



TEXAS  
Health and Human  
Services

# HHSC Family Violence Program: Survivors & Traumatic Brain Injury

---

November 14, 2019

# Agenda

---

## Part I

- HHSC Office of Acquired Brain Injury

## Part II

- Fort Bend Women's Center – Neurofeedback Project



# Objectives

---

1. To provide an understanding of what a traumatic brain injury is and how it relates to work with survivors of family violence.
2. To highlight resources to help survivors with a traumatic brain injury.
3. To share an innovative project to help survivors with a traumatic brain injury and inspire other project ideas.



TEXAS  
Health and Human  
Services



TEXAS  
Health and Human  
Services

# Part I: Acquired Brain Injury 101

---

Texas Health and Human Services  
Office of Acquired Brain Injury

# Overview

---

- Office of Acquired Brain Injury (OABI)
- Brain injury basics
- Causes of brain injury
- Severity of injury
- Effects
- Resources



TEXAS  
Health and Human  
Services



TEXAS  
Health and Human  
Services

# Office of Acquired Brain Injury (OABI)

---

Serving and Supporting Individuals with a Brain Injury



# Office of Acquired Brain Injury



TEXAS  
Health and Human  
Services

The Office of Acquired Brain Injury is the center for awareness and education on brain injuries in Texas. OABI's goal is to help connect people to resources and services, raise awareness and prevent brain injuries.

For brain injury related resources, contact OABI at:

- [OABI@hhsc.state.tx.us](mailto:OABI@hhsc.state.tx.us)
- [hhs.texas.gov/services/disability/office-acquired-brain-injury](https://hhs.texas.gov/services/disability/office-acquired-brain-injury)

The screenshot displays the Texas Health and Human Services website. At the top, there is a navigation bar with links for 'A-Z Index', 'Connect', 'Español', 'Subscribe', and 'Survey'. Below this is a search bar with the text 'Keyword search' and an 'Apply' button. The main header features the Texas Health and Human Services logo and a navigation menu with 'ABOUT HHS', 'SERVICES', 'DOING BUSINESS WITH HHS', 'LAWS & REGULATIONS', and 'CONTACT'. The page title is 'Office of Acquired Brain Injury'. Below the title, there is a breadcrumb trail: 'Home > Services > Disability > Office of Acquired Brain Injury'. The main content area is titled 'Services' and includes a list of links: 'Aging', 'Disability', 'Acquired Brain Injury', 'Contact Us', 'Emergency Response Check List', 'Download or Order Materials', 'Individuals with Brain Injury', 'Find a Support Group', 'Insurance', 'Learn About Acquired Brain Injury', 'Local Coalitions', 'Training for Professionals', 'Veterans Recovery Pilot Program', 'Videos', and 'What is the Office of Acquired Brain Injury?'. A featured video player is titled 'What is an Acquired Brain Injury?' and includes the text 'We're Here to Help You Navigate the Brain Maze' and 'What is Brain Injury'. To the right of the video player, there is a 'Resources' section with a link to the 'Texas Brain Injury Advisory Council'. Below this, there is a 'Feeling Alone?' section with the text 'Join a support group for people with brain injuries and their families.' and a 'FIND A SUPPORT GROUP' button. At the bottom right, there is a 'Professionals: HHS offers free training about acquired brain injuries.' section with a 'LEARN MORE' button.

# Office of Acquired Brain Injury



TEXAS  
Health and Human  
Services

Some of resources available on the OABI webpage are:

- List of support groups
- Navigate the Brain Maze Video Series
- Educational information on brain injuries
- Information on other HHS programs and services that could assist brain injury survivors and/or caregivers
- Free downloadable resource material

What is Brain Injury?



Brain injuries can happen to anyone, at any time, and anywhere. In this video, you will learn what acquired and traumatic brain injuries are, signs and symptoms, the long-term effects, and prevention strategies.

[Watch the video in Spanish](#).





TEXAS  
Health and Human  
Services

# Brain Injury Basics

---

Serving and Supporting Individuals with a Brain Injury

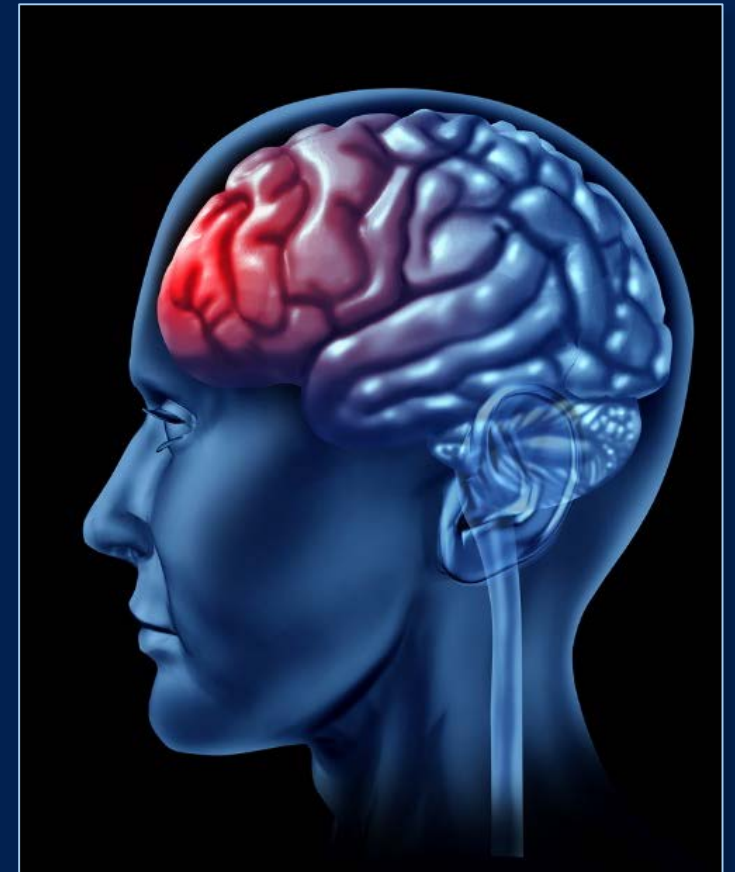
# Acquired Brain Injury



TEXAS  
Health and Human  
Services

An acquired brain injury is an injury to the brain which:

- Occurs after birth
- Is not related to a congenital (present at birth) or degenerative (progressive) disease
- Can cause temporary or permanent impairments that result in physical, emotional, and intellectual difficulties.



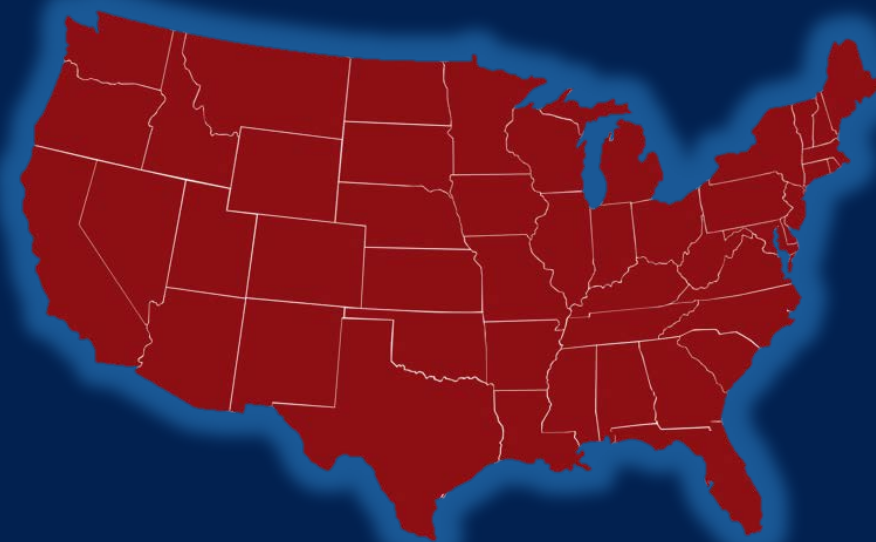
# Incidence of Brain Injury



TEXAS  
Health and Human  
Services

According to the Centers for Disease Control and Prevention, each year in the United States:

- Over **2.8 million** individuals sustain a traumatic brain injury
- Over **795,000** individuals sustain a stroke
- About **610,000** of these are first or new strokes

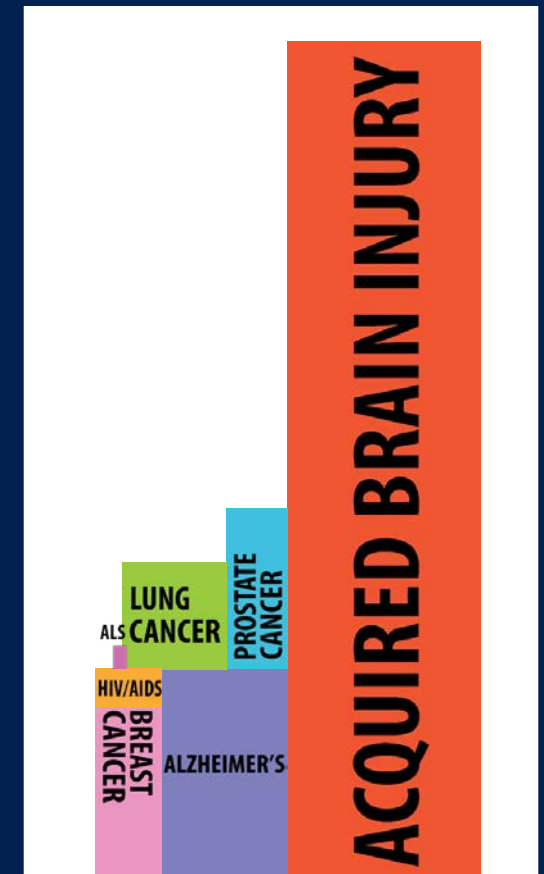




TEXAS  
Health and Human  
Services

# How Does that Compare?

Each year in the U.S., more people are diagnosed with a brain injury than the number of people diagnosed with Alzheimer's, breast cancer, HIV/AIDS, prostate cancer, lung cancer, and amyotrophic lateral sclerosis combined.<sup>1,2,4</sup>





TEXAS  
Health and Human  
Services

# Causes of Brain Injury

---

Serving and Supporting Individuals with a Brain Injury



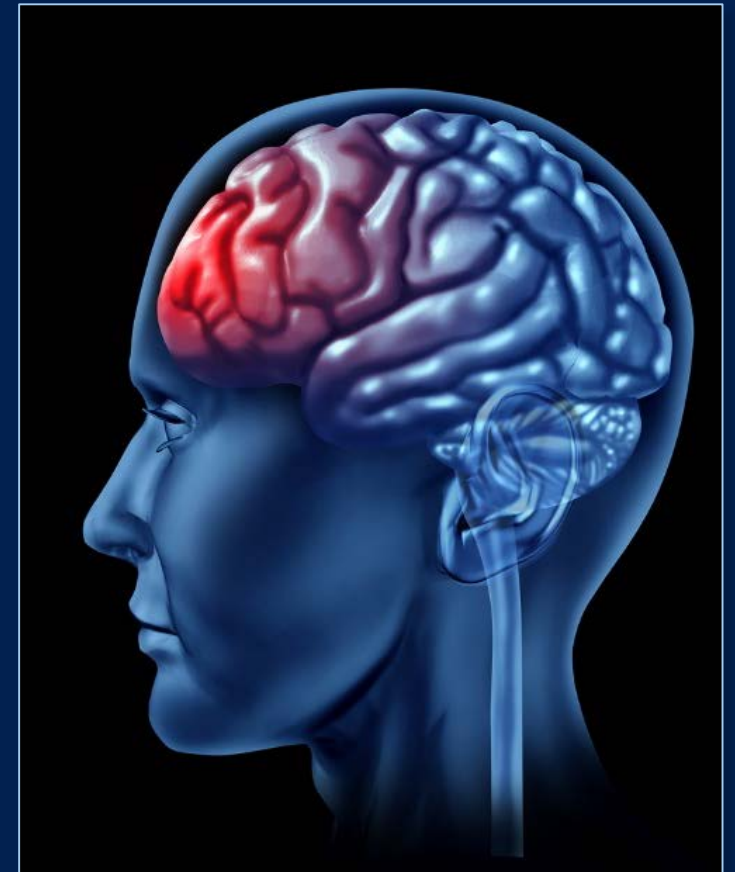
# Types of Brain Injury



TEXAS  
Health and Human  
Services

Acquired brain injuries can be broken down into two categories:

- Traumatic brain injury
- Non-traumatic brain injury





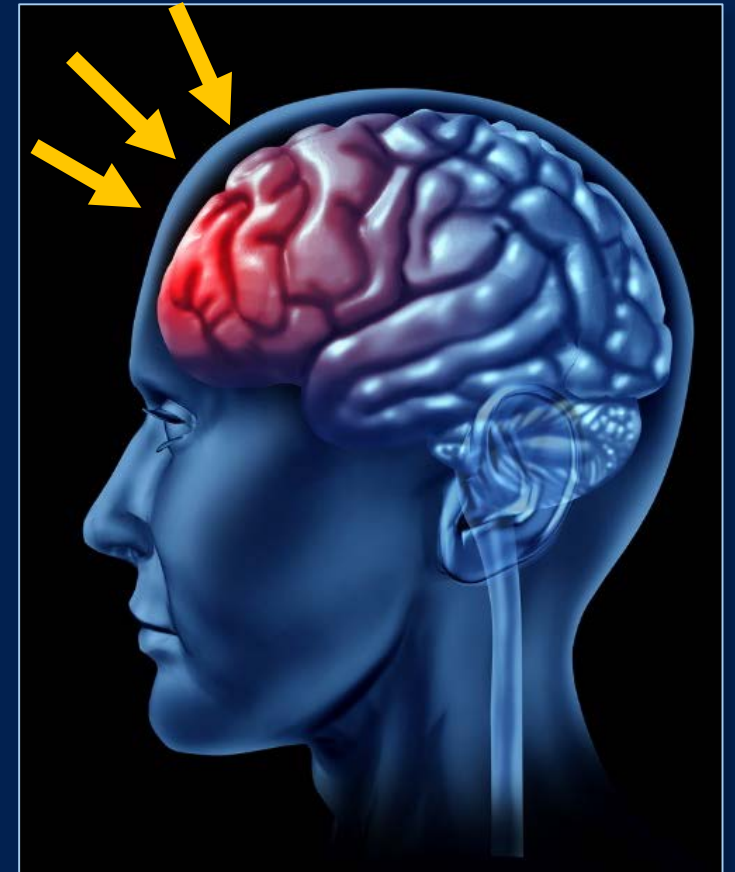
# Traumatic Brain Injury



TEXAS  
Health and Human  
Services

A TBI is a type of acquired brain injury that disrupts the normal function of the brain and is caused by:

- A blow or jolt to the head
- A penetrating head injury



# Traumatic Brain Injury



TEXAS  
Health and Human  
Services

The injury may be a closed or open head injury.

- **Closed:** skull stays intact
- **Open:** an object penetrates the skull and enters the brain



# Common Causes of TBI<sup>4</sup>

## Other/Unknown 15%

Explosion/blast injury  
Sports related injuries

## Assault 9%

Domestic violence,  
gang violence, shaken  
baby syndrome, etc.

## Motor Vehicle Accidents 14%

Cars, motorcycles, ATVs, etc.

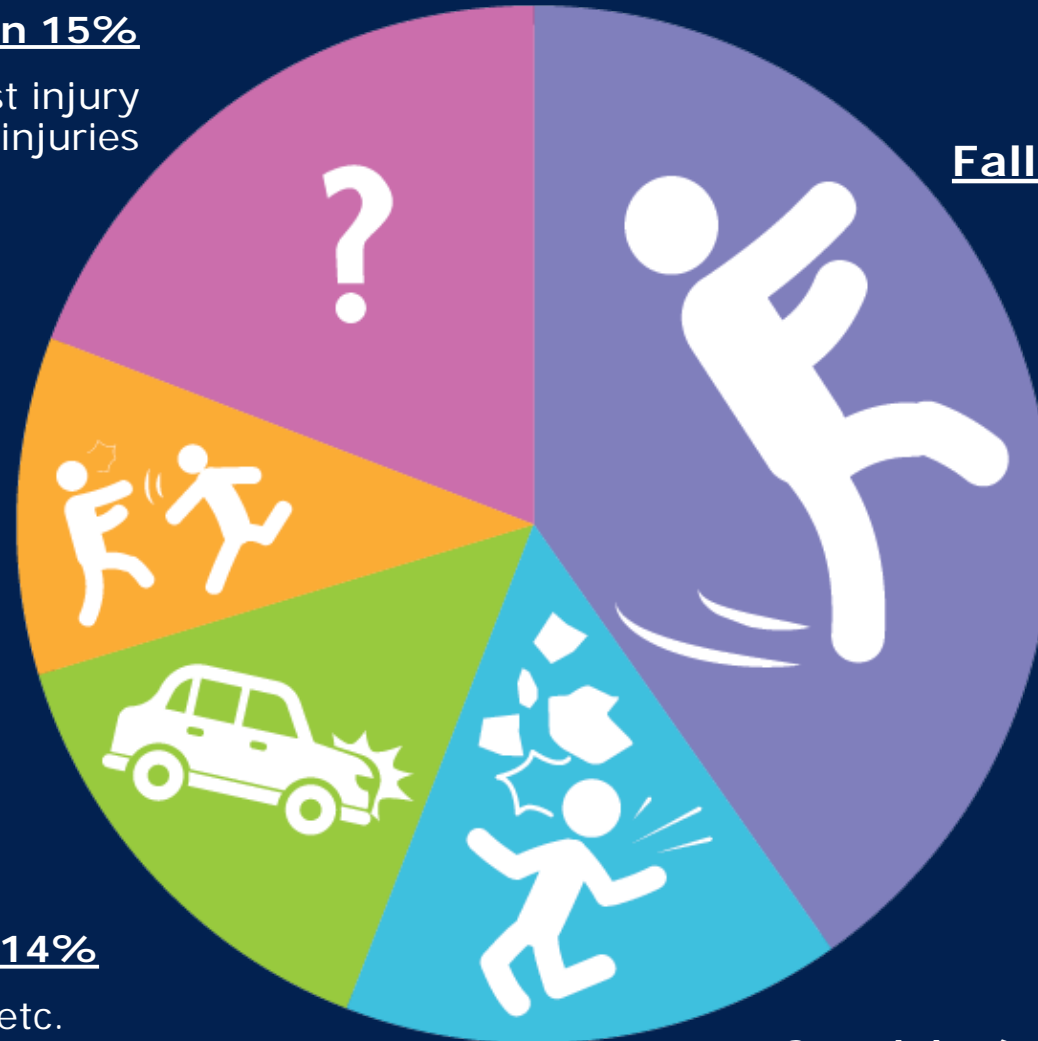
## Falls 47%

Falls from heights like  
buildings, trees, ladders,  
bicycles, etc.

Small falls like slips,  
tumbles down steps, lost  
balance, etc.

## Struck by/against 15%

Falling debris, motor vehicles, etc.



TEXAS  
Health and Human  
Services

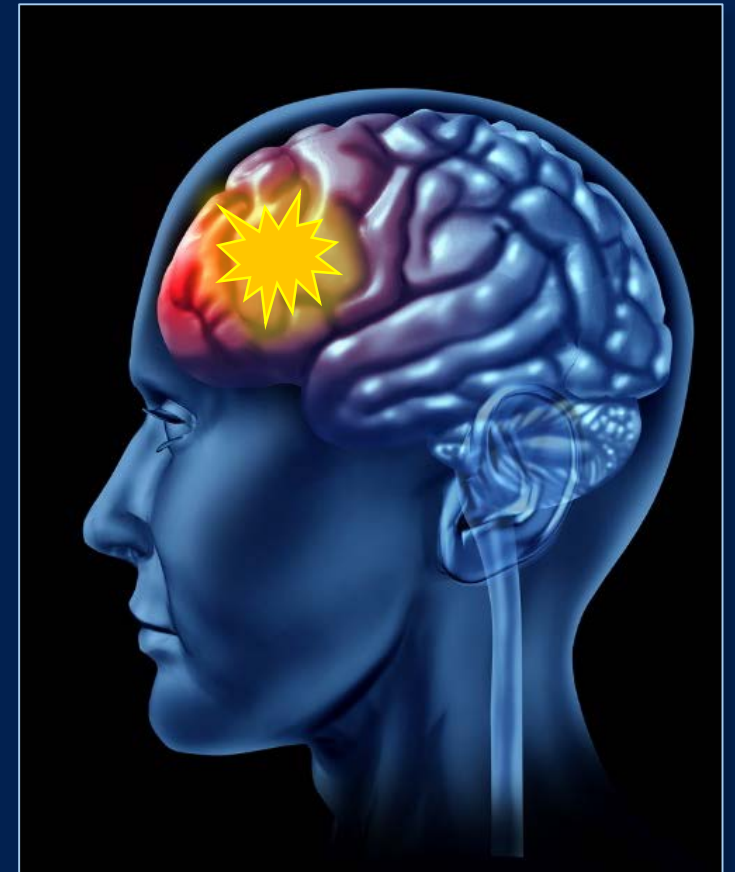
# Non-Traumatic Brain Injury



TEXAS  
Health and Human  
Services

A non-traumatic brain injury is a type of acquired brain injury that disrupts the normal function of the brain and is caused by:

- An internal, rather than an external, event
- Non-traumatic brain injuries are just as serious and life altering as TBIs.



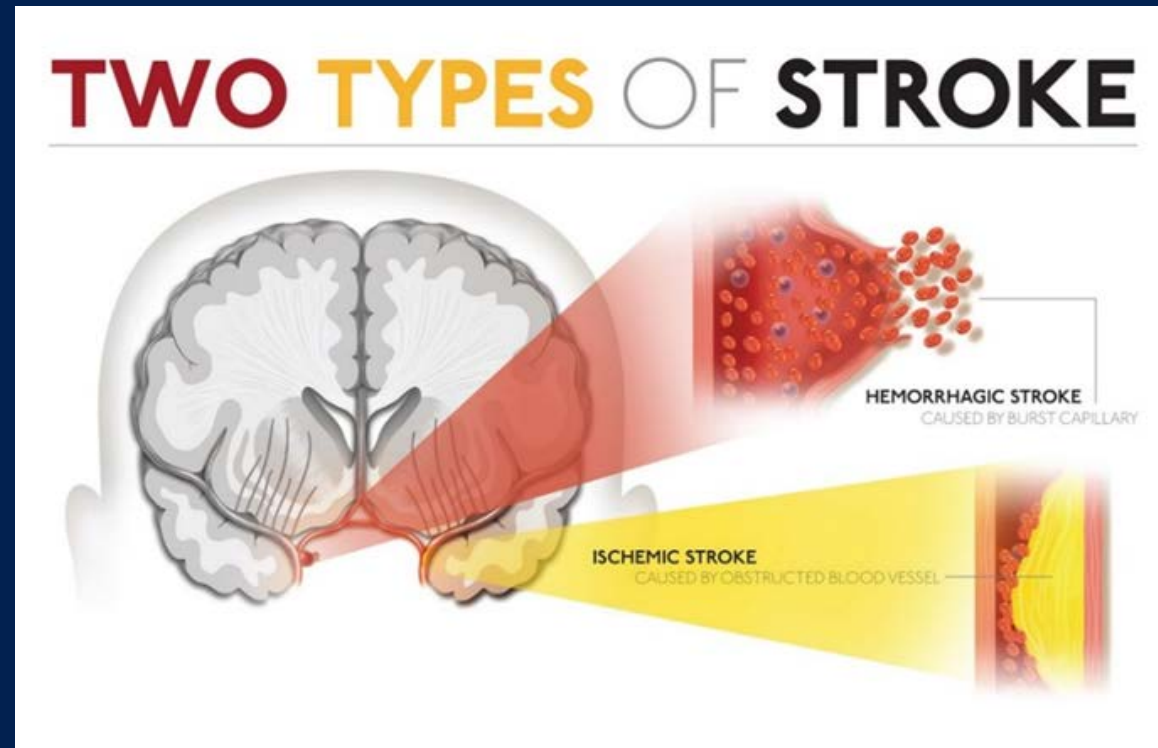


# Common Causes of Non-traumatic Brain Injury



TEXAS  
Health and Human  
Services

- Stroke
  - Ischemic
  - Hemorrhagic
- Aneurysm
- Anoxia / Hypoxia
- Brain tumors
- Infection
- Exposure to toxins
- Drug induced<sup>5</sup>



# What's the Difference?



TEXAS  
Health and Human  
Services

- Both are types of acquired brain injury
- The main difference is the mechanism of injury, the cause, the “how”
  - Traumatic = external
  - Non-traumatic = internal
- While the causes vary, the effects and recovery can be identical







TEXAS  
Health and Human  
Services

# Severity of Injury

---

Serving and Supporting Individuals with a Brain Injury

# Severity of Injury



TEXAS  
Health and Human  
Services

The severity of a brain injury can range from:

- Mild
- Moderate
- Severe



# Four Factors for Determining Severity of Brain Injury<sup>9</sup>



TEXAS  
Health and Human  
Services

Factors	Mild	Moderate	Severe
Confusion/ Disorientation	Less than 30 minutes	More than 30 minutes but less than 24 hours	More than 24 hours
Loss of Consciousness	0 to 30 minutes <i>*A loss of consciousness does not always occur</i>	More than 30 minutes but less than 24 hours	More than 24 hours
Memory Loss	Less than 24 hours	More than 24 hours but less than 7 days	More than 7 days
MRI/CT/Imaging	<b><u>For all levels of severity, imaging results may be normal or abnormal.</u> Certain chemical and physical reactions are not picked up by these tests, and so this should not be the only determining factor when diagnosing a brain injury.</b>		

# Mild Traumatic Brain Injury



TEXAS  
Health and Human  
Services

- Mild TBIs are a major public health concern
- Mild brain injuries are deceptive:
  - A person may look “normal” and feel “fine”
  - Mild brain injuries are often unrecognized and undiagnosed
  - Multiple mild brain injuries can exponentially increase health consequences and even lead to death



TEXAS  
Health and Human  
Services

# Effects

---

**Serving and Supporting Individuals with a Brain Injury**



# The Functions of the Brain



TEXAS  
Health and Human  
Services

- The brain is the control center for our physical, emotional, and cognitive activities
- When someone has a brain injury, some of those activities can be altered





# Basic Overview of the Functions of the Brain



TEXAS  
Health and Human  
Services

## Frontal Lobe

- Social behavior
- Decision making
- Concentration
- Memory
- Emotions
- Personality
- Problem Solving
- Impulse Control

## Parietal Lobe

- Visual interpretation
- Spatial awareness
- Academic skills
- Sense of touch

## Occipital Lobe

- Reading
- Visual reception and interpretation
- Dreams

## Temporal Lobe

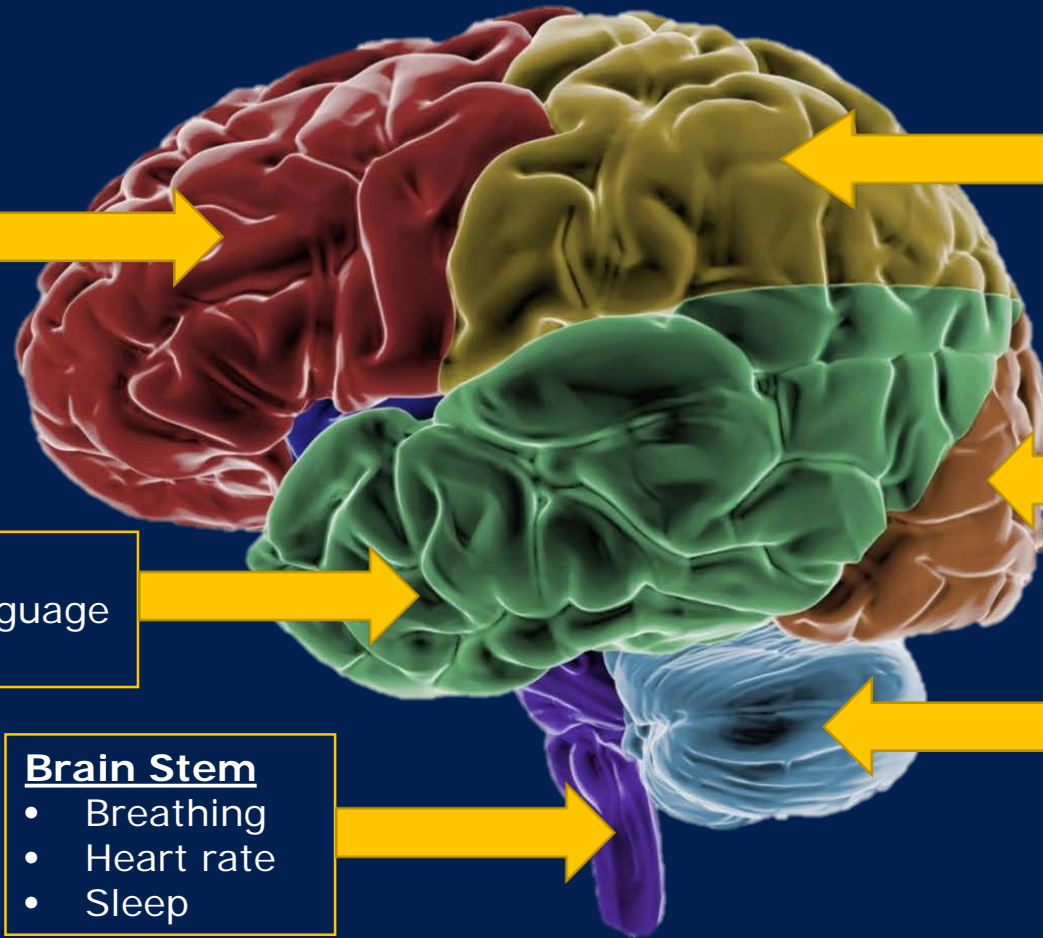
- Understanding Language
- Hearing

## Brain Stem

- Breathing
- Heart rate
- Sleep

## Cerebellum

- Balance
- Coordination
- Fine motor skills



# The Effects of Brain Injury



TEXAS  
Health and Human  
Services

- When a specific part of the brain is injured, the functions of that part could be affected
  - Example: If someone sustains an injury to the frontal lobe, the injury could affect their decision making skills, memory, and/or personality
- Often a single brain injury will affect **multiple parts** of the brain



# The Effects of Brain Injury



TEXAS  
Health and Human  
Services

The effects of a brain injury can be broken down into three categories:

- Cognitive changes
- Emotional/behavioral changes
- Physical changes

# The Effects of Brain Injury



TEXAS  
Health and Human  
Services

Each person's experience is unique

- Not every person will experience changes
- A person may experience a few changes or many
- Changes can be mild, moderate, or severe
- Overstimulation, being upset or irritated, and/or anxiety can increase the level at which these changes are displayed
- Many individuals do not know they have sustained a brain injury, and do not realize these changes have a cause



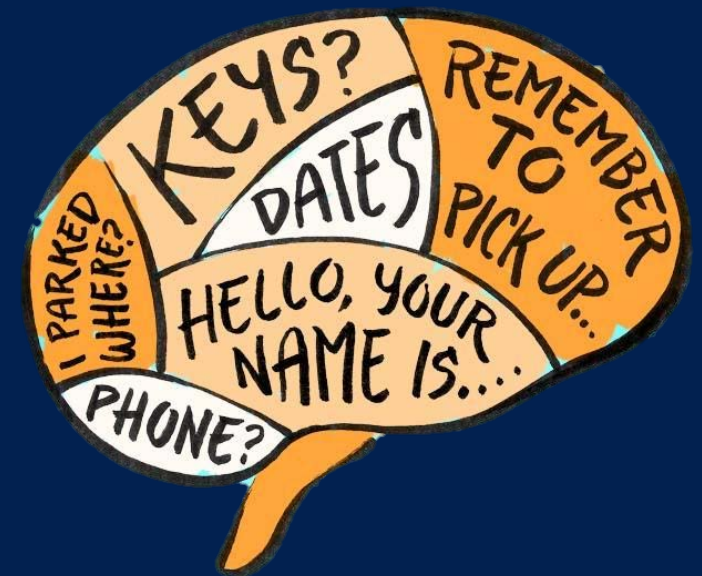
# Cognitive



TEXAS  
Health and Human  
Services

The most common cognitive changes include:

- Difficulty with memory and learning
- Personality changes
- Lack of concentration
- Delayed thinking/processing
- Reckless decision making
- Difficulty communicating and understanding



# Cognitive



TEXAS  
Health and Human  
Services

When interacting with a brain injury survivor, you might notice that someone:

- Does not pay attention and struggles to follow conversation
- Needs things repeated several times
- Cannot remember answers to simple questions
- Has difficulty following instructions
- Is easily distracted
- Says impulsive or inappropriate things



# Emotional/Behavioral



TEXAS  
Health and Human  
Services

The most common behavioral changes include:

- Agitation
- Aggression
- Confusion
- Anxiety
- Depression
- Mood swings
- Inappropriate social behavior
- Lack of impulse control



# Emotional/Behavioral



TEXAS  
Health and Human  
Services

When interacting with a brain injury survivor, you might notice that someone:

- Overreacts with physical and/or verbal outbursts
- Inappropriately laughs, cries, or becomes upset
- Displays inappropriate social behavior
- Makes emotionally driven impulsive decisions
- Displays inappropriate sexual behavior

# Physical



TEXAS  
Health and Human  
Services

The most common physical changes include:

- Sensory changes or impairments:
  - Hearing
  - Vision
  - Touch
  - Smell
  - Taste
- Impaired speech



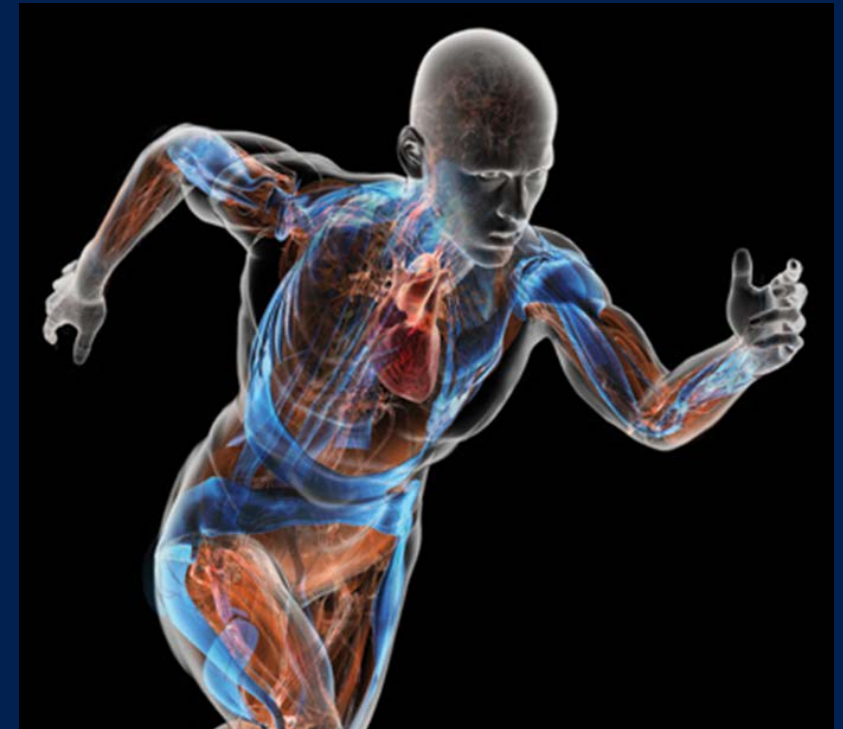
# Physical



TEXAS  
Health and Human  
Services

The most common physical changes (continued):

- Poor balance and coordination
- Impaired fine motor skills
- Muscle tremors
- Chronic headaches
- Chronic pain
- Incontinence
- Seizures



# Co-occurring Conditions



TEXAS  
Health and Human  
Services

Common co-occurring conditions:

- Substance use/abuse
- Sleep disturbances
- Depression, anxiety, suicidality, and various other mental health issues
- Epilepsy
- Neurodegenerative diseases (Ex: ALS, Alzheimer's, dementia, etc.)
- Fatigue





TEXAS  
Health and Human  
Services

# Recovery

---

**Serving and Supporting Individuals with a Brain Injury**

# Recovery is Different for Everyone



TEXAS  
Health and Human  
Services

- Some individuals may feel that they have returned to “normal” (same as before brain injury)
- Others may have to learn what their “new normal” is (ex. limitations, adaptations, etc.)





TEXAS  
Health and Human  
Services

# Resources

---

**Serving and Supporting Individuals with a Brain Injury**

# Texas Brain Injury Resource Guide



TEXAS  
Health and Human  
Services

- Includes detailed information about:
  - Navigating life after brain injury
  - Health care benefits
  - Rehabilitation services
  - Mental health and substance use
  - Financial help
  - Long-term services and supports
  - Independence services
  - Other brain injury resources
  - Issues with services
- Available for free in English and Spanish at [hhs.texas.gov/services/disability/acquired-brain-injury/download-or-order-acquired-brain-injury-materials](https://hhs.texas.gov/services/disability/acquired-brain-injury/download-or-order-acquired-brain-injury-materials)

## Texas Brain Injury Resource Guide

There are many services available to assist people living with a brain injury. Use this guide to find the support you need.



Office of Acquired Brain Injury  
Comprehensive Rehabilitation Services Program  
Office of Disability Prevention for Children



TEXAS  
Health and Human  
Services

# Questions?

---

Questions can be sent to [OABI@hhsc.state.tx.us](mailto:OABI@hhsc.state.tx.us).





TEXAS  
Health and Human  
Services

# Thank you!

---

Carrie Bradford, PhD, Program Manager  
Email: [Carrie.Bradford02@hhsc.state.tx.us](mailto:Carrie.Bradford02@hhsc.state.tx.us)  
Phone: 512-206-5209

Mary Cloud, MPH, Public Health and Prevention Specialist  
Email: [Mary.Cloud01@hhsc.state.tx.us](mailto:Mary.Cloud01@hhsc.state.tx.us)  
Phone: 512-206-5634

# References

1. Alzheimer's Association. 2017 Alzheimer's Disease Facts and Figures. *Alzheimers Dement* 2017;13:325-373.
2. American Cancer Society. *Cancer Facts & Figures 2017*. Atlanta: American Cancer Society; 2017.
3. Bushnik, Tamara, Caplan, B., Bogner, J, Brenner, L. et al. Healthcare Utilization, Legal Incidents, and Victimization Following Traumatic Brain Injury in Homeless and Vulnerably Housed Individuals: A Prospective Cohort Study. *Journal of Health Trauma Rehabilitation*. 30 (4). July/August 2015.  
<https://doi.org/10.1097/HTR.0000000000000044>
4. 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.
5. Stroke. Centers for Disease Control and Prevention. February 13, 2019. <https://www.cdc.gov/stroke/>
6. Defense and Veterans Brain Injury Center <http://dvbic.dcoe.mil/dod-worldwide-numbers-tbi>
7. Zieman, Glynnis, Bridwell, A., Cardena J. Traumatic Brain Injury in Domestic Violence Victims: A Retrospective Study at the Barrow Neurological Institute. *Journal of Neurotrauma*. 34 (4). February 15, 2017.  
<https://doi.org/10.1089/neu.2016.4579>
8. Hughes, N., Williams, W., Chitsabesan, P., Walesby, R., Mounce, L., & Clasby, B. (2015). The Prevalence of Traumatic Brain Injury Among Young Offenders in Custody. *Journal of Head Trauma Rehabilitation*, 94-105.
9. "What Are the Effects of TBI?" TraumaticBrainInjury.com, [www.traumaticbraininjury.com/understanding-tbi/what-are-the-effects-of-tbi/](http://www.traumaticbraininjury.com/understanding-tbi/what-are-the-effects-of-tbi/).

# Image References

- Profile of brain: <https://lehacker.com/wp-content/uploads/2016/04/brain-barrier.jpg>, [http://www.huffingtonpost.com/steve-rhode/facing-a-traumatic-brain\\_b\\_3247783.html](http://www.huffingtonpost.com/steve-rhode/facing-a-traumatic-brain_b_3247783.html)
- Populations at Risk: <https://www.alturalearning.com/blog/children-improve-the-quality-of-aged-care-at-home/>
- Populations at Risk: [https://www.cdc.gov/traumaticbraininjury/data/rates\\_bysex.html](https://www.cdc.gov/traumaticbraininjury/data/rates_bysex.html)
- DoD Number of Traumatic Brain Injury diagram: <http://dvbic.dcoe.mil/dod-worldwide-numbers-tbi>
- Holding head brain: <https://www.jillcarnahan.com/2016/06/13/seven-reasons-a-brain-injury-can-destroy-your-gut-2/>
- Types of Strokes: <https://livelifemore.zest.md/blog/what-are-the-types-of-stroke-124549>
- Functions of the brain: <https://www.thoughtco.com/occipital-lobes-anatomy-373224>
- Cognitive: <https://firstadakit.com/2017/05/21/my-poor-memory/>
- Emotional/Behavioral: <https://tinybuddha.com/blog/how-to-stop-being-a-slave-to-your-emotions/>
- Physical: <https://www.rosedalewellness.com/blog>



TEXAS  
Health and Human  
Services



TEXAS  
Health and Human  
Services

# **Part II: Fort Bend Women's Center**

---

**Abeer Monem**

# Intimate Partner Violence and Brain Trauma: A New Approach

Using Neurofeedback in a Domestic Violence Program



Presented by:

Abeer Monem

Harris County Domestic Violence Coordinating Council (previously with FBWC)

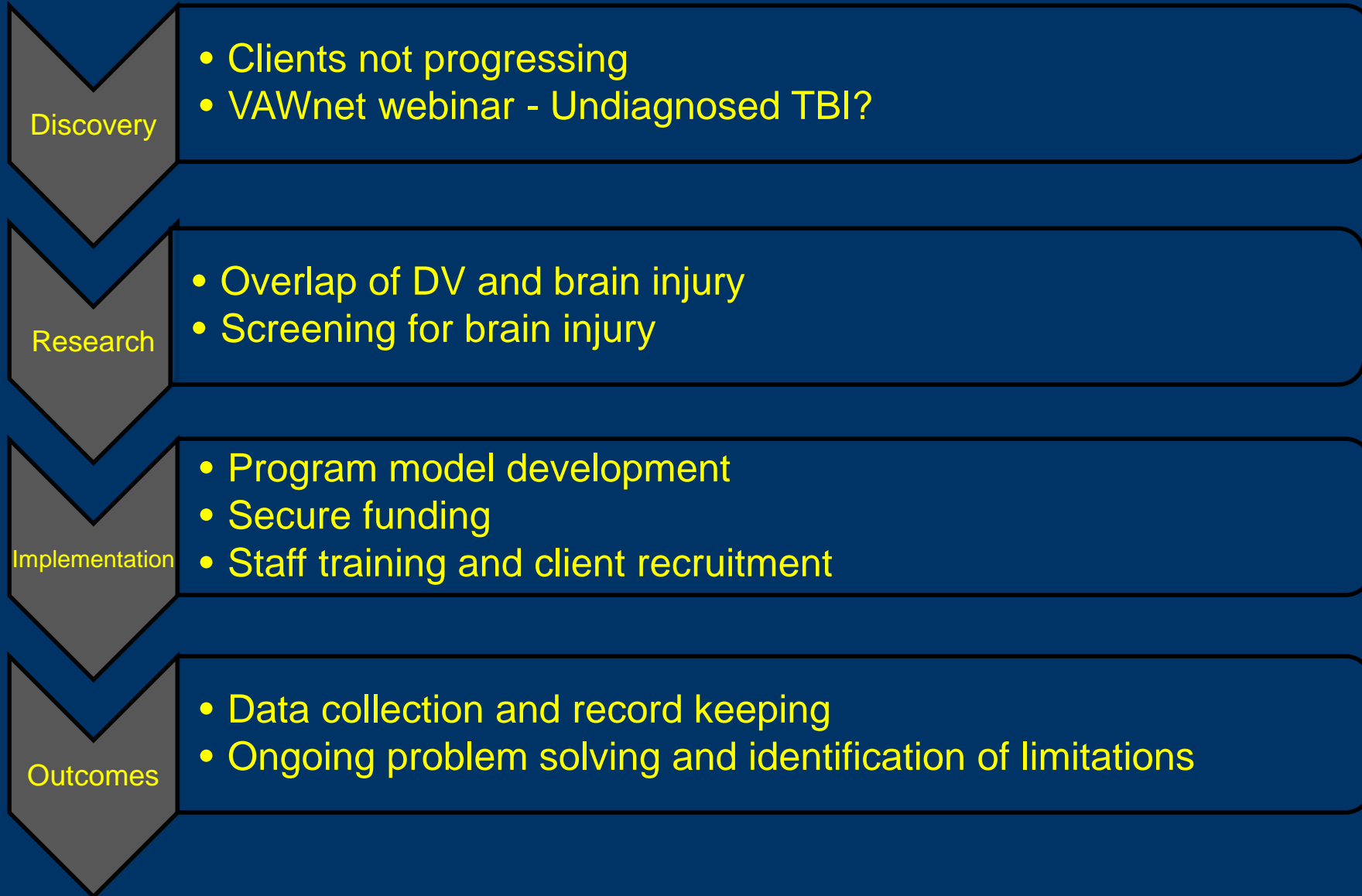




- 24-hour crisis hotline
- Emergency shelter
- Nonresidential services
- Mobile services
- Neurofeedback training
- Mental health counseling
- Legal, vocational, medical assistance
- Housing programs



# FBCWC Program Lifecycle



**Sports/Recreation (2009): 446,788 reported cases at U.S. emergency rooms (cycling/football)**

(Source: American Association of Neurological Surgeons)

**Military (2014): 25,053 reported cases**

(Source: Defense Medical Surveillance System)

**Domestic Violence: ??**

# Domestic Violence and Traumatic Brain Injury

TBI is present in 30-74% of victims of DV who seek services at shelters or emergency rooms. (Source: Kwako et al. 2011)

88-94% of physical DV incidents involve head and/or neck injuries. (Source: Arosarena et al. 2009)

Valera and Berenbaum (2003) found that of the women in their study (all residing in women's shelters), 74% had sustained some type of brain injury from their partner, whereas only 27% sustained accident-related injuries.

# HELPS Screening Tool for Traumatic Brain Injury

- A brief TBI screening tool that was designed to be used by professionals who are not TBI experts (Picard et al., 1991)
- "HELPS" is an acronym for
  - H = Hit in the head;
  - E = Emergency room treatment;
  - L = Loss of consciousness;
  - P = Problems with concentration and memory;
  - S = Sickness or other physical problems following injury



QUESTION		NO	YES	COMMENTS
H	Did you ever <b>HIT</b> your head? Were you ever hit on your face or head? With what? <u>hand</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Did your partner ever slam your head into a wall or another object?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Did your partner ever push you so that you fell and hit your head?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Did your partner ever shake you?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Did your partner ever strangle you, or do anything else that made it hard for you to breathe?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>If there is not a "YES" answer in the "H" section, DO NOT PROCEED.</b>				
E	Did you ever go to the <b>EMERGENCY</b> room after an incident? Why? _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Did they ask you whether you had been hit on the head or indicate that they suspected a head injury or concussion?	<input type="checkbox"/>	<input type="checkbox"/>	
	Was there ever a time when you thought you needed to go to the ER, but didn't go because you couldn't afford it or your partner prevented you?	<input type="checkbox"/>	<input type="checkbox"/>	
	If you did go to the ER, did you think you got all the treatment you needed?	<input type="checkbox"/>	<input type="checkbox"/>	
L	Did you ever <b>LOSE</b> consciousness or black out as a result of what your partner did to you? For how long? <u>does not remember</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	For what reason? <u>x</u>			
P	Did you have any <b>PROBLEMS</b> after you were hit on the head?	<input type="checkbox"/>	<input type="checkbox"/>	
	<input checked="" type="checkbox"/> Headaches			
	<input checked="" type="checkbox"/> Dizziness			
	<input checked="" type="checkbox"/> Anxiety			
	<input checked="" type="checkbox"/> Depression			
	<input checked="" type="checkbox"/> Difficulty concentrating			
	<input checked="" type="checkbox"/> Difficulty remembering			
	<input checked="" type="checkbox"/> Difficulty reading/writing/calculating			
	<input checked="" type="checkbox"/> Difficulty performing old job/school work			
	<input checked="" type="checkbox"/> Changes in behavior/attitude			
<input checked="" type="checkbox"/> Difficulty problem solving				
<input checked="" type="checkbox"/> Changes in relationships				
Are you having trouble finishing things you start to do?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Are people telling you that you don't seem like yourself, or that your behavior has changed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Does your partner say you have changed, and use that as an excuse to	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Have you been having difficulty performing your usual activities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Are you experiencing mood swings that you don't understand?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Has it gotten harder for you to function when you are under stress?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
S	Did you have any significant <b>SICKNESSES</b> after having your head hit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Have you had any physical problems? What kind?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Do you experience any reoccurring headaches or fatigue?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Have you experienced any changes in your vision, hearing, or sense of smell or taste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Do you find yourself dizzy or experiencing a lack of balance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

E= \_\_\_\_\_ L= 1 P= 3 S= 6

# of Yes 10



## 182 women screened using the HELPS Screening Tool for Traumatic Brain Injury

### 75% reported a brain injury incident

- 91% hit their head or were hit on the head
- 76% strangulation from partner
- 66% pushed down by partner and hit head
- 65% head slammed into the wall or other object by partner
- 59% shaken by partner
- 91% reported having various problems after the incident

# THE FORT BEND WOMEN'S CENTER NEUROFEEDBACK PROGRAM



# FBWC “Average” Participant

- Moderate to severe issues with day-to-day functioning:
  - Understanding/Communicating, Getting along with people, Participation in society
- Moderate to severe issues with mental health functioning:
  - Depression, anxiety, somatic symptoms, sleep, repetitive thoughts/behaviors, personality functioning
- Assessed as “Severe” for Posttraumatic Stress symptoms
- Substances used:
  - Sedatives/Tranquilizers, marijuana, painkillers, stimulants, hallucinogens, cocaine/crack, club drugs, methamphetamine

# Program Goals

- Short-term
  - Reduction of negative symptoms
- Intermediate
  - Obtain/maintain employment
  - Obtain/maintain educational and job skills
  - Reduce staff time per client
- Long-term
  - Increased agency service capacity
    - More clients
    - Reduced need for long-term housing due to early intervention in shelter



# Program Pilot

- Funding from Texas HHSC, George Foundation, and Simmons Foundation
- Initially 18 total clients (14 “completers”)
  - Adult clients (women and men)
  - Positive on HELPS Screening Tool for Traumatic Brain Injury
  - Began with long-term housing residents (major mental health diagnosis)
  - Expansion to shelter and nonresidential
- Agency counselors trained in neurofeedback with an eye toward board certification
- Currently 3 Neurofeedback “clinics”

# Program Structure

## Assessments include:

- HELPS Screening Tool for Traumatic Brain Injury
- WHODAS 2.0
- DSM-5 Cross-Cutting Symptom Measure
- DSM-5 Severity Measure for Depression
- DSM-5 Severity Measure for Generalized Anxiety Disorder
- DSM-5 Severity of Posttraumatic Stress Symptoms
- DSM-5 Level 2 Substance Use
- Videotaped Interviews
- Quantitative EEG normative database comparisons
- Provide neurofeedback according to treatment plan.

# WHAT IS NEUROFEEDBACK?

# Neurofeedback is...

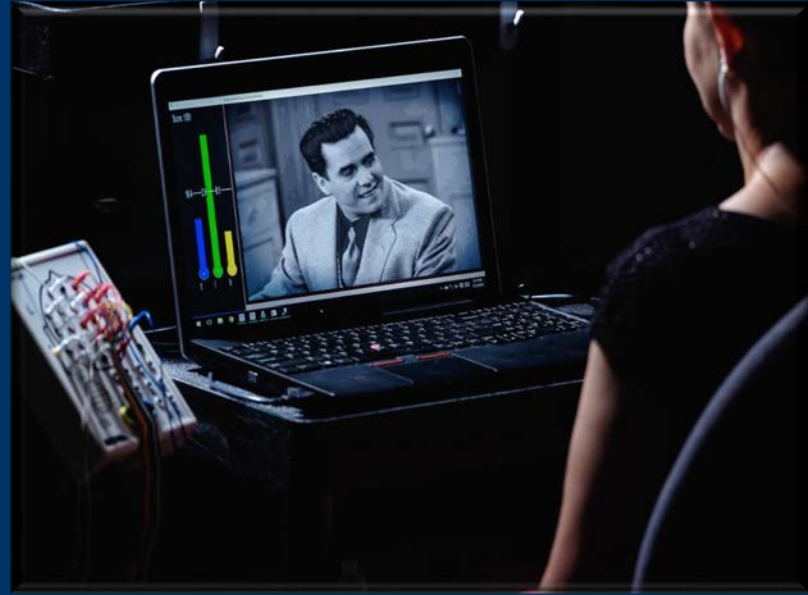
- Also known as EEG Biofeedback or Neurotherapy
- Biofeedback/Operant conditioning of brain wave patterns
- Information we don't normally think about or consciously control (treadmill)



# Neurofeedback is...

- Also known as EEG Biofeedback or Neurotherapy
- Biofeedback/Operant conditioning (use rewards) of brain wave patterns
- Information we don't normally think about or consciously control (treadmill)
- A tool for self-regulation (HRV – heart rate variability)
- Non-invasive, with a low likelihood of negative side effects
- Long lasting
- Michigan State University partnership





# The Neurofeedback Process

- Intake (about 2 hours)
  - Written assessments
  - Videotaped intake interview
  - Quantitative EEG (Brain Map)
- Results Meeting and First Session
  - Results and training plan discussion (10-20 system – electrode placement: 8 frontal lobe, 3 center strip, 4 temporal, 3 parietal, 2 occipital)
  - Begin the first session
- Neurofeedback Training Sessions
  - At least 2 sessions per week
  - Average is 35-45 sessions
- Exit (about 2 hours)
  - Same as Intake



# Neurofeedback Indications



Neurofeedback has been proven effective with:

- Attention disorders (example: ADHD)
- Epilepsy

Neurofeedback has promising research and/or strong clinical evidence with:

- Headaches
- Traumatic Brain Injury (TBI) Symptoms
- Insomnia
- Anxiety
- Depression
- Substance Abuse Relapse Prevention
- Chemotherapy “Brain Fog”
- Pain Disorders

# TBI and criminal justice

- A survivor with a TBI who enters the criminal justice system may face additional challenges.
- Survivor may appear to be disorganized, aggressive, temperamental, or confused. If her behaviors are misunderstood or misdiagnosed as indicating a mental health disability, which often happens, she may have difficulty obtaining custody or being credited as a victim or reliable witness.
- An increase in awareness of TBI among advocates and program staff will result in increased sensitivity, screening, referrals, accommodations, and ultimately, better outcomes, for women who are abused.

# Case Study #1

## Participant Demographics

- 51 yo female shelter resident
- Presenting complaints
  - Depression
  - Anxiety
  - Sleep
- History of head injury
  - Domestic Violence
  - Gunshot
- History of treatment
  - Medication
  - Counseling
- Medications
  - Lisineprol (hypertension)
  - Lexapro (depression)



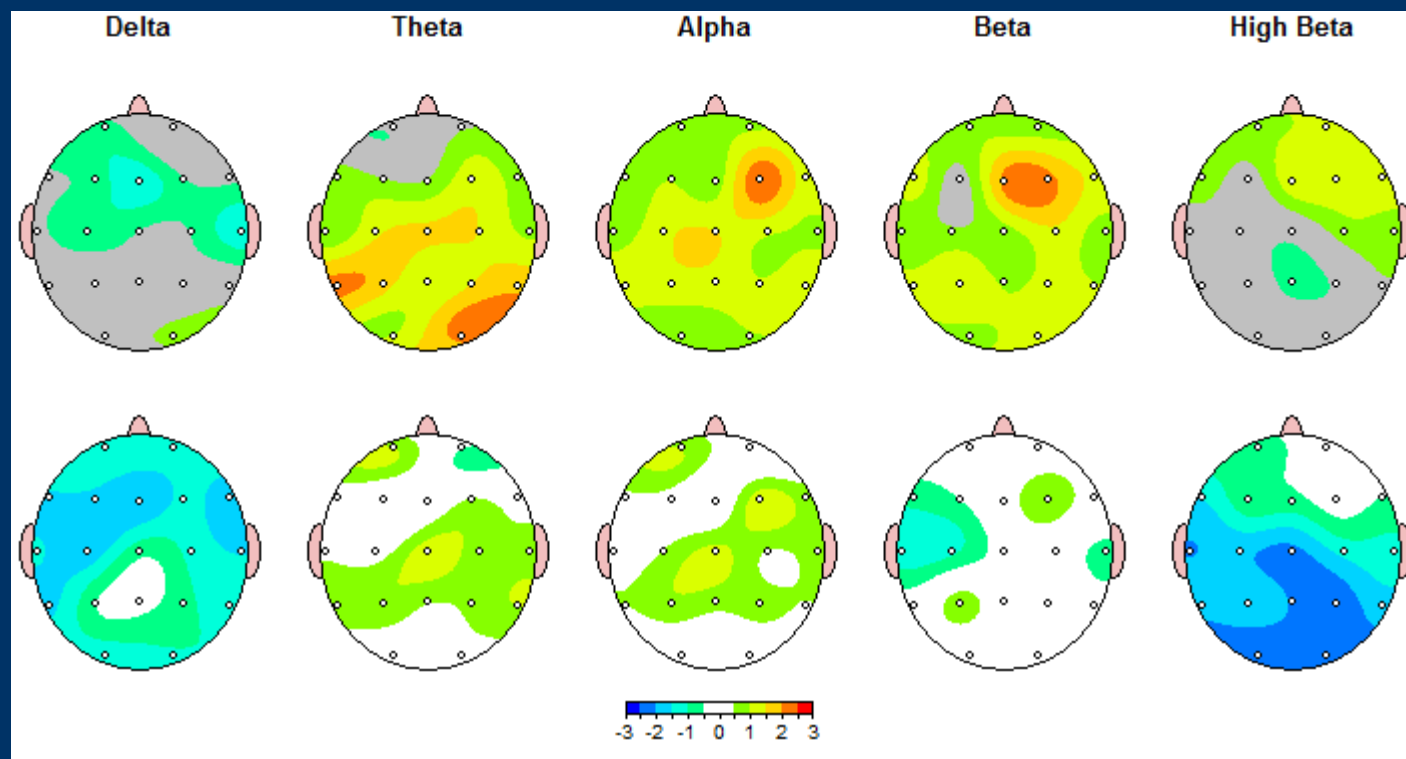
# Case Study #1

## Post-Assessments Score Changes - Summary

- Pre-Neurofeedback: 26% disability,  
Post-neurofeedback: 5% disability
- 86% decrease in Severity Measure for Depression
- 50% decrease in Cross-Cutting Symptom Measure
- 100% decrease in Severity of Posttraumatic Stress Symptoms

# Case Study #1

## Normative Database Comparison



## Overall Pre-Post Assessment Results for All “Completers”

Percent Change in Scores from Pre-Training to Post-Training	
	Average Change
W.H.O. Disability Assessment Schedule (WHODAS) 2.0	<b>24% reduction</b>
DSM-5 Cross Cutting Symptom Measure	<b>47% reduction</b>
DSM-5 Severity Measure for Depression	<b>61% reduction</b>
DSM-5 Severity Measure for Generalized Anxiety Disorder	<b>49% reduction</b>
DSM-5 Severity Measure for Posttraumatic Stress Symptoms	<b>51% reduction</b>

“Everything is OK in my world; before it went from one emergency to the next. OK is a great place to be.”

“I’m not crying uncontrollably anymore.”

“My abuser has been calling me begging to come back. I told him no.”

“Neurofeedback has made a world of difference.”

“I don’t feel as anxious and depressed and I’m communicating better.”

“It’s been 3 weeks since the last time I cut myself.”

“I used to curse like a sailor to anyone that irritated me about the littlest things, now I walk away and am a lot calmer; which is new to me.” (It) feels good to recognize that I’m reacting differently to things that used to piss me the hell off...”

# Program Considerations

- Funding, funding, funding
- Space and juggling multiple locations
- Staff awareness and education
- Client awareness and education
- Client compliance
  - Transient population
  - Motivation
  - Paranoia and trust
- Staff retention
- Other agency demands



# Tips for working with survivors with head injury/TBI

When a woman is experiencing difficulty with attention and concentration:

- Minimize distractions when having detailed conversations.
- Meet individually in quiet locations, with minimum bright lights, and keep meeting times limited.
- Incorporate short breaks.

When a woman is experiencing difficulty with memory:

- Write information down. Provide a notebook or calendar to help her remember important information such as police numbers, Order of Protection information, and court dates.
- Encourage the use of a journal or log.
- Discuss strategies for remembering important appointments and dates (sticky notes, reminder calls/texts, calendar on refrigerator, reminder notifications on phone calendar, etc.).
- Provide repetition of information.
- Develop checklists.

# Tips continued

When a woman is experiencing difficulty in executive functioning:

- Assist in prioritizing goals and break them down into smaller, tangible steps.
- Reduce distractions and allow time when completing tasks.
- Write out steps to a planning or problem-solving task.

When a woman is experiencing difficulty in processing information:

- Focus on one task at a time.
- Break down messages or conversations into smaller pieces and allow for repetition to assist her to understand and process information.
- Talk slowly and on point, repeat information if needed.
- Encourage her to take breaks if needed and to ask for information to be repeated or rephrased.
- Provide information in factual formats, avoiding abstract concepts.
- Double-check with her to ensure that she has understood information.

# Tips continued

## Additional suggestions:

- Provide reassurance, education, and structure to minimize anxiety.
- Help her fill out forms and make important phone calls.
- Assist her in communicating with others.
- Avoid open-ended questions by using a yes-no format.
- Identify supports, both social and medical, and consistently encourage as much self-determination as possible.
- Always ensure that she is a participant in the process of developing plans and in discussions.
- Offer information in writing or on tape.
- Provide respectful feedback to potential or obvious problem areas.
- Be supportive and continuously identify strengths.

# Intimate Partner Violence and Brain Trauma: A New Approach

Using Neurofeedback in a Domestic Violence Program



Contact: Joshua Brown, LCSW, BCN  
jbrown@fbwc.org  
281-344-5733



TEXAS  
Health and Human  
Services

# Questions?

---

# Announcements

---

- Post-webinar feedback survey:

<https://www.surveygizmo.com/s3/5311184/Webinar-Feedback-Survivors-and-Traumatic-Brain-Injury>



TEXAS  
Health and Human  
Services





TEXAS  
Health and Human  
Services

# Thank you

---

Cody Rothschild

Email: [Cody.Rothschild@hhsc.state.tx.us](mailto:Cody.Rothschild@hhsc.state.tx.us)

Office: 512-206-5048