UNDERSTANDING LIFE WITH BRAIN INJURY: 
The Crossroads of Traumatic Brain Injury and Domestic Violence

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• Every 23 seconds a person in the United States sustains a traumatic brain injury (TBI)
Comparative Incidence

Comparison of Annual Incidence
A Comparison of Traumatic Brain Injury and Leading Injuries or Diseases

- Multiple Sclerosis: 10,400
- Spinal Cord Injuries: 11,000
- HIV/AIDS: 43,681
- Breast Cancer: 176,300
- Traumatic Brain Injuries: 1,400,000

Brain Injury Association of America, 2005
Leading Causes of Traumatic Brain Injury

- Falls, 28%
- Motor Vehicle Traffic, 20%
- Struck By/Against, 19%
- Assault, 11%
- Pedal Cycle (non MV), 3%
- Other Transport, 2%
- Other, 7%
- Unknown, 9%
- Suicide, 1%
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
Epidemiology of TBI in the Civilian Population

An estimated **10 million Americans** are affected by stroke and TBI, making brain injury the second most prevalent injury and disability in the United States.

Every **23 seconds**, one person in the United States sustains a traumatic brain injury.

**1.4 million** Americans survive traumatic brain injuries each year.

More than **55,000 people die** every year as a result of traumatic brain injury.

**56% of adults with brain injuries tested positive for blood alcohol.**

Each year, **2-4 million women** are physically abused by an intimate partner. The head, face and neck are the most frequent sites of injury.
Domestic Violence and TBI

Greater than 90% of all injuries secondary to domestic violence occur to the head, neck or face region.

(Monahan & O’Leary 1999)
Women Reporting to ERs for Injuries Associated with DV:

- 30% of battered women reported a loss of consciousness at least once.
- 67% reported residual problems that were potentially head-injury related.

(Corrigan 2003)
The Signature Wound...The Tip of the Iceberg

• As many as 20% 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
Blasts

• Are the **leading cause** of TBI for active duty military personnel\(^1\)

• Account for 69% of TBI cases in the current conflicts\(^2\)

\(^1\)The Defense and Veterans Brain Injury Center, [http://dvbic.org/blastinjury.html](http://dvbic.org/blastinjury.html)

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
  - Domestic Violence
- 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; assault)
  – 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.
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
- severity of the injury
- 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
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”
Repeated Brain Injury

• Typical of ongoing domestic violence.

• Leads to increased cognitive, physical, and emotional dysfunction over time.

(Hibbard 2002)
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

Broad Functional Categories:

• PHYSICAL
• COGNITIVE
• EXECUTIVE FUNCTIONING
• AFFECTIVE/BEHAVIORAL
• PSYCHOSOCIAL
For an Abused Woman, TBI May Make it More Difficult to...

- assess danger and defend herself against assaults
- make and remember safety plans
- go to school or hold a job
- leave an abusive partner
- live independently
- access services
- adapt to living in a shelter
- care for her children

(NYS OPDV)
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
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”.

the injury...
A Sampling of Treatment Providers

- Psychiatrist
- Social Worker
- Neurologist
  - Orthopedic Surgeon
  - Domestic Violence Advocate
  - Speech Therapist
  - Waiver Providers Community-based Providers
- Physiatrist
- Pharmacist
- Neuropsychologist
- Clergy
- Pain Mgmt Specialist
- Job coach
- Massage Therapist
- Behavioral Ophthalmologist
- Psychologist
- Substance Abuse Counselor
- Service Coordinator
- Chiropractor
- Physical Therapist
- Occupational Therapist
- Nurses
- Urologist
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.
It is critical to understand the individuals with whom you work 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. You may be seeing brain injury related behavior.
Some Things to Think About

• Minimize distractions
• Keep meetings short and direct
• Focus on one task at a time; stick to that topic
• Be concrete; break information into small pieces
• Double check to make sure she understands
MORE TO CONSIDER…

- Write information down (as long as it is safe)
- Develop and use checklists
- Break tasks and goals into small, tangible steps
- Allow extra time for completing tasks
- Provide feedback respectfully and positively
- LISTEN TO WHAT SHE IS EXPRESSING
**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?
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)
Family Advocacy, Counseling, and Training Services Program (FACTS)

- A family support program operated by BIANYS and funded by NYS OMRDD.

- Users of the program must have sustained an injury prior to age 22 and be a NYS resident.

- There are 16 FACTS coordinators throughout NYS.
Some Other Resources to Know

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

Community Based Rehabilitation Services
- Contact County Mental Health Departments
- Local Rehabilitation Programs- located in private hospitals, university medical centers, private practice physicians/therapists/counselors

Return to Work Vocational Planning
- Day Programs
- Volunteer Opportunities in Community
- VESID
- Cornell Cooperative Extension
Additional Resources to Know

Housing
  • Independent Living Centers

Transportation
  • Local Transportation Authority

Medicare
  • Social Security Disability Income
  • Supplemental Security Income
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.

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

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

Details to Follow!