

Child Physical Abuse Fundamentals in the Child Abuse Pediatrics Curriculum for Physicians (CAP-CuP)

Katie L. Johnson, MD*, Emily C. B. Brown, MD, MS, Caitlin E. Crumm, MD, MS

*Corresponding author: johnson.katie@mayo.edu

Abstract

Introduction: Child abuse is a highly prevalent yet undertaught condition in medical education. Many physicians feel underprepared to navigate conversations about mandatory reporting. **Methods:** We developed an interactive module for teaching pediatric clinicians about sentinel injuries and mandatory reporting. We evaluated the content by seeking qualitative and quantitative feedback from a large audience at a pediatric continuing medical education (CME) conference and then studied its educational impact using a pre- and postmodule assessment with residents from three specialties. Based upon audience and expert feedback, the content was then divided into two parts, with an expanded section on disproportionality in part one and popcorn-style role-play in part two. **Results:** In the CME audience, 98% of participants (85 of 87) rated the content and presentation skills as excellent or very good. In the resident presentations, there were 34 resident participants from three specialties: 24 from a combined audience of pediatric and emergency medicine residents and 10 from an audience of family medicine residents. Median confidence level increased in the pediatric and emergency medicine audience from 4 to 7 and in the family medicine audience from 5 to 7 on a 10-point scale. The median knowledge scores increased in both groups as well, from 75% to 100% and 25% to 100%, respectively. **Discussion:** This child physical abuse fundamentals module has been presented to a wide range of physician audiences with positive qualitative and quantitative feedback. It is offered here in an expanded two-part workshop that allows for intentional practice of the information taught.

Keywords

Child Abuse Pediatrics, Game-Based Education, Mandatory Reporting, Case-Based Learning, Child Abuse, Games, Pediatric Emergency Medicine, Pediatrics, Role-Play/Dramatization

Educational Objectives

By the end of this activity, learners will be able to:

1. Define the term *sentinel injuries* in the context of child abuse (part one).
2. Construct an appropriate management plan when a concern for nonaccidental trauma is identified (part one).
3. Describe at least two examples of disproportionality in child abuse evaluations in the United States (part one).
4. Navigate indications and mechanisms for mandatory reporting (part two).
5. Identify the best first question when opening a conversation about a mandatory report (part two).
6. Define NURSE (naming, understanding, respecting, supporting, exploring) statements and give two examples (part two).
7. Apply the skills learned to practice disclosing a mandatory report to a family (part two).

Introduction

Child physical abuse is undertaught in medical training,¹⁻⁶ which has significant ramifications for patients and families. Literature suggests that one-third of cases of abusive head trauma are missed by the first physician seen.^{7,8} Many of these infants are further injured or die before the abuse is recognized.⁸ Physicians feel underprepared to recognize subtle indications of child physical abuse¹ and to discuss mandatory reports with families.³ With the inadequate state of medical education on child abuse, it is unfortunate but unsurprising that there are disparities in child abuse evaluations at every stage of the process. Black children are more likely to be worked up, reported, investigated, and die from abusive injuries of the same severity than White

Citation:

Johnson KL, Brown ECB, Crumm CE. Child physical abuse fundamentals in the Child Abuse Pediatrics Curriculum for Physicians (CAP-CuP). *MedEdPORTAL*. 2025;21:11516. https://doi.org/10.15766/mep_2374-8265.11516

children.⁹⁻¹³ Black and American Indian/Alaska Native children are overrepresented in child welfare.¹⁴ Among cases of missed abusive head trauma, the ones most often missed (i.e., assumed to be nonabusive) are those of White infants with two parents present.⁸

Sentinel injuries are subtle, seemingly insignificant physical findings that are key early indicators of abuse.^{15,16} They include bruising, oral injuries, and subconjunctival hemorrhages in premobile infants and are considered red flags that should prompt medical providers to pursue a workup for nonaccidental trauma. Premobile infants do not have many ways of self-sustaining bruising, oral injuries, or subconjunctival hemorrhages due to their limited developmental capabilities, so when these injuries are present, nonaccidental trauma must be considered. Among infants less than 6 months with bruising, 50%-75% are ultimately determined to have been abused after multidisciplinary team review.¹⁷⁻¹⁹ Among infants less than 6 months with subconjunctival hemorrhages, 27% have concomitant bruising, 14%-46% have underlying injuries on skeletal survey, and 5%-15% have underlying intracranial hemorrhage (i.e., concern for abusive head trauma).^{20,21} Physicians and physicians-in-training may have difficulty reconciling the perception that “it is just a small bruise” with the need to file a mandatory report. When clinicians are unfamiliar with child injury data (e.g., 50%-75% of bruises in premobile infants are due to abuse), they may be vulnerable to acting based upon implicit bias; for example, they may be more hesitant to report if a family presents well (i.e., is of high socioeconomic status and education) or more likely to report if the caregiver has a substance use disorder or is of a minority race.²²

Thus, physicians must be equipped to identify and manage these injuries and confidently navigate the complexities of mandatory reporting. Sentinel injuries often prompt some of the most difficult conversations around mandatory reporting because the injuries appear small but are known to be of significant risk. For this reason, when teaching about the appropriate medical response to sentinel injuries, it is important to pair it with education about mandatory reporting. While most medical professionals know they are mandatory reporters, the specific roles of child protection and law enforcement in these cases are not always well understood by physicians. In addition, the act of disclosing a mandatory report to a family is insufficiently practiced in medical training.

There is a need to better prepare physicians who evaluate children to recognize and respond to child physical abuse. Previous *MedEdPORTAL* resources focusing on child physical

abuse involve cases of more critically injured children with multisystem injuries.²³⁻²⁵ These resources and others²⁶ emphasize the importance of mandatory reporting of child abuse but do not provide intentional practice in navigating these difficult, emotionally charged conversations. In their simulation debriefs, Ryan, White, Kiley, Reed, and Giordano observed that learners often want to focus on the social issues of the case once they feel comfortable with their medical management of the injured child. In part, we feel this is because the emotional toll of managing the family during a pediatric crisis is not typically addressed during training yet remains an important aspect of patient care for both the family and the physician.²³

Our interactive, two-part workshop on child physical abuse fundamentals and mandatory reporting offers three features that are unique compared to the prior literature. First, our workshop emphasizes subtle signs of child abuse as opposed to more clinically apparent multisystem injuries; second, it acknowledges disproportionality (i.e., overrepresentation of certain demographics) in child abuse evaluations at every stage of the process; and third, it offers an opportunity for intentional practice in a psychologically safe space for navigating the challenging conversations through popcorn-style role-play. The purpose of this workshop is to provide an interactive teaching tool appropriate for various physician audiences that covers some of the most fundamental yet nuanced aspects of child physical abuse.

Methods

We built this child physical abuse educational activity in 2022 as part of a fundamental child abuse curriculum for physicians at Mayo Clinic. The content was created by a child abuse pediatrician and incorporated scenarios based upon real, challenging cases encountered during child abuse pediatrics training. We created the material to be generalizable to presenters across the country, where child abuse statutes and institutional protocols differ. Because child abuse material is undertaught in medical training, this content is appropriate for all levels of physicians and physicians-in-training who see children (i.e., medical students, residents, and physicians in practice). It has also been presented to other pediatric practitioners such as nurses, nurse practitioners, emergency medical services first responders, and social workers.

Appendix A was initially created in three sections: (1) an overview of sentinel injuries, (2) a review of the nonaccidental trauma workup, and (3) practical tips for navigating difficult conversations

about mandated reporting. This is the structure reflected in the data in the Results, below. Based upon audience and expert feedback, the content on navigating difficult conversations was made into its own Appendix B with an opportunity for role-play, and Appendix A was expanded to cover disproportionality in more detail. The initial presentation took 45 minutes, whereas the current two-part format takes at least 90 minutes: 45 minutes for Appendix A and 45-60 minutes for Appendix B (depending on how many role-plays are facilitated). We prioritized interactive learning through audience-response questions, which were optimally implemented with the use of a quiz-based polling software such as *Kahoot!* or PollEverywhere, though polling software is not required for implementation. Appendix A can accommodate many formats of delivery: individual self-paced completion, small groups, and large audiences. Appendix B exists in a PowerPoint-only form because there are minimal audience-response questions; the participant engagement is primarily through popcorn-style role-play. We recommend facilitating Appendix B in small groups of five to 10 participants. We created a technical guide and script (Appendix C) to aid educators in presenting both Appendices A and B. The only materials needed are a computer and presentation screen, a pen and paper for taking notes during the role-play, and a clock for keeping time during the role-play.

To solicit qualitative and quantitative feedback about this educational activity, it was presented to a large audience of pediatric practitioners at a continuing medical education (CME) conference. Participants were asked to rate the practical value/content as well as the presentation skills on a 5-point Likert scale (1 = *poor*, 5 = *excellent*). Participants were also given the opportunity to provide qualitative feedback, including strengths and areas for improvement. This feedback was reviewed by the primary author and organized into themes based upon similarities in content. The feedback was used to improve the delivery format, specifically by expanding the content on difficult conversations and separating it into a part two with popcorn role-play.

This educational activity was also evaluated with residents from three different specialties using a pre- and postmodule knowledge and confidence assessment. The presentation was delivered by a child abuse pediatrician first to a combined audience of pediatric and emergency medicine residents and then to an audience of family medicine residents. The optional *Kahoot!* link for large groups—available in the title slide notes (Appendix A) and the technical guide (Appendix C)—was used for both presentations.

In the pre- and postmodule assessment, participants rated their confidence in identifying sentinel injuries and discussing a mandatory report with a family on a 10-point scale (1 = *not at all confident*, 10 = *completely confident*). They were then asked four knowledge questions that challenged them to identify a sentinel injury from a list of descriptions, to identify the need to report a sentinel injury, to formulate an appropriate nonaccidental trauma workup for an infant with bruising, and to identify best practices in disclosing a mandatory report to a family (Appendix D, questions 2, 3, 4, 6).

The pre- and postmodule assessment included real case scenarios that challenged participants to think through their initial reporting and medical workup recommendations. The specific outcomes of these cases were withheld until the end of the presentation, by which time the participants had been presented with literature about sentinel injuries and given the opportunity to formulate workup recommendations. The intention behind withholding case outcomes until after the postmodule assessment was to evaluate learning in the absence of knowledge about the case outcomes and to solidify at the conclusion of the presentation the impact of potential missed abuse.

Descriptive statistics were calculated including the median and interquartile range (IQR) of the confidence-level question and the median percentage of correct responses by participants to the knowledge questions. Because participation was voluntary and anonymous, the number of responses to individual questions varied, and so, we were unable to perform subgroup analyses of the combined pediatric and emergency medicine resident audience. This study was approved by the Institutional Review Board and the Education Research Committee at Mayo Clinic.

Results

In the CME conference, there were 110 survey respondents from a multidisciplinary audience of 68% physicians ($n = 75$), 15% nurse practitioners ($n = 17$), 7% physician assistants ($n = 8$), 5% nurses ($n = 6$), and 4% other health care professionals ($n = 4$). From this group, 79% ($n = 87$) responded to the surveys about the content and presentation skills, and 98% of these respondents (85 of 87) rated both as excellent or very good. In the space for qualitative feedback, 25 participants provided open-ended comments regarding strengths of the presentation. Only one comment represented an area for improvement (asking for more script examples). We separated the qualitative feedback into themes accompanied by illustrative quotations (Table).

Table. Qualitative Feedback From CME Conference

Feedback Theme	Illustrative Quotations
Tone (e.g., psychological safety, inclusivity)	<ul style="list-style-type: none"> • “Tough topic, very well-handled.” • “Very sensitive handling of terrible injuries.” • “It is also important to possess the necessary tools to address the abuse suspicion with [families]. I believe this was very well communicated here.” • “Very empathetic and knowledgeable.” • “I really appreciated the variety of ways [the speaker] discussed how important it is to address this and to fight against our implicit biases.”
Presentation style	<ul style="list-style-type: none"> • “Appreciate the opening statement: ‘This can be tough to listen to.’” • “[This presentation] was so excellent. A difficult to discuss topic but so important.... I do think [the] question/cases were the best so far in the [conference]. I loved [the] use of word clouds as well.” • “Enjoyed the combination of interaction and really important information.” • “I really liked the questions and audience involvement.” • “Very well-delivered.” • “Great pictures.” • “Liked the slide showing the doctor with her head in her hands after talking to the family; sometimes it goes badly and it’s not because of us.”
Clinical application	<ul style="list-style-type: none"> • “Important and well-presented information. One of the best lectures of the conference!” • “Difficult topic—clear presentation of sentinel [injuries] and approach to manage them. Will affect how I practice.” • “Good review of an important, difficult topic. Helpful to hear how to talk to parents about reporting.” • “Very pertinent with some great take-home points.” • “Good pointers for primary care.” • “Information was relevant to my practice.” • “I was updated on what to do at what age and why. Very clear and very helpful.” • “More examples of potential scripting for that difficult conversation.”
Areas for improvement	

The feedback was used to enhance the delivery format with additional scripts and role-play.

In the evaluation with the pre- and postmodule evaluation, there were a total of 34 resident participants: 24 from the combined audience of pediatric and emergency medicine residents and 10 from the audience of family medicine residents. Before the module, pediatric and emergency medicine residents rated their confidence in identifying sentinel injuries and discussing a mandated report with a family at a median score of 4 (IQR: 3.00-5.25); after the module, self-rated confidence increased to a median score of 7 (IQR: 7.00-8.00; [Figure 1](#)). Among the family

medicine residents, these metrics were 5 (IQR: 4.25-5.75) and 7 (IQR: 7.00-8.00), respectively ([Figure 2](#)).

For the knowledge questions, the median participant score increased for both audiences. In the pediatric and emergency medicine resident audience, the median premodule knowledge score was 75% (IQR: 46%-75%), and the median postmodule score was 100% (IQR: 75%-100%; [Figure 3](#)). In the family medicine resident audience, these metrics were 25% (IQR: 0%-25%) and 100% (IQR: 75%-100%), respectively ([Figure 3](#)). Question 3, which asked participants to identify the need to

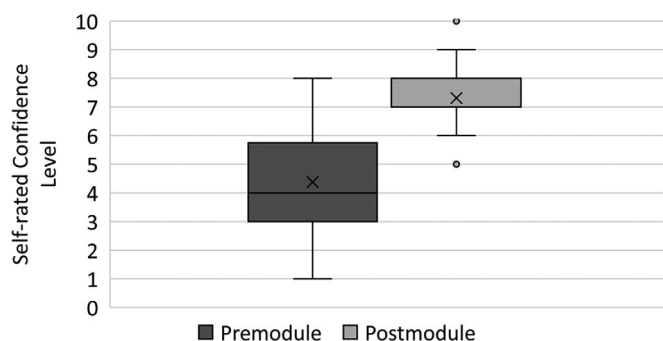


Figure 1. Pediatric and emergency medicine residents' self-rated confidence level in identifying sentinel injuries and discussing a mandated report in the pre- versus postmodule assessments. The median confidence level increased from 4 (IQR: 3.00-5.25) to 7 (IQR: 7.00-8.00). The mean (X) increased from 4.4 to 7.3. The whiskers extend to a maximum of one IQR below the 1st quartile and one IQR above the 3rd quartile, with outliers beyond these ranges indicated by dots.

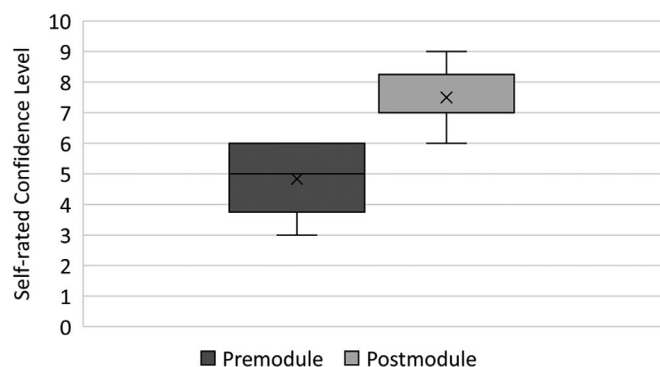


Figure 2. Family medicine residents' self-rated confidence level in identifying sentinel injuries and discussing a mandated report in the pre- versus postmodule assessments. The median confidence level increased from 5 (IQR: 4.25-5.75) to 7 (IQR: 7.00-8.00). The mean (X) increased from 4.8 to 7.5. The whiskers extend to a maximum of one IQR below the 1st quartile and one IQR above the 3rd quartile, with outliers beyond these ranges indicated by dots.

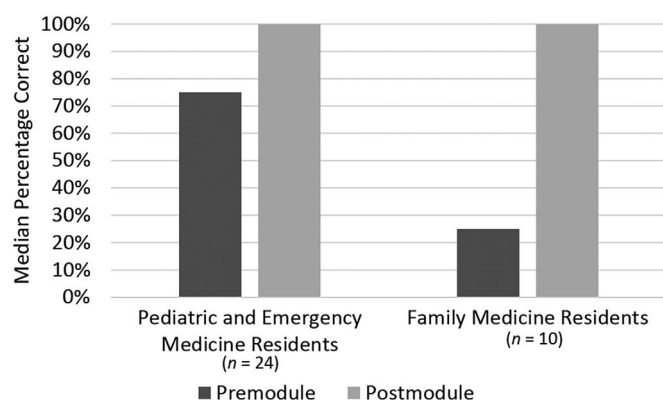


Figure 3. Residents' performance on knowledge-based questions in pre- versus postmodule assessments.

report a sentinel injury, demonstrated significant improvement in both audiences. The 100% postmodule response in both groups was consistent with what has been observed in various ongoing audiences for this module. In other words, essentially every participant who completes this module comes away with an understanding that a bruise in a premobile infant requires a mandatory report.

Discussion

This interactive, two-part workshop on child physical abuse fundamentals, including critical knowledge about sentinel injuries, disproportionality, and mandatory reporting, has been positively received by a wide range of physician and multidisciplinary audiences. Pre- and postmodule assessments demonstrated notable increases in residents' confidence and knowledge regarding this important topic. This education is critical for physicians not only because sentinel injuries are subtle, high-risk, and undertaught in medical training but also because the cognitive dissonance and implicit bias inherent in navigating these cases have potential to perpetuate disparities. This interactive module adds to the prior literature on medical education about child abuse²³⁻²⁶ by bringing a focus on the more subtle signs of child abuse, by offering practical skills for navigating difficult conversations with families about mandatory reporting, and by addressing directly the disproportionality relevant to these cases. By empowering frontline physicians with the knowledge, perspective, and skills to approach these cases in a consistent and equitable way, we hope this module will support the safeguarding of children and mitigation of bias in cases of suspected child abuse.

Lessons learned from this project included strategies for summarizing literature and best practices in a generalizable way. For example, the literature on bruising in premobile infants

contains a fair proportion of indeterminate outcomes (about 25%), so careful discussion was had amongst the author team regarding how to best present this information in a way that communicated serious risk while remaining transparent about the unknown. The data from multiple studies were combined to produce what we felt was an accurate and transparent summary of the evidence.¹⁷⁻¹⁹ In addition, processes for mandated reporting and involvement of child protective services and law enforcement differ across the country, so careful attention was paid to presenting reporting recommendations in a way that would apply to all states and institutions. Moreover, various phrases and labels were used to refer to child protective services or county social services to reflect variations in language across the country. The generalizable intent of these variations was acknowledged in the presenter script.

Limitations of this study include its small sample size ($n = 34$) from three specific specialties (i.e., pediatrics, emergency medicine, family medicine) and specific level of training (i.e., residents) at a single institution. The positive feedback from the large multidisciplinary CME conference, however, supports generalizability and accessibility of the material. We were unable to perform a subgroup analysis of the residents from the combined pediatric and emergency medicine resident audience due to participant anonymity and acknowledge that short-term recall and self-rated confidence are relatively weak forms of assessment. The longitudinal impact of this module on clinical practice remains unknown. The participants in this study represent a small sample of the various audiences and formats in which this module can be used, meaning there are opportunities for further study and ongoing data collection to assess impact on clinical practice.

Next steps may include studying the long-term retention of material taught in this module as well as clinical application. This could be accomplished, for example, through the implementation of a simulation activity 6 months after the workshop requiring residents to recognize a sentinel injury, file a mandatory report, and disclose the report to the family. Lastly, expanding the audience for this module to medical professionals in urgent cares and emergency departments across the country—particularly those staffed with nonpediatric emergency medicine trained providers—could maximize its educational impact.

Appendices

- A. Child Physical Abuse Fundamentals.pptx
- B. Transforming Knowledge Into Practice.pptx

C. Technical Guide and Script.docx

D. Assessment.docx

All appendices are peer reviewed as integral parts of the Original Publication.

Katie L. Johnson, MD: Assistant Professor, Department of Pediatrics, Mayo Clinic; ORCID: <https://orcid.org/0000-0002-6388-489X>

Emily C. B. Brown, MD, MS: Assistant Professor, Department of Pediatrics, University of Washington School of Medicine

Caitlin E. Crumm, MD, MS: Assistant Professor, Division of Pediatric Emergency Medicine, Seattle Children's Hospital

Acknowledgments

The authors would like to thank Dr. Angela Mattke for providing the continuing medical education conference data reported in this publication.

Disclosures

None to report.

Funding/Support

None to report.

Ethical Approval

The Mayo Clinic Education Research Committee and Institutional Review Board reviewed this project.

Disclaimer

The views expressed in this publication are the authors' own and not an official position of the institutions for which they work.

References

1. Anderst J, Dowd MD. Comparative needs in child abuse education and resources: perceptions from three medical specialties. *Med Educ Online*. 2010;15(1):5193. <https://doi.org/10.3402/meo.v15i0.5193>
2. Menoch M, Zimmerman S, Garcia-Filion P, Bulloch B. Child abuse education: an objective evaluation of resident and attending physician knowledge. *Pediatr Emerg Care*. 2011;27(10):937-940. <https://doi.org/10.1097/PEC.0b013e3182307ae5>
3. Lupariello F, Capello F, Grossi V, Bonci C, Di Vella G. Child abuse and neglect: are future medical doctors prepared? *Leg Med (Tokyo)*. 2022;58:102100. <https://doi.org/10.1016/j.legalmed.2022.102100>
4. Christian CW. Professional education in child abuse and neglect. *Pediatrics*. 2008;122(suppl 1):S13-S17. <https://doi.org/10.1542/peds.2008-0715f>
5. Narayan AP, Socolar RRS, St Claire K. Pediatric residency training in child abuse and neglect in the United States. *Pediatrics*. 2006;117(6):2215-2221. <https://doi.org/10.1542/peds.2006-0160>
6. Arnold DH, Spiro DM, Nichols MH, King WD. Availability and perceived competence of pediatricians to serve as child protection team medical consultants: a survey of practicing pediatricians. *South Med J*. 2005;98(4):423-428. <https://doi.org/10.1097/01.SMJ.0000157561.22406.F7>
7. Letson MM, Cooper JN, Deans KJ, et al. Prior opportunities to identify abuse in children with abusive head trauma. *Child Abuse Negl*. 2016;60:36-45. <https://doi.org/10.1016/j.chiabu.2016.09.001>
8. Jenny C, Hymel KP, Ritzen A, Reinert SE, Hay TC. Analysis of missed cases of abusive head trauma. *JAMA*. 1999;281(7):621-626. <https://doi.org/10.1001/jama.281.7.621>
9. Falcone RA Jr, Brown RL, Garcia VF. Disparities in child abuse mortality are not explained by injury severity. *J Pediatr Surg*. 2007;42(6):1031-1037. <https://doi.org/10.1016/j.jpedsurg.2007.01.038>
10. Vazquez S, Das A, Spirollari E, et al. Patterns for child protective service referrals in a pediatric burn cohort. *Cureus*. 2024;16(1):e51525. <https://doi.org/10.7759/cureus.51525>
11. Hymel KP, Laskey AL, Crowell KR, et al; Pediatric Brain Injury Research Network (PedBIRN) Investigators. Racial and ethnic disparities and bias in the evaluation and reporting of abusive head trauma. *J Pediatr*. 2018;198:137-143.e1. <https://doi.org/10.1016/j.jpeds.2018.01.048>
12. Luken A, Nair R, Fix RL. On racial disparities in child abuse reports: exploratory mapping the 2018 NCANDS. *Child Maltreat*. 2021;26(3):267-281. <https://doi.org/10.1177/10775595211001926>
13. Thomas MMC, Waldfogel J, Williams OF. Inequities in child protective services contact between Black and White children. *Child Maltreat*. 2023;28(1):42-54. <https://doi.org/10.1177/10775595211070248>
14. Child Maltreatment 2023. Children's Bureau. Accessed March 25, 2025. <https://acf.gov/sites/default/files/documents/cb/cm2023.pdf>
15. Petska HW, Sheets LK. Sentinel injuries: subtle findings of physical abuse. *Pediatr Clin North Am*. 2014;61(5):923-935. <https://doi.org/10.1016/j.pcl.2014.06.007>
16. Sheets LK, Leach ME, Koszewski IJ, Lessmeier AM, Nugent M, Simpson P. Sentinel injuries in infants evaluated for child physical abuse. *Pediatrics*. 2013;131(4):701-707. <https://doi.org/10.1542/peds.2012-2780>
17. Crumm CE, Brown ECB, Thomas-Smith S, Yu DTY, Metz JB, Feldman KW. Evaluation of an emergency department high-risk bruising screening protocol. *Pediatrics*. 2021;147(4):e2020002444. <https://doi.org/10.1542/peds.2020-002444>
18. Feldman KW, Tayama TM, Strickler LE, et al. A prospective study of the causes of bruises in premobile infants. *Pediatr Emerg*

- Care. 2020;36(2):e43-e49.
<https://doi.org/10.1097/PEC.0000000000001311>
19. Harper NS, Feldman KW, Sugar NF, Anderst JD, Lindberg DM; Examining Siblings to Recognize Abuse Investigators. Additional injuries in young infants with concern for abuse and apparently isolated bruises. *J Pediatr*. 2014;165(2):383-388.e1.
<https://doi.org/10.1016/j.jpeds.2014.04.004>
20. Koti AS, Crichton KG, Liker K, Hashmi Z, Thackeray JD. Occult injury screening among infants with subconjunctival hemorrhage. *J Pediatr Ophthalmol Strabismus*. 2021;58(4):213-217.
<https://doi.org/10.3928/01913913-20210201-02>
21. DeRidder CA, Berkowitz CD, Hicks RA, Laskey AL. Subconjunctival hemorrhages in infants and children: a sign of nonaccidental trauma. *Pediatr Emerg Care*. 2013;29(2):222-226.
<https://doi.org/10.1097/PEC.0b013e318280d663>
22. Letson MM, Crichton KG. How should clinicians minimize bias when responding to suspicions about child abuse? *AMA J Ethics*. 2023;25(2):E93-99. <https://doi.org/10.1001/amajethics.2023.93>
23. Ryan M, White P, Kiley S, Reed H, Giordano C. Managing the complex issues of pediatric nonaccidental trauma: a simulation-based case of a critically injured child. *MedEdPORTAL*. 2017;13:10599.
https://doi.org/10.15766/mep_2374-8265.10599
24. Metz J, Stone K, Reid J, Burns R. Pediatric Boot Camp series: infant with altered mental status and seizure—a case of child abuse. *MedEdPORTAL*. 2017;13:10552.
https://doi.org/10.15766/mep_2374-8265.10552
25. Beattie L, Ryan M, Rowe J, Mazin R. A pediatric death from non-accidental trauma. *MedEdPORTAL*. 2015;11:10064.
https://doi.org/10.15766/mep_2374-8265.10064
26. Sonney J, Willgerodt M, Lindhorst T, Brock D. Elizabeth: typical or troubled teen? A training case for health professionals to recognize and report child maltreatment. *MedEdPORTAL*. 2018; 14:10712. https://doi.org/10.15766/mep_2374-8265.10712

Received: August 29, 2024

Accepted: February 24, 2025

Published: April 22, 2025