The Hidden Problem: Brain Injury and Addiction

March 16, 2010

Judith Avner, Esq.
Brain Injury Association of New York State
• Every 23 seconds a person in the United States sustains a traumatic brain injury (TBI)
LIFE WITH BRAIN INJURY

- Brain injury is the silent epidemic

- 3.2 million people in the US are living with a long term disability due to brain injury
Substance Abuse and Brain Injury

• 50% of these people will return to using alcohol and drugs after the injury (Corrigan, 1995).
• 20% of persons with brain injuries who did not use alcohol or drugs prior to the injury, were vulnerable to alcohol and drug use after the injury (Corrigan, 1995).
• 50% of clients enrolled in OASAS Programs were affected by probable TBI (N=647) (Fenske, Gordon, Perez, Hibbard, Brandau, submitted for publication)
The Signature Wound...The Tip of the Iceberg

• As many as one in five of US combat troops leaving Iraq and Afghanistan are affected by traumatic brain injury.¹

• “...it is unknown how many soldiers have suffered a TBI during OEF/OIF.” The incidence of moderate to severe TBI’s are well captured, but the “overall incidence of mild TBI or concussion in the military” is unknown.¹

• The effects of concussion from blast injury are not always immediately apparent.

¹Army Task Force Report, May 2008
Understanding the Scope of the Problem

The Walter Reed Army Medical Center reported that nearly 30% of all service personnel with combat-related injuries during 2003 to 2005 sustained a traumatic brain injury. Blasts or explosions accounted for 78% of TBI’s sustained by these individuals.
Blasts

• Are the leading cause of TBI for active duty military personnel

• Account for 69% of TBI cases in the current conflicts

The Defense and Veterans Brain Injury Center, http://dvbic.org/blastinjury.html
LATEST INFORMATION

• Brigadier General Sutton: 20% of service members who have served in Iraq and Afghanistan have sustained at least a mild concussion

• Represents roughly 16,633 New York veterans
THE BRAIN

Controls **everything** we do
...breathing
...walking
...talking
...thinking
...behaving
...feeling
DEFINITION – ACQUIRED BRAIN INJURY

Injury to the brain which is not hereditary, congenital or degenerative, and may include brain damage resulting from events such as stroke, aneurysms, anoxia from near drowning, toxic substances or traumatic brain injury (TBI)
ACQUIRED BRAIN INJURY
INCLUDES:

Aneurysm
Stroke
Encephalitis
Anoxia

Traumatic brain injury
- Gunshot wound
- Concussion blast injuries
- Head hitting windshield
- Severe whiplash
- Shaken Baby Syndrome

Toxic exposure (CO, lead paint, neurotoxins, inhaled vapors)
ACQUIRED BRAIN INJURY EXCLUDES:

- Congenital Disorders
  - Intellectual Disabilities
  - Cerebral Palsy
  - Birth Injuries

- Progressive Disorders
  - Alzheimer’s Disease

- Psychiatric Disorders
  - In which there is no known or obvious central nervous system damage
DEFINITION – TRAUMATIC BRAIN INJURY

• Traumatic brain injury is a specific type of damage to the brain that results when the head:
  – hits a stationary object (e.g., windshield in a car crash)
  – is hit (e.g., mugging)
  – is penetrated (e.g., gunshot wound)
  – is violently shaken by external force (e.g., Shaken Baby Syndrome, severe whiplash)
  – Concussion blast injury

• Often included, especially in terms of service provision groups, are individuals with other types of post-natal acquired injuries, such as strokes or aneurysms.
HOW BRAIN DAMAGE OCCURS

The brain is a complicated organ, with millions of cells and connections.

While specific areas of the brain may be related to specific functions, in reality each function (walking, lifting an arm, speaking, etc.) involves many areas of the brain communicating and interacting with each other.
HOW BRAIN DAMAGE OCCURS

Damage to the brain may vary in extent, area and type of damage depending upon:

- nature of the injury (focal or diffuse)
- severity of the injury (level of coma)
- how the injury occurred
- quickness of medical response
HOW BRAIN DAMAGE OCCURS IN A TBI

• Focal Damage
  – Skull Fracture
  – Contusion or bruises under the location of a particular area of impact

• Fronto-Temporal Contusions/Lacerations
  – Bruising of brain or tearing of blood vessels in the frontal and temporal lobes of the brain caused by brain hitting or rotating across ridges inside skull

• Diffuse Axonal Injury
  – Shifting and rotation of brain inside skull will result in tearing and shearing injuries to the brain’s long connecting nerve fibers or axons
FOCAL DAMAGE

Diffuse Axonal Injury

Frontotemporal Regions
HOW BRAIN DAMAGE OCCURS

• If the brain damage is from a medical incident that results in an infection, swelling of the brain or anoxia, the damage tends to be more diffuse.

• If the brain damage is related to a medical incident like a stroke or aneurysm, the damage tends to be more focal.
HOW BRAIN DAMAGE OCCURS IN A TBI

Some time after the injury the following may affect the brain:

• Hematoma (Blood Vessel Damage)
• Brain Swelling
• Increased Intracranial Pressure
• Intracranial Infection
• Seizures
CUMULATIVE EFFECTS OF REPEATED CONCUSSIONS

- History of 3 previous concussions increases risk of repeated concussions 3-fold.
- Athletes with history of 3+ concussions report significantly more symptoms and have lower memory scores at baseline
- Symptoms following repeat concussions may be more serious and resolve at a slower rate
- Worse case = “second-impact syndrome”

Assess for prior exposure, follow more closely and expect more symptoms and slower recovery
EVERY PERSON WITH BRAIN INJURY IS DIFFERENT

There are vast differences from person to person because:

• Every individual is different prior to an injury

• Every brain injury is different
COMMON PROBLEMS AFTER BRAIN INJURY

They can be categorized into the following broad functional areas:

- PHYSICAL
- COGNITIVE
- EXECUTIVE FUNCTIONING
- AFFECTIVE/BEHAVIORAL
- PSYCHOSOCIAL
COMMON PROBLEMS AFTER BRAIN INJURY PHYSICAL

Loss of Smell and Taste
Hearing Loss
Visual Difficulties
Balance Difficulties
Dysarthria
Motor Control and Coordination
Fatigue
Seizures
Decreased Tolerance for Drugs and Alcohol
Headaches
Sleep Disturbances
COMMON PROBLEMS AFTER BRAIN INJURY COGNITIVE

Short Term/Working Memory
Attention
Concentration
Distractibility
Decreased Verbal Fluency/Comprehension
Information processing
Arousal
Problem Solving
Charged Intellectual Functioning
Abstraction and Conceptualization
Slowed Reaction Time
COMMON PROBLEMS AFTER BRAIN INJURY

EXECUTIVE FUNCTIONING

Goal Setting
Self-Monitoring
Planning
Initiating
Modifying
Bringing to Completion
COMMON PROBLEMS AFTER BRAIN INJURY  
AFFECTIVE/BEHAVIORAL

Impulsivity
Emotional Lability
Irritability
Decreased Frustration Tolerance
Impaired Judgment
Tension/Anxiety
Depression
Aggressive Behaviors
Disinhibition
Changed Sexual Drive
Changed Personality
COMMON PROBLEMS AFTER BRAIN INJURY PSYCHOSOCIAL

• Educational/Vocational Problems
• Interpersonal Difficulties
  - Intimacy/Sexuality
  - Dependency Issues
  - Alcohol/Drugs
• Intra-Personal Difficulties
  - Loss of Self Esteem
  - Depression/Frustration/PTSD*
  - Shaken Sense of Self
  - Profound Sense of Loss
• Family Issues
A SAMPLING OF TREATMENT PROVIDERS

- Psychiatrist
- Social Worker
- Neurologist
- Orthopedic Surgeon
- Massage Therapist
- Speech Therapist
- Waiver Providers
- Community-based Providers
- Pain Mgmt Specialist
- Behavioral Optometrist
- Psychological
- Physical Therapist
- Nurses
- Urologist
- Substance Abuse Counselor
- Chiropractor
- Behavioral
- Occupational Therapist
- Support Group
- Clergy
- In-patient program
- Support group
- Physiatrist
- Pharmacists
- Neuropsychologist
- Cognitive therapist
- In-patient program
- In-patient program
RESULTS OF BRAIN INJURY

These are just lists of resulting problems that *may* occur. Not all individuals with a brain injury will have all these problems and each person may have a different combination of problems or “deficits”.
RESULTS OF BRAIN INJURY

Remember, since you are talking about a brain that started out intact and then was damaged, people with brain injury will have many intact abilities.

_This is you or me with some areas of function changed._
WORKING WITH PERSONS WITH BRAIN INJURY

It is important to understand the individuals you work with so that you know what they are capable of doing for themselves and what they need help with (e.g., the type and level of support).

Don’t be mislead by what looks like a personality trait or a willful decision. What you are seeing may be a brain injury related behavior.
**HELPS** Screening Tool

- **H:** were you HIT in the head?
- **E:** Did you seek EMERGENCY room treatment?
- **L:** Did you LOSE consciousness? (caution: not necessary to lose consciousness to sustain a TBI)
- **P:** Are you having problems with concentration and memory?
- **S:** Did you experience SICKNESS or other physical problems following the injury?
SOME RESOURCES TO KNOW

NYS Waiver Programs
- Department of Health
- Office of Mental Retardation and Developmental Disabilities (OMRDD)

Community Based Rehabilitation Services

Return to Work Vocational Planning

Housing

Transportation

Recreation

Government Benefits
THE BRAIN INJURY ASSOCIATION OF NEW YORK STATE

- Traumatic Brain Injury Training and Military Veterans Service Project
- Family Advocacy, Counseling & Training Services Program (FACTS)
- Support groups
- Caregiver Support
- Statewide resources
- Information and training about TBI
- Certified Brain Injury Specialist Training
- Annual conferences and symposia
- Family Help Line (800) 228-8201
- Project LEARN in the classroom (LEARNet)
The FACTS Program is a free service operated by the Brain Injury Association of NYS. The program is funded by the NYS Office of Mental Retardation and Developmental Disabilities. Users of the program must be residents of NYS and have sustained a brain injury prior to the age of 22. If you or someone you know has been injured before age 22, the FACTS Coordinator may be able to help!
SAVE THE DATE
The Fourth Annual Conference
BRAIN INJURY IN THE COMMUNITY: Facing the Impact of Violence
Tuesday, April 20, 2010
9:00AM–4:00PM OMRDD • 75 Morton Street • New York City
A conference for community providers, professionals, and individuals with brain injury and their families.

Sponsored By
ICD—International Center for the Disabled
AHRC-NYC
The Brain Injury Association of New York State

Details to Follow!

Learn About
• The clinical and psychosocial implications of brain injury sustained through violence
• The challenges faced by victims of violence in reclaiming their lives
• Establishing partnerships with programs dealing with suicide prevention, domestic violence, gun violence, bullying and criminal justice
THINKING ABOUT RETURNING TO WORK?

The Brain Injury Association of New York State is holding an information and discussion session about going back to work after injury.

DATE: Tuesday February 23, 2010
TIME: 7:00pm-8:30pm
WHERE: The William K. Sanford Town Library, Colonie, NY

TOPICS:
- Where to begin
- How to know if you’re ready to return to work
- Understanding what a potential employer can and cannot ask you during the interview
- Explaining gaps in your employment history
- Resources to help you

If you are interested in attending please RSVP by Monday February 22 to:

Kristin Weller at (800) 228-8201 or kweller@bianys.org

Refreshments will be provided!
ANNUAL CONFERENCE

Making Peace with Brain Injury: Finding the Silver Lining

Brain Injury Association of New York State

June 3-4, 2010
Albany Marriott Hotel, Albany, New York

FEATURING:
Susan Connors
President / CEO,
Brain Injury Association of America

28th Annual Conference Registration
Additional Resources

**BEYOND THE INVISIBLE: LIVING WITH BRAIN INJURY**

Narrated by LEE WOODRUFF

Brain Injury Association of New York State

---

**RETURNING MILITARY PERSONNEL**

- Were you exposed to a blast while deployed?
- Were you in a vehicle crash or injured in some way that jolted your head?
- Did your injury result in any of the following?
  - Seeing “stars,” being dazed or confused
  - Not remembering the injury
  - Being “knocked out”
  - Having a headache or dizziness
  - Irritability
  - Decreased concentration or feeling disoriented
  - Ringing in your ears
  - Sensitivity to light and noise
  - Memory problems
  - Feeling like you’re losing it

You may have a traumatic brain injury.

**We can help.**

1-800-228-8201

www.bianys.org

Brain Injury Association of New York State

---

Because no one should face brain injury alone.

Support is provided in part by project K12MC000208 from the Maternal and Child Health Bureau (MC), Social Security Act, Health Resources and Services Administration, Department of Health and Human Services.
BRAIN INJURY ASSOCIATION OF NEW YORK STATE

10 Colvin Avenue
Albany, NY 12206
(518) 459-7911
Family Helpline: 1-800-228-8201
info@bianys.org
www.bianys.org