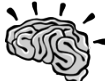


## Brain Injury & School

Tony D. Cochren, M.Ed.  
Carolyn R. Cochren, Ph.D

Reference: Mary R. Hibbard, Ph.D., ABPP,  
Professor  
Department of Rehabilitation Medicine  
Mount Sinai School of Medicine




## Learning Objectives

- Participants will learn how parents and family coped with and planned for recovery issues.
- Participants will learn how attitude, motivation, and family support influenced the Survivor through the recovery process.
- Participants will learn practical ideas on how to interact, plan, and deal with recovery issues of persons with traumatic brain injury.

2


## Traumatic Brain Injury is...

- ★injury to the head from a blunt or penetrating object
- ★injury from rapid movement of the head that causes back and forth movement inside the skull



## Traumatic Brain Injury Is Not...


- ★A new onset mental disorder
- ★Just emotional stress
- ★An acquired mental retardation
- ★The effects of prolonged drug/alcohol abuse



## Pre-Injury

- July 30<sup>th</sup>, 1988
  - \* 18 year old Senior
  - \* 2 Sport Varsity Athlete
  - \* Student Leader
  - \* College Prep Curriculum
  - \* Above Average IQ

5



How the brain works...

6

## "The Accident"

- July 31, 1988 12:30 a.m. received a call that Tony had been in an accident and we needed to report to the hospital.
- Bad news

## RIDING THE ROLLER COASTER

- This was just the beginning of what was to become a roller coaster ride full of a variety of emotions.
  - Highs and lows
  - Sadness and elation
  - Concerns and worries
  - Trying to stay positive

## Everyone Has a Role

Three older brothers: Jeff, Larry, and Mike

**BROTHER NUMBER ONE—JEFF**—the "I can keep it under control" person.

**BROTHER NUMBER TWO—LARRY**—"I can't keep it under control when it comes to family and will become distraught and emotionally fall apart" person.

**BROTHER NUMBER THREE—MIKE**—"I have the ability to keep others emotionally and spiritually together" person.

## THE SUPPORT SYSTEM

**HOLD ON TIGHT. YOU ARE GOING TO NEED LOTS OF SUPPORT. YOU CANNOT WALK THROUGH THIS ALONE.**

- Immediate family: Children, grandparents
- Extended family: Aunts, uncles, cousins
- Friends of family
- Friends of the boys
- Educators

## THE AWAKENING

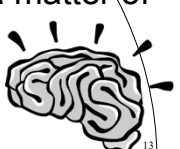
- The family sign, "Flying the Bird"—we knew he was on his way to recovering. How ecstatic was that!
- I woke up. For approximately 14 days, I was walking, talking (a little), but do not remember any of it (semi-comatose).
- On August 22<sup>nd</sup>, 1988, I woke up with my memory. I cannot remember anything from the afternoon of July 30<sup>th</sup> until the morning of August 22<sup>nd</sup>.



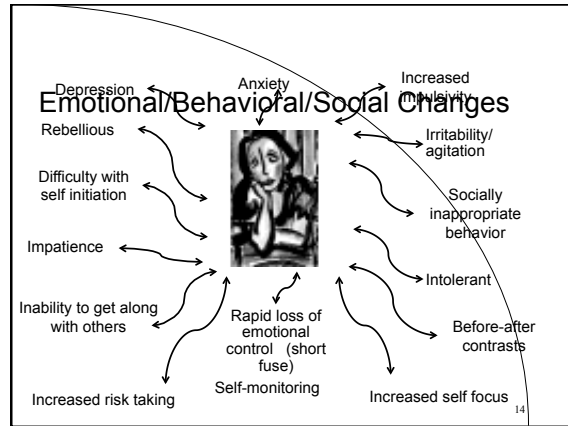
How the brain might look after a TBI...

## Changes after a Brain Injury

A brain injury affects who we are, the way we think, act and feel. It changes everything about ourselves in a matter of seconds.



13



## COMING HOME


- Planning and Coping with the Recovery Process
- Decisions About School
  - Return the First Semester or Wait and Return to School at the Beginning of the Next School Year
  - Special Education or General Education
  - Indiana State University or Indiana University
  - Trials and Tribulations of University Life

## Upon Release

- IQ Test: Full Scale IQ was in the average range.
- Performance IQ (nonverbal IQ) was in the low average range.


16

## What are the most common problems after a TBI?




## Physical Problems

- ★ Overall slowing
- ★ Clumsiness
- ★ Decreased vision/hearing/smell
- ★ Dizziness
- ★ Headaches
- ★ Fatigue
- ★ Increased sensitivity to noise/bright lights




## Thinking Changes

- ★Attention
  - Reduced concentration
  - Reduced visual attention
  - Inability to divide attention between competing tasks
- ★Processing speed
  - Slow thinking
  - Slow reading
  - Slow verbal and written responses




## Thinking Changes

- ★Communication
  - Difficulty finding the right words, naming objects
  - Disorganized in communication
- ★Learning and Memory
  - Information before TBI intact
  - Reduced ability to remember new information
  - Problems with learning new skills



## Thinking Changes in “Executive Functioning”




- Difficulty planning/ setting goals
- Problems being organized
- Difficulty being flexible
- Difficulty problem solving
- Difficulty prioritizing
- Decreased awareness of thinking changes in self

21

## Combined, TBI changes result in clients ...

- ★ having difficulty remembering or learning new information
- ★ being inconsistent in their performance
- ★ having poor judgment and decision making abilities
- ★ having difficulty generalizing to new situations
- ★ lacking awareness of these difficulties



## CHALLENGES

- Remember, Remember, Remember
- Struggled to relate to peers
- Controlling Temper
- Moving my left arm: IT HURT!!

23

## CHALLENGES

- Knowing when to let things go...
- Putting a governor on my mouth.
- Dealing with the rejection of friends, peers, and girlfriend.

24

## MOVING FORWARD

- Indiana University (GO HOOSIERS!)
  - Being open with my professors.
  - Getting a fresh start with new people.
  - Remember, Remember, Remember...
  - Being physically active (I ran a LOT!)
  - Pi Kappa Phi
  - Full Course Load

25

## MOVING FORWARD

PushAmerica

- \* Kids on the Block Intern
- \* Leadership Position
- \* Traveling across country

This led to being elected to the Executive Board of my Fraternity

26


## MOVING FORWARD

- Clemson University Outdoor Laboratory
- Community of Teachers
- Teaching
- Miami University

27

## Long Term Challenges Post TBI

- ★ Vocational and/or school failure
- ★ Family life/social relationships collapse
- ★ Increased financial burden on families and social service systems
- ★ Alcohol and drug abuse
- ★ Chronic depression/anxiety



28

## MOVING FORWARD

- 22 years post injury:
  - very proud of my family
  - Career that is fulfilling and provides for my family.
  - still pursuing an education.
  - No one would know about my experience unless I tell them.
  - IQ is in the (high) average range!

29

Traumatic Brain Injury: A Training Program for Wisconsin Educators (1<sup>st</sup> edition)

APPENDIX A

Contents

Wisconsin PE 11 Definition of Traumatic Brain Injury .....	page 1
TBI Transition to School Checklist .....	page 2
Transition Checklist .....	page 2
TBI Evaluation Planning .....	page 4
Traumatic Brain Injury Checklist .....	page 5
IEP Considerations For Students With TBI .....	page 6
Information Gathering Worksheet .....	page 7
Accommodations and Modifications for the Elementary School Classroom .....	page 8
Accommodations and Modifications for the Secondary School Classroom .....	page 9
Addressing The School Safety and Mobility Needs of a Student with a Disability .....	page 10
Intervention Planning Worksheet .....	page 11
Individual Health Summary .....	page 12

September 2007





Module IV: Planning to Meet the Needs of Students with TBI

**II. GENERAL IEP CONSIDERATIONS**

**A. Safety: Is there a need to consider?**

- health care needs (e.g., medication management)?
- emergency procedures (e.g., evacuation for fire and tornado drills)?
- general safety procedures (e.g., level of supervision on playground, in hallway)?

**B. Schedule: Is there a need to**

- adjust the student's schedule (e.g., length of classes, time of day)?
- incorporate breaks and/or study halls into the schedule?
- explore opportunities for extra-curricular/recreational activities?
- review need for extended school year services if appropriate?

**C. Seat arrangement: Is there a need to**

- address environmental issues (e.g., noise levels, amount of activity, number of changes/transitions)?
- accommodate for physical barriers and mobility issues?

**D. Classroom instruction: Is there a need to**

- modify instructional materials (e.g., large print, color, reduced content per page)?
- adjust instruction (e.g., use computer-assisted instruction, books on tape)?
- include aids (e.g., computer, calculator, tape recorder)?
- adjust classroom expectations (e.g., quality, length, level of independence)?
- develop a contingency system (e.g., repetition, written/visual schedule, assignment methods)?

**E. IEP Review: Is there a need to**

- incorporate frequent IEP review as student recovery progresses on new needs area?

**F. Other areas: Is there a need to**

- address sensitive technology needs (low and high tech)?
- provide transportation?
- consider alternate statewide assessment (in the applicable grades)?

**G. Additional general IEP considerations not covered above**

\_\_\_\_\_

\_\_\_\_\_

September, 2007 Appendix A Page 60

Module IV: Planning to Meet the Needs of Students with TBI

**I. What are the MAJOR issues you need to address in the IEP at this stage after the student's TBI? (Remember that the major needs of students with TBI are active stages of recovery. Often, early after the injury, the student's safety, physical health needs, and psychosocial needs must be addressed before the student is ready to focus intensively on academics.)**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**III. SPECIFIC CONSIDERATIONS IN IEP DEVELOPMENT (Remember a list of specific considerations is not a substitute for careful examination of individual needs.)**

**A. Physical Health**

1. Does the student demonstrate needs in the following areas?

- \_\_\_\_\_ safety (e.g., able to go to rest room planning, directional judgment, vigilance)
- \_\_\_\_\_ core physical/health procedures need to be performed at school (e.g., take feeding, carbohydrate)
- \_\_\_\_\_ medication management
- \_\_\_\_\_ generally reduced motor response time
- \_\_\_\_\_ fatigue

2. Identify the parents' concerns in this area

\_\_\_\_\_

\_\_\_\_\_

**B. Cognitive**

1. Does the student demonstrate needs in the following areas?

- \_\_\_\_\_ decreased memory
- \_\_\_\_\_ difficulty with planning, initiating, and organizing (executive functions)
- \_\_\_\_\_ diminished ability to adjust to change
- \_\_\_\_\_ significant difficulty learning and retaining new information
- \_\_\_\_\_ difficulty with problem-solving and decision making
- \_\_\_\_\_ reduced speed of processing

2. Identify the parents' concerns in this area

\_\_\_\_\_

\_\_\_\_\_

**C. Communication**

1. Does the student demonstrate needs in the following areas?

- \_\_\_\_\_ difficulty with oral retrieval
- \_\_\_\_\_ decreased social language (greeting, taking turns, asking questions)
- \_\_\_\_\_ poor eye contact
- \_\_\_\_\_ decreased vocabulary levels
- \_\_\_\_\_ poor concept formation

2. Identify the parents' concerns in this area

\_\_\_\_\_

\_\_\_\_\_

September, 2007 Appendix A Page 61

Module IV: Planning to Meet the Needs of Students with TBI

**D. Sensory and Perceptual**

1. Does the student demonstrate needs in the following areas?

- \_\_\_\_\_ difficulty with visual tracking, reading and field size
- \_\_\_\_\_ difficulty with visual neglect
- \_\_\_\_\_ difficulty with figure-ground relationships
- \_\_\_\_\_ difficulty hearing and retrieving information
- \_\_\_\_\_ difficulty hearing
- \_\_\_\_\_ difficulty with auditory processing
- \_\_\_\_\_ decreased organizational skills

2. Identify the parents' concerns in this area

\_\_\_\_\_

\_\_\_\_\_

**E. Motor**

1. Does the student demonstrate needs in the following areas?

- \_\_\_\_\_ decreased strength, endurance and flexibility
- \_\_\_\_\_ decreased range of motion
- \_\_\_\_\_ difficulty with static balance
- \_\_\_\_\_ difficulty with advanced locomotor activities such as running, kicking, throwing, catching

2. Identify the parents' concerns in this area

\_\_\_\_\_

\_\_\_\_\_

**F. Psychosocial**

1. Does the student demonstrate needs in the following areas?

- \_\_\_\_\_ inappropriate social behaviors (disabilities)
- \_\_\_\_\_ lack of awareness of the needs and perspectives of others (empathy)
- \_\_\_\_\_ frequently acting without forethought (impulsivity)
- \_\_\_\_\_ difficulty understanding humor
- \_\_\_\_\_ inappropriate affective towards others
- \_\_\_\_\_ verbal and/or physical aggression
- \_\_\_\_\_ irritability
- \_\_\_\_\_ depression
- \_\_\_\_\_ anxiety

2. Identify the parents' concerns in this area

\_\_\_\_\_

\_\_\_\_\_

**G. Does the student demonstrate additional needs in any of the above areas?**

\_\_\_\_\_

\_\_\_\_\_

September, 2007 Appendix A Page 62

Module IV: Planning to Meet the Needs of Students with TBI

**IV. TYPICAL SUPPLEMENTARY AIDS, SERVICES, AND OTHER SUPPORTS FOR FURTHER INFORMATION: WORKING EDUCATION STUDENTS WITH TRAUMATIC BRAIN INJURY: A RESOURCE FOR PRACTICE GUIDANCE (C'Robert B. Howie-Thomson, Wisconsin DPI, 1996) and strategies listed in Module IV: Assessment are a list of general aids, services, and supports to use as a reference for the careful examination of individual needs.**

- supervises as needed
- modified time requirements
- modified academic work load and/or additional study halls
- consistent routines
- extra set of books to be kept at home
- ability to leave class a few minutes early or late to avoid hallway congestion
- professional testing
- provision of study guides
- reduced assignments
- assigned aide(s)
- special education classroom support
- back to work plan at beginning/end of school day
- modified instructional materials
- books on tape
- accommodations for slowest work rate
- provision of additional structure, prompts and cues to ensure success
- peer assistance
- use of professional aide
- others \_\_\_\_\_

**V. PROGRAM MODIFICATIONS OR SUPPORTS FOR SCHOOL PERSONNEL**

- staff training
- consultation with knowledgeable others (medical, community, families, etc.)
- team teaching
- others \_\_\_\_\_

September, 2007 Appendix A Page 63

Module IV: Planning to Meet the Needs of Students with TBI

**Information Gathering Worksheets**

Student: \_\_\_\_\_ Grade: \_\_\_\_\_ Date of Injury: \_\_\_\_\_  
 School: \_\_\_\_\_ Current IEP: \_\_\_\_\_

**I. Traumatic brain injury information**

What do you know?	What if any additional information do you need for eligibility and program planning?

**II. Pre-injury functioning**

What do you know?	What if any additional information do you need for eligibility and program planning?

**III. Current Areas of Functioning to Examine**

**A. Cognitive (i.e., attention, attention switching, direction, thinking, memory, etc.)**

Current functioning	Student needs in this area. Do you see needs to be addressed in the IEP?	How can needs be addressed in the IEP?

September, 2007 Appendix A Page 73

Module IV: Planning to Meet the Needs of Students with TBI

**B. Speech and Language/Communication**

Current functioning	Student needs in this area. Do you see information needed?	How can needs be addressed in the IEP?

**C. Memory and Perceptual Abilities**

Current functioning	Student needs in this area. Do you see information needed?	How can needs be addressed in the IEP?

**D. Motor Abilities**

Current functioning	Student needs in this area. Do you see information needed?	How can needs be addressed in the IEP?

September, 2007 Appendix A Page 74



Module IV: Planning to Meet the Needs of Students with TBI

**B. Psychomotor Skills**

Consider Instruction	Student needs in this area to more information needed?	How can needs be addressed in the IEP?
Consider Health Status (i.e., medical/physical needs, self-care abilities)	Student needs in this area to more information needed?	How can needs be addressed in the IEP?
Consider Academic Skills	Student needs in this area to more information needed?	How can needs be addressed in the IEP?

September, 2007 Appendix A Page 7c

**Accommodations & Modifications in the Elementary Classroom For a Student with Traumatic Brain Injury**

Student: \_\_\_\_\_ Teacher: \_\_\_\_\_ Grade: \_\_\_\_\_ Today's Date: \_\_\_\_\_

Presenting Concerns: \_\_\_\_\_ Date of Injury: \_\_\_\_\_

<b>Consider Student's Environment</b> <ul style="list-style-type: none"> <li>Post class rules (pictures &amp; words)</li> <li>Post daily schedule (pictures &amp; words)</li> <li>Give preferential seating</li> <li>Change to another class</li> <li>Change schedule (most difficult in morning)</li> <li>Eliminate distractions (visual, auditory, olfactory)</li> <li>Modify length of school day</li> <li>Provide frequent breaks</li> <li>Provide place for quiet time</li> <li>Maintain consistent schedule</li> <li>Provide system for transition</li> <li>Position appropriately</li> <li>Explain disabilities to students</li> <li>Use color-coded materials</li> </ul>	<b>Consider Method of Instruction - (Continued)</b> <ul style="list-style-type: none"> <li>Teach in separate room</li> <li>Provide visual prompts (board/dock)</li> <li>Provide immediate feedback (self-correcting task work)</li> <li>Post on card/notes to prevent learning work</li> <li>Use frequent review of key concepts</li> <li>Speak in short bursts or phrases</li> <li>Use frequent review of key concepts (cue materials)</li> <li>Highlight/underline material</li> <li>Use peer tutor/partner</li> <li>Use peer tutor/partner</li> <li>Use peer tutor/partner</li> <li>Use simple sentences</li> <li>Use small individualized instructions</li> <li>Discuss errors and how they were made</li> <li>Use cooperative learning</li> <li>Use instructional assistants</li> <li>Allow extra time</li> <li>Teach study skills</li> <li>Teach sequencing skills</li> <li>Elaborate responses when you know student knows the answer</li> <li>Use assignments in daily log</li> <li>Teach semantic mapping</li> <li>Teach peers how to be helpful</li> </ul>	<b>Consider Student's Behavioral Needs - (Continued)</b> <ul style="list-style-type: none"> <li>Learn to recognize signs of stress</li> <li>Give non verbal cues to discontinue behavior</li> <li>Reinforce positive behavior (4:1)</li> <li>Use mild, consistent consequences</li> <li>Set goals with student</li> <li>Use group/individual contracting</li> <li>Significant at beginning of lesson</li> <li>Provide opportunity to role-play</li> <li>Use proactive behavior management strategies</li> <li>Use schoolwide reinforcement with target students</li> <li>Discuss errors and how they were made</li> <li>Use cooperative learning</li> <li>Use instructional assistants</li> <li>Allow extra time</li> <li>Teach study skills</li> <li>Teach sequencing skills</li> <li>Elaborate responses when you know student knows the answer</li> <li>Use assignments in daily log</li> <li>Teach semantic mapping</li> <li>Teach peers how to be helpful</li> </ul>	<b>Consider Assistive Technology - (Continued)</b> <ul style="list-style-type: none"> <li>Scanned text with OCR software</li> <li>Use voice output computers</li> <li>Electronic organizers/readers/pagers</li> <li>Large display calculators</li> <li>Voice output calculators</li> <li>Math software</li> <li>Picture/verbally-supported software</li> </ul>
--	--	---	--

September, 2007 Appendix A Page 7c

**Accommodations & Modifications in the Secondary Classroom For a Student with Traumatic Brain Injury**

Student: \_\_\_\_\_ Teacher: \_\_\_\_\_ Grade: \_\_\_\_\_ Today's Date: \_\_\_\_\_

Presenting Concerns: \_\_\_\_\_ Date of Injury: \_\_\_\_\_

<b>Consider Student's Environment</b> <ul style="list-style-type: none"> <li>Post class rules (pictures &amp; words)</li> <li>Post daily schedule (pictures &amp; words)</li> <li>Give preferential seating</li> <li>Change to another class</li> <li>Change schedule (most difficult in morning)</li> <li>Eliminate distractions (visual, auditory, olfactory)</li> <li>Modify length of school day</li> <li>Provide frequent breaks</li> <li>Provide place for quiet time</li> <li>Maintain consistent schedule</li> <li>Move class site to avoid physical hazards (stairs)</li> <li>Provide system for transition</li> <li>Position appropriately</li> <li>Explain disabilities to students</li> <li>Use color-coded materials</li> </ul>	<b>Consider Method of Instruction</b> <ul style="list-style-type: none"> <li>Repeat directions</li> <li>Increase active participation</li> <li>Teacher circulate around room</li> <li>Provide visual prompts (board/dock)</li> <li>Provide immediate feedback (self-correcting task work)</li> <li>Point out similarities to previous learning work</li> <li>Use manipulative materials</li> <li>Use frequent review of key concepts</li> <li>Teach in current level of ability (use cue materials)</li> <li>Speak, look or allow or rephrase</li> <li>Prompts/Reminders</li> <li>Highlight/underline material</li> <li>Use peer tutor/partner</li> <li>Use small group instruction</li> <li>Use individualized instruction</li> <li>Pause frequently</li> <li>Discuss errors and how they were made</li> <li>Use cooperative learning</li> <li>Use instructional assistants</li> <li>Encourage requests for clarification, repetition, etc.</li> <li>Elaborate responses when you know student knows the answer</li> <li>Denominate &amp; encourage use of technology (instructional and assistive)</li> </ul>	<b>Consider Student's Behavioral Needs - (Continued)</b> <ul style="list-style-type: none"> <li>Learn to recognize signs of stress</li> <li>Give non verbal cues to discontinue behavior</li> <li>Reinforce positive behavior (4:1)</li> <li>Use mild, consistent consequences</li> <li>Set goals with student</li> <li>Use key students for reinforcement of target student</li> <li>Use group/individual contracting</li> <li>Provide opportunity to role-play</li> <li>Use proactive behavior management strategies</li> </ul>	<b>Consider Assistive Technology</b> <ul style="list-style-type: none"> <li>Scanned text with OCR software</li> <li>Use voice output computers</li> <li>Electronic organizers/PDA's/Palm computers</li> <li>Paper/electronic reminders</li> <li>Large display calculators</li> <li>Talking calculators</li> <li>Math software</li> <li>Voice output calculators</li> <li>Portable word processor</li> <li>Picture supported software</li> </ul>
--	---	---	---

September, 2007 Appendix A Page 7c

**ADDRESSING THE SCHOOL SAFETY AND MOBILITY NEEDS OF A STUDENT WITH A DISABILITY**

Student: \_\_\_\_\_ Grade: \_\_\_\_\_ Date of Injury: \_\_\_\_\_

Presenting Concerns: \_\_\_\_\_ Date of Injury: \_\_\_\_\_

Area of Accommodation	Accommodation Needed	Person Responsible	Comments
<b>PLANNING</b>	Is the student able to plan for the day?		
<b>TRAVEL</b>	Is the student able to travel to and from school?		
<b>TRANSITION</b>	Is the student able to transition from one activity to another?		
<b>CLASSROOM</b>	Is the student able to sit at the desk?		
<b>RESTROOMS</b>	Is the student able to use the restroom?		
<b>LOCKERS</b>	Is the student able to use the locker?		
<b>STAIRS</b>	Is the student able to use the stairs?		
<b>ASCENDERS</b>	Is the student able to use the ascender?		
<b>EVACUATION</b>	Is the student able to evacuate the building?		
<b>EMERGENCY</b>	Is the student able to respond to an emergency?		
<b>OTHER CONSIDERATIONS</b>	Are there any other considerations?		

September, 2007 Appendix A Page 7c

Area of Accommodation	Accommodation Needed	Person Responsible	Comments
<b>PLANNING</b>	Is the student able to plan for the day?		
<b>TRAVEL</b>	Is the student able to travel to and from school?		
<b>TRANSITION</b>	Is the student able to transition from one activity to another?		
<b>CLASSROOM</b>	Is the student able to sit at the desk?		
<b>RESTROOMS</b>	Is the student able to use the restroom?		
<b>LOCKERS</b>	Is the student able to use the locker?		
<b>STAIRS</b>	Is the student able to use the stairs?		
<b>ASCENDERS</b>	Is the student able to use the ascender?		
<b>EVACUATION</b>	Is the student able to evacuate the building?		
<b>EMERGENCY</b>	Is the student able to respond to an emergency?		
<b>OTHER CONSIDERATIONS</b>	Are there any other considerations?		

September, 2007 Appendix A Page 7c

Area of Accommodation	Accommodation Needed	Person Responsible	Comments
<b>PLANNING</b>	Is the student able to plan for the day?		
<b>TRAVEL</b>	Is the student able to travel to and from school?		
<b>TRANSITION</b>	Is the student able to transition from one activity to another?		
<b>CLASSROOM</b>	Is the student able to sit at the desk?		
<b>RESTROOMS</b>	Is the student able to use the restroom?		
<b>LOCKERS</b>	Is the student able to use the locker?		
<b>STAIRS</b>	Is the student able to use the stairs?		
<b>ASCENDERS</b>	Is the student able to use the ascender?		
<b>EVACUATION</b>	Is the student able to evacuate the building?		
<b>EMERGENCY</b>	Is the student able to respond to an emergency?		
<b>OTHER CONSIDERATIONS</b>	Are there any other considerations?		

September, 2007 Appendix A Page 7c

