Practical Strategies to Optimize School Re-Integration for Students with Brain Injury

Jennifer P. Lundine, MA, CCC-SLP
Nationwide Children's Hospital
Columbus, Ohio

Nationwide Children's Hospital

- 328 bed Level I pediatric trauma facility
- Rehab is a unit within the hospital
  - Open since 1987
  - CARF accredited since 1992
- Patients come to rehab from within the hospital and from surrounding counties, states, and across the country

Nationwide Children's Hospital Rehab Unit

- Nationwide Children's Hospital Rehab Unit has 10 beds.
- All rooms are private with accessible tub/shower in each room.
- Parents are extensions of our patients (infants to adolescents) & are welcome 24/7.
- We have a comprehensive school re-entry program spearheaded by our Rehab Teacher, from Columbus Public Schools. We also have early intervention specialists for those patients below age 5.
- We have speech-language pathologists, child life specialists, psychologists, social workers, physical, occupational, recreational, and massage therapists as integral parts of our rehab therapy team.

Acquired Brain Injury

- Traumatic Brain Injury
- Non-traumatic Brain Injury

Average Annual Numbers of TBI-Related ED Visits, Hospitalizations, and Deaths in the United States, 1995-2001 (CDC, 2004)

- Children (Ages 0-14)
  - ED Visits 435,000 (91.5%)
  - Hospitalizations 37,000 (7.8%)
  - Deaths 2,685 (0.57%)
- Majority of school-aged TBI survivors eventually return to the public school system – many with a need for special education services

Who is at risk?

- Children with behavior or learning problems
- Adolescents who are extreme risk takers
- Children whose disadvantaged families have difficulty managing their lives

Every brain injury is different!

- Occurs on a child at a given stage in their development
- Physical injury itself
- Psycho-social supports

Known Vulnerabilities

- Frontal Lobes
  - Executive functions
  - Self-control functions
- Limbic System
  - Memory/New learning
  - Behavioral/Emotional functions

Motor Impairments

- In general, outlook for recovery of motor function is more favorable than for recovery of cognitive/behavioral function
- Areas of deficit
  - Basic motor skills
  - High level motor skills

Other Common Impairments

- Receptive/expressive language deficits
- Visuomotor/visuospatial deficits
- Reduced dexterity on fine motor tasks
- Attentional deficits
- Feeding/swallowing difficulties
- Psychological difficulties

Most Common Deficits that Interfere with School Functioning & Later Life Adjustment (Semrud-Clikeman, 2001)

- Motor (fine & gross)
- Short-term memory & new learning
- Receptive/expressive language skills
- Problems with attention & concentration
- Visual-spatial & visual-motor deficits
- Problems with executive functions & goal setting
- Difficulty with judgment & insight
- Fatigue (physical & cognitive)
- Emotional difficulties

Mild Injuries

- Disabilities are generally more subtle
- Frequently reflect problems with motor coordination, attention, memory, or problem-solving
- May lead to difficulties with adaptation in the family, with friends, as well as with learning and adaptation at school

Functional Outcomes

- " Functional outcome is the result of a complex interaction between the child's pre-injury functioning, injury, and post-injury supports and challenges." (Ylvisaker, 1998, p.6)
- Greater proportion of children than adolescents with residual intellectual impairment following TBI

Transition Back-to-School

- Critical time during a child's recovery
- Due to decreasing lengths of inpatient rehab stays and "the persisting and evolving nature of disability after childhood TBI, schools are unquestionably the primary location for pediatric rehabilitation; educators & school-based related service providers are the primary providers of rehabilitation services." (High et al., 2005, p. 224)

Importance of School Support

- Professionals who serve these children are among those who can make the greatest differences in the long run
- Integration of ongoing rehab & education are essential
- "Outcome is not the inevitable unfolding of biological consequences of the injury. It is rather an ongoing journey, powerfully influenced by the intelligent decisions made by many people along the way." (Ylvisaker, 1998, p.7)

Intervention Must be Proactive

- Results prior to IDEA designation of TBI as official educational disability in 1990 show previous failures
- Prevention of academic and social failures → lessens behavioral challenges
- Cannot choose "wait and see" path
- Communication is critical among parents, schools, and inpatient rehab staff

Brain Injury-Specific Special Education: NO SUCH THING!

- Extraordinary diversity within the population
- Substantial overlap in disability & need with other clinical/special education populations

Brain Injury & Congenital Learning Disabilities

- Students with BI may…
  - Change neurologically
  - Score at misleadingly high levels on tests of academic achievement
  - Experience acute psychosocial problems
  - Experience unpredictable difficulty years after the injury

Brain Injury & Mental Retardation

- Students with BI may…
  - Retain surprising abilities in areas unaffected by the injury
  - Continue to improve neurologically
  - Maintain a self-concept based on pre-injury abilities

Brain Injury & Behavioral/Emotional Disabilities

- Students with BI may…
  - Not respond to behavior management programs commonly used with these other students

How Can We Help These Students???

- Structured observations across multiple settings and activities and curriculum-based assessment will help to determine needs best
- Good clinical and educational decisions are not made on the basis of the diagnosis!

What Intervention is Most Effective?

- Evidence that integrating therapies into actual school activities may be the most beneficial for later learning
- Intensive intervention – part of the daily regimen
- Classroom v. isolated therapies
- Collaborative, interdisciplinary approach

Goals of Therapeutic Intervention

- Maximize age appropriate independent function
- Minimize the degree of assistance required from caregivers/school personnel

Collaboration of Professionals: Re-Integration of Students with Brain Injury is not easy!

- Therapists assist classroom teachers in modifying curriculum or classroom expectations
- Assess & modify the environment
- Collaborate for problem-solving

Creative Thinking is a Must for School Personnel!

- Mobility/ambulation, fine motor skills, feeding, cognitive skills
- Promote self-coaching
- Use of memory devices/organizational strategies
- Need for flexible team who is willing to work together to modify traditional or systemic rules and procedures

What About the Future?

- Follow-up studies have shown that meeting the educational needs of students with brain injury is a long-term commitment
  - Immediate and anticipated needs must be addressed in programming
  - Ongoing classroom assessment by teachers and therapists is crucial
  - Must have mechanisms in place to communicate or facilitate communication

Ongoing Safety Net

- Needs may change as academic/physical demands increase
- Students need school personnel who are aware of these potential changes and are able to be flexible to adjust services and supports

Premises of School Re-Integration & Managing Students Across the Continuum (Ylvisaker, 1998)

1. School program must be individualized and flexible
2. High frequency of delayed developmental consequences for long-term outcome of children and adolescents with brain injury
3. Unusual profiles of cognitive and behavioral functioning tend to be more difficult to deal with for school staff, family, and friends than physical disabilities

Premises of School Re-Integration continued…

4. Standardized, highly structured tests often fail to identify an individual's functional disabilities
5. Re-training needs to be delivered in a meaningful context

Premises of School Re-Integration continued…

6. Positive, antecedent-focused, communication-based approach to problem behaviors
   - Preventing negative behaviors by eliminating the provocation, including unreasonable expectations
   - Providing supports to allow success
   - Helping to ensure success on non-threatening tasks prior to presenting a more challenging task
   - Teaching positive alternatives to negative behaviors
   - Inducing positive internal state
   - Helping student to manage own antecedents

Premises of School Re-Integration continued…

7. Flexibility in educational programming
8. Collaborative educational planning that begins before a child is discharged from inpatient rehabilitation
9. Adequate supports should be in place in the early months/years after return to school, followed by reduction of support as the student demonstrates increased abilities

Premises of School Re-Integration continued…

10. Incidence of TBI is relatively low as compared to other educational disabilities, and has a varied presentation
11. Support of families and peers is essential

Managing School Transitions

- Requires pre-planning
- Includes:
  - Changing grades
  - Changing classrooms
  - Changing teachers, classmates
  - Changing schools
- Strategies to manage transitions

Considerations of School-to-Work Transitions

- Facts: (Ylvisaker, 1998)
  - High school dropout rates for students with disabilities are greater than 25%
  - Under or unemployment post-high school rates can exceed 75%
- Early intervention is key!
  - Early, targeted vocational activities

Concluding Thoughts

Your goal should not be to recover "premorbid" or age appropriate function – but to enable the student to do what they would like and need to do to be successful, but what they find difficult because of their disability.

Concluding Thoughts

If students are not provided with the cognitive support they require, behavior and academic performance predictably deteriorate.

Concluding Thoughts

It is essential that the developmental progress of each student with a brain injury be monitored closely in all areas so that rapid intervention and prevention of secondary deficits can be accomplished.

No End in Sight… but You Can Help!

Brain injury is not merely a medical disability which has an end point…

Brain injury is an enduring "educational disability" with unpredictable, long-term consequences that are nonetheless responsive to intervention by trained educators.

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Feel free to contact me with questions or comments:

Jennifer P. Lundine
Speech-Language Pathologist
Nationwide Children's Hospital
Email: jennifer.lundine@nationwidechildrens.org
Phone: 614.722.3987