UNC Beacon Physical Abuse/Neglect Guide

Effective 4/1/2024, the Beacon child maltreatment team will have reduced capacity. Beacon will continue to be available 7 days per week for consultation and support by telephone. To support providers during this interim period, we are providing this guide. This is not intended to substitute for expert child abuse evaluation, but helps ensure that each patient receives appropriate work-up in the inpatient/acute care setting.

If child with concerning injury or history for possible physical abuse:

History & PE

- Obtain detailed history from caregivers regarding the event history and relevant medical history (birth, family hx, prior injury concerns, psychosocial risk factors)
- Perform a detailed physical exam and photodocument any findings in Haiku

Consults

- **Page Beacon** on-call provider at **123-4100 if 8am-4pm** for phone support and recommendations. If after-hours, page Beacon the next day. If any difficulty paging- call 984-974-0470 for assistance.
- Hospital **social work** for psychosocial assessment and support
- **Trauma surgery** for any child with injuries undergoing NAT evaluation

Initial Eval

- Discuss with family need to obtain additional work-up - See **FIGURE 1** for sample script
- Obtain **labs, imaging studies, and additional consultations** based on age and injury type -- see **TABLES 1 & 2**

NAT vs Accident

- Determine level of concern for possible child maltreatment based on evaluation- ensure reporting if persistent concerns (see below)
- If low concern/accidental history felt plausible- see **FIGURE 2** for additional considerations

Reporting

- If **suspicion** of possible abuse or neglect, **report to child protective services and/or law enforcement** as requried by law.
- **Note: Responsiblity to report is on the treating providers. Hospital SW can assist in making reports and communicating with DSS/LE. Discussion/Consultation with Beacon does not fulfill obligation to report.

Final Dispo

- If concern for child maltreatment and DSS involved: do not discharge until DSS commuicates safety plan
- If low concern for child maltreatment: primary medical team to determie when child is medically ready for discharge. **Note: Beacon and SW do not clear children for discharge

Beacon F/u

- Beacon team will coordinate with DSS/LE/family to offer an outpatient appointment/Chlid Medical Evaluation (CME) at Beacon Child Evaluation Clinic. Beacon team will also order and schedule repeat skeletal surveys as needed.
- **Note: Not every cild will need outpatient follow-up. Only those with DSS/LE invovlement and there is a medical question. DSS/LE may also refer child to another center.

Other

- Ensure primary medical care and other follow-up subspecialist appoitments scheduled
- Address any additional safety, developmental, or mental health needs of the patient and/or family (such as anticipatory guidance re: safety proofing, commuity referrals to CDSA or CMARC, etc)

Table 1: Occult Trauma work-up by age

Age	Skeletal Survey[a]	Head Imaging[b]	Trauma Labs[c]	Dilated eye exam[d]	Abdominal Imaging[e]
0-6 months	Yes	Yes	Yes	Yes	If AST or ALT >80
7-12 months	Yes	Yes	Yes	No unless positive findings on head imaging or neurologic injury concern	If AST or ALT >80
13 months-24 months	Yes	No unless symptomatic	Yes	No unless neurologic injury concern	If AST or ALT >80
2-5 years	No	No unless symptomatic	Yes	No unless intracranial injury concern	If AST or ALT > 80

a- **Skeletal surveys** Per AAP recommendations, skeletal surveys are recommended for children 0-24 months old with suspicious fractures, bruising, or other concerning injuries. A repeat skeletal survey should be done in 2 weeks for children with ongoing NAT concerns (Beacon team will help order repeat skeletal survey).

b- **Head imaging:** Initial screening head imaging can be done with CT head (non-contrast) or Rapid Trauma MRI. Any positive intracranial finding on initial CT head/rapid MRI without a clear, plausible history or a child with neurological signs/symptoms should also have a full brain MRI (which may require sedation) and cervical spine MRI. This helps determine the extent of injury and also helps clarify the injury findings.

**For 6-12 months, may use clinical judgement, however AAP Clinical Report supports head imaging in infants even if asymptomatic

**Symptomatic: unexplained altered mental status, seizures, apnea, vomiting without diarrhea, enlarging head circumference

c- **Trauma Labs** Urine drug screen (may be bagged urine, please obtain ASAP prior to pain medication/sedation if possible), UA, AST/ALT, lipase, amylase

Additional labs based on presenting concerns and findings:

***Bruising/bleeding/neurological sx labs*:

- CBC, coags (PT/PTT/INR), von Willebrand factor activity and antigen, factor VIII, and factor IX.

***If subdurals with abusive head trauma concerns*:

- also obtain d-dimer, fibrinogen, chromogenic factor XIII, urine organic acids, plasma acylcarnitines, plasma carnitine

***Fracture labs*:

- calcium, magnesium, phosphorus, alkaline phosphatase, PTH, and 25-OH vitamin D level

***Any positive results on UDS not explained by medical treatment*

- Add on confirmatory testing to original urine sample (ex: THC confirmation; fentanyl confirmation; opiate confirmation; buprenorphine confirmation; cocaine etc)

d- Ophthalmology consult If there is blood in the head with an unexplained or poorly explained injury, ophthalmology should be consulted for dilated fundoscopic exam to help evaluate for the presence of retinal hemorrhages. **Retinal hemorrhages can resolve very quickly, so it is important this exam occur ideally within the first 24-48 hours of admission**.

e- Abdominal imaging Abdominal CT with contrast is recommended in patients where screening labs are concerning for intra-abdominal injury, especially for elevated LFTs (AST and/or ALT > 80). Additional lab concerns could include elevated pancreatic enzymes, unexplained blood in UA, and unexplained anemia.

Sibling evaluations: As soon as possible, all siblings in the same house/environment should be evaluated for signs of physical abuse. Investigating agencies (DSS) need to ensure siblings are medically evaluated. If a child is a admitted for NAT workup with injuries, siblings under 3 years of age should have a head-to-toe exam and imaging/labs as indicated. It is the responsibility of DSS to ensure that siblings are brought to ED or other provider for this evaluation. Hospital SW may also assist in communication with DSS for evaluation of siblings.

If serious/near-fatal injury and death occurs: try to obtain as much of work-up as possible (such as head imaging, eye exam, and labs). The Medical Examiner should be contacted for any child after death for an autopsy. Post-mortem imaging at UNC is not needed since additional evaluation can be performed by the medical examiner.

If verbal/older child who makes concerning statements for abuse/neglect- document their spontaneous statements to providers. It's ok to ask open ended questions such as "tell me more about that", "tell me what happened." Do NOT ask the child direct and inappropriate questions to obtain more specific details—interviewing the child is best done outpatient by trained, professional interviewers. Report any suspicious concerns to child protective services and/or law enforcement. Note: Beacon does NOT perform interviews of children hospitalized.

Table 2: Additional Evaluation/Considerations By Injury Type

Injury	Special Considerations	Work-up for underlying medical conditions

Sentinel Injuries (ANY bruising, intraoral injury, subconjunctival hemorrhage) in non-mobile infant	Photodocument any findings with Haiku Perform full occult injury work-up (skeletal survey, head imaging, labs, dilated eye exam)	Obtain thorough medical history especially birth history, family hx of bleeding conditions, prior history of excessive bleeding/bruising If bruising/bleeding: CBC, coags, factor VIII, factor IX, von willebrand panel Hematology consult if multiple bruises, abnormal labs, or positive history
P-FACES TEN-4 -Patterned injuries -Frenulum tears -Angle of jaw and cheek bruising -Eyes/scleral injuries -Bruising to Torso, Ear, Neck in Child < 4	Photodocument all injuries with Haiku Perform occult injury work-up by age	Obtain thorough medical history including family history of bleeding disorders and prior history of bruising/bleeding Additional labs: CBC, coags, factor VIII, factor IX, von willebrand panel Hematology consult if multiple bruises, abnormal labs, or positive history
Fractures	Obtain occult trauma work-up by age	If history of trauma, obtain detailed event history from caregivers Obtain thorough medical history including family history of fragile bones/recurrent fractures and OI Additional labs: calcium, phosphorus, magnesium, PTH, alk phos, and 25-OH vitamin D Genetics consult if multiple fractures or positive family history- can direct testing for OI Endocrinology consult if abnormal bone health labs
Abusive head trauma (ICH-SAH/SDHs, parenchymal injuries, AMS/seizures)	Wide range of presentation and findings Perform occult injury work-up by age including dilated eye exam, full	Obtain thorough history (birth history, delivery trauma, prior sentinel injuries/ED visits/hospitalizations, family hx of bleeding disorders) Additional labs: coags, d-dimer, fibrinogen, factor VIII, factor IX, chromogenic factor XIII, metabolic labs for glutaric aciduria

	MRI brain, and spinal MRI	Hematology and genetics consults for subdurals and/or retinal hemorrhages, concerning history
Isolated skull fracture (+/- small associated ICH)	Obtain occult injury by age Short fall onto hard surfaces can cause skull fractures- so if no additional injuries and witnessed reliable history- likely accidental *Delayed scalp swelling can occur with skull fractures	
Burns	Perform occult injury work-up by age if physical abuse concerns If plausible accidental history but concerns for neglect/inadequate supervision, obtain UDS	Consult general pediatrics
Intoxication/Drug or Alcohol Exposure	For positive UDS/ingestion- Send Confirmatory testing Report to DSS any concerns and include wording for NEAR-FATALITY if child needed life-saving measures	History: Screen for medications/substances in the home and caregiver substance use
Domestic violence exposure	Any young child involved in DV incident should undergo occult injury work-up by age and should have report to DSS	Adult Beacon consult for additional caregiver support and resources

Neglect/Other Safety Concerns	Examples: -Child with firearm injury -Child < 8 yo with ATV injury -unrestrained MVC or caregiver under influence -Drowning in young child or infant -Dog bite injury in young child -Delay in seeking medical care for serious injury or inadequate supervision	Consult hospital SW Report to DSS as indicated Consider UDS and occult work-up as indicated

Figure 1: Talking with Families

DISCUSSING THE PHYSICAL ABUSE WORK-UP WITH THE FAMILY – EXAMPLE SCRIPT

"Any time a child of this age comes to the hospital with [this injury/these injuries], we evaluate for other injuries. Sometimes a child can have internal injuries, such as broken bones, head injury, or abdominal injury that we cannot see on the outside. Just like you, we want to make sure that your child is okay, so it is important that we do this testing. These tests include _____. As a part of this evaluation, we will also have our Social Worker come talk with you. By law, we are obligated to report any concern for abuse to Department of Children Services. This is a standard part of our evaluation. We are happy to answer any questions or concerns along the way."

Figure 2: Minor/Low Concern Injury Evaluation Considerations

For a young child with a minor/low risk injury that evaluating providers feel is reasonably explained by history provided, please consider the following for thorough assessment:

1. Assess child fully for other injuries with careful physical exam and appropriate radiological/lab testing as indicated per evaluating provider(s) assessment. This includes detailed skin exam with patient in gown with direct light including examination of ears and mouth.
2. Consider the 5 following questions:

   A. Was the child brought appropriately to medical care with no unreasonable delays in seeking care?
   B. Has the history provided by caregiver been consistent across professionals and within the history provided by caregiver?
   C. Does the history provided reasonably explain the full extent of physical findings?
   D. Does the child have any prior injuries or concern for abuse per medical record review?
   E. Does the child have any prior DSS, substance abuse, DV, or unmet mental health concerns for family?

If there are any concerns from above questions, then please contact Child Abuse Team for further discussion as may raise concerns for child maltreatment.