Traumatic Brain Injury:

A Guide for Criminal Justice Professionals

Many prison and jail inmates are living with traumatic brain injury (TBI)-related problems that complicate their management and treatment while incarcerated. Because most inmates will be released, these problems also pose challenges when they return to the community. The Centers for Disease Control and Prevention (CDC) recognizes TBI in prisons and jails as an important public health problem.

What is Traumatic Brain Injury?

- A traumatic brain injury (TBI) is defined as a blow or jolt to the head or a penetrating head injury that disrupts the function of the brain.[1]
- 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]
- A study of young adults found that those with a TBI were at risk for sustaining another,[2,3] and that a history of multiple TBIs is associated with slower recovery.[4]

How many people have TBI?

- Each year, on average 1.4 million people in the United States sustain a TBI. Of this number, 50,000 die, 235,000 are hospitalized, and 1.1 million are treated and released from an emergency department.[5]
- At least 5.3 million Americans are living with TBI-related disabilities.[6]
- The number of people with TBI who are not seen in an emergency department or who receive no care is unknown.[7]

What are the causes of TBI?

- The leading causes of TBI are falls, motor vehicle-traffic crashes, struck by or against events, and assaults.[5]
- Blasts are the leading cause of TBI among active duty military personnel in war zones.[8]

What are the long-term consequences of TBI?

- A person with a TBI can experience short- or long-term problems, requiring help in performing activities of daily living.[1,6]
- A TBI can cause a wide range of problems in thinking, sensation, learning, language, behavior, and/or emotions.[9-11]
- Persons with TBI may experience mental health problems such as severe depression,[12] anxiety,[13] difficulty controlling anger[14] and alcohol or substance abuse.[15,16]

- TBI can also cause epilepsy and increase the risk for both Alzheimer's and Parkinson's diseases and other brain disorders associated with increasing age.[9]

What is known about the extent of TBI and related problems within the criminal justice system?

General:

- According to jail and prison studies, 25-87% of inmates report having experienced a head injury or TBI[17-19] as compared to 8.5% in a general population reporting a history of TBI.[20]
- Inmates who reported head injuries are more likely to have disciplinary problems during incarceration.[21]
- Inmates with head injuries may have seizures[19] or mental health problems such as anxiety[22] or suicidal thoughts and/or attempts.[22,23]
- Studies of inmates' self-reported health indicated that inmates with one or more head injuries have significantly higher levels of alcohol and/or drug use during the year preceding their current incarceration.[22]
- The U.S. Department of Justice has reported that 52% of female and 41% of male offenders were under the influence of drugs, alcohol, or both at the time of their arrest,[24] and that 64% of male arrestees tested positive for at least one of five illicit drugs (cocaine, opioids, marijuana, methamphetamines, or PCP).[25]
- Although more than half of prison inmates have a lifetime history of drug use disorders,[26] fewer than 15% receive substance abuse treatment services while in prison.[27]

Women and Families:

- Female inmates 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.[28]
- Children and teenagers who have been convicted of a crime are more likely to have sustained a pre-crime TBI[29] and/or some other form of physical abuse.[29-31]
- Among male inmates, a history of TBI is strongly associated with perpetration of domestic violence and other kinds of violence during their lifetimes.[32]

Corrections and Law Enforcement Officers:

- Corrections personnel and law enforcement officers are at risk for head injury or fatal head trauma.[33,34]
- 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.[35]

How might inmates with TBI and others be affected by TBI-related problems?

Within the correctional setting, TBI can contribute to situations that lead to disciplinary action. Here are some common TBI problems and strategies for management:

- Attention deficits may make it difficult for the inmate with TBI to focus on a required task or respond to directions given by a corrections officer. Either situation may be misinterpreted, thus leading to an impression of deliberate defiance on the part of the inmate.[17,36]
    - Management strategies:
        - Ask the inmate to repeat what you have said to confirm that he or she has heard and understood your directions
        - Encourage the inmate to write down steps for the 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 jail or prison staff.[21]
    - Management strategies:
        - Explain rules or directions slowly, step-by-step

        - Ask the inmate to repeat the steps and encourage him or her to write down the information
        - Provide examples and ask the inmate to provide his or her own
        - Teach the inmate to ask questions when he or she doesn't understand

- Slowed verbal and physical responses may be interpreted by corrections officers as uncooperative behavior.[36,37]
    - Management strategies:
        - Give directions, or ask questions, slowly; repeat if necessary
        - Allow the inmate additional time to respond

- Irritability or anger may be difficult to control which can lead to an incident with another inmate or corrections officer. Such incidents can lead to further injury for the inmate with TBI and others.[37,38]
    - Management strategies:
        - Avoid arguing with the inmate
        - Try re-phrasing the problem, breaking it down into parts
        - Reinforce positive behaviors

- Uninhibited or impulsive behavior, including unacceptable sexual behavior, may provoke other inmates or result in disciplinary action by jail or prison staff.[36,39]
    - Management strategies:
        - Tell the inmate calmly that the behavior is unacceptable
        - Seek assistance from mental health professionals

How can the problem of TBI in prisons and jails be addressed?

A recent report from the Commission on Safety and Abuse in America's Prisons recommended increased health screenings, evaluations, and treatment for inmates and development of partnerships with community health providers to assure continuity of care and case management for released inmates.[40]

In addition, TBI experts and some prison officials have suggested the following:

- Routinely screen jail and prison populations to identify a history of TBI.[41,42]

- Screen inmates with TBI for possible alcohol and/or substance abuse and provide treatment for these co-occurring conditions.[25,43,44]

- Conduct additional evaluations to identify specific TBI-related problems and determine how they should be managed.[41] Special attention should be given to impulsive behavior, including violence,[39] sexual activity,[36] and suicide risk if the inmate is depressed.[45]

How should TBI-related problems be addressed after release from jails and prisons?

Lack of treatment and rehabilitation for inmates with mental health and substance abuse problems while incarcerated increases the probability that they will again abuse alcohol and/or drugs when released.[25,44] Persistent substance abuse can lead to homelessness,[46] return to illegal drug activities,[47] re-arrest,[48] and increased risk of death[49] after release. As a result, criminal justice professionals and TBI experts have suggested the following:

- 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. [29,41,42]

- Transition services should be capable of accommodating the effects of an inmate's TBI upon their release and return to the community.[29,41,42]

- Released inmates with mental health and/or substance abuse problems should receive case management services and assistance with placement into community treatment programs.[40,43,49]

CDC supports new research to develop better methods for identifying inmates with a history of TBI and related problems and for determining how many are living with such injury.

Further information is available from these websites:

Traumatic Brain Injury (TBI):
CDC, National Center for Injury Prevention and Control
www.cdc.gov/ncipc/tbi/TBI.htm

This site provides information for professionals and the general public regarding TBI. Topics include prevention, causes, outcomes, and research. Data reports on TBI in the United States and many free publications and fact sheets can be downloaded. Materials are available in English and Spanish.

Health Issues in Correctional Settings:
CDC, National Center for HIV, STD, and TB Prevention
www.cdc.gov/nchstp/od/cccwg/default.htm

This site provides information for public health and criminal justice professionals about health topics with an emphasis on infectious diseases in the correctional setting. It also includes materials for the general public with links to related organizations.

Intimate Partner Violence (IPV):
CDC, National Center for Injury Prevention and Control
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 about IPV, prevention strategies, links to other IPV organizations, and a list of current CDC publications.

Legal Issues of Persons with TBI within Correctional Settings:
National Disability Rights Network
www.ndrn.org/aboutus/consumer.htm

This site provides information about the laws protecting the civil and human rights of people with disabilities including those with TBI. Inmates with disabilities or their families can receive help from the Network about inmates' legal rights, access to mental health services and/or medication, and restoration of benefits upon release.

Substance Abuse:
Substance Abuse & Mental Health Services Administration
www.samhsa.gov

This site provides information for professionals and the general public regarding treatment resources for persons with, or at risk for, mental health and/or substance abuse problems. It also has materials for specific populations and age groups and hotlines.

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