DOMESTIC VIOLENCE AND BRAIN INJURY:
A HEALTH CARE PROVIDER'S LEGAL GUIDE

Nicole Amaldoss, Katherine Carter, and Erin Namovicz
Criminalized Survivor, Justice, and Detention Clinic, Professor Deborah M. Weissman
University of North Carolina School of Law
April 2025

UNC | SCHOOL OF LAW
CRIMINALIZED SURVIVOR, DETENTION, & JUSTICE CLINIC

Acknowledgements

The authors would like to thank those who generously contributed their valuable guidance, expertise, and feedback to this project, especially Dr. Evan Ashkin, Desireé Gorbea-Finalet, and Scott Pokorny. We thank you for your time and knowledge, and most importantly the work you do every day.

Table of Contents

Domestic Violence & Brain Injury

A Healthcare Provider's Guide

CRIMINALIZED SURVIVOR, DETENTION, & JUSTICE CLINIC

MORE THAN 50%
of women who experience intimate partner violence screened positive for brain injury

Journal of Trauma and Dissociation (2016)

Intimate Partner Violence (IPV)

IPV is a pattern of assaultive behavior and coercive behavior that may include physical injury, psychological abuse, sexual assault, progressive isolation, stalking, deprivation, intimidation, and reproductive coercion.

"Almost all clinicians are likely to encounter patients with a history of partner violence, and professional health organizations in the United States and elsewhere have called for **health care system responses** to this problem."

The American College of Obstetricians and Gynecologists, Intimate Partner Violence (2022)

Healthcare Providers Guide at:
https://law.unc.edu/experiential-learning/clinics/criminalized-survivor-detention-and-justice-clinic/

45% of people who have been implicated in the criminal legal system have a history of brain injury.

Incarcerated women have a 5-7% higher rate of brain injury than incarcerated men.

Annie Liontas, Reckoning with the Connection Between Brain Injuries and Criminal Behavior

OBJECTS STRIKING THE HEAD OR NECK

STRANGULATION

ASPHYXIATION

COLLISION WITH WALLS OR OTHER SURFACES

VIOLENT SHAKING

PUSHED DOWN STAIRS OR OUT OF CARS

Screening Tools

Ohio State University Traumatic Brain Injury Identification Method (OSU TBI-ID)

Brain Injury Screening Tool (BIST)

The Brain Check Survey (BCS)

Healthcare Providers Guide at:
https://law.unc.edu/experiential-learning/clinics/criminalized-survivor-detention-and-justice-clinic/

I. Introduction

In recent years, a growing body of research has highlighted a troublingly common occurrence affecting survivors of intimate partner violence (IPV): brain injuries (BI).[1] In light of this recently discovered connection, health care providers (HCP) have a critical role to play to assist survivors of violence, many of whom may have a limited ability to advocate for themselves, determine if they have a BI and learn how to manage it. A review of emerging findings, recommendations, and existing relevant professional and legal standards suggests that HCPs have an obligation not only to recognize the co-occurrence of IPV and BI, but to create and implement universal protocols to screen for BI if a patient has suspected or confirmed intimate partner victimization. HCPs can help to ensure that IPV survivors receive appropriate medical treatment and advocate for IPV survivors, especially those survivors whose BI may have contributed to their involvement in the criminal legal system.

This guide draws on lengthier reports, policy papers, and recommendations from health care experts that can be found in the Appendix at the end of this document. Its purpose is to create awareness of the relationship between BI and IPV and the important role of HCPs in efforts to improve health and social justice outcomes for survivors. It recommends that all HCPs effectively screen for IPV and, where there is reason to believe a patient has been a victim of such abuse, to screen and assess for BI. It further recommends the development or adoption of BI screening tools, and the implementation of mandatory screening policies as well as tailored treatment plans for survivors of IPV who have suffered BIs. Finally, this guide urges HCPs to document their findings when a survivor manifests evidence of a BI and to provide their expertise as may be appropriate to assist victims to obtain a just outcome in any legal proceeding where a victim's BI may have contributed to criminal behavior.

II. HCPs and IPV

HCPs have an important role in assisting survivors of IPV. Conducting routine IPV screening allows HCPs to provide victims of domestic violence (DV) with meaningful relief, such as counselling and referral to advocacy and social services whenever they encounter survivors.[1] HCP screening and referral can prevent and mitigate the enduring consequences associated with IPV and, among other favorable outcomes, can have a positive effect on a range of reproductive-related health concerns of all women.[2] To this end, a number of professional organizations and accrediting bodies have issued standards and guidelines requiring HCPs to screen for and document IPV and to refer patients who have suffered IPV to community organizations and other service providers to receive preventative and remediating services.

[1] Brain Injury (BI) is a broad term that encompasses acquired brain injury (ABI) and traumatic brain injury (TBI). A BI refers to an alteration in the brain function, or other evidence of brain pathology caused by an external force. This guide uses the term BI instead TBI to encompass ABIs, which are also common among victims of IPV because one of their causes is asphyxiation. See Stephanie A. Kolakowsky-Hayner & Yelena Goldin, *Sex and Gender Issues for Individuals with Acquired Brain Injury During Covid-19: A Commentary*, 101 ARCHIVES PHYSICAL MED. & REHAB. 2253 (2020); Darshini Ayton *et al*., *Acquired Brain Injury in the Context of Family Violence: A Systematic Scoping Review of Incidence, Prevalence, and Contributing Factors*, 22 TRAUMA, VIOLENCE & ABUSE 3 (2021).

In fact, experts have long recognized the need for IPV screening across a variety of healthcare practice areas. The American Medical Association (AMA) as early as 1992 issued guidelines that require "routine [DV] screening of all women patients in emergency, surgical, primary care, pediatric, prenatal, and mental health settings."[3] In the wake of the 2010 passage of the Affordable Care Act, the US Department of Health and Human Services convened a committee to evaluate existing guidelines and coverage gaps in women's healthcare.[4] This committee endorsed recommendations by the Institute of Medicine, World Health Organization, American College of Obstetricians and Gynecologists, and the American Academy of Pediatrics. These endorsements indicate that HCPs should implement preventative screening and counseling for IPV and DV while conducting medical histories, during routine visits, and in pediatric settings.[5] Indeed, as medical researchers have observed, "[a]lmost all clinicians are likely to encounter patients with a history of partner violence, and professional health organizations in the United States and elsewhere have called for health care system responses to this problem."[6]

The Joint Commission, which accredits and certifies health care organizations and programs in the United States, has required IPV screening since 2004.[7] Standard PC 01.02.09 "requires organizations to use written criteria to identify those patients who may be victims of physical assault, sexual assault, sexual molestation, domestic abuse, or elder or child abuse and neglect."[8] Under these standards hospitals must educate all staff about how to recognize signs of IPV and train them on how best to follow up to assure that patients are made aware of resources to assist them.[9] The issuance of the Joint Commission standard, along with related healthcare entity guidelines, suggests that a HCP's failure to properly screen for IPV, document, and offer appropriate referrals may trigger medical malpractice claims.[10]

(See Appendix for additional guidelines for HCPs).

III. BI and IPV

Prevalence of BI among IPV Survivors

Research demonstrates that head injuries and strangulation are common among IPV survivors.[11] Blunt force trauma or strangulation may cause a BI.[12] Studies employing a wide range of methodologies have found that anywhere from 19 to 75% of women who are victims of IPV have suffered a corresponding BI.[13] Among victims of IPV who specifically reported head injuries, that number is even higher: one study found that 100% of IPV survivors who reported injuries to the head suffered a BI.[14] Other studies substantiate the problem and have found that a majority of IPV survivors have suffered multiple blows to the head.[15]

The Effects of a BI

The consequences of BIs are varied, often with devastating impacts on the day-to-day life of a survivor. A diagnosis of a "mild" BI can be misleading as even a "mild" BI can cause debilitating consequences including fatigue, depression, memory loss, an inability to concentrate, depression, and more.[16] Studies show that survivors of IPV and BI may suffer long-term physical, cognitive, behavioral, and emotional harm including memory loss, aggression, impaired judgment, and degenerative dementia.[17] BIs impact executive (e.g., decision-making) and inhibitory (impulse control) functioning.[18] Moreover, the more exposure to BIs a survivor has experienced, the greater the likelihood that an individual will struggle with current life stressors.[19] A person who has compromised brain functioning adapts less well in new or

stressful situations and has greater problems following through on recommendations from HCPs, social service advocates, and other professionals.[20] To further complicate the relationship between BI and IPV, research suggests that biological women are more susceptible to worse health outcomes following BI due to hormonal fluctuations.[21]

Barriers to Diagnosis following an IPV-related BI

Many IPV survivors do not seek medical treatment immediately after suffering an assault and often wait until their injuries are significantly grave.[22] Some survivors may not seek treatment because they do not know and cannot recognize that they have a BI.[23] Moreover, even if IPV survivors suspect they have a BI, many women may fear seeking medical treatment.[24] They may have concerns about whether they will be judged for their history of IPV and whether a diagnosis of a BI will pose negative child custody implications.[25]

Researchers have commented on the "underdiagnosis of both [IPV and BI] and the overlapping relationship" between the two circumstances, thus emphasizing the importance of screening for both, and further observe that "[a] positive screen for either IPV or TBI should lead to a screen for the other."[26] As they explain,

> Women experiencing abuse experience several types of stigma, which contributes to difficulty in revealing abuse when screened. Acknowledging symptoms of a mild TBI may be less stigmatizing and lead to earlier intervention. This could lead to a more trusting relationship; and once trust has been established with a community health professional, it is more likely that an abused woman might feel comfortable discussing abuse, either former or current. (*citations omitted*).[27]

It is also possible that when IPV survivors do seek out medical attention, HCPs might not obtain relevant information about BI, and thus, a proper diagnosis may be missed.[28] A history of BI is often hidden among individuals with cognitive disabilities, spinal cord injuries, and behavioral health challenges such as mental health and addiction.[29] BI symptoms are also conflated with the effects of IPV itself, such as hypervigilance and poor judgment, or with symptoms of PTSD, such as trouble concentrating, aggressive behavior, or depression.[30] The complexity of symptoms and the effect of a BI on a survivor's ability to advocate for herself do not excuse a missed BI diagnosis; instead, the difficulty of the situation bolsters the obligation of HCPs to learn how to properly identify and diagnose BI to improve outcomes for IPV survivors.

IV. BI, IPV, and Implications for Criminal Legal System Involvement

The relationship between BI and the involvement of IPV survivors in the criminal legal system adds to the concentric consequences of BI. Approximately 45% of people who have been implicated in the criminal legal system have a history of a BI.[31] Moreover, women in prison have a 5-7% higher rate of BI than incarcerated men.[32] Those who have suffered BIs may experience "overwhelming feelings of disinhibition, mood swings, overreaction and even acts of rage, which can lead to criminalized behaviors."[33]

IPV survivors with BI have distinct challenges in the criminal legal system. They may be subject to duress and coercion and forced to participate in criminal activity.[34] They may be found culpable for failing to protect their child from harm by an abusive partner notwithstanding their best efforts to do so.[35] They

may be compelled to use force against their abusers to defend their lives or their children's lives.[36] As a result of the varied consequences of enduring abuse, survivors of IPV can find themselves in the courtroom charged criminally.[37]

A BI may cause an IPV survivor to experience what is known as "confabulation" which can be harmful in the criminal legal process.[2] Confabulation causes individuals to offer recollections and narratives that may be false with a "degree of confidence and … plausibility" that suggests accuracy.[38] Confabulating individuals often relay partially accurate stories, confabulating to unintentionally "fill in the gaps," which distorts an otherwise accurate story.[39] In these circumstances, criminal legal system actors may have difficulty empathizing with the survivor.[40]

Social-cognition problems such as confabulation may further impede the ability of a BI survivor to understand their legal rights.[41] Some legal issues that can result from a BI-induced confabulation include waiving Miranda rights, entering pleas, and issues with competency to stand trial.[42] BI affects a survivor's ability to understand the facts of the criminal charges she faces, diminishes her ability to participate effectively in her own defense, and otherwise bears on whether she is competent to stand trial.[43] A survivor with BI who cannot process new information, or who suffers from retrograde amnesia—all consequences of BI—will fare poorly throughout all phases of their criminal case.[44]

V. The Role of HCPs in Assisting Individuals with BI and IPV

HCPs play a crucial role in screening and assessing IPV survivors for BIs so that they can obtain the proper and necessary care they require. Given their particular expertise, frontline HCPs and advocates are in the unique position to screen all IPV survivors for BI, either by using an existing screener tool, as discussed below, or by otherwise following their hospital or clinic's procedure for evaluating potential BIs. HCPs are additionally able to refer individuals to neuropsychologists for diagnosis and HCPs or staff such as hospital social workers can assist individuals with following up on appointments and long wait times.

Medical diagnoses of BI help determine culpability when an IPV survivor is charged with criminal conduct. Assessing an IPV survivor's history of BI can help to gauge their cognitive and emotional state and to better understand whether their executive functioning has been impaired—factors that implicate their level of criminal culpability.[45] Medical evidence of BI may be a factor that affects whether an alleged crime is classified as a serious felony or a lesser offense, and whether a conviction is warranted.[46] If an IPV survivor is convicted of a crime, a judge may consider evidence of BI as a mitigating factor when determining an appropriate sentence.[47] By appropriately documenting suspected and confirmed BIs, HCPs can help provide survivors with the evidence they need to achieve a just outcome in their criminal legal proceedings.

Given what is now known about the prevalence of BI in IPV survivors, and the critical nature of diagnoses, HCPs should consider developing and implementing universal BI ~~s~~creening tools for IPV survivors. Every instance in which an HCP has reason to believe a patient has suffered IPV or DV should automatically trigger a screening for BI. Screening for and detecting BI at the start of the patient-provider

[2] Confabulation is defined as "the unintentional recollection of false memories, including elaborations or embellishments that can range from subtle to delusional in nature." Jerrod Brown, *Traumatic Brain Injury and Confabulation in Criminal Justice and Legal Settings: A Brief Review for Caregivers and Professionals*, BRAIN INJURY ASSOCIATION OF AMERICA, https://biausa.org/public-affairs/media/traumatic-brain-injury-and-confabulation

relationship allows the HCP the opportunity to engage with the survivor and, as appropriate, either perform a diagnosis or refer the individual to a neuropsychologist for a proper diagnosis.

Healthcare entities that wish to implement BI screening for IPV survivors have a wealth of resources to draw from. As information about IPV and BI has emerged, HCPs, researchers, and advocates have recognized the importance of these screenings and have begun to develop recommendations and guidelines for determining when and how to screen, document, and follow-up with necessary referrals.[48] The ongoing development of such guidelines is encouraging, but it also indicates the need to establish universal standards--designed in conjunction with IPV survivor advocates--so that HCPs can provide services that benefit all IPV survivors.[49]

Treating BI

In addition to screening and diagnosis, HCPs can suggest accommodations that might support a survivor's impairments. No two brain injuries are exactly alike; thus, appropriate treatment and accommodation may look different for each survivor.[50] Treatment and accommodation can include behavioral therapy or dialectic behavioral therapy, learning how to use supports such as written checklists and planners, or psychoeducation to equip the survivor to advocate for themselves.[51] Upon receiving a positive result on a BI screening test, HCPs should develop a tailored accommodation plan for each survivor with BI, or refer them to a community organization equipped to develop such a plan.

State Legal Obligations to Screen for BI

The North Carolina legislature has established the North Carolina Brain Injury Advisory Council (NCBIAC), tasked with coordinating state agencies that respond to and support individuals with BI, studying their needs, initiating injury prevention strategies, and promulgating recommendations to relevant state authorities.[52] In North Carolina, state law requires that state and local governments, "within available resources," ensure that the "core services" of screening, assessment, and referral are available to individuals with mental health and developmental disability needs.[53] This statutory requirement and the creation of the NCBIAC imply an obligation of HCPs, especially those receiving state funding, to screen, document, and treat IPV survivors for BI. HCPs should advocate with state and local government through commissions such as the NCBIAC to advise officials about the need to regulate and fund BI screening and services for survivors of IPV.

VI. Current Challenges

Adequate initial screening for IPV is crucial in identifying individuals to further screen for BI. However, studies demonstrate that over half of HCPs have failed to comply with existing standards regarding basic screening for IPV, especially for those patients who are at greatest risk for IPV.[54] Other survey evidence has indicated that, notwithstanding the training of HCPs on the importance of screening and referrals, identified IPV survivors were not provided with counseling or resource information as required.[55] Furthermore, one informal study suggests that many hospitals are not sufficiently transparent regarding their basic IPV screening procedures which makes it difficult to track the extent to which they are complying with Joint Commission standards.[56] The lack of transparency additionally complicates the work of DV advocates who advise IPV survivors to seek treatment in the hopes that HCPs will be responsive to their IPV history.[57]

Additionally, the stigma associated with disclosing IPV contributes to the underdiagnosis of BI.[58] However, experts suggest that acknowledging a survivor's symptoms of mild BI—which can be

accomplished through increased screening—may help reduce the stigma they may feel about discussing IPV.[59] Acknowledging a survivor's overlapping experiences helps strength the trust of their relationship with their HCP, which can help lead to an earlier and more effective intervention.[60] Due to the interrelatedness of the two conditions, the implementation of BI screening procedures for survivors of IPV offers healthcare facilities an opportunity to reevaluate and improve upon underlying IPV screening protocols.

It is the unfortunate reality that many HCPs are constrained in their ability to thoroughly comply with all recommended and required screenings due to limited time and financial resources. Nevertheless, the social and legal implications of missed IPV and BI screenings for women survivors implore HCPs to remain diligent. The limited number of neuropsychologists in many states and rural regions poses an additional challenge. While it is true that access to neuropsychologists must be expanded for each positive initial BI screening and referral to translate to a timely diagnosis appointment, the current data demonstrating the demand for neuropsychologists is artificially low. By consistently screening and documenting suspected BIs in IPV survivors, HCPs can contribute to the data demonstrating the need for more neuropsychologist specialty positions, and with this data, advocate for a system in which referrals lead to real results for survivors.

VII. Recommendations

The recommendations that follow are derived from research conducted by and for health care professionals and other experts committed to assisting IPV survivors. They are not meant to be the entirety of suggestions for HCPs to consider when interacting with IPV survivors who may have suffered a BI. HCPs should continue to engage with advocates at the intersection of anti-violence and health care, particularly advocates with expertise in IPV.

At a minimum, recommendations must include **baseline IPV screening** and **specific guidelines for assessing BI**. Standards are necessary to ensure that HCPs regularly assess and document when an IPV patient has suffered a BI. To ensure compliance with relevant statutes, professional conduct standards, and executive initiatives, IPV and BI screening should reflect the guidance contained in this section.

The Joint Commission recommends health care settings take the following actions to better address violence and protect patients:

- Partner with the local DV provider to engage in on-site training.
- Provide training to all employees who interact with patients.
- Create a medical law partnership which allows health care professionals to make immediate referrals.
- Ensure patients receive evidence-based mental health care when they disclose IPV.
- Examine whether the hospital's screening questions are specific and whether HCPs are asking those questions.[61]

The American College of Obstetrics and Gynecologists recommend routine screening for IPV carried out in a manner that is trauma informed and private:

- At the outset, "offer a framing statement to show that screening is done universally not because IPV is suspected."
- Inform and explain to patients the confidential nature of the HCP-patient communication.

- Include screening for IPV as a part of obtaining a routine medical history so that patients are asked about IPV in each instance without regard to suspicion of IPV.
- Make available resource materials in restrooms and examination rooms, including safety planning, hotline numbers, and other information related to services.[62]

Experts on IPV and healthcare, including the nationally recognized Dr. Jacquelyn Campbell, offer the following guidance for **screening for BI among already-identified survivors of IPV**:

- If a survivor discloses IPV, HCPs must inquire whether the survivor has previously been hit in the head or strangled.
    - If positive for either, assess for neurological symptoms (e.g., memory problems, dizzy spells, blacking out, trouble concentrating) and appropriate referral (e.g., a physical therapist, an occupational therapist, or a neurologist).
    - Explain to the patient the diagnoses and discharge instructions, taking into consideration possible post-injury cognition challenges.
- Create standard processes to avoid missing injuries.
- Examine the full body with particular attention to the head.
- Create and use post strangulation evaluation and treatment protocols.[63]

Scott Pokorny, Traumatic Brain Injury Program Manager of the North Carolina Department of Health and Human Services, recommends using a validated BI screening tool such as:

- Ohio State University Traumatic Brain Injury Identification Method.[64]
- Brain Injury Screen Test.[65]
- Brain Injury Screening Questionnaire.[66]
- The Brain Check Survey.[67]

Given that an individual's level of impairment can fluctuate, periodic evaluation should occur to allow for appropriate adjustment of accommodations.[68]

When working with individuals with confirmed or suspected BI, HCPs should utilize the following strategies to facilitate understanding:

- Minimize environmental distractions.
- Educational therapies should emphasize pacing.
- Provide frequent opportunities for clients to respond, generate feedback, and provide reinforcement to maintain client engagement.
- Provide written material/handouts where possible.
- Repeat key points.[69]

The benefits of screening for, documenting, and providing follow-up services for BI extend beyond a particular patient. Following recommended protocols helps to expand opportunities for research and advocacy, furthering efforts to prevent and remediate BIs among IPV survivors.[70] Moreover, by engaging with IPV survivors about their BIs, HCPs can help survivors advocate for themselves within the healthcare system and beyond.

Appendix A: Joint Commission Standards

Joint Commission Standards for Screening Patients for Abuse

1. The hospital has written criteria to identify those patients who may be victims of physical assault, sexual assault, sexual molestation, domestic abuse, or elder or child abuse and neglect. (See also RI.01.06.03, EP 2) Note: Criteria can be based on age, sex, and circumstance. PC.01.02.09 EP 1

2. The hospital educates staff about how to recognize signs of possible abuse and neglect and about their roles in follow-up. (See also HR.01.05.03, EP 5) PC.01.02.09 EP 3

3. The hospital uses its criteria to identify possible victims of abuse and neglect upon entry into the hospital and on an ongoing basis. PC.01.02.09 EP 4

4. The hospital either assesses the patient who meets criteria for possible abuse and neglect or refers the patient to a public or private community agency for assessment. PC.01.02.09 EP 5

5. The hospital internally reports cases of possible abuse and neglect. (See also RI.01.06.03, EP 3) PC.01.02.09 EP 6

6. The hospital reports cases of possible abuse and neglect to external agencies, in accordance with law and regulation. (See also RI.01.06.03, EP 3) PC.01.02.09 EP 7

Appendix B: Sample Survey Instruments

Name: _____ Current Age: _____ Interviewer Initials: _____ Date: _____

Ohio State University TBI Identification Method — Interview Form

Step 1

Ask questions 1-5 below. Record the cause of each reported injury and any details provided spontaneously in the chart at the bottom of this page. You do not need to ask further about loss of consciousness or other injury details during this step.

I am going to ask you about injuries to your head or neck that you may have had anytime in your life.

1. In your lifetime, have you ever been hospitalized or treated in an emergency room following an injury to your head or neck? Think about any childhood injuries you remember or were told about.
   ☐ No ☐ Yes—Record cause in chart
2. In your lifetime, have you ever injured your head or neck in a car accident or from crashing some other moving vehicle like a bicycle, motorcycle or ATV?
   ☐ No ☐ Yes—Record cause in chart
3. In your lifetime, have you ever injured your head or neck in a fall or from being hit by something (for example, falling from a bike or horse, rollerblading, falling on ice, being hit by a rock)? Have you ever injured your head or neck playing sports or on the playground?
   ☐ No ☐ Yes—Record cause in chart
4. In your lifetime, have you ever injured your head or neck in a fight, from being hit by someone, or from being shaken violently? Have you ever been shot in the head?
   ☐ No ☐ Yes—Record cause in chart
5. In your lifetime, have you ever been nearby when an explosion or a blast occurred? If you served in the military, think about any combat- or training-related incidents.
   ☐ No ☐ Yes—Record cause in chart

Interviewer instruction:
If the answers to any of the above questions are "yes," go to Step 2. If the answers to all of the above questions are "no," then proceed to Step 3.

Step 2

Interviewer instruction: If the answer is "yes" to any of the questions in Step 1 ask the following additional questions about each reported injury and add details to the chart below.

Were you knocked out or did you lose consciousness (LOC)?

If yes, how long?

If no, were you dazed or did you have a gap in your memory from the injury?

How old were you?

Step 3

Interviewer instruction: Ask the following questions to help identify a history that may include multiple mild TBIs and complete the chart below.

Have you ever had a period of time in which you experienced multiple, repeated impacts to your head (e.g. history of abuse, contact sports, military duty)?

If yes, what was the typical or usual effect---were you knocked out (Loss of Consciousness - LOC)?

If no, were you dazed or did you have a gap in your memory from the injury?

What was the most severe effect from one of the times you had an impact to the head?

How old were you when these repeated injuries began? Ended?

Step 1	Step 2						
	Loss of consciousness (LOC)/knocked out				Dazed/Mem Gap		Age
Cause	No LOC	< 30 min	30 min-24 hrs	> 24 hrs	Yes	No	

If more injuries with LOC: How many?_____ Longest knocked out?_____ How many ≥ 30 mins.?_____ Youngest age? _____

Step 3	Typical Effect		Most Severe Effect				Age	
Cause of repeated injury	Dazed/ memory gap, no LOC	LOC	Dazed/ memory gap, no LOC	LOC < 30 min	LOC 30 min - 24 hrs.	LOC > 24 hrs.	Began	Ended

(Continuation from reverse side, if needed)

Name: _____ Current Age: _____ Interviewer Initials: _____ Date: _____

Step 1	Step 2						
	Loss of consciousness (LOC)/knocked out				Dazed/Mem Gap		Age
Cause	No LOC	< 30 min	30 min-24 hrs	> 24 hrs	Yes	No	

If more injuries with LOC: How many?_____ Longest knocked out?_____ How many ≥ 30 mins.?_____ Youngest age? _____

Step 3	Typical Effect		Most Severe Effect				Age	
Cause of repeated injury	Dazed/ memory gap, no LOC	LOC	Dazed/ memory gap, no LOC	LOC < 30 min	LOC 30 min - 24 hrs.	LOC > 24 hrs.	Began	Ended

Interpreting Findings

A person may be more likely to have ongoing problems if they have any of the following:

- **WORST**
  One moderate or severe TBI
- **FIRST**
  TBI with loss of consciousness before age 20
- **MULTIPLE**
  2 or more TBIs close together, including a period of time when they experienced multiple blows to the head
- **RECENT**
  A mild TBI in the last weeks or a more severe TBI in the last months
- **OTHER SOURCES**
  Any TBI combined with another way that their brain function has been impaired

For more information about TBI or the OSU TBI Identification Method visit:

- Ohio Valley Center at OSU
  www.ohiovalley.org/informationeducation
- BrainLine.org
  www.brainline.org

(Updated July 2013)

Sample items from parts I, II, and III of the Brain Injury Screening Questionnaire

Part I					
For each event listed, record the number of times you experienced a blow to the head in that type of situation.		For each blow to the head recorded in Column A...			
Column A		Column B			
		Did you ever lose consciousness?		Were you ever dazed and confused?	
Did you ever experience a blow to the head...	How many times?	How many times?	Longest period?	How many times?	Longest period?
In a car crash?					
While on the playground?					
Being assaulted or mugged?					
Part II					
Please check the boxes below to indicate how often, in the past month, you have been bothered by each of the difficulties listed.	Always	Often	Some-times	Never	N/A
Having double vision or blurred vision					
Difficulty concentrating, having a poor span of attention					
Doing things without thinking them through, being impulsive					
Part III			Yes	No	Don't Know
Were you labelled as having a learning disability or an attention deficit disorder?					
Were you ever medicated for a psychiatric condition?					
Were you ever hospitalized or seen in the emergency room for a brain infection?					

Brain Check Survey

Colorado State University
Department of Occupational Therapy
Life Outcomes after Brain Injury (LOBI) Research Program

Available for use at: LOBI (http://www.lobi.chhs.colostate.edu/index.aspx)
To be filled out by the parent/guardian

Student / Family Information

Today's Date: ___/___/___ Child's Name: _____ Child's Age: _____

Child's Date of Birth: ___/___/___ Child's Gender: ☐ Male ☐ Female

*Please answer the following questions about **YOURSELF:***
Are you the student's (circle all that apply)?

☐ Mother ☐ Father ☐ Foster Parent ☐ Other (ex: stepmother) please describe:_____

Your Name (printed): _____ Your Signature: _____

Contact information: Email _____ Phone _____

Injuries or Illnesses

Injury or Illness	Age	Outcomes
Please check all that apply		
☐ **Blow to Head** (From sports, playing, biking, falling, getting hit by an object, etc.)	At what age? ____	*Check all that apply:* ☐ Concussion ☐ Loss of consciousness, *for how long? _____ ☐ Coma, *for how long? _____ ☐ Confusion or altered mental state ☐ Missed school ☐ Resulted in no problem
☐ **Whiplash**	At what age? ____	*Check all that apply:* ☐ Loss of consciousness, *for how long?_____ ☐ Coma, *for how long? _____ ☐ Confusion or altered mental state ☐ Missed school ☐ Resulted in no problem
☐ **Car accident** (resulting in any degree of injury or lack of injury)	At what age? ____	*Check all that apply:* ☐ Concussion ☐ Loss of consciousness, *for how long? _____ ☐ Coma, *for how long? _____

Injury or Illness	Age	Outcomes
		☐ Confusion or altered mental state ☐ Missed school ☐ Resulted in no problem
☐ **Assault/Violence** (child abuse, fights, firearm injury)	At what age? ____	*Check all that apply:* ☐ Concussion ☐ Loss of consciousness, *for how long? _____ ☐ Coma, *for how long? _____ ☐ Confusion or altered mental state ☐ Missed school ☐ Resulted in no problem
☐ **Sustained High Fever**	At what age? ____	*Check all that apply:* ☐ Loss of consciousness, *for how long? _____ ☐ Coma, *for how long? _____ ☐ Confusion or altered mental state ☐ Missed school ☐ Resulted in no problem
☐ **Brain Tumor**	At what age? ____	*Check all that apply:* ☐ Loss of consciousness, *for how long? _____ ☐ Coma, *for how long? _____ ☐ Confusion or altered mental state ☐ Missed school ☐ Resulted in no problem
☐ **Anoxia** (definition: lack of oxygen; caused by such events as a near-drowning experience or suffocating experience)	At what age? ____	*Check all that apply:* ☐ Loss of consciousness, *for how long? _____ ☐ Coma, *for how long? _____ ☐ Confusion or altered mental state ☐ Missed school ☐ Resulted in no problem
☐ **Meningitis**	At what age? ____	*Check all that apply:* ☐ Loss of consciousness, *for how long? _____ ☐ Coma, *for how long? _____ ☐ Confusion or altered mental state ☐ Missed school ☐ Resulted in no problem
☐ **Encephalitis**	At what age? ____	*Check all that apply:* ☐ Loss of consciousness, *for how long? _____ ☐ Coma, *for how long? _____ ☐ Confusion or altered mental state ☐ Missed school ☐ Resulted in no problem
☐ **Seizures** (example: epilepsy)	At what age? ____	*Check all that apply:* ☐ Loss of consciousness, *for how long? _____ ☐ Coma, *for how long? _____ ☐ Confusion or altered mental state ☐ Missed school

Injury or Illness	Age	Outcomes
		☐ Resulted in no problem
☐ **Overdose of** Drugs or alcohol, or inappropriate use of prescription drugs or over- the-counter medication?	At what age? ____	*Check all that apply*: ☐ Loss of consciousness, *for how long? _____ ☐ Coma, *for how long? _____ ☐ Confusion or altered mental state ☐ Missed school ☐ Resulted in no problem
☐ **Other:** _____ _____	At what age? ____	*Check all that apply*: ☐ Loss of consciousness, *for how long? _____ ☐ Coma, *for how long? _____ ☐ Confusion or altered mental state ☐ Missed school ☐ Resulted in no problem
☐ **Other:** _____ _____	At what age? ____	*Check all that apply:* ☐ Loss of consciousness, *for how long? _____ ☐ Coma, *for how long? _____ ☐ Confusion or altered mental state ☐ Missed school ☐ Resulted in no problem

Has your child ever been to the emergency department? ☐ *Yes* ☐ *No*
*If YES, at what age?*_____ *Please explain:*

_____

_____

_____

_____

_____

_____

Behaviors that can affect learning

Please tell us about your child's learning styles and behaviors:

Learning Style or Behavior	**Circle the number on the scale which best describes your child: (1) No Problem ⟺ Extreme Problem (6)**					
Coping with change or transitions	1	2	3	4	5	6
Maintaining family and friend relationships	1	2	3	4	5	6
Letting go of one activity to attend to another	1	2	3	4	5	6
Reaction to simple problems	1	2	3	4	5	6
Waiting for his or her turn in a game	1	2	3	4	5	6
Learns from past mistakes or behavior	1	2	3	4	5	6
Thinks before speaking or acting	1	2	3	4	5	6
Listens without interrupting others often	1	2	3	4	5	6
Handles a change in plans	1	2	3	4	5	6
Demonstrates good judgment	1	2	3	4	5	6

Cognitive Processes that can affect learning

Please tell us about your child's learning styles:

Learning Style or Cognitive Processes	**Circle the number on the scale which best describes your child: (1) No Problem ⟺ Extreme Problem (6)**					
Focusing and maintaining attention	1	2	3	4	5	6
Getting started on activities, tasks, chores, homework and the like, on his or her own	1	2	3	4	5	6
Monitoring own progress on homework, assignments, chores, and the like	1	2	3	4	5	6
Solving everyday problems (example: thinking of different options when something is not working for him/her.)	1	2	3	4	5	6
Learns new things easily	1	2	3	4	5	6
Remembers lists	1	2	3	4	5	6
Remembers day-to-day events	1	2	3	4	5	6

Symptoms – Part 1 (Sensory)

If your child has experienced any of the following symptoms, rank the severity of those symptoms:

Sensory Symptom	**Circle the number on the scale which best describes your child:** **(1) No Problem ⟺ Extreme Problem (6)**					
Headaches and/or Migraines (sudden, not responsive to medications, can last for more than a day)	1	2	3	4	5	6
Blank staring/Day dreaming	1	2	3	4	5	6
Dizziness	1	2	3	4	5	6
Change in vision (blurred vision, double vision, depth perception)	1	2	3	4	5	6
Fatigue (tires easily, is often tired)	1	2	3	4	5	6
Light sensitivity (can be easily upset by bright or strobe lights)	1	2	3	4	5	6

Symptoms – Part 2 (Motor)

If your child has experienced any of the following symptoms, rank the severity of those symptoms:

Motor Symptom	**Circle the number on the scale which best describes your child:** **(1) No Problem ⟺ Extreme Problem (6)**					
Loss of muscle coordination (can look like awkward movements, problems with balance, slowed reactions, uncoordinated running and catching)	1	2	3	4	5	6
Blackouts/ Fainting	1	2	3	4	5	6
Confusion	1	2	3	4	5	6
Seizures	1	2	3	4	5	6
Slurred speech	1	2	3	4	5	6
Has trouble finding the "right" word when talking	1	2	3	4	5	6

Educational Service

Is your child having difficulties with school performance? Please describe:

_____

_____

_____

_____

_____

_____

What does your child do best at in school? Please describe:

_____

_____

_____

_____

_____

_____

Is your child currently receiving any of the following services?

Check all that apply (If "yes", please check if they are provided through school and/or being provided privately.)

Check all that apply (If "yes", please check if they are provided through school and/or being provided privately.) **Service**	***Child's Status (please check)***
Occupational therapy	☐ **No** ☐ **Yes** If Yes, please check whether these services are delivered by: ☐ *school-supported specialists* (the school pays for the specialist); and/or ☐ *by private specialists* (you and/or your insurance pays)
Physical therapy	☐ **No** ☐ **Yes** If Yes, please check whether these services are delivered by: ☐ *school-supported specialists* (the school pays for the specialist); and/or ☐ *by private specialists* (you and/or your insurance pays)
Speech-Language therapy	☐ **No** ☐ **Yes** If Yes, please check whether these services are delivered by: ☐ *school-supported specialists* (the school pays for the specialist); and/or ☐ *by private specialists* (you and/or your insurance pays)
Other: _____	☐ **No** ☐ **Yes** If Yes, please check whether these services are delivered by: ☐ *school-supported specialists* (the school pays for the specialist); and/or ☐ *by private specialists* (you and/or your insurance pays)

Has your child ever been evaluated for special education services? ☐ YES ☐ NO

If Yes, at what age was your child first evaluated? _____

Does your child have a 504 plan? ☐ YES ☐ NO

If Yes, are the accommodations helping your child's school performance? ☐ YES ☐ NO

Does your child have an IEP, Individualized Education Plan?

☐ **No**

☐ **Yes** → if YES, please answer 1 & 2 immediately below:

1. Is the IEP helping your child's school performance? ☐ YES ☐ NO
2. Please check all categories listed on the IEP:
   - ☐ Hearing Impairment, Including deafness
   - ☐ Multiple Disabilities
   - ☐ Deaf-Blindness
   - ☐ Autism Spectrum Disorder
   - ☐ Orthopedic Impairment
   - ☐ Other Health Impaired
   - ☐ Traumatic Brain Injury (TBI)
   - ☐ Developmental Delay
   - ☐ Serious Emotional Disability
   - ☐ Intellectual Disability
   - ☐ Specific Learning Disability
   - ☐ Speech or Language Impairment
   - ☐ Visual Impairment, Including Blindness

Appendix C: Other Useful Resources

Accommodating for the symptoms of TBI, Ohio Valley Center for Brain Injury Prevention and Rehabilitation, (July 8, 2015), https://heller.brandeis.edu/ibh/pdfs/accommodating-tbi-booklet-1-14.pdf.

Special Emphasis Report: Traumatic Brain Injury, NC Injury and Violence Prevention Branch, (July 22, 2020), https://injuryfreenc.dph.ncdhhs.gov/DataSurveillance/TBI-SpecialEmphasisReport-NC-2019.pdf.

Kristi Wall et al., *Violence Related Traumatic Brain Injury in Justice Involved Women*, 45 Criminal Justice and Behavior, (2018).

Megan Davidson & Kate Reed, Mind Matters: Building a Justice System That Is Inclusive and Responsive to Brain Injury, (2024).

Angela Colantonio & Eve M. Valera, *Brain Injury and Intimate Partner Violence*, 37 J. HEAD TRAUMA REHABILITATION, (2022).

Interacting with patients living with traumatic brain injury, Brain Injury Association of North Carolina, (Sept. 23, 2019), https://www.bianc.net/wp-content/uploads/2019/10/Interacting-with-Patients-2.pdf.

Brain Injury: What is it & What Now, Brain Injury Association of North Carolina, (Sept. 30, 2019), https://www.bianc.net/wp-content/uploads/2019/10/BI-Strategies-2.pdf.

Luke Montgomery & Rachel Ramirez, Partner-Inflicted Brain Injury: Promising Practices for Domestic Violence Programs, (Apr. 20, 2022), https://www.odvn.org/wp-content/uploads/2021/11/Promising-Practices-Partner-Inflicted-Brain-Injury.pdf.

---

[1] *See generally*, Elizabeth Miller and Brigid McCaw, *Intimate Partner Violence*, 380 NEW ENG. MED REVIEW AND J. 850, 854 (2019).
[2] The American College of Obstetricians and Gynecologists, Intimate Partner Violence (2022), https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2012/02/intimate-partner-violence
[3] American Medical Association, Diagnostic and Treatment Guidelines on Domestic Violence 8 (1994).
[4] COMMITTEE ON PREVENTATIVE SERVICES FOR WOMEN, CLINICAL PREVENTATIVE SERVICES FOR WOMEN: CLOSING THE GAPS 15, 20-21 (The National Academies Press, 2011). https://nap.nationalacademies.org/read/13181/chapter/1
[5] *Id*. at 120-123.
[6] Miller and McCaw, *supra* note 1, at 854.
[7] The Joint Commission, Quick Safety Issue 63: *Addressing Intimate Partner Violence and Helping to Protect Patients* (2022). https://www.jointcommission.org/-/media/tjc/newsletters/quick-safety-63-addressing-ipv-final3-1-10-22.pdf.

[8] The Joint Commission, Quick Safety Issue 63: *Addressing Intimate Partner Violence and Helping to Protect Patients* (2022). https://www.jointcommission.org/-/media/tjc/newsletters/quick-safety-63-addressing-ipv-final3-1-10-22.pdf.
[9] *Id*.
[10] *See* Jennifer Gunter, *Intimate Partner Violence*, 34 OBSTET GYNECOL CLIN N AM 367, 379 (2007).
[11] *See* Debbie Mukamal *et al*., *Fatal Peril: Unheard Stories from the IPV-to-Prison Pipeline*, Stanford Criminal Justice Center 25 (2024).
[12] *Id*.
[13] Halina Haag, Dayna Jones, Tracey Joseph, & Angela Colantonio, *Battered and Brain Injured: Traumatic Brain Injury Among Women Survivors of Intimate Partner Violence – A Scoping Review,* 23 TRAUMA, VIOLENCE, & ABUSE 1270, 1272.
[14] *Id*.
[15] Eve Valera & Aaron Kucyi, *Brain Injury in Women Experiencing Intimate Partner Violence: Neural Mechanistic Evidence of an "Invisible" Trauma*, 11 BRAIN IMAGING & BEHAV. 1664, 1671 (2017).
[16] Halina (Lin) Haag et al., Battered and Brain Injured: Traumatic Brain Injury Among Women Survivors of Intimate Partner Violence—A Scoping Review, 23 TRAUMA, VIOLENCE & ABUSE 1270, 1285 (2022) Stacey Wood, PhD, Bhushan S. Agharkar, M.D., *Traumatic Brain Injury in Criminal Litigation*, 84 UMKC L. REV. 411, 414 (2015) ("There is nothing truly "mild" about mild TBI.)
[17] Mukamal *et al.*, *supra* note 12, at 25, 152.
[18] Kelly Newcomb, DEFENDING BATTERED SURVIVORS WITH BRAIN INJURIES: AN EDUCATIONAL GUIDE FOR ADVOCATES IN NORTH CAROLINA, 12, 14, 30 (2023) available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4841283.
[19] *Id*. at 8, 11, 12.
[20] Julia K. Campbell, *et al*., *Knowledge, Perceived Competence, and Behaviors Relative to Traumatic Brain Injury Among a Sample of Domestic Violence Emergency Shelter Advocates in a New England State*, 30 VIOLENCE AGAINST WOMEN 2808, 2810 (2024).
[21] Newcomb, *supra* note 8, *at* 8, 18.
[22] Mukamal *et al*., supra note 12, at 38.
[23] *Id*. at 38.
[24] Haag *et al.*, *supra* note 16, at 1283; Miller and McCaw, *supra* note 1, at 854.
[25] *Id.*
[26] Amanda St. Ivany & Donna Schminkey, *Intimate Partner Violence and Traumatic Brain Injury, State of the Science and Next Steps*, 129, 133 (2016).
[27] *Id.*
[28] Megan Davidson and Kate Reed, *Mind Matters- Building A Justice System That Is Inclusive and Responsive to Brain Injury* 12, New York: THE COUNCIL OF STATE GOVERNMENTS JUSTICE CENTER, 2024; Mukamal *et al*., supra note 11, at 38.
[29] E-mail from Scott Pokorny, Traumatic Brain Injury Program Manager, NC Department of Health and Human Services, personal communication (Nov. 22, 2024, 14:39 EST) (on file with author).
[30] Richard Bryant, *Post-traumatic stress disorder vs traumatic brain injury*, DIALOGUES IN CLINICAL NEUROSCIENCE 251, 252, 253, (2023) https://doi.org/10.31887/DCNS.2011.13.2/rbryant.
[31] Annie Liontas, Reckoning with the Connection Between Brain Injuries and Criminal Behavior, N.Y. Times, Nov. 30, 2024, https://www.nytimes.com/2024/11/30/opinion/brain-injury-incarcerations-crime.html.
[32] *Id*.
[33] *Id*.
[34] *See* US v. Dingwall, 6 F.4th 704 (2021) (holding that facts related to the experiences of IPV might support the defense of duress).
[35] Mukamal *et al*., supra note 12, at 30-31.
[36] *Id.* at 96-97.
[37] *Id.*

[38] *Id*. at 39.
[39] *Id*.
[40] *Id*.
[41] *Id*.
[42] Jerrod Brown, *Traumatic Brain Injury and Confabulation in Criminal Justice and Legal Settings: A Brief Review for Caregivers and Professionals*, BRAIN INJURY ASSOCIATION OF AMERICA, HTTPS://www.biausa.org/public-affairs/media/traumatic-brain-injury-and-confabulation.
[43] Wood & Agharkar, *supra* note 16 at 416.
[44] *Id* at 415.
[45] William J. Winslade, Traumatic Brain Injury and Criminal Responsibility, 10 MEDICAL ETHICS, (2003), reprinted at https://www.law.uh.edu/healthlaw/perspectives/disabilities/031215traumatic.html.; J. S. Kreutzer et al. (eds.), ENCYCLOPEDIA OF CLINICAL NEUROPSYCHOLOGY 2490, 2503 (2018) at https://doi.org/10.1007/978-3-319-57111-9.
[46] *Id*.
[47] *Id*.
[48] *See* Appendix B for some examples.
[49] Pratima Bhuttarowas *The Importance of Care Standardization in Medical Practice*, https://www.zynxhealth.com/insights/importance_of_care_standardization/.
[50] *Brain Injury Treatment*, BRAIN INJURY ASSOCIATION OF AMERICA, https://biausa.org/brain-injury/about-brain-injury/treatment (last accessed Feb. 2, 2025).
[51] *See* Pokorny, *supra* note 29.
[52] N.C.G.S. § 143B-216.65, (2009).
[53] N.C.G.S. § 122C-2, (1989).
[54] Gunter *supra* note 11 at 377.
[55] Elizabeth M. Datner, *et al., Universal Screening for Domestic Violence: Inability to Prove JCAHO-Mandated Screening Makes an Immediate Impact,* 9 ACAD EMERG MED 512, 513 (2002)
[56] Pearson & Lee, North Carolina Health Systems' IPV Policies & Procedures, 1, 6 (2023) (on file with the authors).
[57] *See Id*.
[58] Amanda St. Ivany & Donna Schminkey, *Intimate Partner Violence and Traumatic Brain Injury, State of the Science and Next Steps*, 129, 133 (2016).
[59] *Id*.
[60] *Id*.
[61] *See* The Joint Commission, Quick Safety Issue 63, *supra* note 8.
[62] The American College of Obstetricians and Gynecologists, *supra* note 2, at 3.
[63] 24 Jacquelyn Campbell *et al*., *Implications of Brain Injury in Abused Women for Advocacy and Health Care*, 29, 34 (2020).
[64] Ohio State University Traumatic Brain Injury Identification Method, https://www.nashia.org/resources-list/q08b16r1um9qscpkstm478wi4sbrti
[65] Brain Injury Screening Test, at https://tbin.aut.ac.nz/support-and-resources/brain-injury-screening-tool-bist
[66] Brain Injury Screening Questionnaire at https://icahn.mssm.edu/research/brain-injury/resources/screening.
[67] Brain Check Survey, https://www.nashia.org/resources-list/q08b16r1um9qscpkstm478wi4sbrti-wncdx
[68] *See* Video Interview with North Carolina Formerly Incarcerated Transition Program (Oct. 25, 2024) (notes on file with the authors)
[69] *See* Pokorny, *supra* note 29.
[70] Ivany & Schminkey, supra note 59, at 134.