Pediatric Suspected Physical Abuse

Medical Evaluation of Suspected Physical Abuse and Occult Injury
Child referred for this reason or child presenting with historical or physical features associated with physical abuse; see Table 1 & 2 (page 2)

Complete H&P
Include a FULL SKIN EXAM – Wearing only gown and with careful attention to TEN-4 FACES – P (Page 3)
Obtain a private history of injury from the child if verbal

Historical or Physical indications of possible physical abuse See Table 1 & 2 (page 2)

YES

- *Document* H&P findings
- Measure and diagram and/or photograph any skin injuries
- Address non-abuse related medical evaluation
- *Notify* the **state child abuse hotline/DCFS**. (page 4)
- Assess for occult injury depending on age

NO

- Document history and physical exam findings
- Communicate with referring provider or agency
- Consider any safety concerns

If further follow up or review is needed inform the Child Protection Team 708-520-SAFE

Under 12 months

- Skeletal survey
- Non-contrast head CT w/ 3D rendering if under 6 months or indicated by hx/exam. Extend to 12 months if there is facial/head injury or any fracture identified.
- CBC, CMP, Lipase, U/A
- Coags if any bruising/bleeding Consider abdominal CT with IV contrast for ↑lipase, AST or ALT >80, unexplained anemia, or abnormal exam

12-24 months

- Skeletal Survey
- CBC, CMP, Lipase, U/A
- Coags for any bruising/bleeding
- Abdominal CT with IV contrast for ↑lipase, AST or ALT>80, unexplained anemia or abnormal exam
- Consider head CT and 3D rendering based on history & exam

Over 2 years

- Imaging and labs based on history and exam
- Consider skeletal survey and if patient is developmentally delayed or small for age
- Consider labs if patient has history or finding of physical injury or is under 5 years

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E. Siffermann, N. Tran, N. Johnson	Child Protective Services	May 2021	April 2025

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TABLE 1: INJURIES ASSOCIATED WITH CHILD PHYSICAL ABUSE

Skin/Soft tissue injury	Any bruising, laceration, abrasion under the age of 6 months or in a non-ambulatory child TEN-4 bruising: Bruising of the torso, neck, ears in a child under 4 years and no confirmed explanatory accidental trauma (See Page 3) Injury on protected areas of the body Patterned injuries (single or repeated in the shape of an object, loop, hand or bite)
Head/face/eye	-Retinal Hemorrhages -Oral injury such as torn frenula in non-ambulatory child -Unexplained subconjunctival hemorrhage outside of the newborn period -Unexplained scalp injury or skull fracture -Intracranial hemorrhage in the absence of known accidental major trauma
Skeletal Injury	-Any extremity fracture under the age of 12 months or without a history to explain the injury -Unexplained skull fractures -Injuries with high specificity for abuse • *Metaphyseal* • *Rib* • *Scapular* • *Sternum* -Injuries with a moderate specificity for abuse • *Multiple fractures* • *Fractures of different ages* • *Epiphyseal separations* • *Vertebral body fractures/subluxation* • *Digital fractures*
Burns	Multiple On protected areas of the body Immersion (buttocks, extremities, circumferential, uniform depth and clear lines of demarcation) Patterned contact burns

TABLE 2: HISTORICAL RED FLAGS INDICATING POSSIBLE CHILD PHYSICAL ABUSE

- Changing, absent or vague history of injury
- History not consistent with injury pattern, age or severity
- History not consistent with child's developmental ability
- Delay in seeking care
- Major injury attributed to another child
- Previous inflicted injury
- Injury in the setting of interpersonal violence
- Sibling to a child with suspected abusive injuries

TABLE 3: EXCEPTIONS

In the following scenarios and when there are no other indicators of maltreatment, one can consider forgoing an occult injury evaluation:

- Simple skull fracture after a well described fall in a child over 6-12 months of age
- Toddler fracture (distal tib/fib fracture) associated with fall in a newly ambulating child
- Distal forearm torus/buckle fracture after a fall on an outstretched hand

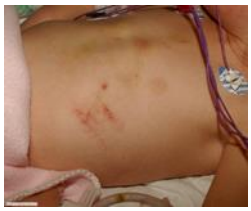
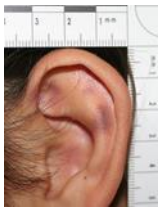
TABLE 4: ADDITIONAL EVALUATION TO CONSIDER

- If isolated bruising/bleeding and prior to transfusion: Coags, CBC, Factor 8/9, Von Willebrand Factor Ag and Activity (DIC panel depending on clinical presentation)
- If osteopenia or risks for poor bone health: Alk phos, Vit D250H, PTH, Ca, Phos, Mg
- In cases of suspected abusive head trauma with intracranial hemorrhage, recommend prompt eye exam and MRI brain and whole spine, the timing of which should be based on clinical need and discussion with neurosurgery.
- For children under 2 with an injury likely to be from abuse, a skeletal survey should be repeated in 2 weeks.

TEN-4 FACES-P

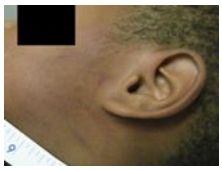
Bruising characteristics predictive of abuse:

- Bruising on the
  - **T**orso
  - **E**ars
  - **N**eck
  - In a child under 4 years
- Bruising under 4.99 months of age

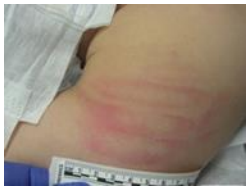



Additional observations and areas to inspect:

- Injury to the
  - **F**renula
  - **A**ngle of the jaw
  - **C**heeks (fleshy)
  - **E**yelid
  - **S**ubconjunctiva


- Skin injury with a **P**attern (loop, bite, object, hand, cluster)

- Pierce MC, et al. Bruising characteristics discriminating physical child abuse from accidental trauma. Pediatrics. 2010;125:67-74.
- Pierce MC, et al. Validation of a clinical decision rule to predict abuse in young children based on bruising characteristics. JAMA Netw Open, 2021;4(4)
- Photos from AAP Visual Diagnosis of Child Abuse, 4th edition, 2016.

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Useful Resources and Telephone Numbers:

Hotline numbers:

Illinois 1-800-25-ABUSE
Indiana 1-800-800-5556
Wisconsin https://dcf.wisconsin.gov/reportabuse (# based on county)

Members of the clinical team should be made aware of the DCFS report and the following should be documented in EMR:

- The concern or information reported to the hotline
- Intake ID# and name of person receiving the information at the DCFS hotline
- Any other information provided by the hotline (taken for investigation, as information only; or if taken as action needed.)

It is usually beneficial to notify the parent/guardian when there is suspicion of maltreatment and when state child protection (DCFS) will be notified; appropriate exceptions exist and should be considered on a case-by-case basis. The following is an example of an approach to use when talking with a family:

Example Communication Strategy:

> "Anytime a child of this age comes to the hospital with this type of injury, we evaluate for other injuries that can't be detected by history and physical exam alone. The standard testing includes ____." And/or "We are mandated to report this type of injury to the Department of Children and Family Services due to the possibility of abuse. We will keep you informed of the information shared and the results of the medical evaluation today."

Addressing Bias:

Racial disproportionality exists within the child welfare system including at the time of the initial report. While the healthcare provider cannot address all the complex structural and systemic factors that contribute to disproportionality, self-reflection about decision making can mitigate bias. Consider a time out to address these questions with the care team during abuse related decision making:

Why do I suspect abuse?
What is the objective evidence of abuse?
Am I relying on a gut feeling?
If the family is like me or unlike me, is that effecting my decision?

The Advocate Children's Hospital Child Protection Team:

Notification of the CPT is recommended for the following Advocate Children's Hospital **inpatients**:

- Serious head injury under the age of 2 (skull fracture, ICH)
- Fractures under the age of 2
- Non-mobile children with bruises, oral injuries
- Any child with unexplained, excessive or patterned injury or with injury that has been reported to DCFS
- Any child with a new disclosure of sexual abuse or any prepubertal child with an STI
- Any other concern for abuse or neglect including suspected human trafficking, medical neglect, medical child abuse, and some instances of FTT

The ACH Child Protection Team is available 6a – 6p and on most weekends to discuss cases.
Availability can be found in PerfectServe by searching "Child protection" in the directory.
Non-urgent messages can be left for the team at 708-520-SAFE

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