



Atrium Health

Mental Health after Brain Injury

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Disclosure Statement

There are no financial conflicts of interest to disclose.

Objectives

- Participant will be able to define mental health
- Participant will be able to identify sequelae that can lead to mental health issues after brain injury
- Participant will be able to define emotional dysregulation after brain injury
- Participant will recognize ways to address mental health in the inpatient rehabilitation setting

Mental Health Defined

- "Mental health is a state of well-being that enables people to cope with the stressors of life, realize their abilities, learn and work well, and contribute to their community.

It is an integral component of health and well-being that underpins our individual and collective abilities to make decisions, build relationships and shape the world we live in."

- World Health Organization¹

Neurobehavioral Consequences

- Cognitive problems
- Emotional and behavior problems
 - Emotional Dysregulation
 - Affective symptoms, including suicidality
 - Anxiety, depression, irritability and emotional lability²

Depression post TBI

- Lavoie et al. In a 2017 study looked at depression rates in men and women one year after injury³
 - 25-50% of individuals will experience depression within the first year
 - Over 60% of persons are affected within 7 years of injury
 - Major depression is associated with adverse outcomes for individuals with TBI including social isolation, hostility and cognitive deficits.
 - "lack of hope"
 - We need early identification, active screening and treatment!

Emotional Dysregulation

- Emotional dysregulation is a common sequelae of Traumatic Brain Injury
- A 2020 study by Stubberud et al identified that impaired emotional regulation can impact⁴:
 - Social functioning: ability to maintain relationships, ability to sustain employment
 - Leisure activity: decreased ability for meaningful leisure activities resulting in increased risk of suicide

Premorbid conditions/risk factors

- Pre-existing psychiatric disorders
- Previous TBI
- Other health conditions
- Psychosocial Factors
 - Support system
 - Access to resources

Psychological Adjustment

- There are many layers of psychological adjustment that occur in response to sudden injury or illness
 - Initial Shock
 - Grief and loss
 - Identity/self-esteem
 - Level of support

Psychological Adjustment

- Grief and loss
 - Cyclical, occurs repeatedly throughout the healing process
 - Affects both patient and family
 - Grief of tangible & intangible losses
 - Everyone's grief and emotional triggers are unique
 - May be latent depending on possible cognitive impairment
 - May be compounded by feelings of guilt/survivor guilt

Psychological Adjustment

- Impact on Identity
 - Sense of self- What does this mean for me as a person?
 - Impact of impairments on lifestyle
 - Over identification with illness/injury
 - Lack of sense of control (or powerless)
 - Changes in family roles
 - Concern for being a burden to others

Psychological Adjustment

Motivation

- Emotional adjustment can affect motivation to participate in treatment/prevention at times.
 - Depression/hopelessness
 - Anxiety
 - Guilt
- Individuals may present with decreased engagement or refuse treatment due to feelings of depression, hopelessness, or lack of sense of control.
- Impaired insight/awareness
- Impaired memory/comprehension
- Unrealistic expectations

Caregiver Burnout

- Caregivers can have a tremendous amount of stress, that affects not only themselves but also their loved ones
- Awareness of resources can be helpful for caregivers to find and maintain balance
 - Respite care
 - Peer supports
 - Day programs

Addressing Mental Health and Related Behaviors in the Inpatient Setting

Behavior Management Prevention

Managing symptoms and setting up the environment in a way that promotes independence and fosters a sense of control can help to reduce emotional fluctuation and related behaviors, such as motivation, participation, and interpersonal interactions with family, caregivers, and staff.

Avoid Overstimulation

- Overstimulation can be caused by too much input to our sensory systems
- Signs of overstimulation include but not limited to: Autonomic reactions, increased restlessness, decreased safety awareness, impulsivity, unsafe choices, cognitive decline, emotional lability
- For patients at risk of overstimulation, maintain a quiet environment.
 - Reduced Stimulation Protocol
 - Family Education

Sleep

- Optimizing Sleep/Wake Cycle
 - Use of blinds/curtains
 - Sound machines
 - Cluster Care
- Recovery
- Caregiver sleep impairment
 - Poor sleep for caregivers and poor adjustment for individuals with TBI= increased irritability, anger and aggression⁵

Pain

- Monitor and Manage pain
- Medicine
 - Balance pain relief with sedation
- Non-Medicinal interventions
 - Aromatherapy
 - Breathing techniques
 - Positioning/Stretching

Communication and Autonomy

- Utilize adaptive communication strategies as needed
 - Speech Language Pathologist
 - Communication boards, adaptive devices
- Provide choices when able to foster patient engagement and sense of control.
- Provide extra time for responses when needed.
- Ask for permission before assisting.

Family Support and Education

- Working with family to identify effective strategies can help with a smooth transition to home.

Communication

-check-ins

Community Re-integration

-Awareness of factors that may make it easier to navigate the world

Ongoing efforts to increase independence

Additional Education and Resources

- Support Groups
 - Caregivers
 - Aphasia
- Education Groups
 - Stroke & BI specific classes
- Community Resources
 - ASAP, BIAA, BIANC, LYBY

Resources

1. Mental Health. World Health Organization. 17 June 2022. Accessed March 7, 2025. <https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response>
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3. Lavoie, S., Sechrist, S., Quach, N., Ehsanian, R., Duong, T., Gotlib, I. H., & Isaac, L. (2017). Depression in Men and Women One Year Following Traumatic Brain Injury (TBI): A TBI Model Systems Study. *Frontiers in psychology*, 8, 634. <https://doi.org/10.3389/fpsyg.2017.00634>
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5. Brickell TA, Wright MM, Sullivan JK, et al. Caregiver sleep impairment and service member and veteran adjustment following traumatic brain injury is related to caregiver health-related quality of life. *J Clin Sleep Med*. 2022;18(11):2577-2588. doi:10.5664/jcsm.10164