

## A Medical Student Primer on Detecting and Reporting Suspected Child Abuse and Neglect (SCAN)

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### Abstract

Child abuse and neglect are increasing in prevalence not only in the United States but also worldwide, and it is believed that many cases of child abuse and neglect go undetected and unreported. Physicians are in a pivotal position to assess and report suspected child abuse and neglect (SCAN). Medical students, entering their clinical years (typically the third and fourth years) of the medical education seem unprepared to detect, assess, and report SCAN. It is not the fault of the student doctor that they are unprepared, instead the health care and legal systems have yet to reach a universal and cooperative protocol to assess and procedures to report SCAN; and the medical education system has yet to mandate and integrate SCAN awareness, assessment, and reporting into the medical curriculum, particularly prior to medical students entering clinical rotations. This deficiency in the preparation of medical students can lead to more unreported cases of SCAN and more children left as victims of repeated child abuse and neglect. The purpose of this paper is to bring awareness of the deficiency in the medical students' knowledge of and training in SCAN, as well as provide them a foundation in the presentation of child abuse and neglect in the clinical setting.

**Keywords:** Child Abuse; Child Neglect; Clinical Rotations; Medical Education; Medical Student; Preceptor; Shaken Baby Syndrome; Student Doctor

### Abbreviations

ITP: Idiopathic Thrombocytopenic Purpura; MS 3-4: Medical Student Third and Fourth Year; SBS: Shaken Baby Syndrome; SCAN: Suspected Child Abuse and Neglect

### Introduction

Child abuse and neglect span all socioeconomic borders. According to the U.S. Department of Health and Human Services, approximately 3.3 million child abuse reports and allegations were made in 2010 involving an estimated 6 million children, while 1,560 children died from physical abuse that year [1]. Since many cases go unreported, experts believe that the actual number of children being abused is much higher [2-4]. In 2010, two-thirds (58.6%) of all child abuse cases and reports made to Child Protective Services (CPS) came from professionals who had contact with the child, including teachers, lawyers, police officers, and social workers. However, many reports (27.7%) came from nonprofessional sources, such as parents, other relatives, friends, and neighbors. Anonymous reports accounted for 9% of all reports, while medical personnel accounted for 8.2% [1].

Physicians are mandated reporters of suspected child abuse and neglect (SCAN) [5]; thus, it is imperative that medical students (as future physicians) not only know how to recognize the various presentations of child abuse and neglect but also know how to document

and report such actual or suspected occurrences through the appropriate channels and to the appropriate authorities. Early recognition and reporting of child abuse and neglect can reduce risk factors for child maltreatment [6]. Medical students, particularly those entering into clinical training, need to understand the medical, legal, and social implications of SCAN and recognize the role of the physician in preventing child abuse, violence, and neglect through routine assessment of family dynamics, early identification of children at risk, and cooperation with community services that support families [7].

A physician (or student doctor) must be able to ascertain child abuse and neglect and to take immediate action on behalf of the victim [8]. In order for proper reporting to occur, medical providers should have reporting materials ready and a plan in place to address abuse or neglect should it present itself in their practices [8].

As future physicians, medical students should be well-versed concerning the signs of child abuse and neglect to ensure that they can recognize cases of SCAN and prevent further trauma to these child victims [8]. The inclusion of SCAN-related classes in medical education would be a fundamental factor contributing to the detection and reporting of child maltreatment and helping innocent victims.

Most medical schools have yet to include SCAN as part of their standard curriculum [9] or as a mandated topic to be covered in pediatric, family medicine/general practice, orthopedic, or emergency medicine/urgent care coursework; nor, in general, are MS3–4 students (student doctors) advised on these matters prior to entering the clinical rotation phase of their medical education. Recognizing the signs of child abuse and neglect is a relevant skill for all medical students entering into the clinical rotation phase of education as student medical doctors. The following is a collective and abridged medical student primer on detecting and reporting suspected child abuse and neglect.

### Discussion

Each state in the U.S. is responsible for defining child maltreatment, based upon the guidelines of the Federal Child Abuse and Neglect Prevention Act passed by the U.S. Congress in 1974. Regardless of the specifics of their definitions, all states agree that there are four types of child maltreatment: 1) physical abuse, 2) sexual abuse, 3) emotional abuse, and 4) neglect [1].

### Types of child abuse

#### Physical abuse

Nonaccidental trauma is the most evident and visible form of child maltreatment; typically the result of excessive and inappropriate physical disciplinary actions, involving kicking, punching, hitting, biting, burning (scalding), choking, scratching, throwing, poisoning, suffocating, or other means of inducing harm [10]. Visible signs on the skin include contusions, scratch marks, bite marks, burn marks or scars (especially from cigarettes), choke marks surrounding the neck region, broken or fractured bones, black eyes, unconsciousness (in infants), and circular marks around wrists or ankles. Other evidence of physical abuse may include subdural hematomas of the brain, fractured ribs, fractures of the skull, greenstick fractures, internal bleeding due to the rupture of an organ or blunt trauma, bleeding in the posterior portion of the eye, as seen in shaken baby syndrome (SBS) [11]. Also, the wearing of inappropriate clothing by the child, such as long sleeves on a hot day, could be an attempt to cover up an injury.

If any of these signs are observed and suspicions are raised, appropriate tests should be performed to provide conclusive evidence. These tests include bone radiographs of the child's entire body to detect fractured, partially-fractured, or broken bones. Additionally, a CT scan or MRI is necessary when attempting to detect hematomas or hemorrhaging of the brain. The preceptor physician or clinical medical student must ask appropriate questions to the parent, guardian, or caregiver of the child, inquiring about the cause of the condition and the time of its occurrence. It is not uncommon for the parent or guardian of an abused child to fabricate symptoms in an attempt to deflect the actual cause of any injury. Also, the child may be too young or fearful of expressing the cause of injury verbally [12].

Caution, discretion, and acumen are required as symptoms of physical abuse may be similar to certain medical conditions; for example, abnormal contusion patterns may result from liver disease or in idiopathic thrombocytopenic purpura (ITP), which occurs when platelet levels are less than normal causing bruising in a child with minimal or no injury. Proper diagnosing often requires a blood sample analysis [12].

### Emotional abuse

Psychological manifestations often express from emotional abuse in children. Verbal abuse of a child involves demeaning language, humiliation, threatening or belittling a child (privately or publicly), or telling a child he or she is "worthless", a "mistake", or "stupid"—such outbursts are considered emotional abuse [13]. Abused children may express fear of being punished for doing something that generally would not be deemed as wrong by mainstream society or have a fear of going home.

### Sexual abuse

Visible signs of sexual abuse in a child are rarely observed unless medical attention is sought immediately after the sexual incident has occurred. Thus, the ability to interpret other, nonphysical symptoms is crucial in maintaining the well-being of the young patient. Sexually abused children often exhibit distinctive behavioral and physical manifestations as a result of molestation [14]. Frequent nightmares, the inability to fall asleep, and age-inappropriate actions, and signs of regression, such as wetting the bed after being potty trained, are common indicators. Demonstrating the fear of a particular person or a feeling of unease when undressing, at appropriate times (to bathe or to change clothes), are suggestive of child sexual abuse. Personality manifestations in a usually confident and happy child, may involve the child becoming depressed, withdrawn, and displaying unsocial characteristics and secretiveness [15].

In other circumstances, ordinarily quiet children may become easily angered, demonstrate an abrupt change in eating habits, inflict self-harm, or use sexually-explicit, child-inappropriate words or actions [15]. Physical signs may include unexplained soreness around the mouth, genital, or rectal areas; a burning sensation while urinating; difficulty walking or sitting; evidence of a sexually transmitted disease, especially under fifteen years of age; and, specifically in females, a broken hymen or unexplained vaginal bleeding, especially before menstruation has begun [15,16].

A child, who may have been a victim of sexual abuse, may present with more than one sign; however, other circumstances that may cause identical or similar behavioral manifestations in children may include coping with a divorce of parents [16], the death or separation from a parent, friend, or loved one, or being bullied or harassed at school.

### Child neglect

Children, who have fallen victim to neglect or have been denied proper care, are often seen with illnesses or physical injuries that remain untreated. Personal hygiene may be poor [17], such as being unbathed, having a foul body odor; clothes that are too small or too big, unclean, ripped, or inappropriate for the weather may be indicative of neglect. Children allowed to play in a dangerous or potentially harmful environment with little to no supervision is considered neglect. Arriving late to school frequently, missing an excessive amount of unexcused days, and signs of hunger and malnourishment may indicate that a child is not receiving appropriate care [8,11].

### Assessment of suspected child abuse or neglect

The clinical medical student (student doctor) must possess the ability to discern between truth and fabrication [9]. If a child appears to have suffered an injury and shows signs of abuse, the examiner should inquire about the injury. This inquiry involves asking when and where the incident occurred, how it occurred, why it occurred, and what has been done to treat it. Parents or guardians guilty of committing child abuse may respond to the inquiries by claiming, "my child fell" or "my child was playing rough" in an attempt to cover up the actual cause of injury.

Parents who drink excessively or are substance abusers are prone to causing harm to their children in a fit of rage; hence, as a physician, gaining a sense of the parent or guardian's recent or current background is also crucial [18]. If a parent appears to mistreat a child in a

medical setting, verbally or otherwise with no discretion, likely, their behavior at home is not much different, if not worse. If a child appears to have abnormal contusions or physical signs of abuse, the clinical medical student (under the supervision of the preceptor physician) must examine the child's entire body to check for other existing signs and unexplained injuries. If the parent or guardian attempts to stop the examination, this could be another indication that child abuse occurred. Often, in child abuse, a parent's or guardian's protest of an examination is done in an attempt to keep an injury hidden from the examiner.

If the child is of appropriate age, between the ages of twelve or thirteen or older, the preceptor and student doctor may feel it beneficial to converse with the young patient privately [19]. If so, explain to the parent or guardian that they should please wait outside, being careful to avoid using an intimidating tone, as it may make the child feel nervous, fearful, or uncomfortable to speak. The young patient should be reassured that the purpose of any private conversation is to ensure his or her well-being; the patient should be encouraged to answer all questions honestly. The examiner should remain alert and make a note of any signs of reluctance or hesitation. Questions to ask could include: When did this happen?; How did this happen?; Who did this to you?; Did anyone hurt you?; and other pertinent questions.

### **Detecting abuse in the mentally-disabled child**

Detecting abuse and maltreatment in a child with a mental disability can pose a significant challenge to the practitioner [20]. Children living with intellectual and developmental disabilities may lack the ability to or demonstrate difficulty in properly communicating with and conveying information to a physician, nurse, or student doctor [20] on a one-to-one basis; hence, these children are often accompanied by a guardian to whom the questions must be addressed. Due to their inability to communicate adequately, such children are targeted for sexual and nonsexual abuse [20].

As a student doctor, it is crucial to detect any physical abnormalities in the patient during the examination, such as inappropriate bleeding, contusions, soreness around the genital or rectal areas, which can be signs indicative of rape and sexual molestation. If the patient is unable to communicate with clarity, it is advised to ask the patient questions that can be answered with a simple "yes" or "no" response. Approach the patient in a calm tone of voice and friendly disposition, to avoid making the patient feel uncomfortable in order to facilitate communication. Children with the inability to speak, due to mutism caused by congenital deafness, brain damage, or autism, should be approached in the same patient, calm, and gentle manner. If the child is unable to hear, it is best to have a translator to better communicate with the child via sign language.

### **Detecting abuse in the physically-disabled child**

Physically-disabled children can also fall victim to abuse [20]. Many children, born with congenital abnormalities or acquired a physical disability through trauma or accident, can pose a challenge to the student doctor or physician. Often, physically-disabled children suffer from sores acquired by being bedridden or from being stationary for extended periods. Bedsores should be considered as a possible sign of neglect. The attendant must perform a full-body examination to detect any signs that the child is not receiving proper care, given that these children are unable to care for themselves. It is essential to ask how often they are bathed and changed.

It is vital to observe the weight of a physically-disabled patient. Some children may be underweight because they are not being adequately fed and are malnourished. Performing a blood analysis can help in determining if a child lacks essential, specific nutrients.

### **Summary of the assessment of SCAN**

There are recognizable forms of child maltreatment involving intentionally-induced physical harm, sexual molestation, emotional trauma, and neglect resulting in the physical and psychological scarring of a child. The clinician's and student doctor's judgment must be astute, and the appropriate precautions must be taken to ensure the safety, health, and well-being of the child. It is beyond the scope of this paper to include images and photographic examples of child abuse and neglect. However, the reader, as a medical student or student doctor, is advised to attend a forensic medicine course or review this subject matter in more detail in subject-related textbooks and from online resources.

### The student doctor's duty to report suspected child abuse and neglect

If abuse or neglect is suspected, the student doctor is wise to report such SCAN to his or her preceptor and the appropriate authorities immediately [9]. The attending doctor or student doctor must be able to determine if a patient has been subjected to harm, keeping in mind that as a clinical caregiver, it is an assumed obligation to ensure the patient's health and well-being, first and foremost. When the safety of a child seems in jeopardy, all challenges and any objectives must be overcome to obtain the necessary evidence needed to treat the child appropriately and to remove them from the abusive environment.

However, medical students do not appear to be receiving adequate training as to their legal responsibilities and how to proceed when they encounter SCAN. Research has shown that medical professionals are not always aware of their legal obligations concerning child abuse and neglect, and medical students and student doctors are deficient in that regard. While healthcare providers often recognize clinical symptoms suggesting child abuse or neglect, they do not always know their legal or ethical obligations to report their findings or suspicions. This clinical conundrum is compounded in the medical student in that they may not consider themselves as mandated reporters and, for the most part, are not versed in how to report child maltreatment.

### Conclusion

Victims suffering physical or emotional trauma from child abuse or neglect are likely to present to a hospital, clinic, or healthcare center for treatment. However, recognizing and reporting SCAN is not currently an established or required part of the medical school curriculum. There are no generally-accepted and established guidelines or protocol for evaluating and reporting SCAN worldwide. This lack of official and standardized guidelines can prove problematic and confusing for the medical student entering clinical rotations and assuming the role of student doctor. A regular screening and reporting protocol for SCAN should be developed for medical students in clinical rotations (or residency), particularly in pediatrics, family medicine/general practice, and emergency medicine/urgent care. Hopefully, this elemental data and preliminary report will demonstrate the the lack of awareness and procedures regarding this fundamental, yet critical, issue and help spawn a constructive path forward without exception in identifying, treating, and assisting victims of child abuse and neglect, and for educating and training better future physicians.

### Conflict of Interest Statement

The authors declare that this paper was written in the absence of any commercial or financial relationship that could be construed as a potential conflict of interest.

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