

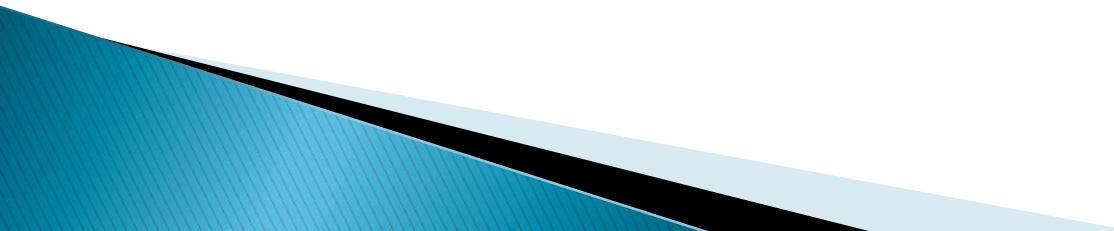
5 Things to Know About Brain Injury



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Objectives

Learners will be able to:

- ▶ Define acquired vs traumatic brain injury.
 - ▶ List 5 fundamental truths about brain injuries.
 - ▶ Apply information to future interactions with brain injury survivors and caregivers.
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Definitions

Acquired Brain Injury

“damage to the brain, which occurs after birth and is not related to a congenital or a degenerative disease. These impairments may be temporary or permanent and cause partial or functional disability or psychosocial maladjustment” (World Health Organization –Geneva 1996).

Traumatic Brain Injury

“a disruption in the normal function of the brain that can be caused by a bump, blow or jolt to the head or a penetrating injury” (CDC, 2015 Report to Congress).

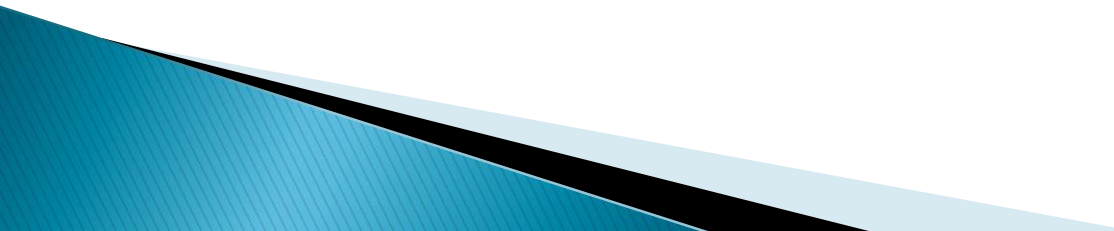


Types of Acquired Brain Injuries

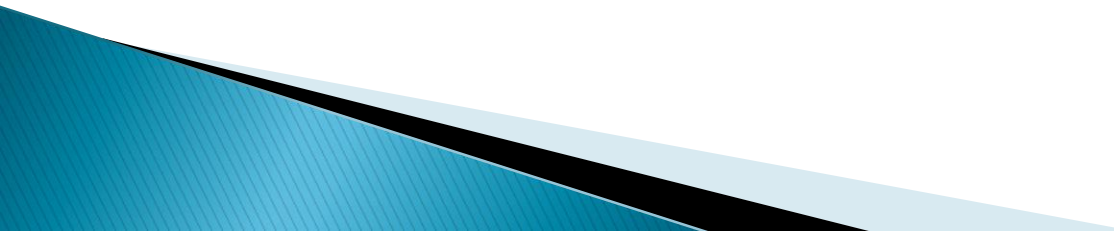
- ▶ Strokes
- ▶ Tumors
- ▶ Aneurysms
- ▶ Viral Encephalitis
- ▶ Multiple Sclerosis
- ▶ Anoxia/Hypoxia
- ▶ Near Drowning
- ▶ Lightning Strike



Common Causes of TBI

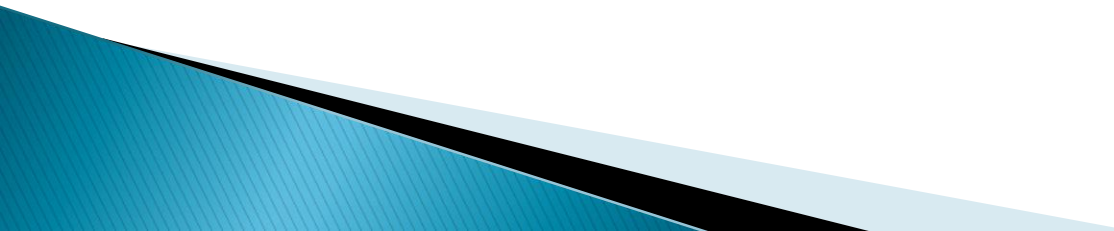
- ▶ Falls
 - ▶ Motor Vehicle Accidents
 - ▶ Struck by or Against Something
 - ▶ Sports Related Injuries
 - ▶ Attacks
 - ▶ Explosions or Blasts
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5 Things To Know

1. Brain Injuries are An Epidemic
 2. No Two Brain Injuries are Alike
 3. Related Deficits Impact Quality of Life
 4. Not enough survivors get access to the resources & support they need.
 5. Brain injury is not an event, it is the start of a chronic neurological disease process.
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#1

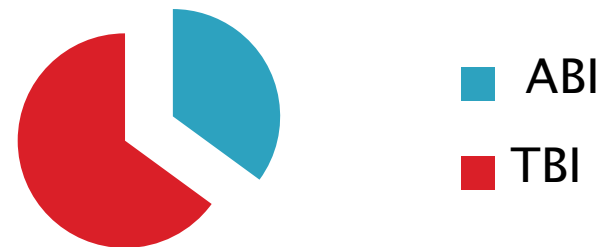
**Brain injuries
are an
epidemic.**

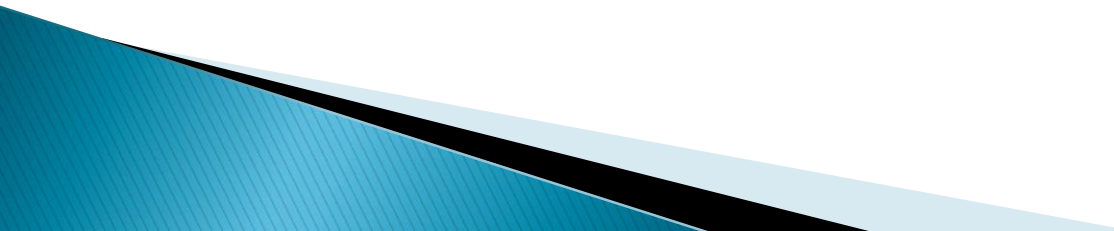


A Silent Epidemic

- ▶ TBI occurs in Texas every 4 minutes and in the US every 16 seconds
- ▶ Annually in the US,
917,000 ABI
(795,000 are strokes)
1,700,000 TBI
(146,000 are Texans)

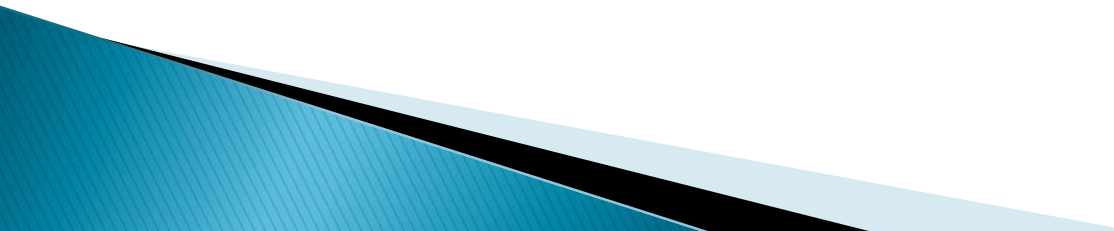
Annual Incidence in
US



- ▶ 500,000 Texans live with a disability due to TBI
 - ▶ The estimated national economic cost of TBI in 2010, including direct and indirect medical costs, is estimated to be approximately \$76.5 billion.
 - ▶ It is estimated that the cost of caring for a survivor of severe TBI is between \$600,000 and over \$1.8 million over a lifetime (<http://www.brainandspinalcord.org>).
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#2

No two
brain injuries
are alike.



No Two Brain Injuries Are Alike

- ▶ Affects ALL parts of life
- ▶ Severity can be from mild to severe
- ▶ Self-awareness and motivation will differ
- ▶ Recovery times will vary



#3

Related Deficits

Impact

Quality of Life.



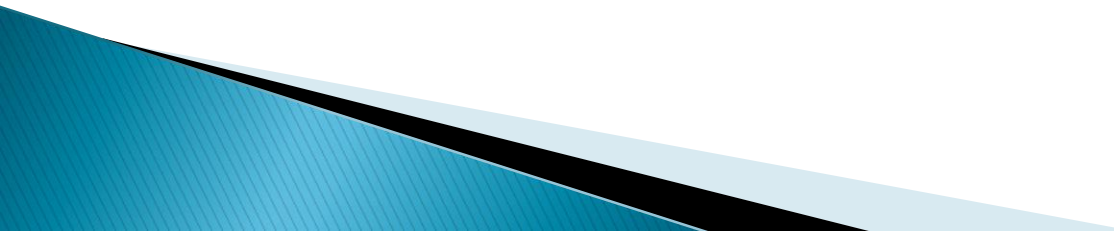
Quality of Life

- ▶ Growth and Development
- ▶ Emotions
- ▶ Employment
- ▶ Money
- ▶ Daily Activities
- ▶ Leisure Activities
- ▶ Driving
- ▶ Relationships



#4

Not enough
survivors get
access to the
resources &
support they need.

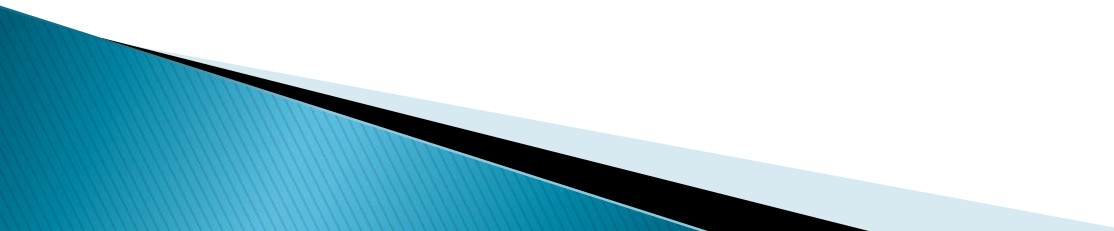


Access to Resources and Support

Fewer than 1 in 20 people with TBI receive the rehab and resources they need.

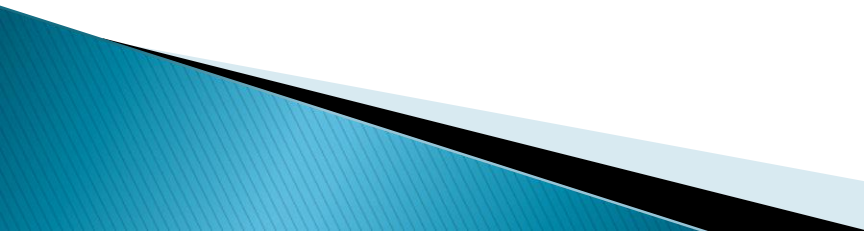
40% hospitalized with TBI had at least one unmet need for services one year after injury.

Unmet needs included help with:

- Memory & problem solving
 - Stress & emotional management
 - Temper Control
 - Improving Job Skills
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#5

Brain injury is not an event, it is the start of a chronic neurological disease process.

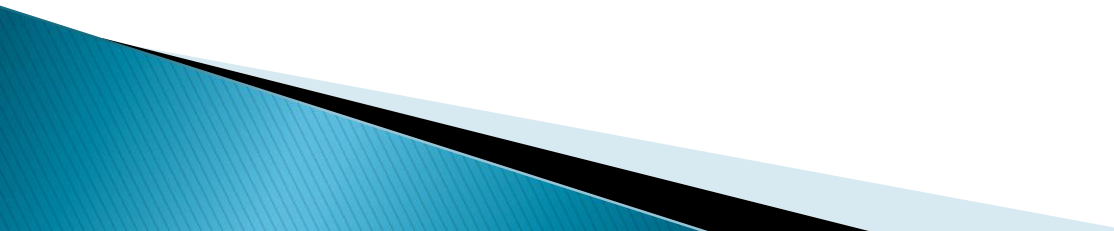


A Chronic Disease Process

(Masel, et al 2010)



Resources

- ▶ East Texas Brain Injury Support Group
 - ▶ Brain Injury Alliance of Texas (texasbia.org)
 - ▶ Northeast Texas Brain Injury Coalition
 - ▶ Office of Acquired Brain Injury
 - ▶ Brain Injury Association of America (biausa.org)
 - ▶ Administration for Community Living (acl.gov)
 - ▶ US Veterans Health Administration to Veterans
 - ▶ Health and Human Services Commission
 - ▶ brainline.org
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▶ <https://www.tbims.org/>

- ▶ [Advocacy Activity Scale \(AAS\)](#)
A 14-item instrument used to provide a measure of involvement in a range of activities representing advocacy for people with acquired brain injury.
- ▶ [Agitated Behavior Scale \(ABS\)](#)
A 14-item instrument used for serial assessment of agitation by clinician raters.
- ▶ [Apathy Evaluation Scale \(AES\)](#)
An 18-item instrument used for evaluation of apathy. Can be self-rated or rated by a clinician or significant other.
- ▶ [Awareness Questionnaire \(AQ\)](#)
An 18-item measure of self-awareness. Can be self-rated or rated by a clinician or significant other.
- ▶ [Cognitive Log \(Cog-Log\)](#)
A 10-item measure used for serial measurement of cognition by clinician raters.
- ▶ [Coma/Near Coma Scale \(CNC\)](#)
An 11-item instrument used by clinicians to assess low-level brain-injured patients.
- ▶ [Coma Recovery Scale-Revised\(CRS-R\)](#)
A 23-item instrument used to assist with differential diagnosis, prognostic assessment, and treatment planning with patients with disorders of consciousness.
- ▶ [Confusion Assessment Protocol \(CAP\)](#)
A 58-item instrument used by clinicians to measure confusion.

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A 58-item instrument used by clinicians to measure confusion.
- ▶ The Community Balance and Mobility Scale (CB&M)
A scale developed to identify postural instability and evaluate change following intervention in the higher functioning ambulatory individual with TBI.
- ▶ Community Integration Questionnaire (CIQ)
A 15-item instrument used to measure community integration. Can be self-rated or rated by a clinician or significant other.
- ▶ The Craig Handicap Assessment and Reporting Technique (CHART)
A 32-item instrument used to measure participation. Can be self-rated or rated by or significant other.
- ▶ The Craig Handicap Assessment and Reporting Technique Short Form (CHART SF)
A 19-item instrument used to measure participation (a shorter version of the CHART). Can be self-rated or rated by or significant other.
- ▶ The Craig Hospital Inventory of Environmental Factors (CHIEF)
A 25-item instrument used to measure environmental factors and the impact of environmental factors. Self-rated.
- ▶ Disability Rating Scale (DRS)
An 8-item instrument used by clinicians to measure disability.
- ▶ (Studying) Employment Variables after TBI
A report on research having to do with employment following brain injury, and how to measure employment.
- ▶ The Family Needs Questionnaire (FNQ)
A 40-item instrument used to measure family needs as rated by a significant other. Proprietary.
- ▶ Functional Assessment Measure (FAM)
A 12-item adjunct or addition to the FIM(TM) adding more brain injury/stroke related items. Rated by clinicians.
- ▶ Functional Independence Measure (FIM)(TM)
An 18-item instrument used by clinicians to measure disability. Proprietary.

- ▶ [Glasgow Outcome Scale \(GOS\)](#)
A 1-item instrument used by clinicians to measure disability. Please note that the GOS has been replaced by the DRS, and therefore GOS Certification is no longer available through the COMBI website. Information on the GOS is available [here](#). To become DRS certified, please click [here](#)
- ▶ [Extended Glasgow Outcome Scale \(GOS-E\)](#)
A 1-item instrument used by clinicians to measure disability. An extension of the GOS that has 8 categories rather than 5.
- ▶ [High Level Mobility Assessment Tool \(HiMAT\)](#)
A 13-item measure used to quantify high-level mobility outcomes following traumatic brain injury (TBI).
- ▶ [Independent Living Scale \(ILS\)](#)
The ILS assesses three main areas: activities of daily living (ADL's), behavior and initiation.
- ▶ [Level of Cognitive Functioning Scale \(LCFS\)](#)
A 1-item instrument used by clinicians to assess cognitive functioning. Commonly referred to as the Rancho Scale.
- ▶ [Mayo Portland Adaptability Inventory \(MPAI\)](#)
A 35-item instrument that measures problems after brain injury. Can be self-rated or rated by a clinician or significant other.
- ▶ [Mississippi Aphasia Screening Test \(MAST\)](#)
A 46-item instrument used by clinicians to measure communication and language skills.
- ▶ [Moss Attention Rating Scale \(MARS\)](#)
A 22-item observational instrument to measure attention related behavior..
- ▶ [Neurobehavioral Functioning Inventory \(NFI\)](#)
A 76-item instrument used to measure symptoms and behaviors after brain injury. Proprietary.
- ▶ [The Orientation Log \(O-Log\)](#)
A 10-item measure used by clinicians to serially assess orientation.

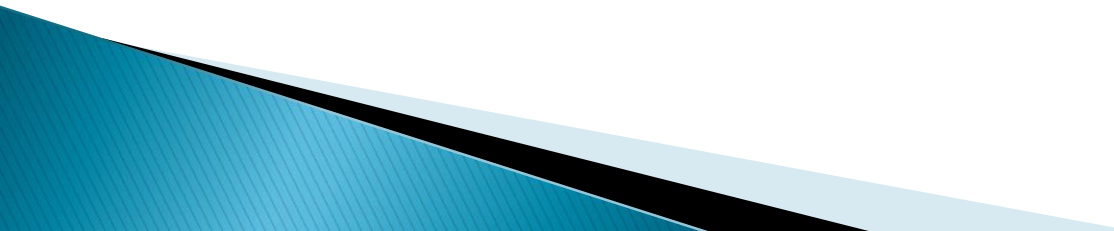
- ▶ The Overt Behaviour Scale (OBS)
Measures 9 categories of challenging behavior. Scoring includes severity, frequency, and impact.
- ▶ The Patient Competency Rating Scale (PCRS)
A 30-item measure of self-awareness. Can be self-rated or rated by a clinician or significant other.
- ▶ The Participation Assessment with Recombined Tools-Objective (PART-O)
A 17-item objective measure of participation, representing functioning at the societal level. Developed by the NIDRR-sponsored Traumatic Brain Injury Model Systems.
- ▶ Participation Objective, Participation Subjective
This instrument asks questions regarding 26 activities or elements of participation. Objective questions relate to the frequency of an activity, subjective questions relate to the importance of an activity and the satisfaction with their current participation in an activity.
- ▶ Perceived Control Scale for Brain Injury(PCS-BI)
A 9-item instrument used to measure self-efficacy.
- ▶ Satisfaction With Life Scale (SWLS)
A 5-item instrument used to measure life satisfaction. Self-rated.
- ▶ (Problematic) Substance Use Identified in the TBI Model Systems National Dataset
A report on research involving substance use and traumatic brain injury, and how to measure substance use.
- ▶ Service Obstacle Scale (SOS)
A 6-item instrument that measures perceptions regarding brain-injury related services. Can be self-rated or rated by a significant other.
- ▶ Supervision Rating Scale (SRS)
A 1-item instrument used by clinicians to measure amount of received supervision.

General Applications

- ▶ Improved brain injury awareness.
- ▶ Educate survivors, family and friends.
- ▶ Support the connection between survivors/caregivers and resources.
- ▶ Support community reintegration of survivors.
- ▶ Support legislation that provides funding for brain injury rehabilitation and care.



What survivors wish we all knew about brain
injury recovery...



Questions??



References

- Brain Injury Association of America. "Brain Injury Statistics." Updated May 1, 2012, accessed May 7, 2017. <http://www.biausa.org>.
- Centers for Disease Control and Prevention. (2015) Report to Congress on Traumatic Brain Injury in the United States: Epidemiology and Rehabilitation. National Center for Injury Prevention and Control: Division of Unintentional Injury Prevention. Atlanta, GA.
- Center for Disease Control and Prevention. "TBI: Get the Facts." Updated September 20, 2016, accessed May 7, 2017. https://www.cdc.gov/traumaticbraininjury/get_the_facts.html.
- Corrigan JD, Whiteneck G, Mellick D., (2004). Perceived needs following TBI, Journal of Head Trauma Rehabilitation, 19: 205–216.
- Masel, Brent E., De Witt, Douglas S., (2010). Traumatic Brain Injury: A Disease Process, Not an Event, Journal of Neurotrauma, 27: 1529–1540.
- World Health Organization Report -Geneva 1996