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Pediatric Abusive Head Trauma (382)

Author: Sarah Reith, MA; Judy Johnstone, BA

Contact hours: 3

Expiration date: April 30, 2029

Price: $29

Criteria for Successful Completion

Study the course material, achieve a score of 80% or higher on the quiz (the quiz can be repeated if a learner scores less than 80%), complete the course evaluation, and pay where required. No partial credit will be awarded.

Instructional Level

Introductory

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Course Objectives

When you finish this course, you will be able to:

1. Define pediatric abusive head trauma (PAHT).
2. List 5 symptoms associated with PAHT.
3. Explain the most common trigger for pediatric abusive head trauma.
4. List 4 individual risk factors for child abuse in the United States.
5. Describe the 3 main components of the PURPLE system.
6. Understand the evolution of society's recognition of child abuse.
7. Describe 4 lifelong effects of SBS/PAHT.
8. Define the 2 components of child abuse under CAPTA.
9. Define "duty to report."

1. Addressing Pediatric Abusive Head Trauma

We will begin and end this course with a simple message:

Never, ever shake a baby!

Pediatric abusive head trauma (PAHT) is a preventable tragedy. It is a severe form of child abuse that causes brain injury, long-term developmental delays, lifelong severe health problems, and even death. The American Academy of Pediatrics estimates that in the United States about 1,300 children per year suffer from this form of abuse, and that 25%

of them die from it. Upwards of 80% of the children who survive this form of assault suffer permanent harm, including blindness and neurological disability.

According to Dr. Dipesh Navsaria, on behalf of Head Start, a national childcare association,

> "It is never OK to shake, throw, hit, slam, or jerk any child. The consequences can be deadly (Navsaria, 2024)."

Online Resource

Keeping Them Safe: Abusive Head Trauma (2024) [5:46]

From: https://headstart.gov/video/abusive-head-trauma

1.1 Terminology: Shaken Baby, or Abusive Head Trauma

Although the term *shaken baby syndrome* is still in wide use, the American Academy of Pediatrics adopted the term *abusive head trauma* in 2009 to recognize the complex biomechanical forces (including shaking) that are involved in children's head injuries (Narang et al., 2020). In addition to shaking, injury mechanisms include blunt trauma, rotational forces, and direct cranial impact (Krishnaprasadh et al., 2025).

The Centers for Disease Control and Prevention (CDC) launched an effort in 2012 to develop uniform case definitions of child maltreatment and abusive head trauma. The CDC defines pediatric abusive head trauma (PAHT) as

> . . . a severe form of child abuse that results in a brain injury. It often happens when a parent or caregiver becomes angry or frustrated because of a child's crying. It is caused by violent shaking and/or with blunt impact. The resulting injury can cause bleeding around the brain or behind the eyes.

The medical, legal, and law enforcement communities often use different terms to describe traumatic brain injuries in infants, among them: shaken infant syndrome, shaking impact syndrome, non-accidental injury, non-accidental trauma, non-accidental head injury, and shaken baby syndrome/abusive head trauma (SBS/AHT). This course will use a variety of terms throughout.

1.2 Distinguishing PAHT from Unintentional Injury

Abusive head trauma can be difficult to diagnose because there is so much variability in the way symptoms present. Often, victims do not have visible injuries, and some of their injuries resemble accidental trauma. The diagnosis often starts with a medical professional or childcare provider's suspicions, based on behavioral and other circumstantial clues.

No centralized reporting system exists for AHT, though it is the leading cause of abusive traumatic brain injury and fatal physical abuse in children (Krishnaprasadh et al., 2025). Children under 1 year, particularly those who are 2 to 4 months old, are particularly vulnerable. Children with special needs and those who suffer from health problems are at even greater risk.

Pediatricians acknowledge the difficulty of diagnosing AHT, because it has such a wide range of symptoms that are common with other diagnoses. Sometimes patients present with subtle indications like vomiting, lethargy, or fussiness. Injuries to the mouth, such as tears in the oral connective tissues, are often a tipoff that abuse has occurred. Damage to the eyes is commonly associated with AHT. *TEN-4** bruising of the torso, ears, and neck in children under 4 years of age should alert medical personnel of the possibility of abuse (Narang et al., 2025).

***TEN-4-FACESp** is a clinical screening tool used to identify potential child abuse by highlighting concerning bruises on children under 4 years old. It focuses on bruising to the Torso, Ears, Neck, any bruising on infants 4 months or younger, and specific facial areas (FACESp: Frenulum, Angle of jaw, Cheek, Eyelid, Subconjunctivae, and patterned bruising) (Mass General Brigham Hospital, 2025).

Pediatricians recommend a comprehensive medical evaluation, including head imaging (plus cranial and spinal MRI and cranial CT if intercranial injury is suspected), skeletal survey, ophthalmology consultation, and a thorough examination of the skin. This needs to be a team effort, involving specialists in child abuse pediatrics, radiology, ophthalmology, neurosurgery, and others, to make sure that nothing is missed (Narang, 2025).

2. Assessment and Diagnosis of PAHT

The fragile skulls and developing brains of infants and young children make them highly susceptible to serious injuries from violent shaking, blunt force trauma, or both. In preverbal children, diagnosis is further complicated by the patient's inability to say what happened. Diagnosis must be a multidisciplinary effort, gathering clues from the child's psychosocial environment, noting risk factors within the family, and assessing the consistency (and likelihood) of the adult's report of the cause.

2.1 Symptoms and Types of Pediatric Injuries

A confident diagnosis must be able to stand up to legal scrutiny; thus, it is important to realize how common *unintentional* injuries are, and how they present. Unintentional injuries, in which abuse plays no role, are the most common cause of death among children the world over (Li et al., 2024).

One of the most common childhood injuries is limb fracture, with an especially high incidence among children with learning disabilities, attention deficit hyperactivity disorder (ADHD), or executive function deficits (Rosenblum et al., 2022).

ThinkFirst National Injury Prevention Foundation is a nonprofit advocacy organization founded by neurosurgeons to prevent brain, spinal cord, and other traumatic injuries. According to *ThinkFirst,* symptoms may include (Wilson et al., 2021):

- lethargy
- poor suckling or swallowing
- poor feeding or eating
- irritability
- difficulty staying awake
- vomiting
- rigidity
- tremors
- inability to lift head
- pale or bluish skin
- difficulty breathing
- paralysis
- coma

Children do get bruised from playing, though bruises on an infant who is not independently mobile should be considered suspicious. Toddlers and older children commonly have bruises that are not related to abuse on the front part of their bodies, especially bony areas like the knees, shins, elbows, and forehead. Even small bruises can indicate a serious injury. A child with a minor bruise on the belly could be suffering a liver laceration from being punched in the stomach. Bruises on the ears could be a clue that the child has suffered a head injury due to abuse (Norton Children's, 2022).

2.2 Mechanism of Injury

> The baby's head is large and heavy. The baby's brain is not fully developed and is fragile. It has the consistency of very soft tofu. Babies have weak neck muscles. When a baby is violently shaken, the head moves around a lot, causing the brain to move vigorously back and forth inside the skull. This can lead to brain damage.
>
> Tanya Minasian, 2021

Shaking is extremely violent. It can be as damaging as a high-speed automobile accident.

Shaken baby syndrome does not result from gentle bouncing, playful swinging, tossing a child in the air, or jogging with a child. Nor is it very likely to occur from accidents such as falling off chairs or accidentally being dropped from a caregiver's arms. The adult perpetrator usually holds the child under the arms and shakes, causing the head to flex, extend, and rotate on the body at a high rate of speed, with both hyperflexion and hyperextension. The violent movements of the brain within the skull can easily rupture the delicate system of veins in the brain (Laurent-Vannier, 2022).

The brain's venous system drains the capillary network that supplies the brain, removing waste products like carbon dioxide and allowing the circulation of fresh blood throughout the body. Even minor trauma or abrupt **de**celeration can damage some of these veins, resulting in a subdural hematoma (Hufnagle and Tadi, 2025). Because the lower part of the brain regulates breathing and heart rate, victims of abusive pediatric head trauma may suffer from lifelong cognitive and physical health problems.

Reported injuries are most likely when the baby was shaken and then its head struck something. The perpetrator is thus able to point to the wound and defer attention from the internal damage due to shaking.

Even hitting a soft object, such as a mattress or pillow, may be enough to injure newborns and small infants. Children's brains are softer, their neck muscles and ligaments are weak, and their heads are large and heavy in proportion to their bodies. The result is a type of whiplash, like what occurs in some auto accidents (MedlinePlus, n.d.).

2.3 Falls

While short falls may cause fractures and, less commonly, even serious head injuries, clinicians can differentiate abusive head trauma from accidental head injury. Common features of *accidental* head trauma are swelling and bruising in the scalp, epidural hemorrhage, and isolated skull fracture. Common features of *abusive* head trauma often include clusters of seizures, intracerebral hemorrhage without skull fracture, and multiple hemorrhages, including subdural and mixed density hemorrhages (Hung, 2020).

One study of children who died after falling 1 to 4 feet found co-existent evidence of abuse. Though retinal hemorrhage is common in both accidental and abusive head trauma, abuse more frequently causes bilateral hemorrhage, while accidents are more likely to cause a hemorrhage in only one eye (Hung, 2020).

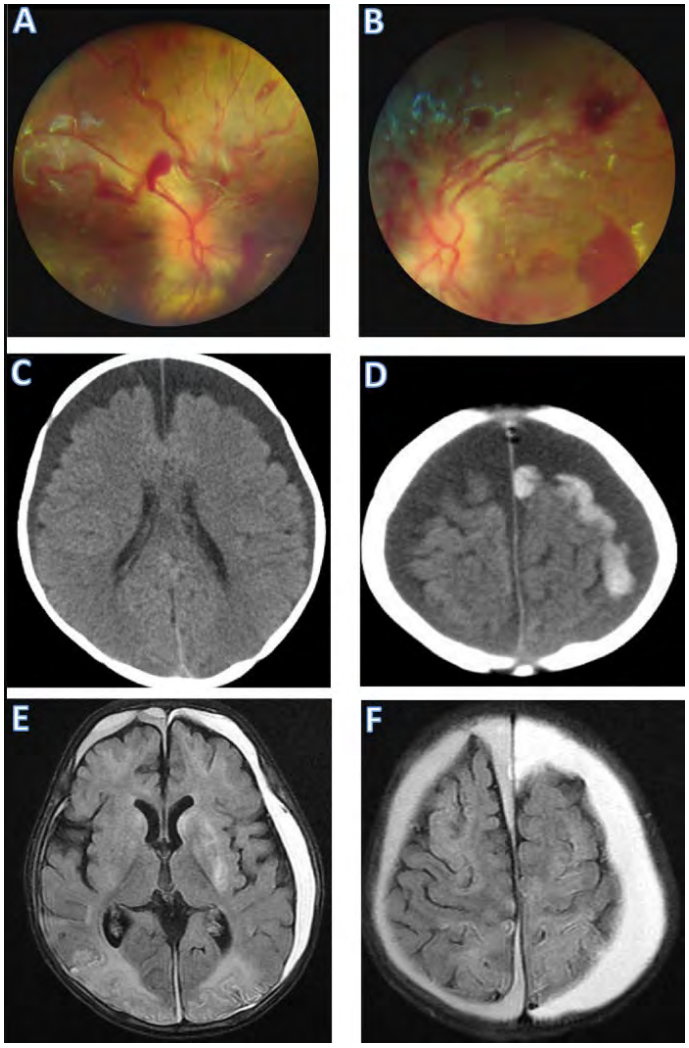


Fig. 1. Abusive head injury in a 1-year-old female infant. (A) Right eye ground, (B) left eye ground shows diffuse intraretinal and preretinal hemorrhages. (C) Initial non-contrast CT demonstrated bilateral chronic subdural effusion, plus (D) acute left subdural hematoma. MRI (E) and (F) taken 2 weeks after bilateral subdural drainage showed asymmetric subdural fluid, as well as several parenchymal ischemic changes over frontal lobes, basal ganglia (more on left), and posterior lobes (Hung, 2020).

In the United States, accidental falls are the leading cause of nonfatal injury among children 0 to 14 years old. They account for about 2 million emergency department visits and more than 30,000 hospitalizations each year. They are the leading cause of traumatic brain injury in children, responsible for 90% of TBIs in zero- to 4-year-olds and 42% of TBIs in children from 5 to 14 (Omaki et al., 2023).

Most of the injuries from falls are treated and released, but 2.7% result in hospitalization. Children who fall from a caregiver's arms are more than twice as likely to be hospitalized as children who fall from another source, like beds or other furniture (Omaki et al., 2023).

3. Incidence and Triggers for AHT

Children are at highest risk for AHT when they are from 2 to 4 months old, because it is the period of most intense, inconsolable crying. All babies less than 1 year of age are at high risk for SBS/AHT because they cry longer and more frequently—and they are easier to shake than older, larger children. One study showed that educating parents about how to cope with inconsolable crying was associated with reducing AHT by over a third in children under 2 years of age (Wilson et al., 2021).

3.1 Triggers for Maltreatment

Perpetrators can be the father, stepfather, mother, or mother's boyfriend. Female babysitters were a large, previously unrecognized group of perpetrators and are concerning because they more easily escape prosecution

The attacks tend to be unwitnessed and take place in the home. Because such attacks are usually caused by frustration with a baby's crying, one prevention strategy includes never leaving the baby alone with someone who is easily irritated, has a temper, or has a history of violence.

Intimate partner violence is highly correlated with use of harmful parenting strategies, including shaking. People who have had a high number of adverse childhood experiences (ACES) are also more likely to abuse their own children. The connection between ACEs and questionable parenting approaches increases with each ACE. Men who had witnessed intimate partner violence (IPV), had a parent who was incarcerated, or who had been physically neglected as children, were more likely to consider shaking a baby to be acceptable (Clemens et al., 2020).

Other predisposing risk factors include: first pregnancy, younger than 24 years old or older than 40, full-time employment, living in an independent house or on a high-rise, economic difficulties, postpartum depression, delay of four months in seeking medical checkups (Latino et al., 2024).

3.2 Episodes of Crying

Inconsolable, long-lasting crying is the most common trigger for shaking a baby. In what has now come to be known as the "infant cry curve," mothers reported gradual increases in their infants' cry duration until 6 weeks, where crying and fussing had a "peak" average duration of 2.75 hours per day. The infant cry curve has since become widely recognized by parents and clinicians as describing a predictable pattern, peaking at 6 weeks, then declining steadily until 12 weeks (Vermillet et al., 2022).

Approximately 3% to 28% of otherwise healthy infants worldwide suffer from **infantile colic**, which is characterized by inconsolable crying, irritability, and screaming without any apparent cause (Bhatt and Kumas. 2023). As distressing as it is for exhausted caregivers, infantile colic is a benign and self-limiting condition that usually resolves between 3 and 4 months of age. However, it is often associated with maternal postpartum depression and SBS/AHT (Rosenthal and Hein, 2023).

Parents and caregivers report the crying as intense, long-lasting, and ear-piercing. It is especially distressing because the infant's face may be flushed, the abdomen may be tense or distended, and the infant may arch his or her back in what appears to be agony. The causes of colic remain unknown, though colic accounts for 10% to 20% of visits to the pediatrician (Rosenthal and Hein, 2023).

Excessive crying has also been associated with early termination of breastfeeding, parental distress, and symptoms of parental depression. This fussing or crying usually decreases significantly after 8 to 9 weeks, though preverbal infants continue to rely on fussing and crying to communicate in the first few years of life (Vermillet et al., 2022).

4. Risk Factors for Child Maltreatment

The 2023 *Child Maltreatment Report* explains that risk factors are characteristics of a child or caregiver that may increase the likelihood of child maltreatment. Drug abuse and domestic violence played large roles in child maltreatment reports, with 24% of victims suffering at the hands of caregivers who abused drugs and 25.1% whose caregivers were also involved in domestic violence. Caregiver alcohol abuse and inadequate housing, defined as substandard, overcrowded, or unsafe housing conditions including homelessness, were also designated as risk factors.

Maternal fatigue, which is often a predictor of depression, is often a factor when mothers shake their infants. First-time mothers, postpartum depression, unwanted pregnancy, and mothers under 19 or over 35 are also associated with shaking a baby. Fatherless households and domestic violence during pregnancy are further variables. Caregiver, family, and community-level factors should be taken into consideration as a physician embarks on a diagnosis (Krishnaprasadh, et al., 2025).

4.1 CDC: Types of Risk Factors

The CDC breaks down risk factors into individual, relationship/family, and community categories. Caregiver and family characteristics also contribute to AHT risk.

Individual risk factors include caregiver with (CDC, 2024):

- drug or alcohol issues
- mental health issues, including depression
- attitudes accepting of or justifying violence or aggression
- low education or income

Additionally, caregivers who (CDC, 2024):

- don't understand children's needs or development.
- were abused or neglected as children.
- are young or single parents or parents with many children
- have experienced high levels of parenting stress or economic stress
- use spanking and other forms of corporal punishment for discipline
- live in the home who are not a biological parent

Relationship / Family risk factors include families that (CDC, 2024):

- have household members in jail or prison
- are isolated from and not connected to other people
- experience other types of violence, including relationship violence
- have high conflict and negative communication styles

Community risk factors include communities with (CDC, 2024):

- high rates of violence and crime
- high rates of poverty and limited educational and economic opportunities
- high unemployment rates
- easy access to drugs and alcohol
- neighbors who don't know or look out for each other
- communities where there is low community involvement among residents
- few community activities for young people
- unstable housing and where residents move frequently
- families that frequently experience food insecurity

The presence of these risk factors may increase vulnerability, but their absence does not rule out a diagnosis of AHT. Perpetrators vary; however, male caregivers, such as fathers, stepfathers, or the mother's boyfriend, are most frequently involved, followed by female babysitters and biological mothers.

Healthcare providers should be alert to caregiver behavior, like providing an inconsistent back story for a child's injury, delaying medical attention, or showing a lack of concern for the child's injuries (Norton Children's Hospital, 2020).

4.2 DHHS: Risk Factors for Victimization

The 2023 Child Maltreatment Report explains that risk factors are characteristics of a child or caregiver that may increase the likelihood of child maltreatment. States provide the data for this report via the National Child Abuse and Neglect Data System. Data has been collected every year since 1991 and is collected from child welfare agencies in the 50 states, Puerto Rico, and the District of Columbia (known as "52 states" in this report). During 2023, key findings include (US DHHS, 2025):

- more than 3 million children received either an investigation or alternative response
- over half a million victims of child abuse and neglect were reported. For FFY 2023, a nationally estimated 2,000 children died from abuse and neglect at a rate of 2.73 per 100,000 children in the population
- a unique count of 422,117 perpetrators
- recipients of prevention services numbered more than 1,700,000

More than a quarter of the victims ranged in age 0 to 2 years, with 14.2% of all victims being under a year. The victimization rate is highest for infant victims younger than 1 year at 21.0 per 1,000 children in the population of the same age, which is 2.2 times the rate of victims who are 1 year at 9.5 per 1,000 children. Victims who are 2 or 3 years old have victimization rates of 8.8 and 8.5 victims per 1,000 children of those respective ages in the population. In general, the rate of victimization decreases with the child's age (US DHHS, 2025).

More than two-thirds of the perpetrators of child abuse were between 25 and 44 years old, with a concentration in the 25 to 34 age range. Based on data from 51 reporting states, more than one-half of perpetrators are female and 47.3 percent of perpetrators are male. The three largest percentages of perpetrators are White (46.6%), Black or African American (21.5%), and Hispanic (20.5%). (US DHHS, 2025).

Most perpetrators are a parent of their victim, 6.6 percent of perpetrators are a relative other than a parent, 4.1 percent have multiple relationships to their victims, and 4.0 percent are an unmarried partner of the parent. Nearly 4.0 percent of perpetrators have another relationship to their victims including foster sibling, nonrelative, or babysitter (US DHHS, 2025).

4.3 Family Risk Factors

Social isolation, family disorganization, dissolution, and violence—including domestic violence—are risk factors for a parent of caregiver committing child abuse. If a parent is stressed, has a poor relationship with the child, or engages in negative interactions with the child, they are at increased risk for committing child abuse.

Children themselves may be in a caretaker role—for example, as a babysitter—and may be responsible for abusing a child in their care. Any adult caretaker may be considered responsible if they delegate care responsibilities to an inappropriate minor. A mandatory reporter who suspects that abuse has occurred when one child is caring for another is required by law to make a child abuse report (Iowa HHS, 2024).

4.4 Community Risk Factors

Certain factors within the community can increase the risk of a parent or caregiver committing child abuse. Community violence, high community poverty rates, residential instability, high unemployment rates, high density of alcohol outlets, and poor social connections can increase the likelihood of a parent or caregiver abusing a child under their care (CDC, 2024).

4.5 The Protective Factors Approach

[The following information is from CWIG, 2025]

Some stakeholders in the child welfare community believe that focusing too much on family risks (mother's mental health, history of violence) made families feel stigmatized and didn't always lead to solutions. In response, the *Child Welfare Information Gateway (CWIG)** has begun to promote a protective factors approach, in which they try to emphasize families' strengths, engage families through collaboration with agencies, and encourage growth in safe and healthy ways.

***The Child Welfare Information Gateway** is a service of the Children's Bureau, US DHHS.

The protective factors approach aims to promote resilience among children, youth, and families, enabling them to develop skills, characteristics, knowledge, and relationships that mitigate risk and achieve both immediate and long-term positive outcomes.

Nurturing and Attachment. A child's early experience of being nurtured and developing a bond with a caring adult affects all aspects of behavior and development. When parents and children have strong, warm feelings for one another, children develop trust that their parents will provide what they need to thrive, including love, acceptance, positive guidance, and protection.

Knowledge of Child Development. Discipline is both more effective and more nurturing when parents know how to set and enforce limits and encourage appropriate behaviors based on the child's age and level of development. Parents who understand how children grow and develop can provide an environment where children are able to live up to their potential. Child abuse and neglect are often associated with a lack of understanding of basic child development or an inability to put that knowledge into action. Timely mentoring, coaching, advice, and practice may be more useful to parents than information alone.

Parental Resilience. Resilience is the ability to handle everyday stressors and recover from occasional crises. Parents who are emotionally resilient have a positive attitude, creatively solve problems, effectively address challenges, and are less likely to direct anger and frustration at their children. These parents are aware of their own challenges—for example, those arising from inappropriate parenting they received as children—and accept help and/or counseling when needed.

Social Connections. Evidence links social isolation and perceived lack of support to child maltreatment. Trusted and caring family and friends provide emotional support to parents by offering encouragement and assistance in facing the daily challenges of raising a family. Supportive adults in the family and the community can model alternative parenting styles and can serve as resources for parents when they need help.

Concrete Supports for Parents. Many factors beyond the parent-child relationship affect a family's ability to care for their children. Parents need basic resources such as food, clothing, housing, transportation, and access to services that address specific needs (e.g., childcare, healthcare) to ensure the health and well-being of their children.

Some families may also need support connecting to social services such as alcohol and drug treatment, domestic violence counseling, or public benefits. Providing or connecting families to the concrete support that families need is critical. These combined efforts help families cope with stress and prevent situations where maltreatment could occur.

Child Social and Emotional Competence. Children need to learn how to identify and express emotions, just as they learn other skills. Healthy emotional expression helps parents meet their children's needs and strengthens relationships. If children are unable to express their needs due to age, disability, or other factors, it can lead to parental stress. Emotional self-regulation is vital for children's interactions with family, peers, and others.

Child abuse and neglect is not a new phenomenon—it has been documented for more than two thousand years. For most of human history children had no rights in the eyes of the law and it was unthinkable that the law would intervene in the domain of the family. In the United States, the first known legal response to child abuse occurred in 1874.

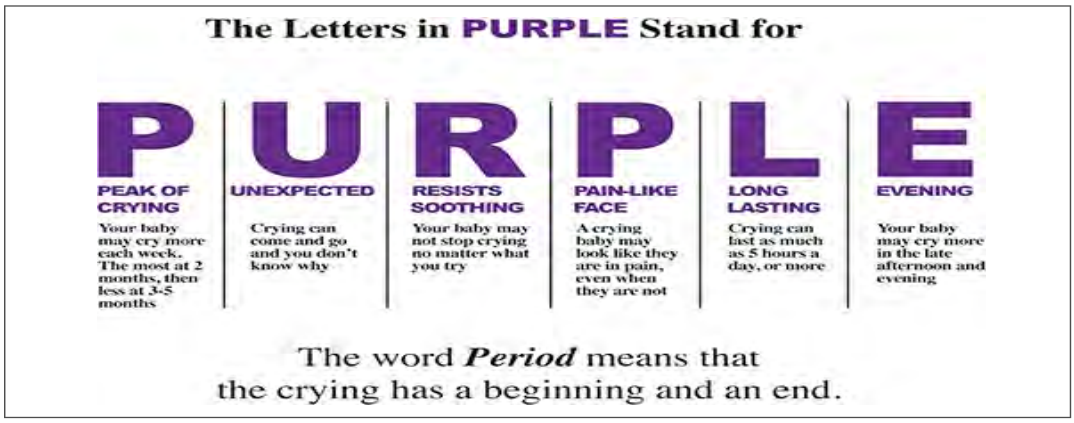
5. Interventions

> I don't know any baby who ever cried themselves to death, but I do know of too many cases where parents got frustrated by the baby crying and we ended up in a quite terrible situation. We always want parents to have a support system. If you are the primary caregiver and you've reached your end, it's always appropriate to say to a partner, grandparent, a support person, or somebody you trust, "Can you take over because I've had enough of the crying baby?" And it's also perfectly fine to take a crying baby and put them in a nice safe sleep environment like a crib and walk away and calm yourself down, do something that relaxes and rejuvenates you, so you don't get frustrated with this crying baby.
>
> Cindy Christian, MD, NICHD, 2013

After a thorough examination to rule out a dangerous health condition, interventions generally consist of offering parental or caregiver support, with an emphasis on reassuring parents that exhaustion and frustration are normal. Various soothing techniques, especially decreased stimulation for the baby, may be effective. Walking the baby or going for a drive, gentle massage, turning the lights down, feeding in a darkened room, avoiding perfumes, and keeping the baby away from siblings and pets may decrease crying and help the infant and everyone else get to sleep (Rosenthal and Hein, 2023).

Parents should also be encouraged to develop their own emotional coping responses for fussiness, to minimize the likelihood that they will become frustrated and injure their infant. Parents or caregivers upset by a bout of nonstop crying should place the baby safely in a crib and walk away to avoid shaking the infant and causing harm. If possible, they should take breaks, take turns, or ask for help from trusted family or friends (Banks, et al., 2023).

The *National Center on Shaken Baby Syndrome* refers to the weeks of most intense crying as the period of PURPLE crying. Many hospitals and birthing centers provide new parents with information about this phase to encourage them to view it as normal and to seek coping strategies.



The Period of PURPLE crying. Source: National Center on Shaken Baby Syndrome. https://dontshake.org/purple-crying

As seen above, each of the letters in PURPLE stand for a property of crying in healthy infants that can frustrate parents and caregivers:

P = **peak pattern**, in which crying increases at about 2 weeks, peaks in the second to third month, and then declines

U = **unexpected** bouts of prolonged crying that come and go

R = **resistance** to soothing

P = **pain-like** look on the child's face when they are crying

L = **long** crying bouts—up to 35 or 40 minutes per bout

E = bouts of crying tend to occur in the late afternoon and **evening** although they can happen at any time of the day

The PURPLE program also emphasizes three main points:

1. Parents are encouraged to use typical calming responses (carry, comfort, walk, talk) with their infants.
2. If the crying is too frustrating, it is okay put the baby down in a safe place, walk away, calm yourself, and then return to check on the baby.
3. Never shake a baby.

6. Societal Recognition of Child Abuse

Foundational Case

In a case that was to have significant repercussions, Henry Bergh, founder of the New York Society for the Prevention of Cruelty to Animals (NYSPCA) and acting as a private citizen, pleaded in court to have an 8-year-old child named Mary Ellen Wilson removed from her abusive and neglectful family. Although in 1874 there were laws in New York that allowed the state to remove neglected children from their homes, New York City authorities were reluctant to take up Mary Ellen's cause.

Etta Wheeler, a Methodist mission worker, had convinced Mr. Bergh to act on behalf of an abused child after her niece suggested he could help, saying, “You are so troubled over that abused child, why not go to Mr. Bergh? She is a little animal, surely!” At the hearing, Mr. Bergh clarified he was not representing the New York SPCA but aimed to stop cruelty to children within the law.

Mary Ellen was removed from her abusive situation and placed in a shelter for adolescent girls. Uncomfortable with this, Ms. Wheeler once again intervened and received permission to send Mary Ellen to live with her own mother in upstate New York. When Ms. Wheeler's mother died, Mary Ellen went to live with Ms. Wheeler's sister and her husband. Mary Ellen eventually married and had two daughters. She died in 1956 at the age of 92 (Watkins, 1990).

Mary Ellen’s case led to the formation of societies in many states to protect children from cruelty. In 1860, Ambroise Tardieu, a French forensic physician—in a treatise entitled “Forensic Study on Cruelty and the Ill-Treatment of Children”—was the first medical professional to provide a clinical definition of *battered child syndrome.* Tardieu detailed thirty-two cases of battered child syndrome in detail, including eighteen that ended in the death of the child. Unfortunately, his clear and precise clinical descriptions were largely ignored by physicians and forensic specialists until nearly a century after his death (Watkins, 1990).

In the 1950s and early 1960s, a movement to protect children came as the result of several pediatricians publishing articles about children suffering multiple fractures and brain injuries at the hands of their caretakers. In 1961 C. Henry Kempe, a physician and president of the American Academy of Pediatrics, convened a conference on the battered child syndrome, in which he argued that doctors had a “duty” to the child to prevent “repetition of trauma.” The Battered Child Syndrome Conference resulted in many states passing laws to protect children from physical abuse (Watkins, 1990).

In 1985, Kempe introduced a set of diagnostic criteria for suspected child abuse:

Abuse should be considered in any child exhibiting evidence of fracture of any bone, subdural hematoma, failure to thrive, soft tissue swellings or skin bruising, in any child who dies suddenly, or where the degree and type of injury is at variance with the history given regarding the occurrence of trauma (Kempe et al., 1985).

Child abuse is now recognized as a problem of epidemic proportions, with serious consequences that may cause indelible pain throughout the victim’s lifetime. Unfortunately, violent and negligent parents and caretakers serve as a model for children as they grow up. The child victims of today, without protection and treatment, may become the child abusers of tomorrow.

Child abuse is a problem for the entire community. Protecting children from abuse requires the coordination of many resources. Parents, caregivers, and professional groups and agencies involved with families must work together and assume responsibility for preventing child abuse.

7. The Lifelong Effects of Child Maltreatment

[The following section is from WHO, 2024]

Child maltreatment occurs all over the world and has serious lifelong consequences. People who have suffered maltreatment as children are more prone to a wide variety of negative health outcomes, including all kinds of injuries and severe disability, post-traumatic stress, anxiety, depression, and sexually transmitted infections (including HIV).

Adolescent girls may face additional health issues, including gynecological disorders and unwanted pregnancy. Child maltreatment can affect cognitive and academic performance and is strongly associated with alcohol, drug abuse, and smoking—key risk factors for noncommunicable diseases such as cardiovascular disease and cancer.

Maltreatment causes stress that is associated with disruption in early brain development. Extreme stress can impair the development of the nervous and immune systems. Consequently, as adults, maltreated children are at increased risk for behavioral, physical and mental health problems such as:

- perpetrating or being a victim of violence
- depression
- smoking
- obesity
- high-risk sexual behaviors
- unintended pregnancy
- alcohol and drug misuse.

Violence against children is also a contributor to inequalities in education. Children who experienced any form of violence in childhood have a 13% greater likelihood of not graduating from school. Beyond the health, social and educational consequences of child maltreatment, there is an economic impact, including costs of hospitalization, mental health treatment, child welfare, and longer-term health costs.

8. Legal Response to Child Abuse

8.1 Child Abuse Prevention and Treatment Act

The Child Abuse Prevention and Treatment Act (CAPTA) was originally enacted by Congress in 1974 and reauthorized in 2010. CAPTA provides minimum standards for defining physical child abuse, child neglect, and sexual abuse that states must incorporate into their statutory definitions to receive federal funds. Under CAPTA, **child abuse and neglect** is defined as:

- any recent act or failure to act on the part of a parent or caretaker that results in death, serious physical or emotional harm, sexual abuse, or exploitation
- an act or failure to act that presents an imminent risk of serious harm

State, Territorial, and Tribal civil laws define the conduct, acts, and omissions that constitute child abuse or neglect that must be reported to child protective agencies. **Physical abuse** is generally defined as "any nonaccidental physical injury to the child" and can include striking, kicking, burning, or biting the child, or any action that results in a physical injury or impairment of the child.

Jurisdictions may expand on this definition, and many choose to include specific additional harms. In 21 states, Puerto Rico, and the Eastern Band of the Cherokee, human trafficking, including involuntary servitude, is included in the definition of child abuse. Ten states include female genital mutilation in their definitions of physical abuse. The Navajo Nation and Pala Band of Mission Indians include exploiting or overworking a child with physical labor in their definitions of maltreatment.

CAPTA defines the term **near fatality** as an act that, as certified by a physician, places the child in serious or critical condition. The act defines the term *serious bodily injury* as bodily injury that involves substantial risk of death, extreme physical pain, protracted and obvious disfigurement, or protracted loss or impairment of the function of a bodily member, organ, or mental faculty.

Neglect is frequently defined as the failure of a parent or other person with responsibility for the child to provide needed food, clothing, shelter, or medical care to the degree that the child's health, safety, and well-being are threatened with harm. Many states and tribes include failure to educate the child as required by law in their definition of neglect, while others include medical neglect in their definitions. Abandonment is often included in the definition of abuse or neglect, though some tribes make an exception if the child is in the custody of a relative.

Strategies to prevent SBS/AHT lean heavily on educating parents and caregivers about how to deal with the stress of crying babies. The Childcare Technical Assistance Network has provided a set of best practices for childcare providers:

Childcare providers have an important role that they can play in adopting prevention strategies to support themselves, other caregivers, parents, and families. These strategies include:

- learning about abusive head trauma
- sharing information on typical child development and self-care
- helping infants and caregivers build relationships
- connecting with community resources (such as home visiting and family support groups)
- identifying sources of household family stress and connecting families to resources in partnership with health and other systems

Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs, outlines best practices regarding abusive head trauma. According to *Caring for Our Children Standard 3.4.4.3, Preventing and Identifying Shaken Baby Syndrome/Abusive Head Trauma,* the goal of this standard is that:

1. All childcare facilities should have a policy and procedure to identify and prevent shaken baby syndrome/abusive head trauma.
2. All caregivers/teachers who are in direct contact with children, including substitute caregivers/teachers and volunteers, should receive training on preventing shaken baby syndrome/abusive head trauma; recognizing potential signs and symptoms of shaken baby syndrome/abusive head trauma; creating strategies for coping with a crying, fussing, or distraught child; and understanding the development and vulnerabilities of the brain in infancy and early childhood.

Children with special needs or health problems are often at increased risk for abusive head trauma. One reason that a child with a disability may be at increased risk is that they are not meeting the developmental milestones that their caregiver is expecting. Children experiencing colic cry for longer periods of time which increases caregiver frustration and the risk of being shaken. Programs that are exempt from licensing need to meet health and safety requirements for abusive head trauma, as outlined by their state, if they care for a child for whom they receive federal childcare financial assistance (CCTAN, 2022).

Giving parents and caregivers tools that help them cope with frustration while caring for a baby are important components of any SBS prevention program. Health professionals play a key role in reinforcing prevention by helping parents and caregivers understand the dangers of violently shaking a baby, the risk factors and the triggers for it, and ways to lessen the load on stressed-out parents and caregivers, all of which may help to reduce the number of cases of SBS (CCTAN, 2022).

Prevention strategies are still being researched and developed. Some studies indicate that paid family leave and California's earned income tax may have resulted in a reduction in AHT. The Period of PURPLE Crying contributed to reduced AHT in British Columbia, but not North Carolina. Another hospital-based program had some success in two New York regions, but not in Pennsylvania (Narang, et al., 2020a).

8.2 Shaken Baby Syndrome Prevention Programs

Many prevention and education programs strive to raise awareness about SBS, educate parents and other caregivers about the serious effects of SBS-related injuries, and inform them about infant crying behavior and safe ways to reduce and prevent SBS injuries.

Examples of common prevention strategies include (CDC, 2024):

- coordinated hospital-based primary prevention programs targeting parents of newborns
- home visits for new parents
- anticipatory guidance at well-baby visits in pediatric practice or health clinics
- school prevention programs for junior high and high school students providing them with an understanding of child maltreatment issues, anger management techniques, and childcare skills

The CDC urges parents and caregivers to focus on calming themselves down if they notice that they are getting frustrated with a crying baby. It is perfectly all right to put the baby down and walk away for five or ten minutes at a time. There is also a hotline for mothers who need some mental health support.

8.3 Not feeling like yourself? Let's talk about it.

The National Maternal Mental Health Hotline provides free, confidential, 24/7 emotional support, resources, and referrals to pregnant and postpartum women and their loved ones. Call or text 1-833-852-6262 (CDC, 2024).

According to the Office on Women's Health, 1 in 8 women report symptoms of postpartum depression in the first year after giving birth. New mothers may feel sad, anxious, or overwhelmed. They may not feel love and care for the baby, and they may have no energy to do anything at all (OWH, 2025). Labor and delivery nurses, discharge nurses, and health educators can distribute the Period of PURPLE Crying program materials to new parents prior to the baby's discharge from the hospital or birthing center. Program materials include an educational video and booklet for new parents and other caregivers to help them understand and cope with infant crying.

The National Center on Shaken Baby Syndrome offers a school-based programs for junior and senior high school students, which teaches students about the medical aspects of shaking injuries, combined with basic anger management and childcare skills. Teaching students how frustration can lead to shaking emphasizes the importance of appropriate coping skills. There are also programs targeting new parents, with information and resources for providing safe and nurturing care for their new infants and safe strategies for coping with frustration caused by crying babies. Other programs emphasize professional education and trainings for doctors, nurses, therapists, social workers, and others providing family services (National Center, 2026).

8.4 Reinforcement by Other Organizations

During their regular interactions with new parents, pediatricians, public health workers, and representatives of foster care agencies, home visitation programs, and adoption agencies are encouraged to ask parents and caregivers if they have received the Period of PURPLE Crying materials (National Center, 2026). If so, they reinforce the key educational messages. If not, they give the materials to the parents and provide an overview of them.

Key points for medical providers include:

- Remind parents and caregivers that crying is normal for babies.
- Infant crying normally increases at 2 to 3 weeks of age, peaks around 6 to 8 weeks of age, and tapers off when the baby is 3 to 4 months old.
- During medical visits, ask parents how they are coping with parenthood and their feelings of stress.
- Remind parents that they may experience a sudden decrease in sleep, but that things will get better.
- Encourage parents to check for signs of illness, fever, unusual behavior, or discomfort.

9. Mandatory Reporting of Child Abuse and Neglect

9.1 Kentucky Mandatory Reporting

If you are licensed in Kentucky, three statutes passed by the State of Kentucky cover the following items:

1. Duty to Report
2. Reporting Procedures
3. Definitions

Duty to Report is the core mandatory reporting statute (KRS 620.030) for child abuse in Kentucky. It establishes the duty of any person with reasonable cause to believe a child is abused, neglected, or dependent to make an immediate report.

The *Reporting Procedures* statute (KRS 620.040) governs how reports are made, who receives them, and the obligations of institutions. Specifically, KRS 620.040(5)(c) addresses situations where a child is sexually abused and the custodian is unable or unwilling to protect the child.

Definitions states that mandated reporters must report a child who is dependent, neglected, abused, or a victim of human trafficking, as defined in Kentucky Statute 600.020.

9.2 Child Abuse Treatment and Prevention Act

CAPTA requires states to identify who is mandated to report child abuse. Mandatory reporters are typically people whose professions bring them into frequent contact with children. In some states, anyone who suspects child abuse is required to report it. In all states, territories, and the District of Columbia, anyone who suspects child maltreatment is permitted to report it, though they are not required to do so.

About half of the states and territories require that mandatory reporters receive training on their responsibilities, while 22 states and the District of Columbia simply make the information available on their agency websites. The institutional responsibility to report includes volunteers or staff members at institutions such as schools or hospitals to report suspected maltreatment, even if the reporter does not belong to a specific profession on the list of mandatory reporters.

Privileged communications, such as confidentiality between spouses and physicians and their patients, are often denied for mandatory reporters, though attorney-client privileges and clergy-penitent privileges are often upheld.

All jurisdictions have provisions to maintain the confidentiality of the reporter. Most states and territories specify that the reporter's identity must be protected from the alleged perpetrator.

9.3 Failure to Report or False Reporting

Mandated reporters are required by law to report child maltreatment when they know it is taking place, or when they have reason to believe it is. Ninety-two percent of states impose criminal penalties for failure to report, and 27% also impose civil penalties. More than half of states penalize mandated reporters who fail to report, while just over a third impose penalties on any adult who fails to report (Lee and Weigensberg, 2022). Failure to report is a misdemeanor, punishable by fines, jail time, and serious professional repercussions.

Often, these laws do not have the intended effect. According to the ACLU of Southern California, these laws often result in overreporting of families, particularly Black, Indigenous, and low-income families, to the "child welfare system" (also known as the "family policing system") for circumstances that arise from poverty rather than neglect. This can leave families most in need of support and resources afraid to ask (ACLU, 2024).

9.4 Who Makes a Report

[The following information is from the U.S. Department of Human Services, 2025]

Mandatory reporters submitted 70.9% of the reports of child abuse and neglect in 2023, according to the Children's Bureau Child Maltreatment 2023 report, released in 2025. Legal and law enforcement personnel submitted 21.4%, educational employees submitted 21.1%. and medical staff submitted 11/2% of reports. Friends, family, and community members submitted 14.8% of the reports.

The Children's Bureau noted some signs of possible improvement, including a 19.3% decrease in children determined to be victims of maltreatment since 2019. The number of children who died from abuse and neglect went down from 2,050 in 2022 to 2,000 in 2023. However, that number is up from the 1,825 children who died from abuse or neglect in 2019.

Native American and Alaska Native children suffered the highest rate of abuse, at 13.8 per 1,000 children of the same race or ethnicity. This is closely followed by Black children, at 11.9 per 1,000. Black children also die from abuse or neglect at more than three times the rate of White children, and 3.4 times the rate of Hispanic children. Children younger than one year old make up 44% of child abuse fatalities. Children under a year old suffer the highest rate of abuse, at 21 per 1,000 children of the same age in the population of the country.

9.5 Professional Training

> Now, we've all heard about what the most important factor is in the child welfare profession—not exactly a new technology, not exactly a new tool to use, and not even, at times, money. There's no question that the most important factor in the child welfare profession and bringing about positive outcomes are the people performing the work. And to improve those outcomes, you need to focus on that workforce.
>
> Tom Oates, CWIG, 2018

Providing training about protective factors for all people who work with children and families helps build a workforce with common knowledge, goals, and language.

Professionals, from frontline workers to supervisors and administrators, can benefit from training that is tailored to their role and imparts a cohesive message focused on strengthening families.

The Child Welfare Information Gateway cites multiple examples of jurisdictions that are using protective factors training materials. For example, the Strengthening Families approach emphasizes ways to support parents, Youth Thrive concentrates primarily on strengthening adolescents and young adults, Essentials for Childhood promotes relationships and environments to help create neighborhoods and communities where children can flourish, and the HOPE framework stresses child well-being while working to reduce the effects of ACEs. Many of these communities have launched their programs using grants from CWIG, which also has an extensive podcast series about how to prevent child abuse (CWIG, 2020).

9.6 Never, Ever Shake a Baby

Recognizing, diagnosing, treating, and ultimately preventing pediatric abusive head trauma and shaken baby syndrome are urgent public health goals. Educating parents and caregivers and providing them with the tools and support to understand when infant crying is normal and when it is something more is the key to preventing frustrated reactions that may lead to abuse.

For those who have regular contact with infants and their parents or caregivers, understanding risk factors is critical. For healthcare providers, knowledge of the latest science about abusive head trauma will guide assessments and diagnoses.

Public health workers, teachers, and others who work with infants and children can educate parents and caregivers about child abuse. They are critical frontline workers who can intervene to protect vulnerable infants when they see signs of potential child abuse.

No matter your occupation or responsibilities, whether you are a parent, a caregiver, a community member, or a healthcare provider, the message is clear and simple:

Never, ever, shake a baby!

[Continue to next page for references]

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[Continue to next page to start quiz]

Quiz: Pediatric Abusive Head Trauma (382)

1. Why did the American Academy of Pediatrics adopt the term pediatric abusive head trauma to replace shaken baby syndrome?

    a. Research indicated that trauma was not exclusively from shaking.

    b. A more medical term was considered desirable.

    c. Courts were demanding the change.

    d. The term “baby” was not acceptable.

2. Distinguishing PAHT from unintentional injury can be difficult because:

    a. The parents may seem conscientious and well-meaning.

    b. A wide range of symptoms clouds the issue.

    c. There is no tool to aid in the decision.

    d. Pediatricians order too few tests.

3. Common features of accidental head trauma are swelling and bruising in the scalp, epidural hemorrhage, and isolated skull fracture.

    a. True

    b. False

4. Bruises on some areas of an infant’s body are suspicious if they:

    a. Appear on the arms and legs.

    b. Are located on the abdomen.

    c. Show signs of healing.

    d. Are accompanied by scratches.

5. The mechanism of injury most common in PAHT is:

    a. Back pain with crying.

    b. Inability to move arms and legs.

    c. Unrelieved vomiting.

    d. Brain bleeds due to venous trauma.

6. Children are at highest risk for AHT when they are:

    a. 0 to 1 month old.

    b. 2 to 4 months old.

    c. 4 to 8 months old.

    d. 0 to 12 months old.

7. The most likely trigger for AHT is:

a. Parental inattention.

b. Inconsolable, long-lasting crying.

c. Sibling rivalry.

d. Marital problems.

8. The letters in PURPLE ae meant to suggest response to stress while caring for a child. Which of the following is not a PURPLE suggestion?

a. Peak of crying

b. Long lasting

c. Evening

d. Pain

9. Protective factors that promote resilience among children, youth, and families include:

a. Nurturing and attachment.

b. Knowledge of child development.

c. Parental resilience.

d. All of the above.

10. Lifelong effects of child maltreatment may be:

a. Dislike of music and the arts

b. Lack of athletic achievement

c. High-risk sexual behaviors

d. Over-achievement in academics

11. Mandatory reporting establishes the duty of any person with reasonable cause to believe a child is abused, neglected, or dependent to make an immediate report.

a. True

b. False

12. Failure to report suspected child abuse is a misdemeanor, punishable by fines, jail time, and serious professional repercussions.

a. True

b. False

[Continue to next page for answer sheet]

Answer Sheet: PAHT (382)

Name (Please print)_____

Date_____

Passing score is 80%

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____

[Continue to next page for course evaluation]

Course Evaluation: PAHT (382)

Please use this scale for your course evaluation. Items with asterisks * are required.

1 = Strongly agree 2 = Agree 3 = Neutral 4 = Disagree 5 = Strongly disagree

*Upon completion of the course, I was able to:

1. Define pediatric abusive head trauma (PAHT).	1 2 3 4 5
2. List 5 symptoms associated with PAHT.	1 2 3 4 5
3. Explain the most common trigger for pediatric abusive head trauma.	1 2 3 4 5
4. List 4 individual risk factors for child abuse in the United States.	1 2 3 4 5
5. Describe the 3 main components of the PURPLE system.	1 2 3 4 5
6. Understand the evolution of society's recognition of child abuse.	1 2 3 4 5
7. Describe 4 lifelong effects of SBS/PAHT.	1 2 3 4 5
8. Define the 2 components of child abuse under CAPTA.	1 2 3 4 5
9. Define "duty to report."	1 2 3 4 5

*The author(s) are knowledgeable about the subject matter. 1 2 3 4 5

*The author(s) cited evidence that supported the material presented. 1 2 3 4 5

*Did this course contain discriminatory or prejudicial language? Yes No

*Was this course free of commercial bias and product promotion? Yes No

*As a result of what you have learned, will make any changes in your practice? Yes No

If you answered Yes above, what changes do you intend to make? If you answered No, please explain why.

*Do you intend to return to ATrain for your ongoing CE needs?

_____Yes, within the next 30 days. _____Yes, during my next renewal cycle.

_____Maybe, not sure. _____No, I only needed this one course.

*Would you recommend ATrain Education to a friend, co-worker, or colleague?

_____Yes, definitely. _____Possibly. _____No, not at this time.

*What is your overall satisfaction with this learning activity? 1 2 3 4 5

*Navigating the ATrain Education website was:

_____Easy. _____Somewhat easy. _____Not at all easy.

*How long did it take you to complete this course, quiz, and course evaluation?

_____60 minutes (or more) per contact hour _____59 minutes per contact hour

_____40-49 minutes per contact hour _____30-39 minutes per contact hour

_____Less than 30 minutes per contact hour

I heard about ATrain Education from:

_____Government or Department of Health website. _____State board or professional association.

_____Searching the Internet. _____A friend.

_____An advertisement. _____I am a returning customer.

_____My employer. _____Social Media

_____Other _____

Please let us know your age group to help us meet your professional needs

_____18 to 30 _____31 to 45 _____46+

I completed this course on:

_____My own or a friend's computer. _____A computer at work.

_____A library computer. _____A tablet.

_____A cellphone. _____A paper copy of the course.

Please enter your comments or suggestions here:

[Continue to next page for registration and payment]

Registration

Please answer all of the following questions (* required).

*Name: _____

*Email: _____

*Address: _____

*City and State: _____

*Zip: _____

*Country: _____

*Phone: _____

*Professional Credentials/Designations:

_____

*License Number and State: _____

Payment Options

You may pay by credit card, check or money order.

Fill out this section only if you are paying by credit card.

3 contact hours: $29

Credit card information

*Name: _____

Address (if different from above):

*City and State: _____

*Zip: _____

*Card type: Visa Master Card American Express Discover

*Card number: _____

*CVS#: _____ *Expiration date: _____