BOTTOM LINE RECOMMENDATIONS

Physical Child Abuse

Children under 3 years of age are at highest risk for serious injuries from abuse. Being alert to findings that suggest abuse will improve early recognition and prevent recurrent, escalating abuse. The extent of the workup performed in the emergency department (ED) will vary based on geography, acuity of injury, and services available. Early consultation with a Pediatric Referral Centre or child protection team is recommended.[1]

RED FLAGS

HISTORY[2]

- Serious injury without a history of significant trauma
- Insufficiently explained delay in seeking care for a child with a clear injury
- History that is inconsistent between caregivers and/or with the child's developmental abilities
- Exposure to other family violence (intimate partner violence, child abuse, elder abuse, animal abuse)
- Serious injury attributed to a young child or pet
- Concern for abuse identified by routine screening or clinical decision tool

BRUISES/BURNS/FACIAL INJURIES (Most Common Findings in Abuse)

- Accidental injuries usually occur over bony prominences and on anterior body surfaces
- Any bruise in an infant up to 4 months and 30 days old, even if minor in appearance (sentinel injury)[3]
- A bruise in a child <4 years old of: Torso, Ears, Neck, Frenulum, Angle of the jaw, Cheeks (soft part), Eyelids or Subconjunctivae or Patterned **(TEN-4 FACESp)**[3]
- Burns whose pattern suggests an implement or immersion

FRACTURES (See TREKK Fracture Recommendations)

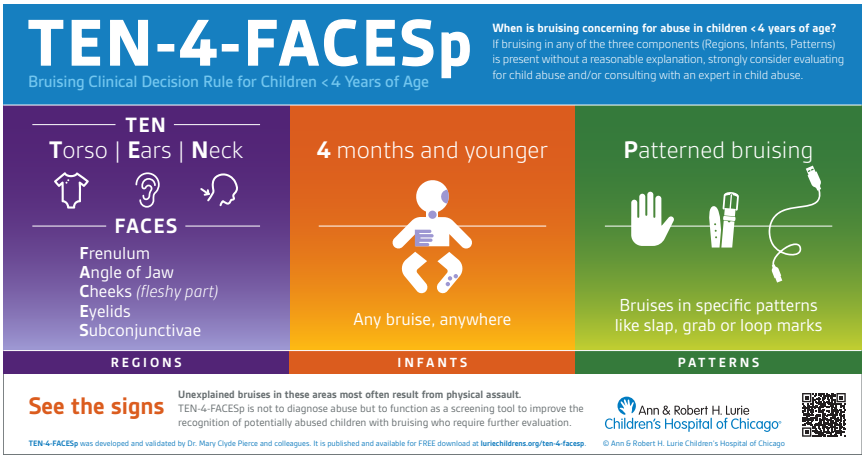
- Any fracture in a non-ambulatory child
- Humeral or femoral fracture in a child <18 months old[4]
- Rib fracture in a child <3 years old[4]
- Classic metaphyseal fracture of the long bones in the arms or legs of an infant
- Fractures in different stages of healing
- Fracture of spine, hands/feet, pelvis, scapula, sternum, without history of significant trauma

HEAD INJURIES[5] (See TREKK Severe Head Injury Recommendations)

- High risk symptoms: apnea, altered mental status, seizure without a fever
- High risk signs: scalp swelling/deformity, bruise in young infants (<6 months old)
- Intracranial injury without history of trauma or medical explanation
- Abusive head trauma can be present even without typical symptoms of head injury
- Subdural hemorrhage is the most common intracranial finding in abuse

OTHER INJURIES

- Abdominal, thoracic, and spinal injuries also occur with abuse; they are concerning for abuse when there is no clear mechanism of injury



EVALUATION AND MANAGEMENT OF SUSPECTED PHYSICAL CHILD ABUSE

INITIAL EVALUATION/MANAGEMENT

- Stabilize, evaluate, and treat all injuries according to trauma protocols (See **TREKK Multisystem Trauma Recommendations**)
- Obtain a good history by asking open-ended questions
- Is a history of trauma provided?
  - Yes - ask about the mechanism, timing, preceding circumstances, and who was present; note the onset/timing of child's signs and symptoms after the incident
  - No - ask about when the child was last well and when signs and symptoms were first noted
- Perform a complete physical exam including a head-to-toe skin assessment, paying close attention to TEN-4-FACESp areas (see above) and genitalia
- Plot height, weight, and head circumference (<2 years old) on a growth chart

REPORTING OF SUSPECTED ABUSE TO A CHILD PROTECTION SERVICES AGENCY

- Medical professionals in the US and Canada are mandated by law to report cases of suspected abuse to a child protection services agency
- The duty to report is based on having reasonable concern that a child has been or is at risk of being abused; a definitive **diagnosis of abuse is not required**
- The report should include: the age of the child; why or how the child presented; what injuries the child sustained; why you are concerned about abuse; your level of concern for abuse
- A standardized approach to child abuse, including clinical decision support, evidence-based tools/guidelines and peer review should be used to mitigate bias[6]

COMMUNICATION WITH FAMILY/CAREGIVERS

- Communicate objective findings or concerns of abuse with caregivers in a non-judgmental, empathic manner
- Use statements that reassure the family that the focus is on doing what is right for their child and that a uniform approach is taken to all children with concerning injuries
- It is not the role of medical professionals to determine the perpetrator of abuse

WORKUP FOR SUSPECTED ABUSE[7,8,9]

Initial Work-up May Include	Additional Work-up (Pediatric Referral Centre)
Urgent neuroimaging (CT head without contrast and with 3D reconstruction or fast MRI, if available) • Any child with signs or symptoms of head and/or spine trauma or infants with other injuries highly concerning for abuse • Well-appearing infants from 30 days up to 1 year of age with high-risk signs and symptoms (Pittsburgh Infant Brain Injury Score (PIBIS) >2)[9] • The PECARN traumatic brain injury tool does **NOT** apply when concerned about abuse • Skull x-rays and head ultrasound are **NOT** helpful to rule out abuse	**Skeletal survey** • Indicated in children <2 years old with concern for physical abuse This includes 20+ dedicated x-ray views • Survey should be performed by experienced technicians and read by a pediatric radiologist
AST/ALT in children with significant injury OR high concern for abuse • If AST or ALT >80 IU/L obtain abdominal CT with IV contrast CBC and coagulation studies	Dilated retinal exam by ophthalmologist • Indicated when imaging reveals head injury from suspected abuse • Not an adequate screen for underlying head injury
Urine toxicology • If altered or loss of consciousness	Bone fragility evaluation in consultation with Pediatric Referral Centre

DISPOSITION

- Children may be discharged home if: they are medically stable; there is a plan for safe disposition made in conjunction with child protection services agency and, if indicated, Pediatric Referral Centre; if needed, plan for arranging follow-up testing/hand off to Pediatric Referral Centre and/or primary care provider
- Reporting to child protection services should be completed prior to disposition unless the child is unstable
- If unable to complete the above requirements, admit or transfer to a Pediatric Referral Centre

FOR A FULL LIST OF REFERENCES AND DEVELOPMENT TEAM MEMBERS, PLEASE SEE THE FOLLOWING PAGE.

Physical Child Abuse

BOTTOM LINE RECOMMENDATIONS

Bottom Line Recommendations are short summaries for healthcare providers of the latest knowledge related to the diagnosis and management of pediatric emergency conditions. This resource is not intended to be used as a step-by-step guide. It is ideal for educational purposes and to summarize existing evidence on suspected physical child abuse in pediatric emergency care. Development of this resource involved a rigorous and iterative process, bringing together experts from a variety of specialties (nursing, emergency medicine, and pediatric care). To learn more about the development, see the References & Development Team section below.

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