Ochsner Pediatric ED Pathway

NON-ACCIDENTAL TRAUMA

Louisiana Children's Code Definition of Abuse:

- *The infliction, attempted infliction, or, as a result of inadequate supervision, the allowance of the infliction or attempted infliction of physical or mental injury upon the child by a parent or any other person.*
- *The exploitation or overwork of a child by a parent or any other person, including but not limited to commercial sexual exploitation of the child.*
- *The involvement of the child in any sexual act with a parent or any other person, or the aiding or toleration by the parent, caretaker, or any other person of the child's involvement*

Inclusion Criteria

*Any child <18 with the following red flags and/or other concern for physical abuse**

Chief Complaint

NAT is on differential in infant with[1]:

- Irritability
- Lethargy/Altered Mental Status
- Apnea/BRUE
- Unexplained vomiting
- Seizures

History[1]

- Statement of harm from a verbal child
- No, inconsistent, or changing history
- Injury inconsistent with developmental abilities of child
- Unexplained delay in seeking care
- Social risk factors^
- Prematurity (<37 weeks)
- Low birth weight
- Chronic medical conditions
- Developmental/physical disabilities

Physical Exam

- **Any bruise***in a non-ambulating child
- Isolated subconjunctival hemorrhage outside newborn
- Patterned cutaneous injuries*
- Immersion burns*
- **Torn frenulum***
- Failure to thrive
- Large heads in infants*
- Clearly demarcated burn*
- Bruising in child

Radiologic Findings*

- **Any fracture** in a nonmobile child
- Metaphyseal (corner) fractures
- Rib fractures
- Occult fractures, multiple fractures
- Any undiagnosed healing fracture
- SDH and/or SAH
- Infants/toddlers with midshaft humerus or femur fractures

Meticulous physical exam and detailed history

- Full (undressed) skin exam for bruising
- Full oral exam, including frenulum, ears (pinna and hairline behind ears)
- Thorough abdominal, buttock, and thigh exam

Labs

- All patients: CBC, CMP, lipase, amylase, UA
- See "Labs" table for additional labs →

Labs

Concern/Finding	Labs
Abusive bruising Intracranial hemorrhage	INR, PT/PTT[1]
Concern for bleeding diathesis (FH and/or patient requires blood products)	Hematology consult; consider von Willebrand antigen and activity, Factor VIII, Factor IX, platelet function assay[1]
Abusive fracture	Calcium, mg, phos, alk phos PTH, 25-OH-D if concern for Vit D deficiency diet, alk phos, bone density
Altered mental status Unexplained fussiness Breast fed infant	Urine drug screen (UDS) ☓
AST or ALT >80 Signs of chest trauma Ill appearing (3)	Troponin I[3]

Imaging

- See "Imaging" table →

Imaging

Age	Head Imaging	Skeletal Survey	Cervical Spine MRI	Abdominal/Pelvic CT *with contrast*
0-12 months	CT if symptomatic; schedule and admit for MRI if asymptomatic	Yes	Perform if AHT	Perform if: Comatose Symptomatic AST/ALT is >80 u/L or UA >20 RBCs Note: Abdominal bruising is rare, absence does not rule out abdominal organ trauma[1]
12-24 months	CT if symptoms of AHT or face injury			
2-18 years		Consider if developmentally delayed or 24-36 months and severely injured		

Abnormal Imaging/Labs?

Yes

Consult(s)

Finding	Consult
Abnormal abdominal CT or Elevated ALT, AST, or lipase	Pediatric Surgery
Abnormal head CT/neuro exam	Neurosurgery Ophthalmology should see patient within 48 hours of admission
Fracture	Orthopedics

No

Consider child abuse consult if ***any*** question

- *Negative studies do not rule child abuse out*
- *If an infant has a sentinel bruise but negative labs/imaging, abuse remains the primary diagnostic consideration[4]*

Sentinel injury
and/or
Labs, imaging, and/or history suspicious for NAT

Yes

Report/Notify

- Report to DCFS
- Notify family of DCFS report
- Police report if warranted (see p.4)
- Social Work (Inpatient)

No

Work up incomplete
Patient not medically cleared
or
Provider or DCFS feel discharge is unsafe

Yes

Admit

No

Discharge

If discharging **after** filing report:

- Notify PCP of clinical concern
- Place referral to and coordinate follow up at one of below in 2 weeks:

Southshore:
Audrey Hepburn CARE Center - New Orleans Child Abuse Center
210 State Street
New Orleans, LA 70118
504-896-9237

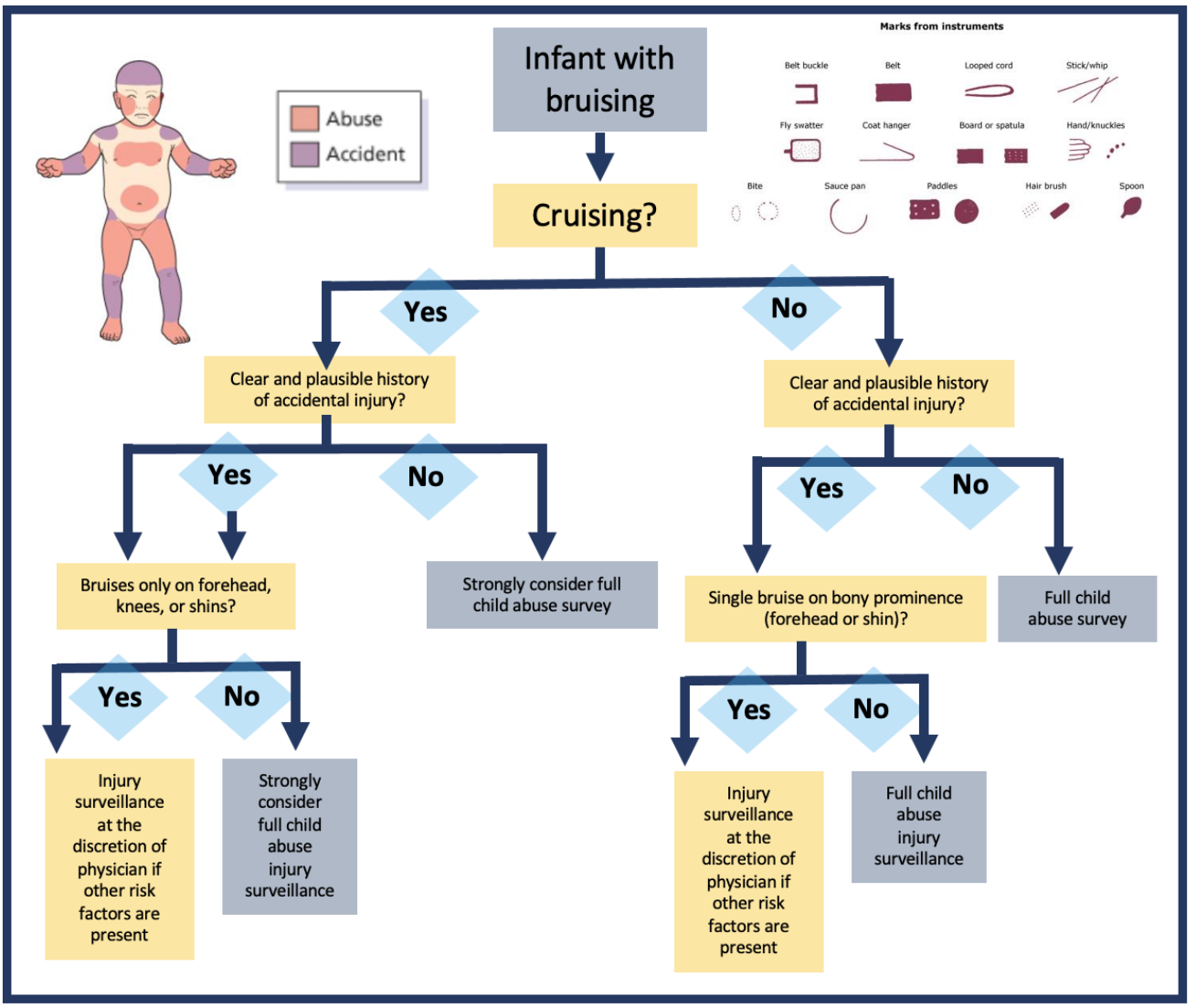
Northshore:
Hope House - Children's Advocacy Center
223 W 28 Ave
Covington, LA 70433
985-892-3885

☓*Pain Clinic Drug Screen Urine – send if negative urine tox but high suspicion for ingestion *See page 2 for more information on bruising, burns, fractures, intracranial bleeds ^See page 3 for social risk factors

Sentinel Injuries[4]

- Minor injuries, such as bruise or intraoral injury
- Visible or detectable to a caregiver
- Poorly explained and unexpected

- Any bruising in infants < 4 months is abnormal:
  - **"Those who don't cruise don't bruise"[8,9]**
- Bruise locations concerning for abuse in children <4:
  - **Torso, Ears, Neck- 4 (TEN 4[7])**



Abusive Burns[1]

- **Immersion scald burns**
  - No splash or cascading flow pattern
  - Well-demarcated
  - Confluent
  - Sparing of flexion creases
  - **Involve:**
    - Buttocks
    - Perineum
    - Extremities
    - Hands/feet "stocking/glove"(Glick)
- **Cigarette burns**
- **Multiple burn sites**
- **Patterned contact burns with insufficient mechanism**

Abusive Head Trauma (AHT)[6]

Pittsburgh Infant Brain Injury Score (PIBIS)[6]

Chief complaint

- Apnea/ALTE
- Vomiting without diarrhea or fever
- Seizures or seizure-like activity
- Soft tissue swelling of scalp
- Bruising
- Other nonspecific neurologic symptom not described above, e.g. lethargy, fussiness, poor feeding

Must meet all 4

- 30-364 days of age AND
- Well appearing AND
- Temp <38.3 AND
- No history of trauma

PIBIS		
	Abnormality on derm exam	2 pt
	Age ≥3 months	1 pt
	Head circumference > 85th%	1 pt
	Hemoglobin < 11.2 g/dL	1 pt
	Score of 2 : Sens + AHT >90% , Spec >50% Score of 3: Sens + AHT 81%, Spec 75%	

Abusive Fractures[1]

Age is single most important risk factor; abuse causes 80% of fractures in kids <18 months

- **Fractures with HIGH specificity for abuse (especially in infants):**
  - Metaphyseal[1]
  - Rib[1]
  - Scapular
  - Spinous process
  - Sternum
- **Fractures with MODERATE specificity for abuse**
  - Multiple (especially bilateral)
  - Different ages
  - Epiphyseal separations
  - Vertebral body fractures and subluxations
  - Digital fractures
  - Complex skull fractures
  - Extremity fractures in infants <12 months (excluding exceptions below)
- **Fractures with LOW specificity for abuse (abuse less likely)**
  - Distal buckle fracture of radius/ulna
  - Distal buckle fracture of tibia/fibula
  - Toddler's fracture
  - Clavicular fracture in newborns
  - Subperiosteal new bone formation
  - Isolated linear skull fracture with plausible mechanism in well-appearing infant < 6 months

Patient Assessment, Documentation, and Communication

Risk Factors for Abuse/Neglect

- Child is infant or toddler
- Prematurity
- LBW
- Intrauterine drug exposure
- Developmental/physical disabilities
- Potty training

Parent/household risk factors:

- Substance abuse
- Mental illness
- Interpersonal violence
- Single and/or teen parent
- Nonrelated adult in home
- Social isolation
- Poverty
- Low levels of education
- Large family size

Patient Assessment[1]

Interviewing Family

- When injury is incidentally found during ED visit
  - Ask how an injury occurred and whether the child was seen for treatment
- Have family provide entire history without interrupting to avoid unintentionally suggesting a mechanism
- If child ≥2 years old, talk with the parents separately from child to prevent discussion from influencing child's story[10]
- In alleged sexual abuse, interview should be done by skilled professional, as the way the interview is conducted influences the positive and negative predictive value of abuse disclosure[10]
- Separate caregivers to hear each person's story; Ask caregivers whether they have any concerns that someone may have harmed child—introduces concern but not blame[2]

History of Present Illness

- What happened (mechanism), when, who was involved
- Injury witnessed/unwitnessed?
- Recreate scene, flooring ,height of furniture, child's position)

- Onset and progression of symptoms, last known normal
- Behavior/activities/responsiveness/feeding times before and after injury
- Any pain associated with the injury?

- Who has been with child (age, relation, contact info)
- How child has done with feeding, diaper changing, bathing
- Who is child's primary care provider? When was last visit?

Review of Systems

- Developmentally normal vs abnormal
- Changes in behavior, nightmares, depression
- General/somatic symptoms, including nausea, vomiting, abdominal pain, fever

Family History

- Febrile seizures
- Epilepsy
- Neurological disorder

Physical Exam

- Mental status, affect, level of activity
- Head circumference
- Pinnae, behind ears, teeth, frena, soles/palms, genitals, anus
- Presence/absence of swelling and ability to move limbs
- Undress and examine all skin surfaces with good lighting
- Describe, draw, and/or photograph any injuries

Provider Documentation[2]

Because DCFS (CPS) and law enforcement investigators do not typically have a medical background, the clinicians' interpretation of the child's injuries in straightforward language is needed for proper investigation, decision-making, and protection of the child

- Clearly document who is providing history[1]
- Clearly document all details of HPI
- Use quotations to document exact words; especially when a child directly discloses to you[1]

- Carefully document all visible injuries:
  - Written description
  - Digital photographs
  - Body diagrams

Writing Your Impression

- Summary statement with patient's gender, age, reason for evaluation, exam findings
- Include whether DCFS and/or law enforcement report made and result
- Address the likelihood of nonaccidental injury in your impression
  - E.g., In cases with multiorgan, severe, or obvious injuries, abuse may be clear, and a strong diagnostic statement is warranted
  - Use words such as "extremely concerning for inflicted trauma" vs "consistent with accidental injury"

Communicating With Family[2]:

- Raise concern about an injury, while not placing blame
- Inform parents inflicted trauma is part of diagnostic consideration
- Inform parent that because of the nature and circumstances of the injury, a report for further investigation is mandated by law
  - ***Unless*** you are concerned this will cause imminent harm to child
- Clarify that medical providers are not investigators and that will be the role or Child Protective Services

- Be direct and objective (avoid appearing judgmental)
- Keep the focus on the child
- Assure parents of thoroughness of evaluation
- Update family on results of studies

Reporting and/or Consultation

Clinician's role in NAT[2]
- Recognize **potential** abuse
- Obtain thorough medical and event history
- Initiate appropriate workup
- Refer patient or involve specialists who are expert in medical eval/investigation

When a child has suspicious injury/ies and a clinician has a reasonable suspicion that a child has been abused, **a report to CPS for further investigation is mandated by law**[2]
- Mandated reports do not require certainty[2]
- Failure to report can result in civil or criminal penalties for the clinician or injury or death of a child[2]
- Even if abuse is not substantiated or perpetrator is not identified, the investigation may change caregiver behavior and/or trajectory of abuse[4]
- Investigation may lead to increased caregiver support (e.g., home visits, parenting classes, access to transportation, therapy)

Department of Children and Family Services (DCFS)
- DCFS reports should be made **in parish child lives in**
- Express **and** document explicit and detailed concerns to DCFS
    - If you are concerned about abuse outside of home, but not brought to your attention by parent, report to DCFS and explicitly communicate that parent is not protective
- To orally report alleged abuse/neglect that requires immediate attention, call toll-free **1-855-4LA-KIDS (855-452-5437)** to speak with a trained specialist 24 hours a day, 7 days a week
    - To expedite DCSF involvement, say you need "immediate assistance"
    - If not getting immediate attention, ask for DCFS supervisor
- AFTER oral report, you must follow up with written report: https://mr.dcfs.la.gov/c/MR_PortalApp.app
- After you make a report, you can call back to see who is assigned to case
- Once case is assigned, you can ask for them to be dispatched and/or ask for a safety plan
- If a child with high suspicion for abuse has siblings, verbalize siblings need to be evaluated

Non-emergent mandated reporter link should only be used if child is not in immediate risk of harm
-NOT for child fatality, drug exposed newborn, human trafficking, life-threatening injury, safe haven, sexual abuse

Gather the following information BEFORE calling DCFS:
- Name, address, age, sex, and race of the child
- Nature, extent, and cause of the child's injuries or endangered condition including any previous known or suspected abuse to the child or his/her siblings
- Name and address of the child's parents or other caretaker
- Names and ages of all other members of the child's household
- Name and address of the reporter
- Account of how child came to the reporter's attention
- Any explanation of the cause of the child's injury or condition offered by the child, the caretaker, or any other person
- Number of times the reporter has filed a report on the child or the child's siblings
- Name of the person or persons who are believed to have caused or contributed to the child's condition, if known
- Any other important or relevant information

Police
- Police reports should be made **in parish incident occurred in**
    - Most of Jefferson is JPSO; NOLA is NOPD
- Report to police immediately if perpetrator thought to be **outside home**
    - Not spouse or someone in romantic relationship with parent, or person living in house with child
- Report should be made for child sexual abuse
- Police report should also be made if other children in home are in imminent danger

Audrey Hepburn Center (CHNOLA)
- Any patient with suspected child abuse/neglect can be referred to Audrey Hepburn Center
- Referrals should be made via paper/fax (link); once they receive referrals, RN calls family and center will call investigative workers to check on case
- When to place referral:
    - All AHT
    - All suspicious bruising that has been referred to DCFS

- **Audrey Hepburn Center's Role in NAT Cases**
    - Case review (help determine whether injury matches mechanism, etc..)
    - Connect with child services
    - See siblings
    - Direct to trauma therapy
    - Follow up exams
    - Follow up skeletal surveys

- **If you have questions during business hours, call their clinic (clinic # is 504-896-9237)**
    - Identify yourself as a clinician in the ED from Ochsner
    - Say you have a question about a patient

CHILD SEXUAL ABUSE

Note: The majority of children do not display signs of penetrating trauma at anogenital examination[10]

(Nonspecific) Signs of sexual abuse[10]:

- Urogenital or gastrointestinal symptoms
- Internalizing and externalizing behavioral problems
- Developmental regressions
- Post-traumatic stress symptoms
- Atypical sexual behavior in children
- Children's behavioral reactions during examinations

If patient is unstable/needs PICU care, stabilize first, consider PICU admission

SANE exams should be transferred to the CHNOLA ED if assault happened within last 72 hours; if it is daytime hours, you can also try calling AH providers to see if they can fit patient in on schedule

-Usually police will be involved and can escort patient
-If you are concerned they will not go, call ambulance
-If you think they'll go, can send them POV

Concern for acute sexual abuse (<72 hours)?

1. Report to DCFS **and** law enforcement (where the incident happened). Discuss evidence collection with law enforcement.
2. If between the hours of 8:30 am - 4:30 pm. Call Audrey Hepburn Center at 504-896- 9237. Click on option 4, which should connect you to the medical clinic. Please state, "I'm a physician with Ochsner. I need to talk to the on-call physician for some guidance on a patient."
3. If after 4:30pm or on weekends, transfer through transfer center; call CHNOLA ED and ask to speak with the charge nurse.
4. If concerning marks are identified, please photo document if possible. Keep in mind sensitive (genital/breast) images should not be taken (for example, ensure breasts/genitals are covered in photos).
6. Consider post exposure prophylaxis in pubertal children. (Pubertal kids can be treated for Chlamydia, Gonorrhea, Trichomonas, as well as offered Ella/Plan B and HIV PEP. Pre pubertal children should NOT routinely receive prophylaxis).

Concern for non-acute (> 72 hours) sexual abuse?

1. Report to DCFS and law enforcement (where the incident occurred).
2. Refer patient to the Audrey Hepburn Center via fax/email and fill out Forensic Medical Referral form.
3. Genital exam can be deferred if not medically indicated. Consider obtaining blood and urine testing for STIs (Chlamydia, Gonorrhea, Trichomonas, HIV, Syphilis, Hepatitis A).
4. Pre-pubertal children positive for STIs are strongly recommended to have confirmatory testing by the CARE center prior to treatment

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