

MONTHLY FEATURE CPG SOPR SUMMARY

CPG Citation: Mitchell IC, Norat BJ, Auerbach M, *et al.* Identifying Maltreatment in Infants and Young Children Presenting with Fractures: Does Age Matter? Acad Emerg Med 2021 Jan;28(1):5-18.

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Scope of Guideline: This guideline is intended for practitioners/facilities who evaluate injured children for potential child abuse.

Key Words: Child abuse, fractures, risk stratification.

Key Recommendations: *Each recommendation is accompanied by the “strength” of recommendation and the level of evidence (LoE) supporting that recommendation*

Recommendations	Strength, LoE
FOR Clinical Action In children presenting to a health care facility with a rib fracture , who were not in an independently verified incident, we strongly recommend routine child abuse evaluations for patients younger than 3 years of age.	Strong; Moderate LoE
In children presenting to a health care facility with a humeral fracture , who were not in an independently verified incident, we strongly recommend routine child abuse evaluations for patients younger than 18 months of age.	Strong; Moderate LoE
In children presenting to a health care facility with a femoral fracture aged less than 18 months, who were not in an independently verified incident, we strongly recommend routine evaluation to identify child abuse.	Strong; Moderate LoE

Benefits of Recommendations:

These recommendations can raise the likelihood of finding infant/young child victims of child abuse, and intervening in order to address acute injuries during index ED visit, and worse future outcomes (ie. critical injury, death).

In this review, the **presence of rib fractures in children <3yo was associated with a 96% incidence in child abuse determination.**

For **children <18mo with a humeral fracture, the abuse incidence was 48%.**

Finally, in children with **femoral fractures, the incidence of abuse was 34% (<12mo) and 25% (<18mo).**

There are likely racial, gender and other socioeconomic biases that may influence differential screening of injured children for actual abuse. For example, more complete abuse evaluations is more likely to occur in African-American or lower SES populations, whereas they are more likely to be overlooked in Caucasian and higher SES encounters. The implementation of routine complete abuse evaluations in children with these fractures could obviate some of these.

These guidelines were developed as a collaborative initiative between the Pediatric Trauma Society (PTS), Eastern Association for the Surgery of Trauma (EAST), and RE Helper Society (Child Abuse Pediatrics). These recommendations complement the 2015 AAP Child Abuse and Neglect position statement (PDF available for download at <https://pediatrics.aappublications.org/content/pediatrics/135/5/e1337.full.pdf>)

Harms/Adverse Effects of Recommendations:

Routine screening of injured for child abuse will potentially lead to increased stress in parents/caregivers, and may lead to excessive use of imaging resources and radiation exposures. Parents/caregivers could be reassured that progression to routine complete abuse screening is in the child's (and presumably parents/caregivers) best interests.

Reporting of suspected/detected child abuse will also create stress/upset for parents/caregivers, but the physical safety/wellbeing of the child is generally paramount, and legally required of ED staff.

There was insufficient evidence to inform recommendations for other fractures (forearm, hand, lower leg, foot).

Barriers to Uptake: There may be some resource issues around routine complete child abuse screening in smaller community ED's that lack pediatrics consultation support. There also be reluctance to complete Xray skeletal surveys on infants/young children, but this cannot be in impediment to being thorough in evaluating/protecting children at risk. Finally, ED clinicians need to have a clear appreciation of injuries that are suggestive of child abuse, especially those inconsistent with developmental milestones.

There is no reported participation of parents/child caregivers in this guideline project which, given the significant sensitivity of the clinical topic, would have been critical to ensure patient priorities, values/preferences and equity considerations (GRADE Evidence-to-Decision framework).

Facilitators of Uptake: Emergency departments of any size should have policies/protocols in place to address the evaluation & management of potential child abuse victims, either in-hospital or to local pediatric EDs with appropriate child protection services.

Concerns re: imaging radiation of complete skeletal surveys may be partially obviated with the growing role of ED point-of-care ultrasound (POCUS), which has shown diagnostic characteristics for detecting various skeletal fractures (long bone, distal radius, infant skull). There are no know official recommendations (yet) regarding replacing complete Xray skeletal surveys with ED POCUS.

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Grading System Used: GRADE system

Institute of Medicine 2011 Trustworthiness Standards

Rating Domain	Rating (Good/Fair/Poor)
Establishing transparency	Good
Managing conflict of interest in CPG development group	Good
Group composition (range of stakeholders involved)	Good
Critical evaluation of supporting evidence	Good
Framing recommendations based on supporting evidence	Good
Clear articulation of recommendations	Fair
External review by relevant stakeholders/ organizations	Poor
Updating schedule	Poor
Implementation issues	Fair

