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Contact Hours: **1.5**

Pediatric Abusive Head Trauma CE for Kentucky Nurses

Prevent and Report Shaken Baby Syndrome

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LEARNING OUTCOME AND OBJECTIVES: Upon completion of this course, you will be better prepared to recognize and help prevent pediatric abusive head trauma (AHT) and understand reporting requirements for instances of AHT in Kentucky. Specific learning objectives to address potential knowledge gaps include:

- Define “pediatric abusive head trauma.”
- Recognize the risk factors for head injuries resulting from abuse.
- Describe the mechanisms of injury, clinical presentation, history gathering, physical assessment, and diagnosis of pediatric AHT.
- Distinguish between accidental and abusive head trauma in the pediatric population.
- Discuss resources for prevention of pediatric AHT.
- Summarize Kentucky reporting requirements for suspected child abuse and neglect.

INTRODUCTION

According to the CDC (2021), pediatric abusive head trauma (AHT) is a preventable and severe form of physical child abuse that results in an injury to the head or brain of a child. It is caused by violent shaking (often referred to as *shaken baby syndrome*) and/or blunt impact. AHT includes a range of injury mechanisms and clinical outcomes, from subtle presentations to infants with severe and life-threatening injuries.

The diagnosis of AHT should be made by a multidisciplinary team based on an aggregate of physical, radiographic, and laboratory evidence that cannot be explained by the provided history

or is incongruent with the developmental stage of the child (Choudhary et al., 2018; O'Meara et al., 2020). Subspecialists in radiology, ophthalmology, neurosurgery, neurology, general pediatric surgery, and other fields should also be consulted when necessary to ensure a complete and accurate diagnostic evaluation (AAP, 2020).

AHT continues to be leading cause of physical abuse–related death in children and the leading cause of death from injury in infants. The fatality rate is significant for AHT and has been estimated to exceed 20%, with significant disability for nearly two thirds of the survivors. Deaths due to abusive head trauma peak at 1 to 2 months of age, most likely due to higher physiologic vulnerability (see also “Risk Factors” below) (CDC, 2022, 2021).

For children in the first year of life, the majority of serious head injuries result from abuse, and this peak incidence and rapid decrease with age are thought to be related to episodes of prolonged, inconsolable, and unpredictable crying. Such crying can be both a developmentally typical way for infants to communicate their basic needs, but it also can be related to a variety of other health and/or developmental causes that can be identified through medical examination. Regardless of the etiology, it is important to aim prevention strategies toward supporting parents and caregivers in dealing with crying.

TERMINOLOGY

Pediatric Abusive Head Trauma (PAHT or AHT): KRS 620.020 defines pediatric abusive head trauma as the various injuries or conditions that may result following the vigorous shaking, slamming, or impacting the head of an infant or young child. These injuries or conditions, also known as *pediatric acquired abusive head trauma*, have in the past been called *Shaken Baby Syndrome* or *Shaken Infant Syndrome*. Pediatric abusive head trauma injuries or conditions have included but are not limited to the following:

- Irreversible brain damage
- Blindness
- Retinal hemorrhage
- Eye damage
- Cerebral palsy
- Hearing loss
- Spinal cord injury
- Paralysis
- Seizures
- Learning disability
- Death
- Central nervous system injury as evidenced by central nervous system hemorrhaging
- Closed head injury
- Rib fracture
- Subdural hematoma



Pediatric Acquired/Traumatic Brain Injury (PA/TBI): This term includes traumatic causes such as those sustained as a result of motor vehicle accidents, sports-related injuries, blast injuries from war, assaults/child abuse, gunshot wounds, and falls.

Shaken Baby Syndrome (SBS): SBS refers to a form of abusive head trauma caused by shaking and with a characteristic pattern of injuries that may include retinal hemorrhages, certain fractures (in particular, ribs and the ends of long bones), and recognizable patterns of brain injury, often including thin subdural hemorrhages and sometimes diffuse axonal injury.

The change in terminology (from “shaken baby syndrome” to “abusive head trauma”) was misinterpreted by some in the legal and medical communities as an invalidation of the diagnosis and the mechanism of shaking as a cause of injury. However, the AAP continues to affirm the dangers and harms of shaking infants and embraces the “shaken baby syndrome” diagnosis as a valid subset of an AHT diagnosis and for parental education and community preventative efforts to caution against the detrimental effects of infant shaking (AAP, 2020).

RISK FACTORS FOR ABUSIVE HEAD TRAUMA

Anatomy- and Physiology-Related Risk Factors

There are specific risks to the young infant due to their anatomy and physiology. These include the combination of a disproportionately larger head, soft and rapidly growing brain, thin skull wall, and lack of mobility and control of the head and neck that makes infants extremely vulnerable to injury from shaking actions.

Because the brain grows rapidly during infancy, infants have proportionally larger heads than adults in relation to their body size. (The relation between head and body size continuously declines with increasing age.) Therefore, the head is relatively heavy compared to the rest of the body, which results in different dynamics of head acceleration due to external forces, making the infant head more vulnerable to trauma (Araki et al., 2017).

Additionally, the infant’s brain has higher water content and less myelination than an adult brain, is more gelatinous, and is easily compressed and distorted within the skull during a shaking episode. The infant’s blood vessels around the brain are more susceptible to shearing, and tearing can lead to brain hemorrhages. Because of their minimally developed anatomy, infants are also at increased risk for death and permanent disability.



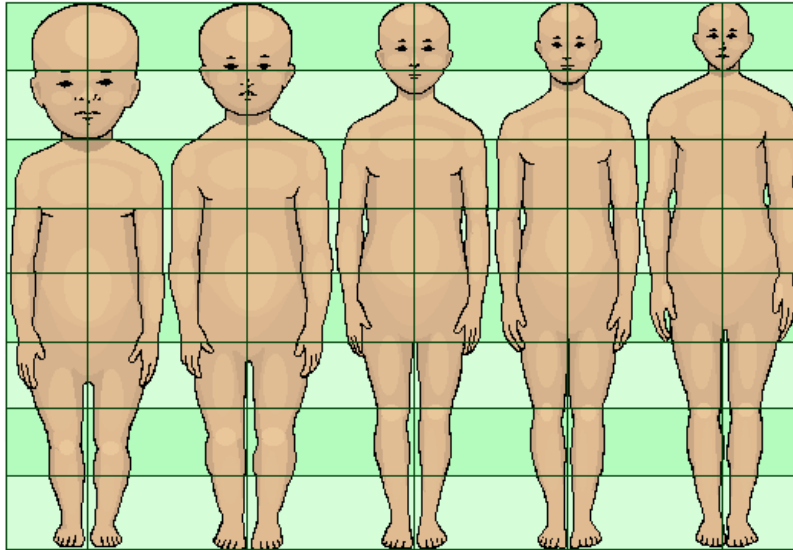


Diagram showing the proportionally larger head of an infant relative to an adult.
(Source: Journal of Heredity, 1921.)

Household Risk Factors and Perpetrator Characteristics

Understanding the AHT risks from various caregivers may help to inform current prevention strategies. A critical risk factor is the occurrence of shaking used either to attempt to calm infants and children or as a means of discipline. Less consistent risk factors include socioeconomic status, societal and family stress, prematurity, multiple births, developmental delay, prior military service, and childhood history of abuse in the perpetrator (Joyce & Huecker, 2018).

There are few statistics looking specifically at risk as it relates to perpetrators of pediatric AHT. Among the limited studies, Ahmed (2017) reported that “by far, parents were more likely to be perpetrators of the confirmed or suspected child abuse. However, children injured by a parent’s partner—a group that was overwhelmingly male—were more likely to be more severely injured, to experience severe head injuries, and to require intubation compared with children who were abused by a parent.” Laurent-Vannier and colleagues (2021) examined 91 cases of AHT and found that all of the abusive events occurred inside a home (parent’s or childcare provider’s), never outdoors or in a public place, and always in the presence of only one adult. One third of perpetrators were males ($n=32$), and two thirds females ($n=59$), of which 49 were the childcare provider (“nanny”) and 10 were the infant’s mother.

According to the CDC (2022), factors that increase the caregiver’s risk for child abuse in general include:

Individual Risk Factors

- Parents’ lack of understanding of children’s needs, child development, and parenting skills



- Parental history of child abuse and/or neglect
- Substance abuse and/or mental health issues, including depression in the family
- Parental characteristics such as young age, low education, single parenthood, large number of dependent children, and low income
- Nonbiological, transient caregivers in the home (e.g., mother's male partner)
- Parental thoughts and emotions that tend to support or justify maltreatment behaviors

Family Risk Factors

- Social isolation
- Family disorganization, dissolution, and violence, including intimate partner violence
- Parenting stress, poor parent-child relationships, and negative interactions

Community Risk Factors

- Community violence
- Concentrated neighborhood disadvantage (e.g., high poverty, residential instability, high unemployment rates, and high density of alcohol outlets) and poor social connections

Child Risk Factors

Children with special needs—including those born prematurely and/or having developmental delays and/or disabilities—are at higher risk for AHT. A lack of understanding of premature infant development may lead to additional frustration, stress, decreased tolerance, and resentment among caregivers. Since premature infants have a higher rate of disabilities than full-term infants, their risk is even greater.

Infants experiencing neonatal abstinence syndrome (NAS) (i.e., babies in withdrawal) are at particular risk for child abuse, including abusive head trauma, due to the irritability and excessive crying that result from withdrawal from substance addiction. This can last for weeks and months, making such babies difficult to care for.

ASSESSMENT AND DIAGNOSIS OF PEDIATRIC ABUSIVE HEAD TRAUMA

Mechanism of Injury

Abusive head trauma encompasses many mechanisms of injury. Children who present with AHT may have been injured in a number of ways, including shaking, blunt impact, suffocation,



strangulation, and others. It is important to remember that **no single injury is diagnostic of AHT** (Choudhary et al., 2018).

Each type of imposed stress produces a characteristic pattern of injury:

- Acceleration and deceleration through an arc (shaking) produce thin subdural hemorrhage and, commonly, retinal hemorrhages.
- Impact is associated with skull fractures, contra-coup bruising, and unilateral subdural hemorrhage.
- Strangulation causes hypoxia and hypoxic ischemic encephalopathy.

These stresses may occur separately or in any combination.



When a baby is shaken, the neck snaps back and forth and the brain rotates, causing shearing stresses on the vessels and membranes between the brain and skull. (Source: Radiologyassistant.nl.)

Clinical Presentations

Healthcare professionals may first encounter young children with AHT in a range of clinical settings, including primary care, urgent care, and emergency departments. Since there are significant variations in the clinical presentation of children with AHT, it is important that professionals are trained to identify potentially life-threatening situations.

While there is an increased awareness now about AHT and how it may present, it is still important to realize that AHT may present with subtle signs and symptoms. A history of trauma is rarely provided in the initial stages, and if it is, it is usually reported as a fall from a distance less than 5 feet (APA, 2020).

Less severely injured infants and young children may present with symptoms that are quite nonspecific and without a history of trauma provided by a caregiver. These symptoms may be



transient and improve if the trauma is not repeated. They include irritability, vomiting, and apnea. These and other symptoms of AHT are also seen in other minor medical conditions and can easily lead to a mistaken diagnosis of those conditions instead. Healthcare providers may have difficulty recognizing that such symptoms are the result of abuse, and the infant may return to an abusive environment (see also “Differential Diagnoses” below).

More seriously injured children have symptoms that should lead to rapid diagnosis of intracranial trauma. The caregiver may report a dramatic change in level of consciousness, as in acute collapse, such as unconsciousness, apnea, or seizures. An episode of minor trauma may be given as an explanation for the injury. Examples include falls off beds, being dropped by caregivers, or other minor contact injuries to the head.

Presenting History

Any reported history or statements made by the caregiver regarding the injury should be documented accurately and completely. It is best to include the specific questions asked as well as the responses. Information should be gathered in a nonaccusatory but detailed manner.

There are two general portions of the presenting history that are important to document. The first is the history of the injury event and the second is how the child responded or behaved after the injury.

Questions asked when taking a presenting history should include:

- What happened?
- Who was there when it happened?
- Where did it happen?
- When did it happen?
- What happened afterwards?
- When was the child noticed to be ill or injured? How did the child respond? When did symptoms start? How did you respond?
- What made you bring your child to the doctor (or hospital)?
- When was the last time your child was totally normal or well?
- What has your child been doing and how have they appeared during the last 24–48 hours?

Medical, Developmental, and Social History

Information that may be useful in the medical assessment of suspected physical abuse include:



- Past medical history (trauma, hospitalizations, congenital conditions, chronic illnesses)
- Nutrition history
- Seizure history
- Medications and immunizations
- Family history (especially of bleeding, bone disorders, and metabolic or genetic disorders, which often appear as a history of early deaths)
- Pregnancy history (wanted/unwanted, planned/unplanned, prenatal care, postnatal complications, postpartum depression, delivery in nonhospital settings)
- Familial patterns of discipline
- Child temperament (easy to care for versus fussy)
- History of past abuse to child, siblings, or parents, including history of Child Protective Services or police involvement
- Developmental history of child (language, gross motor, fine motor, psychosocial milestones)
- Substance abuse by any caregivers or people living in the home
- Social and financial stressors and resources (unemployment, divorce/separation, etc.)
- Violent interactions among other family members (Christian, 2018)

The social history is a critical component of the evaluation. Asking parents about the household composition, other caregivers, siblings, substance abuse, mental illness, and social stressors can provide valuable information. It is preferable to interview caregivers separately; thorough and accurate documentation, including the use of quotes, is critical.

Explanations that are of concern for AHT include:

- Any infant or young child whose history is not plausible or consistent with the presenting signs and symptoms (i.e., explanation that is inconsistent with the pattern, age, or severity of the injury or injuries)
- History of behavior that is inconsistent with the child's physical and/or developmental capabilities
- Presence of a new adult partner in the home
- History of delay in seeking medical attention



- History or suspicion of previous abuse
- Absence of a primary caregiver at the onset of injury or illness
- Physical evidence of multiple injuries at varying stages of healing
- Unexplained changes in neurologic status, unexplained shock, and/or cardiovascular collapse (CDC, 2018)

Physical Assessment

There are various signs and symptoms of AHT that can be recognized in a physical assessment of the child. Depending on the severity of the clinical presentation, initial assessment is often focused on identifying and treating life-threatening issues. This initial assessment focuses on the airway, breathing, circulation, and neurologic status.

As noted above, the consequences of less severe cases may not be brought to the attention of healthcare professionals and may never be diagnosed. In the most severe cases, which usually result in death or severe neurological consequences, the child usually becomes immediately unconscious and suffers rapidly escalating, life-threatening central nervous system dysfunction.

Common presenting **signs and symptoms of AHT** are:

- Lethargy/decreased muscle tone
- Extreme irritability
- Decreased appetite, poor feeding, or vomiting for no apparent reason
- Grab-type bruises on arms or chest (rare)
- No smiling or vocalization
- Poor sucking or swallowing
- Rigidity or posturing
- Difficulty breathing
- Seizures
- Head or forehead appears larger than usual (disproportional growth may be demonstrated on a growth chart if data are available) or soft-spot on head appears to be bulging
- Inability to lift head in an age-appropriate manner
- Inability of eyes to focus or track movement or unequal size of pupils (NCSBS, 2018)



Complete **physical exam** for any young child with suspected AHT includes:

- Inspection of all body parts, scalp, ears, and hair
- Inspection of the mouth (lip, tongue, buccal) to look for frenula tears or dental injuries
- Palpation of legs, arms, hands, feet, and ribs to feel for crepitus or deformities

Nursing neurologic assessment of the child with head trauma includes evaluation of:

- Eye opening
- Arousability level or irritability/consolability
- Symmetry of facial expressions
- Movement of upper and lower extremities
- Increased weakness or pitch in cry/vocalizations
- Fontanel
- Each pupil separately for size, shape, equality of reaction to light
- Ability to track objects
- Muscle tone for rigid extension or flexion of extremities, flaccidity, and/or unusual posturing

Research has identified several specific types of injuries as being associated with AHT. These include retinal hemorrhage in 85%, subdural hematoma in over 70%, and hypoxic-ischemic injury and cerebral edema as significantly associated with AHT (O'Meara et al., 2020).

Distinguishing between Accidental and Abusive Head Trauma

There are several challenges to differentiating between accidental (nonabusive/noninflicted) trauma or age-appropriate injuries and child abuse in infants and young children. This is especially true in children who are not yet verbal enough to explain what happened to them (i.e., infants, toddlers, and children with developmental delay and/or altered levels of consciousness).

Because of this, knowledge of typical developmental patterns of injury is helpful. That is, how does the presenting pattern(s) of injury and the child's age and developmental level match up with the reported mechanism of injury?

DEVELOPMENTAL PATTERNS OF INJURY

Developmental patterns of injury seen in the 0- to 3-year-old range (the age range most frequently seen with AHT) include:



- Trauma from falls from furniture, down stairs, or being dropped by another person
- Traumatic delivery (e.g., forceps, vacuum extraction, and/or breech)
- Motor vehicle accidents

Head injury is frequently involved with these traumas because of several factors, including the larger head-to-body ratio and the inability to shield oneself during a fall.

Developmentally, this age range is at risk for accidental injury because the child's developmental milestones include increasing motor skills and curiosity, allowing them a greater range and access to potential hazards. The advancing physical abilities of young children often precede their ability to understand the consequences of their actions. Thus, parent/caregiver knowledge of growth and developmental milestones may reduce the likelihood that they will misjudge the ability of the child and utilize an inappropriate supervision strategy. The mechanisms seen in accidental (noninflicted) injuries are generally different in these types of injuries as compared to AHT, as discussed below.

ASSESSMENT QUESTIONS

Because this situation is highly charged for both the family and all the healthcare providers involved, it is a good idea to have a mental checklist in place to both pose questions and evaluate responses in relation to the specific patient in question. Providers should further objectively and clearly document the history as described by the parents and/or caregivers present.

The following are questions a clinician can ask oneself to help separate the unintentional from the inflicted injury:

- What is the **age of the child**?
 - What are the normal behaviors of a child at that age? Developmental stages of childhood determine what kinds of injuries are likely to be seen. The motor skills of the child determine what the child could have done to incur injury.
 - Based on the child's age, is the presenting injury plausible?
- Is the **history plausible**? Could this injury have been sustained in the manner described? Does the history change with changing information supplied to the caretaker? Adjustments in the account of the injury may be made by caretakers to fit the evolving information, indicating the tailoring of the history to fit new information. Does the history change when related in subsequent accounts by other family members?
- Was the injury **witnessed**? The lack of information as to how a serious injury has occurred should raise the index of suspicion for an abusive origin.
- Is the **social situation** in which the injury occurred a high-risk environment? The presence of community or intrafamilial violence, substance abuse, chaotic living



arrangements, poverty, social isolation, transient lifestyles, mental health issues, or conflict among family members are red flags.

- Can the **described mechanism of injury** account for the observed injury? What else could produce the clinical picture?
- Can the history be independently verified (through photographs, scene investigation, etc.)?

Explanations that are concerning for intentional trauma include:

- No explanation or vague explanation for a significant injury
- An important detail of the explanation that changes dramatically
- An explanation that is inconsistent with the pattern, age, or severity of the injury or injuries
- An explanation that is inconsistent with the child's physical and/or developmental capabilities
- Different witnesses who provide markedly different explanations for the injury or injuries (Christian, 2015)

(See also “Reporting Child Abuse and Neglect” below for information on when a healthcare provider may be mandated to report suspected AHT.)

Differential Diagnoses

It is also important to rule out underlying conditions that may cause some of the same signs or symptoms associated with AHT or other abuse. Where indicated, medical professionals should inquire about the presence of any of the following conditions or practices:

- Congenital, metabolic, or neoplastic conditions (e.g., aneurysm, arteriovenous malformation, brain tumor, leukemia)
- Connective tissue disease or osteogenesis imperfecta, which may lead to fragile bones that fracture with less force than would be expected
- Acquired causes (e.g., meningitis, obstructive hydrocephalus)
- Undetected bleeding disorders that can lead to abnormal bleeding patterns (e.g., hemophilia, Von Willebrand's disease, liver disease)
- Traditional or alternative healing practices, which may lead to unusual bruising and scarring patterns (e.g., coin rubbing, cupping, or burning herbs on the skin over acupuncture points)
(Killion, 2017)



PREVENTION STRATEGIES FOR ABUSIVE HEAD TRAUMA

Research has shown that certain protective factors are linked to a lower incidence of child abuse and neglect in general. They are attributes that serve as buffers, helping parents who might otherwise be at risk of abusing their children to find resources, supports, or coping strategies that allow them to parent effectively, even under stress. These protective factors include:

- Nurturing and attachment
- Knowledge of parenting and child development
- Parental resilience
- Social connections
- Concrete supports for parents
- Social and emotional competence of children
(CWIG, 2021)

Many states, including Kentucky, have enacted programs aimed at preventing child abuse, including pediatric abusive head trauma in particular, through a public health primary universal prevention strategy aimed at changing knowledge and behaviors of caregivers and society in general concerning normal development of infants and the significance of early increased infant crying. By increasing parental understanding of infant development, with a focus on infant crying and coping strategies to address it, such programs are thought to offer a “window of opportunity” for the prevention of AHT and, potentially, other forms of infant abuse.

Primary prevention efforts address a broad segment of the population, such as all new parents. Secondary prevention efforts target a specific subset of the population considered to be at higher risk for child maltreatment. Tertiary prevention efforts target perpetrators of child maltreatment and seek primarily to prevent recidivism.

Primary Efforts: General Public and Parent Education

Primary prevention activities are directed at the general population and attempt to stop maltreatment before it occurs. All members of the community have access to and may benefit from these services. Primary prevention activities with a universal focus seek to raise the awareness of the general public, service providers, and decision makers about the scope and problems associated with child maltreatment. Universal approaches to primary prevention might include:

- Public service announcements that encourage positive parenting
- Parent education programs and support groups that focus on child development, age-appropriate expectations, and the roles and responsibilities of parenting



- Family support and family strengthening programs that enhance the ability of families to access existing services and resources to support positive interactions among family members
- Public awareness campaigns that provide information on how and where to report suspected child abuse and neglect

Parent education and support programs can address:

- Developing and practicing positive discipline techniques
- Learning age-appropriate child development skills and milestones
- Promoting positive play and interaction between parents and children
- Locating and accessing community services and supports

Healthcare professionals can provide the following messages to parents and caregivers during their everyday encounters:

- Remind parents and caregivers that crying is normal for babies.
- Explain to parents that excessive crying is often a normal phase of infant development.
- Ask parents how they are coping with parenthood and their feelings of stress.
- Assure parents that it is normal to feel frustrated at long bouts of crying and a sudden decrease in sleep, but that things will get better.
- Give parents the number to a local helpline or other resource for help.
- Talk with parents about the steps they can take when feeling frustrated with a crying baby, such as putting the baby safely in a crib on their back, checking on the baby's safety every 5 to 10 minutes, and calling for help or a friend.
- Let parents know what to check for when their baby is crying: signs of illness, fever, or other behavior that is unusual; discomfort like a dirty diaper, diaper rash, teething, or tight clothing; or whether the baby is hungry or needs to be burped.
(CDC, 2021)

The **Period of PURPLE Crying** is an example of a primary-level program specifically geared to the prevention of AHT. The target population is all parents of new infants and society in general, with the goal of increasing their understanding of early infant crying and shaken baby syndrome. The Period of Purple Crying training, when taken by nurses, has also been shown to improve nurses' short- and long-term understanding of AHT and their confidence in instructing parents and caregivers about its associated dangers and risks (Glennery et al., 2020).



PERIOD OF PURPLE CRYING PROGRAM		
P	Peak of crying	Your baby may cry more each week, peaking at 2 months, then less at 3 to 5 months.
U	Unexpected	Crying can come and go and you do not know why.
R	Resists soothing	Your baby may not stop crying no matter what you try.
P	Pain-like face	Your crying baby may look to be in pain even when they are not.
L	Long lasting	Crying can last as much as 5 hours a day or more.
E	Evening	Your baby may cry more in the late afternoon or evening.
(NCSBS, 2018)		

The PURPLE program includes a booklet plus either a smart phone “app” that parents can use to track crying and access other developmental and anticipatory guidance information and/or a DVD. The program is designed to help parents of new babies, caregivers, and the public to understand the typical crying curve and the dangers of reacting to an infant’s crying in frustration and shaking a baby. It is based on 30 years of scientific research on the connection between the infant crying curve and the incidence of SBS and is delivered using a specific protocol (Barr, 2021).

(See also “Resources” at the end of this course.)

Secondary Prevention Efforts

Secondary prevention efforts, such as home visitation programs, target a specific subset of the population considered to be at higher risk for child maltreatment, such as poverty, parental substance abuse, young maternal age, parental mental health concerns, and parental or child disabilities. Approaches to prevention programs that focus on high-risk populations might include:

- Parent education programs located in high schools and focusing on teen parents or located within substance abuse treatment programs for mothers and families with young children
- Parent support groups that help parents deal with their everyday stresses and meet the challenges and responsibilities of parenting
- Respite care for families who have children with special needs
- Family resource centers that offer information and referral services to families living in low-income neighborhoods
- Home visiting programs that provide support and assistance to expecting and new mothers in their homes
(CWIG, 2021b)



EXAMPLE PROGRAMS

Two examples of such programs are listed below:

Kentucky's **Health Access Nurturing Development Services (HANDS)** program is designed to assist overburdened first-time parents at critical development points. Frequent pre- and postnatal home visits by trained professionals are provided to first-time parents. These appointments assist new parents by sharing important information, problem solving, and helping them to meet basic needs such as housing, food, healthcare, and other required services. All of Kentucky's 120 counties offer the HANDS program at no cost to families. Enrollment must be during pregnancy or when the infant is less than 3 months old, and referral to HANDS is made through the County Health Department.

Although there is currently no data to support the HANDS program's effectiveness as it relates to AHT prevention, families who participated in HANDS (compared to families who did not participate) experienced:

- Fewer premature infants
- Fewer low birth weight babies (<5 lbs., 9 oz.)
- Fewer very low birth weight babies (<3 lbs., 5 oz.)
- Fewer developmental delays
- Fewer complications during pregnancy and/or delivery
- Adequate prenatal care
(HANDS, 2022)

The **Nurse-Family Partnership** program provides home visits by registered nurses to first-time, low-income mothers, beginning during pregnancy and continuing through the child's second birthday. It operates nationwide. The program has three primary goals: 1) to improve pregnancy outcomes by promoting health-related behaviors; 2) to improve child health, development, and safety by promoting competent caregiving; and 3) to enhance parent life-course development by promoting pregnancy planning, educational achievement, and employment. The program also has two secondary goals: to enhance families' material support by providing links with needed health and social services and to promote supportive relationships among family and friends.

(See also "Resources" at the end of this course.)

Tertiary Efforts: Recidivism Prevention

Tertiary prevention activities focus on families where maltreatment has already occurred and seek to reduce the negative consequences of the maltreatment and to prevent its recurrence. These prevention programs may include services such as:



- Intensive family preservation services with trained mental health counselors that are available to families 24 hours per day for a short period of time (e.g., 6 to 8 weeks)
- Parent mentor programs with stable, nonabusive families acting as role models and providing support to families in crisis
- Parent support groups that help parents transform negative practices and beliefs into positive parenting behaviors and attitudes
- Mental health services for children and families affected by maltreatment to improve family communication and functioning (CWIG, 2021b)

REPORTING CHILD ABUSE AND NEGLECT IN KENTUCKY

Pediatric abusive head trauma is a form of child abuse, and all fifty states, including Kentucky, have statutes that mandate reporting of suspected child abuse and neglect for certain professionals. Familiarity with Kentucky laws will ensure that providers report to the appropriate agency within the required time frame.

Definitions of Child Abuse and Neglect

(From Kentucky Rev. Stat. §600.020)

“Abused or neglected child” means a child whose health or welfare is harmed or threatened with harm when his or her parent, guardian, or other person exercising custodial control or supervision:

- Inflicts or allows to be inflicted upon the child physical or emotional injury by other than accidental means
- Creates or allows to be created a risk of physical or emotional injury to the child by other than accidental means
- Engages in a pattern of conduct that renders the parent incapable of caring for the immediate and ongoing needs of the child, including, but not limited to, parental incapacity due to alcohol and other drug abuse
- Continuously or repeatedly fails or refuses to provide essential parental care and protection for the child, considering the age of the child
- Commits or allows to be committed an act of sexual abuse, sexual exploitation, or prostitution upon the child
- Creates or allows to be created a risk that an act of sexual abuse, sexual exploitation, or prostitution will be committed upon a child



- Abandons or exploits the child
- Does not provide the child with adequate care, supervision, food, clothing, shelter, education, or medical care necessary for the child's well-being
- Fails to make sufficient progress toward identified goals as set forth in the court-approved case plan to allow for the safe return of the child to the parent that results in the child remaining committed to the Cabinet and remaining in foster care for 15 of the most recent 22 months

“Physical injury” means substantial physical pain or any impairment of physical condition.

“Serious physical injury” means physical injury that creates a substantial risk of death, or causes serious and prolonged disfigurement, prolonged impairment of health, or prolonged loss or impairment of the function of any bodily member or organ.

Persons responsible for the child include:

- A parent who is the biological or adoptive mother or father of a child
- A person exercising custodial control and supervision or an agency that has assumed the role and responsibility of a parent or guardian for the child but does not necessarily have legal custody of the child

Exception: A parent or other person exercising custodial control or supervision of the child who is legitimately practicing his or her religious beliefs shall not be considered a negligent parent because of failure to provide specified medical treatment for a child for that reason alone. This exception shall not preclude a court from ordering necessary medical services for a child.

Standards for Reporting

(From Kentucky Rev. Stat. §620.030 and §620.050)

Any person who knows or has reasonable cause to believe that a child is dependent, neglected, or abused shall immediately report. All persons are required to report, including, but not limited to:

- Physicians, osteopathic physicians, nurses, coroners, medical examiners, residents, interns, chiropractors, dentists, optometrists, emergency medical technicians, paramedics, or other health professionals
- Teachers, school personnel, or child-caring personnel
- Social workers or mental health professionals
- Peace officers

Neither the husband-wife nor any professional client-patient privilege, except the attorney-client and clergy-penitent privilege, shall be a ground for refusing to report.



The reporter is not specifically required by statute to provide his or her name in the report. The identity of the reporter shall not be disclosed except:

- To law enforcement officials, the agency investigating the report, or to a multidisciplinary team
- Under court order, after a court has found reason to believe the reporter knowingly made a false report

Making a Report

Reports of pediatric abusive head trauma can be made by calling toll-free:

- **Kentucky Child Protection Hotline:** 877-KYSAFE1 (877-597-2331)

Before reporting, explain to the child's caregiver(s) that:

- The child sustained a serious brain injury not explained by the history
- You are a mandated reporter who is legally required to make a child abuse report
- You will contact social services and law enforcement agencies, which will investigate

As stated above, having a social worker present may be helpful.

Avoid sharing details of clinical findings or suggesting possible explanations for the injuries. Such discussions could affect later forensic interviews and child abuse investigations.

Mandated reporting to county child welfare services and law enforcement agencies is required as soon as the reporter has a reasonable suspicion that abuse has occurred. It is not necessary to wait until all assessments are complete. Although there is usually a cross-reporting mandate between child welfare and law enforcement officials, it might not happen immediately. Generally, once law enforcement officials are notified, they will launch an investigation parallel to the child welfare agency's investigation.

CONCLUSION

Child abuse and neglect remains a serious problem in Kentucky. Pediatric abusive head trauma is one of the most serious types of such abuse and the leading cause of death from injury in infants.

It is important for all healthcare professionals to be aware of the risk factors and signs and symptoms of AHT in the patients they care for, since a diagnosis depends on input from a multidisciplinary team. Kentucky offers a 24-hour hotline number to make a report of abuse or neglect, and any person suspecting child abuse is required to report it immediately.



Various resources are also available to help prevent the behaviors that lead to AHT, including Kentucky's statewide HANDS program. Prevention education by healthcare professionals serves the important goal of reducing child abuse and neglect, including abusive head trauma.



RESOURCES

Child Welfare Information Gateway
<http://www.childwelfare.gov>

Family Nurturing Center
<http://www.familynurture.com>

Kentucky Child Protection Hot Line
877-KYSAFE1 (877-597-2331)

Kentucky Child Protection Branch
<https://chfs.ky.gov/agencies/dcbs/dpp/cpb/Pages/default.aspx>

HANDS
<https://chfs.ky.gov/agencies/dph/dmch/ecdb/Pages/hands.aspx>

National Center on Shaken Baby Syndrome
<http://www.dontshake.org>

The Period of PURPLE Crying
<http://www.purplecrying.info/>
<https://www.youtube.com/watch?v=F3BTZpwiX6s> (app info)

Shaken Baby Alliance
<http://www.shakenbaby.org>

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TEST

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1. “Pediatric abusive head trauma” is defined by the State of Kentucky as:
 - a. The injury to the skull of an infant or young child due to neglect or violence, including gunshot wounds, stab wounds, or penetrating trauma.
 - b. The various injuries or conditions that may result following the vigorous shaking, slamming, or impacting the head of an infant or young child.
 - c. The injury to the scalp of an infant or young child due to an open or closed head fracture.
 - d. The white brain matter injury of an infant or young child due to causes of unknown etiology.

2. Infants are at greater risk than adults to head trauma because their:
 - a. Brains are larger proportionately to their body size and are easily compressed within the skull during a shaking episode.
 - b. Skulls are thick and rigid, with open fontanelles that swell and bleed with excessive shaking.
 - c. Heads are smaller in relation to their body size, and their blood vessels are stiff and dilate when shaking occurs.
 - d. Brains have less water content and contain more brain cells than an adult brain.

3. According to study findings, a clinician who assesses families for risk of pediatric abusive head trauma finds which situation to present the highest risk?
 - a. A mother states she is going back to work, leaving her 3-month-old infant with a neighbor who provides licensed in-home care for her own 6-month-old infant.
 - b. A single mother states that her live-in boyfriend, who is currently unemployed, will be caring for her special needs 4-month-old infant while she is at work.
 - c. A new mother states that she is experiencing mild postpartum depression.
 - d. A husband brings his 1-month-old infant to the family’s doctor appointment, stating that his wife is being treated for postpartum anemia.

4. Which question is **not** part of a nursing neurological assessment of a child suspected of having an abusive head injury?
 - a. Are facial movements symmetrical?
 - b. Is each pupil the same size, shape, and able to react to light equally?
 - c. Does the child appear well-nourished?
 - d. Does the child show unusual flaccidity or posturing?



5. Which injury describes **normal** developmental patterns of accidental injury in the 0- to 3-year-old age range?
 - a. Rib fractures
 - b. Trauma from falls down stairs or off of a bed or changing table
 - c. Retinal hemorrhage and bilateral, hypoxic-ischemic brain injury
 - d. Bruises with patterns such as handprints, loop or belt marks, or bite marks

6. Which intervention by a healthcare professional is the best example of a **primary** child abuse prevention strategy?
 - a. Offering a parenting course specifically to teen mothers at risk for child abuse
 - b. Referring parents with “mental health” issues to a community mental health agency
 - c. Providing all new parents with information on normal newborn crying and steps to take if they become frustrated
 - d. Referring parents convicted of child abuse to a home-visiting program that teaches parenting skills

7. Which is a **correct** statement regarding mandated reporting of child abuse and/or neglect, to include pediatric abusive head trauma, in Kentucky?
 - a. Reporters are required to provide their name in the report.
 - b. Mandated reporting is required once a complete assessment of the injuries has been conducted in the presence of a social worker.
 - c. Reporting is mandated only for healthcare professionals.
 - d. Mandated reporting is required as soon as there is reasonable cause to believe that abuse has occurred.

