

## Physical and sexual abuse of children

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### Goals and objectives

1. To understand the spectrum of child abuse that exists and may be seen by the clinician
2. To better identify, manage, and refer the child or adolescent who may have been neglected or physically abused
3. To better identify, manage, and refer the child or adolescent who may have been sexually abused

### Introduction

Children and adolescent victims of physical abuse, sexual abuse, and/or neglect may initially present to an emergency department or primary care office. The patient–health care provider encounter may have significant emotional, legal, forensic, and medical implications for a child/adolescent and his/her family. In general, the emergency department setting is not ideal for the comprehensive, multidisciplinary assessment of the child/adolescent who may have been abused. Whenever and wherever possible, a coordinated, protocol-based collaboration between an emergency department and the nearest child advocacy center or program is recommended. Nonetheless, the emergency department provider should have a thorough understanding of the detection, triage, management, documentation, and treatment of the maltreated child or adolescent.

### Epidemiology

The U.S. Department of Health and Human Services reports that approximately 872,000 children were victims of child maltreatment in 2004.<sup>1</sup> Their report is based on national data collected from child protective services (CPS) agencies in the United States, which were analyzed by the National Child Abuse and Neglect Data

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System, the Children's Bureau, Administration on Children, Youth, and Families in the Administration for Children and Families, and the U.S. Department of Health and Human Services. The majority of these children, 62.4 percent, were victims of neglect, 17.5 percent were victims of physical abuse, 9.7 percent suffered sexual abuse, and 7 percent were emotionally abused.<sup>1</sup> Children under three years of age had the highest rate of overall victimization (16.1 per 1,000 children); 72.9 percent of these cases were cases of neglect.<sup>1</sup> Females comprised 51.7 percent of the victims overall.<sup>1</sup> This gender difference in victimization is even more pervasive when looking specifically at sexual abuse, with some reports concluding that females are sexually abused three times more than males.<sup>3</sup> Abused males, however, seemed to be at increased risk for serious harm or injury when compared with females.<sup>3</sup>

In addition to gender differences, racial disparities also exist among child victims. African-American (19.9 per 1,000 children), Pacific Islander (17.6 per 1,000 children), and American Indian or Alaskan Native children (15.5 per 1,000 children) have rates of victimization out of proportion to their percentage within the general population.<sup>1</sup> Asian children had the lowest rate of victimization, 2.9 per 1,000 children, whereas White and Hispanic children had rates of 10.7 and 10.4 per 1,000 children, respectively.<sup>1</sup>

By definition, child abuse is committed by a person legally responsible for the child, such as a parent, caretaker, or guardian; therefore, in the majority of instances, the perpetrator is known to the child. The majority of perpetrators of neglect are mothers, and because neglect is the most common type of child abuse, mothers are the most common perpetrators of maltreatment.<sup>1</sup> Ninety percent of sexual abuse is committed by males and by individuals known to the child, with family members representing one-third to one-half of the perpetrators against girls and 10 to 20 percent of the perpetrators against boys.<sup>2</sup>

In 2004, a total of 1,490 children died as a result of abuse or neglect, with more than one-third of these deaths being ascribed to neglect.<sup>1</sup> Of these child fatalities, more than 80 percent of the children were under four years of age.<sup>1</sup> The aforementioned data do not take into account victimization of children by persons not legally responsible, including child-on-child abuse, "stranger" abuse, and certain authority figures that are not recognized as legally responsible under state law. Thus, as staggering as these statistics are, these numbers are derived solely from reported cases to CPS agencies and, therefore, may be a significant underestimation of the true scope of the problem.

### **Reporting child maltreatment**

Although the role and right of families to raise children as they see fit is honored in the United States, the state has the right to intervene if a child is not protected from

preventable harm. The federal government demonstrated its commitment to issues of child protection with the establishment of the Children's Bureau in 1912. The Child Abuse Prevention and Treatment Act (CAPTA), a key federal law established in 1974, ensures that victimized children are identified and reported to appropriate authorities.

All states have the responsibility, under CAPTA, to comply with child maltreatment guidelines and have enacted child maltreatment laws that define the parent-child relationship, the role of mandated reporters, and the specific tasks of the Child Protection Agency, the Civil Court, and the Criminal Court. Because each individual state has some autonomy in the design of the specific regulations for reporting and response to maltreatment, it is important for professionals to be familiar with the child protection structure in their own states. A summary of state reporting laws is available at the State Statutes section of the National Clearinghouse on Child Abuse and Neglect website ([www.calib.com/nccanch/statutes](http://www.calib.com/nccanch/statutes)).

Although there are some differences among states, most reporting laws define and identify which professionals are recognized as mandated reporters; enumerate the criteria and the threshold for reporting; and describe the reporting process, the response to a report of child maltreatment, and penalties for failure to report. The following are general principles of the Child Protection Process:

### **1. Identification**

The first step in the process is the identification of children who have been subjected to maltreatment or who are at significant risk of maltreatment. Medical providers, particularly those whose jobs place them on the front line, must be familiar with the definitions of sexual abuse, physical abuse, and neglect. A recent study by Flaherty and Sege<sup>4</sup> revealed that physicians under-identify and under-report child abuse, leaving children at risk for victimization and harm. The authors of this study conclude that identification and reporting of child abuse can be improved by a program of continuing education that covers not only identification but also information about child protective interventions and outcomes.

### **2. Reporting**

State laws generally define what conditions are reportable; how, when, and by whom a report should be made; the duty to share information; as well as the boundaries of information sharing. In most states, reports are made orally, generally via telephone, although many states require that a written report follow. Reports must be made promptly and based on suspicion because a delay in reporting for confirmation or "proof" may be placing a child at imminent risk.

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**3. Mandatory reporters**

Those individuals who are mandated reporters risk civil and criminal liability for failure to report. Any person may make a report of child abuse or neglect to the agency that is authorized to receive such reports. In 18 states, any person who suspects child abuse is required to make a report. In the majority of states, however, mandated reporters are those individuals who suspect child abuse from an interaction in their professional capacity. Physicians and other health care professionals are always included among the list of mandated reporters. Although the specific language may differ from state to state, a report must be made when the reporter has reasonable cause to know, suspect, or believe that a child has been abused or neglected.

**The response to a report of suspected maltreatment**

In most states, the Child Protection Agency is authorized to receive reports of suspected child abuse. Some states require that certain types of abuse, such as sexual abuse and severe physical abuse, are reported to both Child Protection and law enforcement. In most states, when the Child Protection Agency receives a report there is a system in place for information to be shared with law enforcement and the prosecutor's office when appropriate. After a report is made, there is an initial screening procedure that determines whether the information meets the state's statutory and agency definitions of maltreatment as well as the urgency of the investigation.

**Penalties for failing to make a report and immunity provisions for reporters**

To encourage reporting and eliminate perceived barriers to reporting, state statutes provide protection for reporters by conferring immunity from civil lawsuits, if a report is made in "good faith". On the other hand, most states impose penalties for mandated reporters who knowingly or willfully fail to report suspected abuse. In general, failure to report is a misdemeanor. Information sharing is generally protected by statute such that medical providers who make a report are not only permitted to share relevant medical information but are also required to cooperate with the investigation.

**Child protection teams and child advocacy centers**

One of the most significant changes in the field of Child Maltreatment over the past two decades has come about with the recognition that child abuse is not an issue that falls exclusively within the purview of the medical, social service, or legal fields. National, State, and local efforts to create integrated and collaborative models to address this complex issue have emerged. Concomitant with the development of collaborative programs was the emergence of Child Abuse Pediatrics as a subspecialty

within Pediatric Medicine. In June 2005, the American Board of Pediatrics (ABP) accepted a petition to begin a new subspecialty within pediatrics certified by the ABP. Child Abuse Pediatricians, or forensic pediatricians, provide children, families, and communities with expertise in the recognition and management of child abuse, provide consultation to child protection and law enforcement professionals, participate on multidisciplinary teams, engage in child abuse research, and serve as medical directors of child advocacy centers.

Multidisciplinary teams are the result of community cooperation in an effort to provide a coordinated response to suspected child maltreatment. Through inter-agency agreements and established guidelines, teams work together to investigate and prosecute child abuse as well as protect children from ongoing harm. The objective of this collaborative model is to lessen the trauma to the child/adolescent victim and their families by reducing the number of times that a child is interviewed, minimizing duplicative services as well as enhancing communication and information sharing among involved agencies. The core membership of multidisciplinary teams includes professionals from child protective services, law enforcement agencies, local prosecutor's offices, victim advocacy groups, and medical experts. Broader membership might include participation by Departments of Education, domestic violence agencies, and disability agencies.

Hospital-based child protection teams are essential to the proper detection, reporting, coordination, and management of abuse cases. These may include a pediatrician or child abuse pediatrician, social work services specifically trained in the field of child abuse, an administrative unit (particularly for a children's hospital), and other health professionals, such as psychologists.

Child advocacy centers provide a centralized, child-friendly venue for the work of the multidisciplinary team. Although models differ throughout the country, child advocacy centers generally provide a single site for investigation, provision of victim support, and other mental health services, as well as expert medical evaluation. The National Children's Alliance website ([www.nca-online.org](http://www.nca-online.org)) provides information on advocacy centers as well as listings of those certified through the organization across the United States.

Although acute care settings such as emergency departments will often be the point of initial recognition of child maltreatment, they are not appropriate locations for the conduction of an investigation including forensic interviews of children. In addition, expert medical services are not necessarily available in those acute care facilities. Every primary care practice/program and emergency department must have a triage algorithm that includes clear guidelines for how to respond to suspected maltreatment. The decision tree outlines which cases must be evaluated at the time of presentation and which cases can be referred for evaluation to a child protection team or child advocacy center. Specific information about effective and appropriate

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triage is included in sections on physical and sexual abuse elsewhere in this chapter.

## **General history taking**

### **Taking a history and effective triage in child or adolescent abuse**

#### Effective triage

*Adapted from [www.childabusemd.com](http://www.childabusemd.com)*

Once a child or adolescent presents for an evaluation due to a concerning physical sign or symptom, worrisome behavioral sign or symptom, or because they have made a statement that suggests that they have been abused, the medical provider must proceed with caution to avoid the “runaway train” scenario that may develop if a report to child protective services or law enforcement agency is triggered inappropriately or prematurely. Effective triage requires that the provider do the following:

- Gather and document pertinent information
- Determine the safety and welfare of the child/adolescent
- Determine who should examine the child/adolescent and when
- Determine whether you are mandated to report this situation

#### **Gather and document pertinent information**

The importance of a careful and detailed history cannot be emphasized enough. In a stepwise fashion, the reason for the abuse concern must be understood. The presenting caregiver must provide the answers to the following questions:

1. Who are you and what is your relationship to the child/adolescent?
2. What is your reason for concern regarding abuse?
  - Is this a referral from a child abuse investigative agency?
  - Have you witnessed the abuse?
  - Did the child/adolescent disclose abuse? If so, to whom was the disclosure made? What are the exact words the child/adolescent used?
3. Who is the suspected perpetrator and what is that person’s relationship to the child/adolescent?
4. Does the child/adolescent live with the suspected abuser or have regular contact with that person? Is the child/adolescent safe from the suspected perpetrator now?
5. Are you safe? Do you think your present situation is dangerous?
6. Is there a medical concern such as pain, bruising, bleeding, alteration in mental status, acute change in behavior, or possible pregnancy?
7. When was the last time that the child/adolescent had contact with the suspected perpetrator?

### **Determine the safety and welfare of the child or adolescent**

As the responses to the above questions are being gathered, the provider must have the safety of the child or adolescent foremost in his or her mind. If there is any indication that the suspect has accompanied the child for the medical visit, he/she must be separated from the patient. This might be done by bringing the patient into the exam room while asking the adults to remain in the waiting area. If there is any chance of a dangerous situation developing, the facility's security should be called or local law enforcement contacted by dialing 911 if necessary. If the decision is made that the patient needs to be sent to another facility, for example, a child advocacy center, for evaluation, utmost care must be taken to arrange for and assure safe transport. If the child is being referred to another facility, the transfer of accurate and complete information is as important as the safe transport of the child. If the accepting institution does not understand the referral source's concern about abuse, effective evaluation and treatment will be jeopardized.

### **Determine the most appropriate location for evaluation and the most appropriate provider to conduct the evaluation**

It goes without saying that the very first step is to determine whether the child or adolescent is medically stable. Any and all investigatory steps may need to be delayed if the child requires emergency medical treatment.

If the child/adolescent has any of the following and has presented to a primary care office setting, a local emergency response team should be notified with appropriate referral to an emergency department.

- Unstable vital signs
- Symptoms of head trauma: vomiting, headache, syncope, lethargy, visual disturbance
- Symptoms of abdominal injury: vomiting, abdominal pain, bruising to the abdomen/flank/back, hematuria
- Symptoms or history of recent traumatic sexual contact: bleeding from the vagina or rectum, genital pain, or other signs of injury

If a sexual abuse incident has occurred within 96 hours and the child/adolescent is medically stable, refer to the appropriate local resource, emergency department, or specialized center for forensic evidence collection.

The nature of sexual abuse is such that most exams are not an emergency. There are powerful disincentives for children to disclose, therefore sexual abuse of children often comes to medical attention after a delay. If the child/adolescent is safe, the examination can usually be deferred until the next working day. Making a report to CPS and/or an appropriate law enforcement agency cannot be deferred. In areas where there is an effective multidisciplinary response to child maltreatment

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or a child advocacy center, the coordinated investigation and medical exam may be deferred in some cases once there has been an assessment of immediate risk. If there is a local child abuse expert, refer the child/adolescent to that medical provider. If this is not an option, proper photo documentation and clear medical record documentation of the examination are essential so that a forensic pediatrician can interpret the findings. If your facility does not offer the appropriate services for medical care, determine which facility offers the best services for this child/adolescent and family.

**Determine whether you are mandated to make a report**

A discussion of mandated reporting is located elsewhere in this chapter.

**Physical abuse**

**Cutaneous manifestations of abuse**

Cutaneous manifestations of child physical abuse include abrasions, bruises, lacerations, burns, oral injuries, and bite marks. Labbe and colleagues evaluated 1,467 children and adolescents aged 0 to 17 from the general population and noted that over 75 percent of nonabused children had at least one recent skin injury and 17 percent of the total sample had at least five injuries.<sup>5</sup> This same study demonstrated that children under eight months of age rarely had skin injuries, a finding echoed by Sugar and colleagues who found bruising extremely rare in infants younger than six months.<sup>6</sup> This study led to the commonly voiced axiom, “Those who don’t cruise, rarely bruise.” In other words, the assessment of any injury must take into account the developmental stage of the infant or child. In pre-ambulatory infants, the opportunities to bruise are few. Although the clinician must always consider non-visible signs of trauma, up to 90 percent of physical abuse victims present with discernible skin manifestations.<sup>7</sup>

To distinguish physical abuse from accidental or medical conditions, the clinician must consider location, number, and patterns of injury as well as underlying medical conditions, presenting history, and developmental capabilities of the child or adolescent.

**Contusions, lacerations, and abrasions**

A contusion represents hemorrhage into the skin secondary to blunt trauma. Contusions that are diffuse are referred to as bruises, and those that are focal, as hematomas. A laceration represents tearing of the skin secondary to crushing, cutting, or shearing forces. An abrasion, or “scrape,” is removal of superficial skin layers secondary to friction.

Bruises are the most common type of injury seen in children greater than eight months of age; in infants less than eight months of age, scratches are the



predominant type of injury.<sup>5</sup> The most common location for accidental bruising in mobile children is the anterior tibia or knee, followed by the forehead, scalp, and upper leg, with accidental bruising in all age groups most commonly found over bony prominences.<sup>6</sup>

Bruising in protected areas of the body, such as hands, ears, neck, buttocks, medial and posterior thighs, and upper arms, should raise concern for physical abuse. Although forehead bruising is commonly seen bruises located primarily on the facial soft tissues, such as, cheeks, should raise concern because the bony facial structures project making them the most likely points of impact. As mentioned previously, bruising in babies and children who are not independently mobile is rare and should also raise concern.

There are clearly identifiable patterns of injury that may be evident while examining a child. Emergency department clinicians should be familiar with pattern injuries and the objects used to produce them.

The appearance of a bruise depends on site of injury, depth of tissue, skin complexion, age, and characteristics of each individual's inherent healing capabilities. Therefore, visual dating of bruises has been demonstrated to be inexact,<sup>8,9</sup> although an assessment of acute or fresh vs. old may be made by the experienced examiner. In contrast to bruises that are in the advanced stage of resolution, fresh bruises may be accompanied by tenderness, swelling, and palpable induration. The presence of bruises at multiple stages of healing should raise concern because this suggests multiple episodes of inflicted injury.

### **Bite marks**

The presence of abrasions, ecchymoses, or lacerations in an elliptical or ovoid pattern should raise concern for abuse as they may be indicative of bite marks. The positive pressure created by the closing of teeth, or the negative pressure created by suction, often creates a central area of contusion. As opposed to animal bites, which tear flesh, human bites compress flesh. Human bites rarely lead to avulsion of tissue. The general medical provider is cautioned about attempting to make a determination of whether a bite is from an adult or child though they may feel pressured to do so. The intercanine distance is the linear distance between the central point of the cuspid tip and will measure more than 3.0 cm in an adult and less than 2.5 in a child; this measurement should only be made by a professional who has been trained to do so.<sup>10</sup> Bite marks should be evaluated by a forensic odontologist (or a forensic pathologist if an odontologist is not available).

These specially trained professionals may be of assistance in evaluating the pattern, size, contour, and color of the bite mark. If none is available, a physician or dentist with experience in child abuse should photographically document the bite mark with an identification tag and scale marker. The photograph should be taken so that

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the camera lens is over the bite and perpendicular to the plane of the bite. The American Board of Forensic Odontology (ABFO) created a special photographic scale for this purpose, which is available at [www.abfo.org](http://www.abfo.org). A polyvinyl siloxane impression of the bite mark should be made only after, in acute cases, the mark is swabbed for DNA through proper forensic techniques (see below). Some authors suggest daily photographs for at least three days to document the evolution of the bite.

As mentioned, DNA evidence may be obtained from fresh bites. Also, blood-group substances can be secreted in saliva. Even if saliva and cells have dried, they should be collected by using the double-swab technique as follows:

1. A sterile cotton swab moistened with distilled water is used to wipe the area in question, dried, and placed in a specimen tube.
2. A second sterile, dry cotton swab cleans the same area and then is dried and placed in a specimen tube.
3. A third control sample should be obtained from an uninvolved area of the child's skin. All samples should be sent to a certified forensic laboratory for prompt analysis.<sup>11</sup>

## **Burns**

### **Epidemiology**

Inflicted burns are mostly seen in younger children with the majority being less than two years of age.<sup>12</sup> Burns comprise approximately 10 percent of all cases of child abuse.<sup>13</sup> Moreover, 10 percent of children with burns requiring admission to an inpatient burn unit have inflicted injuries. Compared with children who present with accidental burn injuries, children with inflicted burns tend to be significantly younger and have higher mortality rates.<sup>12</sup>

The hallmark of a first-degree burn result is erythema of the epidermis; medical conditions such as cellulitis, erysipelas, sunburns, contact dermatitis, rash from a drug reaction, and diaper rash may mimic the appearance of first-degree burns. Second-degree burns extend into the dermal layer and cause erythema and blister formation; medical conditions that involve blistering may mimic second-degree burns, such as bullous impetigo, Staphylococcal scalded skin syndrome, toxic epidermal necrolysis, Epidermolysis bullosa, phytophotodermatitis, and varicella.

Third-degree burns involve the entire dermis with destruction of all the dermal appendages, including nerves, and are typically insensate.

### **Thermal injuries and imitators**

Scald burns comprise the most common type of inflicted burn in children.<sup>14,15</sup> If a scald burn results from forcible immersion of a child, there may be a bilateral or