ACS TRAUMA QUALITY PROGRAMS

BEST PRACTICES GUIDELINES FOR TRAUMA CENTER RECOGNITION OF

Child Abuse, Elder Abuse, and Intimate Partner Violence

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INTRODUCTION

Child abuse, elder abuse, and intimate partner violence are serious, preventable public health problems that affect millions of people. This guideline seeks to help the trauma practitioner identify victims of abuse that present with physical injury and to initiate treatment and reporting. While this Best Practices Guideline (BPG) is not intended to focus on the victims of neglect or psychological abuse, the included screening tools may reveal these conditions in patients being treated in the trauma center.

Research on the identification and management of child abuse is much more mature and robust than in elder abuse or intimate partner violence. However, similarities and overlap between all three forms of family violence exist. It is not unusual for a family to have a "culture of abuse" which can manifest as intimate partner violence, child abuse, or elder abuse. Suspicion of abuse is often triggered when the story does not match the injury pattern, the story changes over time, multiple injuries result from a simple mechanism, or injuries are present in various stages of healing.

The goal of this BPG is to provide a resource for trauma center health professionals to identify, evaluate, manage, document, and report patients that are victims of abuse. It also provides tools for collecting data, injury coding, and quality indicators to monitor, compare, and improve care.

Each of the sections—child abuse, elder abuse, and intimate partner violence—separately address definition, epidemiology, assessment and screening, management, and reporting. Documentation for all forms of abuse follows the family violence sections. Quality and process improvement measures are addressed in a separate section at the end, with specific recommendations for each type of abuse.

Important Note

The intent of the ACS Trauma Quality Programs (TQP) Best Practices Guidelines is to provide health care professionals with evidence-based recommendations regarding care of the trauma patient. The Best Practices Guidelines do not include all potential options for prevention, diagnosis, and treatment and are not intended as a substitute for the provider's clinical judgment and experience. The responsible provider must make all treatment decisions based upon their independent judgment and the patient's individual clinical presentation. The ACS and any entities endorsing the Guidelines shall not be liable for any direct, indirect, special, incidental, or consequential damages related to the use of the information contained herein. The ACS may modify the TQP Best Practices Guidelines at any time without notice.

BEST PRACTICES GUIDELINES FOR TRAUMA CENTER RECOGNITION: CHILD ABUSE

CHILD ABUSE

OVERVIEW

Key Points

- An estimated 1 in 4 children are victims of some form of child abuse or neglect in their lifetimes, and 1 in 7 experienced it in the past year.
- Implement a standardized tool to screen for child physical abuse at all designated trauma centers and trauma hospitals.
- Use the Centers for Disease Control and Prevention (CDC) standard definitions of child physical abuse to enable accurate understanding and measurement of its scope.

Annually, nearly one million children are victims of child maltreatment in the United States.[1] It is estimated 1:4 children experience some form of child abuse or neglect in their lifetime (1:7 in the past year) accounting for a total lifetime economic cost upward of $124 billion.[2,3]

Definitions

The CDC definition of child maltreatment is "any act or series of acts of commission or omission by a parent or other caregiver that results in harm, potential for harm, or threat of harm to a child."[1] Child maltreatment refers to acts of *commission* (deliberate or intentional inflicted injury referred to as child abuse or nonaccidental trauma [NAT]) or *omission* (failure to provide for a child's needs resulting in harm or injury referred to as neglect) in children under 18 years of age.[2] Physical abuse, sexual abuse, and psychological abuse are types of abuse resulting from acts of commission. Acts of omission or neglect (e.g., delay in bringing the injured child to care, not using vehicle restraints, or inappropriate supervision) can worsen outcomes when the child is abused.

The CDC *Child Maltreatment Uniform Definitions for Public Health and Recommended Data Elements* (https://www.cdc.gov/violenceprevention/pdf/CM_Surveillance-a.pdf) is recommended to enable more accurate incidence monitoring. Using these definitions supports research to determine the magnitude of child abuse and neglect, examine trends over time, and determine the impact of prevention and screening strategies.[4]

- **Physical abuse** includes physical acts ranging from those leaving no physical mark on the child to those causing permanent disability, disfigurement, or death. It can result from discipline or physical punishment. Physical acts can include hitting, kicking, punching, beating, stabbing, biting, pushing, shoving, throwing, pulling, dragging, dropping, shaking, strangling/choking, smothering, burning, scalding, and poisoning.[4]

- **Sexual abuse** is defined as sexual violence against children that occurs in the context of a caregiver relationship. It includes any completed or attempted sexual act, sexual contact with, or exploitation (i.e., noncontact sexual interaction) of a child by a caregiver. Physical injuries to the anal or genital area or surrounding areas (e.g., anal or genital bruising or tearing; internal injuries resulting from penetration by a penis, hand, finger, or other object) that occur during attempted or completed sexual abuse, or other physical injuries that result during commission (e.g., bruises due to restraint, hitting, pushing) are sexual abuse rather than physical abuse.[4]
- **Psychological abuse** is defined as an intentional caregiver behavior (i.e., act of commission) that conveys to a child that they are worthless, flawed, unloved, unwanted, endangered, or valued only in meeting another's needs.[4]
- **Caregiver** is defined as a person (or people) who at the time of the maltreatment is in a permanent (**primary caregiver**) or temporary (**substitute caregiver**) custodial role, although discrepancies in the definition of caregiver often occur in state laws. In a custodial role, the person is responsible for care and control of the child and for the child's overall health and welfare.
  - Primary caregivers must live with the child at least part of the time and can include, but are not limited to, a relative or biological, adoptive, step-, or foster parent(s); a legal guardian(s); or their intimate partner.
  - Substitute caregivers may or may not reside with the child and can include clergy, coaches, teachers, relatives, babysitters, residential facility staff, or others who are not the child's primary caregiver(s).[4]

The Child Abuse Prevention and Treatment Act (CAPTA) (P.L. 100-294) (amended by the CAPTA Reauthorization Act of 2010 [P.L. 111–320]) establishes the standard legal definition of child abuse and neglect as "any recent act or failure to act on the part of a parent or caretaker which results in death, serious physical or emotional harm, sexual abuse or exploitation; or an act or failure to act, which presents an imminent risk of serious harm."[5]

Epidemiology

An estimated 674,000 children were classified as victims of maltreatment in the United States in 2017, at a rate of 9.1 victims per 1,000 children.[5] More than a quarter of these victims in 2017 were younger than three years. Children younger than 12 months were especially vulnerable with an age-specific victimization rate of 25.3 per 1,000.[5]

An estimated 1,720 children died from maltreatment in 2017, an 11% increase from the 2013[5]. Children younger than 3 years accounted for more than 70% of all fatalities. Of the children who died, 41.6% suffered physical child abuse (PCA) exclusively or in combination with another maltreatment type including neglect, psychological abuse, or sexual abuse.[5] More boys than girls died from maltreatment in 2017. American Indian and Alaska Native children had the highest rate of victimization followed by African-American children.[5] The rate of African-American child fatalities was more than double the rate for White children and triple the rate for Hispanic children.[5] Approximately 80% of child fatalities involved parents, and more than a quarter of child fatalities had at least one prior Child Protective Services (CPS) contact.[5]

Sentinel Injuries

Sentinel injuries are injuries suspicious for physical abuse. These are poorly explained visible or detectable minor injuries such as bruising, musculoskeletal, head or minor oral injury including torn labial frenum (or frenulum) in a pre-cruising infant.[6] Other authors expand the definition to include any injury with rates of abuse high enough to warrant routine evaluation for abuse.[6] Recognizing sentinel injuries provides an opportunity to identify and intervene with a child before the abuse escalates.[7,8] After a child sustains one injury and remains in the same abusive environment without intervention, the child is more likely to sustain repeat events, potentially resulting in a more severe or even fatal injury (escalation injury). Early identification of child abuse may mitigate further escalation injuries.[9-11] Victims of repeated child abuse have higher mortality (25%) compared to victims of initial child abuse episodes (10%).[12] Thus, it is critical to act during a first encounter to prevent further injury, which may be ultimately lifesaving.

A 1999 landmark study found 31% of evaluated abusive head trauma cases were not properly identified as abusive by physicians at the time of the child's initial evaluation, and 30% were reinjured after the missed diagnosis, resulting in death in many cases.[13] Two additional studies reported similar findings associated with skeletal fractures in which physical abuse was previously missed.[14,15] Sentinel injuries can seem minor, and a high level of suspicion and familiarity with high-risk injuries is critical for identification. The history is not always reliable, especially if the historian is the abusive caregiver. One study found only 41.9% of sentinel injuries were recognized by medical providers in a hospital-based setting.[8] Medical providers must maintain a high index of suspicion throughout the continuum of trauma care to identify sentinel injuries.

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ASSESSMENT

CLINICAL SCREENING

Key Points

- A positive clinical screen identifies patients with higher probability of physical abuse that requires additional testing or evaluation.
- Screening tools with reasonable validity evidence include TEN-4 FACESp BCDR, burns, and head injury (PEDIBIRN, PIBIS, PredAHT).
- Ongoing education about child abuse screening is important for interprofessional providers across the continuum of care to understand how and why to perform screening.

Clinical screening for physical child abuse requires vigilance and the focus of diverse interprofessional trauma providers. While primary prevention is ideal, clinical screening (secondary prevention) aims to identify physical

abuse at its earliest stage. Screening is the "presumptive identification of unrecognized disease by the application of tests, examinations, history or other procedures which can be applied rapidly."[1] A positive screen identifies patients with higher probability of abuse that require additional testing or evaluation. However, screening does not lead to a diagnosis of abuse, and an initial negative screen does not "rule out" abuse. Screening must occur across the trauma/emergency care continuum (emergency department [ED], intensive care unit [ICU], medical-surgical units, and rehabilitation), in the community, and by emergency medical services (EMS).

The development of a robust evidence-based screening tool is challenging because no gold standard test exists to confirm or rule out abuse. Due to mandated reporting and the high-risk of ongoing abuse, a limited tolerance exists for false negative screening. However, false positive screens are equally unacceptable because of the cost and emotional toll on providers and families.

Screening strategies can involve one of three approaches.

- ***Mass screening.*** A tool is applied across the entire population of patients coming to the ED. Several Dutch studies (CHAIN-ER) about a mass screening program led investigators to caution others to consider cost effectiveness, as well as clinical and societal implications about this approach.[2,4,5]
- ***Selective screening.*** A tool is applied to selected high-risk groups. Escobar, et al. summarized the existing highest quality evidence regarding the association between various elements of history, physical examination, and diagnostic tests with a diagnosis of physical child abuse.[6] Screening tools with reasonable validity evidence include TEN-4 FACESp Bruising Clinical Decision Rule (BCDR), burns, and head injury (PEDIBIRN, PIBIS, PredAHT).[7-12] Keep in mind that first the presenting injury must be detected and *recognized* as a sentinel injury. See Table 1.
- ***Multiphase screening.*** Two or more screenings are applied at different times. For example, the American Academy of Pediatrics (AAP) and other organizations have guideline criteria for when to perform a skeletal survey as a second phase screening tool for physical abuse.[2,13]

In some cases, local screening guidelines were implemented by trauma centers to improve the detection of physical abuse and studied prospectively. Most studies involved single trauma centers, were underpowered, and outcomes demonstrating screening guideline efficacy in reducing provider bias were limited. Many screening guidelines resulted in increased resource utilization.[14,15] One study reported that implementation of a standardized guideline did *not* result in increased resource utilization, including decreased admissions and no change in use of CT scans.[16]

Table 1. Clinical Screening Tools for Child Abuse

Clinical Tool	Intended Population	Exclusion Criteria	Injuries/Findings	Validation Study Results
Pediatric Brain Injury Research Network (PediBIRN)[10]	Children under 3 years of age admitted to the pediatric ICU with an acute, closed, traumatic cranial or intracranial injury; tool now also validated in an ED setting[19]	• Imaging reveals "pre-existing brain malformation, disease, infection, or hypoxia-ischemia" • Injuries resulting from a motor vehicular collision	The 4 variables used were: • Clinically significant respiratory compromise any time prior to admission; • Bruising of the torso, ears, neck; • Subdural hematoma or fluid bilaterally and/or in the interhemispheric fissure; • Any skull fracture except a parietal fracture that is isolated, unilateral, nondiastatic, linear	When more than 1 variable was present, the sensitivity was 96% and the specificity was 46%
Predicting Abusive Head Trauma (PredAHT)[17]	Hospitalized children under 3 years old presenting with an intracranial injury	Cases where etiology of injury was deemed "indeterminate"	6 features are used in the tool: head or neck bruising, seizure, apnea, rib fracture, long bone fracture, retinal hemorrhage	With more than 3 features present, sensitivity was 72.3% and specificity was 85.7%
Pittsburgh Infant Brain Injury Score (PIBIS)[9]	Well appearing infants (i.e. less than 1 year of age) presenting to an ED with no history of trauma and a high-risk sign or symptom (e.g., acute life-threatening event [ALTE]/ brief resolved unexplained event [BRUE], seizure, vomiting without diarrhea, irritable, bump on scalp, bruising)	Having a previously abnormal head computed tomography (CT)	The 5-point PIBIS scale is weighted: 2 points for abnormality on dermatologic exam (e.g., bruising); 1 point for age above 3 months, head circumference above 85%, or serum hemoglobin under 11.2 g/dL	In patients with a score of 2 or greater, sensitivity of the test for identification of abnormal intracranial imaging was 93% and specificity was 53%
TEN-4-FACESp Bruising Clinical Decision Rule[8,18] A screening tool for physical abuse in children with bruising	Children under 4 years of age with bruising evaluated in an ED/hospital setting	Bleeding disorder, motor vehicle crash, severe spasticity, no bruising	• "TEN": Bruising on **T**orso (chest, abdomen, back, buttocks, genitourinary region, and hip), **E**ars, **N**eck; • **Any** bruising in infants 4 months old and younger • "FACES" bruising on **F**renulum, **A**ngle of jaw, **C**heek, **E**yelids, **s**ubconjunctivae; **p** for patterned	96% sensitive, 87% specific for predicting abuse in children with bruising, and an abuse work-up may be warranted

Trauma centers need standardized targeted screening tools for physical abuse to implement across the continuum of care, rather than ones limited to triage. One example is the Mary Bridge Screening Tool, see Appendix B-1. Guidelines for child physical abuse screening must be communicated to pertinent front-line trauma practitioners and stakeholders to ensure widespread adoption within the trauma center and system. Consider implementation facilitators and barriers to child abuse screening when developing strategies to communicate screening within a particular facility.[20] Facilitators include the following: support of the hospital board, dedicated child abuse personnel, presence of a child abuse team, and intensive training of trauma hospital staff.[20] Logistical barriers include insufficient time, quick turnover, inadequate communication skills, and lack of knowledge. A personal barrier is the fear of an unjustified suspicion.[20] Consider these facilitators and barriers when developing strategies for health care practitioner education and implementation of screening protocols.

Effective strategies to communicate screening protocols to health professionals include the following: educational sessions, hospital-specific screening protocols, automated notes or checklists within electronic medical records to prompt specialty referral, and an interprofessional child abuse team.[21,22]

Screening Education for Health Professionals

Educational sessions are the cornerstone of screening dissemination. Studies reported that health professional education improves screening results and reduces false positive rates.[21,22] Standardized educational programs and established screening protocols improve detection of child abuse and decrease bias.[21,22] Target educational initiatives to front-line providers, including physicians, nurses, and other staff members (such as child life specialists and volunteers) who may encounter patients with suspected abuse.[22] It is recommended that educational programs be formal, structured, and mandatory with a focus on hospital-specific screening protocols, child physical abuse detection, and interview techniques for discussing suspected abuse with parents. Given the rapid turnover of physicians-in-training on trauma services, offer this education frequently enough to ensure all front-line providers are educated.[21] These education sessions raise awareness of child physical abuse screening protocols across the hospital. In addition, simple brochures or published materials can be disseminated within the hospital to supplement education sessions about child physical abuse screening protocols. Consider offering educational sessions via telemedicine to more remotely located facilities.[22]

Integration of screening guidelines into electronic medical records (EMR) using checklists, automated notes, or alerts improves chances of protocol adoption and dissemination.[18,19] This process notifies providers when they need to be concerned about child abuse, and it serves as another tool to help communicate hospital-wide screening protocols. Ideally, any screening tool used needs to be concise, automated, and user-friendly with easy access to improve chances of widespread adoption.[22] Over time, these integrated screening tools become a part of routine day-to-day clinical practice.

Once a screening approach is selected, implement performance improvement (PI) related to the detection and evaluation of physical abuse. See Trauma Performance Improvement Integration section.

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HISTORY

Key Points

- Red flag history elements help differentiate intentional and unintentional injuries.
- The association between isolated history elements and physical abuse is not supported by evidence or validated screening tools, independent of findings from the physical examination, laboratory tests, and imaging.
- Reliability of the history is a problem when adult witnesses are concerned about their own safety or negative consequences of reporting. A history from the injured child often cannot be obtained because of age, development, and/or fear.
- Numerous history elements prompt health professional concerns based on their experience that may not be supported by evidence.

A careful and well-documented history is an essential component of the evaluation for physical abuse. A number of developed guidelines provide consensus on elements of concern learned from the history.[1,2] Historical clues of concern include the following:

- Social factors such as a family member history of substance use or abuse, mental health disorders (e.g., depression or psychosis), arrests or incarcerations, and intimate partner violence (IPV)
- Affect of the child and/or caretakers (e.g., inappropriate anxiety or calmness)
- Inappropriate comments by the parent about or to the child (e.g., "they are difficult to care for")
- Parents' reactions to the child's behaviors or pain (e.g., exaggerated concern for the patient that seems forced or unauthentic, or minimizing the patient's pain)

- Inappropriate interactions between family members (e.g., fighting with each other in the examination room or unusual displays of affection)
- The family's approach to discipline (e.g., spanking or other forms of corporal punishment)

These clues are difficult to quantify in the EMR, and evidence for the above factors is limited to expert opinion and health professional experience.

Reliability of the historical information is a concern. Adults who provide the history or witness the event can be concerned about personal safety and/or the negative consequences of reporting. Some injured children are unable to provide a history due to age, development, and/or fear.

In a multivariate analysis of the stated reason for the visit, one of the best predictors of child physical abuse was injury inconsistent with the history, such as a vague or minor explanation for a significant injury (e.g., bumped head on car seat when a large hematoma is seen). Another good predictor is the patient was referred to the clinician for suspected child abuse.[6] Other overall impressions or experiences based on numerous historical factors can prompt health professional concerns. Well-described history red flags for abuse related to the type of injury and how it occurred include the following:[3-10]

- The history changes over time by same source and/or story discrepancies are noted between different sources
- Delay in seeking care for more than 24 hours after the injury
- Responses to questions related to mental status, seizures, lethargy, irritability, pain, feeding vomiting, or apnea can raise concerns for child abuse when the child does not have a trauma-related chief complaint
- No history of trauma is reported and/or possible trauma is denied when an obvious injury is present (e.g., "we do not know what happened," or "we just noticed the bruise")
- An inappropriate response or child behavior is reported by the caregiver after the injury (e.g., a child with a femur fracture was reported to walk after the injury)
- An injury is attributed to self-inflicted harm, a pet or sibling, or to resuscitation or treatment efforts after the injury
- A prior history of an unexplained death of a child in the household is reported
- An injury mechanism inconsistent with the infant's development and/or age (e.g., a 2-month-old rolling over). The expected age of milestone achievements in the first year is as follows:
  - 2 months: head control/head up
  - 4 months: roll over/ sit with support
  - 6 months: sit without support



- 9 months: cruise up on two legs and stay with support
- 12 months and beyond: walk, run, jump, climb

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BRUISING AND ORAL INJURIES

Key Points

- Respect the bruise – it's an injury with high predictive significance.
- Bruises are the most common injury from child physical abuse. Bruises and oral injuries are the most common missed or misinterpreted injuries (sentinel injuries) before a child is seriously injured or killed from abuse.
- Bruising resulting from physical assault occurs most often in different body locations than do those resulting from unintentional trauma (soft areas vs. bony areas).
- Any bruise, anywhere, on an infant that is not yet mobile is highly concerning for inflicted trauma, requiring due diligence.

Bruising Injuries

Bruising is the most common and usually the first injury to occur from physical child abuse (PCA). It is often misdiagnosed as unintentional, incidental, or completely overlooked by the medical community, underestimated regarding risk by CPS, or unsubstantiated by the judicial system as not meeting the evidentiary requirements for abuse.[1-6] Underestimation of the importance of this injury (medical recognition failure) leads directly to poor patient outcomes when the patient returns back to the abuse setting. Recognition

failure is especially risky for infants too young to defend themselves or toddlers too afraid to say anything. The burden of safety rests on the shoulders of trauma and medical professionals to correctly interpret these (often subtle) skin and oral injuries.

Studies of sentinel injuries identified missed opportunities for earlier diagnosis of PCA by medical and/or CPS providers.[2-4,7-9] In many cases the repeat injury was more severe,[2,3,5,7-9] with mortality rates significantly increasing with repeat episodes of physical abuse.[9] Sheets reported sentinel injuries in the form of misinterpreted bruising or other similar findings at a rate of 27.5% in patients identified as likely abuse.[7] Jenny, et al. and Letsen, et al. identified similar "missed opportunities", with sentinel injury rates (most often bruising or oral injuries to the frena) of 31% for young children ultimately diagnosed with abusive head trauma.[3,8] Pierce, et al. studied a series of fatal and near-fatal physical abuse cases in young children, identifying a high rate of prior unexplained bruising in 64% of cases, all of whom suffered subsequent traumatic brain injury (TBI) resulting in 4 deaths.[2]

Distinguishing between bruise characteristics predictive of abuse and expected to occur in unintentional injury can lead to better injury plausibility assessments and differentiation of abuse-related versus unintentional trauma in children. See Table 2.

Table 2. Distinguishing Bruising Characteristics Between Abuse and Unintentional Injury

Bruise Events	Bruising Characteristics
Bruises associated with child age and developmental capabilities	• "One and done" is the rule - more than 80% of children sustained a single bruise from a single injury mechanism. • More than 3 bruises from a single event was extremely rare, and more than 5 bruises from a single event was not observed. • Bruises to opposite sides of the body (front/back or left/right) were extremely rare and observed only in the case of a motor vehicle crash or fall down 12 steps. • Bruises over bony prominent areas occur most often with unintentional or incidental injuries.
Bruises Associated with Physical Abuse	• Bruises to non-bony prominent areas of the body are highly concerning for abuse in all children, including those with disabilities. • Petechia were most often indicative of abuse. • Bruising in infants and children not independently mobile is highly concerning for abuse. • Bruises cannot be dated by their color.

Data from: Hibberd O, Nuttall D, Watson RE, *et al*. Childhood bruising distribution observed from eight mechanisms of unintentional injury. *Arch Dis Child.* 2017; doi:10.1136/archdischild-2017-312847; Feldman KW. Patterned abusive bruises of the buttocks and the pinnae. *Pediatrics*. 1992; 90: 633–6; Pierce MC. *Arch Dis Child.* 2017; 102(12): doi:10.1136/ archdischild-2017-313367; Maguire S, Mann M. Systematic reviews of bruising in relation to child abuse—what have we learnt: An overview of review updates. *Evid Based Child Health*. 2013; 8(2): 255–263; and Escobar, Jr. MA, Flynn-O'Brien KT, Auerbach M, et al. The association of nonaccidental trauma with historical factors, examination findings, and diagnostic testing during the initial trauma evaluation. *Trauma Acute Care Surg*. 2017; 82(6): 1147-1157.

Falls down stairs or from the bed or couch are the most common fabricated trauma histories provided by caregivers to cover an act of abuse. The stair fall history is invented to explain multiple impacts (e.g., multiple stairs equates to multiple bruises). Research shows however that most stair falls produce 0 or 1 bruises, and occasionally up to 3 bruises.[10] Concern for abuse is higher when a child has multiple bruises and the reported story of injury is a stair or short fall.[11,12] Short falls from a couch or bed most often result in no bruise, or a bruise reflecting the impact site (such as forehead).[13]

A multicenter study (N=2200) of bruising characteristics validated a previously derived BCDR for identifying children at high-risk for physical abuse.[14-16] The validated, *TEN-4-FACESp BCDR***,** applies to children ages less than 4 years and evaluates bruising on the **T**orso**, E**ar**,** **N**eck, **F**renulum, **A**ngle of jaw, **C**heek [buccal], **E**yelids, **S**ubconjunctiva, or **p**atterned bruising, or *any bruising anywhere on an* infant 4 months of age and younger. The following four questions are used to screen children at high-risk for abuse:

- Body region: is there bruising to the T-E-N or F-A-C-E-S regions?
- Is bruising seen anywhere on an infant 4 months of age and younger?
- Does the bruising or petechia display a geometric shape or recognizable pattern?
- Is a clear, developmentally plausible story provided that accounts for all of the child's bruises?

Bruising that meets any one of the criteria is considered a "positive" screen for a high likelihood of physical abuse and requires further evaluation. Bruising serves as a warning of occult internal injuries. A higher rate of positive screening studies (e.g., skeletal survey and head imaging, or trauma labs) occurs when BCDR bruises or oral injuries are present. Harper, et al. found that 50% of children with bruises had at least one additional serious injury. Of infants 6 months of age and younger who appeared to have isolated bruising at presentation, screening studies identified 50% of them had at least one additional serious injury such as a fracture or intracranial hemorrhage.[17]

Oral Injuries

Relatively minor traumas can result in an injury to the frenulum, especially the upper lip frenulum. Generally, an injury to the frenulum has low specificity for abuse; however, Dorfman, et al. reported that infants presenting with medical rather trauma chief complaints (such as fussiness or vomiting) who had an injured frenulum often had internal injuries such as a subdural hematoma or rib fractures that cause infant irritability.[18]

A frenulum injury in an infant without a clear history of trauma is an important sentinel injury, and the infant requires a careful evaluation for abuse.[18-20]

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BURNS

Key Points

- Burn injury is both a source and a marker of abuse in children.
- The risk of recurrent abuse and mortality is high in children with burn abuse injury unless intervention occurs.
- Patterns of scald and contact burn injury help distinguish between unintentional and abuse-related injury.

Burn injury causes more than 60,000 deaths to children and youth under 20 years worldwide, and a child dies from a burn injury every five minutes.[1,2] Non-fatal burn injury incidence is even greater, and it is a leading cause of long-term economic, physical, social, and psychological cost. In the United States, scald burns are the leading cause of burn injury in small children, and scalds represent 70% of hospitalized burns in children less than 5 years of age.[3] Children are especially susceptible to burn injury for several reasons:[2]

- Ongoing cognitive and physical development,
- Thin skin (a temperature of 65 degrees Celsius causes a burn in a child in 0.5 seconds),
- Propensity to "freeze" when in contact with a heat source (resulting in deeper burns), and
- Curiosity leading them to investigate their environment and risk burn exposure.

Burn injury is both a source and a marker of abuse-related injury in children. Small children are susceptible to abuse-related burn injuries due to their small size, reliance on adults for basic physical needs (such as toileting), and their psychological immaturity. Estimates of abuse-related childhood burn injury vary with reports of 3 to 24% of cases referred to CPS for suspected abuse.[4,5] Of greater concern is the likelihood that a child with a burn injury is 6.9 times more likely to sustain future child abuse or neglect by the age of 6 years compared to non-burned children.[6] Half of the children who experience abuse-related burn injury will sustain recurrent abuse (type varies), and 30% of children with burn abuse eventually die unless intervention occurs.[7] Additionally, burns due to neglect outnumber those due to abuse by 9:1, making it essential to evaluate the circumstances of every burn in a child.

Common History Factors

The characteristics of children who sustain abuse-related burn injury follow several common patterns:

- The victim mean age is 2 to 4 years, older than other forms of abusive trauma in children[7]
- Boys have 2 to 3 times greater incidence[8]
- The victim is often from a family with more than 2 children, is the youngest child, and has signs of previous and concurrent trauma, as well as emotional abuse[8]

- The victim is more likely to have a single parent, a mother with lower level of education, lower family income, no paternal involvement, parental unemployment, higher rates of parental alcohol and drug abuse, and live with family members other than biologic parents[9]
- A strong association exists between a past history of abuse in the adult abuser[8]

Other features are common in abuse-related burn injuries including: a history of family social services involvement, intimate partner violence, blaming a sibling or person not present for the burn,[10] a trigger (such as soiling or enuresis), inadequate supervision, history of a burn or other injuries, or lack of parental concern. A quiet/withdrawn child after burn injury is particularly worrisome and may be a sign of recurrent abuse.

Clinical Patterns

Patterns of injury frequently provide clues that help distinguish between intentional and unintentional scald and contact burns. See Table 3.

Obtain a full skeletal survey for any child less than 2 years of age with suspected abuse-related burn injury due to an associated 16.3% incidence of occult fractures in this age group.[2,12,13] Abdominal injuries are no less frequent in abuse-related burns compared to a control group; however, a lower yield from neuroimaging was found in children with abusive burns.[13] Consider obtaining neuroimaging and diagnostic testing for abdominal injuries in the context of injury.

Table 3. Characteristics Distinguishing Abuse-Related from Unintentional Burns

Abuse-Related Injury	Unintentional Injury
Scald Burns	
• Mechanism - Immersion (hot water) • Stocking distribution • Clearly demarcated borders • Uniform burn depth • Tub burn distribution: bilateral feet, lower limbs, buttocks, and perineum, donut sign on buttock[9] • Flexion sparing of popliteal fossa or groin (tub burn)[11] • Sole of foot may be spared if standing in tub	• Mechanism - spilled soup or hot liquid • V-shaped, asymmetric, tapering • Irregular borders • Decreasing burn depth as tapers toward abdomen • Distribution - unilateral, anterior chest and shoulder • Splash marks • No or irregular burn of popliteal fossa
Contact Burns	
• Mechanism – hot item held against skin • Located on limbs (including feet), or back of hand • Sharply demarcated, may be in shape of object • Multiple punched out circular burns in various stages of healing (e.g., from cigarette)	• Mechanism – grabs a hot object • Single location on palm of hand or anterior body • No clearly demarcated edge • Child is usually less than 4 years old[2]

Children who sustain abuse-related burn injury have a higher morbidity and mortality than children with unintentional burns. Overall, the burn injury is more extensive, and children with abuse-related burn injury have a longer length of stay, more septic complications, increased ICU admissions, and increased mortality.[9] Refer children with severe burns requiring hospitalization to a burn center capable of caring for children.

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ABUSIVE HEAD TRAUMA

Key Points

- The history given on ED presentation is frequently an unknown mechanism or a mechanism not consistent with the degree of observed injury.
- "Occult symptoms" of abusive head trauma (AHT) include unexplained emesis, macrocephaly, seizure, or loss of consciousness. Recognize these as possible sequelae of AHT.
- Common radiographic findings in patients with AHT include subdural hematoma, hypoxic-ischemic changes, and cerebral edema.
- Skull fractures can result from either unintentional injury or AHT. Findings more consistent with an unintentional etiology include unilateral, linear skull fracture without associated intracranial injury.

On presentation, a common injury history for AHT is either unknown cause or a low-risk mechanism for a significant injury (e.g., fall from 3 feet or less).[1] Unintentional injuries are more often associated with a verifiable cause (e.g., motor vehicle crash).[2] Children with AHT may present with "occult symptoms" such as emesis, macrocephaly, or a syncopal event.[3, 4] Patients with severe injury due to AHT, can present with apnea or seizure.[5]

Head CT is the initial imaging study which can identify skull fractures, intracranial bleeding, cerebral edema, and mass effect/intracranial shift.[6] Magnetic resonance imaging (MRI) better demonstrates brain tissue changes such as micro-hemorrhage, cerebral edema, and areas of stroke. An MRI also better distinguishes extra-axial fluid collections (e.g., differentiating benign enlargement of the subarachnoid spaces from chronic subdural hematoma) and the age and extent of subdural hematoma.[6] Neuroimaging findings for AHT-related subdural hematoma (SDH) include SDH without an associated skull fracture, more chronic appearing hematoma, and areas of hematoma with blood of multiple apparent ages. Hypoxic-ischemic changes and cerebral edema are also associated with AHT.[7]

Isolated skull fractures with TBI result from unintentional and abuse-related causes, and they occur with equal frequency from both etiologies.[8] Complex fractures may be more common following AHT, and findings more consistent with an unintentional injury include unilateral, linear skull fracture without associated intracranial injury.[9]

Alternative explanations for SDH include benign enlargement of the subarachnoid spaces or birth trauma. While benign enlargement of the subarachnoid spaces potentially increases the likelihood of a patient having SDH,[10] a subset of these patients may also have other signs of AHT, warranting investigation.[11] SDH is commonly present on brain MRI after either vaginal delivery or Cesarean section; however, SDH due to birth trauma is often minor and resolves within 1-3 months.[12]

Eye examination to check for retinal hemorrhages provides further evidence of AHT.[13] Gathering maximal evidence of AHT is important to confirm the injury etiology and confront alternative explanations.[14] See the Eye Findings in Abusive Head Trauma for more information.

Clinical prediction tools exist for evaluating patients with possible AHT in a variety of clinical settings (Table 1, page 11).[15,16,17] Of note, the Pediatric Emergency Care Applied Research Network (PECARN) head injury clinical prediction rules may not be applicable to children with suspected AHT as children with "suspected child abuse" were excluded from the validation study.[18]

Outcome from AHT is variable and related to injury severity. Radiographic markers indicating greater disease severity such as cerebral edema, midline shift, and evidence of hypoxic-ischemic changes correlate with an increased risk for early post-injury seizures.[19,20] Consider using continuous electroencephalography for children with these findings, as well as prompt neurology consultation to monitor and treat seizures.[21]

Subclinical seizures may be more common in children with AHT, and treatment/prevention of seizures may decrease secondary brain injury.[22]

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EYE FINDINGS IN ABUSIVE HEAD TRAUMA

Key Points

- Every victim of AHT deserves a detailed ocular examination.
- Retinal hemorrhages in isolation are not diagnostic of AHT; however, extensive bilateral posterior segment hemorrhages are particularly suggestive of this diagnosis.
- Consult with ophthalmology for dilated ophthalmoscopy within 24 – 48 hours of presentation because intraretinal hemorrhages can resolve in a matter of hours to days.
- Suspected victims of AHT at very low-risk for retinal hemorrhages include those without intracranial hemorrhage, normal mental status and no bruising of the head or face.[1,2]

Vision Screening

Screen for visual acuity as it is the strongest prognostic indicator of ocular trauma in children with AHT. Test each eye of preverbal children for fix and follow behavior using illuminated or brightly colored handheld toys. Evidence of good vision includes central and steady fixation that is maintained through a blink (central, steady, maintained). Developmentally normal children 3 years and older can often be coaxed by a parent to play a matching game with HOTV letters, common symbols, or tumbling E's on a clipboard when the characters are presented on a chart as isolated optotypes. Snellen letters are used for older children and adolescents. Pinhole occluders and near-cards are good substitutes to assess the visual acuity when the children with refractive errors do not have their spectacles available.

Ocular Examination

Perform an ocular motility, confrontational visual fields, pupil status, and a careful "front-to-back" examination on each child with suspected AHT. A portable slit lamp or other form of illuminated magnification is helpful to evaluate anterior segment structures. A dilated indirect ophthalmoscopy is performed in cases of suspected AHT unless a child is considered to be at very low risk for retinal hemorrhages (e.g., no evidence of intracranial hemorrhage, normal mental status, and no bruising of the head or face).[1] Give serious consideration regarding the need for a dilated fundus exam in a child at low risk for retinal hemorrhages. The exam is often poorly tolerated, and it adds to the emotional trauma already experienced by the child.

Retinal hemorrhages in AHT victims typically involve the posterior pole that can be viewed with the direct ophthalmoscope. Mydriatic drugs are commonly used to dilate the pupils in children, but infants less than age 3 months may have adverse effects associated with systemic absorption. Avoid pharmacological pupil dilation in victims with severe neurologic



impairment who require periodic pupil reactivity assessment. Notify all members of the team and obtain permission before eye drops are instilled.

Orbital and Adnexal Trauma

Pain with motility and diplopia can be indicative of orbital trauma. Orbital roof fractures are the most common type of orbital fractures in children under the age or 3 years,[3] most often caused by a forward fall and rarely AHT. Orbital floor fractures in children are often caused by significant blunt trauma to the face and orbits. Unlike in adults, floor fractures in children often present without significant lid edema and ecchymosis.[4-6] These are often greenstick-type fractures which allow intra-orbital contents to prolapse into the maxillary sinus and become entrapped, leading to restricted vertical ocular movements. If accompanied by nausea, vomiting, bradycardia and/or syncope (oculocardiac reflex) urgent surgical repair is needed.[6]

Anterior Segment Trauma

Anterior segment manifestations of AHT are varied and include subconjunctival hemorrhage, corneal abrasion, corneal opacity, traumatic mydriasis (blown pupil), hyphema (blood in the anterior chamber), and cataract. When the globe is intact, a subconjunctival hemorrhage is expected to resolve like any other bruise and can be observed. Refer all children with hyphemas (Figure 1) to ophthalmology. If the child has sickle cell disease closely monitor for elevated intraocular pressure. Traumatic cataracts are rare in AHT, but if they impair vision in a child less than 8 to 10 years old, early surgery is indicated.

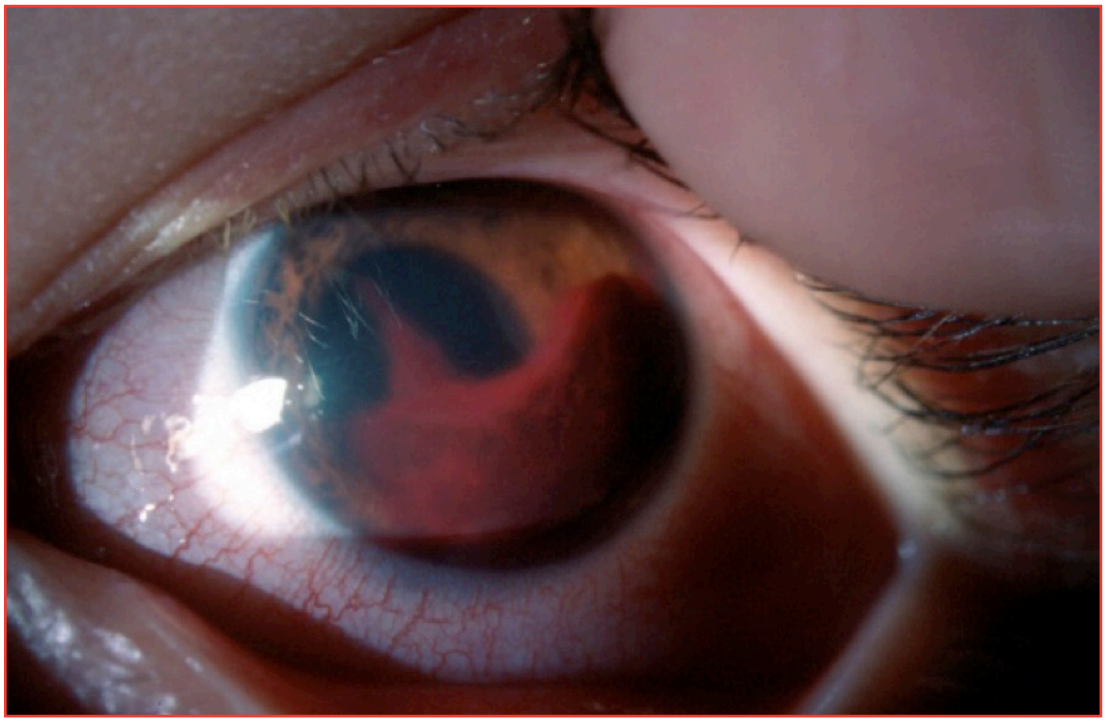
Posterior Segment Trauma

Posterior segment injury is almost always noted in AHT. Children less than 2 years old are most susceptible to serious injury with shaking alone compared to older children. However, when combined with impact, children of all ages are at risk for serious ocular injury, especially those with concurrent intracranial hemorrhage. Refer these children to an ophthalmologist within 24 to 48 hours of presentation. In these cases, intraretinal hemorrhages are the most common finding.[7]

Intraretinal hemorrhages are caused by elevated intraocular pressure causing papilledema or by violent acceleration-deceleration forces causing traction along the vitreo-retinal interface (shearing). Clues can suggest the approximate time of the traumatic event.

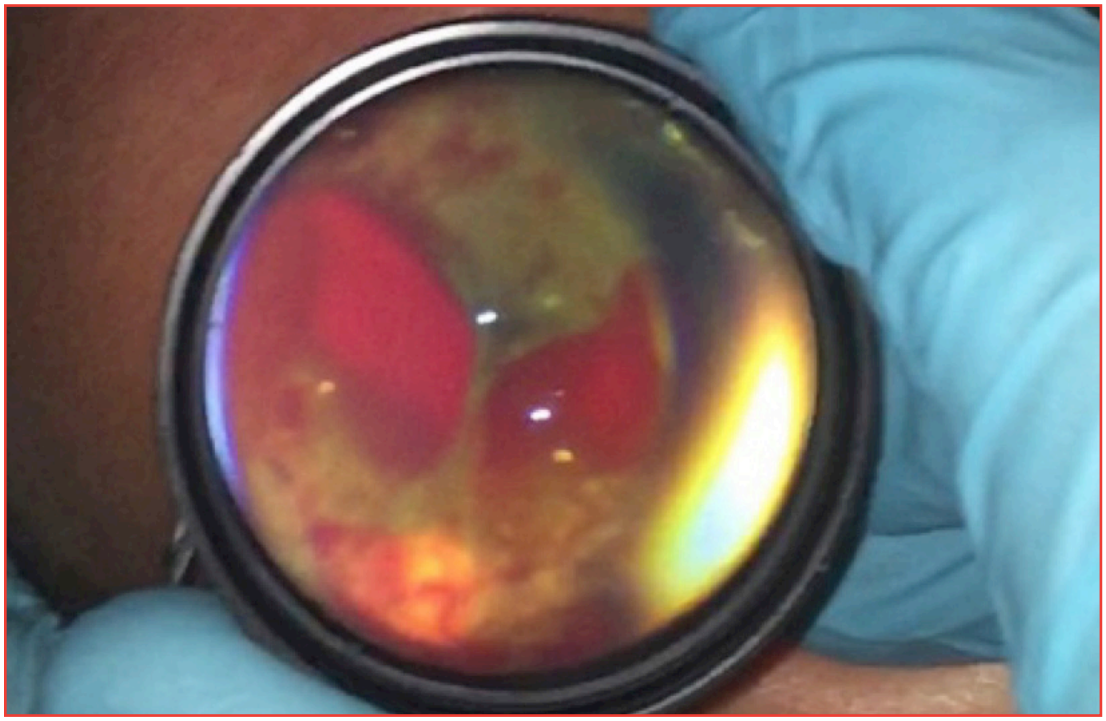
- When intraretinal hemorrhages are present, the injury likely occurred within days of the examination. Intraretinal hemorrhages can resolve within 72 hours, and even intraretinal hemorrhages too numerous to count can resolve in a matter of days.[7] If the intraretinal component has resorbed, it is much more difficult to time the injury.
- Subretinal, preretinal and intravitreal hemorrhages (Figure 2) indicate more severe AHT and often take weeks to months to resolve.

Figure 1. Blood in the Anterior Chamber of the Eye (Hyphema)



Courtesy of William R. Raymond, IV, MD

Figure 2. Hemorrhages at All Levels – Intraretinal, Subretinal, Preretinal and Intravitreal



Courtesy of William R. Raymond, IV, MD

While intraocular hemorrhages alone are not diagnostic of AHT, the presence of extensive bilateral posterior segment hemorrhages involving all layers of the retina, especially those associated with retinal folds[8] and traumatic retinoschisis[9] are particularly suggestive of the diagnosis.

The role of the ophthalmologist is supportive in cases of suspected PCA. Retinal hemorrhages are a significant finding in non-abuse-related trauma; however, this finding alone cannot be used to diagnose AHT without supportive history, physical examination, radiographic, and laboratory evidence. Other conditions to consider when intraretinal hemorrhages are present include increased intracranial pressure, hypoxia, sodium balance, bacterial meningitis, coagulopathy, anemia, birth trauma, leukemia or other systemic disorders.

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ABDOMINAL INJURIES

Key Points

- Abdominal injuries inflicted from child abuse are a significant source of morbidity and mortality.
- Duodenal injuries in young children from blunt force injury to the upper abdomen are considered a sentinel injury of physical abuse.
- Imaging is recommended when abdominal tenderness and bruising is noted.
- Abdominal wall bruising is absent in up to 80% of children with abusive injuries; serum alanine aminotransaminase (ALT), aspartate aminotransaminase (AST), and pancreatic enzymes are used to screen for occult abdominal injury.

Abdominal injuries inflicted from child physical abuse, particularly hollow viscus injuries with delayed presentation, are a significant source of morbidity and mortality. A systematic review of abusive abdominal injuries in children revealed they were younger (2.5-3.7 years) than children with unintentional injuries (7.6-10.3 years), and the mortality was significantly higher in abusive injuries (53% vs. 21%).[1] A review of the Kid's Inpatient Database revealed that 25% of abdominal trauma hospitalizations in infants were the result of PCA.[2] The proportion of abdominal trauma cases due to abuse was 50% in data evaluated from the National Pediatric Trauma Registry (NPTR).[3]

Abdominal injuries can be subtle with nonspecific signs and symptoms, and abdominal wall bruising is absent in up to 80% of children with abuse-related injuries.[1] Solid organ (liver and spleen most often) and/or hollow viscus injuries are found in isolation or combination. Hollow viscus injuries with late presentation significantly increase the rate of infectious complications and associated morbidity. Consider abdominal injury when other major torso injuries are present. Associated abdominal injury was reported in 26% of abused children with acute rib fractures and 100% of children with thoracic or spine injuries.[4]

Urgent evaluation by a surgeon is essential for any abdominal injury. Imaging is recommended when tenderness or bruising is evident. CT is more sensitive than ultrasound. Consider CT in suspicious cases or when the abdominal exam is unreliable, such as in a patient with low Glasgow Coma Scale (GCS) score, very young age, or a distracting injury.[5] For obvious peritonitis or evidence of bleeding, operative exploration often precedes imaging.

Duodenal injuries in young children resulting from blunt force injury to the upper abdomen are considered a sentinel injury of PCA. Sowrey, et al. reported that 100% of duodenal injuries in children under 2 years of age and 54% in children 3-5 years old were as a result of physical abuse.[6] The diagnosis of duodenal injury is challenging. Clinical symptoms often take days to develop. CT findings are not always obvious if retroperitoneal perforation is present. An elevated serum amylase or lipase (>100 U/L) can indicate the diagnosis. An upper GI study often provides the most useful information. Some patients with a delayed presentation have a duodenal hematoma or duodenal stricture, with signs of proximal intestinal obstruction.

When clinical suspicion for abdominal trauma is low, screen for occult abdominal injury with measurement of serum ALT, AST, and pancreatic enzymes. Elevated transaminases are indicative of severe blunt force trauma, not necessarily liver injury. One study of nearly 3,000 children undergoing abdominal abuse evaluation reported a sensitivity of 84% and specificity of 83% for abdominal injury when an AST or ALT is greater than 80 IU/L.[7] The specificity of elevated pancreatic enzymes is similarly high for possible pancreatic injury, as occurs with unintentional injuries.[8]

Early identification of all injuries is vital because a child admitted with an undiagnosed solid organ injury could bleed and become unstable. Close evaluation by a surgeon, either on the wards or in the intensive care unit, is prudent and important.

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SKELETAL INJURIES

Key Points

- Skeletal fractures are a sentinel injury and the second most common presenting sign of physical abuse.
- Fractures more specifically associated with abuse include rib fractures, classic metaphyseal lesions, or long bone fractures in the pre-ambulatory infant; however, any fracture location or pattern can be accompanied by physical abuse.
- High suspicion for physical abuse is warranted with a skeletal fracture in younger children, especially infants prior to walking.

For all types of fractures, carefully consider the child's age, the presenting history, and the physical findings to distinguish a fracture secondary to physical abuse. Children presenting with fractures from PCA are typically very young, with 68-80% of patients less than 18–24 months of age.[1,2] It is estimated that 24.9% of all fractures in children younger than 1 year of age are attributable to abuse.[3] Seriously consider PCA in non-ambulatory infants, because the energy from the usual reported fall mechanism is inadequate to cause the fracture.

Fractures are a sentinel injury of physical abuse, second in frequency to bruising or soft tissue injury. Fractures from unintentional injuries are common in toddlers and young children, making

it difficult to identify those caused by abuse. Up to 20% of fractures caused by physical abuse are initially attributed to unintentional injury.[4] Misdiagnosis places the child at high-risk if returned to the abusive environment. Several guidelines help identify fractures resulting from physical abuse.

Children with acute fractures often present with irritability, pain, guarding, and limited use of the fractured extremity. Physical examination often demonstrates swelling, and inspection of the skin occasionally provides mechanism clues (e.g., bruising from vigorous grabbing, shaking, or twisting). However, when presentation is delayed, overt external signs of fracture in abuse-related injury can be missing. Image all suspected extremity fractures with dedicated biplanar (AP and lateral) radiographs.

Distinguishing abuse-related fractures from unintentional injury fractures can be difficult because of the variety of fracture type and location associated with physical abuse. Some fracture types have a higher specificity for physical abuse, including the following:[5]

- Long bone classic metaphyseal lesions (fractures that occur through the primary spongiosa of the distal metaphysis of a long bone) due to twisting or shearing, have a bucket handle appearance on radiographs
- Rib fractures associated with the ribs held between the hands in a compressive shaking maneuver
- Fractures in unusual locations (sternum, scapulae, vertebrae) are associated with a holding and shaking mechanism

Although these fractures are highly specific for PCA, recognize that any fracture can be caused by abuse.

Importance of Age More than Fracture Location

The most common fracture types in relation to abuse are rib, femur, tibia and humerus fractures.[6,7] See Table 4.

Rib fracture in any location or pattern in children under 3 years of age warrants a thorough evaluation of PCA. Posterior rib fractures, multiple or bilateral rib fractures, and multiple rib fractures in various stages of healing are highly associated with abuse.[7,8]

Femur and tibia fractures, while common fractures requiring hospitalization in children, are not highly specific for abuse. The ambulatory toddler can develop a femur or tibia fracture from low energy slips and falls. Location or fracture type (i.e., spiral, transverse) is not pathognomonic for abuse. The midshaft femur is the most common location in children with both PCA and unintentional injury.[8] Age less

Table 4. Different Fracture Types and Rates in Young Children Who Were Abused

Type of Fracture and Age	Abuse-Related Rate
Rib fracture[5]	
• Infants less than 12 months	67-84%
• Children 12-35 months	28-29%
Femur [8]	
• Infants less than 12 months	16.7-35.2%
• Children greater than 12 months	1.5-6.0%
Humerus[9,10]	
• Children less than 3 years	8-79%

than 18 months is the strongest risk factor for both femur and tibia/fibula fractures associated with abuse.[9]

Humerus fracture of any type in children less than 18 months is an important risk factor for PCA.[10,11] In ambulatory children older than 18 months supracondylar humerus fractures are more commonly associated with unintentional injury rather than abuse.

Fractures of the hand, foot, pelvis, and spine are occasionally found on a radiographic skeletal survey. Due to the injury severity and potential neurologic risk, spine fractures in infants warrant special consideration. As with other fractures, children with vertebral column injury secondary to PCA are more likely to be under 2 years old.[12]

The cervical and thoracolumbar spine are more commonly injured, presumably from a hyperflexion or shaking force. While clinical presentation of cervical spine injuries varies, have a higher level of suspicion in infants with known AHT, or those presenting with impaired consciousness, respiratory distress, or neurologic deficits. Thoracolumbar spine fractures can present with focal neurologic symptoms to the lower extremities and abnormal kyphosis visible on physical exam in this region. Types of cervical spine fractures, e.g., compression type, hangman's, or pedicle are reported, but cervical spine ligamentous injuries identified on MRI are much more common given the relative elasticity of the pediatric spine. Cases of abuse-related cervical spine ligamentous injury in young infants often coexist with abusive head trauma (50%-78% concurrent cases).[13,14]

Importance of History

Due to lack of specificity for abuse in many children presenting with fractures, seek clues from the history. Common risk factors include a mechanism of injury that does not explain the fracture type, inconsistent history or lack of an injury history, unwitnessed mechanism, and delay in seeking care for more than 24 hours.[9,15]

Other Considerations

Some infants and children sustain fractures due to increased bone fragility. Perform a differential diagnosis of common conditions affecting bone strength, especially when the history suggests a mechanism other than PCA. Conditions that increase the propensity for fracture include collagen disorders such as osteogenesis imperfecta, malnutrition and deficiencies (e.g., rickets and scurvy), chronic renal disease, or any condition that subjects the child to prolonged immobility (e.g., severely involved cerebral palsy). A child with severely involved spastic cerebral palsy and low bone mineral density could potentially develop a femur fracture from routine care such as transferring or diapering. Children with osteogenesis imperfecta can present with multiple fractures in various locations with seemingly minor trauma. Fractures can also occur in neonates during vaginal or caesarian deliveries (e.g., difficult deliveries due to shoulder dystocia) that are discovered in later stages of healing and misinterpreted for abuse. Premature infants requiring extensive and prolonged neonatal ICU support are also are at risk of osteopenia and fractures in the first few months of life.[16,17] For all children presenting with fractures, consider the possibility of a less common condition that can explain the fractures present.

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LABORATORY SCREENING

Key Points

- Obtain serum transaminases (AST/ALT), lipase, hematocrit, and urinalysis in all children undergoing forensic evaluation for child physical abuse.
- Evaluate serum alkaline phosphatase, calcium, phosphate, and vitamin D levels in cases of unexplained fracture.
- Obtain specific recommended coagulation studies in all children with "spontaneous" or unexplained hemorrhage, including bruising and intracranial hemorrhage without fracture.
- Child physical abuse can occur in the presence of an underlying medical disorder and the mere presence of hemophilia or metabolic bone disease does not exclude the diagnosis of child physical abuse.

Laboratory studies are an important part of the forensic evaluation for injuries in all patients with suspected PCA. Screening laboratory studies are used to evaluate possible injuries, while specific coagulation or metabolic assays are performed to identify potential underlying genetic or metabolic causes of "spontaneous" bleeds or fractures.

Biochemical Screening. Specific laboratory screening is designed to minimize the use of high-dose ionizing radiation from routine CT in all patients while avoiding missed injuries.

AST/ALT. The routine use of hepatic transaminases for screening in blunt abdominal trauma is well-supported.[1-4] While higher cut-off values are used in the general blunt trauma population, use more conservative values (AST or ALT above 80 IU/L) to trigger a CT scan of the abdomen and pelvis in suspected PCA. Even the most minor injuries (e.g., Grade 1 liver laceration) need to be detected. Elevated transaminases are also associated with pancreatic, splenic, mesenteric, and intestinal injuries. The forensic data from this diagnostic study aids in prosecution of perpetrators, even if the injury is minor and the patient can be potentially discharged from the ED with close follow-up.

Transaminase levels peak and decline rapidly within the first 24 hours, so it is essential to obtain these screening lab tests in the ED during the initial evaluation.[5] However, due to the unknown timing of injury in PCA, use caution when interpreting 'normal' transaminases as indicative of no injury. A high index of suspicion for injury must remain even if levels are normal due to the possibility of a delayed presentation or old injury.

Lipase. The addition of lipase to routine biochemical screening can increase the overall sensitivity and decrease the risk of missed pancreatic injuries.[1] While many pancreatic injuries are associated with elevated transaminases initially after injury, these elevations are transient and become unreliable more than 24 hours after injury. Consider PCA in the differential diagnosis of any child with "idiopathic" pancreatitis. Request a CT scan of the abdomen and pelvis with a lipase elevation over 100 U/L.

Hematocrit and Urinalysis. The hematocrit and urinalysis are components of screening for high-energy blunt abdominal trauma. In cases of unknown injury mechanism, the mechanism is considered high-energy until proven otherwise. Most pediatric centers incorporate routine hematocrit levels and urinalysis for hematuria into screening protocols for blunt abdominal trauma in PCA. Findings can raise concerns about occult hemorrhage and trigger evaluation for a source of hemorrhage. Request a CT scan of the abdomen and pelvis when findings raise concerns about occult renal injury. Because anemia (hematocrit less than 30) is also associated with intracranial hemorrhage in the PCA, obtain a CT scan of the head.[6]

Biochemical Evaluation to Rule-out Non-Traumatic Causes of Injuries. Children with injuries resulting from abuse can often mimic patients with underlying coagulopathy or metabolic bone disease. However, *PCA can still be the cause of injury in the presence of an underlying medical disorder, and the mere presence of hemophilia or metabolic bone disease does not exclude the diagnosis of PCA.* Assays for bleeding or metabolic disorders are warranted to detect an underlying medical cause as a possible etiology for a fracture or spontaneous hemorrhage.

Evaluation for Bleeding Disorders. Evidence-based guidelines exist for the work-up of underlying bleeding disorders in patients with suspected PCA.[7] For patients with unexplained bruising or spontaneous bleeding, initial testing includes: prothrombin time (PT), activated partial thromboplastin time (PTT), von Willebrand factor (VWF) antigen, VWF activity (ristocetin cofactor), Factor VIII level, Factor IX level, and complete blood count with platelet count. For patients with unexplained intracranial hemorrhage or intracranial hemorrhage without associated fracture and suspicion for PCA, initial testing includes: PT, PTT, Factor VIII levels, Factor IX levels, CBC, fibrinogen levels, and d-dimer levels. In addition to these initial studies, many

centers add platelet function assays (such as PFA-100) into the initial work-up, but this practice is not widespread. Consult with a pediatric hematologist if any abnormality is identified.

Evaluation for Underlying Bone Disease. No standardized or consensus guidelines exist for the work-up of metabolic bone disease. Consider osteopathy of prematurity, osteogenesis imperfecta, rickets, or underling mineral deficiency as causes of multiple fractures. Standard initial assays include calcium, phosphate, alkaline phosphatase, and vitamin D levels. Early engagement of a child abuse pediatrician, endocrinologist, and/or geneticist is recommended if an underlying medical bone disorder is being considered. Genetic testing is generally directed by medical subspecialists.

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IMAGING FOR SUSPECTED CHILD ABUSE

Key Points

- A brain CT without IV contrast is the best initial examination for detecting intracranial hemorrhage and skull fractures caused by AHT in children with neurological impairment.
- Brain MRI is more sensitive for brain parenchymal and cervical spine injuries. Acute subarachnoid hemorrhage or small subdural hemorrhages can be inconspicuous on MRI in the first few days after injury .
- Complete radiographic skeletal surveys with 22 separate views must be performed on all children under the age of 2 years when a suspicion of abuse exists. A limited follow-up skeletal survey performed 2 weeks after the initial survey helps identify occult acute fractures and clarify questionable findings.

- CT of the abdomen and pelvis with IV contrast is the best examination for suspected abusive abdominal trauma in a stable patient. Perform upper GI series if CT findings are equivocal for duodenal injury.

Radiologic imaging provides vital information for the diagnosis and management of PCA. Imaging ensures that all injuries are identified and documented, especially when injuries are not clinically evident in infants and young children. Use imaging findings correlated with the history to help determine whether injuries are intentional or unintentional, and to identify an approximate date of the injury. Provide detailed documentation of imaging findings to support legal proceedings. Multimodality imaging (radiographs, CT, and MRI) is often required to fully evaluate injuries. Ultrasound and nuclear scintigraphy may also play a role.

The brain, spinal cord, skeleton, and abdomen are the sites most often targeted by advanced imaging; chest injuries are usually diagnosed with radiographs. Radiologists responsible for imaging children for suspected PCA must ensure that images are performed according to highest professional standards. Adhere to ALARA (as low as reasonably achievable) principles when possible to keep radiation exposure of children to an acceptable level, but do not compromise the quality of diagnostic information just to decrease radiation dose.[1] Radiation dose is low for a complete skeletal survey (approximately 0.8 mSV in children up to 2 yrs. of age). Do not avoid such imaging because of radiation exposure concerns.

Head Imaging

CT of the head without contrast is the primary imaging tool for the initial evaluation of possible AHT in children. Occult head injury is common in children less than 2 years of age with suspected physical abuse, especially in the presence of certain clinical findings such as macrocephaly, emesis, or loss of consciousness.[2,3] CT is highly sensitive and specific for detection of intracranial hemorrhage and skull injuries. Perform CT scans with soft tissue algorithm reconstructions at slice thickness of 5 mm and with bone algorithm reconstructions at 2.5 mm. 3D reconstructions of the skull can be a valuable problem-solving tool to identify subtle fractures and distinguish normal skull variants (e.g., accessory suture) from fractures.[4] While MRI can be used as the initial imaging examination of the child who is neurologically intact, acute subarachnoid or small subdural hemorrhage can be inconspicuous on MRI.

Full MRI is performed after the CT if neurologic impairment is present clinically, but MRI must not delay any necessary emergent surgical intervention.[5] MRI is more sensitive than CT for delineating parenchymal injuries such as diffuse axonal/shearing injuries, and it can better characterize the nature of extra-axial fluid collections. Ensure that brain MRI protocols include T1- and T2-weighted sequences in at least 2 planes, axial T2-weighted fluid attenuated inversion recovery (FLAIR), gradient-recalled echo sequences (GRE) or susceptibility-weighted imaging (SWI) for hemorrhage, and diffusion-weighted sequence for parenchymal injury.

An MRI performed 5-7 days after injury is more likely to show hemorrhage as it becomes hyperintense on T1-weighted images. The timing of intraparenchymal hemorrhage can be broadly established on imaging findings,[6] but precise dating of extra-axial hemorrhage may not be possible on the initial CT or MRI in some cases. A follow-up study may be helpful.

Ultrasound does not play a role in early evaluation of intracranial hemorrhage, but it can be used for follow-up of pathology in infants up to age 6-9 months.

Neck Imaging

Young infants are at increased risk of upper cervical spine injuries associated with head trauma. The incidence rate of cervical spine injury in infants with AHT varies widely, but the prevalence may be as high as 75% in patients with AHT and hypoxic-ischemic injury.[7] Abuse injuries in infants and young children usually involve the soft tissues or ligaments rather than the bony structures,[8] and MRI often is more suitable than CT for evaluation of the cervical spine beyond the skeletal survey.

Consider trauma as a mechanism when cervical soft tissue injury occurs with intracranial hemorrhage; however, absence of cervical spine injury does not ensure that intracranial hemorrhage is not AHT. Spinal SDHs also are common in infants with AHT.[9] The value of full spine MRI in children with AHT is still debated, but consider MRI of the cervical, thoracic, and lumbar spine when intracranial injuries are found.[10] Include the following in MRI of the spine: sagittal T1, T2, fat-saturated T2/short T1 inversion recovery (STIR) and axial T1-, T2-weighted sequences. MRI is highly sensitive, but it has low specificity for soft tissue injuries, so distinguishing between ligamentous edema/strain from ligamentous tear/rupture is challenging. Cervical vascular injuries occur in up to 16% of children who have C1 to C3 fractures. Consider requesting computed tomography angiography (CTA) or magnetic resonance angiography (MRA) for this group of patients.[11]

Skeletal imaging

Identification of occult fractures plays a significant role in diagnosis of PCA in children with suspicious injuries. In infants less than one year of age, the rate of occult fractures caused by abuse is high (20-25%).[12] The evaluation for occult fractures in young children with injuries with a high likelihood of abuse varies widely at different practice sites.[13] A radiographic skeletal survey is the primary imaging tool for detecting and evaluating both overt and occult fractures. Perform skeletal surveys on all children under 2 years of age with clinical suspicion of abuse. Between 2 to 5 years of age, use specific clinical indicators of abuse to determine the use of imaging. Skeletal surveys are of little use in children after the age of 5 years. When a high suspicion of intentional injury exists, perform a skeletal survey on siblings and household contacts 24 months of age and younger.

Perform skeletal surveys for PCA only at centers with radiology personnel who are experienced in such examinations.

Obtain images using a high-detail imaging system, collimated to the specific body part of interest. The complete survey includes 22 images (see Table 5). Oblique views of the chest are included because rib fractures are commonly non-displaced and very subtle on radiographs.[14] Obtain separate views of each humerus, forearm, hand, femur, leg, and foot.[15] A full body "babygram" is not an acceptable substitute. Lateral views of long bones, anteroposterior (AP) and lateral views centered at selected joints, or a Towne view of the skull may also be helpful. Have the examination monitored by a pediatric radiologist or other appropriately trained radiologist to ensure that all necessary images are obtained and interpreted to clarify questionable findings. Consider a 99mTc bone scintigraphy if the radiographic skeletal survey is negative but the clinical suspicion is high.[16]

Because certain fractures (e.g., ribs, classic metaphyseal lesions) are difficult to detect when acute, a follow-up skeletal survey is advised approximately 2 weeks after the initial survey (Table 6). The follow-up survey can verify that a questionable finding is a true fracture, identify previously occult fractures, and help to date the injury by assessing the stage of healing. Up to 24% of young children with suspected abuse are found to have additional fractures at follow-up, and the findings increase confidence in the abuse diagnosis.[17,18] Because fractures of the skull, spine, pelvis, hands, and feet are much less likely to be occult on the initial skeletal survey, studies suggest eliminating these views on the follow-up survey.[19,20] Fracture healing can be estimated by the radiographic pattern using broad time frames: acute (< 1 week), recent (8-35 days), old (>36 days).[21,22] Although certain types and combinations of fractures have a very high association

Table 5. Complete Skeletal Survey

Skeleton Portions	Views to Obtain
APPENDICULAR SKELETON (individual bilateral views)	Humerus (AP) Forearm (AP) Hand (PA) Femur (AP) Lower leg (AP) Foot (AP or PA)
AXIAL SKELETON	Thorax (AP, lateral, right and left obliques), to include sternum, ribs, thoracic and upper lumbar spine Pelvis (AP), to include the mid lumbar spine Lumbosacral spine (lateral) Cervical spine (AP and lateral) Skull (frontal and lateral)

Source: The American College of Radiology. *ACR-SPR Practice Parameter for the Performance and Interpretation of Skeletal Surveys in Children – Practice Parameter*. 2016. https://www.acr.org/-/media/ACR/Files/Practice-Parameters/Skeletal-Survey.pdf?la=en. Accessed September 5, 2018. Published with permission.

Table 6. Limited Follow-Up Bone Survey

Skeleton Portions	Views to Obtain
Appendicular skeleton (individual bilateral views)	Humerus (AP) Forearm (AP) Femur (AP) Lower leg (AP)
Axial skeleton	Chest (AP), bilateral oblique to include bilateral ribs

Source: Harlan SR, Nixon GW, Campbell KA, et al. Follow-up skeletal surveys for nonaccidental trauma: Can a more limited survey be performed? *Pediatric Radiology*. 2009; 39(9): 962-968. doi:10.1007/s00247-009-1313-7. Published with permission.

with PCA, correlation with detailed history and clinical findings is essential to declare abuse as the fracture mechanism.

Abdominal Imaging

Diagnosis of abdominal injuries secondary to abusive blunt trauma is challenging and often is delayed because the trauma history is withheld or distorted by caretakers. Imaging findings may be confusing because the injuries are in a more advanced stage than would be expected from the history. When the child is stable, CT scan with IV contrast is the best imaging modality for solid organ and hollow viscus injury secondary to blunt trauma. Intravenous contrast (at a dose of 2 mL/kg body weight) is vital to demonstrate solid organ parenchymal injuries and vascular injuries accurately.

Intestinal injuries can be subtle on CT.[23] While some radiologists advocate for oral contrast to evaluate for bowel perforation or hematoma, oral contrast extravasation is seldom seen on CT in children. Oral contrast administration is not recommended because it can delay imaging, and no significant difference in sensitivity and specificity of CT with or without oral contrast material for blunt trauma is reported.[24] Perform scans that extend from slightly above the diaphragm to the symphysis pubis, optimally with 0.6 mm collimation and 3 mm slice thickness. Follow guidelines for dose reduction during CT (*www.ImageGently.org*), and use automated dose modulation, if available. It is desirable to make only one pass through the abdomen with CT to decrease radiation exposure. Obtain delayed scans only in select circumstances, such as a question of active contrast extravasation on the initial scan. Delayed scans can also help identify urine extravastion in cases of severe renal injury.[25]

Hollow viscus and pancreatic injuries occur more commonly with blunt trauma caused by PCA. If CT findings are equivocal for duodenal injury, consider an upper GI series to make the diagnosis.[26] Pancreatic contusions and lacerations can be missed on acute abdominal CT scans. Detection of a pancreatic duct injury is important for treatment planning. Combining abdominal CT with IV contrast and MR cholangiopancreatography improves the diagnosis of such injuries.[27]

Thoracic Imaging

Other than rib fractures, injuries to the chest are uncommon among abused children. Radiographs are usually sufficient to diagnose significant pleural effusion, hemothorax, pneumothorax, or pulmonary contusion. Chest CT with IV contrast may be indicated if conditions such as hemopericardium, cardiac contusion, or laceration are suspected clinically. Routine CT of the chest is not recommended;[28] however, consider low dose CT to better evaluate suspected rib fractures[29] and to detect scapular or spine fractures not seen on radiographs.

Interpretation of Imaging Findings

PCA patients are often treated at pediatric trauma centers after imaging is performed and evaluated at a referring facility. Be sure to document the results of imaging studies performed at outside hospitals, including the source of the image interpretation (radiology report from referring hospital, neurosurgeon interpretation at the trauma center, or the health professional's own interpretation). Formal reads by a pediatric radiologist are recommended to avoid questions of reliability raised by different interpretations.

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INTERVENTION

COMMUNICATING WITH FAMILIES

Key Point:

- Effectively communicate with families about the physical child abuse screening process to maintain open lines of communication.

When a health professional raises a concern of PCA during a child's trauma hospitalization, parents are understandably concerned and anxious. Clear and effective communication helps health professionals navigate this difficult conversation and explain to parents why certain screening tests are needed.[1] It is a process to help keep lines of communication open between families and health professionals.

To effectively communicate with the family during the screening process, it is essential to develop rapport with the family and patient during the initial encounter.[1,2] Maintain a high level of cultural sensitivity to build a relationship with the family and to understand the issues facing parents and their child. Awareness of a patient's socioeconomic, neighborhood, ethnic, and religious background is critical. Learning about the family's values and beliefs is also important. Health care facilities need to institute cultural competency training to empower health care practitioners in this area.[3] The Joint Commission requires hospitals to address cultural competency, effective communication, and patient- and family-centered care.[4] Additionally, the Centers for Medicare and Medicaid Services (CMS) encourage providers to have cultural competence training (*https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNMattersArticles/downloads/SE0621.pdf*).

Key principles for communication include:

- Clearly state your role as an advocate for the child or adolescent.
- Be direct and objective as you proceed through the screening process.
- Use a neutral tone and avoid accusatory statements to present the appearance of being nonjudgmental.[1,2]
- Notify parents that physical abuse is a consideration in the trauma work up of their child and that abuse can occur without obvious physical examination findings.

After the interview process, explain your particular concerns and your duty to report the suspicion of child abuse. Then, introduce the need for and role of other services (such as the Child Abuse team) and agencies (such as CPS and Law Enforcement) that help complete the patient assessment.[1,2] Inform the family that you are available to address any further concerns throughout the assessment process. If at any time you feel uncomfortable having these conversations, involve social work or a senior colleague.[1]

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TRAUMA-INFORMED CARE

Key Points

- The four basic components of trauma-informed care include: understanding the impact of trauma on individuals; knowing how trauma may affect patients, families, and staff; utilizing knowledge about trauma responses and putting it into practice; and preventing re-traumatization.
- Both the child victim and family members need a trauma-informed care approach to help manage stresses of the event and reduce the risk for an adverse psychological response.
- Health care professionals need information and guidance on methods to manage the stressors associated with caring for child victims of abuse to reduce personal stress responses.

Trauma treatment provided to children and their families can potentially cause adverse psychological responses. Two-thirds of these patients and family members are exposed to at least one other type of traumatic event before reaching adulthood.[1] These adverse childhood experiences (ACEs), describe any of 10 classifications of abuse, neglect, or loss prior to age 18 years, including PCA. Many studies report that ACEs predict higher rates of poor health outcomes, including higher health risk behaviors, increased risk for chronic medical problems and mental health issues, and other impacts.[2,3] "Prolonged exposure to repetitive or severe events such as PCA, is likely to cause the most severe and lasting effects."[4]

Trauma-informed care encompasses four basic components: understanding the impact of trauma on individuals; knowing how trauma may affect patients, families, and staff; utilizing knowledge about trauma responses and putting it into practice; and preventing re-traumatization.[5] Health care professionals need to understand the effect of trauma on child development and to understand how to minimize its effects without causing further harm. This includes identifying and managing the child's pre-existing emotional trauma responses as well as new trauma responses related to their care, procedures and treatments.

The trauma-informed care approach guides provider interactions with patients and families to promote recovery and resilience. It recognizes the presence of traumatic stress symptoms and

acknowledges the role that previous trauma events play in the lives of patients and families. Trauma-informed care and trauma medical treatments are two different approaches.

- A trauma-informed care approach acknowledges the entire history of previous traumatic events, as well as the current trauma, and delivers all aspects of care with this awareness.
- Trauma medical treatments are evidence-based protocols aimed at treating injuries related to trauma.

Integrate the delivery of trauma-specific medical treatments with a trauma-informed care approach. Early recognition of trauma exposure in conjunction with appropriate intervention can assist in the prevention of lifelong consequences.[3]

Address any family distress, providing emotional support and safety for the family, and offering proactive guidance regarding recovery.[5] When used in conjunction with family-centered care, a trauma-informed care approach can improve the quality of care provided to patient and their caregivers.[6] While caring for patients who have experienced physical abuse, be aware that these patients often have triggers that can affect their behavior and willingness to participate in medical therapies. After becoming aware of and understanding the triggers, alter the patient's care plan accordingly. This action may change these behaviors and provide the patient with a feeling of safety.

Implementing trauma-informed practices by all providers across the pediatric health care network is important. Education about trauma-informed approaches needs to include information on understanding the prevalence of trauma in patients of various ages, recognizing how trauma impacts children differently by developmental age, and responding with a trauma-informed approach can help prevent re-traumatization.[5] Assess the patient for reactions to procedures and treatment experiences that could be traumatic (e.g., needles, taking medications, etc.). The DEF (Reduce **D**istress, **E**motional Support, Remember the **F**amily) protocol for pediatric health professionals is one trauma-informed approach. It is an evidence-based method to identify and address traumatic stress responses in children after illness or injury. Trauma-related needs may be identified through appropriate trauma screening and assessment. Patients can then be referred for more support when appropriate.

Stress Disorders

Acute stress disorder (ASD) occurs when a child has an intense reaction to a traumatic event, such as a death or illness in the family, a serious injury, natural disaster, or other traumatic experience. This reaction, occurring between 3 and 30 days after the event, often results in difficulties coping with the event, as well as an impaired ability

to function at home, at school and in social settings.[7] Screening all trauma patients for ASD prior to discharge is an important role for trauma centers.

Victims of child maltreatment are at increased risk of developing *posttraumatic stress disorder* (PTSD). Common symptoms of PTSD include: dreams about the event, play that recreates the trauma, difficulty sleeping or nightmares, irritability, and withdrawn or detached behaviors.[7] The patient may be diagnosed with PTSD when symptoms develop one month or longer after the event, and these symptoms upset or interfere with their relationships and activities.[8] If the patient is still hospitalized within this timeframe, screen for PTSD prior to discharge.

When patients screen positive for either ASD or PTSD obtain a behavioral health consult prior to discharge and make referrals to a psychiatric provider or counselor for outpatient follow up. Inform and educate the child's primary care provider about the child's increased risk for PTSD and the need for screening at follow up visits.

Health Professional Stress

Consider the experiences of all health professionals in the trauma center and first responders who repeatedly care for and are exposed to the suffering of critically ill and injured children. Caring for children in distress can make health professionals more susceptible to repeated psychological trauma.[5] Health professional responses include compassion fatigue or burnout. *Compassion fatigue* refers to work-related posttraumatic stress syndrome (PTSS) that arises from long-term exposure to other persons experiencing trauma. *Burnout* refers to a combination of symptoms including emotional exhaustion, depersonalization, and a diminished sense of personal accomplishment or workplace satisfaction. Both burnout and compassion fatigue may contribute to suboptimal patient care.

Health professionals who work with child abuse patients are often involved in highly distressing situations, including hearing about, treating, and documenting graphic and sometimes horrific details of the abuse. This can lead to secondary traumatic stress (STS), the emotional distress that results when an individual hears about the traumatic experiences of someone else or is involved in the care of traumatically injured individuals.[9] Awareness of the effects of indirect trauma exposure is key to protecting the health and well-being of these health professionals. Providers have a different way of coping with work-related stresses. They will be less likely to avoid caring for these patients if they have a healthy strategy to manage their reactions to these encounters. An important role for trauma centers is to educate staff about trauma and STS, to implement strategies and practices that build resilience and help staff manage stress, and to address the impact of STS on both individuals and on the system.[10]

Resources for Traumatic Stress

Center for Pediatric Traumatic Stress (CPTS *https://www.chop.edu/centers-programs/center-pediatric-traumatic-stress*.

SAMHSA *https://www.samhsa.gov/children/awareness-day/2018/resource-list-traumatic-stress*

The American Academy of Pediatrics (AAP) *http://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/healthy-foster-care-america/Pages/Trauma-Guide.aspx*

National Child Traumatic Stress Network *https://www.nctsn.org/treatments-and-practices/screening-and-assessments/trauma-screening*

DEF toolbox *https://www.healthcaretoolbox.org/what-providers-can-do/d-e-f-protocol-for-trauma-informed-pediatric-care.html*.

Post discharge screening and referral recommendations for ASD/PTSD: *https://www.healthcaretoolbox.org/what-providers-can-do/when-and-how-to-refer-for-mental-health-care.html*

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TEAMWORK

Key Points

- The trauma center needs a structured communication hand-off strategy to ensure effective communication.
- The essential health professionals for completion of a child abuse screening assessment include the trauma surgeon, a pediatrician, and a social worker.
- A child abuse pediatrician is an important team member to manage suspected child abuse and to coordinate investigations of CPS and law enforcement.

Effective Communication

Reporting the presence or absence of risk factors or concerns about child maltreatment is essential during transitions in care between teams and between interprofessional providers. For example:

- An EMS provider often has information related to the scene of the injury, the parent's reactions, and/or home environment that are not available to the hospital-based providers.
- A patient with a negative screen at triage may subsequently have findings noted on the secondary or tertiary trauma survey in the ED, operating room (OR) or ICU.
- The story changes over time and/or corroborating information may become available later in the hospital stay.

Teamwork and communication are critical for successful patient hand-offs between team members, especially in the case of PCA. A trauma center needs a structured communication hand-off strategy. TeamSTEPPS, created by the Agency for Healthcare Research and Quality is one effective team collaboration approach (*https://www.ahrq.gov/teamstepps/index.html*). TeamSTEPPS leads to improved trauma team performance and patient outcomes, and it reduces patient errors due to lost information and communication lapses.[1,2]

The Essential Assessment Team

A trauma surgeon, a child abuse pediatrician or pediatrician, and a social worker are the essential team members required to initiate a PCA screening assessment. When these resources are not available in the trauma center, use transfer agreements to ensure children are evaluated for possible abuse. Telemedicine is also an option.

The American College of Surgeons' (ACS) *Optimal Resources for Children's Surgical Care* advocates for a child abuse team to be available full-time.[3] Programs and policies to identify PCA patients are essential for verification as a Children's Surgical Center. While the composition of the child abuse team is not specified, it is intended to be an interprofessional team that includes pediatric surgeons. Similarly, the ACS *Resources for Optimal Care of the Injured Patient* mandates a process to generally

assess, screen, treat, or refer a child suspected of maltreatment in all Level I and Level II pediatric trauma centers.[4]

Child Abuse Pediatrician

The trauma surgeon leads the interprofessional evaluation, screening and management of suspected victims of PCA.[5-7] Partnership with a child abuse pediatrician (CAP) is critical to the successful management of these patients. CAPs are board-eligible pediatric subspecialists responsible for the diagnosis and treatment of children and adolescents who are suspected victims of any form of child maltreatment including physical abuse, sexual abuse, sexual violence, factitious illness (medical child abuse – Munchausen syndrome or Munchausen by proxy), neglect, and psychological/emotional abuse. CAPs coordinate investigations of CPS and law enforcement and are often called upon for expert testimony in the judicial system for victims of child maltreatment.

Additional Team Members

The trauma team partners with social work, CPS, and law enforcement in investigating suspected child abuse. Surgical subspecialists such as neurosurgery, orthopaedic surgery, otolaryngology, ophthalmology, plastic surgery, urology, dental and oromaxillofacial surgery are consulted as needed. Nurses provide care, document social interactions, and communicate with the patient, family and caregivers. Social work, child life, psychology, and neuropsychology provide social and psychological support for children and their families. Access to therapy services and rehabilitation is essential due to possible long-term disabilities after PCA. Adequate hand-offs to the child's primary care provider facilitates the patient's care back to the outpatient setting and medical home.

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MANDATED REPORTING

Key Point

- Reporting suspected child abuse to CPS is mandated in all states, Washington, D.C., and the U.S. territories.

All states, the District of Columbia and the U.S. Territories have laws that mandate the reporting of suspected child abuse to Child Protective Services (CPS). The definitions are based on federal standards (CAPTA), although each state has its own standards. Most states require professionals to notify CPS in cases of suspected child abuse, but some states require all people to report their concerns.

State Law Information

Children's Bureau (Administration for Children and Families, US Department of Health and Human Services; *https://www.childwelfare.gov/topics/systemwide/laws-policies/state/*

Data on individual state child abuse and neglect reporting can be found at *https://www.childwelfare.gov/organizations/?CWIGFunctionsaction=rols:main.dspList&rolType=Custom&RS_ID=5*. See this website for toll-free numbers to agencies designated to receive and investigate reports of suspected child abuse and neglect.

Link for reporting: *http://www.childwelfare.gov/topics/systemwide/laws-policies/can/reporting/*

In most states, the majority of reported cases receive an investigation. An investigation response results in a determination or disposition about the suspected child maltreatment. Dispositions are reported to the National Child Abuse and Neglect Data System (NCANDS).

BEST PRACTICES GUIDELINES FOR TRAUMA CENTER RECOGNITION: ELDER ABUSE

ELDER ABUSE

OVERVIEW

Key Points

- Elder abuse is common in community-dwelling older adults and nursing home residents, but identification and reporting are infrequent.
- Elder abuse is associated with poor medical outcomes including higher mortality rates than non-abused older adults, as well as depression, dementia, and worsening of chronic conditions.
- A health care encounter after traumatic injury is an important opportunity to identify elder abuse, and the trauma care team needs to recognize and report it.

Definitions

Elder abuse encompasses actions committed by someone in a relationship with an expectation of trust or when the victim is targeted because of age or disability. Types of abuse (defined and described in Table 7) include: physical abuse, sexual abuse, neglect, psychological abuse, and financial exploitation.[1-5]

Epidemiology

Elder abuse is common, with 5-10% of community-dwelling older adults[1-6] and more than 20% of nursing home residents[7-11] victimized each year.

Psychological abuse, financial exploitation, and neglect are more common, while physical abuse and sexual abuse occur less frequently.[4,12,13] Many victims suffer from multiple types of abuse concurrently.

Elder abuse often has significant negative medical and social consequences. In population-based studies, victims have a higher mortality rate than other older adults.[6,14,15] Elder abuse is also associated with poor medical outcomes including depression, dementia, and worsening of chronic conditions.[16] Victims of elder abuse are more likely to seek care in the ED,[17,18] be hospitalized,[19] and be placed in a nursing home.[20,21]

Elder abuse is infrequently detected, and research suggests that as few as 1 in 24 cases of abuse are identified and reported to the authorities.[2] Presentation to the hospital after an acute traumatic injury represents a unique and critical opportunity to detect elder abuse and initiate intervention. It may represent the only time a socially-isolated older adult leaves his or her home.[22-24]

Currently, ED and trauma care providers infrequently detect and report elder abuse or neglect.[25-28] Reasons include inadequate training, difficulty distinguishing between intentional and unintentional injuries, desire to avoid legal system involvement, a victim's unwillingness to report, and a victim's inability to report due to cognitive impairment.[27-30] Despite these challenges, improved identification of and intervention for elder abuse victims is essential to improve the safety and health of these vulnerable patients.

Table 7. Types of Elder Abuse and Neglect

Type	Definition	Examples
Physical abuse	Intentional use of physical force that may result in bodily injury, physical pain, or impairment	• Slapping, hitting, kicking, pushing, pulling hair • Use of physical restraints, force-feeding • Burning, use of household objects as weapons, use of firearms and knives
Sexual abuse	Any type of sexual contact with an older adult that is non-consensual, or sexual contact with any person incapable of giving consent	• Sexual assault or battery, such as rape, sodomy, coerced nudity, and/or sexually explicit photographing • Unwanted touching, verbal sexual advances • Indecent exposure
Neglect	Refusal or failure to fulfill any part of a person's obligations or duties to an older adult, which may result in harm – may be intentional or unintentional	• Withholding of food, water, clothing, shelter, medications • Failure to ensure older adult's personal hygiene or to provide physical aids, including walker, cane, glasses, hearing aids, dentures • Failure to ensure older adult's personal safety and/or appropriate medical follow-up
Emotional/ Psychological abuse	Intentional infliction of anguish, pain, or distress through verbal or nonverbal acts	• Verbal berating, harassment, or intimidation • Threats of punishment or deprivation • Treating the older adult like an infant • Isolating the older adult from others
Financial/Material exploitation	Illegal or improper use of an older adult's money, property, or assets	• Stealing money or belongings • Cashing an older adult's checks without permission and/or forging his or her signature • Coercing an older adult to sign contracts, change a will, or assign durable power of attorney against his or her wishes or when the older adult does not possess the mental capacity to do so

Adapted from National Center on Elder Abuse. *Types of abuse*. https://ncea.acl.gov/Suspect-Abuse/Abuse-Types.aspx Accessed June 5, 2019. Published with permission.

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ASSESSMENT

IDENTIFYING HIGH-RISK PATIENTS

Key Points

- Factors that place the older adult at higher risk for abuse include cognitive impairment, social isolation, functional dependence, and history of family violence.
- Interactions between the patient and caregiver as well as elements of the medical history may provide clues to the presence of abuse or neglect.
- If suspicion for abuse exists, ask the patient directly in a private setting. Even a cognitively impaired older adult may provide an accurate report.
- Consider interviewing the suspected abuser separately for additional information.

When evaluating older adult trauma patients for abuse, consider established factors that increase risk for elder abuse. Research suggests that cognitively impaired and socially isolated older adults are more likely to be victimized; however, socio-demographic factors, such as age are inconsistently associated with victimization.[1-9] Additional risk factors for victimization supported by evidence, as well as risk factors for becoming a perpetrator are listed in Table 8. Many cases occur in the absence of any risk factors, so be alert to the possibility of abuse when assessing an older adult.

Observe interactions between the patient and caregivers or other family members to identify clues to the presence of abuse or neglect, such as the following:

- Conflicting accounts of events are given by the older adult and caregiver
- Caregiver interrupts or answers for the older adult
- Older adult seems fearful of or hostile toward caregiver
- Caregiver appears unengaged or inattentive in caring for the older adult
- Caregiver appears frustrated, tired, angry, burdened, or overwhelmed by the older adult

Table 8. Potential Risk Factors for Elder Abuse

Risk Potential	Risk Factors
For Becoming A Victim	• Functional dependence or disability • Poor physical health • Cognitive impairment/dementia • Poor mental health • Low income/socio-economic status • Social isolation/low social support • Previous history of family violence • Previous traumatic event exposure • Substance abuse
For Becoming a Perpetrator	• Mental illness • Substance abuse • Caregiver stress • Previous history of family/intimate partner violence • Financial, housing, or other dependence on older adult

Data from: Pillemer K, Burnes D, Riffin C, Lachs MS. Elder abuse: Global situation, risk factors, and prevention strategies. *Gerontologist*. 2016 Apr; 56 Suppl 2: S194-205; Acierno R, Hernandez MA, Amstadter AB, et al. Prevalence and correlates of emotional, physical, sexual, and financial abuse and potential neglect in the United States: The National Elder Mistreatment Study. *American Journal of Public Health*. 2010; 100: 292-7; Amstadter AB, Zajac K, Strachan M, et al. Prevalence and correlates of elder mistreatment in South Carolina: The South Carolina elder mistreatment study. *J Interpers Violence*. 2011; 26: 2947-72; and Laumann EO, Leitsch SA, Waite LJ. Elder mistreatment in the United States: Prevalence estimates from a nationally representative study. *The Journals of Gerontology Series B, Psychological Sciences and Social Sciences.* 2008; 63: S248-S54.

- Caregiver appears to lack knowledge of the patient's care needs
- Evidence that the caregiver and/or older adult may be abusing alcohol or illicit drugs

Empower all members of the clinical team (e.g., radiology technologists, clerks, and patient escorts) to raise concerns about worrisome observations.

History

Make an effort to collect the medical history without caregivers or other family members present. Use a professional translator if a language barrier exists. Do not use family members as translators, even if they are not suspected perpetrators. Be mindful of reasons patients are reluctant to report abuse or neglect, including shame, guilt, fear of retaliation, or fear of nursing home placement.

When obtaining the history, explore in detail how traumatic injuries occurred. Consider asking the patient directly about physical abuse if suspicion exists. Ask patients if any issues have occurred in the past 6 months using the suggested questions about types of elder abuse included in Table 9. Explore any positive answers in more detail (see Comprehensive Evaluation questions in Appendix B-2).

Additionally, explore the patient's care needs, functional status, cognition, and safety of the home environment,[10] and consider asking if the patient feels socially

isolated. During history-taking, observe for patient behavioral signs that suggest the potential for abuse and neglect, including fear, anxiety, low self-esteem, and poor eye contact.[11] Indicators suggestive of elder abuse or neglect from the medical history include the following:

- Unexplained injuries
- Past history of frequent injuries
- Patient referred to as "accident prone"
- Delay between injury event or medical illness onset and seeking of medical attention
- Recurrent visits to the ED for similar injuries
- Multiple physicians and EDs used for care versus one primary care physician ("doctor hopping or shopping")
- Noncompliance with medications, appointments, or physician directions

Table 9. Emergency Department Elder Mistreatment Assessment Tool for Social Workers (ED-MATS), Initial Evaluation

Types of Abuse	Questions to Ask
Neglect and Functional Status	1. Has anyone prevented you from getting food, clothes, medication, glasses, hearing aids, medical care, or anything else you need to stay healthy?
Psychological Abuse	2. Has anyone close to you called you names, put you down, or yelled at you? 3. Has anyone close to you ever threatened to punish you or put you in an institution? 4. Have you felt afraid of anyone close to you? 5. Do you distrust anyone close to you?
Physical Abuse	6. Has anyone tried to harm you? Have you been hit, slapped, pushed, grabbed, strangled, or kicked? 7. Are there guns or other weapons in your home? Does anyone close to you have access to guns or other weapons?
Financial Exploitation	8. Has anyone tried to force you to sign papers against your will, or that you did not understand? • Has anyone pressured you to give them money or property? 9. Has anyone taken money or things that belong to you without asking? 10. Did you give, or feel pressure to give, money in person or over the telephone for an investment, financial opportunity, or lottery?
Sexual Abuse	11. Has anyone touched you in ways or places you did not want to be touched?
Rapport Building Questions	• What typically causes conflict in your home? How do you resolve it? • Describe a typical day. Who do you see? What do you do? • Are you aware of supportive community services and crisis services? Have you ever used them? • Are you, your caregiver, or someone close to you interested in receiving additional services or resources?

Courtesy of Sarah Rosselli, David Burnes, Sunday Clark, Michael E. Stern, Veronica M. LoFaso, Mary R. Mulcare, Risa Breckman, Tony Rosen, and Alyssa Elman. Published with permission.

Attempt to obtain a medical history from older adults with dementing illness. Research revealed that older adults with cognitive impairment can often accurately relate how an injury occurred.[12,13] If an older adult is unable to provide a history, seek collateral information from the primary care physician, other family members, neighbors, or visiting nurses.

Interviewing the Caregiver

Consider interviewing the suspected abuser separately to detect any discrepancies from the patient-provided history.[10,14] An additional red flag may be a caregiver who does not know an older adult's care needs or regular medications. When conducting the interview with the suspected abuser, avoid accusing or being critical of the caregiver. Frame the purpose of the interview as a chance to find out more about the patient. Ask questions about any changes or other stressors that have occurred in the patient's home environment, what other responsibilities and dependents the caregiver has, and if any home health services or respite services have been offered or accepted. To build rapport, acknowledge the difficulties associated with caregiving and express empathy. Potential questions to ask the caregiver are provided in Table 10.

Table 10. The Caregiver Interview

Caregiver Questions about the Older Adult Patient
• Ask about the circumstances surrounding the patient's presentation. • What are the patient's medical conditions? What medications does he / she take? • What do you think is important for us to know about the patient? • What kind of care does the patient require? • How involved are you in the patient's everyday activities and care? • What do you expect the patient to do for himself / herself? • What does the patient expect you to do for him / her? Do you do these things? Are you able to do them? What happens when you are unable to do them? • Caring for someone who has a lot of needs is difficult. Have you ever felt overwhelmed, frustrated, or unable to provide needed care to the patient? Is the patient ever physically aggressive toward you? • Have recent changes or stressors occurred for you or the patient? • What other responsibilities do you have (e.g., parenting, job, etc.)? • Are there others in your household? Are there others who can help provide care to the patient? • Do you have any home health services for the patient, respite care, or other support? If not, have these been offered? Do you think they would be helpful?

Contributed by Anthony Rosen, MD, MPH

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PHYSICAL SIGNS

Key Points

- A comprehensive physical examination is critical to identify abuse, especially for patients who choose not to or are unable to report abuse.
- Multiple suspicious physical findings are more suggestive of elder abuse than an isolated finding.
- Preliminary research describes patterns of injury common in physical abuse that may assist in differentiating it from unintentional injury.

A comprehensive physical examination may reveal signs of elder mistreatment, especially in patients who do not disclose or are unable to report because of cognitive impairment or severity of injury. When assessing injuries, always consider whether the physical findings are consistent with the reported mechanism of injury.

Perform a full head-to-toe examination of older adult patients. Make sure to inspect the skin, including fingernails and toenails, as well as an intra-oral exam. See Table 11 for physical examination findings that raise concern for physical abuse, sexual abuse, or neglect. The presence of multiple suspicious physical findings is more suggestive of elder mistreatment than an isolated finding.[1]

In cases of reported or suspected sexual abuse, similar to younger victims, offer a forensic examination with evidence collection if the patient can consent.

Limited research exists to guide trauma providers in differentiating injury patterns in physical elder abuse or assault from non-intentional injuries, such as falls. Preliminary studies suggest that abuse and assault-related injuries occur most frequently on the head, neck, and upper extremities.[2-4] Bruises in physical assault victims are more often large (larger than 5 cm) and found on the face, lateral arm, or posterior torso.[5] Injuries to the left cheek/zygoma, neck, and ulnar forearm appear to be more common in physical abuse than fall-related injuries.[6]

Table 11. Physical Signs Suspicious of Elder Abuse

Type of Abuse	Physical Findings
Physical Abuse	• Bruising in atypical locations (on lateral arms, back, face, ears, or neck rather than on bony prominences) • Patterned injuries (bite marks or injury consistent with the shape of a belt buckle, fingertip, or other object) • Wrist or ankle lesions or scars (suggesting inappropriate restraint) • Burns (particularly stocking/glove pattern suggesting forced immersion or cigarette/cigarette lighter pattern) • Multiple fractures or bruises of different ages • Traumatic alopecia or scalp hematomas • Subconjunctival, vitreous or retinal hemorrhages • Intra-oral soft tissue injuries
Sexual Abuse	• Genital, rectal, or oral trauma (including erythema, bruising, lacerations) • Evidence of sexually-transmitted disease
Neglect	• Cachexia/malnutrition • Dehydration • Pressure sore/decubitus ulcers • Poor body hygiene, unchanged diaper • Dirty, severely worn clothing • Elongated toenails • Poor oral hygiene

Data from: Collins KA. Elder maltreatment: A review. *Arch Pathol Lab Med.* 2006; 130: 1290-6; Gibbs LM. Understanding the medical markers of elder abuse and neglect: Physical examination findings. *Clinics in Geriatric Medicine*. 2014; 30: 687-712; Palmer M, Brodell RT, Mostow EN. Elder abuse: Dermatologic clues and critical solutions. *J Am Acad Dermatol.* 2013; 68: e37-42; Speck PM, Hartig MT, Likes W, et al. Case series of sexual assault in older persons. *Clinics in Geriatric Medicine*. 2014; 30: 779-806; and Chang AL, Wong JW, Endo JO, Norman RA. Geriatric dermatology: Part II. Risk factors and cutaneous signs of elder mistreatment for the dermatologist. *J Am Acad Dermatol.* 2013; 68:533 e1-10.

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SCREENING

Key Points

- Consider screening older adults for potential elder abuse, as the trauma-related health encounter provides a unique opportunity to identify it.
- Multiple screening tools exist, but none have been validated in the ED or trauma inpatient setting. No evidence indicates either improved outcomes or negative consequences with screening.
- Targeted screening is challenging because it is difficult to accurately identify high-risk patients and screening may miss victims.

Consider screening older adults for elder abuse given the unique opportunity that a trauma evaluation provides to identify this frequently hidden issue. The trauma service has time to conduct a more complete evaluation than may occur initially in the ED. Though a single question about home safety may be asked routinely as part of ED and trauma practice, it is likely inadequate, particularly because the potential abuser is often at bedside.

While multiple tools exist to screen older adults for elder abuse, they are not validated for use in the ED or trauma inpatient setting.[1-3]

- The Elder Abuse Suspicion Index (EASI©) is a short tool validated for cognitively-intact patients in ambulatory care and may be appropriate for trauma patients.[2] See Appendix B-3.
- The ED Senior AID (Abuse Identification) tool is a promising recently developed ED-specific screening tool that is currently undergoing validation.[4]
- Another method is a multi-step process with a brief initial screen for all older adult patients followed by a more comprehensive screen if concern is identified.

Screening targeted to high-risk patients may seem an attractive alternative to universal screening. Unfortunately, research has not consistently identified

demographic factors that dramatically alter risk for elder abuse.[5-9] Identifying appropriate high-risk patients to target is challenging, and this strategy is likely to miss victims.

While screening for elder abuse in the trauma or ED setting has the potential to identify cases leading to intervention, evidence of improved outcomes to support universal or targeted screening for older adult mistreatment does not yet exist. The US Preventative Services Task Force has not recommended screening for elder abuse in health care settings.[10,11]

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LABORATORY SCREENING

Key Points

- The older adult with suspicious bruising and normal coagulation studies may have abuse-related injuries.
- Illicit drug, toxin, and medication levels may be useful in evaluation of neglect. Undetectable or low levels of prescribed opioids may indicate diversion of pain medications by a caregiver.

Laboratory testing cannot diagnose or exclude elder mistreatment, but findings can help increase or decrease concern. The older adult trauma patient with unexplained or suspicious bruising and normal platelet levels and coagulation

studies is less likely to have an alternate explanation for bruises. The presence of anemia, dehydration, malnutrition, or rhabdomyolysis, while non-specific, may raise concern for neglect.[1]

Toxicology screens, routinely obtained in trauma patients, may be helpful. The presence of illicit drugs, toxins, or drugs not prescribed indicates potential poisoning.[1] Check blood or urine prescription medication levels in cases where concern for neglect exists.[1] Undetectable or low levels of a medication prescribed to an older adult may suggest that a caregiver has intentionally or unintentionally withheld the drug. Diversion of narcotic pain medications is an increasingly common issue.[1] Elevated levels of prescribed medications suggests potential overdose.

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IMAGING FOR SUSPECTED ELDER ABUSE

Key Points

- Fractures at different stages of healing or a reported history of injury out of proportion to the observed injury are suspicious for elder abuse.
- Provide the radiologist with a description of the clinical scenario to improve the identification of a mismatch between injury severity and the reported mechanism of injury.

Without formal radiological training and accepted pathognomonic radiographic findings, radiologists are reluctant, or may not even consider, the diagnosis for elder abuse. Imaging correlates for elder abuse are not as well established as the correlates for child abuse.[1] As with intentional injury in children, fractures at different stages of healing or a reported history of injury out of proportion to the observed injury can be indicative of elder abuse.[2]

Radiographic evidence of an injury requiring a high-energy mechanism that was reported by the patient or caregiver to be caused by a low-energy mechanism is suspicious, and a work-up for physical abuse is indicated. However, older adults have comorbidities such as osteoporosis or medications that can inhibit coagulation and impair balance, and it can be challenging to distinguish between a high and low energy injury.[3]

Provide the radiologist with a detailed description of the clinical scenario when requesting an imaging study. An inadequate description of the mechanism of injury or simply stating "trauma, rule out injury," on the imaging requisition significantly limits the radiologist's ability to comment on a potential mismatch of the observed injury relative to the reported mechanism. Examples of the types of injuries for which a diagnostic mismatch can be contemplated include humeral or forearm diaphysis fractures with a reported history of fall. A fall mechanism more commonly results in a metaphysis injury rather than a diaphysis fracture. Diaphysis fractures of the upper

extremity are indicative of a high-energy injury such as blunt direct trauma or acquired in an act of self-defense.[3]

Improved communication between the frontline clinicians and the radiologist on issues including mechanism of injury, living conditions of the patient, and degree of suspicion can considerably improve detection of elder abuse.[4]

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INTERVENTION

ACUTE TRAUMATIC, MEDICAL, AND PSYCHOLOGICAL CARE

Key Point

- Focus first on treating and stabilizing acute traumatic, medical, and psychological issues in cases of suspected abuse and have a low threshold for admission to the hospital.

In cases of suspected abuse, focus initially on treating and stabilizing acute traumatic, medical, and psychological issues. Even with a seemingly minor mechanism of injury, significant fractures, brain injury, spine injury and bleeding can occur in the older adult. In addition, small derangements in physiology can cause profound shock, tissue injury, and organ failure. Rapidly triage, diagnose, and stabilize the injured older adult.

As in other abuse, attention must also focus on management of old or chronic traumatic injuries and chronic medical conditions. Management of old wounds, ulcers, burns, or other manifestations of neglect is important. Treatment of acute exacerbations of underlying medical conditions is needed because the older adult has not received appropriate care or all prescribed medications. Pay particular attention to medication levels, such as anticoagulants and cardiovascular medications. Even when traumatic injuries are minor, maintain a low threshold for admission to the hospital due to the social and medical issues.[1-3]

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TRAUMA-INFORMED CARE

Key Points

- Practicing trauma-informed care and being sensitive to the impact of traumatic and stressful life experiences are essential when providing optimal medical and surgical care to older adults who are victims of elder abuse.
- Trauma-informed care focuses on the older adult's need for safety, respect, and acceptance, maximizing victim control and choice while minimizing repeated trauma by treatment, and recognizing that routine treatment for trauma may actually cause more psychological trauma.
- Educate providers about trauma-informed care and implement wellness programs for health professionals impacted by caring for traumatized older adult patients.

Trauma-informed care focuses on sensitivity to the impact of traumatic and stressful life experiences that can have a profound impact on mental and physical health.[1,2] For older adults, both current abuse or neglect, as well as previous traumatic experiences, even from many years ago, may contribute to anxiety, depression, or PTSD.[1-5] Evidence suggests that the effect of these traumatic experiences is cumulative over a lifetime.[1,5]

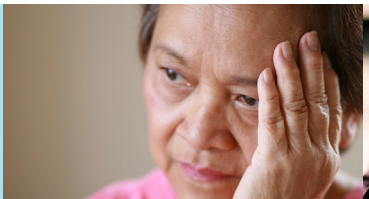
To date, trauma-informed care for older adults has received less focus than for children and younger adult victims.[1] However, victims of elder abuse have had a lifetime to potentially experience traumatic or stressful events, making it an important consideration in their care.[1-5] Exposure to traumatic experiences may also actually increase elder abuse risk, because an older adult who attempts to avoid re-exposure may become more socially isolated.[1] Elder abuse itself, which often occurs daily for years, is profoundly stressful.

Trauma-informed care recognizes older adult patients with a history of traumatic exposures and focuses on their need for safety, respect, and acceptance.[2] It attempts to maximize victim control and choice while minimizing re-traumatization by treatment.[2] A trauma-informed organization builds a culture that:

- Recognizes that coercive interventions cause trauma and re-traumatization
- Provides awareness/training on re-traumatization and vicarious trauma
- Values patients' voices in every aspect of care
- Integrates survivor perspectives in design and delivery of services
- Recognizes the whole person and their environment
- Focuses on what has happened to the person rather than what is wrong with the person[6]

Strategies for a trauma-informed approach to care include:

- Using language and grammar that is easily understood, neutral, and not intimidating



- Limiting the number of times a victim must talk about the assault[2]
- Avoiding words such as violence, abuse, or criminal behavior if the victim does not initially recognize what has occurred is abusive or criminal[2]
- Asking permission before touching a potential victim[2]
- Maintaining the victim's privacy and confidentiality[2]
- Offering the support of an advocate if available[2]
- Being mindful of culturally-specific expectations regarding interactions between older adult patients and younger care providers[2]

Consider using this approach even for patients with cognitive impairment,[2] as these patients may still be deeply impacted by current or previous traumatic exposures. Regular education about how to provide trauma-informed care is essential for interprofessional trauma team members, as many health professionals are unfamiliar with this approach.

Trauma-informed care acknowledges that trauma team members may themselves be deeply affected by the stress of providing care to abuse victims.[1,2,6] Compassion fatigue or burnout can result, potentially leading providers to actively avoid participation in the care of these patients. Implement education and support programs for the trauma team to ensure that they become aware of signs and symptoms, as well as the need to practice appropriate self-care. Ensure that support and resources are also available for these professionals.

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TEAM WORK

Key Points

- EMS providers, the first clinicians to assess older adults after traumatic injury, are a critical resource to identify elder abuse.
- Strongly consider consulting with a health professional having expertise in caring for older adults for all trauma patients in whom elder abuse, neglect, or exploitation is suspected.

- The social worker has an important role in safety planning for the patient's discharge to the community or to a facility for rehabilitation or long-term care.

Given the challenges in identifying elder abuse, often hidden in trauma patients, developing a team-based approach is important. A successful approach takes advantage of the unique perspectives of the interprofessional team involved in the care of trauma patients and empowers everyone to contribute to abuse detection.

Emergency Medical Services

EMS providers are the first clinicians to assess older adults after a traumatic injury, often in the patient's home.[1,2] They often have important information about the circumstances surrounding the injury and interpersonal dynamics between the patient, caregiver, and other family members. Observations made may include:

- Inappropriate or unusual interactions between patients and caregivers,
- Evidence of alcohol or drug use, or
- Home environment hazards, such as clutter/hoarding, vermin infestation, dangerously hot or cold temperature, utilities not working, or absence of available food.[1,2]

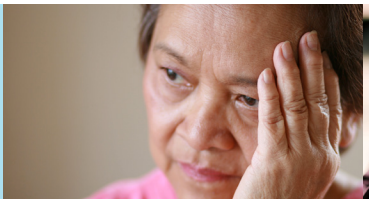
EMS providers report frequently encountering elder abuse and neglect and their ability to identify victims.[2] Unfortunately, they also report difficulties when communicating their concerns to ED providers, including barriers such as time constraints and ED staff who are unavailable or unreceptive.[2] Whenever possible, proactively seek out EMS personnel to inquire about their observations regarding injury circumstances, patient-family interactions, and the home environment. Always review the EMS report documentation.

Geriatric Co-Management

Co-management of geriatric trauma patients by health professionals with expertise in caring for older adults (geriatricians, hospitalists, internal medicine physicians, family medicine physicians, or advanced practice providers) is increasingly common, particularly after hip fractures, because of improved outcomes.[3,4,5] For trauma patients in whom elder abuse, neglect or exploitation is suspected, an in-patient evaluation by a health professional with geriatric expertise can be valuable to help distinguish between normal changes of aging and the sequela of abuse or neglect. These health professionals can also assist with:

- Management of complex medical problems and multiple medications.
- Prevention and management of geriatric syndromes including pressure ulcers, delirium, and functional decline.
- Guidance for discharge planning decisions that optimize safety while aligning with the patient's goals.

Because these health professionals understand the challenges associated with caregiving, they can in some cases work with the perpetrator to identify



strategies to minimize the potential for future mistreatment. When a health professional with expertise in caring for older adults is present in the in-patient clinical setting, strongly consider a consultation request for all trauma patients in whom elder abuse, neglect, or exploitation is suspected, given the complexities in patient management.

Social Workers

Social workers and case managers serve a critical role in the assessment for potential elder abuse and initiation of intervention in most interprofessional trauma teams. When these professionals conduct in-depth biopsychosocial assessments for all older adult trauma victims, additional cases may be identified. An assessment tool for ED social workers may be useful for trauma team social workers with less experience evaluating for mistreatment. See Appendix B-2.

If elder mistreatment is identified, a social worker can connect with police, legal and advocacy services, and shelter if appropriate. Other important roles of the social worker or case manager include the following:

- Use a strengths-based approach to help empower a patient to optimize his/her circumstances.
- Assist with safety planning, especially regarding discharge planning decisions.
- Identify and recommend available community resources to assist vulnerable older adult trauma patients being discharged to the community.
- Ensure that the rehabilitation or long-term care facility is aware of mistreatment concerns and is prepared to monitor the patient appropriately.

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ENSURING PATIENT SAFETY

Key Points

- Focus on ensuring the safety of victims of elder abuse in immediate danger, and strongly consider the involvement of law enforcement.
- When an older adult in immediate danger declines intervention, an assessment of capacity to refuse is often needed.

- For the victim of elder abuse who is discharged to the same home environment, make efforts to discuss safety planning and offer community services.

Attempt to ensure the safety of any older adult in immediate danger. Strongly consider involving local law enforcement. One challenging intervention is to prevent victim contact with the suspected abuser while the patient is hospitalized, especially if the perpetrator is the health care proxy or power of attorney. In this case consider involving hospital administration and the legal department to assist with issues including health care decision-making and guardianship.[1]

When older adult patients in immediate danger decline intervention, an assessment of their capacity to refuse is often needed.[1] When available, a psychiatric evaluation can be helpful to assess an older adult's decision-making capacity. If a victim of elder mistreatment has the mental capacity to refuse care and/or request discharge, respect the choice to return to an unsafe environment. This is similar to the care process for younger adult victims of IPV. Even when a patient refuses intervention, make efforts to discuss safety planning, offer psychoeducation about violence and abuse, and suggest appropriate community services. If the victim is found to lack mental capacity, proceed with treatments that are in the older adult's best interest, including hospitalization when appropriate.

If a patient is not at risk for imminent harm, consider methods to customize interventions to needs. Trauma team social workers can provide safety planning, counseling, and resources for the patient and caregiver as appropriate, including home health services, adult daycare, senior centers, Meals-on-Wheels, medical transportation services, substance abuse treatment options, and respite care. Additionally, make an effort to contact the older adult's primary care provider to ensure follow-up.

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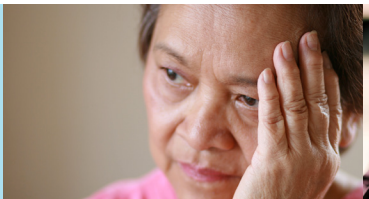
REPORTING ELDER ABUSE

Key Points

- Reasonable cause to suspect abuse is all that is necessary to report potential cases of elder abuse or neglect to the appropriate authorities.
- Suspected cases of older adults living in the community are investigated by Adult Protective Services (APS). Cases in nursing homes and other institutions are investigated by Long-Term Care Ombudsman programs.
- In many states, APS responds only to cases in which an older adult has cognitive or functional impairment.



- Consider reporting suspected abuse to local law enforcement when concerned about a patient's safety or when a crime was committed because APS will not initiate an investigation in the ED or hospital.

Report all suspected cases of elder abuse or neglect to the appropriate authorities, even when uncertain that abuse or neglect has occurred. A reasonable cause to suspect abuse is all that is necessary to report. Health professionals are mandatory reporters for elder abuse in most US states. In many states, elder abuse must be reported even if the victim does not want a report made. Laws vary, and health care providers need to know reporting requirements in their state. Obtain this information at your state's Department of Health website.

Resource: State Reporting Requirements

http://www.napsa-now.org/wp-content/uploads/2014/11/Mandatory-Reporting-Chart-Updated-FINAL.pdf

https://ltcombudsman.org/issues/abuse-neglect-and-exploitation-in-long-term-care-facilities

For older adults living in the community, the agency that initially investigates these cases is APS. Report suspected or confirmed elder abuse in nursing homes, board and care homes, or assisted living facilities to the state's Long-Term Care Ombudsman or to APS. Also, many state departments of health have protocols for reports about concerns regarding care provided in nursing homes. While the trauma team social worker or case manager is often responsible for this reporting, all members need to ensure that it occurs.

Resources

Adult Protective Services: *http://www.napsa-now.org/get-help/help-in-your-area/*

Long-Term Ombudsman program: *https://theconsumervoice.org/get_help*

Be aware of the scope of APS' role in investigation. In most U.S. states, APS responds only to cases of an older adult with cognitive or functional impairment, and APS will not act unless the older adult meets these criteria. The APS operates much differently than Child Protective Services. APS will initiate an investigation only after the patient is discharged as the patient in the ED or hospital is considered to be in a safe environment. Therefore, consider reporting the case to local law enforcement when concerned about a patient's safety or when a crime was committed.

See the Documentation section, page 91, to review guidelines for the complete, accurate and unbiased documentation of patient history and injuries.

BEST PRACTICES GUIDELINES FOR TRAUMA CENTER RECOGNITION: INTIMATE PARTNER VIOLENCE

INTIMATE PARTNER VIOLENCE

OVERVIEW

Key Points

- Intimate partner violence (IPV) affects all population groups, including men, women, adolescents, and individuals with LGBTQ+ identity.
- IPV is responsible for 30% of trauma center admissions for women.
- IPV is a known risk factor for intimate partner homicide, with firearms often the weapon of choice.

Definition

The CDC defines IPV as physical, emotional, or psychological harm in the form of physical or sexual violence, stalking and/or psychological aggression (including coercive acts).[1] Sexual intimacy is not required to qualify.[1] IPV may be perpetrated by a current or former partner or spouse, either in heterosexual or same-sex couples. While not always recurrent, IPV ranges from a continuum of one isolated episode to multiple, recurrent episodes over many years, to intimate partner homicide.[1]

Epidemiology

IPV, including sexual violence and intimate partner homicide, disproportionately affects women with an estimated 54% lifetime incidence, compared to 30% for men. IPV is responsible for 30% of trauma center admissions for women,[2] and it continues to be a significant risk factor for violence in pregnant women, specifically with pediatric pregnant patients.[3,4]

The 2015 *National Youth Risk Behavior Survey* suggests that IPV is largely unreported by adolescents. Teen dating violence is prevalent, with nearly 12% of high school girls reporting physical violence, and nearly 16% reporting sexual violence from a dating partner in the preceding 12 months. Of those reporting IPV, nearly 23% of women and 14% of men first experienced some type of violence by an intimate partner before the age of 18.[5]

IPV also affects the lesbian, gay, bisexual, transgender, queer and questioning (LGBTQ+) community. While understudied, rates may be higher than in cisgender sex partners. IPV rates are estimated to be as high as one in every two transgender individuals. LGBTQ+ survivors face distinct barriers to disclosing or seeking help, including "a limited understanding of the problem of LGBTQ+ IPV, stigma, and systemic inequities." This is particularly true when a risk of transgender identity disclosure is needed and the victim is not ready.[6,7] Even within institutions that are generally considered more progressive, such as college campuses, surveyed LGBTQ+ individuals perceived that their campuses were "low in readiness" to address IPV in their population.[8]

Two other populations with a potential increased risk of IPV and increased failure to disclose are undocumented individuals



because of fear of exposure, as well as parents of children with suspected abuse, particularly due to the overlap of abuser and victim.[9,10] Additionally, male victims of IPV may be reluctant to disclose given societal gender schemas and a lack of resources available for support.[11]

IPV is a known risk factor for intimate partner homicide, with firearms often the weapon of choice. A firearm in the home increases the risk of homicide by 270%.[12-14] Intimate partner homicide continues to claim the lives of 4-5 women daily in the United States, as 55% of homicides for American women are IPV-related.[15] The female partner is five times more likely to be killed when a gun is present in an IPV situation. Up to 40% of intimate partner homicides are male victims.[16]

IPV is also implicated in 54% of mass shootings, which disproportionately affect women and children.[17] Most mass shootings in the U.S. have been committed by white men, with only 5% of men committing homicidal shootings having a history of mental illness.[18-20]

Survivors of near-homicide IPV attempts frequently present for care at trauma centers across the U.S.[21,22] A recent multicenter trial of intimate partner and sexual violence demonstrated an overall prevalence of 11.4% for all trauma patients admitted, regardless of mechanism of injury.[21] The rates were similar between men and women, specifically with physical violence (4.8% vs. 4.3%, respectively, p = 0.896), with men admitted after penetrating trauma at particular risk.[11] Male intimate partner and/or sexual violence have been implicated in bidirectionality of such violence backtoward their partners and possibly to their communities at large.[23-25]

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ASSESSMENT

SCREENING

Key Points

- Universal screening for IPV is recommended for patients of all ages seeking health care.
- Use a standardized, validated IPV screening tool when taking the patient history.
- Recognize patterns of IPV injury, including injuries to the head, neck, or face, abdomen and thorax, as well as multiple injuries.



Identifying Victims

Patients present to trauma centers in a non-voluntary fashion. This allows for mandatory interaction between trauma care providers and a potentially reluctant patient, or one previously denied care by their partner. This interaction provides health professionals with an opportunity to screen, and ideally intervene, in cases of intimate partner or sexual violence. It also represents a potential (but usually missed) opportunity to identify IPV and initiate intervention, breaking the cycle and potentially preventing future intimate partner homicide.[1]

It is recommended that all trauma patients be screened for such violence, regardless of presenting mechanism, as intimate partner and sexual violence has been linked to trauma recidivism, self-reported mental illness, and substance abuse.[2] Joseph, et al. demonstrated that the prevalence of IPV is increasing among trauma patients, has a mortality rate of 6%, and mandatory screening and national intervention is urgently needed.[3] Various studies have validated screening tools (including for men and non-English speakers)[4,5] for use in trauma centers and EDs. The Joint Commission recommendation for hospital-based IPV screening has existed since 1992.[6] Routine screening for IPV is recommended by the following organizations: The American Medical Association, American College of Emergency Physicians, American College of Obstetrics and Gynecology, American Nurses Association, the Joint Commission, and the Institute of Medicine.

Routine or universal screening normalizes screening procedures. Techniques to normalize the process include incorporating screening questions into the intake process. This communicates to patients that this is a standard set of questions asked of all patients, it provides permission to discuss the topic, and it reminds providers to ask them during the general history.

It is essential to interview the patient alone.[7,8] Keep in mind that intimate partners of LGBTQ+ patients may be identified as friends, so it is equally important to ask them to leave during screening. Ideally the person who asks screening questions received behavioral health training; however, this training is not a prerequisite for safe and effective screening. Any screening is better than not asking the questions.

A number of short screening tools are designed and validated for IPV screening. See Rabin, et al. for more information about the specific strengths and weaknesses of the most commonly used tools.[9] The Hurt, Insult, Threaten, Scream (HITS) tool (see Table 12) in its verbal form is recommended for its ease of scoring and validation across multiple genders.[10] This screen does not include a direct assessment of sexual abuse, as it focuses narrowly on physical violence and safety. Other tools assess all three areas traditionally grouped as IPV, including sexual abuse; but these tools were predominantly developed for and validated in women.[11-13.] See Appendix C-1 for Example Screening/Documentation Tools.



Table 12. The Hurt, Insult, Threaten, Scream (HITS) Screening Tool

HITS (verbal) Questions	Scoring
Does your partner. . . 1. Physically hurt you 2. Insult or talk down to you fairly often? 3. Threaten you with harm? 4. Scream or curse at you fairly often?	Yes to any question is a positive score

From: Shakil A, Bardwell J, Sherin K, Sinacore JM, Zitter R, Kindratt TB. Development of verbal HITS for intimate partner violence screening in family medicine. *Fam Med.* 2014; 46(3): 180-5. Published with permission.

Many professional organizations recommend routine or universal screening for IPV, but some controversy continues. A 2015 Cochrane review firmly established the benefit of routine screening in identifying survivors of IPV. Among 10,074 patients screened, clinical identification of survivors did increase (OR 2.95, 95% CI 1.79 to 4.87, moderate quality evidence). However, no evidence was provided that better identification led to improved outcomes in terms of referrals, re-exposure to violence, or other health measures.[14]

Patients at Higher Risk

IPV is more prevalent in certain population groups. These high-risk groups include adolescent girls,[15,16] patients with unintended pregnancies,[17,18] LGBTQ+ patients,[19,20] mothers or caregivers of children with child abuse,[21] or those with mental illness or substance abuse.[22-24] While universal screening for IPV among all patients is recommended, be aware of the need for sensitivity and the need for additional screening for the patients in higher risk groups. By the same token, other household members are at higher risk when IPV is identified. Based on anecdotal evidence and small case series, some experts have recommended increased testing for child abuse in the young children of IPV victims.

Physical Examination

Be aware of and recognize injury patterns that have a higher association with IPV. Head, neck, or facial injuries among women were more associated with IPV in a meta-analysis of ED studies, while abdomen and thorax injuries were significantly more common among women survivors of IPV in another study.[25,26] Women injured by IPV are more likely to have multiple injuries.[26] Data are lacking for specific indicators for IPV in LGBTQ+ patients and men.

Among female victims of IPV identified in police databases, 64% received ED care in the year before the reported assault. The majority of victims also had multiple visits for non-injury related complaints.[27] Survivors of IPV have high rates of generalized medical complaints including chronic pain, GI symptoms (e.g., irritable bowel syndrome, reflux, diarrhea, and constipation), and multiple physical symptoms including insomnia, fatigue, fainting, shortness of breath, loss of appetite, vaginal discharge, and painful intercourse.[28-32]



Some injury patterns are associated with future intimate partner homicide, including non-fatal strangulation, rape, and threat with a weapon.[33] Be particularly aware of patients who are both in a higher risk population group and have a characteristic injury pattern or previous medical history because this group of patients are at greatest risk for intimate partner homicide.

Resources

See *http://ipvhealth.org/* for validated online resources and guidance about establishing universal screening protocols.

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INTERVENTION

MEDICAL AND PSYCHOSOCIAL INTERVENTIONS

Key Point

- Effective intervention includes awareness, validation, emotional support.

After injuries from IPV have been assessed or a patient has disclosed IPV, respond with medical and psychosocial interventions. When physical injuries are present, identify and treat injuries according to best practice standards. Additionally, be attuned to the psychological impact of IPV-related injuries and make appropriate referrals. A best practice also includes additional interventions and referrals to other services to manage chronic physical health conditions or illnesses that may be associated with the short- and long-term impacts of IPV.[1]

If available, referrals to behavioral health specialists and/or related services (pastoral care, social work, and psychiatry) during trauma admissions help to provide victims with specialized interventions addressing



psychosocial issues (e.g., substance use, posttraumatic stress, depression, suicidality).[1] Psychosocial interventions can be offered, including brief crisis counseling, social work services for alternative housing (e.g., domestic violence shelters), and/or child protective services for concerns about the safety of children in the household.

Trauma-Informed Care

A publication introducing the concept of trauma-informed care and recommendations for developing and implementing a trauma-informed framework is available at *https://store.samhsa.gov/system/files/sma14-4884.pdf*, with additional resources available at *store.samhsa.gov*.

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ADDRESSING PATIENT SAFETY

Key Points

- The primary goal of intervention is safety planning, regardless of relationship status or outcome.
- A best practice is creating a safety plan with connection to IPV resources and referrals, that is accomplished better with a "warm referral."

A primary goal of IPV intervention after stabilization of injuries is addressing immediate safety concerns.[3] Ultimately, patients who experience IPV have rights to self-determination in terms of making decisions about their relationship status.

The goal of intervention is to ensure the patient has access to IPV resources and the ability to maintain safety after discharge, rather than change the relationship status with the perpetrator. If patients decide to remain in the IPV relationship, health professionals are recommended to remain supportive and avoid responses that may be perceived as judgmental. Such responses may discourage future disclosure to health professionals and/or help-seeking behavior.[1]

A best practice is the development of a safety plan and provision of resources coupled with basic psychological intervention, including general emotional support, validating statements to affirm disclosure, and sensitivity toward the impact of IPV on interpersonal functioning. See Table 13 for examples of validating statements after positive IPV screen.

Health professionals and members of the interprofessional team collaborate with the patient to develop a personal safety plan prior to discharge. See Table 14. A printable safety plan is available at *https://www.thehotline.org/resources/download-materials/*



Table 13. Examples of Validating Responses for a Positive IPV Screen

- "Thank you for telling me. It can be difficult to talk about these topics."
- "I am concerned for your safety (and the safety of your children)."
- "You are not alone and help is available."
- "You don't deserve the abuse and it is not your fault."
- "Stopping the abuse is the responsibility of your partner, not you."
- "It takes courage to talk about this with me today."
- "I'm sorry this happened to you. How can I help?"
- "I am concerned for your safety and well-being."
- "Everyone deserves to feel safe at home."
- "It's okay if you don't want help now. If you change your mind in the future, we are here and happy to help."

Data from: Choo EK, Houry D. Managing intimate partner violence in the emergency department. *Annals of Emergency Medicine*. 2015; 65(4): 447-451.e1. doi:10.1016/j.annemergmed.2014.11.004; Valpied J, Hegarty K. Intimate partner abuse: Identifying, caring for and helping women in healthcare settings. *Womens Health*. 2015; 11(1): 51-63. doi: 10.2217/whe.14.59; and Paterno MT, Draughon JE. Screening for intimate partner violence. *Journal of Midwifery & Women's Health*. 2016; 61(3): 370-375. doi:10.1111/jmwh.12443.

Details of recommended interventions for specific health care settings can be found in the Family Violence Prevention Fund's *National Consensus Guidelines on Identifying and Responding to Domestic Violence Victimization in Healthcare Settings*.[2]

Trauma centers need to establish and maintain relationships with local community partners who provide IPV services, especially if the trauma center does not have internal resources for intervention. When trauma center providers are familiar with the staff and services available at local agencies, the likelihood of the patient following through with the connection is increased. Local partnerships allow for "warm referrals" from trauma centers, in which health professionals can directly set up connections between patients and IPV service organizations before they are discharged.[3] For a best practice, identify community partners and organizations that provide services for diverse cultural groups.

When Patients Decline Help

Some patients do not disclose existing IPV, or they decline assistance or resources for many reasons, including health professional and patient characteristics, as well as societal and environmental variables.[4] Because of barriers to IPV disclosure and referral acceptance, use primary prevention techniques for both incidental and anonymous reception of IPV information and available resources (multicultural and multilingual). Posting visible signage and providing access to brochures in private and public areas can achieve this goal.[2] In addition, public awareness



Table 14. Safety Planning Examples

If you are still in the relationship:	
• Practice getting out of your home safely • Pack a bag and have it ready at a friend's or relative's house or in a hidden location • Devise a code word or signal to use with your children, friends, and family if you are in danger • Hide money and a spare set of house and car keys • Memorize all important numbers • Use your instincts and judgment • Ensure there are no weapons in the house	
If you have left or are preparing to leave:	
• Change your phone number and screen calls • Save and document all contacts, messages, and injuries involving the abuser • Open a checking or savings account in your own name • Have someone you trust keep money, keys, copies of documents, extra clothes, and medications • Avoid staying alone and vary your routine • Notify family, school, and work contacts • Change window and door locks • Keep contact information for hotlines and shelters • Identify a safe place to go and someone who can lend you money • Never tell abuser where you are or your phone number and only meet in public places • Obtain a protective order • Make arrangements for pet safety	
When you need to leave:	
• Driver's license, ID • Birth certificate (including children's) • Social security cards • Money, checkbook, and credit cards in your name • Protective order • Rent and utility receipts • Car registration and insurance papers • Medical and school records • Important telephone numbers	• Passport • Work permits/visas • Marriage license and/or divorce/custody papers • Sentimental items • Extra clothes for you and your children • Valuables • Medications • Keys • Proof of income, tax information

Data from: Choo EK, Houry D. Managing intimate partner violence in the emergency department. *Annals of Emergency Medicine*. 2015; 65(4): 447-451.e1. doi:10.1016/j.annemergmed.2014.11.004; Valpied J, Hegarty K. Intimate partner abuse: Identifying, caring for & helping women in health care settings. *Womens Health*. 2015; 11(1): 51-63. doi: 10.2217/whe.14.59; and The National Domestic Violence Hotline. *Personal Safety Plan*. Accessed February 10, 2019 from https://www.thehotline.org/wp-content/uploads/2015/05/Hotline-personalsafetyplan.pdf

campaigns and social media marketing can spread information about IPV to patients and families in trauma centers.

Provide information and referrals in a discreet manner, because some individuals will not feel safe taking information with them. Provide wallet-sized cards that can be hidden, give materials to safe family members, and/or label resources using general terms such as "Social Services," can help maintain patient safety.[1]



IPV Resources

Hotlines	• National Domestic Violence Hotline 1-800-799-SAFE (7233) • Rape Abuse & Incest National Network (RAINN) Hotline 1-800-656-HOPE (4673)
Websites	• Futures Without Violence (previously known as Family Violence Prevention Fund) *http://www.futureswithoutviolence.org/* • National Coalition Against Domestic Violence http://www.ncadv.org/ • National Network to End Domestic Violence *http://www.nnedv.org/* • National Resource Center on Domestic Violence *http://www.nrcdv.org/* • Office on Violence Against Women (U.S. Department of Justice) *http://www.usdoj.gov/ovw*

The nature of IPV dynamics can be a source of frustration for health professionals when patients decline resources or appear to remain in potentially dangerous situations. Attempts to provide access to support are not failures. Patients may have multiple interactions with health professionals before they disclose IPV or respond to referrals.[4] Each encounter is another opportunity for these issues to be addressed. If an individual decides to decline help at the current encounter, a recommended practice is to offer resources and referrals and communicate availability of support in the future. The psychological impact of health professionals' vicarious or personal exposure to IPV can be buffered by attention to self-care and utilization of available support systems.

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TEAMWORK

Key Points

- Carefully review EMS reports and talk with EMS providers to identify clues of IPV as a component of the patient's injuries.
- All emergency medicine and trauma team members need training and education in environmental and interpersonal strategies to facilitate disclosure of IPV.
- Identify professionals with behavioral health or psychosocial training to educate the trauma team to improve screening practices.

Emergency Medical Services

As for all trauma patients, teamwork is an essential component of patient care in cases of IPV. Careful review of the EMS report about the environment, as well as clues from interactions with EMS providers can provide physicians with important information about IPV as a potential root cause or component of the patient's injuries. Collection of accurate information rather than speculation is essential. EMS, law enforcement, bystanders, or family who accompany the patient can provide important information that helps to confirm or deny a suspicion of IPV.

Trauma Team Education

In trauma centers, best practice includes universal screening, however, the fidelity of screening can be impacted negatively if the health professionals are not properly trained in the use of screening tools.[1] All members of the trauma and emergency medicine teams, including nursing, medical assistants and social workers, need to receive training and education in trauma-informed, evidence-based practices for screening, including environmental and interpersonal strategies to facilitate disclosure during screening (e.g., confidentiality, active listening).[2,3] Ensure that these practices are reviewed with all new team members, and regularly review compliance and outcomes as part of team performance improvement.

Behavioral Health

Identify opportunities for health professionals with behavioral health and/or psychosocial training (e.g., counselors, psychologists, clinical social workers, psychiatrists) to offer training and education to the trauma team to improve screening practices. Additionally, consider using behavioral health specialists to provide more in-depth screening, assessment, and intervention when IPV is suspected, even when patients have not directly disclosed IPV.[4,5] Behavioral health specialists are trained in trauma-informed, evidence-based practices and communication strategies that may facilitate disclosure and provide support.[6]

When IPV has been reported or identified, involve psychosocial staff to assist the trauma team in the creation and implementation of a safe discharge plan. Such a plan can include resources and referrals for housing, finances, childcare, employment and/or counseling



services. When trauma centers do not have access to psychosocial health professionals or other resources, trauma team collaboration with community agencies can help identify the availability of needed referrals and resources.

Law Enforcement

When applicable, involve law enforcement in the management of patients to prosecute crimes or press charges. It is important to encourage involved law enforcement personnel to use a trauma-informed care approach. Victims of IPV report increased posttraumatic stress after law enforcement involvement.[7,8] Trauma centers can leverage their relationships with law enforcement and community organizations to encourage trauma-informed approaches, as well as encourage local law enforcement agencies to offer trauma-informed care training for their officers.

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REPORTING TO LAW ENFORCEMENT

Key Points

- Few states have IPV-specific mandatory reporting.
- Reporting in some cases is for specified injuries often associated with IPV.

Health professionals also need to know state requirements for mandatory reporting of IPV to law enforcement, if disclosed or suspected.[1] See resource box for specific state laws and requirements, as well as related information and recommendations.



Resources: State Laws and Requirements

https://www.futureswithoutviolence.org/userfiles/file/HealthCare/Compendium%20Final.pdf

https://www.evawintl.org/images/uploads/AEq%20Reporting%20Requirements%20for%20DV%20Victims.pdf

https://www.acf.hhs.gov/sites/default/files/fysb/state_compendium.pdf

http://www.bwjp.org/training/webinar-mandatory-reporting-laws-impact-on-victim-ipv.html

https://cdc.gov/violenceprevention/intimatepartnerviolence/index.html

Few states have mandatory reporting specifically for IPV, but most states have laws mandating the report of specified injuries and wounds often associated with IPV (e.g., gunshot wounds). According to the Family Violence Prevention Fund, state laws relating to IPV fall into four categories:[1]

- Mandatory reporting of injuries caused by weapons
- Mandatory reporting for violation of criminal laws related to violence/nonaccidental injury
- Mandatory reporting for IPV
- No mandatory reporting

Mandatory criminal reporting laws for IPV can be helpful, but also have costs for victims (e.g., loss of confidentiality, fear of retribution, underreporting).[1] Health professionals can be most effective in helping victims address health and safety issues.

See the Documentation Section, page 91, for guidance in accurately documenting patient information and patient injuries.

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BEST PRACTICES GUIDELINES FOR TRAUMA CENTER RECOGNITION: SEX TRAFFICKING

OVERVIEW

Key Point

- The majority of sex trafficking victims, including children, see a health professional while being victimized, but they are not recognized.

Definition

The U.S. Congress defines *human trafficking* as the "recruitment, harboring, transportation, provision, or obtaining of a person for labor or services, through the use of force, fraud, or coercion for the purpose of subjection to involuntary servitude, peonage, debt bondage, or slavery."[1] *Sex trafficking* is defined as "the recruitment, harboring, transportation, provision, or obtaining of a person for the purpose of a commercial sex act, in which the commercial sex act is induced by force, fraud, or coercion, or in which the person induced to perform such act has not attained 18 years of age."[1]

Epidemiology

Accurate statistics on the incidence and prevalence of human trafficking are difficult to obtain because of the hidden nature of labor and sex trafficking. The number of victims worldwide is estimated to be in the millions.[2] Sex trafficking is documented in every state and Washington DC, including cities, suburbs, and rural areas.[3]

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IDENTIFYING VICTIMS OF SEX TRAFFICKING

Key Point

- Get the patient alone to collect key information by telling all non-health professionals to leave at least once during the examination.

Victims of sex trafficking experience acute injuries that require care by the trauma team, as well as a variety of acute and chronic medical conditions. Many victims (87%) report visiting a health professional while being victimized, but they are not often identified as a victim of sex trafficking.[1,2] Child victims of trafficking are also known to see a health professional during their victimization.[1] Health professionals miss the signs of trafficking because they lack training to identify victims, and hospital protocols or guidelines often do not exist.[3-6]

Health professionals play a critical role in the identification of trafficking victims, and they have an opportunity to significantly impact their care. Recognition of key situations and circumstances is essential to help identify this vulnerable population. Some potential warning signs and risk factors of a patient who may be trafficked include:[3,4,7]

- Minor presents without a legal guardian
- Unstable housing situation
- Runaway youth
- Substance use (current use or signs of drug use)
- Multiple or frequent sexually transmitted infections
- Delay in seeking medical care, such as no prenatal care
- Children with a history of being in the child welfare system
- LGBTQ+ youth
- History of child abuse or family violence
- History of date violence or sexual assault

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INTERVENTIONS

Key Points

- Establish a relationship of trust and address patient safety.
- Involve the child abuse team in care of the child victim of sex trafficking and social services for adult victims of sex trafficking.

Addressing Patient Safety

When assessing this vulnerable population, it is imperative to assess their safety. Treat and respond to the patient with kindness and without judgement. A disclosure of trafficking is



not the goal. Rather place emphasis on establishing a relationship of trust and respect between the health professionals and the trafficking victim, as you do for all patients. Get the patient alone by telling non-health professionals to leave at least once during the examination.

When the patient is alone and able to answer freely, ask only need-to-know information and inquire about immediate safety. Examples of questions you may use include:[1,2]

- Do you have a safe place to stay?
- Where are you living?
- Do you work, live, and sleep all in the same place?
- Have you ever traded anything for sex: food, a place to sleep, clothing, or drugs?

Recommendations for Health Care Providers

The National Human Trafficking Hotline number is 888-373-7888, which is simple to remember by telling the patient "888-373-7888." Give your patient the number at the beginning of your conversation, let them know you want them to remember the number, and ask them to recite it back at the end of your interaction.

When you suspect a patient is a victim of sex trafficking:

- Always ask who other people are in the room.
- Establish trust between you and the patient and inform the patient of your mandatory reporting obligations.
- Let the patient feel in control and be non-judgmental.
- Engage your social worker and/or child abuse team immediately. Local resources for patient emotional support may be available in your city.
- Call the National Human Trafficking Hotline (888-373-7888) to inquire about sex trafficking specific services in your area.

Specialized care for long-term treatment is required for this patient population. Currently, the approach to care for this population is extrapolated from victims of IPV and sexual abuse.

Health Professional Education

- Make a commitment to educate all trauma team health professionals about sex trafficking. Include the following elements in the education:[3]
  - An understanding of the scope of the public health care crisis,
  - Identification of warning signs that raise suspicion of sex trafficking victimization,
  - Use of a trauma-informed and patient-centered approach to the screening of suspected victims of sex trafficking, and
  - Referral resources for support and treatment.



National Resources

- Human Trafficking database, enlisting law enforcement, and support for victims. *www.polarisproject.org*
- HEAL (Health, Education, Advocacy, Linkage) Trafficking. *healtrafficking.org*
- American Medical Women's Association. Physicians Against the trafficking of humans (AMWA-PATH). *www.doc-path.org*
- U.S. Department of Health & Human Services, Office on Trafficking in Persons. *www.acf.hhs.gov/otip/training/soar-to-health-and-wellness-training*

Systemwide Improvement, Development, and Leadership

Develop a protocol for use by your health care facility for the identification, evaluation, and treatment of victims suspected of sex trafficking. Suggestions for developing a protocol can be found at the HEAL web site (*healtrafficking.org*). Organize an advisory board that ideally includes health professionals and community representatives.

Reporting Sex Trafficking

When initiating the patient-physician relationship identify your mandatory reporting obligations and provide the patient with a safe and comfortable environment. Many victims of sex trafficking feel shame and believe they are solely responsible for their situation, similar to victims of sexual abuse and domestic violence.

Mandatory reporting of victims of sex trafficking is a complex issue, and research is being conducted regarding the safest approach for this patient population. Mandatory reporting laws exist to protect victims, connect patients to community services and treatment programs, and to bring perpetrators to the attention of authorities. However, mandatory reporting victims of sex trafficking often involves significant risk to the patient.[4]

When a patient discloses being a victim of sex trafficking, contact your social worker. If the patient is under the age of 18 years old, contact your child abuse team. Sex trafficking or the commercial sexual exploitation of children may be added to your state's child protective services, and this may affect whether or not a disclosure of sex trafficking is reportable. As of 2016, eight states include trafficking as abuse under child abuse and neglect laws (California, Colorado, Florida, Hawaii, Illinois, Maryland, Massachusetts, and North Carolina).[5] See *www.victimlaw.org* for other states considering laws. If the victim is an adult, follow your hospital's reporting policy with regards to reporting IPV or rape.

See the Documentation Section, page 91, for guidance in accurately reporting patient information and physical findings.



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BEST PRACTICES GUIDELINES FOR TRAUMA CENTER RECOGNITION: DOCUMENTATION

Key Points

- Complete, accurate, and unbiased documentation by all health professionals (physicians, nurses, social workers, and trainees) is critical to providing optimal care for patients and use in legal proceedings.
- Document the source of the history obtained:
  - Child abuse: parents, babysitter, EMS, health professional, etc.
  - Elder abuse: patient, caregiver, EMS, health professional, etc.
  - Intimate partner violence: patient, companion, etc.
- Do NOT "cut and paste" medical history from prior records during documentation. Errors in this information create questionable credibility of your own history.
- Use a hospital credentialed interpreter to obtain the history when not fluent in the language of the patient or historian to ensure that the history will be valid in a court of law.
- Document in detail the patient's history in the patient's own words and avoid biased words such as "claims" or "alleged." Use words such as "patient states" or "patient reports."
- Document in detail all physical findings including the size, color, or odor of any injuries/lesions and include, if possible, body diagram, and photographs.

Patient History

Thorough, accurate and unbiased documentation of history elements, source, context, language, physical exam findings, and medical decision making is essential for the optimal care of abused patients and also for subsequent use in legal proceedings.[1,2] Unfortunately, this documentation by health professionals is frequently inadequate or inconsistent.[3,4] Depositions and courtroom trials occur months to years after the patient encounter, and the health professional's memory is not a valid source of evidence in these proceedings. A detailed and complete record is essential to adjudicate abuse in court.[5]

Details related to the mechanism of injury and circumstances around the injury are essential to understand if the injury sustained is consistent with the stated mechanism. Essential historical elements to obtain and document at the initial encounter include those seen in Table 15 (children). When IPV or elder mistreatment is discovered through routine screening or is suspected based on the initial presentation, ask the patient very specific questions to help guide the ED head-to-toe examination outlined in Table 16.[2]

Table 15. Essential History Elements Needed for Potentially Abused Children

Questions to Ask During History Taking
• Who brought the child to the ED? Was presentation delayed and is any explanation provided? • Who provided the historical information? • What exactly happened (height of fall, what patient fell from, what they landed on)? • When did the injury happen? Pay specific attention to any injuries prior to this event or identify when the child was last well/normal. Imaging may later demonstrate chronic injuries. • How did it happen? What was the child doing? What was the child's behavior before, during or after the injury occurred? • Where did the injury happen (in the home, in which room, or in a public place)? • What happened immediately after the injury? (A history of a child standing up on a broken femur would be consistent with fabrication of mechanism.) • Who witnessed the incident? Who was around but did not witness the incident? (Witnesses may come forward later that were not actually at the place of injury.) • What is the history of previous injuries? • For children less than one year, what developmental milestones have been achieved (rolling over, sitting, walking), and when were they achieved?

Table 16. Information to Ask of Adult Victims of Assault

Category	Information to Collect
General information	• Time and place of assault • Full or partial names, if known, of those involved • Witnesses to the assault • Manner of assault • Any verbal threats of harm • Any verbal threats of death
Assault with a weapon	• If punched, where, how many times, with an open or closed hand, or both • If kicked, where, how many times, with bare feet, type of shoe (tennis vs. work boots) • If licked/sucked (sexual assault), where, number of times, swab for DNA even if bathed • If bitten, where, number of times, swab for DNA even if bathed • If spat upon, where, number of times, swab for DNA, even if bathed • If strangled, where to the neck, number of times, manual and/or ligature (See Appendix B-3 for a detailed neck trauma form) ◗ Loss of consciousness ◗ Voice changes ◗ Difficulty breathing and/or swallowing ◗ Loss of bowel/bladder control • Presence or absence of petechial hemorrhage to eyes/face
Assault with a weapon or object used as a weapon	• If specific weapon, what type (e.g., knife, firearm, taser), where, number of times • If object, what was used (e.g., baseball bat, cane, hammer), where, number of times

Data from: Sheridan DJ, Nash KR, Kapur J, & Giardino AP. Intimate partner violence: Assessment, forensic documentation, and safety planning. In LE Ledray, AW Burgess, & AP Giardino (Eds.), *Medical responses to adult sexual assault: A resource guide for clinicians and related professionals* (pp. 329-356). St. Louis, MO: STM Learning, Inc. 2011; Sheridan D. Treating survivors of intimate partner abuse. In JS Olshaker, MC Jackson, & WS Smock (Eds.), *Forensic emergency medicine* (2nd ed., pp 202-222). Philadelphia, PA: Lippincott, Williams, & Wilkins, 2007; and Brockmeyer DM, & Sheridan D. Domestic violence: A practical guide to the use of forensic evaluation in clinical examination and documentation of injuries. In JC Campbell (Ed.), *Empowering survivors of abuse: Health care for battered women and their children* (pp. 23-31). Thousand Oaks, CA: Sage. 1998.

Source of Patient History

Attribution of a history source is essential for forensic evaluation because multiple providers taking a history from different sources can introduce variability. This variability may be attributed to a parent or caregiver changing his or her story, when, in fact, the history was taken from multiple individuals. When appropriate to interview individual caretakers separately, allow the source to provide a narrative without interruptions. This practice avoids the influence introduced by clinical questions or interpretations.

When the child or adult is able to provide a history, obtain it without the presence of the parent or caregiver. Make an effort for the team to concurrently interview the child/adult, rather than having a series of health professionals (medical student, intern, resident, fellow, attending, social worker, nurse) asking the same questions. When possible, ask about and document the patient's social history and living arrangement in the EMR. Whenever possible, document the patient's statements verbatim. Use direct quotes with attribution, using terms like "patient said, stated or reported."[6,7]

Consider assigning medical scribes or forensically-trained nurses to record verbatim patient statements. Documenting paraphrased statements or statements with partial direct quotes is acceptable when it is impractical to immediately document verbatim statements. This is important because it increases the likelihood that statements in the EMR can be introduced into court as exceptions to hearsay, even if the patient is unavailable or unwilling to testify at a later legal proceeding. If an older adult presents to the ED acutely post-assault and is visibly upset, document the patient's psychological demeanor when the patient made the verbatim declarations.

Statements, especially unsolicited statements made in a moment of shock, are called *excited utterances*. These statements are usually considered by the courts to be reliable since the declarant did not have the time to fabricate a lie.[8] In addition, statements made to physicians and nurses for the purposes of diagnosis and treatment are often viewed by the court as reliable exceptions to hearsay, since the court presumes it is in the patient's best interests to be truthful to receive the best medical care.[8]

Avoid Biased Documentation

When documenting patient statements avoid using pejorative or biased words, such as *claims* or *alleged*. For example, documenting "the patient *claims* she was assaulted," gives the impression the patient may be either unreliable or is lying. A health professional would never document "alleged chest pain" or "alleged pregnancy," yet "alleged assault" and "alleged rape" are commonly documented in ED medical records. *Alleged* gives the impression the history is unproven, and thus may be false. It is more accurate to document "reported assault" or "suspected assault."

For potentially abused children, unless the health professional is an expert in physical child abuse (PCA), avoid statements such as "doubt child abuse." Additionally, avoid a statement that the

"injury is consistent with mechanism" when further validation of injury circumstances is to be conducted with home visits and inspections by child protective services (CPS). It is appropriate to document the suspicion of PCA ("rule out abuse" and "suspected/probable abuse") and an injury that is NOT consistent with a stated mechanism.

Trauma care providers often obtain patient history information from EMS providers, nurses, or health professionals at a referring facility, and integrate this history into the EMR without attribution of source. If the history is available from the primary caretaker responsible for the child/adult at the time of injury, then document this. Similarly, if the history is only available from the health professional report or EMS, then clearly document this in the chart to help explain discrepancies after a full history is obtained later from the primary caretaker.

Avoid using templated or "cut and paste" medical, social, family, and medication histories because these are known to contain errors. Including these errors in a health professional's own note raises questions about the reliability of that health professional's history documentation. The quality of documentation is important because the EMR is often subpoenaed as a critical piece of evidence in criminal and civil trials of suspected abuse.[1,6] Forensic interviewing is beyond the scope of clinical trauma providers, therefore, do NOT focus questions solely on identifying the perpetrator. This forensic information is obtained by specialty trained providers or law enforcement at a later time.

Health professionals often obtain medical histories when they have limited ability to speak a second language. While this practice facilitates patient flow and rapid work-up in the ED when limited interpretation resources exist, do NOT employ this practice in a possible abused patient. When it becomes apparent that a patient has injuries related to potential abuse, re-take the history with the assistance of a credentialed interpreter, and document the identity of the interpreter. A health professional must be able to testify in court that he or she is bilingual, or the history taken by a non-fluent provider is not valid. Use caution when taking a history from a patient or caretaker with limited English. It can be quite convenient for this individual to have even more limited English when testifying in court at a later date. Always offer an interpreter, and if declined, document that as well. Another good practice is to document specifically which questions parents/caregivers were asked that demonstrate an apparently fluent conversation with the health professional.

Written Documentation of the Physical Findings

Most documented physical examinations focus on pertinent positive and negative findings to determine a list of potential diagnoses. This often results in inadequate detailed documentation of the entire examination. Some elements

of the examination may be inadvertently skipped. For example, documentation of a genital exam is recorded in only 50-60% of suspected PCA patients.[4] Ensure that every potentially abused patient has a comprehensive physical examination that is documented, including overlooked elements such as the following in a child's examination:

- Complete neurologic examination ("sleeping calmly" is not acceptable)
- A complete disrobed skin examination (including the back, ears, and scalp) with a detailed description of bruising (location, pattern, size, colors, and distribution if multiple) or lack of bruising if it is not seen
- Description of cutaneous lesions (including location, size, and color)
- A detailed perineal examination detailing the presence of perianal lesions or injuries to the genitalia.
- Growth parameters (height, weight, head circumference)
- Fundoscopic examination (ideally by an ophthalmologist – see page 25 Eye Findings in Abusive Head Trauma)

Pay particular attention when describing left- or right-sided injuries, ensuring that all references are oriented to the *patient's* left and right. Discrepancies in documentation of injury sidedness raise questions about the reliability of the health professional's documentation.

Failing to accurately distinguish and document the etiology of injuries can have serious medical-legal consequence.[9] Some medical-forensic terms are used incorrectly in written documentation, such as *laceration* versus *cut* and *bruise* versus *ecchymosis.* A laceration is an irregular, jagged tear in the skin from force, and a cut (a sharp force injury) is caused by an instrument, tool, weapon or object with a sharp edge that smoothly incises the skin.[9] Bruises (also called contusions) are caused by blunt or squeezing force mechanisms, while ecchymoses are hemorrhagic lesions under the skin, sometimes called senile ecchymoses.[10] See Table 17 for definitions of the most common assault-related injuries.

For written documentation of injuries in injured adults, as in children, include a detailed description of all assessed injuries, old and new. Include measurements and a description of the color of all bruises, ecchymotic lesions, abrasions, scabs, and scars. Document if any wound has drainage. Include data from all senses, including smell, when documenting physical findings of abuse/neglect.

While objective, thorough, and unbiased written documentation of the physical findings is essential, the use of body diagrams and photographs is very important for the investigation of reported or suspected child abuse, elder abuse, and IPV.[13] See the Mary Bridge Children's Hospital screening tool to guide documentation of suspected child abuse (See Appendix B-1). The Geriatric-

Table 17. Documentation: Correct Medical Injury Terminology

Term	Definition
Abrasion	Wearing, grinding, rubbing, or scraping surface layer of cells or tissue from an area of the skin or mucous membrane.[11]
Avulsion	A tearing away of a body part (skin) accidentally or surgically.[11]
Partial Avulsion	Skin tear.[6]
Bruise	CONTUSE – an injury transmitted through unbroken skin to underlying tissue causing rupture of small blood vessels and escape of blood into the tissues with resulting discoloration: CONTUSION.[11]
Contusion	Injury to tissue usually without laceration: BRUISE.[11]
Choke (choking)	To keep from breathing in a normal way by compressing or obstructing the windpipe or constricting the windpipe – to have the windpipe blocked entirely or partly.[11]
Cut	To penetrate with or as if with an edged instrument – an opening made with an edged instrument – a wound made by something sharp.[11]
Ecchymosis (singular) Ecchymoses (plural)	The escape of blood into the tissue from a ruptured blood vessel marked by livid black-and-blue or purple spots or area.[11]
Incision	A cut.[11]
Hematoma	A mass of usually clotted blood that forms in a tissue, organ, or body space as a result of broken blood vessel.[11]
Hemorrhage	A copious discharge of blood from the blood vessels.[11]
Laceration	The act of making a rough or jagged wound tear - a torn or ragged wound.[11]
Lesion	An abnormal change in structure of an organ or part due to injury or disease.[11]
Patterned injury	A representation of the shape of the object that caused the injury.[12]
Pattern of injury	Injuries in various stages of healing.[6]
Petechia (singular), Petechiae (plural)	A minute reddish or purplish spot containing blood that appears in skin or mucous membrane as a result of localized hemorrhage.[11]
Strangulation	The action or process of strangling or becoming constricted so as to stop circulation.[11]
Tear	To wound by or as if by pulling apart by force (the skin).[11]
Wound	A physical injury to the body consisting of a laceration or breaking of the skin mucous membrane often with damages to underlying tissues.[11]

Injury Documentation Tool (Geri-IDT) is a useful clinical documentation guide for suspected elder abuse (see Appendix B-4).[14] See Appendix C-1 for screening documentation samples for Human and Sexual Trafficking.

Photographic Documentation

Routine photography of injuries to patients reporting victimization is not common in hospital EDs that do not have a formalized forensic examiner program. Time, lack of a readily available camera, and consent issues are some barriers to taking patient photographs. For children, most trauma centers have dedicated child abuse teams to obtain these images. Parental consent is not required to use images for documentation of physical exam findings in the EMR. Most general ED and hospital treatment consent forms do contain language about the use of photography in routine medical care.

When photographs are taken, additionally use paper or electronic body diagrams to draw the injuries (see Appendix B-4 for sample body diagrams). The photographs provide the medical pictorial documentation of injury.[6,7]

Guidelines for obtaining photographs is as follows:

- Bracket the images—the first and last photographs list the patient name, medical record number, date and time of the photograph, and name of the photographer.[2] Sometimes a patient label is included in each image.
- For each wound or region of wounds photographed, take a series of photos that include a far image (6 feet away), a mid-range image (4 feet away) and a close-up image (2 feet away). This is often called "rule of thirds" since the distance is cut by a third with each image.[6]
- Include a standardized scale (e.g., ruler) in at least one image.[6,13]

When photographs are taken as part of the medical evaluation, a chain of custody does not need to be established or maintained. A photograph to medically document an injury is conceptually similar to radiographic images (e.g., radiographs, CT, MRI) to aid in the assessment and documentation of numerous medical conditions and traumas. Maintain the photographs as protected confidential patient medical records. Most EMR systems have the capability to upload and confidentially store patient photographs.

If the ED uses a forensic nurse or medical examiner system, photographs become part of an official forensic examination. When signed consent is required for release of medical records to law enforcement, the photographs and digital files must be maintained following the rules of a chain of custody.

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BEST PRACTICES GUIDELINES FOR TRAUMA CENTER RECOGNITION: PERFORMANCE IMPROVEMENT

IMPLEMENTING ABUSE MANAGEMENT BEST PRACTICE GUIDELINES

Key Points

- Trauma medical directors, trauma program managers, trauma liaisons, registrars, and staff have a leadership role in implementing and supporting abuse screening, reporting, management, and implementing the abuse best practice guidelines and monitoring compliance.
- Implementing the abuse best practice guidelines starts with a stakeholder workgroup that receives its directives from the trauma medical director and the trauma operation committee.
- The workgroup is charged with completing a gap analysis to identify the priorities of developing or revising the trauma center's abuse guideline, identifying the priorities, and developing an educational plan to introduce the guideline.

Implementing trauma center best practice guidelines begins with the trauma medical director (TMD), trauma program manager (TPM), the trauma liaisons, and registrars as leaders and change agents. These individuals are responsible for the oversight, management, and continuous commitment to improving care within the trauma center and the trauma system, regardless of trauma center designation level. They define the leadership structure, culture, and implementation processes for best practice guidelines that foster stakeholder engagement. These leaders will define the following:

- Abuse guideline workgroup that is comprised of champions and stakeholders
- The workgroup leader
- The goals and timelines for completion of a gap analysis focused on the trauma center's abuse assessment and management practices and the *ACS Best Practices Guidelines for Trauma Center Recognition of Family Violence: Child Abuse, Elder Abuse and Intimate Partner Violence*.
- The reporting structure for the abuse guideline workgroup

The abuse guideline workgroup is charged with comparing current practice to those recommended in the BPG to identify gaps.[1] This gap analysis identifies opportunities to align the trauma center's abuse management practices with the

ACS Best Practices Guidelines for Trauma Center Recognition of Family Violence: Child Abuse, Elder Abuse and Intimate Partner Violence. This workgroup, in conjunction with the trauma center's operation committee, establishes the priorities for changes. Progress reports regarding the completion of these identified tasks are provided to the trauma operations committee. See Appendix A for examples of gap assessment tools.

The next step is to revise or develop the trauma center's abuse guidelines for child abuse, elder abuse, and intimate partner violence. Each abuse BPG is reviewed and approved by the trauma operations committee and the TMD. The operations committee is responsible for the dissemination and communication of the revised abuse guidelines to individuals who participate in trauma care. The next abuse guideline workgroup priority is development of an educational plan to introduce the new abuse guidelines to all stakeholders. This educational plan outlines the expectations for the various health professional roles involved in abuse screening and management, as well as the specific tasks associated with screening, documentation, interventions, referrals, safe discharge, and mandatory reporting.

The BPG implementation date is determined as the workgroup completes the abuse guidelines and develops the educational plan. The performance improvement and outcome measures to monitor compliance of the abuse guidelines are defined prior to implementation.

ABUSE INJURY CODING

Key Points

- Trauma registrars must have the education and skills to accurately code abuse injuries.
- Custom trauma registry data elements can improve the trauma center's ability to identify the patient population and review management.

Trauma registrars and health information coders are key stakeholders in the development of best practice guidelines for managing abuse injuries. Timely, accurate injury coding begins with the details and descriptions of the injuries documented by the health professionals (see Documentation Section for guidelines). See Appendix C-1. Trauma registrars must have the education and skills to accurately code abuse injuries. Trauma registrar participation with the interdisciplinary assessment team to validate and clarify the injuries identified is essential for accurate injury coding. The registry data are used to generate reports related to abused patients and outcomes.

Trauma registrars need to follow the rules of the most current *NTDS Data Dictionary* and ICD-10-CM Official Guidelines for Coding and Reporting, found in the *ICD-10-CM Official Codebook (Center for Medicare and Medicaid Services, 2018)*.[2] These references give guidance on how to sequence diagnosis codes and external cause codes.

Table 18. Coding Guidance for Confirmed and Suspected Abuse

If suspected abuse…	**2019 Arrivals and Prior**	**2020 Arrivals and Later**
Primary External Cause Code	T code	T code
Secondary External Cause Code	Not Applicable	Not Applicable
Tertiary External Cause Code		Not Applicable
If confirmed abuse…	**2019 Arrivals and Prior**	**2020 Arrivals and Later**
Primary External Cause Code	T code or Y code	T code
Secondary External Cause Code	Code representing mechanism that caused injury	Y code (perpetrator)
Tertiary External Cause Code		Code representing mechanism that caused injury

Distinguishing suspected versus confirmed abuse is critical for assigning the correct injury coding. Use the patient status at discharge or the best available information at the time to meet coding standards. See Appendix C-2 for a *Trauma Coder's Guide to Abuse Injury Coding*. See Table 18 for coding guidance regarding confirmed and suspected abuse. The following definitions are recommended to provide a uniform standard for abuse coding.

Confirmed abuse:

- Abuse confirmed by a multidisciplinary team reviewing the case (members may include medical/law enforcement/child welfare)
- Abuse admitted by perpetrator
- Abuse witnessed by unbiased, independent observer
- Abuse disclosed by victim
- Abuse confirmed by the presence of injuries with a high-risk of associated abuse occurring without a reasonable explanation based on history

Suspected abuse:

- Consideration of abuse when not meeting the criteria of "confirmed abuse" or "no abuse"

No abuse:

- No abuse suspected or abuse ruled out by the hospital physician, social worker, or investigation by law enforcement or protective services

Consider the addition of custom elements regarding abuse within the trauma center's registry. These custom elements provide the opportunity to capture "confirmed abuse", "suspected abuse", and "no abuse", as well as the mandatory reporting status. They can be used to assist in identification of this patient population and further advance the trauma center's guidelines for management of child abuse, elder abuse, and intimate partner violence.

RECOMMENDED TRAUMA PERFORMANCE IMPROVEMENT GUIDELINE INTEGRATION

Key Points

- The abuse guidelines are integrated into the Trauma Performance Improvement Patient Safety Plan to monitor compliance and outcomes.
- Mandatory reporting is tracked using the trauma center's trauma registry.
- Examples of the abuse guideline integration into the performance improvement measures include the following:
  - Compliance regarding the completion of the abuse screening
  - Compliance to recommendations for psychosocial referrals
  - Compliance to mandatory reporting of abuse to the authorities
  - Compliance to recommended injury description documentation standards
  - Abuse coding accuracy for suspected, confirmed, and no abuse that uses the best information available at discharge
- Cases of missed abuse recognition are processed through the second level of trauma performance improvement review. Cases are escalated to trauma peer review and system review when appropriate.
- Abuse screening outcomes are integrated into the trauma center's operations committee standing reports.

Table 19 reflects integration of the abuse guideline's compliance and outcome reviews into the trauma center's trauma performance improvement and patient safety plan.[3]

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Table 19. Child Abuse, Elder Abuse, and Intimate Partner Violence Abuse Trauma Performance Improvement Integration Recommendations

Organizational Structure for Abuse Screening and Management Performance Improvement Initiatives	**Compliance Is Met or Not Met**
Policies/procedures/guidelines that define the abuse screening and management of patients with suspected or confirmed child abuse, elder abuse, or intimate partner violence, and sex trafficking are documented and current.	100%
Individuals participating in the oversight, coordination, and bedside care from trauma resuscitation of trauma patient through hospital discharge have education and training in child abuse, elder abuse, and intimate partner violence, and sex trafficking abuse and the established guidelines.	100%
Individuals participating in the oversight, coordination, and bedside care of abuse trauma patients have access to trauma-informed care training.	100%
Trauma registrars and registry coders have the education and resources necessary to achieve accurate, validated abuse injury coding.	100%
Abuse Screening and Management Performance Improvement Process Measures	**Compliance Threshold**
Compliance to the abuse screening is completed and documented within the established timeline.	80%
Suspected abuse referrals are completed within the established guidelines.	80%
Mandatory reporting of abuse to the authorities is completed.	95%
Documentation of the physical assessment and injury descriptions follow guidelines.	80%
Cases with missed abuse recognition are reviewed through the second level of trauma performance improvement review and escalated to trauma peer review.	100%
Abuse coding is correct.	100%
Standardized definitions for suspected, confirmed, and no abuse are used for coding.	100%
Abuse coding is completed using the best available information at the time of the patient's discharge.	100%

Acronyms

AAP – American Academy of Pediatrics
ACE – adverse childhood experience
ACS – American College of Surgeons
AHT – abusive head trauma
ALARA – as low as reasonably achievable
ALT – alanine aminotransaminase
ALTE – acute life-threatening event
AP – anteroposterior
APS – adult protective services
ASD – acute stress disorder
AST – aspartate aminotransaminase

BCDR – Bruising Clinical Decision Rule
BPG – best practice guideline
BRUE – brief resolved unexplained event

CAP – child abuse pediatrician
CAPTA – Child Abuse Prevention and Treatment Act
CDC – Centers for Disease Control and Prevention
CPS – child protective services
CT – computed tomography
CTA - computed tomography angiography

ED – emergency department
EMR – electronic medical record
EMS – emergency medical services

FLAIR – fluid-attenuated inversion recovery

GCS – Glasgow Coma Scale
GRE – gradient-recalled echo

HIPAA – Health Insurance Portability and Accountability Act

ICU – intensive care unit
IPV – intimate partner violence
IV – intravenous

LGBTQ+ – lesbian, gay, bisexual, transgender, queer, questioning

MRA – magnetic resonance angiography
MRI – magnetic resonance imaging

NPTR – National Pediatric Trauma Registry
NTDS – National Trauma Data Standard
OR – operating room

PA – posterioranterior
PCA – physical child abuse
PediBIRN – Pediatric Brain Injury Research Network
PECARN – Pediatric Emergency Care Applied Research Network
PredAHT – Predicting Abusive Head Trauma
PI – performance improvement
PIBIS – Pittsburgh Infant Brain Injury Score
PT – prothrombin time
PTSD – posttraumatic stress disorder
PTSS – posttraumatic stress syndrome
PTT – activated partial thromboplastin time

SDH – subdural hematoma
STIR – short T1 inversion recovery
STS – secondary traumatic stress
SWI – susceptibility-weighted imaging

TBI – traumatic brain injury

VWF – von Willebrand factor

Appendix A-1. Child Abuse Guideline Gap Assessment Tool

Child Abuse Screening in the ED	Met	Partially Met	Unmet	Priority	Comments
Guideline outlines the standardized screening for child abuse.					
Screening process is integrated in the electronic medical record.					
Guideline defines the timeliness for initial screening with processes for a focused assessment and continual screening during the continuum of care.					
Guideline identifies the need for a complete physical exam and history documentation requirements to include recording injuries and stage of injuries on a body diagram.					
Documentation includes the developmental stage of the child and the child's reaction and statement regarding the event.					
If the history of the event is provided by someone other than the child, the individual providing the history is documented and listed by role or name.					
Guideline identifies that a credentialed translator must be available to assist with the screening and history when language barriers exist.					
Strategies to communicate with family members are outlined.					
Guideline identifies the standard laboratory and radiological exams for suspected abuse.					
Guideline identifies the multidisciplinary child abuse response team and outlines the specific roles and priorities of the team and the team members.					
Transfer guidelines are defined for centers who have limited resources for child abuse screening, interventions, and resources necessary for managing this patient population.					

All ED staff members receive annual education on abuse, screening tools, documentation of findings, and importance of trauma-informed care.					
Guideline discusses when follow-up for all children in same home/location of the child with suspected abuse is necessary.					
Health professionals participating in child abuse screening, interventions, and on-going management are competent in trauma-informed care.					
Child Abuse Management in the In-Patient Setting	**Met**	**Partially Met**	**Unmet**	**Priority**	**Comments**
An identified leader or interdisciplinary team (with specific skills and training for abuse) is responsible for the continuing communication and follow-through with the law enforcement agencies and identified resources until the patient's discharge from the hospital.					
Guideline defines the interdisciplinary team member responsible for completing the abuse mandatory reporting and the timeframe for its completion.					
Psychosocial support systems and behavioral health professionals are available to screen the child and family for acute stress disorder and posttraumatic stress disorder; and for provision of necessary interventions through the child's hospital stay to discharge and recovery.					
Referrals to facilitate safe discharge planning are initiated.					
Behavioral health professionals are integrated into the health care team's oversight and planning for discharge and referrals.					
All nurses in the pediatric inpatient areas providing continuum of care receive annual education on the red flags of abuse, screening tools, documentation of findings and trauma-informed care.					

Child Abuse Management Post-Hospital Discharge	Met	Partially Met	Unmet	Priority	Comments
Provisions to ensure a safe discharge and follow-up appointments for the continuum of care are outlined.					
Guideline defines the member(s) of the interdisciplinary team responsible for providing law enforcement agencies with requested information.					
Guideline defines the trauma registrar's education and resources needed for accurate abuse injury coding.					
Trauma registrars registry coders use the "best available information" at the time of discharge for injury coding.					
The interdisciplinary team and trauma registrars use the standard definitions of "suspected" and "confirmed" for accurate pediatric abuse injury coding.					
Guideline defines the abuse screening and reporting compliance outcomes to be reported at the trauma operations committee.					
Trauma centers participate in the local and/or regional pediatric abuse fatality reviews, pediatric abuse awareness and prevention programs.					

Appendix A-2. Elder Abuse Guideline Gap Assessment Tool

Elder Abuse Screening and Management in the ED	Met	Partially Met	Unmet	Priority	Comments
Guidelines for elder abuse screening are disseminated to all patient care areas.					
Guideline defines the standardized process for elder abuse screening and abuse screening performed in a continual process.					
Elder abuse screening is provided universally at the trauma center for all older adults.					
A standardized screening tool for elder abuse and a body diagram for documentation of injuries are integrated into the electronic medical record.					
Guideline defines when the initial abuse screening and, if needed, the follow-up focused physical assessment are to be completed, with the screening and assessment performed in a private setting.					
Guideline defines certified translator must be utilized and documentation reflects the translator's name and position.					
Guideline defines the diagnostic interventions for elder abuse regarding laboratory studies and radiological images.					
Guideline defines the documentation standards for describing the injuries in detail to include new and old injuries, color and size of bruising, patterns of injury, size and depth of lacerations, cuts, odors, and any drainage from wounds.					
Guideline defines the physician documentation needs for elder abuse in the history and physical exam.					
Guidelines for documentation include the use of photographs and the processes for labelling and storing them in the electronic medical record.					

Guideline defines the timelines for referral or consult by the interdisciplinary abuse team or resources to address the social needs of the patient.					
Transfer guidelines are defined for centers that have limited resources for elder abuse screening, management, and other needed resources.					
Guideline identifies who is required to have the "Trauma-Informed Care" training and specifies the use of this approach for communication with the patient, family, and staff.					
Guideline defines the individual responsible to complete mandatory reporting and the timeframe for reporting completion.					
Guideline defines the individual designated to report the abuse to the local law enforcement agencies and Adult Protective Services (APS).					
Elder Abuse Management in the In-Patient Setting	**Met**	**Partially Met**	**Unmet**	**Priority**	**Comments**
Guidelines for the hand-off of elder abuse patients to the admission team are outlined to ensure continuum of care and on-going assessment.					
Guidelines define the continuum of abuse assessment and documentation of injuries, as well as any additional injuries identified.					
Guideline identifies the leader of the interdisciplinary team member (with specific skills and training for elder abuse) responsible for the continuing communication and follow-through with the resources and law enforcement agencies until the patient's discharge from the hospital.					
Guideline identifies the psychosocial support systems and behavioral health professionals available throughout the individual's hospital stay to address stress disorders and psychological needs.					
Progression of injuries and findings are well documented and captured in the trauma registry.					

Guideline defines when available community resources are contacted and individual responsible for this initial contact.					
Guideline defines mechanisms to be in place to alert health professionals about subsequent visits by patients with suspected elder abuse.					
Guideline ensures follow-up visits are integrated into the discharge planning process and that these patients have continued screening for elder abuse.					
Elder Abuse Management; Post-Hospital Discharge	**Met**	**Partially Met**	**Unmet**	**Priority**	**Comments**
Guideline identifies the interdisciplinary team member(s) responsible to ensure a safe discharge is completed.					
Guideline identifies the interdisciplinary team member responsible for communicating with Adult Protective Services and providing law enforcement agencies with requested information.					
Guideline defines the trauma registrar's education needs and resources specific to abuse coding and how the registrars are integrated into the interdisciplinary abuse team.					
Guideline ensures that proper abuse injury coding is completed and integrated into the trauma registry.					
Trauma registry injury coding for elder abuse is standardized to use the "best available information at the time of discharge."					
Trauma registry coding follows the NTDS and ICD-10-CM recommended abuse codes.					
Customized trauma registry data fields are in place to track elder abuse screening.					
Guideline defines use of standardized definitions for "suspected" and "confirmed" abuse.					
Guideline identifies the abuse screening and reporting compliance outcomes to report at the trauma operations committee.					
Trauma centers participate in local and/or regional elder abuse awareness and prevention programs.					

Appendix A-3. Intimate Partner Violence Guideline Gap Assessment Tool

Intimate Partner Violence Screening and Management in the ED	Met	Partially Met	Unmet	Priority	Comments
Guideline identifies universal IPV screening for all individuals seeking emergency and trauma care.					
Guideline identifies use of a validated IPV screening tool that is integrated into the electronic medical record.					
Guideline defines when screening for IPV occurs and individual responsible for the screening.					
Guideline defines the expectations for a complete physical assessment and focused assessment for IPV.					
Guideline defines standards for documentation of injuries in detail and measures to record the injuries on a body diagram in the electronic medical record.					
Guideline defines the management of photographs of injuries and their entry into the electronic medical record.					
Guideline defines standards for the IPV assessment and diagnostic laboratory and imaging evaluation.					
Guideline defines the timelines for referrals to appropriate community resources and individual responsible for initiating the referrals.					
Guideline specifies patient interactions and screening are done in a private setting.					
Guideline identifies measures to provide IPV community resources that enable the patient to access them in a confidential manner.					
Guideline identifies the role of the IPV interdisciplinary response team for further screening and communication of available resources.					
Guideline defines the use of trauma-informed care communication skills for screening and patient interactions by health care team.					

Guideline identifies the behavioral health resources and psychosocial support to address stress disorders.					
Transfer guidelines are defined for trauma centers with limited resources for IPV screening, interventions, and management.					
Guideline defines the individual with responsibility to report IPV to the local law enforcement agency and the timeline for report completion.					
Guideline follows the state's mandatory reporting laws for IPV and defines who is responsible for this mandatory reporting.					
Intimate Partner Violence Management in the In-Patient Setting	**Met**	**Partially Met**	**Unmet**	**Status**	**Comments**
Processes are in place for the continuum of IPV screening and detailed documentation of injuries.					
Guideline defines the on-going coordination with radiology for imaging consistent with the IPV abuse patterns.					
An identified IPV interdisciplinary team leader (with specific skills and training for IPV abuse) is responsible for communication with law enforcement agencies and community resources until the patient's hospital discharge.					
Psychosocial support systems and behavioral health professionals are available throughout the individual's hospital stay.					
Progression of injuries and delayed findings are well documented and captured in the electronic medical record and the trauma registry.					
Guideline defines the individual responsible to address safe discharge and access to community resources.					
Mechanisms to alert health care team members on subsequent visits of suspected IPV patient are in place.					
Guideline has provisions to ensure the integration of follow-up visits into the discharge planning process and patients have continued screening for IPV.					

Intimate Partner Violence Management Post-Hospital Discharge	Met	Partially Met	Unmet	Status	Comments
Guideline defines the interdisciplinary team member responsible for on-going communication with law enforcement agencies.					
Guideline defines the trauma registrar's specific educational needs for abuse coding and resources needed.					
Abuse coding uses the best available information at the time of discharge.					
Defined definitions for "suspected" and "confirmed" abuse are used for coding.					
Specific abuse customized data fields are integrated into the registry to facilitate data capture.					
Trauma registry coding follows the NTDS and ICD-10-CM recommended abuse codes.					
Abuse screening and reporting compliance outcome reports are integrated into the trauma operations committee's standard reports.					
Trauma centers participate in the local and/or regional IPV awareness and prevention programs.					

Appendix A-4. Sex Trafficking Guideline Gap Assessment Tool

Sex Trafficking Screening in the ED	Met	Partially Met	Unmet	Priority	Comments
Guidelines for sex trafficking screening are documented and disseminated to all trauma and emergency personnel.					
Guideline specifies that the process for standardized screening process for sex trafficking is continual.					
Sex trafficking abuse screening is provided universally and in a private setting.					
Sex trafficking abuse screening assessment tool and body diagram are integrated into the electronic medical record for documentation of injuries.					
Guideline defines when the patient is alone and can freely answer questions to specifically focus on "safety."					
Guideline defines that the provider or individual assessing the patient will share the National Human Trafficking Hotline number 888-373-7888.					
Guideline specifies when the patient discloses being a victim of human or sex trafficking the social worker is contacted. If the patient is under 18 years of age, the child abuse interdisciplinary team is contacted.					
Guideline identifies the use of trauma-informed care for communication with the patient, family, and staff, and who is required to have trauma-informed care training.					
Guideline defines the individual responsible to complete mandatory reporting and the timeframe for reporting completion.					

Sex Trafficking Management Post-Hospital Discharge	Met	Partially Met	Unmet	Priority	Comments
Guideline identifies the interdisciplinary team member(s) responsible to ensure a safe discharge is completed.					
Guideline identifies the interdisciplinary team member responsible for communicating with law enforcement agencies with requested information.					
Guideline ensures that proper abuse injury coding is completed and integrated into the trauma registry.					
Trauma registry injury coding is updated at the patient's discharge and when autopsy findings are reviewed.					
Trauma Registry coding follows the NTDS and ICD-10-CM recommended abuse codes.					
Trauma centers participate in local/ regional sex trafficking abuse awareness, prevention, and advocacy programs.					



Appendix B-1. Mary Bridge Children's Hospital Screening Tool for Child Abuse

Mary Bridge Children's
Hospital • Clinics • Foundation

NON-ACCIDENTAL TRAUMA (NAT) SCREENING and MANAGEMENT GUIDELINE (Inpatient and Outpatient)

"Red Flag" History of Present Injury

- **No history or inconsistent hx**
- **Changing history**
- **Unwitnessed injury**
- **Delay in seeking care**
- **Prior ED visit**
- **Domestic Violence in home**
- **Premature infant (< 37 weeks)**
- **Low birth weight/IUGR**
- **Chronic medical conditions**
- **Referred for suspected child abuse**

"Red Flag" Physical Exam Findings Infant

- **Torn frenulum**
- **FTT (weight, length, head circumference)**
- **Large heads in infants (consider measuring of OFC in children < 1 yr)**
- **Any bruise in any non-ambulating child - "if you don't cruise you don't bruise"**
- **Any bruise in a non-exploratory location {especially the TEN region - Torso (area covered by a standard girl's bathing suit), Ears and Neck} < 4yrs old (TEN-4)**
- **Bruises, marks, or scars in patterns that suggest hitting with an object**
- **Perineal bruising or injury**

"Red Flag" Radiographic Findings

- **Metaphyseal fractures (corner)**
- **Rib fractures (especially posterior) in infants**
- **Any fracture in a non-ambulating infant**
- **An undiagnosed healing fracture**
- **SDH and/or SAH on neuro-imaging in young children, particularly in the absence of skull fracture < 1 year**

Recommended evaluation in cases of suspected physical abuse

Note: If patient presents at any MHS Hospital other than Mary Bridge Children's Hospital, with "Red Flag" findings, please call the MBCH Emergency Department at (253) 403-1418 to arrange transfer for complete NAT workup.

↓

Laboratory

General for most patients:

- CBC & platelets; PT/PTT/INR
  (if concern of low/falling Hgb, repeat in am with retic)
- CMP
- Lipase
- Urinalysis – Dip, send for microscopic
- Comprehensive urine toxicology screen for < 2 years old with altered level of consciousness

If fractures are present:

- Phos
- PTH
- Vit D 25-OH

↓

Radiology

- Skeletal survey for < 2 years old (with 2 week follow up)
  - In ED if needed for disposition; or
  - Within 24 hours of admission
- Head CT (non-contrast with 3D reconstruction) if
  - < 6 months of age and other findings of abuse
  - Bruising to face or head injuries AND < 12 months of age
  - Neurologic symptoms < 12 months of age (including soft symptoms such as vomiting, fussiness)
- Abdominal CT if
  - S/Sx of abdominal trauma
  - ALT or AST >80

↓

Consults

- Crisis Intervention Social Work
- Call CAID if diagnosis of abuse or likely abuse at:
  - (253) 403-1478, Monday-Friday 8 am to 5 pm; if after hours, leave a message and call will be returned when they return
  - (253) 403-1418, MB ED, after hours and weekends (they can reach the CAID Medical Director if necessary)
- Report to Child Protective Services: **All patient care providers are required by law to report suspected child abuse and neglect or cause a report to be made and are considered to be "mandated reporters". Patient care staff have a duty to make reports but may participate collaboratively to assure that reports are made. Collaborative referral does not negate the responsibility of the individual if the call is later not completed.**
- Pediatric General Surgery for trauma evaluation
- If Head CT abnormal and abuse is being considered, call
  - Neurosurgery
  - Ophthalmology for retinal exam*
  - Neuropsychology
  - Child Advocacy

*An Ophthalmology consult for a dilated eye exam is not necessary as part of the evaluation for physical abuse

IF ALL OF THE FOLLOWING CRITERIA ARE MET AND THERE IS NO FACIAL BRUISING:

- NORMAL head CT or CT with only a single, simple non-occipital skull fracture
- NORMAL mental status/neurologic exam

Mary Bridge Children's Hospital Contact Information:
Child Abuse Intervention Department: (253) 403-1478

Washington State Contact Numbers:
Child Protective Services: (253) 983-6100
After Hours: (800) 562-5624

Adult/Child Abuse Hotline: (866) ENDHARM (363-4276)

Washington State Crisis Line (24 hours): (800) 244-5767

Disposition

- If any suspicion of NAT has been raised during the ED encounter, a face-to-face care team "huddle" must take place prior to ED discharge. All members involved in the patient's care should participate including (at a minimum) the ED physician, ED RN and Social Worker.
- For suspected abusive head trauma NAT cases that require admission as clinically indicated with either Intracranial abnormality identified on head CT or suspected seizures from abusive head trauma:
  - Medical/Surgical trauma service admission with Q4 hour neuro checks for further child abuse work up
  - Consider PICU admission for:
- Any child with intracranial injury/bleed or skull fracture(s) identified on head CT
- Any child with normal head CT/no seizures but GCS < 15
- For suspected NAT cases not involving head trauma, admission to Medical/Surgical or PICU after injuries are reviewed by ED MD and Pediatric General Surgeon as medically indicated.
- Prior to hospital discharge: care team "huddle" including all members involved in the patient's care. Phone communication may be utilized as necessary.
- Outpatient CAID follow-up as needed.

Notification of Family

(The communication should clarify that medical providers are not investigators and that will be the role of Child Protective Services.)

- Inform parents if a CPS Referral has been filed and/or if Child Advocacy is consulted. Notification to family should be straightforward and non-punitive.
- Be direct and objective. Inform parents inflicted trauma is part of diagnostic consideration.
- Keep the focus on the child. Avoid appearing judgmental. Assure parents of thoroughness of evaluation.
- If you are unable to have this conversation with the parents, ask SWS or a senior colleague to do so.

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Revised 8/21/18

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Appendix B-2. Emergency Department – Mistreatment Assessment Tool for Social Workers (ED-MATS), Comprehensive Assessment

Assessment Categories	Questions to Ask
Living Arrangements	1. Do you live alone? a. If not, who do you live with? For how long? 2. Do you need assistance cleaning and/or maintaining your apartment? 3. Have there been any recent changes to your living arrangements? 4. Do you have concerns about your current housing arrangements? 5. Do you have concerns about future living arrangements?
Financial Status	6. What are your current assets and sources of income? a. Are they adequate to cover your expenses? 7. Do you contribute to the expenses of anyone close to you? 8. Who manages your finances? a. If someone else, why? For how long? Is this a legal or informal arrangement? How do you receive information about transactions? 9. Have you made any changes recently to your finances? Your will?
Emotional/ Psychological Status	10. Are you happy at home? 11. Do you have any history of mental illness? Does anyone close to you suffer from mental illness? a.If yes, how has this affected you recently? 12. Do you have a history of alcohol or substance abuse issues? Does anyone close to you drink or use drugs or have a history of alcohol or substance abuse issues? a. If yes, how has this affected you recently? 13. Have you recently had thoughts of killing yourself? Have you ever tried to kill yourself? *Administer Geriatric Depression Scale to all patients
Stressors	14. Is there a history of family violence? 15. How do people close to you cope with stress? Has anyone close to you had any significant recent stressors, such as the death of someone close to them, illness, births, relationship changes, and/or changes in employment, finances, or housing?
Social Support/ Resources	16. Is anyone preventing you from spending time with others? 17. Do you have someone to share your worries with?
Sexual Abuse	Additional questions to consider: a. Do you feel as though your sexuality and right to sexual privacy is respected by your caregivers? b. Has anyone behaved in a sexual manner toward you that made you feel uncomfortable? If yes, did anyone threaten you if you told someone about it? *Make note of any hyper-sexualized behavior or language*

Courtesy of Sarah Rosselli, David Burnes, Sunday Clark, Michael E. Stern, Veronica M. LoFaso, Mary R. Mulcare, Risa Breckman, Tony Rosen, and Alyssa Elman. Published with permission.

Appendix B-3. Elder Abuse Suspicion Index (EASI©)

Q.1-Q.5 asked of patient; Q.6 answered by doctor (Within the last 12 months)			
1) Have you relied on people for any of the following: bathing, dressing, shopping, banking, or meals?	YES	NO	Did not answer
2) Has anyone prevented you from getting food, clothes, medication, glasses, hearing aids, or medical care, or from being with people you wanted to be with?	YES	NO	Did not answer
3) Have you been upset because someone talked to you in a way that made you feel shamed or threatened?	YES	NO	Did not answer
4) Has anyone tried to force you to sign papers or to use your money against your will?	YES	NO	Did not answer
5) Has anyone made you afraid, touched you in ways that you did not want, or hurt you physically?	YES	NO	Did not answer
6) **Doctor:** Elder abuse may be associated with findings such as: poor eye contact, withdrawn nature, malnourishment, hygiene issues, cuts, bruises, inappropriate clothing, or medication compliance issues. Did you notice any of these today or in the last 12 months?	YES	NO	Not sure

Published with permission from the authors: Yaffe MJ, Wolfson C, Weiss D, Lithwick M. Development and validation of a tool to assist physicians' identification of elder abuse: The Elder Abuse Suspicion Index (EASI©). *Journal of Elder Abuse and Neglect*, 2008; 20 (3): 276-300
For information about strengths and limitations of the tool, and access to other linguistic versions of the tool see https://www.mcgill.ca/familymed/research/projects/elder

Appendix B-4. Geriatric Injury Documentation Tool

Geri-IDT

GERIATRIC-INJURY DOCUMENTATION TOOL

TO DOCUMENT INJURY-RELATED PHYSICAL FINDINGS FOR GERIATRIC PATIENTS

This tool will assist with documentation when an older person has an injury. When one injury is noted, a head-to-toe exam to look for other injuries is warranted. Photograph physical findings if possible. In a case of suspected sexual abuse, follow the appropriate protocols.

For each injury, document:

- Reported mechanism of injury(ies)
- How did it happen/how did the injury(ies) occur?
- Was there pain at the time of the injury(ies) and is there pain now?
- Who is reporting the history? Who else is present while report is given?
- Tenderness to palpation and how it is expressed (e.g. verbal, grimacing, moaning, withdrawal, etc.)
- Precise Location
- Size

Document the following characteristics:

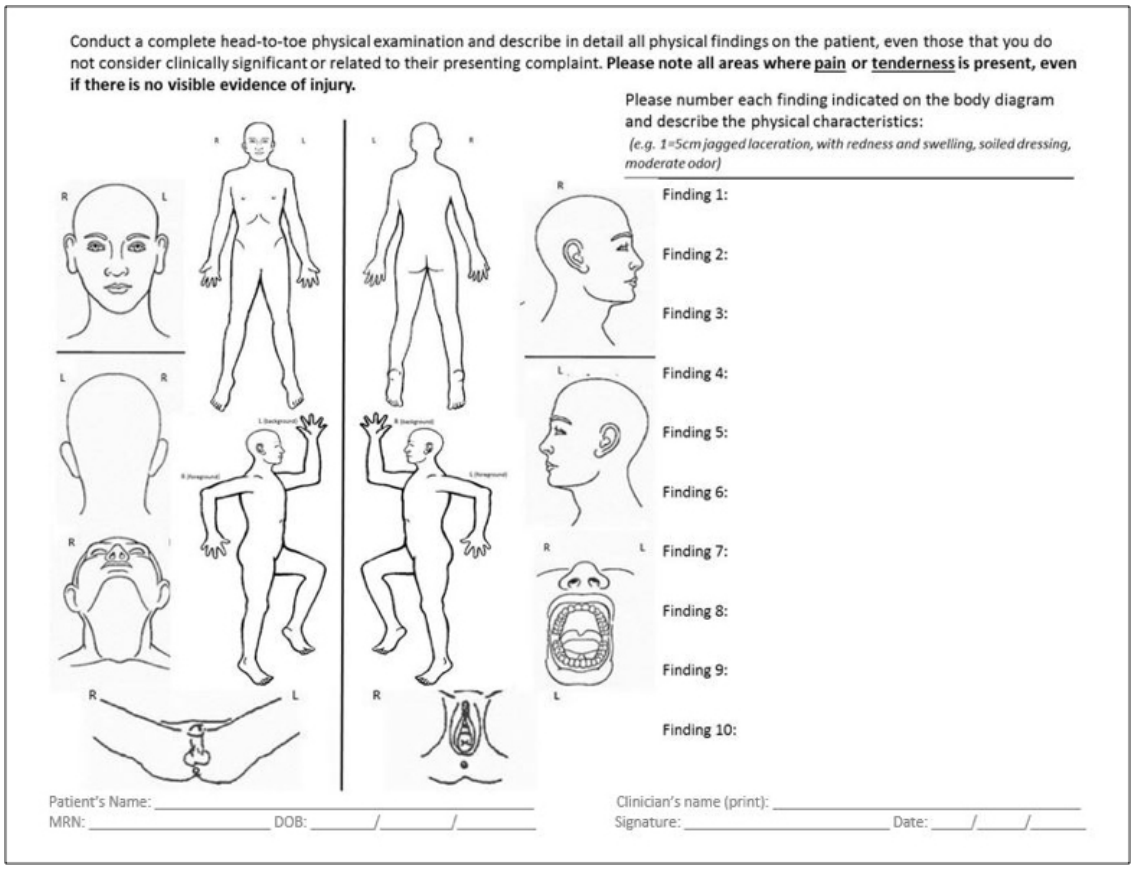
INJURY	CHARACTERISTICS TO DOCUMENT
Abrasion	shape, bleeding, cleanliness, dressings, presence of foreign particles
Bite mark	depth, cleanliness, signs of infection
Bruise	shape, color(s), size, swelling, pattern, induration
Burn	burn degree(s), signs of infection, total body surface area
Deformity	bone(s) fractured, whether open or comminuted, healing status, joint(s) dislocated
Laceration	depth, bleeding, cleanliness, linearity/jaggedness, presence of foreign particles, signs of infection
Petechia	location, size, color
Skin Tear	bleeding, dressings, presence of foreign particles, signs of infection
Swelling	size

Document initial physical appearance (including hygiene) on presentation and indications of alcohol or substance abuse.

PRESSURE/WOUND	CHARACTERISTICS TO DOCUMENT
Pressure sore/injury	depth/stage[1], size, odor, exudate, evidence of wound care, dressing, signs of infection

[1]National Pressure Ulcer Advisory Panel stages of pressure injury (2016):

Stage I Non-blanchable erythema of intact skin
Stage II Partial-thickness skin loss with exposed dermis
Stage III Full-thickness skin loss
Stage IV Full-thickness skin and tissue loss
Unstageable: Obscured full-thickness skin and tissue loss such as eschar
Deep Tissue Pressure Injury: Persistent non-blanchable deep red, maroon or purple discoloration



From: Kogan AC, Rosen T, Navarro A, Homeier D, Chennapan K, & Mosqueda L. Developing the Geriatric Injury Documentation Tool (Geri-IDT) to improve documentation of physical findings in injured older adults. *Journal of General Internal Medicine*, 2019; 34(4): 567-574. DOI:10.1007/s11606-019-04844-8
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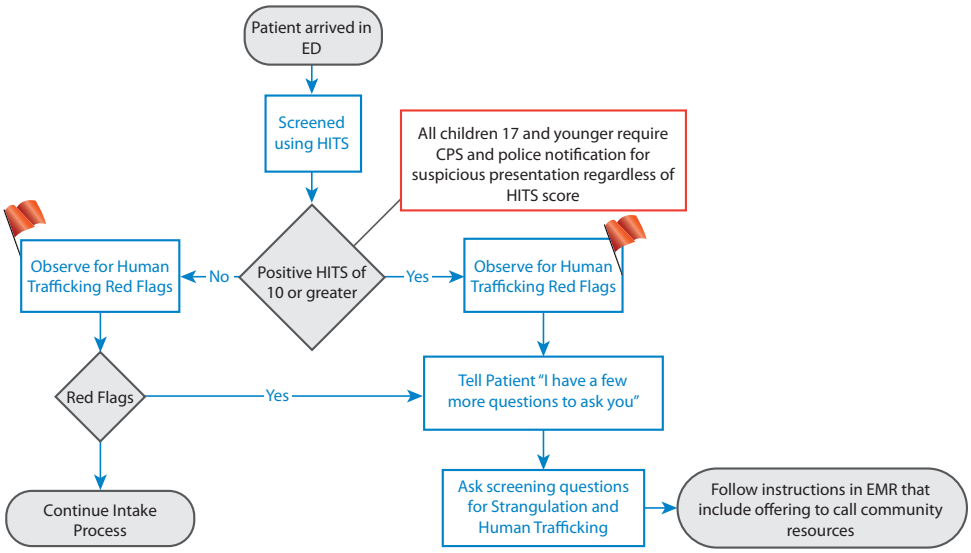
Appendix C-1. Screening for Intimate Partner Violence or Sexual Trafficking



1. Use the Hurt, Insult, Threaten, Scream (HITS) tool (See Table 12, page 76)

2. Strangulation questions

☐ Has your partner ever used their body or any other object to forcibly strangle/choke you?

If Yes

☐ Did you experience any of the following during/after strangulation/choking?

☐ Difficulty swallowing, neck tenderness, voice changes, loss of bladder or bowel, loss of memory, loss of consciences, patient denies listed symptoms.

Say to the Patient "Your answer regarding strangulation is concerning. People who are strangled are 700 percent more likely to die as a result of violence."

3. Human Trafficking

Questions	**Yes = 1**	**No = 0**
Can you leave your job situation if you want?		
Can you come and go as you please?		
Have you or your family been threatened if you try to leave?		
Have you been harmed in any way?		
Do you sleep where you work?		
Have you ever been deprived of food, water, sleep or medical care?		
Do you need to ask permission to eat, sleep or go to the bathroom?		
Have your identification documents been taken from you?		
Is anyone forcing you to do anything you do not want to do?		

Courtesy of Mary Ann Contreras and Heather Scroggins

Appendix C-2. Trauma Coder's Guide to Abuse Injury Coding

Injury Coding, Version for 2020

Trauma registry and health information coders are key stakeholders in the development of best practice guidelines for managing abuse. Trauma coders must have the education and skills to accurately code abuse injuries. Coding of injuries related to abuse requires participation in the interdisciplinary assessment team to ensure that coding is accurate, reliable, and can be used to generate reports related to the abused patient.

Trauma registry coders need to follow the rules of the most current *NTDS Data Dictionary* and ICD-10-CM Official Guidelines for Coding and Reporting, found in the *ICD-10-CM Official Codebook*. These references give guidance on how to sequence diagnosis codes and external cause codes.

Additional custom elements regarding abuse can be developed within the trauma center's registry. These can be used to assist in identification of this patient population and further the center's guidelines for pediatric abuse, elder abuse, and intimate partner violence.

Quick Guide for Trauma Registry Abstraction

Regardless of patient population specificity, trauma registry abstractors need to represent abuse, or nonaccidental trauma, in the trauma registry in accordance with the *NTDS Data Dictionary*, as well as in alignment with additional recommendations outlined in this Best Practice Guideline. Trauma program managers, PI coordinators, and data abstractors need to collaborate to create a structure within the trauma registry that supports the following:

- Tracking and trending of abuse screening,
- Suspected/confirmed abuse cases, and
- Performance improvement efforts for the care of patients with known or suspected abuse.

Items 1 and 2 are required fields outlined in the *NTDS Data Dictionary*. Potential registry fields trauma programs may find helpful to add to their trauma registries to support PI efforts can be found in Table 18 on page 101.

1. In accordance with the NTDS data elements, record an external cause code for abuse if abuse is confirmed in the medical record. Please refer to the NTDS data element definition for the ICD-10 Primary External Cause Code that describes the prioritization of ICD-10 external cause code use. In cases of abuse, the abuse external cause code is captured first, then an additional external cause code to describe the injury event/specifics is captured. Abstractor review of the EMS/physician/care team documentation is essential to ascertain whether or not patients have an injury due to abuse.

Applicable Population	Code	Description
Elder	Y07.512	At-home adult care provider, perpetrator of maltreatment and neglect
Elder	Y07.513	Adult care center provider, perpetrator of maltreatment and neglect
IPV	Y07.01	Husband, perpetrator of maltreatment and neglect
IPV	Y07.02	Wife, perpetrator of maltreatment and neglect
IPV	Y07.03	Male partner, perpetrator of maltreatment and neglect
IPV	Y07.04	Female partner, perpetrator of maltreatment and neglect
IPV/Elder	T74.11XA	Adult physical abuse, confirmed, initial encounter
IPV/Elder	T74.91XA	Unspecified adult maltreatment, confirmed, initial encounter
IPV/Elder	T76.11XA	Adult physical abuse, suspected, initial encounter
IPV/Elder	T76.91XA	Unspecified adult maltreatment, suspected, initial encounter
Pediatric	T74.12XA	Child physical abuse, confirmed, initial encounter
Pediatric	T74.4XXA	Shaken infant syndrome, initial encounter
Pediatric	T74.92XA	Unspecified child maltreatment, confirmed, initial encounter
Pediatric	T76.12XA	Child physical abuse, suspected, initial encounter
Pediatric	T76.92XA	Unspecified child maltreatment, suspected, initial encounter
Pediatric	Y07.420	Foster father, perpetrator of maltreatment and neglect
Pediatric	Y07.421	Foster mother, perpetrator of maltreatment and neglect
Pediatric	Y07.510	At-home childcare provider, perpetrator of maltreatment and neglect
Pediatric	Y07.511	Daycare center childcare provider, perpetrator of maltreatment and neglect
Pediatric/Elder	Y07.519	Unspecified daycare provider, perpetrator of maltreatment and neglect
Pediatric/Elder	Y07.521	Mental health provider, perpetrator of maltreatment and neglect
Pediatric/Elder	Y07.528	Other therapist or health professional, perpetrator of maltreatment and neglect
Pediatric/Elder	Y07.529	Unspecified health professional, perpetrator of maltreatment and neglect
Pediatric/Elder	Y07.53	Teacher or instructor, perpetrator of maltreatment and neglect
Pediatric/IPV/Elder	Y07.11	Biological father, perpetrator of maltreatment and neglect
Pediatric/IPV/Elder	Y07.12	Biological mother, perpetrator of maltreatment and neglect
Pediatric/IPV/Elder	Y07.13	Adoptive father, perpetrator of maltreatment and neglect
Pediatric/IPV/Elder	Y07.14	Adoptive mother, perpetrator of maltreatment and neglect

Pediatric/IPV/Elder	Y07.30	Other maltreatment syndromes by official authorities, while engaged in sports activity
Pediatric/IPV/Elder	Y07.410	Brother, perpetrator of maltreatment and neglect
Pediatric/IPV/Elder	Y07.411	Sister, perpetrator of maltreatment and neglect
Pediatric/IPV/Elder	Y07.430	Stepfather, perpetrator of maltreatment and neglect
Pediatric/IPV/Elder	Y07.432	Male friend of parent (co-residing in household), perpetrator of maltreatment and neglect
Pediatric/IPV/Elder	Y07.433	Stepmother, perpetrator of maltreatment and neglect
Pediatric/IPV/Elder	Y07.434	Female friend of parent (co-residing in household), perpetrator of maltreatment and neglect
Pediatric/IPV/Elder	Y07.435	Stepbrother, perpetrator of maltreatment and neglect
Pediatric/IPV/Elder	Y07.436	Stepsister, perpetrator of maltreatment and neglect
Pediatric/IPV/Elder	Y07.490	Male cousin, perpetrator of maltreatment and neglect
Pediatric/IPV/Elder	Y07.491	Female cousin, perpetrator of maltreatment and neglect
Pediatric/IPV/Elder	Y07.499	Other family member, perpetrator of maltreatment and neglect
Pediatric/IPV/Elder	Y07.50	Unspecified non-family member, perpetrator of maltreatment and neglect
Pediatric/IPV/Elder	Y07.59	Other non-family member, perpetrator of maltreatment and neglect
Pediatric/IPV/Elder	Y07.9	Unspecified perpetrator of maltreatment and neglect

(Note: Always refer to the most updated version of the TQIP Reporting Code Sets found in the *TQIP Benchmark Report Resources* document for the most up-to-date information regarding these codes.)

2. Consider additional trauma registry integration to create specific, customized data fields to support tracking of abuse screening. These custom fields need to be simple and easily mapped during software upgrades. Examples include the following.

Confirmed abuse:

__ Abuse confirmed by a multidisciplinary team reviewing the case (members may include medical/law enforcement/child welfare)

__ Abuse admitted by perpetrator

__ Abuse witnessed by unbiased, independent observer

__ Abuse disclosed by victim

__ Abuse confirmed by the presence of injuries with a high-risk of associated abuse occurring without a reasonable explanation based on history

Suspected abuse:

__ Consideration of abuse when not meeting the criteria of "confirmed abuse" or "no abuse"

No abuse:

__ No abuse suspected or abuse ruled out by the hospital physician, social worker, or investigation by law enforcement or protective services

Mandatory reporting completed: ___Yes, ___ No, ___N/A

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