

A. Identifying Abuse and Neglect: Physical and Behavioral Indicators

Conceptual Framework

The term "child maltreatment" encompasses a wide range of parental acts or behaviors that place children at risk of serious physical or emotional harm. The National Institute of Child Health and Human Development defines maltreatment as:

"... behavior towards another person, which (a) is outside the norms of conduct, and (b) entails a substantial risk of causing physical or emotional harm. Behaviors included will consist of actions and omissions, ones that are intentional and ones that are unintentional" [Christoffel et al. 1992].

In most states and provinces, child maltreatment is legally defined by statute. The exact labels used in statute to define maltreated children vary among jurisdictions, and include: "neglected child," "abused child," "deprived child," "dependent child," "child in need of protection," and "child in need of care." While the specific content of these statutes may vary, they have many common elements.

A second definition from the National Center on Child Abuse and Neglect is helpful in further defining and delineating the scope of child maltreatment [Jenkins, Salus & Schultze 1979]. In this definition, an abused or neglected child is a child whose physical or mental health or welfare is harmed, or threatened with harm, by the acts or omissions of the child's parent, or other persons responsible for that child's welfare. Such harm, or threat of harm, can occur when a parent or other caregiver:

- Inflicts, or allows to be inflicted, upon the child, physical or mental injury, including injuries sustained as a result of excessive corporal punishment;
- Commits, or allows to be committed, against the child, a sexual offense, as defined by state law;
- Fails to supply the child with adequate food, clothing, shelter, education (as defined by law), or health care, though financially able to do so or offered financial or other reasonable means to do so; "adequate health care" includes any medical or nonmedical remedial health care permitted or authorized under state law;
- Abandons the child, as defined by law; or
- Fails to provide the child with adequate supervision, or guardianship by specific acts or omissions of a similarly serious nature requiring the intervention of the child protective service of a court [Jenkins, Salus & Schultze 1979].

For a child to be considered abused or neglected, the child must be seriously harmed, or threatened with (at high risk of) serious harm, by the acts or omissions of his or her parents or caregivers. The inclusion of words like "severe," "serious," and "substantial risk," suggest that unless a child's health, life, or well-being are in serious jeopardy, the child cannot be considered at risk of abuse or neglect, and the state cannot intervene on behalf of the child against the parents' wishes.

In general, the term "abuse" refers to the "nonaccidental" infliction of injury or harm to a child by the caregiver. A two-year-old child who receives a serious burn by pulling a cup of hot coffee off a table is not considered abused. While the parent's judgment could be questioned for leaving hot liquid within easy

reach of the toddler, the parent did not purposefully harm the child. If the parent had poured hot coffee on the child to "teach him a lesson," that would be considered abuse.

Neglect places a child at risk of serious harm through acts of omission by the parent or caregiver. In most circumstances, a neglectful parent fails to provide minimal levels of care and supervision to a child, even though the parent may have the means and ability to do so. In this sense, there is often an element of willful intent included in the definition of neglect. However, not all parental acts that place children at high risk are "willful." Some parents have a condition, such as mental illness or mental retardation, that prevents them from providing their children with safe care. Other parents simply lack the capacity to be parents. Some legal statutes use the criteria of "willful intent" to differentiate neglect from "nonwillful" child endangerment (dependency); in other statutes there is no differentiation. Regardless, intentionality of the parent does not determine whether the child protective agency intervenes; the level of risk to the child is the defining criteria for child protective service involvement. The parent's intentions may, however, have bearing upon the scope and type of services needed by the family.

Types of Maltreatment

Child abuse most often refers to physical assault on a child that leads to a wide range of injuries. These can include bruises, bone fractures, head injuries, internal organ injuries, burns, and injuries to the genitals. Such injuries can result in permanent physical damage, scars, or disabilities such as mental retardation, epilepsy, and cerebral palsy. Severe abuse, particularly in an infant or toddler, can lead to the death of the child. Certain types of injuries are almost always indicative of abuse. The child welfare caseworker must learn to recognize the signs and symptoms of these injuries, and must be able to differentiate them from the typical accidental injuries of childhood.

At times, abusive parental acts can injure a child or place a child at high risk of harm without leaving any visible marks or bruises. Injuries to internal organs may occur from direct blows to the chest and abdomen; these injuries often leave no external marks. In addition, an abusive parental act may occur that does not result in physical injury to a child. An extreme example would be a parent who throws a knife at a child and misses. However, in determining risk of future harm, identifying and assessing abusive parental acts is as important as recognizing and properly assessing a child's injuries.

The long-term effects of physical abuse are variable, depending upon several factors. These include:

- The age of the child when the abuse begins; the younger the child, the more likely the child will be seriously hurt, or will have long-range developmental problems as a result.
- The length of time the child is abused; the longer the period of time the child is abused, the more severe and pervasive the developmental outcomes are likely to be.
- The frequency of the abuse; children who are abused often are more likely to suffer negative consequences than a child who is abused intermittently and infrequently.
- The nature of the child's relationship with the abuser; the closer the relationship of the abuser to the child, the more likely the child will be negatively affected. Abuse by a parent, therefore, has the most serious consequences on the child's development and emotional health.
- The nature and extent of the abuse; the more severe the pain, and the more serious the injury, the more negative the psychological and physical outcomes.

- The availability to the child of support; the presence of other adults who can provide proper care and nurturance to the child can partially mediate the negative effects of abuse.
- Constitutional factors; the child's inherent personality and temperament can affect the outcomes of abusive treatment. Some children are more resilient and have unusual coping strengths. Other children are more vulnerable.

Abuse is generally identified by the presence of characteristic physical injuries. When physical injuries are equivocal, certain behavioral and emotional indicators in children and their caregivers can help caseworkers to recognize the risk or presence of child abuse. These will be discussed later in this section, and in Section II-B, "Dynamics of Child Maltreatment."

Neglect is the failure of parents or caregivers to meet a child's most basic physical, nutritional, safety, medical, and emotional needs. The risks of neglect are serious injury, pervasive developmental delay, developmental disability, or death. It is often easy to identify the physical indicators of serious neglect, including malnutrition, illness, developmental delay, or injury. When neglect is less serious, the indicators may not be as easy to identify. Many cases of moderate neglect go undetected.

The degree of permanent harm to children from neglect may vary, but in general, the younger the child, or the more developmentally delayed, the higher the risk from neglect. Chronic neglect is also more damaging than neglect that occurs intermittently with periods of adequate care.

Neglect is not always easy to identify for many reasons. Differences in values, norms, and community standards of acceptable child rearing may confound the determination of neglect. Failure to understand cultural differences in parenting

and child-rearing practices might lead a caseworker to misinterpret the parents' behavior and intent. Different cultural groups have different standards related to factors such as: the age at which children are expected to be self-sufficient, or to care for younger siblings; the age at which parents leave their children unsupervised; differences in dietary practices and food choices; values about formal public education; medical and health practices, such as reliance upon culturally-specific medical practices; and standards of housekeeping and cleanliness.

"Marginal" child rearing presents a different kind of problem. Often, there is no imminent risk of serious harm to the child, but the cumulative effects of long-term substandard care are likely to be very detrimental to the child's health and development. Whether, and how, to intervene in such cases is a difficult decision, particularly when families do not want intervention. In addition, while preventive services to such families can often reduce risk and promote healthy child development, few child welfare agencies have the resources to routinely deliver preventive services.

Poverty can contribute to both abuse and neglect. In general, poverty places considerable stress on families, complicates most life decisions, and can prevent parents from meeting their children's basic needs. Families in poverty may have inadequate shelter and food, may not be able to afford medical care, and may be so overwhelmed with just surviving, they have little energy left to attend to their children's other developmental needs. Yet, the parents may be providing for their children to the best of their ability under extremely difficult circumstances. While such situations may not constitute neglect in the classic sense, the needs of the child may be equally dire, there may be high risk of potential harm, and the family may need comprehensive services.

When poverty is a primary contributing variable, family support services and linkage to community resources can often remedy the conditions that contribute to poor child care and high risk of harm. However, the child welfare system's

limited resources often prevent us from directly providing comprehensive supportive services to all families that need them. This further underscores the necessity of a shared community responsibility for serving these families.

Emotional Harm

Emotional abuse can be associated with physical abuse or neglect, or it can be a separate psychological phenomenon. Emotional harm that occurs without concurrent physical abuse or neglect is often beyond the legal and practical scope of child welfare intervention. This is unfortunate, because ultimately, the only lasting outcomes to any form of child abuse, other than permanent physical injury, are the pervasive emotional consequences.

The dynamics of emotional abuse can be extremely complicated and destructive. Many of the most serious psychological and behavioral dysfunctions in adults have their roots in the emotional harm resulting from child abuse and neglect. While the dynamics in an individual case may be very complicated, there are factors suggestive of emotional abuse that increase the risk to a child. These are:

- The unpredictability of parental responses;
- Extreme, frequent belittling;
- Verbal denigration of a child's personal worth; and,
- Parental indifference.

Capricious and unpredictable emotional or physical trauma creates constant and extreme anxiety for children. Children are often better able to cope with abusive situations if their occurrence is predictable and the consequence of consistent, albeit unjust, adult behavior. Some children may even be able to determine possible reasons for the situation and adopt coping strategies, including avoidance. However, if the parent or caregiver is both the source of unpredictable pain, and also the child's exclusive source of support and nurturance, the child may become emotionally disturbed.

Parents and other significant caregivers are a child's most important source of the praise and support needed to develop confidence, self-worth, self-esteem, and a sense of accomplishment. Parental approval and support are a necessary prerequisite to healthy emotional development. Children who are constantly belittled and assaulted with disparaging remarks can suffer serious emotional consequences, and are at high risk of emotional harm.

Parental indifference may have even more potential for emotional damage than constant belittling. While belittling communicates dissatisfaction and disappointment, it may also communicate that at least someone cares enough to comment. With parental indifference, the message is that nobody cares; that the child is not worth even a negative thought or interaction; that the child is not worth anything. Parental indifference robs children of their most important source of self-worth and self-esteem; and, of a chance to learn the rewards of reciprocating, caring relationships.

Emotional abuse prevents children from developing into emotionally mature adults. We know that many adults with serious emotional and behavioral disturbances were the victims of emotional abuse. Yet, in individual cases it is very difficult to assess the extent of emotional harm, or to precisely predict the pathology likely to result from emotional abuse. It is particularly hard to identify risk assessment criteria with respect to emotional abuse that have enough validity to warrant agency intervention and family disruption. Because of this practical difficulty, as well as the inherent immediacy of physical abuse and neglect, and limited service resources, physical abuse and neglect have been child welfare's priorities for intervention. However, we must recognize when emotional abuse increases the risk to an abused or neglected child, and when appropriate, we must include intervention strategies in case plans to address the child's and the family's emotional needs.

Application

Recognizing Physical Indicators of Abuse

The following section is designed to help child welfare caseworkers recognize the signs and symptoms of abuse. When abuse is suspected, caseworkers should seek medical assessment both to validate the likelihood of abuse, and to provide the child with medical care for sustained injuries.

The following general criteria are used to determine whether a child's injuries are potentially the result of abuse:

- The location of the injury on the child's body;
- The shape and appearance of the marks or other injuries;
- The history of how the injury was incurred, and the logical probability of the caregiver's explanation;
- The presence of multiple injuries in different stages of healing, suggesting repeated injury; and
- The caregiver's explanation for a child's injuries is not possible, considering the child's age and level of development.

In the identification of abuse and neglect, caseworkers must make judgments about the need for emergency medical assistance. The following description of

indicators of maltreatment includes typical warning signs and symptoms of conditions that require immediate medical intervention. These are not exhaustive or exclusive, and when in doubt, the caseworker should seek emergency medical assistance.

The primary types of injuries seen in child maltreatment and their physical indicators are [Schmitt 1979; Johnson 1994]:

Bruises

Bruises are often the most obvious signs of child abuse. While bruises themselves are not usually medical emergencies, common sense would suggest that any trauma sufficient to cause severe bruising might also be sufficient to cause other serious problems, particularly at certain locations on the body. When bruises are found on the abdomen, there is always the possibility of ruptured internal organs. Bruises may also overlie bone fractures. Bruises around the head, neck, trunk, and genitals should alert the caseworker to be aware of other symptoms or indicators of more serious underlying problems.

Certain patterns of bruising are highly suggestive of child abuse:

- Bruises on the buttocks, back of the thighs, and lower back are frequently related to physical or corporal punishment. Bruising after a paddling, spanking, or whipping means that a child was hit with a hand or object with sufficient force to break blood vessels.
- Bruises at certain sites on the body are uncommon, except as the result of abuse. When they occur, abuse must be strongly considered as the possible cause. Bruises that occur on soft parts of the body, such as the cheek, the earlobe, the upper lip, the fleshy part of the arm, and the

neck; or, injuries on relatively protected parts of the body such as the buttocks, the abdominal wall, and the genitals, are often due to abuse.

- Injuries to the genitals are almost always nonaccidental. Bruises found in the genital area or on the inner thighs are often inflicted for toileting mishaps. Some parents become enraged when a child wets or soils himself. A pinch mark on the penis can be caused by the fingernails, leaving two small crescent-shaped bruises facing each other. A deep groove on the penis can result from having it repeatedly tied with a shoestring, ostensibly to keep the child from wetting. Adult teeth marks on the genital area suggest sexual abuse. Penetrating injuries of the genitalia are rarely accidental. Any injury to the genitals should raise suspicion of sexual abuse, and immediate medical assistance should be sought.
- Bruises on the cheek or earlobe are often the result of having been slapped or cupped. Visible outlines of the fingers on the face from a slap mark should be considered a potentially serious injury, since a blow to the head or face can cause brain injury. Sometimes children are picked up or pulled by the earlobe. When children are slapped on the earlobe, it usually leaves pinpoint bleeding into the skin. Sometimes these pinpoints are only found on the surface of the ear next to the scalp.
- Bruises on the inside and outside of an infant's or toddler's upper lip are usually caused by a bottle during forced feeding, or in a desperate attempt to quiet a screaming child. Bruises in this area cannot be self-inflicted until a baby is old enough to sit up independently and inadvertently falls forward. This ability is normally developed between six to eight months of age. Bruising or tears may occur inside the upper lip, and may remain hidden unless the lip is carefully inverted and examined. A tear on the floor of the mouth can be caused

by jamming a pacifier or other object into a baby's mouth. Older children can cut the inner lips with their teeth in a fall.

- Bruises or cuts on the neck are almost always due to being choked or strangled by a human hand, a cord, a dog collar, or other objects. Accidental injury to the neck is extremely rare, and bruises or other marks on the neck should always be viewed with suspicion.
- Bruises left by the human hand include grab marks or squeeze marks on the skin, pressure bruises resembling finger tips, fingers, the whole hand, or pinch marks. Grabbing a child around the chest or abdomen results in multiple finger bruises on one side of the body, and two thumb bruises on the reverse side. The force from this action may fracture underlying ribs. Oval-shaped bruises may actually be finger prints caused by violent squeezing or shaking. Grab marks on the cheek may be caused by intense squeezing of the face to get something into the child's mouth. In a full hand print bruise, several of the finger joints, or creases, can be seen. The human hand leaves an outline bruise because the capillaries at the edge of the injury stretch and rupture.
- Human bite marks are distinctive, paired, crescent-shaped bruises with individual teeth marks. Whether the bite was made by a child or an adult can be determined by a physician or dentist by measuring the point-to-point distance between the canine teeth. Bite marks should always be investigated. In serious cases, the perpetrator can sometimes be determined by having a dentist make wax impressions of the teeth of persons in contact with the child, and comparing them to photographs of the bite marks. New bite marks can also be swabbed for saliva, which can be used to identify the perpetrator. Ringworm, at times, can resemble a human bite mark; however, it

begins as a scaly dot or patch, and then spreads to surrounding skin area.

- Linear bruises, often one to two inches in width, and sometimes covering a curved body surface, are almost always caused by a strap or a belt. Sometimes the strap eyelets or buckle are visible within the bruise.
- Loop marks on the skin are caused by hitting with a doubled over electrical cord, rope, or fan belt. If the skin is broken, scarring is very common. A similar mark may be caused by a coat hanger.
- When a blunt instrument is used for punishment, a bruise or welt will often resemble the shape of the instrument used to inflict the wound. Bruises with bizarre or geometric shapes are almost always intentionally inflicted.
- At times we see children with tattoos that have been inflicted with sharp instruments, such as pins, or razors and ink. A pencil can also cause a tattoo.
- Tying a child to a bed or other object for restraint leaves tie marks on the feet, ankles, and wrists. The cords or narrow ropes used often leave cuts. Ropes that do not cut into the skin can leave rope burns, abrasions, or blisters. Rope burns on a child's mouth may be the result of the child having been gagged for screaming or yelling. This type of abrasion runs from both corners of the child's mouth.
- Multiple scars or bruises on different body parts, particularly when they are in various stages of healing, are especially indicative of repeated maltreatment, rather than of accidental injury. The approximate age of bruises can be determined by their color. If the

bruises are swollen and tender, they are probably less than two days old. The initial color of a bruise is red, changing in hours or days to blue or purple. As the hemoglobin is broken down, the bruise goes through three additional color changes which begin at the periphery, or outside edges. The first color change, to green, occurs in a minimum of five days. Then, within a few days this changes to yellow, and then in a few more days, the bruise has a brownish coloration. The brownish color may persist anywhere from four days to two weeks before the bruise has completely cleared.

- Mongolian spots are sometimes mistaken for bruises. However, they are a form of birth mark, not a bruise. They are present at birth, and typically last for two to three years. They are grayish blue, they do not change color, and they have a clear cut margin. They commonly occur on the buttocks and lower back, but they can occur anywhere on the body. They are more common in persons with dark skin, such as African American, Asian, Native American, and Mexican American children.

To help differentiate inflicted from accidental injury, it is important to understand the typical patterns of normal accidental bruising. Following is a description of these patterns:

- The most common sites of accidental bruising in children of all ages are on the bony prominences such as knees, elbows, forearms, shins, forehead, and chin. The most frequent bruises are to the knees and shins. Bruises on the forehead are normal in toddlers who are just learning to walk, and are more common after age two, when children begin running and climbing. Children typically receive similar bruises from tripping and falling. These bruises are usually circular in shape and have a nondescript pattern.

- In the first few months of life, babies often scratch themselves on the cheeks, ears, nose, and eyes. This most often results from long fingernails, and usually disappears if parents trim babies' fingernails regularly.
- At times, unexplained and frequently occurring bruises result from an inherited bleeding disorder. These bruises are generally at normal areas of trauma. In such situations, a physician must make the diagnosis, usually by conducting a series of bleeding tests. The family dynamics that are common in abusing families are generally absent in these situations, and the parents can often easily describe and explain the cause of the bruises.

Burns

Approximately 10 percent of physical abuse cases involve burns.

Following is a description of inflicted burns and their probable causes:

- The most common inflicted burns are from cigarettes. These burns are circular, punched out, and consistent in size. They can vary from blisters to deeper sores, depending upon how long the cigarette was left in contact with the skin. Hot cigarettes are sometimes applied to children's hands to stop them from sucking their thumbs. Match tip or incense burns are similar to cigarette burns, but are smaller in size.
- The shape of certain burns is diagnostic of inflicted injury. Dry contact burns may be inflicted by forcibly holding a child against a heating device, such as an iron, a heating grate, or a radiator, or holding a child's hands on a hot stove burner or electric hot plate. These burns generally leave an identifiable and recognizable pattern. A child who falls accidentally against a heating device would not stay there long enough to get a burn of the same magnitude as one that develops

when the child is forcibly held against the heat source. These burns are usually second degree, but without any blister formation. Additionally, children explore surfaces with the palms of their hands. Burns to the tops of the hand are more likely the result of abuse.

- Branding burns occur when someone touches a child with a metal object that has been heated to a burning temperature. The shape of these burns resemble the hot object, such as a comb, knife, key, a curling iron, or the heated cover of a cigarette lighter.
- The most common inflicted hot water burn is caused by dunking or immersion. A dunking occurs when an offender holds a child's thighs against the abdomen in a jack knife position and then dunks the buttocks and genital/rectal area into a tub of scalding water. This usually results in a circular burn that is restricted to the buttocks and the genitals. Burns inflicted at this site are almost always punishment for bed wetting or for resistance to toilet training. The fact that the hands and feet are spared makes this burn incompatible with any explanation of how this could have happened accidentally.
- Sometimes a child is forced to sit in scalding water. This gives the dunking type burn, and it also scalds the back of the thighs and legs. This is often referred to as a doughnut burn. The unburned skin, or doughnut hole, is forcibly held against the bottom of the tub, and is therefore protected from prolonged contact with hot water. Scald burns involving the buttocks and the genital/rectal area can be very serious, and lead to prolonged hospitalization and scarring.
- Inflicted burns caused by submerging parts of a child's body in scalding water are regular in appearance and have clearly demarcated edges and an absence of splash marks.

- A forced immersion burn of both legs is sometimes called a "stocking burn," because the pattern of the burn looks like socks. A similar forced immersion burn of the hands is called a "glove burn." Forced immersion of the hand or foot as punishment is likely, if the burn goes well above a child's wrist or the ankle, and there are no splash marks on other parts of the body.
- Most hot water heaters are set at about 140 degrees Fahrenheit. Water at this temperature can cause a second degree burn after only three seconds of exposure. Water at a temperature of 130 degrees can cause a second degree burn after 30 seconds of exposure. Some hot water taps produce water above 150 degrees; this can cause a burn following split second exposure. Most people prefer their bath water temperature to be at 105 to 110 degrees Fahrenheit. Many accidental scalds could, therefore, be prevented by setting all hot water heaters at 125 degrees Fahrenheit.

Caseworkers may have to make decisions about whether newly observed burns should be treated as medical emergencies. Distinguishing between minor and major burns involves determining the degree of tissue damage and the extent of the burn. Physicians often use three classifications of burns [Larson 1990]:

- *First Degree Burns* – The skin is usually reddened and swollen. Unless the burn is over a substantial portion of the body, it is usually considered a minor burn, not requiring immediate medical assistance. Most sunburns are first degree burns.
- *Second Degree Burns* – Blisters develop and the skin is deeply reddened and mottled. Severe pain and swelling are common. If a second degree burn is limited to two or three inches, and is *not* on the hands,

feet, face, groin, buttocks, or a major joint, it can be treated as a minor burn, not requiring immediate assistance.

- *Third Degree Burns* – The skin appears charred black or dry white. There may be severe pain, or if the nerve damage is severe, no pain at all. Hot objects, hot grease, and open flames are more likely to cause third degree burns.

There are circumstances where any one of these types of burns requires immediate treatment. First degree burns over substantial portions of the body; second degree burns larger than three inches, or on the hands, feet, face, groin, buttocks, or over a major joint; and any third degree burn should be considered a medical emergency, and immediate emergency medical assistance should be obtained [Larson 1990].

The following principles can help workers differentiate inflicted from accidental burns:

- One skin condition that might be confused with cigarette burns is impetigo, a skin disease caused by a bacteria. In this situation the sores are of varying sizes, they tend to crust and ooze pus, and increase in number over time.
- The severity of any burn is dependent not only on the temperature of a hot object or liquid, but the length of time the skin is in direct contact. Because children reflexively move away from burn sources after accidental contact, a high percentage of very severe burns are the result of having been forcibly held against the hot object or in hot liquid.
- Children over the age of 18-24 months can burn themselves in the bathtub, if they are able to turn on the hot water faucet. However,

these accidental burns are not as regular in appearance as inflicted burns, nor do they have clear lines of demarcation. Accidental burns are also usually accompanied by splash marks. If a child is standing up at the time of the accident, the blast of hot water usually scalds the top of the feet, often one foot more than the other, and there are generally splash marks. If a child is sitting in the tub, the backs of the lower legs may be burned, since these are closest to the faucet. The genital and rectal areas are usually not burned in accidental scalds.

- There is one medical condition which creates skin disruptions that may look like hot water burns. This condition is called scalded skin syndrome, and it is caused by a staph bacteria. A child with this condition generally appears to be very ill, and may have unexplained large blisters and loss of skin at the ankle, thigh, and diaper area. The diagnosis is generally made because of the generalized redness, the scattered nature of the blisters, and the fact that the blisters may increase in number during the child's stay in the hospital.

Head Injuries

Head injuries, particularly in young children, can cause severe and permanent brain damage. There are several ways in which abuse can result in serious head injury:

- A blood clot on the surface of the brain is one of the most serious consequences of child abuse. This type of blood clot is called a subdural hematoma (sub-du'-ral hee'-mah-toe'-mah.) It can result from a severe blow to the head, and can cause serious and permanent brain damage. A quarter of children with this type of head injury die, and the majority of the survivors develop mental retardation, blindness, cerebral palsy, or seizures as a result of the injury. When

first seen, these children may be irritable, experience vomiting, and have diminished consciousness, difficulty breathing, and convulsions or seizures.

- Not all subdural hematomas result from direct blows to the head. Over half the children with subdural hematomas have no skull fractures or visible scalp injuries. Studies have shown that many unexplained subdural hematomas are due to injury from violent shaking, or from acceleration-deceleration trauma. Most of these cases occur in babies under one year of age, who are shaken to make them stop crying. X-rays show bone fractures in about 25 percent of the cases of severe shaking. Bleeding in the back of the eyes, called retinal hemorrhages, are almost always present when there is subdural hematoma due to shaking. Subdural hematomas are rarely spontaneous, and when seen in babies, should be considered a strong indicator of abuse.
- A child may have skull fractures and brain trauma from being thrown or hit against a wall or a door. In young children, this brain trauma may cause spreading of the sutures of the skull due to increased intracranial pressure from the swelling of the brain. More than one fracture at different locations on the head, or complex fractures, increases the likelihood that the injury was inflicted.
- A large bald spot on the scalp can result from repeatedly yanking on the child's hair. Broken hairs of various lengths suggest this injury. If the hair pulling has been recent, there will also be tenderness of the scalp. Violent and sudden lifting of the child by the hair can also cause bleeding under the skin. Neglected babies, who spend long amounts of time on their backs, may also lose hair at the back of their heads.

- Bilateral black eyes can occur when a child has been repeatedly hit with an open hand around the eyes and head. Massive swelling and bruising of the eyelids is indicative of abuse. Accidental injury to the nose or central forehead can also cause two black eyes. Blood can seep down to the eyelids from a large bruise on the forehead, or from a skull fracture. However, in these injuries there is minimal eyelid swelling and no eyelid tenderness. In addition, the onset of the black eyes is generally delayed by one or two days from the time of the accident.
- Subdural hematomas, retinal hemorrhages, multiple skull fractures, or any serious or life-threatening injury, reportedly the result of a child falling from a bed or crib, should be considered the result of child abuse. One study reported the outcomes for 246 young children who had accidentally fallen out of their cribs or beds. In 80 percent of these instances, there were no findings of injury. The other 20 percent had a single bruise, lump, or cut. Only 1 percent of the children had skull fractures; these were single, and linear. Another 1% of the children had a fresh fracture at another site, usually the clavicle (collar bone) or humerus (arm). Of greatest importance was that none of these children sustained subdural hematomas, retinal hemorrhages, or any serious or life-threatening injury [Schmitt 1979].

Caseworkers will generally not be able to identify head injuries from a visual inspection of the child, but *should seek medical assistance immediately* if an investigation elicits a history of trauma to the head, or if a child appears to have any of the following symptoms: chronic irritability or vomiting, diminished consciousness, difficulty breathing, convulsions, or seizures.

Intra-Abdominal Injuries

Internal abdominal injuries are the second most common cause of death in battered children. The abdominal organs are not well protected in young children. Injuries are usually caused by a punch or kick to the abdomen.

- The most common injuries from blows to the abdomen are to the liver, spleen, small or large intestine, or the pancreas. Kidney injuries can result from blows to the back.
- While bruises on the abdomen can overlie internal injury, in over half the cases of internal injuries there are no visible bruises or marks on the outer abdominal wall. Any time a child presents symptoms of internal injury, child abuse must be considered, since accidental injury to internal organs is relatively uncommon. Symptoms include projectile vomiting, abdominal pain, or hypovolemic shock (a decrease in the volume of circulating blood as a result of internal bleeding). Signs of hypovolemic shock include pale or gray skin that is cool and clammy to the touch; a weak, rapid heartbeat accompanied by shallow breathing; eyes staring and perhaps dilated; and unconsciousness, or if the victim is awake, confusion or anxiety. *Intra-abdominal injuries may not be noticed until several days after occurrence. They are serious and require immediate medical attention.*
- If investigation elicits a history of significant trauma to the chest or abdomen, immediate emergency medical assistance should be obtained.

Bone Injuries

Suspected bone injuries should be considered emergencies that require immediate medical attention. Over 20 percent of children who are physically abused have x-ray evidence of bone injuries. In a study of children less than one year of age, 55 percent of fractures were found to be the result of abuse. Preambulating children usually do not generate sufficient force to fracture a bone, and they generally cannot climb high enough to fall the distances required to cause a fracture. Following is a description of bone injuries typical of child abuse:

- A spiral fracture in infants will result when an adult grabs and twists the infant's limbs. These fractures are often indicative of inflicted injury.
- Chip fractures and bucket handle fractures are the most unique fractures seen in abused children. A chip, or corner, fracture, is the most classic early finding of inflicted injury. The corner of the growing end of the bone may be torn off during wrenching or twisting, such as might occur when a child's legs are forcibly spread during an angry diaper change. Immediately after the injury, the chip fracture is visible in x-rays.
- Ribs are rarely fractured by accidental trauma in infants. Rib fractures can occur when young infants are squeezed violently. Unusual fracture sites, such as the shoulder blade, collar bone, or sternum are also suspicious.

Between seven to 11 days after a bone injury calcification begins, and becomes visible on x-ray. By four to six weeks after an injury, the calcification will be solid. X-rays can, therefore, diagnose bone injuries in

different stages of healing. This is extremely helpful in the diagnosis of child abuse, because it suggests repeated assaults.

Accurate diagnosis of a bone injury must be made by a physician after careful x-ray examination. However, the following can help caseworkers recognize when bone injuries are likely to have been inflicted rather than accidental:

- "Normal" bone breaks from falls or accidents are often of a different type than bone injuries resulting from abuse. Chip fractures or bucket handle tears are usually caused by wrenching, twisting, or traction force, and do not normally occur from falls or accidents.
- Repeated fractures to the same site, when there is no underlying disease process, or multiple fractures to different sites and in different stages of healing, are often indicative of repeated abuse.
- Spiral fractures occur when one end of a bone is fixed and the other end is twisted. Such fractures are usually inflicted in infants and nonambulatory children. However, once children have learned to stand and walk, spiral fractures of the arm, and the upper and lower leg bones (femur and tibia) may also be accidental. For example, if, while running, a child's foot becomes entrapped and the child's body twists as he falls, a spiral fracture of the leg could result.
- While some rare bone diseases can lead to repeated fractures, these fractures differ from inflicted fractures. Fractures in diseased bones generally occur to the midshaft of the bone, and there are no chip fractures or bucket handle fractures. Second, there is usually a family history of these conditions. Most child protection teams will see this type of bone disease only once in several years, because new cases are rare. Physicians can diagnose these diseases.

- Sometimes a parent's lawyer might suggest that inflicted fractures are the result of birth injury. By seven to 14 days, newborn fractures show signs of healing (callus formation). By age four months, birth fractures should be completely healed. There should also have been evidence and documentation of injury at the time of the birth or shortly afterward.

Failure to Thrive

A victim of failure to thrive can be best described as a significantly underweight baby. The baby may look undernourished. Failure to thrive is caused by underfeeding in over 50 percent of cases. Another 20 percent of children have failure to thrive due to an error in feeding, and about 30 percent have an organic cause for the failure to grow. Several criteria are used to diagnose failure to thrive:

- While failure to thrive is usually diagnosed by charting the infant's weight and height on a standardized growth chart, it is often suspected because of the absence of visible fatty tissue. The failure-to-thrive child is likely to have very prominent ribs, thin buttocks, much wrinkled skin, spindly arms and legs, and a pinched looking face due to an absence of normal fat deposits. Prolonged malnutrition is very dangerous to infants. It can lead to permanent brain damage, including mental retardation, and even to death.
- Infants with failure to thrive are usually under 18 months of age, because older children can more successfully obtain food for themselves. In bizarre circumstances, however, an older child may be deprived of food. Infants with failure to thrive from neglect often gain weight rapidly when they are provided with a nutrient-rich therapeutic diet.

- The diagnostic criteria for failure to thrive due to underfeeding include: 1) the child must be significantly underweight for age; 2) there must be a failure to gain weight while in the home; 3) there must be demonstration of significant and rapid weight gain when the child is cared for out of the home, usually in a hospital setting; and, 4) the child usually demonstrates a ravenous appetite. (This can often be confirmed on first contact). The primary caregiver may be unwilling or unable to provide the food and stimulation necessary for normal growth. Many infants with failure to thrive display behaviors suggestive of such deprivation, such as an expressionless face, lack of eye contact, and lack of response to cuddling. These children usually respond in a matter of days, however, to tactile and verbal stimulation. (See Section V-B, "The Effects of Maltreatment on Infants and Toddlers," for a more comprehensive discussion of failure to thrive.)

Parental Explanations for Injuries That Suggest Abuse

Although the diagnosis of child abuse can often be made based on physical findings alone, the history of the injury is very important, especially when the child is brought in with multiple, nondescript bruises. The explanation(s) of the history of the injury made by the parents is an important source of information for the determination of abuse or neglect. Reported histories that should raise suspicion of maltreatment may include the following:

- There might be an eyewitness report or self-report by the child. When a child states that a particular adult hurt him, it is almost always true. For this reason, it is very important that we interview any child over the age of three alone. Other children who may have witnessed the event(s) should also be interviewed.

- When one parent accuses the other parent of hurting a child, it is generally accurate, especially if the parents are not engaged in a custody dispute.
- Partial confessions by parents are not uncommon. For example, parents may admit that they caused one of the injuries, but not the other; or, they may state that they felt like shaking or hitting the child prior to the injuries, but didn't act on the impulse or cause any of the injuries. Such partial confessions should be considered strong indications of the possibility that a parent perpetrated the abuse.
- Some parents deny being aware that a child had any bruises or burns, even when such injuries are blatant. If a criminal investigation is being conducted concurrently, parents may be more likely to deny abuse. Other parents have noticed physical injuries, but they can offer no explanation as to how the injury happened. They state that they just found the child that way, or the child woke up that way. When pressed, they may become evasive or offer a vague explanation such as, "He might have fallen down." Nonabusive parents willingly discuss where, when, and how their child was hurt, and are anxious to prevent the injury from reoccurring.
- Many abusive parents offer explanations that are implausible and inconsistent with common sense or medical judgment. If the parents offer a bizarre, unusual, or implausible history, diagnosis is fairly easy. Occasionally, parents will attribute a serious injury to a minor accident, such as a child receiving multiple body bruises from having tripped and fallen onto a thick carpet.
- Another indicator of inflicted injury is when the child's described behavior is not possible for the child's level of development; for

example, when a ten-month-old child is said to have climbed into the bathtub and turned on the scalding water, or a one month old is said to have rolled out of bed.

- The alleged self-inflicted injury in young babies is most suspicious. In general, children who are not yet crawling are unable to injure themselves. Fractures in children this age are almost always inflicted. Logically impossible explanations, such as, "The baby rolled over on her arm and broke it," or, "She got her head caught in the crib and bruised it," should be acted upon immediately. These children can suffer further injuries and be killed, if they are sent home without significant and intensive intervention to remove the contributors to risk.
- The child's siblings might be accused of having inflicted the injuries. When parents have difficulty coming up with an explanation for an injury, they commonly project the blame onto rough play with siblings. They may state that the sibling dropped a toy on the injured child, or threw a bottle at him. The existence of serious injuries requiring force or mature coordination are not compatible with such explanations.
- Nonabusing parents generally seek immediate medical attention for an injured child. In contrast, abusive parents may delay seeking medical care for an injured child. Some abused children are not brought in for a considerable length of time, even when there is a major injury. In the extreme, they are not brought in until they are nearly dead. One study showed that one third of abused children weren't brought in until the morning after a serious injury; one third were brought for care within one to four days after an injury [Schmitt 1979].

- Another common behavior in abuse situations is that the adult who was with the child at the time of the injury does not come to the doctor or to the hospital with the child.

Emotional and Behavioral Indicators of Abuse

Physical indicators of abuse are not always evident at the time of a referral. Therefore, the caseworker must be able to recognize other indicators of abuse.

Abused children often develop and behave in characteristic ways. A child's behavior and emotional responses to typical situations can alert a caseworker to the presence of abuse in a family when there are no clear physical indicators. Parental behaviors, which can also be signs that abuse is occurring in a family, will be discussed in the next section.

Young children who have been abused severely and at an early age may display pervasive indicators of abnormal development and developmental delay, such as:

- The child may be remote, withdrawn, lacking in curiosity, compliant, and detached. The child may not relate to other people.
- The child may whine, whimper or cry, with no expectation of comfort. The child may not turn to adults for help.
- A state of "frozen watchfulness" has been noted in severely abused children. They remain emotionally withdrawn and uninvolved, but they observe closely what is going on around them.
- They may exhibit hypervigilance and discomfort with or fear of physical contact.

- Severely abused children may appear to be autistic. Many do not relate in normal ways to the people and objects in their environment. Most seriously abused infants show pervasive delays in development.
- The child may be unable to form healthy attachments, but display a forlorn clinging dependency and demonstrate insecure attachment.
- The child may appear depressed, or may display little or no emotion. The child may not cry or respond when in pain or when injured, and may show no enjoyment. Some children do not smile or play.

Preschool-aged children who have been abused may display the following characteristics:

- They may be timid and easily frightened. They may duck, cringe, flinch, withdraw, attempt to get out of the way, or otherwise exhibit fear when the parent comes near.
- They may be very eager to please, may crave affection, and may show indiscriminate attachment by becoming affectionate with anyone, including strangers.
- Early signs of role reversal may be present. The child may try very hard to behave in ways that meet the parent's needs. The child may also demonstrate a clingy attachment and repeatedly verbalize love and concern for the abusing parent.
- The child may show physical signs of stress and anxiety, including physical illness and regressive behaviors.
- The child may be aggressive with other children, and may have temper tantrums and emotional outbursts with little apparent provocation.

School-age children show many of the same characteristics as preschool children. Their problems in relationships and their developmental delays will be more pronounced the longer they have been maltreated. These characteristics include:

- The child may assume the adult role with the parent. The child is often a "little helper," who cares for the parent, demonstrates excessive concern when the parent is distressed, and is excessively compliant. The "role reversal" is clearly evident.
- The child may have difficulty in relating to other children and to adults, acting manipulative, or withdrawn and distant. The child may show angry, aggressive outbursts, and temper tantrums.
- The child may appear to be hyperactive, including having an unusually short attention span, an inability to concentrate, and other symptoms of chronic anxiety. This may prevent the child from doing well in school.
- The child may demonstrate a fear of the parents or, in some cases, an absence of fear or concern in the face of parental or adult authority.

Many emotional and behavior problems of adolescents may be indicators that they have been, or are currently being abused or neglected. These may include:

- Lying or stealing;
- Fighting, angry outbursts, belligerence, and behaving aggressively toward other people;
- Abuse of alcohol or drugs;

- Truancy, including repeatedly running away and refusing to go home;
- Generalized difficulty in entering into and sustaining interpersonal relationships;
- Emotional and social withdrawal, depression, lack of interest in activities or other people; or
- Reported dissociative episodes, such as reporting a feeling of "standing by and watching something happen," or feeling "far away, outside of the event" while being directly involved in the event. Dissociative reactions such as these are not unusual when people are subjected to serious psychological trauma.

Recognizing Neglect

Neglected children include:

- Children abandoned by their parents. This includes children who have been left by their parents with other people, including strangers, for extended periods of time without parental contact or support. The worker must differentiate these children from children who are cared for by relatives, under an agreement with the parent.
- Children who are malnourished and dehydrated. Such children are either not fed, or are fed improperly. In infants, severe malnutrition can lead to failure to thrive, mental retardation or other brain damage, and death. In older children the symptoms may not be as pronounced, but the effects of long-term malnutrition can be as serious. These children are recognizable by their poor weight gain for height and age, thin extremities, a sallow or pale, pasty appearance, and in young children, a protruding abdomen.

- Children who are ill and injured, and who do not receive necessary medical care. The failure to provide medical care can result in chronic illness and disabling conditions. In addition, the failure to provide medical care exacerbates the process of diseases. For example, untreated colds and flu can result in pneumonia, which can be fatal. It is important to determine if parents suspected of neglect understand medical instructions, and have the intellectual, emotional, and financial resources to carry them out.
- Children who live in a dangerous physical environment. While a dirty house does not by itself create risk for children, children can be seriously harmed when the living environment is unsanitary or dangerous. Excessive filth, including exposed garbage, rotting food, animal and human excrement, and other unsanitary conditions can expose a child to disease and illness. Dangerous conditions in the home and immediate environment create increased risk of serious injury. These conditions include broken glass, sharp exposed edges on furniture and other objects, exposed electrical wires, flaking lead-based paint, the presence of rats or other vermin in the living environment, and unprotected areas from which children could fall.
- Children who are not old enough to care for themselves and are left unattended, or who are supervised by someone who is not competent to meet their needs, are at risk of injury and death. Unattended children may fall from windows, wander into streets, ingest toxins, or gain access to loaded and unlocked firearms. Many unattended children have died in fires they themselves started by playing with matches.
- Children who lack basic physical care and hygiene. Again, a dirty child is not necessarily a child at risk. However, the chronic lack of

physical care can create risk of disease or illness. Examples are ulcerative diaper rash from unchanged diapers, and localized or systemic bacterial infections from untreated skin abrasions or other injuries. Unkempt school-age children may also be teased and shunned by peers.

- Children who are inadequately clothed. The child who is not provided with proper clothing for the weather is at risk of illness from exposure.

In some states, failure to send a child to school, and to assure that the child acquires a basic education is considered educational neglect. School failure may also be an indicator of possible neglect, when combined with an inability to concentrate, falling asleep in class, and a lack of interest in the school environment. Parents may also keep their children home from school or fail to attend medical appointments, if the children have visible, nonaccidental injuries.

Emotional neglect includes chronic emotional deprivation, in which the child is denied attention and affection, is ignored, made to feel unwanted and unloved, is isolated and denied interactions with other people, or is exposed to the conflict, discord, and often erratic behaviors of a mentally ill or emotionally disturbed parent.

Behavioral and emotional indicators can alert a caseworker to the presence of neglect in a family when there are no clear physical indicators of illness or injury. These indicators may include:

- A very large percentage of neglected children are delayed in all developmental domains. The degree of delay can be determined by comparing the child's developmental level with expected developmental achievement for the child's chronological age. Neglected children may display mild to serious delays in physical and motor development, cognitive ability, school achievement, social

skills, interpersonal relationships, and emotional development. Severely neglected children may develop mental retardation as a result.

- Neglected children are often described as unresponsive, placid, apathetic, dull, lacking in curiosity, and uninterested in their surroundings.
- Neglected children may not approach other people, nor exhibit normal interest in interpersonal interactions. They may not play, or they may play half-heartedly. In cases of serious neglect, the child may exhibit signs of depression.
- Neglected children may appear to be hungry or constantly tired, and may fall asleep in school. Some older children who are inadequately fed use their own resources by searching for or stealing food.
- Some neglected children may be out of control behaviorally as a result of not having limits set on their behavior from adult caregivers. They may exhibit a variety of behavior problems, anxiety, and other signs of emotional distress. At times a false bravado can be seen.