

Clinical Screening Tools for Child Maltreatment (ACS Best Practice Guidelines)

Clinical Tool	Intended Population	Exclusion Criteria	Injuries/Findings	Validation Study Results
Pediatric Brain Injury Research Network (PediBRN)	Children under 3 years of age admitted to the pediatric ICU with an acute, closed, traumatic cranial or intracranial injury; tool now also validated in an ED setting ¹⁹	<ul style="list-style-type: none"> Imaging reveals “pre-existing brain malformation, disease, infection, or hypoxia-ischemia” Injuries resulting from a motor vehicular collision 	<p>The 4 variables used were:</p> <ul style="list-style-type: none"> Clinically significant respiratory compromise any time prior to admission; Bruising of the torso, ears, neck; Subdural hematoma or fluid bilaterally and/or in the interhemispheric fissure; Any skull fracture except a parietal fracture that is isolated, unilateral, nondiastatic, linear 	<p>When more than 1 variable was present, the sensitivity was 96% and the specificity was 46%</p> <p>External Validation of the PediBRN Screening Tool for Abusive Head Trauma in Pediatric Emergency Department Settings</p>
Predicting Abusive Head Trauma (PredAHT)	Hospitalized children under 3 years old presenting with an intracranial injury	Cases where etiology of injury was deemed “indeterminate”	6 features are used in the tool: head or neck bruising, seizure, apnea, rib fracture, long bone fracture, retinal hemorrhage	With more than 3 features present, sensitivity was 72.3% and specificity was 85.7%
Pittsburgh Infant Brain Injury Score (PIBIS)	Well appearing infants (i.e. less than 1 year of age) presenting to an ED with no history of trauma and a high-risk sign or symptom (e.g., acute life-threatening event [ALTE]/ brief resolved unexplained event [BRUE], seizure, vomiting without diarrhea, irritable, bump on scalp, bruising)	Having a previously abnormal head computed tomography (CT)	The 5-point PIBIS scale is weighted: 2 points for abnormality on dermatologic exam (e.g., bruising); 1 point for age above 3 months, head circumference above 85%, or serum hemoglobin under 11.2 g/dL	In patients with a score of 2 or greater, sensitivity of the test for identification of abnormal intracranial imaging was 93% and specificity was 53%
TEN-4-FACESp Bruising Clinical Decision Rule A screening tool for physical abuse in children with bruising	<p>Children under 4 years of age with bruising evaluated in an ED/hospital setting</p> <p>TEN-4-FACESp graphic</p>	Bleeding disorder, motor vehicle crash, severe spasticity, no bruising	<ul style="list-style-type: none"> “TEN”: Bruising on Torso (chest, abdomen, back, buttocks, genitourinary region, and hip), Ears, Neck; Any bruising in infants 4 months old and younger “FACES” bruising on Frenulum, Angle of jaw, Cheek, Eyelids, subconjunctivae; p for patterned 	96% sensitive, 87% specific for predicting abuse in children with bruising, and an abuse work-up may be warranted

TEN-4-FACESp

Bruising Clinical Decision Rule

When is bruising concerning for abuse?

If any of the 3 components (Regions, Ages, Patterns) are observed in a child **under 4 years of age**, strongly consider seeking evaluation by a medical provider with expertise in child abuse.

Torso | Ears | Neck



FACES

Frenulum
Angle of Jaw
Cheeks (*fleshy part*)
Eyelids
Subconjunctivae
(*whites of the eyes*)

REGIONS

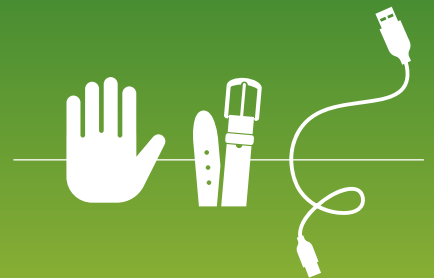
4 months and younger

Any bruise, anywhere



AGES

Patterned
bruising



Bruises in specific
patterns like slap, grab
or loop marks

PATTERNS

See the signs

Unexplained bruises in these areas most often result from physical assault.

TEN-4-FACEp is not to diagnose abuse but to function as a screening tool to improve the recognition of potentially abused children with bruising who require further evaluation.

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TEN-4-FACEp was developed and validated by Dr. Mary Clyde Pierce and colleagues.
It is published and available for FREE download at luriechildrens.org/ten-4-facesp.



Innovative Resource: Child Protector App



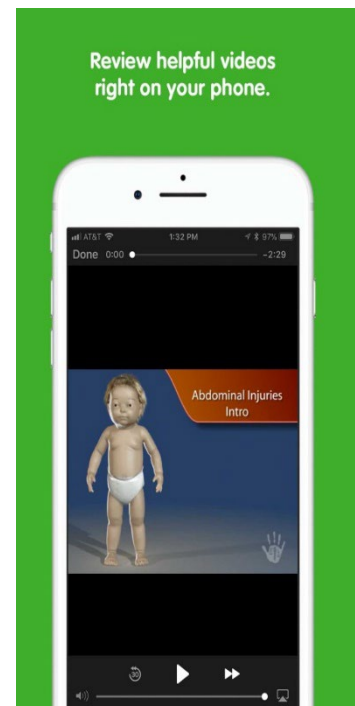
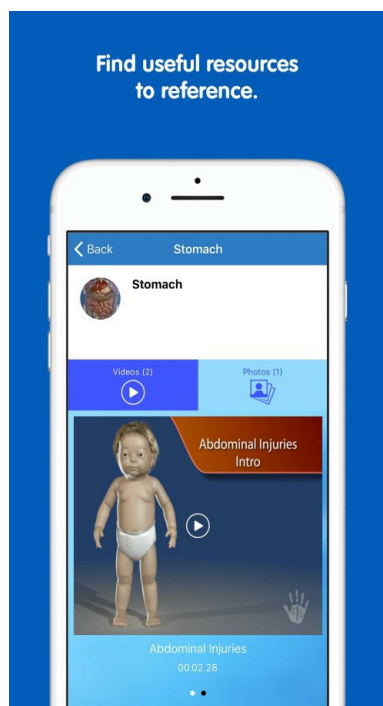
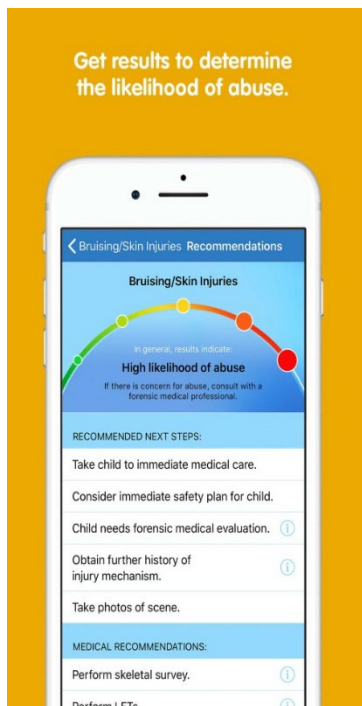
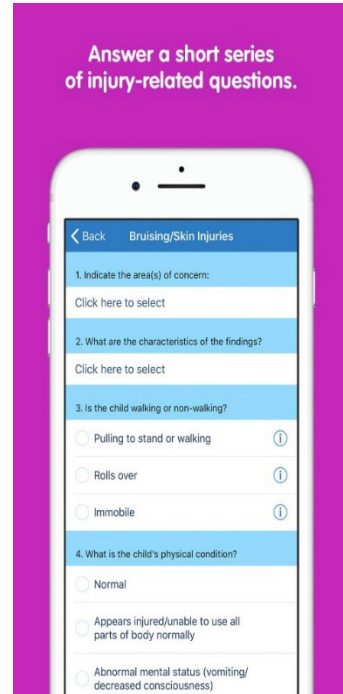
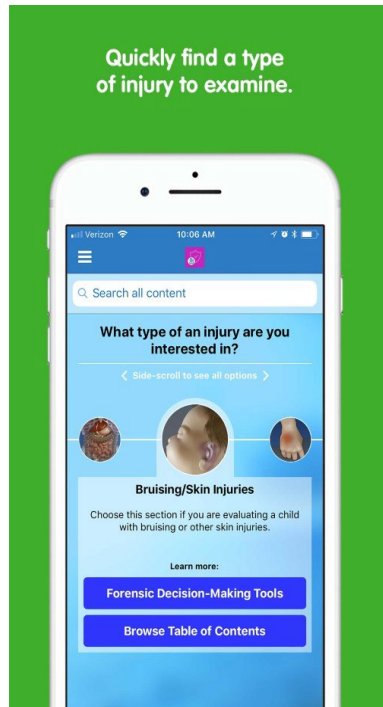
Protecting against child abuse

Child Protector assists Children's Protective Services, law enforcement, attorneys and medical personnel when evaluating children who may have been physically abused. The free app was developed by Children's Mercy and the University of Texas Health Science Center (San Antonio) through Children's Justice Act Funding from Texas and Missouri.

App features

- Realistic animations of how childhood injuries may happen, both accidental and inflicted. Injury types include bruises, burns, head injuries, fractures, and abdominal injuries along with real images of radiology scans and child injuries with accompanying narration.
- Depictions of different types of injuries including bruises, head injuries, fractures, abdominal injuries and burns.
- Decision trees for use in determining likelihood of abuse, the appropriate medical evaluation, further investigative needs, further medical testing for each of the injury types and appropriate further scene investigation and safety planning for the child.
- A library of over 100 animations with accompanying narration that depict the mechanisms of different types of injuries for children.

- Descriptions of medical findings, the meaning of those findings, and how they can be used in investigative, legal or court processes.
- History taking tools for both investigators and medical professionals



Download

The app may be downloaded from either the Apple or Google Play stores (search “Child Protector” or use the links below). In the App store, Child Protector is available in the iPhone apps section (as opposed to iPad apps). However, Child Protector functions both in iPhones and iPads. Optimal function on iPads is achieved with the tablet held in a vertical orientation.

