eric Kloos: (651) 582-8268
MN State Dept. of Education
1500 Highway 36 East
Roseville, MN 55113-4266
Email: eric.kloos@state.mn.us

Minnesota State Physical/Health Disabilities Network

Contact your regional P/HD teacher or RLIF for more information on the Network.

Minnesota Special Education Low Incidence Regional Project

Host agencies and facilitators (RLIFs) for low incidence grants:

Region 1 & 2

Brenda Ackerson
224 East Bridge
Warren, MN 56762
(218) 745-5628 FAX: (218) 745-5886
Email: backers@wao.k12.mn.us

Region 6 & 8

Bob Braun
Southwest/West Central Service Cooperative
1420 East College Drive
Marshall, MN 56258
(507) 537-2252 FAX: (507) 537-7327
Email: bob.braun@swsc.org

Region 3

Pat Brandstaetter
NE Service Cooperative
8633 So. 8th St.
Mountain Iron, MN 55768
(218) 748-7606 FAX: (218) 741-1719
Email: pbrand@nesc.k12.mn.us

Region 9

Linda Watson
South Central Service Cooperative
1610 Commerce Drive
North Mankato, MN 56003
(507) 389-2123 FAX: (507) 389-1772
Email: lwatson@mncsc.org

Region 4

Dennis Ceminski
Lakes Country Service Cooperative
1001 East Mt. Faith
Fergus Falls, MN 56537
(218) 739-3273 FAX (218) 739-2459
Email: ceminski@lcsc.org

Region 10

Jean Davis
Region 10 Special Education Programs
615 SW Seventh Street
Rochester, MN 55902
(507) 287-1346 FAX: (507) 280-4762
Email: jdavis@rochester.k12.mn.us

Region 5 & 7

Earl Mergens
200 First St. N, Suite 1
Staples, MN 56479-9502
(218) 894-5462 FAX: (218) 894-3045
Email: earlm@ncscmn.org

Region 11

Judy Wolff
Metro ECSU
4001 Stinson Blvd NE, Suite 210
St. Anthony, MN 55421
(612) 638-1524 FAX: (612) 638-0811
Email: jwolff@ecsu.k12.mn.us

Appendix D: Community Resources

Arc of Minnesota

770 Transfer Road, Suite 26
St. Paul, MN 55114
(651) 523-0823 or (800) 582-5256
fax: (651)523-0829
Email: mail@arcminnesota.com

Arc has many offices throughout the state. To find the office nearest you, contact this office.

Brain Injury Association of Minnesota

34 13th Avenue NE Suite B 001
Mpls., MN 55413
(612) 378-2742
Help Line: (800) 669-6442
Fax: 612-378-2789
Email: info@braininjurymn.org
Website: www.braininjurymn.org

Courage Center

3915 Golden Valley Road
Golden Valley, MN 55422
(763) 588-0811
(763) 520-0410 TDD
(763) 520-0577 Fax
Website: <http://www.courage.org>

Epilepsy Foundation of Minnesota

2356 University Avenue West, Suite 405
St. Paul, MN 55114-1802
(651) 646-8675 or (800) 779-0777
Fax: (651) 646-1887
Website: www.efmn.org

Gillette Children's Specialty Healthcare

200 E. University Ave.
St. Paul, MN 55101
(651) 291-2848
Fax: (651) 229-3833
Website: www.gillettechildrens.org

Hennepin County Medical Center

Pediatric Brain Injury Program
701 Park Avenue
Mpls., MN 55415
(612) 347-2259
Fax: (612) 904-4295
Website: www.hcmc.org

Institute of Community Integration

University of Minnesota
102 Pattee Hall

150 Pillsbury Dr. SE
Mpls., MN 55455
(612) 624-6300
Fax: (612) 624-9344
Website: <http://ici.umn.edu>

Learning Disabilities of Minnesota

166 4th Street East, Suite 200
St. Paul, MN 55101-1464
(651) 222-0311
Fax: (651) 222-8920
Website: www.familyinc.org

Metropolitan Center for Independent Living

1600 University Ave. W. Suite 16
St. Paul, MN 55104
(651) 646-8342
TDD: (612) 642-2515
Website: www.mcil-mn.org

Minnesota Disability Law Center

430 First Ave. N Suite 300
Mpls., MN 55401-1780
(612) 332-1441 or (800) 292-4150
Fax: (612) 334-5755
Website: www.mnlegalservices.org

Minnesota State Council on Disability

121 E. Seventh Place, Suite 107
St Paul, MN 55101
(651) 296-6785 V/TDD or (800)945-8913 V/TDD
Fax: (651) 296-5935
Website: www.disability.state.mn.us
Email: council.disability@state.mn.us

PACER Center (Parent Advocacy Coalition for Educational Rights)

8161 Normandale Blvd.
Bloomington, MN 55437
(952) 838-9000 or (800) 53PACER
Fax: (952) 838-0199
Website: www.pacer.org

TBI Metro Services

(Vocational services and structured day program for ages 18 and older)
(612) 869-3995 (Mpls. area)
(651) 457-4756 (St. Paul area)
Website: www.opportunities.org

Appendix E: Minnesota State Agencies

MN Department of Education

1500 Highway 36 West
Roseville, MN 55113-4266
(651) 582-8200
TTY: (651) 582-8201
Website: www.education.state.mn.us

Minnesota Department of Health

MN Children with Special Health Needs
PO Box 64882
85 East 7th Place, Suite 400 St. Paul, MN
55164-0882
(651) 215-8956 V/TDD or (800) 728-5420
V/TDD
Fax: (651) 281-9988
Website:
www.health.state.mn.us/divs/fh/mcshn

Minnesota Department of Human Rights

Army Corps of Engineer Center
190 E. 5th Street Suite 700
St. Paul, MN 55101
(651) 296-5663 or (800) 657-3704 .TDD:
(651) 296-1283
Fax: (651) 296-9064
Website: www.humanrights.state.mn.us

Minnesota Department of Human Services

Traumatic Brain Injury Program
Disabilities Services Division
444 Lafayette Road
St. Paul, MN 55155-3857
(651) 582-1998 or (800)747-5484
Website: www.dhs.state.mn.us

Minnesota Department Economic Security

Division of Rehabilitation Services
390 North Robert Street
St. Paul, MN 55101
(651) 296-5616 or (800) 328-9095 TDD:
(651) 296-3900
Fax: (651) 297-5159
Website: www.des.state.mn.us

Office of Ombudsman for Mental Health and Mental Retardation

Metro Square Building, Suite 420
121 7th Place East
St. Paul, MN 55101-2117
(651) 296-3848 or (800) 657-3506
Fax: (651) 296-1021
Website: www.ombudmhm.state.mn.us

APPENDIX F: National Organizations

American Trauma Society

8903 Presidential Parkway, Suite 512
Upper Marlboro, Maryland 20772-2656
(800) 556-7890
Fax: (301) 420-0617
Website: www.amtrauma.org

Council for Exceptional Children

110 North Glebe Rd Suite 300
Arlington, VA 22201
(703) 620-3660
Website: www.cec.spec.org

National Institute of Health: Public Health Service

200 Independence Avenue SW
Washington, D.C. 20201
(301) 496-4000
Website: www.nih.gov

Federation for Children with Special Needs

1135 Tremont St. Suite 420
Boston, MA 02120
(617) 236-7210
Fax: (617) 572-2094
Website: www.fcsn.org

National Association of Protection and Advocacy Systems (NAPAS)

900 Second St. NE, S-211 Washington J OC
20002
(202) 408-9514 TOLL: (202) 408-9521
Fax: (202) 408-9520
Website: www.protectionandadvocacy.org

National Brain Injury Association

105 North Alfred Street
Alexandria, VA 22314
(703) 236-6000 or (800) 444-6443
Website address: <http://www.bia.usa.org>

National Information Center for Children and Youth With Disabilities (NICHD)

PO Box 1492
Washington, DC 20013-1492
(800) 695-0285
(Ask for Information Specialist)
Fax: (202) 884-8441
Website: www.nichy.org

Medical Discharge Documentation For School/Childcare Re-Entry: *Traumatic Brain Injury*

(Please send home with family at point of discharge, and fax to child's school.)

Date: _____

RE: (Child's name) _____

Medical Record Number: _____

Date of Birth: _____

Dear School or Child Care Provider,

This child has sustained a minor/mild brain injury and has been seen in the emergency room and/or hospitalized on the following date(s): _____. The child is being discharged today. Specific information and recommendations regarding a return to school or a childcare program are documented below.

Resume school/childcare program (Check one): homebound half day full day

Duration (Give dates): _____

Transportation (Check one): regular lift bus bus seatbelt helmet

Physical education class (Check one): resume regular class modify

If modified, list restrictions: _____

Contact sports (Check one): resume modify

If modified, list restrictions: _____

Presenting educational problems related to brain injury: _____

If additional information is needed about this child's return to school or childcare, contact:

(Name) _____ (Phone) _____

Physician's Name (if different from above)

Suggested Re-entry Protocol I

Student: _____ School/Grade: _____

Date of Injury: _____ Parent Name/Phone #: _____

- **Immediately Following Traumatic Brain Injury**

A school representative (TBI specialist, special education case manager, or school nurse) is assigned as the contact person by the administrator. The school representative will:

- Contact parent(s) to:
 - Inquire about their child's condition
 - Obtain release for hospital contact (get release to and from school)
- Contact the child's case manager at the hospital to:
 - Discuss the school's re-entry issues/questions
- Meet with the child's classroom teacher(s) to:
 - Inform them of the child's condition
 - Obtain/review current educational records

- **After Student's Condition Has Stabilized**

The school representative will:

- Contact the hospital case manager to:
 - Obtain information regarding the child's condition
 - Determine if/when to send school work

- **Prior To Discharge From Hospital**

The school representative will:

- Visit with student and rehabilitation staff
- Obtain copies of hospital evaluations **and** documentation of the medical diagnosis of TBI
- Conduct or arrange for inservice in school to:
 - Provide specific information about the student's condition
 - Provide general information about TBI
 - Discuss potential modifications, i.e., ramp, wheelchair, lighting

- **Immediately After Hospital Discharge**

The school representative will:

- Contact parent(s) to:
 - Determine when the child will be getting post-acute rehabilitative care
 - Set a tentative date for return to school, if no further rehabilitation is being provided
- Follow-up with hospital case manager
 - Get update on discharge condition/special needs, i.e., tracheostomy, ambulation
- Establish an educational team and designate a case manager (if different from representative)

The team will:

- Develop a tentative plan for school reentry (consider need for environmental modification, 504 Plan, special education evaluation)

- **Arrival At School**

The team will:

- Assign personnel to conduct initial evaluation and give feedback to teachers and parents
- Further modify classroom environment to meet student's needs

- **After First Weeks At School**

The team will:

- Reassess the student's needs and modify educational plan accordingly
- Maintain contact with parents and teacher

Suggested Re-entry Protocol II

Hospital and School Collaboration

Collaboration between the hospital, school and family is critical for a smooth transition of the young person with a brain injury. The following protocol, with family involvement and permission, is recommended.

1. The parent or a hospital representative calls the school district (representatives could include a director of special education, a traumatic brain injury resource person, or a Physical/Health Disabilities (P/HD) teacher to inform the district of a potential student with a traumatic brain injury that may require accommodations/modifications.
2. The school district identifies a resource person to serve as the hospital contact and to coordinate the school's preparation for the student's return. This resource person needs to be knowledgeable about TBI.
3. The resource person communicates with the appropriate school personnel (nurse, special education, regular education, and administration) regarding the student.
4. School staff, hospital staff and family continue to communicate throughout the student's hospitalization.
5. The resource person and selected school personnel (i.e., special education teacher, related service staff) attend a hospital discharge conference to gather information and obtain appropriate release of information to understand the student's needs. The educational team may want to consider initiating a special education evaluation at this time, so that the evaluation process is concurrent with school re-entry. A team member may also want to schedule an observation of the student in the hospital setting to coincide with this meeting.
6. The resource person contacts the special education director to arrange for paraprofessional support, special busing or alternative placement as needed.
7. The resource person meets with the parents and school staff to discuss the student's needs.
8. The school resource person or a hospital representative provides inservice with school staff and/or classmates, as needed or requested by parents or student.
9. The student re-enters school with the evaluation in process or services are in place. This may include an IEP or 504 Plan and necessary accommodations clearly documented.

A timely return to school is beneficial. Schools can customize a student's day to ease the transition and accommodate factors such as ongoing fatigue.

- Initial
 Re-evaluation

TBI Criteria Checklist

Student's Name _____ DOB _____ Grade _____
 School _____ Evaluation Summary Meeting Date _____

In order for a student to be eligible for special education and related services under the category of TBI, Item A, and Items B and C, as documented by the information gathered according to Item D, must be met.

A. Yes No

- There is documentation by a physician of a medically verified traumatic brain injury in the student's school file.

AND

B. Yes No

- There is a functional impairment attributable to the traumatic brain injury that adversely affects educational performance in one or more of the following areas:

- ___ intellectual-cognitive
- ___ academic
- ___ communication
- ___ motor
- ___ sensory
- ___ social-emotional-behavioral
- ___ functional skills-adaptive behavior

AND

C. Yes No

- The functional impairments are **NOT** primarily the result of previously existing:

- ___ vision, hearing, or motor impairments
- ___ emotional-behavioral disorders
- ___ mental retardation
- ___ language or specific learning disabilities
- ___ environmental or economic disadvantage
- ___ cultural differences

D. Yes No

- Information/data to document a functional impairment in Item B must, at a minimum, include one source from Group One and one source from Group Two:

Group One

- ___ checklists
- ___ classroom or work samples
- ___ educational/medical history
- ___ documented, systematic behavioral observations
- ___ interviews with parents, student, and other knowledgeable individuals

Group Two

- ___ criterion-referenced measures
- ___ personality or projective measures
- ___ sociometric measures
- ___ standardized assessment measures (academic, cognitive, communication, neuropsychological or motor)

TBI CRITERIA Worksheet

(This document may be used to fulfill Item D, Group One of the criteria)

Student's Name _____ School _____ Grade _____

Completed by _____ Subject Taught _____

Check any behaviors you have observed, and record specific concerns related to the student's ability to function independently in the school environment.

INTELLECTUAL/COGNITIVE

- | | |
|---|--|
| <input type="checkbox"/> difficulty initiating tasks | <input type="checkbox"/> doesn't problem-solve |
| <input type="checkbox"/> off-task behavior | <input type="checkbox"/> forgets information/materials/rules |
| <input type="checkbox"/> easily distracted | <input type="checkbox"/> difficulty learning new concepts |
| <input type="checkbox"/> doesn't bring materials to class | <input type="checkbox"/> impulsive |
| <input type="checkbox"/> doesn't use work time efficiently | <input type="checkbox"/> difficulty with organization |
| <input type="checkbox"/> doesn't follow directions | <input type="checkbox"/> gives up quickly on challenging tasks |
| <input type="checkbox"/> doesn't understand abstract concepts | <input type="checkbox"/> assignment quality unsatisfactory |
| <input type="checkbox"/> processes information slowly | |

ACADEMIC

- | | |
|--|--|
| <input type="checkbox"/> change in achievement from pre-injury | <input type="checkbox"/> written assignments disorganized/off-topic |
| <input type="checkbox"/> inadequate academic progress | <input type="checkbox"/> unable to complete assignments by due date |
| <input type="checkbox"/> "gaps" in basic knowledge | <input type="checkbox"/> difficulty breaking down large, complex tasks |
| <input type="checkbox"/> difficulty integrating/applying new information | |

COMMUNICATION

- | | |
|--|---|
| <input type="checkbox"/> difficulty conversing with adults/peers | <input type="checkbox"/> perseverates on words, phrases, topics |
| <input type="checkbox"/> difficulty expressing ideas fluently | <input type="checkbox"/> confused by multiple meanings of words |
| <input type="checkbox"/> doesn't ask for clarification or assistance | <input type="checkbox"/> difficulty understanding lengthy discussions |
| <input type="checkbox"/> confused by idioms, slang | <input type="checkbox"/> speech not easily understood by others |
| <input type="checkbox"/> frequently off-topic | |

MOTOR

- | | |
|--|---|
| <input type="checkbox"/> motor paralysis or weakness | <input type="checkbox"/> unable to access some areas of school environment |
| <input type="checkbox"/> poor balance | <input type="checkbox"/> unable to manage materials (books, folders, locks) |
| <input type="checkbox"/> limited strength/endorance | <input type="checkbox"/> difficulty with tracking, copying, note-taking |
| <input type="checkbox"/> difficulty in writing, drawing, cutting | <input type="checkbox"/> difficulty completing written tasks |

SENSORY

- difficulty with visual acuity
 - difficulty with hearing
 - difficulty with visual perceptions (misses words on a page: difficulty using maps, graphs; skips problems)
 - unusual sensitivity to sounds, ringing in the ears, etc.
 - loss of sensation (numbness, tingling, lack of hot/cold discrimination)
-
-

HEALTH/PHYSICAL

- | | |
|---|--|
| <input type="checkbox"/> complains of headaches | <input type="checkbox"/> unusual movements |
| <input type="checkbox"/> complains of dizziness | <input type="checkbox"/> becomes fatigued/needs rest times |
| <input type="checkbox"/> stares blankly | <input type="checkbox"/> seems in a fog, confused |
-
-

SOCIAL, EMOTIONAL, BEHAVIORAL

- | | |
|---|---|
| <input type="checkbox"/> responses or statements are off-topic | <input type="checkbox"/> fails to understand social humor |
| <input type="checkbox"/> disinterested in friends, activities | <input type="checkbox"/> peculiar mannerisms |
| <input type="checkbox"/> makes inappropriate or offensive remarks | <input type="checkbox"/> doesn't understand feelings of others |
| <input type="checkbox"/> fails to understand nonverbal cues | <input type="checkbox"/> cries or laughs too easily |
| <input type="checkbox"/> easily provoked to anger | <input type="checkbox"/> easily frustrated |
| <input type="checkbox"/> denies problems or changes from injury | <input type="checkbox"/> unrealistic view of strengths/weaknesses |
| <input type="checkbox"/> unhappy or depressed affect | <input type="checkbox"/> acts immature for age |
| <input type="checkbox"/> poor peer relationships | <input type="checkbox"/> doesn't ask for needed accommodations |
| <input type="checkbox"/> displays poor judgment | |
-
-

FUNCTIONAL

- | | |
|---|---|
| <input type="checkbox"/> requires assistance with personal cares | <input type="checkbox"/> fails to understand social humor |
| <input type="checkbox"/> disinterested in friends, activities | <input type="checkbox"/> peculiar mannerisms |
| <input type="checkbox"/> makes inappropriate or offensive remarks | <input type="checkbox"/> doesn't understand feelings of others |
| <input type="checkbox"/> fails to understand nonverbal cues | <input type="checkbox"/> cries or laughs too easily |
| <input type="checkbox"/> easily provoked to anger | <input type="checkbox"/> easily frustrated |
| <input type="checkbox"/> denies problems or changes from injury | <input type="checkbox"/> unrealistic view of strengths/weaknesses |
| <input type="checkbox"/> unhappy or depressed affect | <input type="checkbox"/> acts immature for age |
| <input type="checkbox"/> poor peer relationships | <input type="checkbox"/> doesn't ask for needed accommodations |
| <input type="checkbox"/> displays poor judgment | |
-
-

Please list any accommodations or modifications you routinely make for this student in your class:

Traumatic Brain Injury Checklist

Name of Student: _____

Name of Individual Completing Form: _____

Date: _____

Directions: Please rate the student's behavior (in comparison to same-age classmates) by placing an X in the appropriate column below.

(0)	(1)	(2)	(3)	Numbers are for scoring purposes only. Please indicate frequency of each behavior by marking an X in the appropriate column.
Not at all	Occasionally	Often	Very Severe and/or Frequent Problems	
				A. Orientation and Attention to Activity
				Confused with time (day, date), place (classroom, bathroom, schedule changes), and personal information (birth date, address, phone schedule)
				Seems to be "in a fog"
				Stares blankly
				Appears sleepy or to fatigue easily
				Fails to finish things started
				Cannot concentrate or pay attention
				Daydreams or gets lost in thoughts
				Inattentive, easily distracted
				B. Starting, Changing and Maintaining Activities
				Confused or requires prompts about where, how or when to begin assignment
				Doesn't not know how to initiate or maintain conversation
				Confused or agitated when moving from one activity, place, or group to another
				Stops mid-task (math problem, worksheets, story, or conversation)
				Perseverates on certain topics of behaviors
				Gives up quickly on challenging tasks

Traumatic Brain Injury Checklist

(0)	(1)	(2)	(3)	Numbers are for scoring purposes only. Please indicate frequency of each behavior by marking an X in the appropriate column.
Not at all	Occasionally	Often	Very Severe and/or Frequent Problems	
C. Absorbing and Retaining Information				
				Forgets things that happened even the same day
				Problems with learning new concepts, facts, or information
				Cannot remember simple instructions or rules
				Forgets classroom materials, assignments, and deadlines
				Forgets information learned from day to day (does well on quizzes, but fails test covering several weeks of learning)
D. Language Comprehension and Expression				
				Confused with idioms (“climbing the walls”) or slang
				Unable to recall word meaning or altered meaning (homonym or homographs)
				Unable to comprehend or breakdown instructions and request
				Difficulty understanding complex or lengthy discussion
				Processes information at a slow pace
				Difficulty finding specific words(may describe but not label)
				Stammers or slurs words
				Difficulty fluently expressing ideas (speech disjointed, stops midsentence)
E. Visual-Perceptual Processing				
				Cannot track when reading, skips problems, or neglects a portion of a page of written material
				Orients body or materials in unusual positions when reading or writing
				Gets lost in halls and cannot follow maps or graphs
				Shows left-right confusion

Traumatic Brain Injury Checklist

(0)	(1)	(2)	(3)	Numbers are for scoring purposes only. Please indicate frequency of each behavior by marking an X in the appropriate column.
Not at all	Occasionally	Often	Very Severe and/or Frequent Problems	
				F. Visual-motor Skills
				Difficulty copying information from board
				Difficulty with notetaking
				Difficulty with letter formation or spacing
				Slow, inefficient motor output
				Poor motor dexterity (cutting, drawing)
				G. Sequential Processing
				Difficulty with sequential steps of task (getting out materials, turning to page, starting an assignment)
				Confuses the sequence of events or other time-related concepts
				H. Problem-Solving, Reasoning, and Generalization
				Fails to consider alternatives when first attempts fails
				Does not use compensatory strategies (outlining or underlining)
				Problems understanding abstract concepts (color, emotions, math and science)
				Confusion with cause-effect relationships
				Unable to categorize (size, species)
				Problems making inferences or drawing conclusions
				Can state facts, but cannot integrate or synthesize information
				Difficulty applying what is known to new or different situations
				I. Organization and Planning Skills
				Difficulty breaking down complex tasks (term papers, projects)
				Problems organizing materials
				Problems distinguishing between important and unimportant information
				Difficulty making plans and setting goals
				Difficulty following through and monitoring plans
				Set unrealistic goals

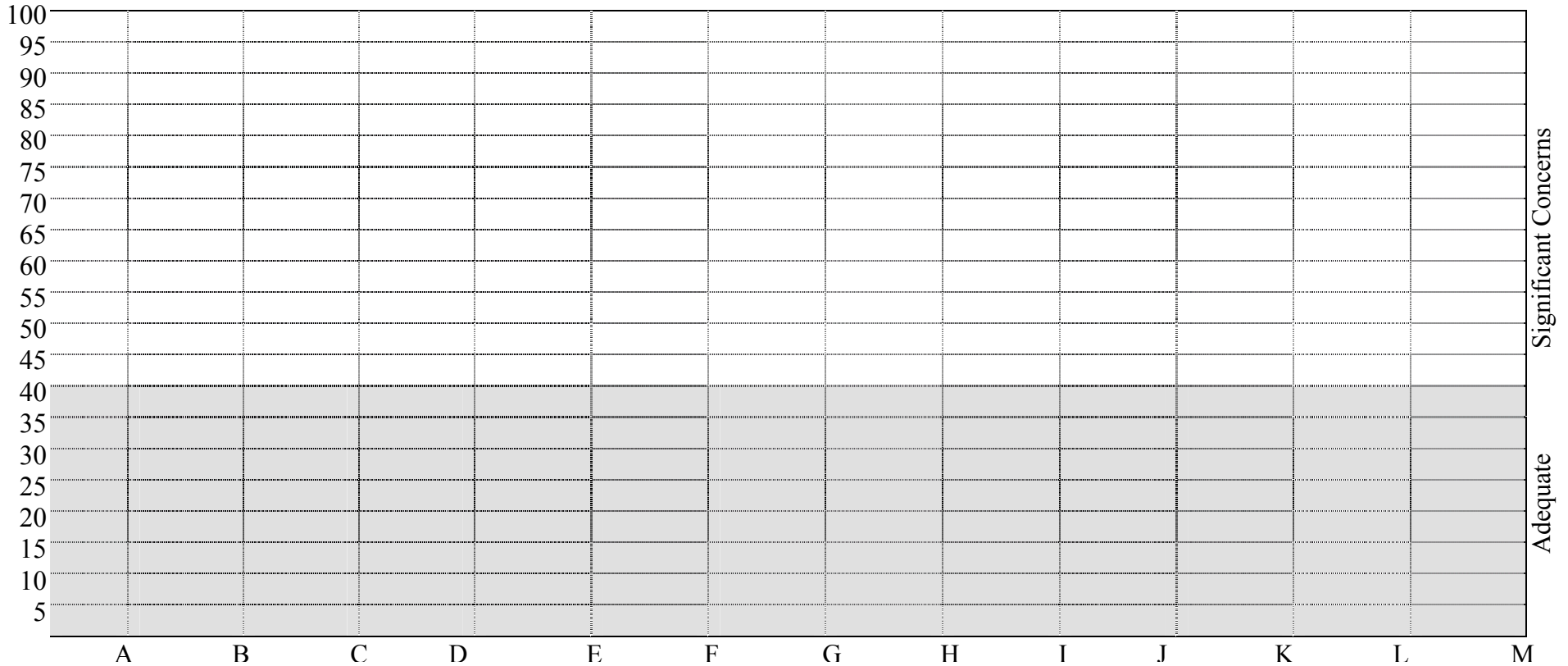
Traumatic Brain Injury Checklist

(0)	(1)	(2)	(3)	Numbers are for scoring purposes only. Please indicate frequency of each behavior by marking an X in the appropriate column.
Not at all	Occasionally	Often	Very Severe and/or Frequent Problems	
J. Impulse or Self-Control				
				Blurts out in class
				Makes unrelated statements or responses
				Acts without thinking (leaves class, throws things, sets off alarms)
				Displays dangerous behavior (runs into street, plays with fire, drives unsafely)
				Disturbs other pupils
				Makes inappropriate or offensive remarks
				Shows compulsive habits (nail biting, tapping)
				Hyperactive, out - of - seat behavior
K. Social Adjustment and Awareness				
				Acts immature for age
				Too dependent on adults
				Too bossy or submissive with peers
				Peculiar manners and mannerisms (stands too close, interrupts, unusually loud,
				Fails to understand social humor
				Fails to correctly interpret nonverbal social cues
				Difficulty understanding the feelings and perspective of others
				Does not understand strengths, weaknesses and self presentation
				Does not know when help is required or how to get assistance
				Denies any problems or changes resulting from injury
L. Emotional Adjustment				
				Easily frustrated by tasks or if demands not immediately met
				Becomes argumentative, aggressive, or destructive with little provocation
				Cries or laughs too easily
				Feels worthless or inferior
				Withdrawn, does not get involved with others
				Becomes angry or defensive when confronted with changes resulting from injury
				Apathetic and disinterested in friends or activities
				Makes constant inappropriate sexual comments and gestures
				Unhappy or depressed affect
				Nervous, self-conscious, or anxious behavior

Traumatic Brain Injury Checklist

(0)	(1)	(2)	(3)	Numbers are for scoring purposes only. Please indicate frequency of each behavior by marking an X in the appropriate column.
Not at all	Occasionally	Often	Very Severe and/or Frequent Problems	
				M. Sensorimotor Skills
				Problems with smell, taste, touch, hearing or vision
				Problems with visual acuity, blurring or tracking
				Problems with tactile sensitivity (e.g., cannot type or play an instrument without watching hands)
				Problems with oromotor (e.g., swallowing), fine motor or gross motor skills
				Poor sense of body in space (loses balance, negotiating obstacles)
				Motor paralysis or weakness on one or both sides
				Motor rigidity (limited range of motion), spasticity (contractions) and ataxia (erratic movements) circle one
				Difficulty with skilled motor activities (dressing, eating)
Waaland and Bohannon, 1992				

TBI Checklist Summary Graph



- A. Orientation and Attention to Activity
- B. Starting, Changing and Maintaining Activities
- C. Absorbing and Retaining Information
- D. Language Comprehension and Expression
- E. Visual-Perceptual Processing
- F. Visual-motor Skills
- G. Sequential Processing

- H. Problem-Solving, Reasoning, and Generalization
- I. Organization and Planning Skills
- J. Impulse or Self-Control
- K. Social Adjustment and Awareness
- L. Emotional Adjustment
- M. Sensorimotor Skills

Raters:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

TBI Observation/Interview Form

Student's Name _____ DOB _____ School _____

(Of the information gathered in interview, star [★] behaviors actually observed.)

Interview Date _____ Observation Date(s) _____

Person(s) Interviewed _____ Observation Setting _____

Completed by _____ Completed by _____

Title _____ Title _____

HEALTH STATUS (Information as known by teacher/staff/parents)

- Staff/Student Knowledge of Diagnosis:
- Medication:
- Health Plan:
- Emergency/Safety Procedures:
- Attendance:

ORGANIZATION SKILLS (Document significant discrepancies from peers)

- Materials: (Has materials when needed, physical organization of space)
- Written Work: (Organized on page in sequential manner)
- Thoughts: (Tells thoughts of stories sequentially--beginning, middle, and end--stays on topic)

TBI Observation/Interview Form (*Continued*)

STUDY SKILLS

- Self-Initiates:
- Displays On-Task Behavior:
- Follows Directions:
- Completes Homework:
- Participates in Group Activities:

WORK COMPLETION

- Number of Assignments Given ____
Assignments Turned In ____ Assignments Late ____

INDEPENDENCE

- Work Completion: (Unassisted, adult assisted, peer assisted)
- Movement Through School Environment:
- Clothing/Bathroom/Lunchroom:
- Motoric Management of Materials: (Books, notes, pencil, scissors, desk, locker)
- Level of Self-Advocacy:

TBI Observation/Interview Form (*Continued*)

FUNCTIONAL LEVEL OF ACADEMIC PERFORMANCE

(Daily classroom performance in relation to peers)

- Reading:

- Math:

- Written Language:

- Other:

PEER INTERACTION

- Student with Peers:

- Peers with Student:

INTERFERING BEHAVIORS

- Distracting to Self or Others:

- Aggressive Behavior:

MAIN CONCERNS AND/OR STRENGTHS

- Parents:

- General Education Teacher/Other Staff:

(Developed by ISD #625, St. Paul Schools)

Traumatic Brain Injury Services in the Educational Setting

The frequency of traumatic brain injury (TBI) in children and teens is staggering. Each year in the United States, as many as one million children and youth will sustain traumatic brain injuries from motor vehicle accidents, falls, sports, and abuse. The largest group of traumatic brain injured individuals fall within the 15-24 year old age group, but the frequency is nearly as high for youngsters under 15 years of age.

Definition

Minnesota Rule 3525.1348 defines Traumatic Brain Injury as an acquired injury to the brain caused by an external physical force, resulting in total or partial functional disability or psycho-social impairment, or both, that may adversely affect a child's educational performance and result in the need for special education and related services. The term applies to open or closed head injuries resulting in impairments in one or more areas, such as: cognition, speech/language, memory, attention, reasoning, abstract thinking, judgment, problem solving, sensory, perceptual and motor abilities, psycho-social behavior, physical functions, and information processing. The term does not apply to brain injuries that are congenital or degenerative, or brain injuries induced by birth trauma.

Two key factors to consider when determining whether a student may be eligible for special education support include the following:

There must be medical documentation stating that the student's brain has been injured by an "external physical force." Children who have a brain injury as a result of infection, cerebral vascular accidents (stroke), brain tumors, or poison may have significant educational needs, but do *not* meet state TBI criteria. Eligibility in other categories could be considered by the team, depending on the presenting problems.

There *must be* evidence that this injury has caused a functional impairment that adversely affects the student's educational performance. This evidence is determined through the assessment process.

Section 504 of the Rehabilitation Act may be considered when making minor accommodations for a student with mild brain injury.

Referral

Referrals come from a variety of sources including parent(s), teachers, school nurses, special education teachers and/or the medical or rehabilitative community. A referral must include medical documentation of a TBI diagnosis by a physician. This documentation must be kept in the student's due process file.

Licensure

Although there is currently no teacher licensure for the Traumatic Brain Injury category in Minnesota, Professional Competencies have recently been developed and can be found on the Minnesota Department of Education Website. As a result, it is strongly recommended that the team include a special education teacher who demonstrates the knowledge and skills outlined in the TBI Competencies. A Physical/Health Disabilities teacher would be considered an excellent candidate, given their training and experience in the area of TBI.

Eligibility Criteria

The team shall determine that a pupil is eligible and in need of special education and related services .if the pupil meets the criterion in item A *and* in items B and C as documented by the information gathered according to item D:

A. There is documentation by a physician of a medically verified traumatic brain injury.

B. There is a functional impairment attributable to the traumatic brain injury that adversely affects educational performance in *one or more* of the following areas: intellectual/cognitive, academic, communication, motor, sensory, social-emotional/behavioral, and functional skills/adaptive behavior.

C. The functional impairments are *not* primarily the result of previously existing:

1. visual, hearing, or motor impairments
2. emotional/behavioral disorders
3. mental retardation
4. language or specific learning disabilities
5. environmental or economic disadvantage
6. cultural differences

D. Documentation of a functional impairment in one or more of the areas in item B must, at a minimum, include one source from Group One and one source from Group 2:

1. GROUP ONE

- a. checklists
- b. classroom or work samples
- c. education/medical history
- d. documented, systematic behavioral observations
- e. interviews with parents, student, and other knowledgeable individuals

2. GROUP TWO

- a. criterion-referenced measures
- b. personality or projective measures
- c. sociometric measures
- d. standardized assessment measures (academic, cognitive, communication, neuro- psychological, or motor)

Evaluation

A multi-disciplinary evaluation team may include the following people: a licensed special education teacher knowledgeable in traumatic brain injury, a school nurse, a school psychologist, a DAPE teacher, a general classroom teacher, a therapist, and other appropriate related service providers.

Further Information

Contact the State TBI specialist at the Minnesota Department of Education, (612) 638-1532 for more information, or refer to the Minnesota TBI manual entitled, **Special Education Evaluation and Services for Students with Traumatic Brain Injury: A Manual for Minnesota Educators (Revised 2003)**.