CONNECTING BRAIN INJURY CLIENTS TO SERVICES IN RURAL ALASKA

BHA FORUM 2020

ADAM GROVE ND CBIS

WHERE ARE WE GOING?

A JOURNEY TOGETHER

- I am here to share information and learn from you
- I am not here to tell you how to do anything, you know best how to do that
- I am here to help you help your communities with the very important problem of traumatic brain injuries
  - Introduction to brain injury
  - How to identify clients with brain injury
  - How is brain injury treated and the important role of the BHA
  - Connecting clients to resources

THANK YOU

To the Dena’ina people who have cared for this place we now are in and who have suffered from the vast harms of colonization. I hope that through what we do together for the next 90 minutes we can offer a gift of wisdom and better health for all of us living here.

To The Alaska Mental Health Trust Authority for providing a grant to make the Alaska Brain Bus a reality and bringing me here today.

alaskabrainbus.com

Trust

Alaska Mental Health Trust Authority

INTRODUCTION TO BRAIN INJURY

THIS IS IMPORTANT

Understanding TBI is very important for BHAs because so few other providers do

- There are so many TBIs in our people
  - Alaska leads the nation in the number of TBIs and rural, predominantly native communities, have the most of these
- TBI's change a person in a way that makes life very difficult for them and you will see them every day in your office and in your communities
- TBIs make it much more likely a person will fail in life and it does not need to happen
- You are the most likely person to identify at TBI because of what you do
- You are also an important member of the treatment team and in some case the leader
- If you don't identify a TBI, the treatment you provide will not be as helpful as it could be

INTRODUCTION TO BRAIN INJURY

THE MANY WAYS TO HURT YOUR BRAIN

A brain injury is an insult or injury to the brain which effects how it works.

We talk about two general types

- Congenital brain injuries happen before or during birth and maybe put to 6-12 months. They include injuries such as fetal alcohol syndrome, perinatal illness or perinatal hypoxia, birth trauma etc.

- An acquired Brain Injury (ABI) occurs after 6-12 months.
  - Non-traumatic brain injuries include surgery, strokes, tumors, anoxia, hypoxia, toxins, degenerative diseases, near drowning, tumors, poisoning, drug over doses etc
  - A traumatic brain injury, or TBI may be caused by a: bump, blow, or jolt to the head, or a penetrating injury to the head

INTRODUCTION TO BRAIN INJURY

THE MANY WAYS TO HURT YOUR BRAIN

When a brain is injured, it is not just the brain which is impacted

It is very unusual to sustain a TBI without injuring the neck

- Neck injuries can result in many symptoms we find with TBI
- Most providers and even survivors have no idea that the neck matters
- It is important to look for these “cervicogenic” issues and get them fixed

INTRODUCTION TO BRAIN INJURY

THE MANY WAYS TO HURT YOUR BRAIN

There are many different terms used to denote the severity of the brain injury but these are problematic and often not helpful

Even a mild injury not resulting in loss of consciousness or a whiplash injury in a car accident can be more debilitating than one resulting in a coma

Concussion = mild TBI and 75% of all TBIs fall in this category

But knowing that a brain injury is “mild” does not tell us anything about the outcome or what that person needs to heal

INTRODUCTION TO BRAIN INJURY

PEDIATRIC VS ADULT

TBI in children is very different than in adults

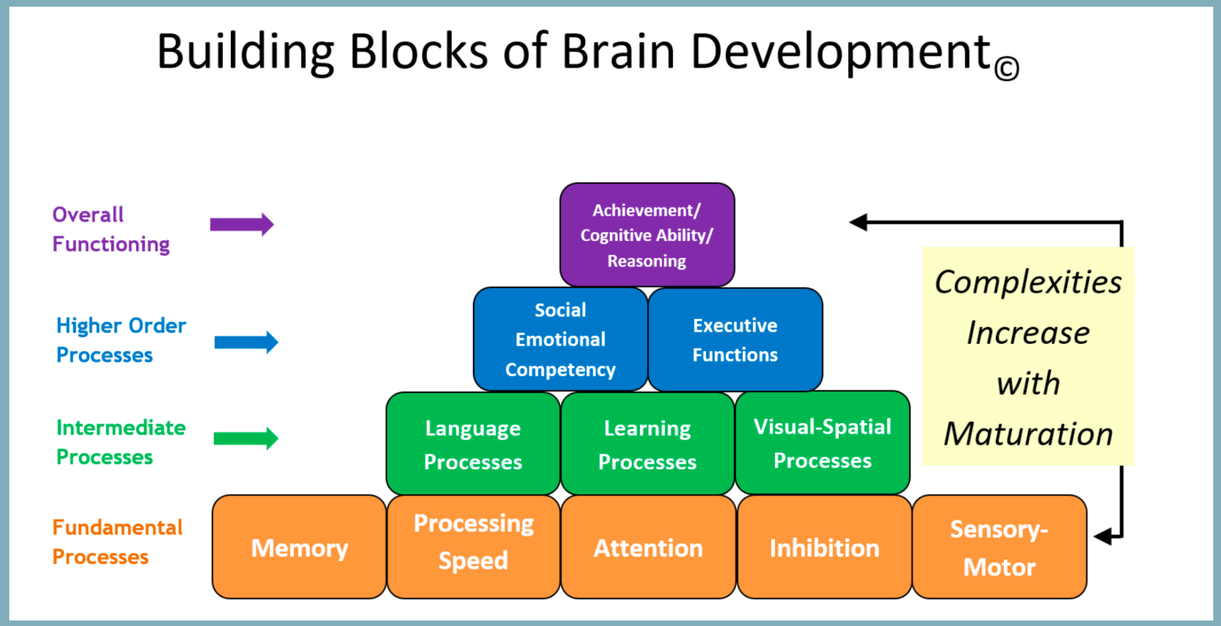
- Head wounds can lead to shock in young children because they have so little blood volume
- The skulls of young children are not so rigid and can flex but this can lead to internal bleeding
- The very young brain is more susceptible to injury from shaking
- Young kids's have big proportionally larger and heavier heads so they are more prone to injury
- The brain matter of young kids is more watery with less myelin so it is more vulnerable to damage from trauma
- Sinuses are not developed in young children so forces to the face are transmitted right to the brain
- Young kids have weaker necks and heavier heads so injury to the head AND the neck is more likely

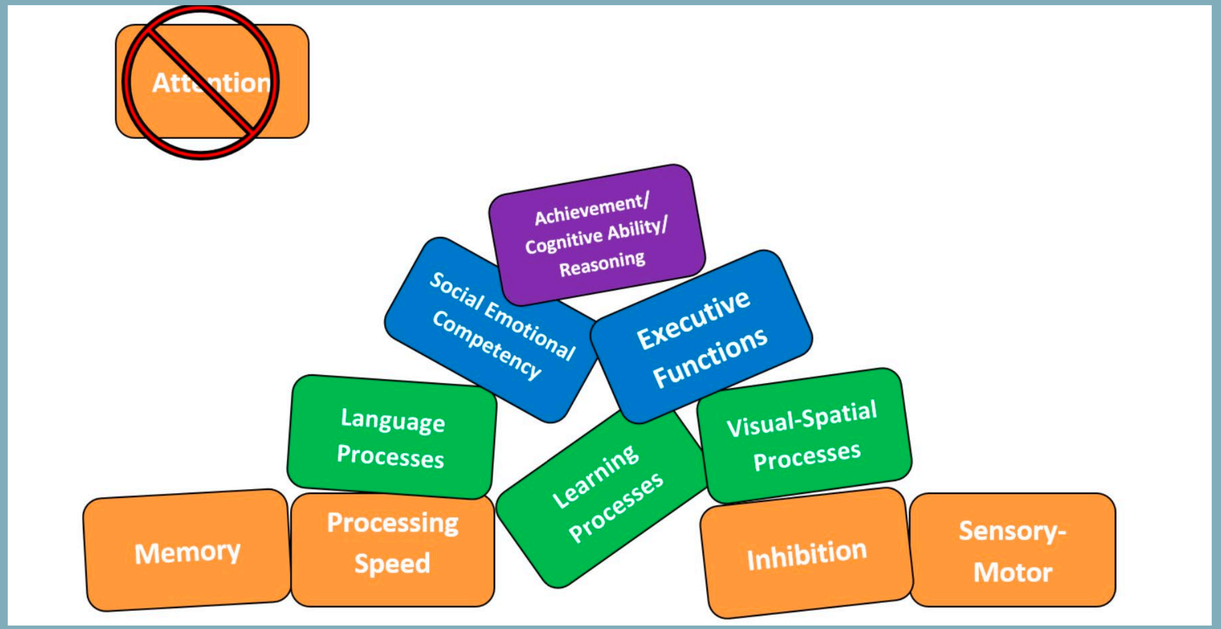
Children younger than 5 years of age with TBI have a greater mortality rate.

Many infants and young children suffer a high rate of abusive head injuries

INTRODUCTION TO BRAIN INJURY

PEDIATRIC VS ADULT





The Hierarchy of Neurocognitive Functioning © - created by Peter Thompson, Ph.D. 2013, adapted from the works by Miller 2007; Reitan and Wolfson 20

INTRODUCTION TO BRAIN INJURY

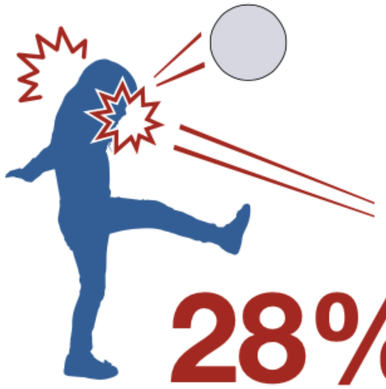
HOW DO TRAUMATIC BRAIN INJURIES HAPPEN?

The **leading causes** of TBI in the United States are[1]

Falls

About half
of brain injuries in children are caused by falls from objects like stairs and bicycles.

Unintentional blunt trauma



28%
of brain injuries in children are caused by being hit in the head with an object, like a baseball or soccer ball.

Motor vehicle crashes

Car accidents are the #1 cause of TBI-related death in children older than age 5.

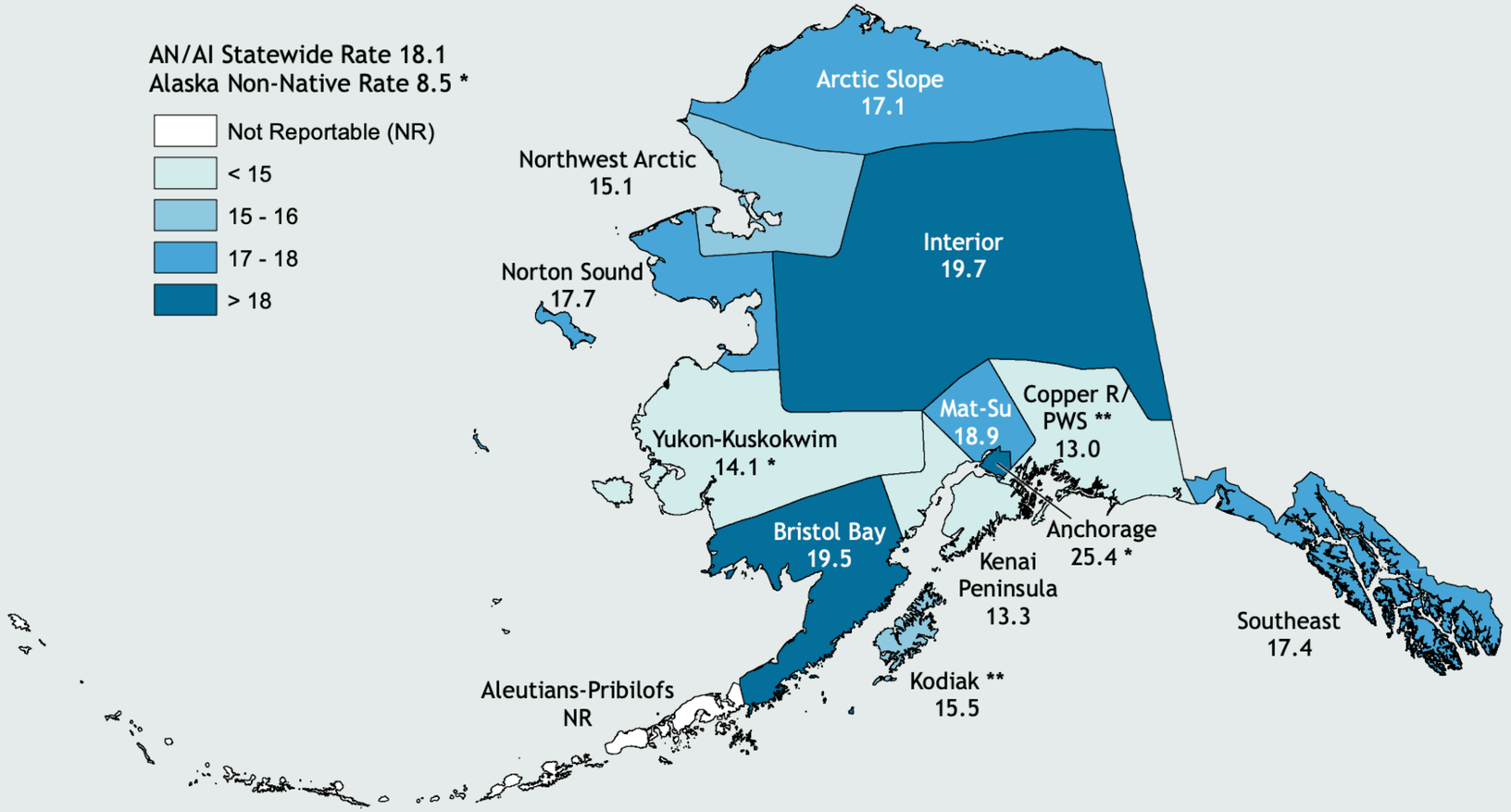
Homicide

Homicide is the #1 cause of TBI-related death in children age 4 and younger.

INTRODUCTION TO BRAIN INJURY

WHERE DO TRAUMATIC BRAIN INJURIES HAPPEN?

TBI Injury Hospitalization Rate by Region, AN/AI People, 2012-2016



Note: Hospitalization rates per 10,000 age-adjusted to 2000 US standard population.
** Statistically significant difference between the regional and AN/AI people statewide rate, p<0.05.*
*** Rates based on 10-19 cases are not statistically reliable and should be used with caution.*
NR: Rate is not reported for fewer than 10 cases.

INTRODUCTION TO BRAIN INJURY

WHERE DO TRAUMATIC BRAIN INJURIES HAPPEN?

Most TBIs in kids (and elders) occur at home

As kids get a bit older (4-8 years), more are injured in car crashes and bike accidents

In Alaska, AN/AI people of all ages had a substantially higher proportion of TBI caused by all-terrain vehicle (ATV) and snow machine incidents and this number goes up as kids get older

Children living in rural areas are more likely to get a TBI and to die as a result of this injury compared to children living in urban areas

INTRODUCTION TO BRAIN INJURY

WHAT HAPPENS TO PEOPLE WITH TBIS?

HOW TRAUMATIC BRAIN INJURY (TBI) AFFECTS DAILY LIFE

HEALTHY

- Frontal: Concentration, Problem Solving, Speech
- Parietal: Sense of Touch, Pain, Temperature
- Occipital: Healthy Vision
- Temporal: Memory, Organization
- Cerebellum: Balance & Coordination
- Brainstem: Breathing, Steady Heart Rate

HOPE For The WARRIORS®
2006-2016
10 YEARS OF HOPE

TBI

- Frontal: Lack of Focus, Irritability, Language Difficulty
- Parietal: Difficulty with Reading, Spatial Misperception
- Occipital: Blind Spots, Blurred Vision
- Temporal: Problems with Short- & Long-Term Memory
- Cerebellum: Difficulty Walking, Slurred Speech
- Brainstem: Changes in Breath, Difficulty Swallowing

Data © Mayfield Clinic

INTRODUCTION TO BRAIN INJURY

WHAT HAPPENS TO PEOPLE WITH TBIS?

Physical	Cognitive	Behavioral/Emotional
Headaches Blurred vision Noise/light sensitivity Nausea Balance issues Nausea Sleep changes Fatigue Hormone/Endocrine changes	Difficulty sustaining attention Difficulty concentrating Difficulty following through on tasks Difficulty following directions Mental fog Slower thinking Confusion Forgetfulness Loss of previous skills	Irritability Frustration Moodiness Sadness Anxiety Withdrawn Anger

INTRODUCTION TO BRAIN INJURY

Some changes after TBI require immediate medical attention:

- Significant drowsiness or inability to wake up
- Repeated vomiting
- A headache which gets increasingly worse or is “worse ever”
- Weakness, numbness or tingling in arms or legs
- Changes in vision
- Slurred speech
- Convulsions or seizures
- Increasing restlessness, confusion or agitation
- Unusual behavior

These can be difficult to identify in young children

INTRODUCTION TO BRAIN INJURY

WHAT HAPPENS TO PEOPLE WITH TBIS?

Many studies link TBIs, especially those in childhood, to later social failure

It makes sense that if your brain is not working, your behavior will change

- Rates of substance abuse/addiction is much higher among those surviving a TBI than in the general population
  - 21-37% of TBI survivors report use of illegal drugs compared to 15% of non-TBI survivors
  - Prior TBI is common among individuals in substance abuse treatment. Among those seeking drug treatment 38-69% report a prior TBI.

INTRODUCTION TO BRAIN INJURY

WHAT HAPPENS TO PEOPLE WITH TBIS?

- People with TBI are much more likely to end up in jail:
  - 25-87% of inmates report having experienced a head injury or TBI compared to 8.5% in the general population.
  - 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.
  - Among male prisoners, a history of TBI is strongly associated with perpetration of domestic and other kinds of violence.[16]
  - Children and teenagers who have been convicted of a crime are more likely to have had a pre-crime TBI[17,18] and/or some other kind of physical abuse.
  - TBI rates are estimated to be as high as 100% among incarcerated adults and juveniles who have received the death penalty

INTRODUCTION TO BRAIN INJURY

WHAT HAPPENS TO PEOPLE WITH TBIS?

- TBI greatly increases the risk for becoming and staying homeless.
  - A study of 3000 people who spent the last year or more with housing challenges found 50% reported TBIs related to severe childhood physical abuse and less frequently in car crashes, falls or sports.
  - Most had been placed in special education as children for behavioral or academic issues (NOT FOR TBI)
  - Very few finished high school and those who enlisted in the military often could not complete their initial tour due to cognitive and behavioral challenges.
  - A study in Boston found that 25% of the homeless men studied could not read or write due to TBIs sustained as children.

INTRODUCTION TO BRAIN INJURY

WHAT HAPPENS TO PEOPLE WITH TBIS?

- Dementia risk increases with each TBI you accumulate
  - A single injury in one's 20's increased risk of dementia at age 50 by 60%
  - 5 or more TBIs increased one's risk by 183%
  - Males with TBI were on average at a 30% increased risk compared to females at 19%
- What does this mean for our knowledge keepers and elders who had a TBI when they were a young person and it was never treated?

INTRODUCTION TO BRAIN INJURY

WHAT HAPPENS TO PEOPLE WITH TBIS?

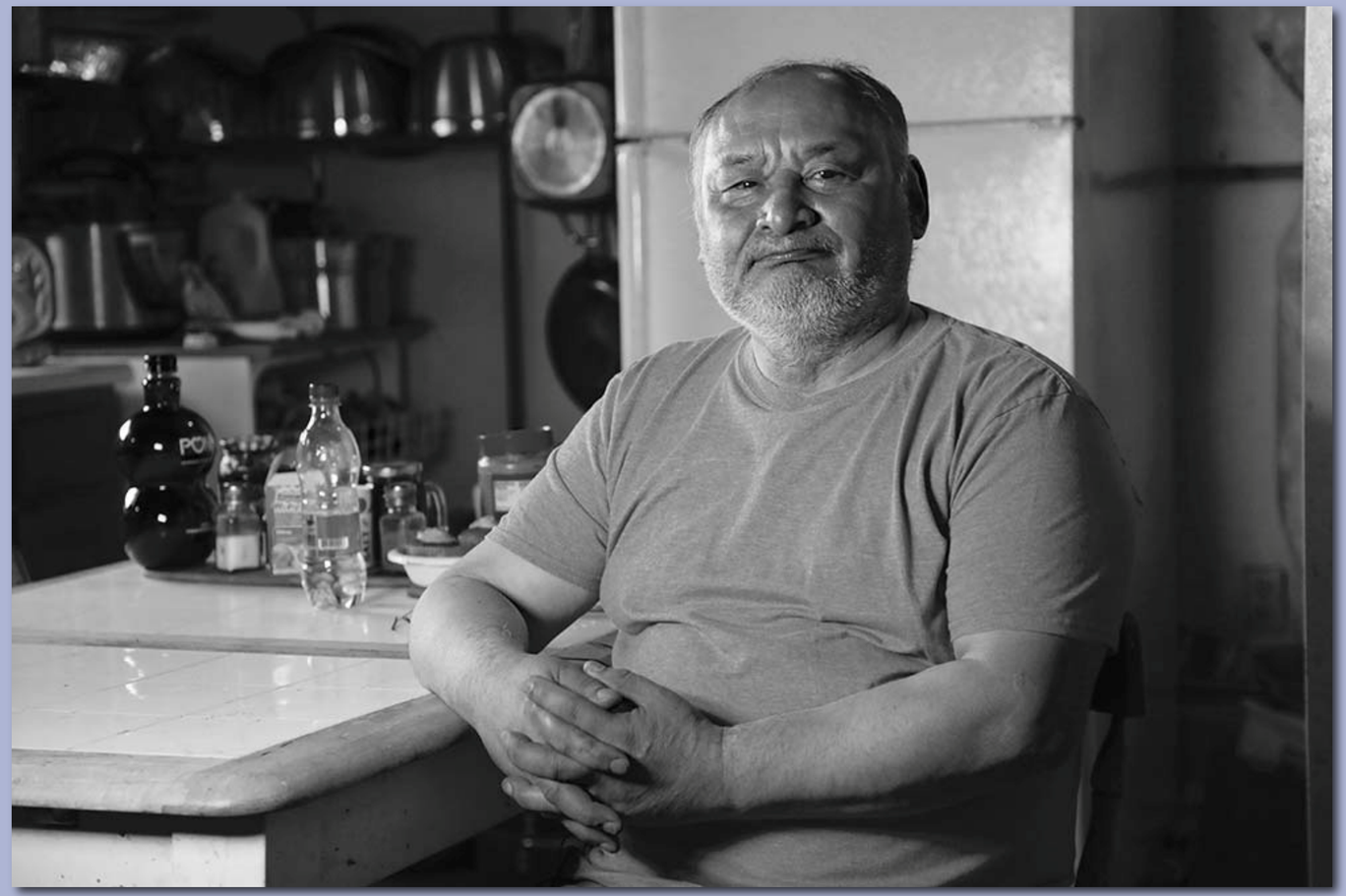
All of these things can be prevented

- Don’t hit your head!
- Get help if you do
- TBIs can be treated and treatment can change that person’s future

BUT to help people with TBI, we need to know who has one

HOW TO IDENTIFY CLIENTS WITH BI

DONEC QUIS NUNC



HOW TO IDENTIFY CLIENTS WITH BI

Usually severe injuries are identified for you. Milder ones are often not going to be so visible. look for clues

- Signs/symptoms such as scars, recent wounds, complaints of pain, headache, vision changes etc
- Sudden changes in behavior
- Certain injuries - face, neck, head injuries all point toward possible TBI
- There are things which might increase your index of suspicion
  - Unsafe homes - domestic violence, child abuse
  - Homelessness
  - Drug abuse in the house
  - Prior military service
  - Participation in certain sports or activities

HOW TO IDENTIFY CLIENTS WITH BI

DONEC QUIS NUNC

Identification of a TBI is actually quite difficult

- Especially when the damage is functional and not structural and most brain damage is functional
- Many victims may not know they have a brain injury - the CDC estimates that up to 75% of people with mild TBIs (Concussions) never seek care
- Symptoms may only show up weeks or years later (especially in children)
- A brain injury will look like many other things and are often mis-diagnosed
- Most doctors are not trained in identification or treating brain injury so many injuries are un-diagnosed

HOW TO IDENTIFY CLIENTS WITH BI

DONEC QUIS NUNC

Often people with TBI are mis-diagnosed so look beyond the diagnosis:

- When did the diagnosis appear in their record and was there an accident prior to that?
  - Symptoms can take a while to appear
- Was the change in behavior sudden or was it a return of prior behavior after it had cleared up?
- Brain Injury is commonly mis-diagnosed as a mental illness or another medical conditions
  - Depression, anxiety, bi-polar disorder, PTSD etc
  - Symptoms may only appear when the person is tired or stressed
- A person with a TBI may not be compliant which increases risk of mis-diagnosis

HOW TO IDENTIFY CLIENTS WITH BI

SCREENING FOR ADULT TBI

There are many Adult screening tools and these can be used on kids as young as middle school.

- Common screening tools include:
  - OSU TBI Identification Tool - comprehensive but more complicated than others
  - HELPS - much simpler but less information for the treating clinician
  - SCAT 5 - designed for athletes (13 years to adult) and must be administered by a healthcare professional
    - Requires some physical exam (balance, neck range of motion etc) and assesses cognition.
    - Should be compared with a baseline done before the injury.

HOW TO IDENTIFY CLIENTS WITH BI

SCREENING FOR ADULT TBI

OSU TBI-ID

- Short Version - takes 5 minutes and focuses more on injuries with loss of consciousness and does not ask about symptoms after the injury

- Clinical Version - takes longer but is more comprehensive and is recommended in the clinical setting

HOW TO IDENTIFY CLIENTS WITH BI

THE OSU-TBI-ID

Use these questions to help a person recall injuries that may have involved an impact to the head or neck.

T

TRAUMA: An injury that includes a blow to the head, the head having impact with another object (e.g., the ground, a windshield), or substantial shaking without impact.

	YES	NO
Have you ever been knocked out following an accident, an assault, or any other injury?		
Have you ever been injured … in a car or bike accident?		
… from being hit by something?		
… in a fight?		
… playing sports?		
… by a family member?		
… while serving in the military?		
… being near an explosion?		
Have you ever been treated in an emergency room, or hospitalized following an injury?		
Were you ever injured and should have received medical attention but didn't?		

HOW TO IDENTIFY CLIENTS WITH BI

THE OSU-TBI-ID

For each injury, determine if the person was hit in the head, near an explosion, or if the head could have been shaken violently. If so, was the person dazed or confused, have a period of memory lapse, or actually knocked out or unconscious?

B

BEHAVIORAL EFFECT IMMEDIATELY: An altered state of consciousness evident in confusion, impaired memory for events around the injury, or loss of consciousness.

Incident	Age at time	*Were you dazed or confused (D/C), have a lapse in memory (Mem), or actually knocked out (KO)?*	If knocked out, how long?	*Were you treated in the ER, hospitalized, or admitted to a rehabilitation facility?*
		CIRCLE ONE		CIRCLE ONE
		D/C Mem KO		ER Hosp Rehab
		D/C Mem KO		ER Hosp Rehab
		D/C Mem KO		ER Hosp Rehab
		D/C Mem KO		ER Hosp Rehab
		D/C Mem KO		ER Hosp Rehab

HOW TO IDENTIFY CLIENTS WITH BI

THE OSU-TBI-ID

I

IMPACT ON EVERYDAY FUNCTION: Following the injury, new onset or exacerbation of symptoms (e.g., headaches, dizziness, fatigue, depression) or function (e.g., attention, memory, employment, relationships).

After any of your injuries did any of these persist *for more than several weeks?*	YES	NO
Headaches		
Dizziness or balance problems		
Tiredness or fatigue		
Problems paying attention or concentrating		
Being sensitive to bright lights or loud noises		
In the months after any of your injuries did you:	YES	NO
Have new problems at work or school, or lose a job?		
Notice changes in your relationships with your family *(wife, husband, parents, friends)*?		
Have trouble remembering things or solving problems?		
Feel depressed or anxious more than before the injury?		
Have trouble controlling your temper?		

HOW TO IDENTIFY CLIENTS WITH BI

HELPS

H Have you ever **H**it your **H**ead or been **H**it on the **H**ead? ☐ Yes ☐ No

Note: Prompt client to think about all incidents that may have occurred at any age, even those that did not seem serious: vehicle accidents, falls, assault, abuse, sports, etc. Screen for domestic violence and child abuse, and also for service related injuries. A TBI can also occur from violent shaking of the head, such as being shaken as a baby or child.

E Were you ever seen in the **E**mergency room, hospital, or by a doctor because of an injury to your head? ☐ Yes ☐ No

Note: Many people are seen for treatment. However, there are those who cannot afford treatment, or who do not think they require medical attention.

L Did you ever **L**ose consciousness or experience a period of being dazed and confused because of an injury to your head? ☐ Yes ☐ No

Note: People with TBI may not lose consciousness but experience an "alteration of consciousness." This may include feeling dazed, confused, or disoriented at the time of the injury, or being unable to remember the events surrounding the injury.

P Do you experience any of these **P**roblems in your daily life since you hit your head? ☐ Yes ☐ No

Note: Ask your client if s/he experiences any of the following problems, and ask when the problem presented. You are looking for a combination of two or more problems that were not present prior to the injury.

- ☐ headaches
- ☐ dizziness
- ☐ anxiety
- ☐ depression
- ☐ difficulty concentrating
- ☐ difficulty remembering
- ☐ difficulty reading, writing, calculating
- ☐ poor problem solving
- ☐ difficulty performing your job/school work
- ☐ change in relationships with others
- ☐ poor judgment (being fired from job, arrests, fights)

S Any significant **S**icknesses? ☐ Yes ☐ No

Note: Traumatic brain injury implies a physical blow to the head, but acquired brain injury may also be caused by medical conditions, such as: brain tumor, meningitis, West Nile virus, stroke, seizures. Also screen for instances of oxygen deprivation such as following a heart attack, carbon monoxide poisoning, near drowning, or near suffocation.

HOW TO IDENTIFY CLIENTS WITH BI

SCREENING FOR PEDIATRIC TBI

This can be a sensitive issue if the injury is due to domestic violence, neglect or something like shaken baby syndrome.

We often must rely on parents, siblings and caregivers for this information

Repeat assessment are needed as kids get hurt all the time

- Annually like hearing and vision in Head Start, Pre-school, School (K-12)
- Whenever there is a reported injury
- Whenever the child begins to act or perform differently (behaviorally or cognitively)

HOW TO IDENTIFY CLIENTS WITH BI

SCREENING FOR PEDIATRIC TBI

For the youth athlete ages 5-12 you can use the Child SCAT

- Brain Check Survey (BCS) - K-12 filled out by parent, 8 pages. Scored by clinician
- SAFE CHild 0-3 and SAFE CHIld 3-5 - one page and completed by parents
- Concussion Recognition Tool 5 - for ages 5 to adult. For non-healthcare providers such as coaches and parents. Designed for student athletes.

HOW TO IDENTIFY CLIENTS WITH BI

SAFE CHILD 3-5

Sickness	Has your child ever had a seizure, high fever (greater than 104 degrees), infection of the brain or spinal cord (e.g., meningitis or encephalitis), or other serious illness affecting the brain?	□ Yes □ No If yes, how many times? _____
Accidents	Has your child ever: been in a car accident? □ Yes □ No experienced a near drowning or suffocation? □ Yes □ No stopped breathing for one minute or longer? □ Yes □ No been exposed to a toxin (e.g., lead, carbon monoxide)? □ Yes □ No or sustained a blow to the head? □ Yes □ No	□ Yes □ No If yes, how many times? _____
Falls	Has your child ever had a substantial fall resulting in a blow to the head (e.g., down stairs, from playground equipment, or when riding a tricycle/bicycle/scooter)?	□ Yes □ No If yes, how many times? _____
Emergency Room	Has your child ever needed emergency medical attention because of a loss of consciousness or blow to the head?	□ Yes □ No If yes, how many times? _____
CHild Behaviors	If you answered **YES** to any of the above questions, have you noticed any of the following behaviors in your child since the incident? Check all that apply: □ Decreased strength □ Frequent headaches or nausea □ Frequent rubbing of eyes □ Sensitivity to light or sound □ Changes in activity level or tiring easily □ Loss of previously-mastered skills such as toileting or handling small objects □ Other _____ □ Coordination problems, clumsiness, loss of balance, or dizziness □ Extreme irritability or crankiness □ Decreased language/communication □ Changes in eating or sleeping habits □ Changes in play behaviors □ Change in school performance	

HOW TO IDENTIFY CLIENTS WITH BI

CRT-5

CONCUSSION RECOGNITION TOOL 5 ©

To help identify concussion in children, adolescents and adults

Supported by

RECOGNISE & REMOVE

Head impacts can be associated with serious and potentially fatal brain injuries. The Concussion Recognition Tool 5 (CRT5) is to be used for the identification of suspected concussion. It is not designed to diagnose concussion.

STEP 1: RED FLAGS — CALL AN AMBULANCE

If there is concern after an injury including whether ANY of the following signs are observed or complaints are reported then the player should be safely and immediately removed from play/game/activity. If no licensed healthcare professional is available, call an ambulance for urgent medical assessment:

- **Neck pain or tenderness**
- **Double vision**
- **Weakness or tingling/ burning in arms or legs**
- **Severe or increasing headache**
- **Seizure or convulsion**
- **Loss of consciousness**
- **Deteriorating conscious state**
- **Vomiting**
- **Increasingly restless, agitated or combative**

Remember:

- In all cases, the basic principles of first aid (danger, response, airway, breathing, circulation) should be followed.
- Assessment for a spinal cord injury is critical.
- Do not attempt to move the player (other than required for airway support) unless trained to so do.
- Do not remove a helmet or any other equipment unless trained to do so safely.

If there are no Red Flags, identification of possible concussion should proceed to the following steps:

STEP 2: OBSERVABLE SIGNS

Visual clues that suggest possible concussion include:

- Lying motionless on the playing surface
- Slow to get up after a direct or indirect hit to the head
- Disorientation or confusion, or an inability to respond appropriately to questions
- Blank or vacant look
- Balance, gait difficulties, motor incoordination, stumbling, slow laboured movements
- Facial injury after head trauma

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STEP 3: SYMPTOMS

- Headache
- "Pressure in head"
- Balance problems
- Nausea or vomiting
- Drowsiness
- Dizziness
- Blurred vision
- Sensitivity to light
- Sensitivity to noise
- Fatigue or low energy
- "Don't feel right"
- More emotional
- More Irritable
- Sadness
- Nervous or anxious
- Neck Pain
- Difficulty concentrating
- Difficulty remembering
- Feeling slowed down
- Feeling like "in a fog"

STEP 4: MEMORY ASSESSMENT

(IN ATHLETES OLDER THAN 12 YEARS)

Failure to answer any of these questions (modified appropriately for each sport) correctly may suggest a concussion:

- "What venue are we at today?"
- "Which half is it now?"
- "Who scored last in this game?"
- "What team did you play last week/game?"
- "Did your team win the last game?"

Athletes with suspected concussion should:

- Not be left alone initially (at least for the first 1-2 hours).
- Not drink alcohol.
- Not use recreational/ prescription drugs.
- Not be sent home by themselves. They need to be with a responsible adult.
- Not drive a motor vehicle until cleared to do so by a healthcare professional.

The CRT5 may be freely copied in its current form for distribution to individuals, teams, groups and organisations. Any revision and any reproduction in a digital form requires approval by the Concussion in Sport Group. It should not be altered in any way, rebranded or sold for commercial gain.

ANY ATHLETE WITH A SUSPECTED CONCUSSION SHOULD BE IMMEDIATELY REMOVED FROM PRACTICE OR PLAY AND SHOULD NOT RETURN TO ACTIVITY UNTIL ASSESSED MEDICALLY, EVEN IF THE SYMPTOMS RESOLVE

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HOW TO IDENTIFY CLIENTS WITH BI

WHAT ABOUT THOSE WHO DO NOT GET BETTER?

- Within days to weeks 40-50% of those with mild TBI will experience disabling conditions known collectively as post concussive syndrome/ Persistent post-concussive symptoms.
- Symptoms include headache, dizziness, vertigo, memory problems, trouble concentrating, sleeping problems, restlessness, irritability, apathy, depression, anxiety
- Some are left with long term cognitive, expressive, emotional/behavior disabilities
- This can look like depression, chronic fatigue, chronic pain, cervical injury, vestibular dysfunction, ocular or visual dysfunction, somatization etc
- This should be considered when you are working with clients with these symptoms and there are some tools to help with this.

HOW TO IDENTIFY CLIENTS WITH BI

WHAT ABOUT THOSE WHO DO NOT GET BETTER?

Some people are more likely to get PCS

- Older people and women/girls
- More serious injuries or multiple injuries close together
- Longer lasting symptoms after injury
- Visual problems right after injury
- Poor neck strength at injury
- Anxiety, depression, mood disorders
- Past seizure disorder, migraine headaches or past ADD, ADHD, learning disabilities

HOW TO IDENTIFY CLIENTS WITH BI

WHAT ABOUT THOSE WHO DO NOT GET BETTER?

Tools to assess PCS

- Rivermead Post-Concussion Symptom Questionnaire -
- Post-Concussion Symptom Checklist

These are brief, one-page, self reports and they can be repeated over time to track recovery or how well a treatment is working

HOW TO IDENTIFY CLIENTS WITH BI

DON'T FORGET COVID

Ask about COVID infection(s) because COVID is causing brain injury

- When
- Vaccination status at the time
- Course of the illness
- Are they fully recovered?

COVID can cause Brain Injury through a variety of mechanisms - infection, inflammation, loss of blood flow etc

Long-COVID looks a lot like Post Concussion Syndrome

A study of 1.2 million people with COVID just published in The Lancet:

- Increased risk of psychiatric disorders after infection which took 417-457 days to return to baseline
- Brain fog, dementia, psychotic disorders and epilepsy were still above baseline at the 2 year point.

HOW IS BRAIN INJURY TREATED?

DONEC QUIS NUNC

HOW IS BRAIN INJURY TREATED?

DONEC QUIS NUNC

- Fortunately none of us wil be doing neurosurgery for people with brain injury
- We will all be working with people after their TBI though
- You may not be treating their TBI but you play an important role in getting them that treatment and providing accommodations while they recover
- Accommodation is NOT the same as treatment and it should not be substituted for it

HOW IS BRAIN INJURY TREATED?

DONEC QUIS NUNC

- The most important thing is to prevent TBI in the first place - there is no cure for brain injury
- This is the most effective an devidence-based interventions for TBI to date but is not easy
- Prevention messaging is very important and needs to be individualized based on the community and audience

AND we need you because:

- Messaging in marginalized groups has not been very effective
- Cultural norms and languages must be taken into account

STOP HITTING KIDS IN THE HEAD

HOW IS BRAIN INJURY TREATED?

PREVENTION

- Prevention ideas
  - Helmets - they are not perfect, you can still get a TBI with a helmet but they help a lot
    - Wear them always and properly fitted when on bicycles,motorcycles, 4 wheelers and snow machines and when at work in construction and other work sites
  - Fall prevention
    - Railings, clear pathways, remove obstacles, increase lighting, mark stair edges with reflective tape
    - Wear ice grippers (put on at firs snow and take off after breakup)
    - Monitor children when playing
    - Get vision checks especially in the elderly
    - Be cautious with medications which can make you dizzy
- Avoid contact sports or modify the rules to prevent injury
- Use personal flotation devices all the time, every time you are on the water or near the water
- Work on physical strength and balance

HOW IS BRAIN INJURY TREATED?

DONEC QUIS NUNC

Treatment depends on the injury

- The majority of the people you see will not be freshly out of treatment or have had any treatment at all
- I see people 10-15 years after their injuries and they can still be helped
- TBI symptoms can vary from day to day and can be worsened by fatigue, stress, drugs/alcohol, noise, light etc
- Don’t forget about the neck!

HOW IS BRAIN INJURY TREATED?

IMPORTANT CONCEPTS IN TREATMENT

Every brain injury is unique

All brains can heal and they can heal forever but recovery can be very uneven

All brain injury is a chronic illnes -It will be with you for your entire life but it can change over time for better and worse

TBIs can create disability but this disability can be reversed in many cases

Injuries can manifest years later as the brain ages or is stressed

Kids recover faster but as they age, problems start to show up

Early and intense treatment is best

HOW IS BRAIN INJURY TREATED?

IMPORTANT CONCEPTS IN TREATMENT

Women suffer more mild TBI

Most damage regardless of area impacted is in the frontal/ temporal lobes

If there are a lot of other medical concerns/emergencies, brain injury can be ignored or lost in the shuffle

Due to better prevention, fewer die after a TBI but we have a lot more impaired survivors

TBI surveyors can be discharged from the hospital without a proper diagnosis so it iso important to make sure they are not left hanging

HOW IS BRAIN INJURY TREATED?

IMPORTANT CONCEPTS IN TREATMENT

Key aspects of post-acute treatment

- Stabilize – Place to live, support, money
- Slow neuronal death – stop working if needed, no more screens, reduce stress and anxiety
- Repair neuronal networks – sleep (lots!), eat (well! Ketogenic maybe), lots of therapy
- Return to work and play – slowly and carefully to ensure success
- Avoid more TBIs – prevention and risk reduction
- Repeat therapy, if needed, later in life

HOW IS BRAIN INJURY TREATED?

IMPORTANT CONCEPTS IN TREATMENT

Many Alaskans leave their communities for treatment

TBI survivors can be discharged from the hospital without a proper diagnosis so it is important to make sure they are not left hanging

Others are diagnosed but discharged and returned home with little or no follow up

The best treatment is based in the survivor's community and is person centered - they are in charge of their recovery.

Neurologists seem like the expert to refer to but they are often not trained in brain injury and are rarely a good choice. A Speech Therapist is a better choice actually.

HOW IS BRAIN INJURY TREATED?

DONEC QUIS NUNC

HOW IS BRAIN INJURY TREATED?

Treatment options are many but in a village, it may seem there are none

- BUT many treatments are not difficult to provide, are not expensive and can be done by non-provider medical people
- Many treatments can be established by a provider with a brief visit or even telehealth and then carried out locally

HOW IS BRAIN INJURY TREATED?

DONEC QUIS NUNC

Other treatment options

- Return to school or work plans - School Special Education I(EP or 504 plans) vocational rehabilitation (DVR or TVR)
- Sleep studies and management (many medications for sleep are bad for the injured brain)
- Dietary intervention
- Addiction treatment
- Mental Health Court if legal issues are involved
- Case management

HOW IS BRAIN INJURY TREATED?

DONEC QUIS NUNC

Exercise can be very important but confusing

- Studies now show getting the person moving as soon as possible after injury speeds healing
- Exercise should be something they like to do and perhaps did before (walking is perfect)
- Make sure they are safe doing it - indoors on a treadmill in the winter or a boardwalk in the summer
- Exercise to the point of feeling symptoms coming on then measure heart rate and then limit exercise so heart rate is only 90% of that for several days/weeks then gradually increase
- Do not have them push or try so hard that they get symptoms - pushing hard does not heal a brain

HOW IS BRAIN INJURY TREATED?

- Treatments which can be provided via Telehealth
  - Cognitive rehabilitation
  - Speech therapy
  - Some physical therapy and occupational therapy
  - Psychiatry and psychology/counseling
  - Consults with a TBI specialist from the Sheppard Center in Atlanta GA
  - Nutritionist consults
  - Peer lead support groups
  - Case Management
  - Music therapy

HOW IS BRAIN INJURY TREATED?

DONEC QUIS NUNC

Treatments which can be done locally

- Screenings of people at risk to get baseline data and education about prevention
  - Screen all school children every spring
  - Teach about the brain in school
  - Check in with elders about safety and get them things to help prevent falls
- Execution of PT, OT, Speech and Vision therapy plans
- Drumming and Music therapy - learning to play an instrument is excellent neurotherapy

HOW IS BRAIN INJURY TREATED?

DONEC QUIS NUNC

Treatments which can be done locally

- Traditional Dance - coordinated movement is critical for brain rehabilitation
- Talking Circles/Support groups provide understanding and stimulation
- Bingo and card games can provide social interaction and cognitive skill building
- Crafts such as carving, sewing or knitting provide community and excellent occupational therapy-style treatments
- Walking groups can provide social interaction and exercise which is very important
- Traditional medicine, healing touch, herbs and spirituality are very important to healing

HOW IS BRAIN INJURY TREATED?

DONEC QUIS NUNC

Accommodation is often mistaken for treatment

Accommodation teaches someone how to live with the disability

Treatment focuses on removing the disability

Usually some accommodation is necessary but treatment should always be the goal

HOW IS BRAIN INJURY TREATED?

What can you do to support a person getting treatment?

- Be aware of these common struggles after a brain injury
  - Attention and ability to focus
  - Processing speed and slowing of thinking
  - Memory weakness and loss of memories
  - Executive functioning problems impacting decision making and behaviors
  - Overly sensitive to light, sound, movement
  - Head aches and fatigue

Educate others about these issues - survivor’s family, community, your colleagues

HOW IS BRAIN INJURY TREATED?

DONEC QUIS NUNC

Modify the environment to make it better for the injured person

- Change the classroom/workspace/home/hospital
  - Move the person to reduce distraction
  - Turn down the light and the noise
  - Eliminate or reduce screen time (phones and computers)
  - Remove stressors if you can - get some to come help shovel snow or feed the dogs

HOW IS BRAIN INJURY TREATED?

DONEC QUIS NUNC

- Change the pace
  - Encourage frequent breaks and be OK with cancelling if they are not feeling well
  - Slow the pace of instruction/therapy/conversation
  - Repeat yourself
  - Write everything down for them – maybe twice!
  - Provide advance warning of upcoming events or changes in routine
  - Use memory systems - organizers, calendars

HOW IS BRAIN INJURY TREATED?

Treat them with respect even though they may treat you badly - they are injured

Always speak to them and not as if they are not in the room

Be positive always and avoid the stigma of being brain injured

Be patient – brain injury is a chronic disease and it can bet better and worse

Be kind and forgiving but keep your boundaries

Be consistent and transparent

Laugh – a lot!

Keep pushing to get them the help they need to recover as fully as they want

HOW IS BRAIN INJURY TREATED?

The Alaska Brain Bus project is now offering Brain Injury Fundamentals training

This 12 hour course provides training on many aspects of brain injury to include

- Cognition
- Guidelines for interacting and building rapport
- Brain injury and behavior
- Medical complications
- Safe medication management
- Families coping with brain injury

Contact us at akbraininjury@gmail.com for more information

HOW IS BRAIN INJURY TREATED?

DONEC QUIS NUNC

Opportunities to learn more from the Concussion Legacy Foundation (https://concussionfoundation.org/Alaska)

Concussion, PCS, and CTE with Katelynn Cataldo

Nov. 17 | 12pm AK

Dec. 15 | 4pm AK

Concussion and PCS with Dr. Robert Cantu

Nov. 15 | 12pm AK

Dec. 13 | 4pm AK

Chronic Traumatic Encephalopathy with Dr. Robert Cantu

Nov. 10 | 12pm AK

Nov. 16 | 12pm AK

Dec. 14 | 4pm AK

CONNECTING CLIENTS TO RESOURCES

DONEC QUIS NUNC

CONNECTING CLIENTS TO RESOURCES

DONEC QUIS NUNC

Reach out to your region’s Traumatic and Acquired Brain Injury Agency

- Access Alaska - Anchorage (907-248-4777), Mat-Su (907-357-2588), & Fairbanks (907-479-7940) info@accessalaska.org • AccessAlaska.org
- Daybreak -Anchorage & the Mat-Su Valley: 907-746-6019 contact@daybreakmhsc.com • Daybreakmhsc.com
- Independent Living Center (ILC) - Gulf Coast Region: 907-235-7911 • PeninsulaILC.org
- Maniilaq Association - Northwest: 907-442-7887 • Maniilaq.org
- Southeast Alaska Independent Living (SAIL)* Southeast: 800-478-7245 - info@sailinc.org • SAILinc.org

CONNECTING CLIENTS TO RESOURCES

DONEC QUIS NUNC

Reach out to your region’s Traumatic and Acquired Brain Injury Agencies

- Aging Resource and Disability Centers (ADRC) - 855-565-2017
- Local offices of Department of Vocational Rehabilitation or Tribal Vocational Rehabilitation
- Local agencies such the Independent Living Centers, SAIL Arctic Access, Access Alaska

CONNECTING CLIENTS TO RESOURCES

DONEC QUIS NUNC

The State provides free Case Management and Grants ($2,500).

- You need a Verification of Diagnosis (which you can fill out for your client)
- AND an application form
- You can find these at https://health.alaska.gov/dsds/Pages/tabi/default.aspx

The Alaska Mental Health Trust Authority also provides behavioral health mini-grants to individuals with TBI: https://alaskamentalhealthtrust.org/alaska-mental-health-trust-authority/grants/mini-grants/behavioral-health/

South Central Foundation is working hard on providing more services for TBI - more to come on that

CONNECTING CLIENTS TO RESOURCES

DONEC QUIS NUNC

The Concussion Legacy Foundation has a helpline (email) which does not provide emergency or 24 hour coverage but can help - https://concussionfoundation.org/helpline

Ask TBI survivors in your community what worked for them.

Think outside the box. You know more what is needed and how to do it than someone from Anchorge or Seattle

Be an advocate and push for change

Ask for help and share your ideas.

CONNECTING CLIENTS TO RESOURCES

Feel free to explore resources and contact us at AlaskaBrainBus.com or akbraininjury@gmail.com

Our mission is to connect and empower Alaska communities to support brain injury recovery, education and prevention.

We are devoted to creating a future for every community where brain injury prevention is an everyday mindset, where resources are readily available and brain injury screening and treatment is normalized and integrated into all levels of medical and mental health care.

Please share your thoughts with us as we are all in this together.

CONNECTING CLIENTS TO RESOURCES

CONCUSSION RECOGNITION TOOL 5 ©

To help identify concussion in children, adolescents and adults

Supported by

RECOGNISE & REMOVE

Head impacts can be associated with serious and potentially fatal brain injuries. The Concussion Recognition Tool 5 (CRT5) is to be used for the identification of suspected concussion. It is not designed to diagnose concussion.

STEP 1: RED FLAGS — CALL AN AMBULANCE

If there is concern after an injury including whether ANY of the following signs are observed or complaints are reported then the player should be safely and immediately removed from play/game/activity. If no licensed healthcare professional is available, call an ambulance for urgent medical assessment:

- **Neck pain or tenderness**
- **Double vision**
- **Weakness or tingling/ burning in arms or legs**
- **Severe or increasing headache**
- **Seizure or convulsion**
- **Loss of consciousness**
- **Deteriorating conscious state**
- **Vomiting**
- **Increasingly restless, agitated or combative**

Remember:

- In all cases, the basic principles of first aid (danger, response, airway, breathing, circulation) should be followed.
- Assessment for a spinal cord injury is critical.
- Do not attempt to move the player (other than required for airway support) unless trained to so do.
- Do not remove a helmet or any other equipment unless trained to do so safely.

If there are no Red Flags, identification of possible concussion should proceed to the following steps:

STEP 2: OBSERVABLE SIGNS

Visual clues that suggest possible concussion include:

- Lying motionless on the playing surface
- Slow to get up after a direct or indirect hit to the head
- Disorientation or confusion, or an inability to respond appropriately to questions
- Blank or vacant look
- Balance, gait difficulties, motor incoordination, stumbling, slow laboured movements
- Facial injury after head trauma

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STEP 3: SYMPTOMS

- Headache
- "Pressure in head"
- Balance problems
- Nausea or vomiting
- Drowsiness
- Dizziness
- Blurred vision
- Sensitivity to light
- Sensitivity to noise
- Fatigue or low energy
- "Don't feel right"
- More emotional
- More Irritable
- Sadness
- Nervous or anxious
- Neck Pain
- Difficulty concentrating
- Difficulty remembering
- Feeling slowed down
- Feeling like "in a fog"

STEP 4: MEMORY ASSESSMENT

(IN ATHLETES OLDER THAN 12 YEARS)

Failure to answer any of these questions (modified appropriately for each sport) correctly may suggest a concussion:

- "What venue are we at today?"
- "Which half is it now?"
- "Who scored last in this game?"
- "What team did you play last week/game?"
- "Did your team win the last game?"

Athletes with suspected concussion should:

- Not be left alone initially (at least for the first 1-2 hours).
- Not drink alcohol.
- Not use recreational/ prescription drugs.
- Not be sent home by themselves. They need to be with a responsible adult.
- Not drive a motor vehicle until cleared to do so by a healthcare professional.

The CRT5 may be freely copied in its current form for distribution to individuals, teams, groups and organisations. Any revision and any reproduction in a digital form requires approval by the Concussion in Sport Group. It should not be altered in any way, rebranded or sold for commercial gain.

ANY ATHLETE WITH A SUSPECTED CONCUSSION SHOULD BE IMMEDIATELY REMOVED FROM PRACTICE OR PLAY AND SHOULD NOT RETURN TO ACTIVITY UNTIL ASSESSED MEDICALLY, EVEN IF THE SYMPTOMS RESOLVE

© Concussion in Sport Group 2017

HELPS BRAIN INJURY SCREENING TOOL

Consumer Information: _____

_____

_____

Agency/Screener's Information: _____

_____

H Have you ever **H**it your **H**ead or been **H**it on the **H**ead? ☐ Yes ☐ No

Note: Prompt client to think about all incidents that may have occurred at any age, even those that did not seem serious: vehicle accidents, falls, assault, abuse, sports, etc. Screen for domestic violence and child abuse, and also for service related injuries. A TBI can also occur from violent shaking of the head, such as being shaken as a baby or child.

E Were you ever seen in the **E**mergency room, hospital, or by a doctor because of an injury to your head? ☐ Yes ☐ No

Note: Many people are seen for treatment. However, there are those who cannot afford treatment, or who do not think they require medical attention.

L Did you ever **L**ose consciousness or experience a period of being dazed and confused because of an injury to your head? ☐ Yes ☐ No

Note: People with TBI may not lose consciousness but experience an "alteration of consciousness." This may include feeling dazed, confused, or disoriented at the time of the injury, or being unable to remember the events surrounding the injury.

P Do you experience any of these **P**roblems in your daily life since you hit your head? ☐ Yes ☐ No

Note: Ask your client if s/he experiences any of the following problems, and ask when the problem presented. You are looking for a combination of two or more problems that were not present prior to the injury.

- ☐ headaches
- ☐ dizziness
- ☐ anxiety
- ☐ depression
- ☐ difficulty concentrating
- ☐ difficulty remembering
- ☐ difficulty reading, writing, calculating
- ☐ poor problem solving
- ☐ difficulty performing your job/school work
- ☐ change in relationships with others
- ☐ poor judgment (being fired from job, arrests, fights)

S Any significant **S**icknesses? ☐ Yes ☐ No

Note: Traumatic brain injury implies a physical blow to the head, but acquired brain injury may also be caused by medical conditions, such as: brain tumor, meningitis, West Nile virus, stroke, seizures. Also screen for instances of oxygen deprivation such as following a heart attack, carbon monoxide poisoning, near drowning, or near suffocation.

Scoring the HELPS Screening Tool

A HELPS screening is considered positive for a *possible* TBI when the following 3 items are identified:

1. **1.)** An event that could have caused a brain injury (yes to H, E **or** S), **and**
2. **2.)** A period of loss of consciousness or altered consciousness after the injury or another indication that the injury was severe (yes to L or E), **and**
3. **3.)** The presence of two or more chronic problems listed under P that were not present before the injury.

Note:

- A positive screening is **not sufficient to diagnose TBI** as the reason for current symptoms and difficulties - other possible causes may need to be ruled out
- **Some individuals could present exceptions** to the screening results, such as people who do have TBI-related problems but answered "no" to some questions
- Consider positive responses within the context of the person's self-report and documentation of altered behavioral and/or cognitive functioning

The original HELPS TBI screening tool was developed by M. Picard, D. Scarisbrick, R. Paluck, 9/91, International Center for the Disabled, TBI-NET, U.S. Department of Education, Rehabilitation Services Administration, Grant #H128A00022. The Helps Tool was updated by project personnel to reflect recent recommendations by the CDC on the diagnosis of TBI. See http://www.cdc.gov/ncipc/pub-res/tbi_toolkit/physicians/mtbi/diagnosis.htm.

This document was supported in part by Grant 6 H21 MC 00039-03-01 from the Department of Health and Human Services (DHHS) Health Resources and Services Administration, Maternal and Child Bureau to the Michigan Department of Community Health. The contents are the sole responsibility of the authors and do not necessarily represent the official views of DHHS.

Post-Concussion Symptom Checklist

Name:_____

Date:_____

Please indicate how much each symptom has bothered you over the past 2 days.

	Symptoms	None	Mild		Moderate		Severe	
PHYSICAL	Headache	0	1	2	3	4	5	6
	Nausea	0	1	2	3	4	5	6
	Vomiting	0	1	2	3	4	5	6
	Balance Problem	0	1	2	3	4	5	6
	Dizziness	0	1	2	3	4	5	6
	Blurry or double vision	0	1	2	3	4	5	6
	Sensitivity to Light	0	1	2	3	4	5	6
	Sensitivity to Noise	0	1	2	3	4	5	6
	Balance Problems	0	1	2	3	4	5	6
	Pain other than headache	0	1	2	3	4	5	6
THINKING/ COGNITIVE	Feeling “in a fog”	0	1	2	3	4	5	6
	Feeling Slowed Down	0	1	2	3	4	5	6
	Difficulty concentrating	0	1	2	3	4	5	6
	Difficulty Remembering	0	1	2	3	4	5	6
SLEEP ISSUES	Trouble Falling Asleep	0	1	2	3	4	5	6
	Fatigue or low energy	0	1	2	3	4	5	6
	Drowsiness	0	1	2	3	4	5	6
EMOTIONAL	Feeling more Emotional	0	1	2	3	4	5	6
	Irritability	0	1	2	3	4	5	6
	Sadness	0	1	2	3	4	5	6
	Nervousness	0	1	2	3	4	5	6

Do symptoms worsen with physical activity? Yes____ No_____ Not Applicable_____
Do symptoms worsen with thinking/cognitive activity? Yes_____ No_____ Not Applicable_____

Activity Level: Over the past two days, compared to what I would typically do, my level of activity has been _____% of what it would normally be.

Adapted from Oregon Concussion Awareness and Management Program (OCAMP)
http://media.cbirt.org/uploads/files/sports_concussion_management_guide.pdf

Rivermead Post Concussion Symptoms Questionnaire

Modified (Rpq-3 And Rpq-13)[42] Printed With Permission: Modified Scoring System From Eyres 2005 [28]

Name: Date:

After a head injury or accident some people experience symptoms that can cause worry or nuisance. We would like to know if you now suffer any of the symptoms given below. Because many of these symptoms occur normally, we would like you to compare yourself now with before the accident. For each symptom listed below please circle the number that most closely represents your answer.

0 = not experienced at all
1 = no more of a problem
2 = a mild problem
3 = a moderate problem
4 = a severe problem

Compared with **before** the accident, do you **now** (i.e., over the last 24 hours) suffer from:

	not experienced	no more of a problem	mild problem	moderate problem	severe problem
Headaches	0	1	2	3	4
Feelings of dizziness	0	1	2	3	4
Nausea and/or vomiting	0	1	2	3	4
Noise sensitivity (easily upset by loud noise)	0	1	2	3	4
Sleep disturbance	0	1	2	3	4
Fatigue, tiring more easily	0	1	2	3	4
Being irritable, easily angered	0	1	2	3	4
Feeling depressed or tearful	0	1	2	3	4
Feeling frustrated or impatient	0	1	2	3	4
Forgetfulness, poor memory	0	1	2	3	4
Poor concentration	0	1	2	3	4
Taking longer to think	0	1	2	3	4
Blurred vision	0	1	2	3	4
Light sensitivity (easily upset by bright light)	0	1	2	3	4
Double vision	0	1	2	3	4
Restlessness	0	1	2	3	4
Are you experiencing any other difficulties? Please specify, and rate as above.					
1.	0	1	2	3	4
2.	0	1	2	3	4

Administration only:

RPQ-3 *(total for first three items)*	
RPQ-13 *(total for next 13 items)*	

http://www.maa.nsw.gov.au/default.aspx?MenuID=148

Rivermead Post Concussion Symptoms Questionnaire (cont.)

Modified (Rpq-3 And Rpq-13)[42] Printed With Permission: Modified Scoring System From Eyres 2005 [28]

Administration only

Individual item scores reflect the presence and severity of post concussive symptoms. Post concussive symptoms, as measured by the RPQ, may arise for different reasons subsequent to (although not necessarily directly because of) a traumatic brain injury. The symptoms overlap with broader conditions, such as pain, fatigue and mental health conditions such as depression[72].

The questionnaire can be repeated to monitor a patient's progress over time. There may be changes in the severity of symptoms, or the range of symptoms. Typical recovery is reflected in a reduction of symptoms and their severity within three months.

Scoring

The scoring system has been modified from Eyres, 2005[24].

The items are scored in two groups. The first group (RPQ-3) consists of the first three items (headaches, feelings of dizziness and nausea) and the second group (RPQ-13) comprises the next 13 items. The total score for RPQ-3 items is potentially 0–12 and is associated with early symptom clusters of post concussive symptoms. If there is a higher score on the RPQ-3, earlier reassessment and closer monitoring is recommended.

The RPQ-13 score is potentially 0–52, where higher scores reflect greater severity of post concussive symptoms. The RPQ-13 items are associated with a later cluster of symptoms, although the RPQ-3 symptoms of headaches, dizziness and nausea may also be present. The later cluster of symptoms is associated with having a greater impact on participation, psychosocial functioning and lifestyle. Symptoms are likely to resolve within three months. A gradual resumption of usual activities is recommended during this period, appropriate to symptoms. If the symptoms do not resolve within three months, consideration of referral for specialist assessment or treatment services is recommended.

References:

Eyres, S., Carey, A., Gilworth, G., Neumann, V., Tennant, A. (2005). Construct validity and reliability of the Rivermead Post Concussion Symptoms Questionnaire. *Clinical Rehabilitation*, 19, 878-887.

King, N. S., Crawford, S., Wenden, F.J., Moss, N.E.G. Wade, D.T. (1995). The Rivermead Post Concussion Symptoms Questionnaire: a measure of symptoms commonly experienced after head injury and its reliability *Journal of Neurology*, 242, 587-592.

Potter, S., Leigh, E., Wade, D., Fleminger, S. (2006). The Rivermead Post Concussion Symptoms Questionnaire *Journal of Neurology*, October 1-12.

Traumatic and Acquired Brain Injury (TABI) Mini-Grant Program
Timeline and Requirements

- **Applications will be reviewed on the 3rd Friday of each month.**
  - Please submit all materials to the regional agency applicable. These 4 regional agencies submit complete applications to the Division of Senior and Disability Services on your behalf. Have the agencies help you with any questions.
  - If you live in:
    1) **Anchorage/Eagle River/The Valley**
       the grant contact is Daybreak, Inc. The mini grant coordinator is Guylene Derry.
       - Email: guylene@daybreakmhsc.com
       - Phone: (907) 390-0981
    2) **Anchorage/Eagle River/Girdwood + Fairbanks/Surrounding Area**
       please contact Bridgit Barstad at Access Alaska, Inc.
       - Email: bbarstad@accessalaska.org
       - Phone: (907) 248-4777
    3) **Northwest Arctic Region**
       please contact Kim Bebout with Maniilaq, Inc.
       - Email: Kimberly.Bebout@maniilaq.org
       - Phone: (907) 442-7887
       - Cell: (907) 947-0047
    4) **Southeast**
       the contact is Deb Etheridge at Southeast Alaska Independent Living (SAIL) Inc.
       - Email: detheridge@sailinc.org
       - Phone: (800) 478-7245
       - Fax: (888) 521-4869
    5) **Outside these Regions**
       Michelle Rogers with SDS will receive applications for those living in areas outside these 4 regions
       - Secure email: michelle.rogers@hss.soa.directak.net
       - Phone: (907) 465-4995

- **Bills/Invoices/Estimates for the services/items need to be included.**
  - This cannot be stressed enough --- pretty please include supporting docs.
    6) 2 quotes for a service/item are needed for a price comparison.
       - Exception: if only 1 vendor exists (special item)
  - If the application is approved, then a check goes directly to the vendor.

7) The selection committee needs to see a dollar amount associated with the service/item
8) Make sure quotes have the price guaranteed for at least 30 days

- Also include a mailing address and/or additional payment info
  9) If the grant request is online,
     - send clear screenshots and include URL
     - indicate options for payment

❖ **Have your doctor sign the Verification of Diagnosis**. This 1-page form is the only medical documentation required.
- **IMPORTANT! ---** Kindly <u>do not</u> send packets, DVDs, etc. of medical records
- Form can be signed by
  - Primary Care Doctors (MD or DO)
  - Physician Assistants (PA) and Advanced Nurse Practitioners (ANP)
  - Medical specialists such as Neuropsychologists or Doctors of Physical Therapy (DPT) may also sign

❖ **The funding maximum per year is $2,500.**
- If the service/item exceeds $2,500 then write how you will be able to pay for the remaining amount
- If funding is approved, the check will be issued in the following 7-10 business days after the 3rd Friday of the month (the day its reviewed)

T-B-I SCREENING

Name: _____

Date: _____ Date of Birth: _____

Traumatic Brain Injury, or TBI, is "… an insult to the brain caused by an external force that results in an altered state of consciousness and one or more impairments of brain functioning. Effects may be temporary or permanent." (CDC)

Use these questions to help a person recall injuries that may have involved an impact to the head or neck.

T

TRAUMA: An injury that includes a blow to the head, the head having impact with another object (e.g., the ground, a windshield), or substantial shaking without impact.

	YES	NO
Have you ever been knocked out following an accident, an assault, or any other injury?		
Have you ever been injured … in a car or bike accident?		
… from being hit by something?		
… in a fight?		
… playing sports?		
… by a family member?		
… while serving in the military?		
… being near an explosion?		
Have you ever been treated in an emergency room, or hospitalized following an injury?		
Were you ever injured and should have received medical attention but didn't?		

With the identification of a possible trauma, next evaluate whether any of the injuries caused an altered state of consciousness.

For each injury, determine if the person was hit in the head, near an explosion, or if the head could have been shaken violently. If so, was the person dazed or confused, have a period of memory lapse, or actually knocked out or unconscious?

B

BEHAVIORAL EFFECT IMMEDIATELY: An altered state of consciousness evident in confusion, impaired memory for events around the injury, or loss of consciousness.

Incident	Age at time	*Were you dazed or confused (D/C), have a lapse in memory (Mem), or actually knocked out (KO)?*	If knocked out, how long?	*Were you treated in the ER, hospitalized, or admitted to a rehabilitation facility?*
		CIRCLE ONE		CIRCLE ONE
		D/C Mem KO		ER Hosp Rehab
		D/C Mem KO		ER Hosp Rehab
		D/C Mem KO		ER Hosp Rehab
		D/C Mem KO		ER Hosp Rehab
		D/C Mem KO		ER Hosp Rehab

I

IMPACT ON EVERYDAY FUNCTION: Following the injury, new onset or exacerbation of symptoms (e.g., headaches, dizziness, fatigue, depression) or function (e.g., attention, memory, employment, relationships).

After any of your injuries did any of these persist *for more than several weeks?*	YES	NO
Headaches		
Dizziness or balance problems		
Tiredness or fatigue		
Problems paying attention or concentrating		
Being sensitive to bright lights or loud noises		
In the months after any of your injuries did you:	YES	NO
Have new problems at work or school, or lose a job?		
Notice changes in your relationships with your family *(wife, husband, parents, friends)*?		
Have trouble remembering things or solving problems?		
Feel depressed or anxious more than before the injury?		
Have trouble controlling your temper?		

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How to Judge Injury Severity

MILDER	Loss of consciousness of 30 minutes or less	Temporary effects	Having several TBIs with any loss of consciousness may show cumulative effects (e.g., though each of the TBIs are mild, their combined effect may be like a moderate or severe TBI).
		Some individuals will have a less severe TBI, but experience greater effects because of an interaction between the TBI and other neurologic compromises.	TBIs requiring hospitalization are generally more severe than those requiring ER care (however, hospitalization can be for injuries other than the TBI).
	Effects that persist	TBIs that have more effects on everyday functioning are more severe.	TBIs requiring rehabilitation are generally more severe than those requiring hospitalization only (however, rehabilitation can be for injuries other than TBI).
MORE SEVERE	Having no recall of a day or more ***after*** the injury	More severe TBI will be associated with greater cognitive, behavioral, and emotional problems. Often, the problem is regulating one's thinking, actions, or emotions.	May not report significant effects because they are not able to recognize changes in their ability to function because of an "unawareness" of deficits, (a specific kind of cognitive impairment that can result from TBI).

Consider the Consequences of **Timing** of Injury (See "**B**" Section Above)

1) More recent TBI will be associated with greater problems in attention and new learning, and greater likelihood of depression.

2) Early developmental TBI (before age 10) may be associated with less adept interpersonal functioning, attention deficit, learning problems, conduct disorder, or adolescent onset of substance use disorder.

3) TBI in early adolescence may arrest emotional and behavioral development and/or trigger the development of a substance use disorder.

Treatment Considerations

1) How can accommodations be made to your treatment (see "Suggestions for Professionals" section)?

2) Does this client need an evaluation by a specialist (e.g., neuropsychologist, neurologist, speech pathologist, etc.)?

3) Does this client need referral to a specialized treatment program or setting?

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Suggestions for Professionals Working With TBI

1. Carefully observe and assess the person's unique communication and learning styles.

a) Ask how well the person reads and writes; or evaluate via samples.

b) Evaluate whether the individual is able to comprehend both written and spoken language.

c) If someone is not able to speak (or speak easily), inquire as to alternate methods of expression (e.g., writing or gestures).

d) Ask about and observe a person's attention span; be attuned to whether attention seems to change in busy versus quiet environments.

e) Ask about and observe a person's capacity for new learning; inquire as to strengths and weaknesses or seek consultation to determine optimum approaches.

2. Help the individual compensate for a changed learning style.

a) Modify written material to make it concise and to the point.

b) Paraphrase concepts, use concrete examples, incorporate visual aids, or otherwise present an idea in more than one way.

c) If it helps, encourage the person to take notes or at least write down key points for later review and recall.

d) Encourage the use of a calendar or planner. If the treatment program includes a daily schedule, make sure a "pocket version" is kept for easy reference.

e) Write down homework assignments.

f) After group sessions, meet individually to review main points.

g) Provide assistance with homework or worksheets. Allow extra time for tasks that involve reading or writing.

h) Ask family, friends, or other service providers to reinforce goals.

i) Remember that something learned in one situation may not be generalized to another.

j) Repeat, review, rehearse, repeat, review, rehearse.

3. Provide direct feedback regarding inappropriate behaviors.

a) Let a person know a behavior is inappropriate. Do not assume the individual is making a conscious choice to act out or is even aware that he is misbehaving.

b) Be clear about the behaviors that are expected and provide direct feedback when inappropriate behavior occurs.

c) Redirect tangential or excessive speech, and establish a method to unobtrusively signal inappropriate behavior in public.

4. Remember that non-compliant behaviors may be symptoms of neurological deficits.

a) Do not presume that non-compliance arises from lack of motivation or resistance. Check it out.

b) Be aware that unawareness of deficits can arise as a result of specific damage to the brain and may not always be due to denial.

c) Confrontation shuts down thinking and elicits rigidity; roll with resistance.

d) Absences or lack of follow-through may be reasons to change treatment strategies. Don't rush to discharge.

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State of Alaska • Department of Health and Social Services • Senior and Disabilities Services

Traumatic & Acquired Brain Injury Mini-Grant Program

Verification of Diagnosis

For Traumatic and Acquired Brain Injury

Applicant/Recipient Name: _____ Date of Birth: _____

The information requested by this form, which must be completed by a *physician, a physician assistant, an advanced nurse practitioner, registered nurse, speech language pathologist, occupational therapist, physical therapist, naturopathic physician or a neuropsychologist*, will assist to determine if the applicant/recipient qualifies for the TABI mini-grant program. ~~Questions may be directed to Alaska Brain Injury Network, the mini-grant coordinator, by calling 907-274-2824 or 1-888-574-2824.~~

"Traumatic or acquired brain injury" means an insult from physical force or internal damage to the brain or its coverings, not of a degenerative or congenital nature, that produces an altered mental state and that results in a decrease in cognitive, behavioral, emotional, or physical functioning, as defined in Alaska Statute 47.80.590. An acquired brain injury is an injury to the brain that has occurred after birth and is not induced by birth trauma, such as a stroke.

I certify that the above named individual has a current diagnosis of Traumatic or Acquired Brain Injury, and is currently experiencing symptoms as a result of the brain injury.

Diagnoses *(Please do not use ICD-9 or ICD-10 codes):*

Primary: _____

Secondary: _____

Additional: _____

I certify that, to the best of my knowledge, the above information is true, accurate, and complete.

_____	_____	_____
Medical Provider Signature/Credentials	Date	Provider ID #
_____	_____	
Printed Name/Credentials	Telephone Number	

This form submitted alone does not constitute an application for funding and must be accompanied by a complete TABI Mini-Grant application in order to be considered for an award.

Practitioners may fax the completed form to *Alaska Brain Injury Network at 907-274-2826*. Thank you.