

## **MEDICAL EXAMINATIONS**

The diagnosis of child abuse or neglect has both civil protective and criminal ramifications. Whenever possible, when there is a suspicion of abuse, medical examination of the child should be performed by health care providers with expertise in the area of detecting and diagnosing abuse and neglect. Health care providers who perform these examinations must be prepared to cooperate with law enforcement and DCFS in the investigation of the case and with court proceedings, whether criminal or civil.

Health care providers should take an appropriate history. However, complete investigative interviews should be conducted by DCFS, law enforcement, and/or a trained forensic interview specialist whenever possible. It is appropriate for the health care provider to obtain information necessary to diagnose, make any mandated reports, or complete forensic medical documents. While it is necessary for the health care provider to obtain a medical history, the goal is to avoid leading or suggestive questions. The health care provider should explain to the child why the exam is necessary and observe interaction between the child and caretaker.

If a child or guardian discloses allegations of abuse or neglect in the course of an evaluation for other medical problems, law enforcement or DCFS should be notified immediately. In addition to the necessary medical treatment for the child, sufficient medical information should be obtained in order to assist law enforcement and DCFS to determine if further action, such as removing the child from the home, is required.

This section is intended as an overview for health care professionals who assess child abuse and neglect. It also offers indicators of suspected child abuse and neglect in order to assist the health care practitioner with identification, documentation and treatment. Practitioners seeking direction for reporting requirements should refer to the section on Mandatory Reporting of Child Abuse and Neglect elsewhere in this document. For clarity and organization, this section is divided into three parts: Sexual Abuse, Physical Abuse, and Non-organic Failure to Thrive.

### **Sexual Abuse**

The State of California Emergency Management Agency (CalEMA, formerly Office of Emergency Services) and the California Medical Training Center, at UC Davis, have current information on child abuse investigation, forensic exams and forms. The California Medical Training Center provides specialized training for potential medical examiners. Their website is [www.ucdmc.ucdavis.edu/medtrng/](http://www.ucdmc.ucdavis.edu/medtrng/).

Be aware that a victim of sexual abuse has the right to have a sexual assault victim counselor and a support person of the victim's choosing present at any medical evidentiary or physical examination. The health care provider must notify the victim of this right at the time of the exam. The support person may be excluded from a medical evidentiary or physical examination if the law enforcement officer or health care provider determines that the presence of that person would be detrimental to the purpose of the examination. {PC §264.2}

Pursuant to PC §13823.5(c), sexual assault examinations shall be documented on the forms mandated by CalEMA (formerly OES). Form CalEMA 930 should be used for acute injuries occurring less than 72 hours before the exam. Form CalEMA 925 should be used for examinations which occur more than 72 hours after the sexual act. Due to advances in technology it is expected that the definition of acute injury will be extended beyond 72 hours. Cases close to the 72-hour limit should be referred to an expert in forensic child sexual exams for consultation. [See the Index of Appendices for a list of Recognized Resources for Forensic Examinations.]

## **Physical Abuse**

The type and nature of an injury will not, by itself, indicate whether abuse occurred. Therefore, a comprehensive medical examination is a necessary component of the overall investigative effort by law enforcement and DCFS. Detailed below are significant points the health care provider should consider when performing an examination for physical abuse.

### **History and Assessment**

- interview the parents or guardians separately from each other and from the child
- interview the child alone, if possible
- interview the siblings, separately from each other, the child, and the parents or guardians
- during these interviews, attempt to obtain
  - how the injury occurred
  - where the injury occurred
  - when the injury occurred
  - past medical history (assess if the history is consistent with the injury)
  - past developmental history [assess if the mechanism of the injury is

plausible given the child's developmental level]

- whether there were any delays in seeking medical treatment

## **Physical Examination**

Health care providers need to perform and document a complete head-to-toe evaluation. All areas of the child's body including the genito-urinary and rectal areas, should be examined visually.

### Bruises

- When documenting bruising on a child, it is important to note the location, size, shape, and color of each bruise
- Bruises, in some cases, such as on the genitals, inner thighs, ear, upper lip, or frenulum, are highly unlikely to be accidental
- some features of bruises commonly seen in inflicted trauma include
  - any bruising in an infant who is not yet pulling to stand
  - multiple bruises in different stages of healing
  - bruises having a pattern or discernible shape [such as human hand, human bite, or strap marks]
- dating the approximate age of a bruise after injury can be difficult but, under certain circumstances, estimates can be made
- if bruises exist, rule out bleeding disorders or clotting problems

### Burns

There are three basic types of burns commonly seen in inflicted trauma: scald burns, contact burns, and flame burns. Each type of burn causes certain characteristic injuries

- Scald burns are the most common type of burn seen in children. These are caused by any hot liquid such as water, soup, or grease. There are two types of scald burns--immersion and spill burns
  - Features of immersion burns include
    - child is placed into a container of hot liquid
    - deliberate injuries have uniform depth, unvaried appearance, and burn wound borders are distinct with water line
    - central spared areas on buttocks caused by contact with the cool bottom of the container ["donut" pattern]
    - sparing of flexion areas [e.g. inside of the elbows or back of the

knees not burned]

- "stocking" pattern on feet or "glove" pattern on hands
- Spill burns are characterized by splash marks, varying depth of burn, indistinct borders between burned and unburned skin, and multiple areas of burn as the child struggles to escape the hot liquid. Spill burns may be inflicted or accidental.
- Contact burns are the second leading cause of abusive burns. They occur when a hot solid object contacts the skin.
- Deliberately inflicted burns have clear patterns of the object resulting from prolonged steady contact.
- Prolonged contact results in symmetric, deep imprints with crisp margins. Examples include
  - irons
  - stovetops
  - curling irons
  - cigarette or cigar patterns
  - heating grate patterns
  - spoon burns
- Accidental burns may result in brief contact with a small portion of the hot object. Accidental injuries may lack apparent pattern due to the child's reactive movement away from the object. Accidental burns are more likely to result in small burn areas with slurred margins, usually deeper and more intense in one edge of the burn.
- Flame burns occur when there is direct contact between a flame and skin. Inflicted flame burns cause several extremely deep burns in a limited area of skin.
- For all of the above types of inflicted burns an adult other than the caretaker usually brings the child for medical treatment. Inflicted abuse is more likely if the adult was in the room when the burn occurred.

### Skeletal Injuries

Any type of fracture can be caused by abuse. Some fractures commonly seen in inflicted trauma include

- fractures inconsistent with history given or a child's developmental capabilities
- fractures in a non-ambulating child
- metaphyseal fractures [chip and bucket-handle]
- rib fractures

- scapular fractures
- sternal fractures
- multiple fractures
- fractures of different ages
- complex skull fractures

Some fractures which may be seen in inflicted trauma include

- spinous process fractures
- epiphyseal separations
- vertebral body fracture
- digital fracture
- clavicular fracture
- long bone shaft fracture
- repeated fractures at the same site

### Abusive Head Trauma

Abusive head trauma refers to the constellation of non-accidental head injuries resulting from child abuse.

Some intracranial injuries commonly seen in abusive head trauma include

- serious intracranial injury including subdural hemorrhages or hematomas, subarachnoid hemorrhages, shearing between grey-white matter, cerebral edema, and cerebral contusions
- depressed, comminuted, stellate, or widely separated fractures
- retinal hemorrhages
  - Retinal hemorrhages are usually indicative of abuse; however, there is a significant differential diagnosis that should be considered. Retinal hemorrhages can be seen in falls from significant heights or high speed motor accidents. CPR is unlikely to cause retinal hemorrhage.

Each of the injuries noted above is usually not caused by short falls [those under four feet, often reported from a bed or sofa]. Short falls are more likely to cause simple linear skull fractures or an intracranial epidural hematoma.

## Intra-abdominal Injuries

Intra-abdominal injuries are the second most common cause of death from child abuse. Consider child abuse in any traumatic abdominal injury of undetermined etiology. There may be no external signs of injury as the energy of the traumatic force may be absorbed by the abdominal contents.

## Intrathoracic Injuries

Intrathoracic injuries (i.e. injuries internal to the chest) are less common than head and abdominal injuries. There may be no external signs of trauma. Intrathoracic injuries are usually seen in conjunction with other injuries. Isolated intrathoracic injury from abuse is rare.

## **Some Suggested Diagnostic Tests for Physical Abuse Cases**

- Skeletal survey recommended if child is under age two; consider for child over age two if suggested by history or physical findings including a positive head computerized tomography [CT]; a nuclear bone scan should be considered if there is a high index of suspicion for inflicted trauma and skeletal survey is negative
- Lab tests including complete blood count [CBC], pro-thrombin [PT], partial thromboplastin time [PTT], and platelet count should be considered if petechiae, bruising, intracranial bleeds and/or retinal hemorrhages are present
- Liver function tests, amylase, lipase, blood urea nitrogen [BUN]/creatinine and urinalysis, CBC, PT, PTT in addition to lab tests listed above if there is a suspicion for abdominal trauma; consider surgical consult and further radiographic studies such as abdominal CT or magnetic resonance imaging [MRI]
- Head CT if there is suspicion for head trauma or two or more unexplained fractures in a child under age two; head MRI if the head CT is positive or if the head CT is negative and a high index of suspicion of abuse exists
- A retinal examination for retinal hemorrhages should be performed by an ophthalmologist if there is evidence of intracranial bleeding or there is a high index of suspicion for abuse; evaluate fundus if mental status is altered. Use of a short acting mydriatic agent for thorough exam may be indicated

NOTE: Please be aware of physical findings that may not be the result of physical abuse, e.g. bleeding abnormalities, some folk remedies, and phytophotodermatitis.

## **Non-Organic Failure to Thrive**

Non-Organic Failure to Thrive is suspected when a child is not developing physically, emotionally, and cognitively. Typically the child falls below the fifth percentile in the child's height, weight, and head circumference. The term Non-Organic Failure to Thrive is a diagnosis of exclusion, used when no organic reason for the failure to thrive has been identified. The following recommendations may be used in close and ongoing consultation with a multi-disciplinary team with medical expertise.

### **History**

- review birth history, including pregnancy, maternal complications and birth complications
- review medical history, including previous growth parameters, recurrent infections, chronic medical problems/signs and symptoms of chronic medical problems, feeding difficulties and complete nutritional assessment
- review family history, including growth problems, height and weight of parents
- assess child development and behavior
- review psychosocial history, including number of people in the home, ages of other children, parents' employment, and financial situation

### **Physical Examination**

In addition to a complete physical examination, the examiner should

- identify chronic illness, recognize possible growth-retarding syndromes, and document the signs of malnutrition
- note general appearance; infants may present with certain behaviors, including wide-eyed, wary gaze; strap-hangers position [arms held above the head and flexed at the elbows]; poor suck; crying and arching back when cuddled; and discontinuation of arching and crying behavior when distance is put between examiner and infant
- undress child completely because clothes may give the impression that the child is larger or heavier than the child actually is
- obtain and plot on a growth chart accurate serial anthropometric measurements including weight, height, head circumference, and body mass index
- observe interaction with the caretaker and feeding behavior
- use a multi-disciplinary team approach whenever possible

- order laboratory/radiographic evaluation conservatively, guided by the history and physical exam
- conduct general screening studies as part of health maintenance for the child including CBC, lead level, urinalysis, and tuberculosis [TB] tests
- obtain other appropriate studies, depending on the history and physical exam
- consider a skeletal survey for infants less than one year with signs of malnutrition; if skeletal survey is positive, treat pursuant to Physical Abuse section as indicated above

## **Intervention**

Appropriate intervention requires the use of an experienced multi-disciplinary team. Frequent medical follow-up is essential to ensure effective management. Occasionally, hospitalization is indicated.

Regular home visitation and referrals to appropriate resources are recommended. Coordination between case-management staff and referral agencies ensures compliance and prevents misunderstandings which could complicate the child's condition.

Non-Organic Failure to Thrive may be neglect. Refer to the Mandatory Reporting section of this document.