

Traumatic Brain Injury: Causes, Impacts and Implications for the Criminal Justice System



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Presentation Outline

- What is a Traumatic Brain Injury (TBI)
- National and State Incidence – Prevalence
- What are the long term consequences?
- Extent of TBI in the Corrections System
- How TBI problems could effect prisoners & others
- Problems and Strategies for management
- What's Needed?
- Resources

Definitions

Traumatic Brain Injury *is an insult to the brain caused by an external physical force*

Not all blows or jolts to the head result in a TBI. The severity of such an injury may range from 'mild', with a brief change in mental status or consciousness, to 'severe', with an extended period of unconsciousness or amnesia after the injury.¹

Acquired Brain Injury *is an insult to the brain that has occurred after birth, for example; TBI, stroke, near suffocation, infections in the brain, anoxia*

Studies of young adults indicate that having a TBI places a person at risk for sustaining another TBI ²⁻³ and that a history of multiple TBI is associated with slower recovery.⁴

TBI is a **SUSTAINED** injury to the head, diagnosed as
MILD, MODERATE, or SEVERE,
Classified as two types of injuries:

Closed Head Injury:

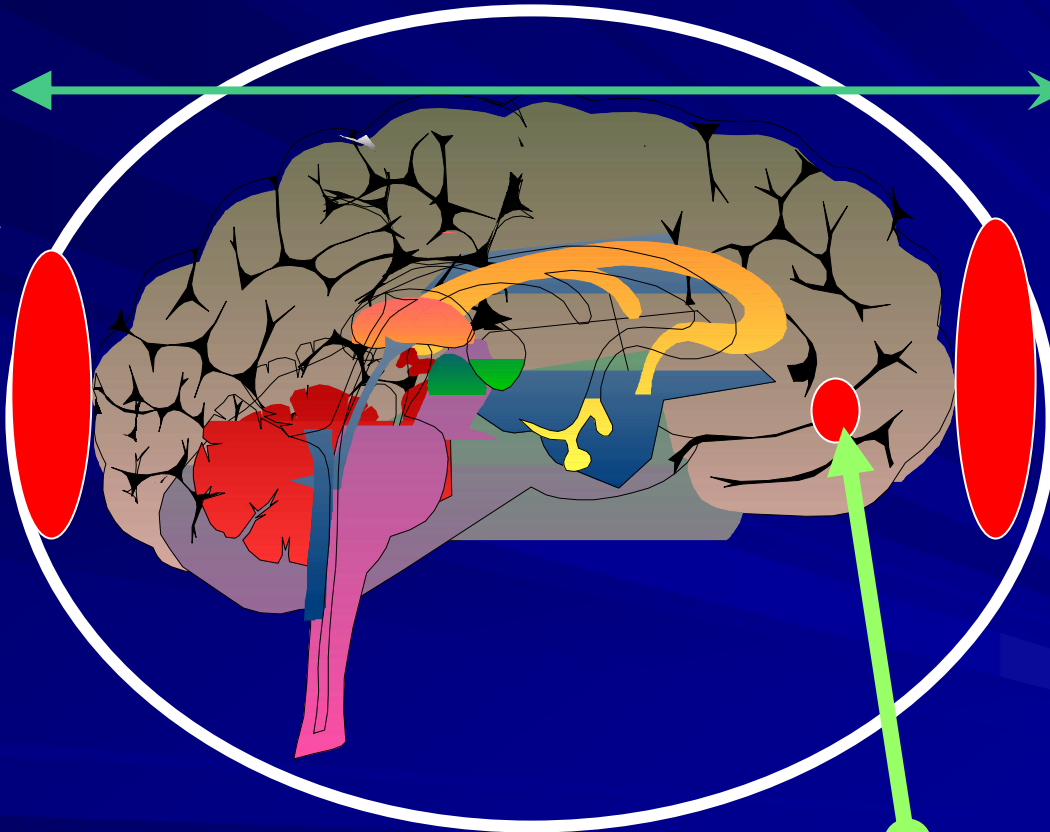
Where there are no obvious external signs, resulting from –for example – motor vehicle crashes, falls, child abuse, or domestic violence.

Open Head Injury:

For example a gunshot wound or object penetrating the skull.

Brain can bounce against inside of skull & cause damage & tear.

Smashes against **BACK** of skull.



Smashes against **FRONT** of skull.

Penetrating Wounds, I.e. bullet.

How many people have TBI?

- An estimated 5.3 million Americans – greater than 2% of the U.S. population currently living with disabilities resulting from brain injury
- 1.4 million Americans each year, of this number 50,000 die, 235,000 are hospitalized, and 1.1 million are treated and released from an emergency dept.
- 80,000 each year experience long term disability following a brain injury
- Traumatic Brain Injury is the leading cause of death and disability for Americans under 45

How many people have TBI cont'd ?

- Risk of TBI is highest among adolescents, young adults, and those older than 75
- After one brain injury, the risk for a second injury is three times greater; after the second injury, the risk for a third injury is eight times greater.
- Vehicle crashes are the leading cause of brain injury. Falls are the second leading cause and first with the elderly.
- Persons age 75 years and older have the highest rates of TBI hospitalization and death (261.0 per 100,000 and 50.0 per 100,000 respectively).

Idaho TBI Facts

- ✓ No one knows exactly how many Idahoans are living with TBIs, using CDC estimates,
 - At least 29,200 people living with a severe TBI
 - 2000: 276 injury deaths and 14,276 injuries in Idaho related to trauma <18
 - 4,074 hospitalizations related to trauma in children <18. CDC ranks ID 7th in the nation-per capita hospitalization and rate of disability due to TBI
 - 108,640 emergency dept visits related to trauma <18
- IDHW Vital Statistics report
 - motor vehicle related accidents for children <18 was the highest reported cause of injury (2,580)

Leading Causes??

- Motor Vehicle Crashes-44%
- Falls-26%
- Other/Unknown-13%
- Non-Firearm Assaults-9%
- Firearms-8%

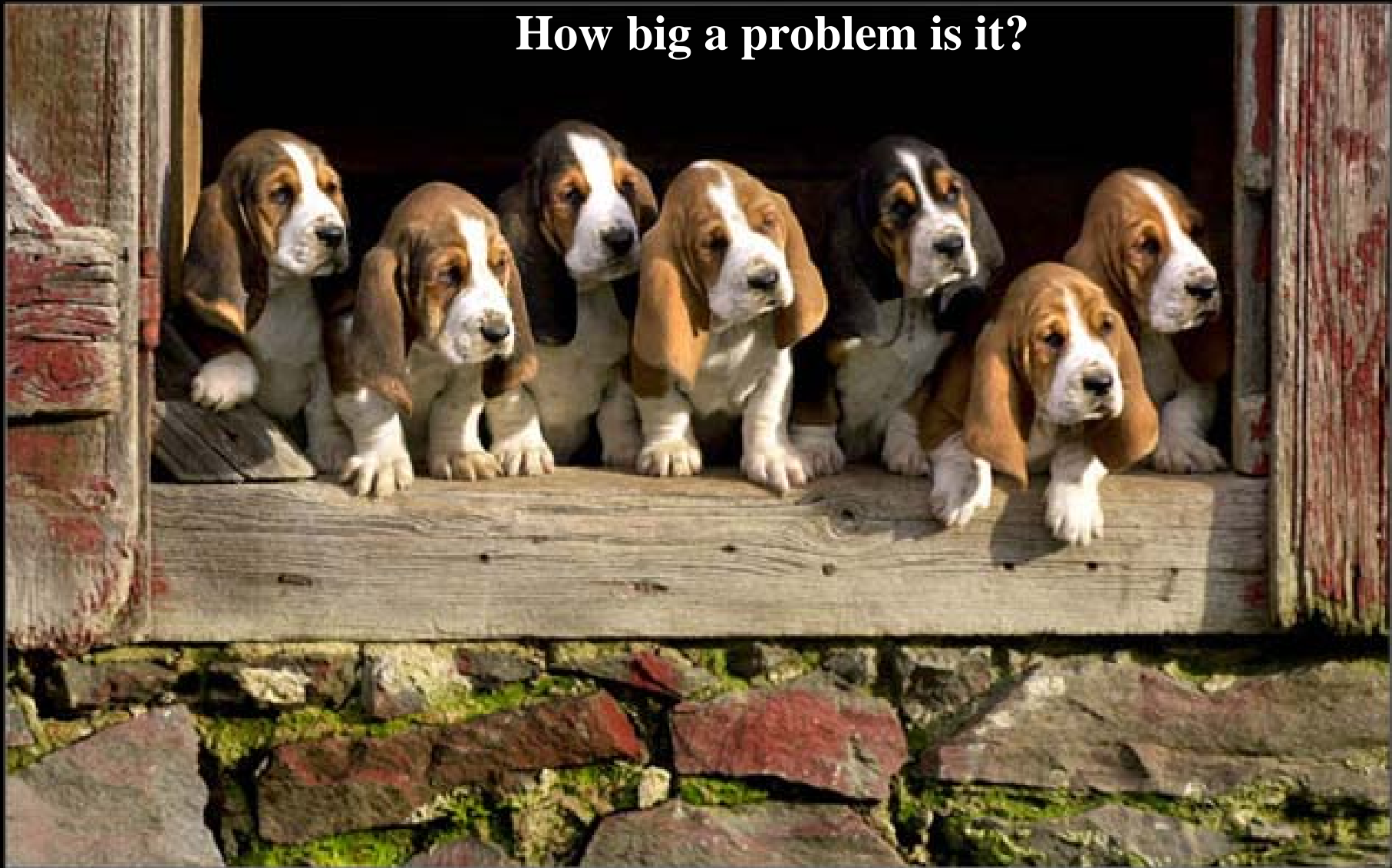
A new type of brain injury

These days there is a new category of injury – **BLAST INJURY!**

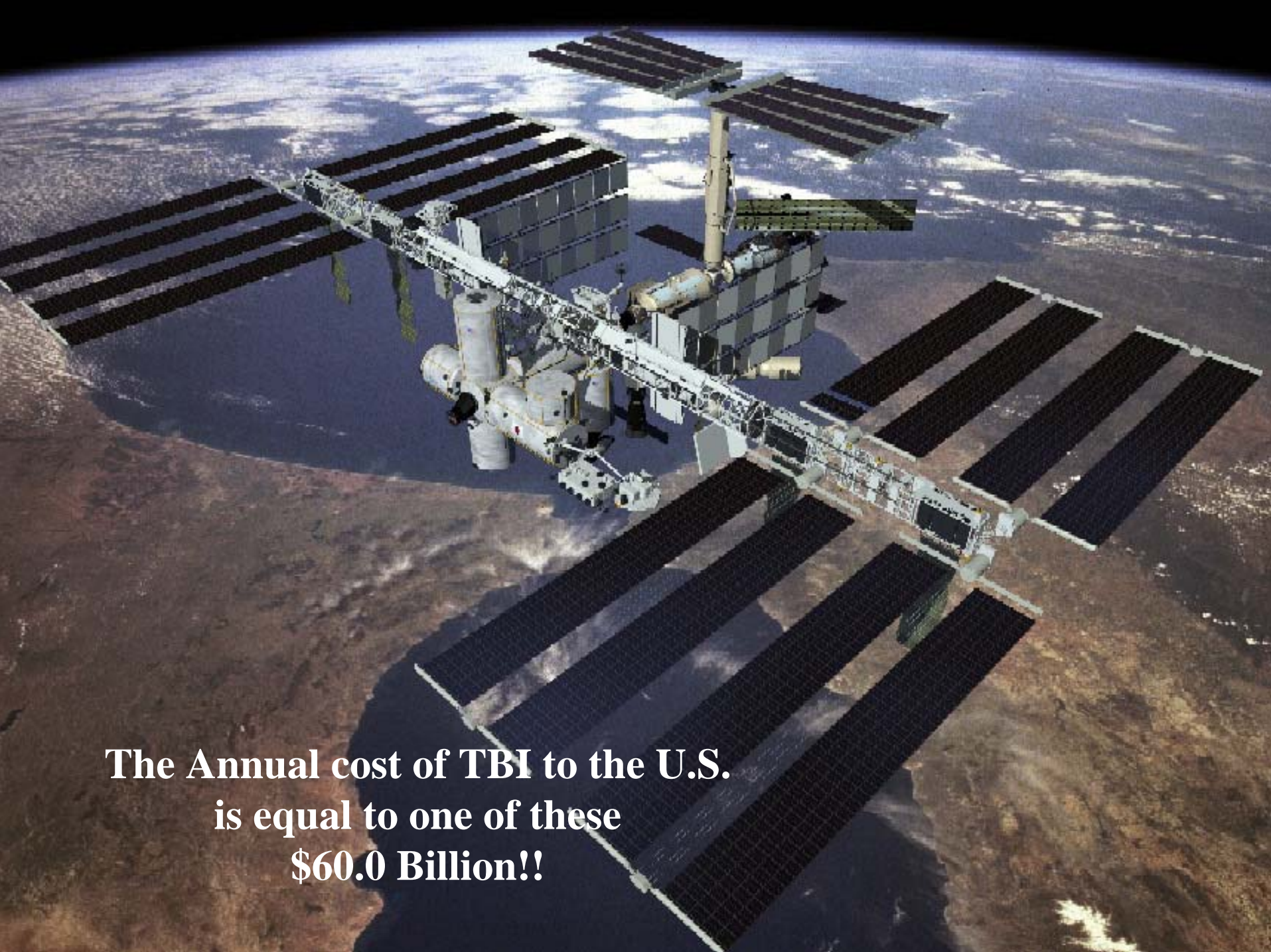
A significant number of soldiers returning from the conflicts in Iraq and Afghanistan have this injury and will suffer long term consequences.



How big a problem is it?



Richard Hertzler / Lancaster New Era



**The Annual cost of TBI to the U.S.
is equal to one of these
\$60.0 Billion!!**

What are the long-term consequences of TBI?

- Memory
- Attention
- Concentration
- Processing
- Aphasia/receptive and expressive language
- Executive skills
- Problem solving
- Organization
- Self-Perception
- Perception
- Inflexibility
- Persistence

Possible Changes-Physical

- Motor skills/Balance
- Hearing
- Spasticity/Tremors
- Speech
- Fatigue/Weakness
- Seizures
- Taste/Smell

Possible Changes-Personality and Behavioral

- Severe depression
- Social skills problems
- Mood swings (anxiety)
- Problems with emotional control
- Inappropriate behavior
- Inability to inhibit remarks
- Inability to recognize social cues

Personality and Behavioral cont..

- Problems with initiation
- Reduced self-esteem
- Difficulty relating to others
- Difficulty maintaining relationships
- Difficulty forming new relationships
- Stress/anxiety/frustration and reduced frustration tolerance

Recovery.....

- Measured in weeks, months and years
- Usually most rapid in the first six months
- Recovery from brain injury is slow and often incomplete

Focal frontal lobe disorders and violent behavior

- “acquired sociopathy” described in individuals with ventromedial prefrontal injuries in adulthood
- Adults who had frontal lobe damage prior to age 8 exhibited recurrent impulsive and aggressive behavior
- 14% of the subjects in the Vietnam Head Injury Project with frontal lobe lesions engaged in fights or damaged property compared to 4% of controls without TBI



• What are the implications for the Criminal Justice System?

General

- Studies of individual jails and prisons indicate that as many as 87% of inmates report having experienced a head injury or TBI.¹⁻³
- Prisoners who report head injuries are more likely to have disciplinary problems during incarceration.⁴
- Prisoners with head injuries may have problems such as seizures³ or mental health problems such as anxiety⁵ or suicidal thoughts and/or attempts.⁵⁻⁶
- Studies of prisoners' self-reported health indicate that persons with one or more head injuries have significantly higher levels of alcohol and/or drug use in the year preceding their current incarceration.⁵

General

- The U.S. Department of Justice⁶ has reported that 52% of women and 41% of male offenders are under the influence of drugs, alcohol, or both at the time of their arrest, and 64% of male arrestees test positive for at least one of five illicit drugs [cocaine, opioids, marijuana, methamphetamines, or PCP].⁷
- Although more than half of prison inmates have a lifetime prevalence of drug use disorders⁸, fewer than 15% of inmates receive substance abuse treatment services while in prison.⁹

Women and Families

- Children and teenagers who have been convicted of a crime are more likely to have sustained a pre-crime TBI¹⁰ and/or some other form of physical abuse.¹⁰⁻¹²
- Among male prisoners, a history of TBI is strongly associated with perpetration of domestic violence and other kinds of violence during their lifetimes.¹³
- Among female prisoners, those who are convicted of a violent crime are more likely to have sustained a pre-crime TBI and/or some other form of physical abuse.¹⁴

Correctional and Law Enforcement Officers

- Correctional personnel and law enforcement officers are at risk for head injury or fatal head trauma.¹⁵⁻¹⁶
- Interactions with suspects prior to arrest and with inmates during their incarceration are considered high risk situations for injury or death due to head trauma.¹⁷

**For prisoners with TBI, how
might TBI-related problems
affect them and others?**

The consequences of having a TBI can contribute to situations that lead to disciplinary action within a correctional setting.

Here are some common TBI problems and strategies for management

Attention Deficits

may make it difficult to focus on directions given by a correctional officer or to complete a required work task giving the impression of defiance.^{16,33}

– Management strategies:

- Ask the person to repeat what you have said in order to confirm that they have heard and understood your directions
- Encourage the person to write down steps for task
- Allow extra time for the task to be done
- Clear or reduce environmental distractions

Memory deficits

can make it difficult to understand or remember rules or directions which may lead to disciplinary actions by the jail or prison staff.¹⁹

– Management strategies:

- Rules or directions should be explained slowly, step-by-step
- Ask the person to repeat the steps and encourage him or her to write down the information
- Provide examples and ask the person to provide their own examples
- Teach the person to ask when he or she doesn't understand

Slowed verbal and physical responses

may be interpreted as uncooperative behavior by correctional officers.¹⁸⁻¹⁹

– Strategies to compensate:

- Directions or questions need to be asked slowly and repeated if necessary
- Additional time should be given for the person to respond

Irritability or anger

may be difficult to control which can lead to an incident with another prisoner or correctional officer. Such incidents can lead to further injury for the person and others.¹⁹⁻²⁰

– Strategies to compensate:

- Avoid arguing with the person**
- Try re-phrasing the problem, breaking it down into parts**
- Reinforce positive behaviors**

Uninhibited or impulsive behavior

including unacceptable sexual behavior, may provoke other prisoners or result in disciplinary action by jail or prison staff.^{18, 21}

– Strategies to compensate:

- The person should be told calmly that the behavior is unacceptable
- Assistance may be sought from mental health professionals

**What is needed to address the
problem of TBI in prisons and
jails?**

A recent report from the Commission on Safety and Abuse in America's Prisons²² has recommended increased health screenings, evaluations and treatment of inmates as well as development of partnerships with community health providers to assure continuity of care and case management for released persons.

TBI experts and some prison officials have suggested the following

- Routine screening of jail and prison populations to identify inmates with a history of TBI²³⁻²⁴
- Treatment and/or services appropriate for the unique problems resulting from TBI including a TBI experienced while incarcerated.^{20-21, 23}
- Additional evaluations to identify specific TBI-related problems and determine how they should be managed.²³ Special attention should be given to impulsive behavior, including violence²¹, sexual activity¹⁸, and suicide risk (if the inmate is depressed).²⁵
- Screening of inmates with TBI for possible alcohol and/or substance abuse and appropriate treatment for these co-occurring conditions should be provided.^{7,26-27}

Focus of Rehabilitation and Often Lifetime Support

- Increase individual's awareness of injury imposed deficits
- Increase awareness of the the impact these deficits have on current functioning and activities
- Teach to anticipate how these deficits could affect future plans/activities

**What is needed to address
TBI-related problems after
release from jails and
prisons?**

Lack of treatment and rehabilitation for mental health and substance abuse problems while incarcerated increases the probability that a released person will again abuse alcohol and/or drugs.^{7,27} Persisting substance problems can lead to homelessness²⁸, return to illegal drug activities²⁹ and re-arrest.³⁰

Criminal justice professionals and TBI experts have suggested the following

- Released prisoners with mental health and/or substance abuse problems should receive placement assistance into community treatment programs and case management services.**^{22,26}
- Transition services upon release and return to the community should be capable of accommodating the effects of TBI.**^{10, 23-24}
- Community re-entry staff should be trained to identify a history of TBI and have access to appropriate consultation with other professionals with expertise in TBI as needed.**^{10, 23-24}

CDC is supporting new research to develop better methods for identifying a history of TBI and related problems among inmates and to find out how many incarcerated people are living with TBI and related problems such as substance abuse.

Further information is available:

■ Traumatic Brain Injury (TBI):

■ CDC. National Center for Injury Prevention and Control:

– <http://www.cdc.gov/ncipc/tbi/TBI.htm>

– This site provides information for professionals and the general public regarding TBI. Topics covered include prevention, causes, outcomes, and research. Data reports regarding TBI in the United States as well as, a variety of free publications and fact sheets can be downloaded. Materials are available in English and Spanish language versions.

■ Health Issues in Correctional Settings:

- CDC. National Center for HIV, STD, and TB Prevention:
 - <http://www.cdc.gov/nchstp/od/cccwg/default.htm>
 - This site provides information for public health and criminal justice professionals regarding correctional health topics with an emphasis on infectious diseases. Also, the site has materials for the general public with links to related organizations.

■ Intimate Partner Violence (IPV):

■ CDC. National Center for Injury Prevention and Control:

- <http://www.cdc.gov/ncipc/factsheets/ipvfacts.htm>
- This site provides information for professionals and the general public regarding IPV. The site contains an overview and fact sheet regarding IPV, prevention strategies, links to other IPV prevention organizations, and a list of current publications by CDC IPV investigators.

■ Legal Issues of Persons with TBI within Correctional Settings:

■ National Disability Rights Network:

– <http://www.ndrn.org/aboutus/consumer.htm>

– This site provides information regarding the laws protecting the civil and human rights of persons with disabilities including those with TBI.

Incarcerated persons with disabilities, or their families, can receive help from the Network regarding prisoners' legal rights, access to mental health services and/or medication, and restoration of benefits upon release.

■ Substance Abuse:

■ Substance Abuse & Mental Health Services Administration:

- <http://www.samhsa.gov>
- This site provides information for professionals and the general public regarding treatment resources for persons with, or at risk for, mental and/or substance abuse problems. Also, the site provides information for professionals regarding alcohol and other drug-related disorders. The site has materials for specific populations and age groups and hotline numbers.

Resources

- MA: The *Brains At Risk Program* is a court appointed program for ages 17 and older and the Gateway program is for youth ages 13-16. Brains At Risk is used as part of probation and attendees of the Gateway are assigned by District Attorneys as part of a diversion program.
- FL: *Project L.E.A.P.- Law Enforcers Are Partners*
Self-study 2 hour on-line course. Provides the basics of TBI, common behavioral issues, handling encounters/interactions with persons with a brain injury and common medications used.
<http://www.biaf.org/ProjectLEAP.html>
- MD: *Police Training Series*: Police Interaction with individuals with Brain Injury. 24 min. video & workbook designed to train police officers in stressful situations (domestic violence, traffic stop, suspicious suspect).

TBI Resources In Idaho

- **Comprehensive Advocacy Inc. (Co-Ad)**
Jim Baugh, Executive Director
4477 W. Emerald, Suite B-100
Boise, ID 83706
(208) 336-5353
Email: jbaugh@cableone.net
- **Idaho Trauma Registry**
Ginger Franks, M.S., Dr.P.H, Director
615 North Seventh Street
P.O. Box 1278
Boise, ID 83701
Phone: (208) 338-5100 x221
Fax: (208) 344-0180
Email: info@idahotrauma.org
- **Idaho Division of Vocational Rehabilitation**
Michael Graham, Administrator
650 W. State Street – Room 150
Boise, ID 83720
(208) 334-5305
Email: mgraham@vridaho.gov
- **Brain Injury Association of Idaho (BIA-ID)**
Michelle Featherston, President
P. O. Box 414
Boise, ID 83701
(208) 342-0999

Questions?



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