

CHILD ABUSE CLINICAL DECISION SUPPORT TOOLS

Improving detection, evaluation &
reporting of child maltreatment



Child Maltreatment...Why Does this Deserve Your Attention?

~1 million children are victims of child maltreatment yearly

A rate of ~1 per 100 children in the US per year

More than four children die every day as a result of child maltreatment

- ▶ Over the past 10 years, more than 20,000 American children have been killed as a result of maltreatment
- ▶ ~four times the number of US soldiers killed in Iraq and Afghanistan.
- ▶ Half of these children were less than 1 year of age

The US has among the highest mortality rates from child maltreatment among industrialized nations

The Faces of Child Maltreatment

These are some of the 477 photos of children who died from abuse in Florida from Miami Herald's "Innocents Lost"



Child Maltreatment...Why Does this Deserve Your Attention?

Many children who are injured or die due to abuse have been previously evaluated by a physician for injuries which were likely caused by abuse, but the diagnosis was not recognized

Numerous studies demonstrate that medical professionals fail to consistently screen for abuse even in high-risk situations

Abuse is a cycle. Failure to recognize abuse in its less severe forms can result in repeated abuse and increased morbidity and mortality

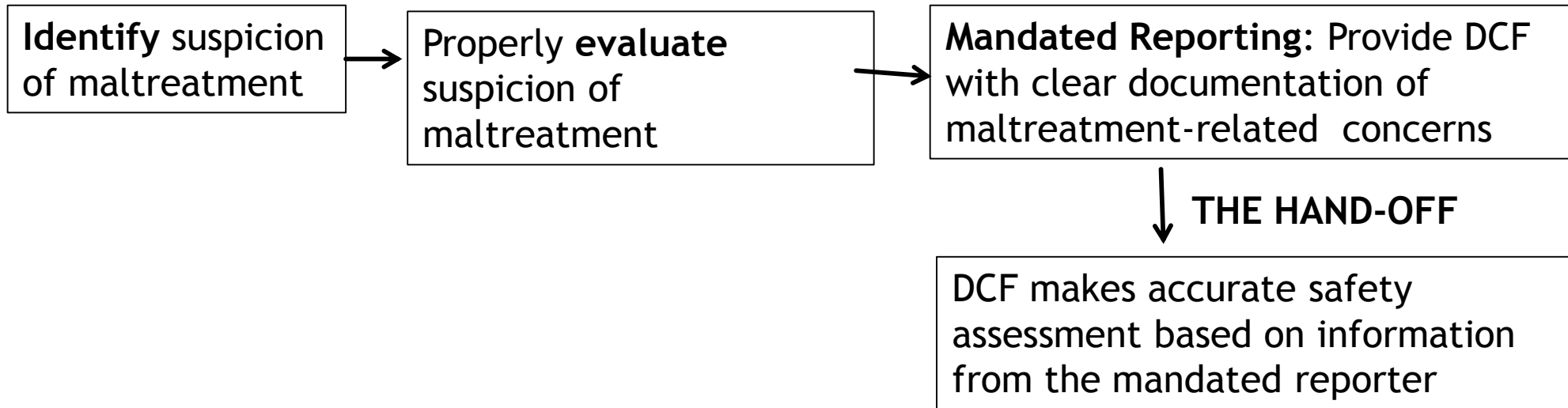
Child Maltreatment...Why Does this Deserve Your Attention?

85% of children in the US receive emergency care in general EDs - not pediatric EDs

The rate of proper recognition of high-risk injuries as being suspicious for abuse is more than 2x lower in general EDs vs pediatric EDs

Abusive fractures are 7x more likely to be missed in a general ED vs a pediatric ED

How do we protect children who have been maltreated?



There are a lot of people and a lot of systems which need to work together in order to protect children - **needs to be multidisciplinary**

The UPMC Child Abuse Initiative

Started in 2014 as a research grant

Has been part of clinical care since 2016 with ongoing enhancements

Coming to your ED soon!

Addresses each of the steps for protection through a child abuse clinical decision support system (CA-CDSS)

- ▶ Identification
- ▶ Evaluation
- ▶ Mandated reporting

CA-CDSS

Identification

- ▶ Child Abuse Screening Tool (CAS)
- ▶ Rule-driven Trigger System

Evaluation

- ▶ Physician/APP Pop-Up Alerts
- ▶ CEC Physical Abuse Power-plan

Reporting

- ▶ Child Abuse Reporting Form (CARF)

Improving Identification

Child Abuse Screening Tool (CAS)

- ▶ Helps to recognize 'red flag' clinical features
- ▶ Done in ALL children <18 years of age (mandatory but not a hard stop)
- ▶ 5-item survey filled out by primary nurse - if any question is positive it triggers a pop-up alert to the Physician/APP

Child Abuse Screening Tool

Child Abuse Screening Tool

Disclaimer: A positive child abuse screen will initiate an electronic physician notification and does not necessarily mean that sufficient suspicion exists to warrant mandated child abuse reporting.

Has a child maltreatment report been made regarding this visit prior to the patient arriving in the ED?

Yes No

1. For children presenting for evaluation of a possible injury, was there a possible or definite delay in seeking medical attention given the severity of the injury/injuries?

Yes No/NA

2. Are you concerned that the history may not be consistent with the injury or illness?

Yes No

3. Are any of the following findings present on physical examination?

Yes No

3a. In a non-mobile child

- i. ANY bruise, burn, subconjunctival hemorrhage, or frenulum injury
- ii. Laceration on child less than 1 year old

3b. In a mobile child

- i. Bruises, burns, or other markings in the shape of an object.
- ii. Bruises on non-bony prominences/protected regions (e.g. torso, genitalia/buttocks, upper arms, ear, neck)
- iii. More bruises than you would expect to see even in an active child
- iv. Any unexplained swelling anywhere on child

4. Are there findings that might reflect poor supervision, care, nourishment or hygiene?

Yes No

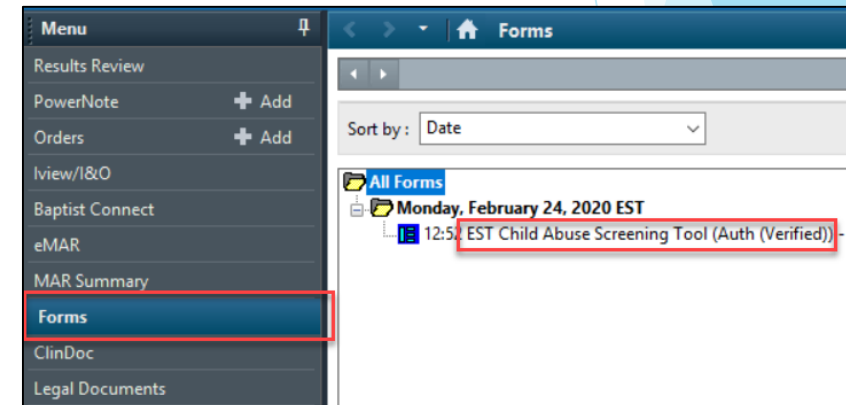
5. Are there any additional comments or concerns related to child abuse or neglect and/or additional explanations for any 'yes' responses above?

Yes No

Additional Comments or Concerns

*ALL CHILDREN LESS THAN 5 YRS AGE MUST BE UNDRRESSED COMPLETELY.
Children greater than 4 years should be completely undressed if any of the screening questions are positive or you have concern for abuse or neglect.

Results seen in
“Forms”



Improving Identification: A Rule Driven Trigger-system

In addition to the CAS, there is a combination of nursing documentation, orders and discharge education which in combination with age, will trigger the CA-CDSS

Automated Alert Triggers

The system will automatically send an alert if any of the following criteria are met:

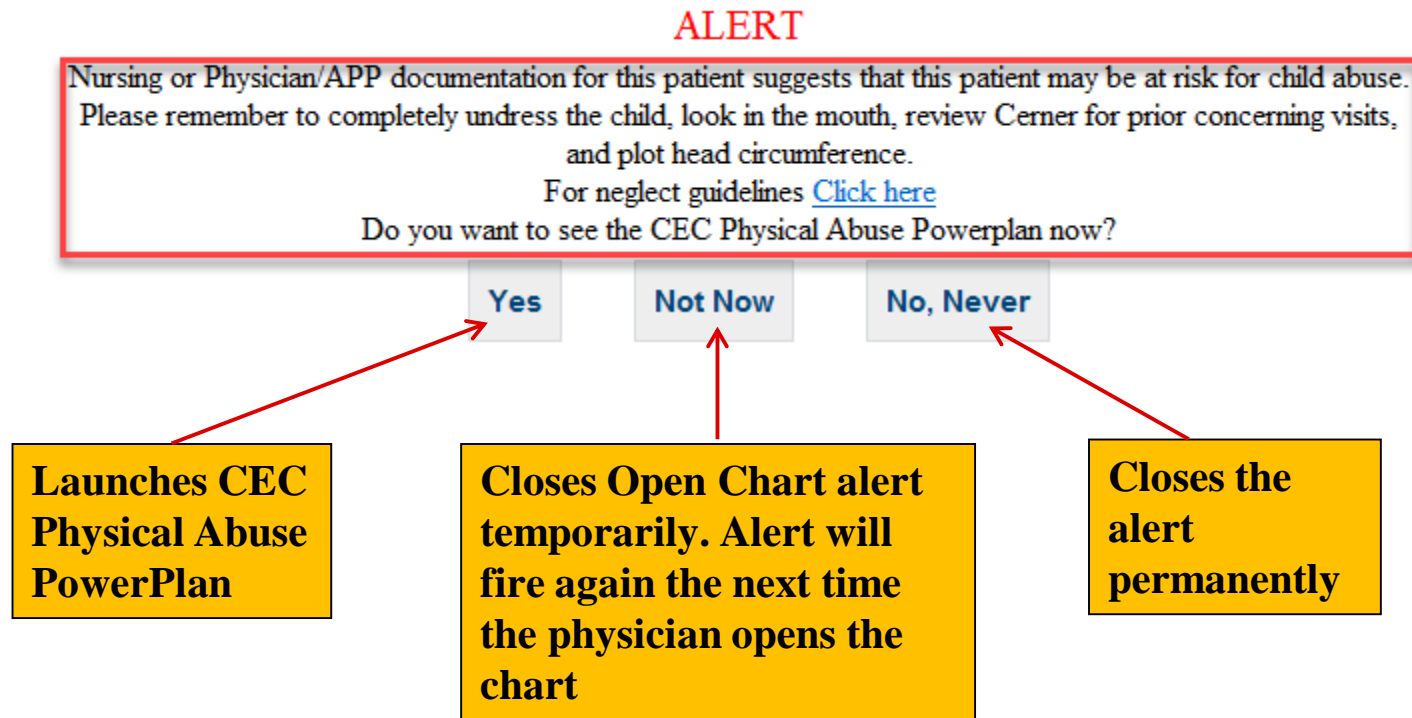
- ▶ Any patient less than 1 year old and has a qualifying XR Order **AND** an order of Fentanyl, Midazolam, Ketorlac, Naloxone, or Flumazenil
- ▶ Any patient less than 1 year old that has the 1st or 2nd Degree Burn, Fx of Clavicle, Humerus, or Hand, or Shoulder Dislocation Krames Education added to their discharge instructions

Nursing documentation of the following findings in iView will automatically generate the open chart alert:

- ▶ Any patient less than 2 years old that has documented Left or Right Ear Bruising
- ▶ Any patient less than 1 year old with Subconjunctival Hemorrhage

Physician/APP Alert

If any of the CAS questions are answered “yes” or any of the rules alert the system, the Physician/APP will get the alert



Physician/APP Alert

If “No, Never” is selected the provider will have to select a reason as to why they choose that option.












The screenshot shows a software alert dialog box. At the top, the word "ALERT" is displayed in red. Below it, there is a line of text: "Nursing or physician documentation for this patient suggests that this patient may be at risk for child abuse. Please remember to document all concerning visits,". A red header bar within the dialog reads "Select a Reason". Below this header is a list of four options: "Not appropriate/child not at risk", "Disagree with recommended evaluation on powerplan.", "Evaluation will be done as in-patient", and "Other". To the right of the list is an "Ok" button. At the bottom of the dialog, there are three buttons: "Yes", "Not Now", and "No, Never".

CEC Physical Abuse PowerPlan





















Click on the clinically relevant subphase

NOT necessary to have a positive screen to use

- CEC Patient Status
- CEC Physical Abuse**
- CEC Protocol Abdominal Pain
- CEC Protocol Altered Level of Consciousness

CEC Physical Abuse (Planned Pending)	
△ Condition/Status	
	 Single injury concerning for physical abuse
<input type="checkbox"/>	 SUB Bruise/petechiae in a child who is not yet cruising
<input type="checkbox"/>	 SUB Burn in a child who is not yet cruising
<input type="checkbox"/>	 SUB Subconjunctival hemorrhages in a child who is n...
<input type="checkbox"/>	 SUB Fracture in a child who is not yet cruising
<input type="checkbox"/>	 SUB Intracranial hemorrhage in a child who is not yet ...
<input type="checkbox"/>	 SUB Bruising in a mobile child
<input type="checkbox"/>	 SUB Fracture in a mobile child
<input type="checkbox"/>	 SUB Intracranial hemorrhage in a mobile child
	 Other injury/injuries concerning for physical abuse, but not specified above
<input type="checkbox"/>	 SUB Other injury/injuries concerning for physical abuse

Example of a Subphase

CEC Physical Abuse, SUB Fracture in a mobile child (Planned Pending)		
<input checked="" type="checkbox"/> Laboratory		
<input checked="" type="checkbox"/>	 CBC with Diff	STAT, Blood, ED_ONCE
<input checked="" type="checkbox"/>	 Comprehensive Metabolic Panel	STAT, Blood, ED_ONCE
<input checked="" type="checkbox"/>	 Prothrombin INR	STAT, Blood, ED_ONCE
<input checked="" type="checkbox"/>	 Partial Thromboplastin Time	STAT, Blood, ED_ONCE
<input checked="" type="checkbox"/>	 Magnesium Level	STAT, Blood, ED_ONCE
<input checked="" type="checkbox"/>	 Phosphorus Level	STAT, Blood, ED_ONCE
<input checked="" type="checkbox"/>	 Amylase Level	STAT, Blood, ED_ONCE
<input checked="" type="checkbox"/>	 Lipase Level	STAT, Blood, ED_ONCE
<input checked="" type="checkbox"/>	 Vitamin D Level	STAT, Blood, ED_ONCE
<input checked="" type="checkbox"/>	 PTH Intact	STAT, Blood, ED_ONCE
<input checked="" type="checkbox"/>	 Urinalysis with Microscopic if indicated	<input type="checkbox"/> STAT, URINE, CLEAN CATCH, ED_ONCE
<input type="checkbox"/>	 Toxicology Screen 12 - Urine	STAT, URINE, ED_ONCE
<input checked="" type="checkbox"/> Radiology		
	 Skeletal survey recommended in all children less than 2 years of age	
<input type="checkbox"/>	 XR Bone Survey	Trauma, Stat, Pending Discharge - No, ED_ONCE, Include Oblique views
	 CT Head is not recommended in children > 12 months unless there is altered mental status or significant facial bruising	
<input type="checkbox"/>	 CT Head w/o Contrast	Trauma, Stat, Pending Discharge - No, ED_ONCE
	 CT Abdomen recommended if AST or ALT > 80 IU/L	
<input type="checkbox"/>	 CT Abdomen w/ Contrast	Trauma, Stat, Pending Discharge - No, ED_ONCE
<input checked="" type="checkbox"/> Consults		
<input checked="" type="checkbox"/>	  Social Work Consult	Stat, Other - See Special Instructions, Suspected child abuse and neglect

Summary of the AAP Recommendations

Infants <6 months of age with ANY bruise, frenulum tear, burn or subconjunctival hemorrhage (not present at birth)

Skeletal Survey

Head CT

Labs - CBC with platelets, PT/PTT, AST/ALT

Complete physical examination

- Completely undress the child
- Includes looking at the frenulum and behind the ears

Summary of the AAP recommendations

Infants 6-12 months with bruise*, frenulum tear, burn or subconjunctival hemorrhage (not present at birth)

*Depends on location of injury, history for injury, and developmental level of infant

Concerning bruises- mobile child (6-12 months)

Torso (except over bony prominences)

Ears

Neck

Frenulum

Angle of Jaw

Cheek

Eyelids

Sclera -subconjunctival hemorrhage

Summary of the AAP Recommendations

If concerning **location**, **history is not clear** (or no history), and/or **developmentally not appropriate**:

do skeletal survey and blood work

consider head CT, especially if:

- ▶ hemoglobin <11 g/dl
- ▶ bruising on face
- ▶ head circumference is out of proportion to the weight

Based on Pittsburgh Infant Brain Injury Score data

Skeletal Surveys

Part of the evaluation of a child with suspected physical abuse

All children <2 years old

- ▶ If you are reporting a child <2 years old to DCF for concern of physical abuse, you need to get a skeletal survey
- ▶ The converse is likely also true (if you're getting a skeletal survey, you need to report to DCF)

In children >2 years of age, a skeletal survey is RARELY helpful unless the child has SEVERE abusive injuries or child is comatose.

How much radiation is in a skeletal survey?

The effective radiation dose from a skeletal survey *in an infant* is ~0.2mSv

0.2mSv is approximately the radiation dose from flying in a commercial airline across the country

Background radiation is considered about 4mSv annually

“It doesn’t matter how much radiation you didn’t get if you are dead”

Evaluation of any fracture in a non-mobile infant OR any fracture concerning for abuse in child <2 years old

Skeletal survey

Labs: CBC with platelets, PT/PTT, ast/alt

Consider calcium, phosphorus, alk phos, 25 (OH) Vit D, intact PTH

Complete physical examination: completely undress and look in the mouth for palate or frenulum injury

If/when imaging the head, use protocol for c-spine imaging as well

Evaluation of any fracture in a non-mobile infant OR any fracture concerning for abuse in child <2 years old

Neuroimaging:

If <6 months: Head CT always (consider MRI if stable)

6 - 12 months: Ok to use clinical judgement about CT, PIBIS criteria (and AAP physical abuse guideline from 2015)

- ▶ head circumference over 85% for age or out of proportion to weight
- ▶ hemoglobin less than 11.2
- ▶ "abnormal dermatologic exam" -- esp. minor craniofacial injury

>12 months: CT is rarely indicated in neurologically normal child.

Which fractures ARE particularly concerning for abuse?

ANY fracture in a non-mobile child REGARDLESS OF HISTORY

A fracture in a mobile child in which the history is unclear, does not fit the mechanism, not developmentally appropriate or changing

A proximal or comminuted femur or humerus fracture

Classic metaphyseal fractures

A rib fracture, fracture of the end of the clavicle or acromion, digit fractures

More than one fracture (either at two different times or from a single event)

Fracture occurring with other injuries (e.g. bruises) where the constellation of findings doesn't match the history

Which fractures ARE NOT very concerning for abuse?

Spiral tibia fracture (toddler's fracture) in a *MOBILE* child

Linear parietal skull fracture with a clear history of trauma in a *MOBILE* child

BRIEF CHEAT SHEET: A child needs an evaluation for suspected physical abuse in the following scenarios

ANY bruise, burn, petechiae, subconjunctival hemorrhage (not present at birth), or frenulum injury <6 MONTHS of age regardless of history

>6 MONTHS, strongly consider it for

- ▶ ANY bruise in the TEN FACES region
- ▶ bruising on non-bony prominences
- ▶ bruises are in the shape of an object
- ▶ more bruises than you would expect to see even in an active child

BRIEF CHEAT SHEET: A child needs an evaluation for suspected physical abuse in the following scenarios

ANY fracture in a non-cruising infant

A fracture in a mobile child when

- ▶ The history is unclear, does not fit the mechanism, is not developmentally appropriate and/or is changing
- ▶ It is a proximal or comminuted humerus or femur fracture
- ▶ Classic metaphyseal fractures
- ▶ More than one fracture (either at two different times or from a single event)
- ▶ Fracture occurring with other injuries (e.g. bruises) where the constellation of findings doesn't match the history

A Note About Neglect

It can be hard to determine whether neglectful actions such as lack of supervision reach the level of reasonable suspicions for neglect (e.g. do you need to report them)

Neglect clinical guidelines can be found on the intranet and can help you decide

Guideline for Evaluation of Children with Concerns for Neglect

When deciding whether to report concerns of neglect to child protective services (CPS), consider the scenarios and their consequences below:

- **If the clinical scenario led to any of the listed consequences**, then the threshold of reasonable suspicion of neglect has likely been met and a report to CPS is strongly suggested. **Contact Social Work to report to CPS** and consider a ¹CPT Consult
- If the clinical scenario did not lead to any of these situations (e.g. drowning episodes which was very brief, child was clinical well and was able to be discharged home from ED), then reporting to CPS may not be necessary, but safety education for the family is critical.

Are any of the following clinical scenarios present?

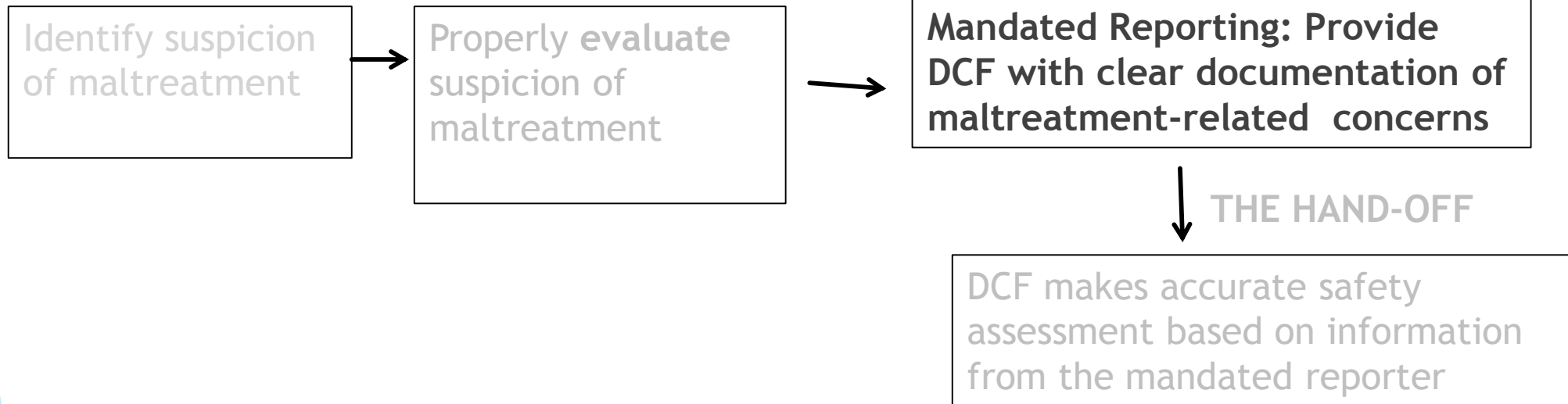
1. **Inadequate supervision** (supervision which would not be considered reasonable given the child's age and circumstances) which led to an injury including, but not limited to
 - drowning episode (non-fatal or fatal)
 - burn
 - fall from window/balcony/down stairs/fall from height >3 ft
 - dog bite
 - exposure to a toxic substance (ex. caustic agent)
2. **Unsafe sleep** leading to near-fatality or fatality
3. **Impaired parenting and/or poor parenting choice(s)** which put the child at imminent risk of injury including, but not limited to
 - child left alone in a car
 - young child allowed to ride on ATV
 - child left alone at home (consider developmental capacity)
 - intoxicated parent or parent affected by a substance
 - young child not in an age appropriate car seat
4. **Unintentional ingestion including**
 - presence of an illegal substance, narcotic or prescription medication (not prescribed to the child) in a patient <13 years old
 - a patient with change in mental status that responds to Narcan
 - altered mental status due to possible ingestion

Did the clinical scenario above lead to any of the following consequences?

1. **Admitted to the hospital** for observation or treatment
2. **Near-fatal or fatal event**
3. **Urine toxicology** positive for a drug or medication not prescribed to the patient and/or illegal
4. **Reasonable suspicion** that the child's environment is not safe

Similar
guidelines for
sexual abuse
will also be
available

If you have reasonable suspicion for abuse or neglect, you need to report to DCF



There are a lot of people and a lot of systems which need to work together in order to protect children - needs to be multidisciplinary

Mandated Reporting

For DCF to protect a child, you **MUST** make them aware of your concerns

- ▶ What type of abuse you are worried about (e.g. physical abuse, neglect)
- ▶ What makes you concerned (e.g. femur fracture)
- ▶ How concerned you are (e.g. highly concerned)

The more specific you are, the better

- ▶ More information is not necessarily better....you need to be clear

Mandated Reporting

- ▶ DCF workers have NO medical training
- ▶ Physical abuse is a MEDICAL DIAGNOSIS
- ▶ You need to tell DCF if you think it's abuse
- ▶ They are going to interview caregivers and get more information but YOU need to provide the medical information

DCF Push Back

- ▶ **There have been reports of DCF staff attempting to “push back” or refusing to take reports. DCF is NOT allowed to refuse taking an Emergency Department physician’s report.**
- ▶ They should not be asking YOU if you suspect or really think or “feel” it is child abuse or neglect.
- ▶ They should not be telling YOU there needs to be a known history of an abusive act.
- ▶ They should not be telling YOU if a fracture in a parent’s hand is “accidental” or “unintentional” - that is also how child abuse happens.
- ▶ They do not have the expertise to decide on the phone whether a mechanism of injury fits the faux explanation that worries you.
- ▶ They should not be telling YOU they will not accept a report because you are missing a piece of information so early in the evaluations.
- ▶ They should not be telling YOU they will not accept a report on a young infant (< 6 months) with even just one injury if you are concerned.

Helpful DCF “lingo”

- ▶ I believe this child is in imminent danger if he/she goes home
- ▶ This injury is concerning for physical abuse
- ▶ Other key words: life threatening, dangerous, risk, vulnerable, harm/threatened harm
- ▶ **When reporting to hotline include - Baby or child is being transferred/admitted to evaluate for additional undisclosed injuries**

Types of Maltreatment (DCF)

- ▶ Abandonment
- ▶ Asphyxiation
- ▶ Bizarre punishment
- ▶ Bone fracture
- ▶ Burns
- ▶ Death
- ▶ Environmental hazards
- ▶ Failure to protect
- ▶ Failure to thrive/malnutrition/dehydration
- ▶ Household violence threatens child
- ▶ Human trafficking (sexual, labor)
- ▶ Inadequate supervision
- ▶ Internal injuries
- ▶ Intimate partner violence threatens child
- ▶ Medical neglect
- ▶ Mental injury
- ▶ Physical injury
- ▶ Sexual abuse (battery, exploitation, molestation)
- ▶ Substance exposed newborn
- ▶ Substance misuse (alcohol, illicit drugs, prescription drugs)
- ▶ Threatened harm

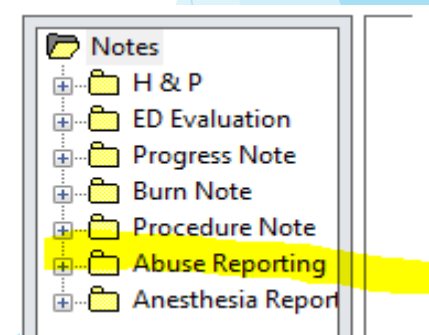
Child Abuse Reporting Form (CARF)

This is internal documentation that a report to DCF has been filed

- ▶ It allows providers to easily see if other providers in the system have previously made a report
- ▶ The information can be copied and pasted between web report and physician/APP/nursing documentation

It is a multi-contributor form which saves in ClinDocs

IMPORTANT: Documenting this form does not automatically notify DCF. The nurse must still call DCF to report the case.



Child Abuse Reporting Form (CARF)

Child Abuse Reporting			
Name of person filing DCF Report	<input type="text"/>	Date and Time of Report	<input type="text"/> <input type="text"/>
Patient location at time report is filed	<input type="radio"/> Emergency Department <input type="radio"/> Newborn nursery/NICU <input type="radio"/> Other:		
Method of reporting	<input type="radio"/> Phone report to 1(800)-96-ABUSE (1-800-962-2873) <input type="radio"/> DCF report already filed by another reporting source <input type="radio"/> Other:	In Florida, reporting is based on where the abuse occurred. If suspected abuse occurred in another state, see guidance below.	
Reporting Guidance: The most common state other than Florida you might need to report is Georgia: 1-855-GACHILD (1-855-422-4453).		If abuse occurred in another state, call the national hotline: 1-800-4ACHILD (1-800-422-4453) to find the county and the county contact for any of the states when you have concerns of abuse.	
Abuse report taken by state	<input type="radio"/> Yes <input type="radio"/> No	Reason report not taken	<input type="text"/>
Intake Worker Name	<input type="text"/>	ID Number	<input type="text"/>

Child Abuse Reporting Form

Statement of Concern

Prompt and decisive action by DCF relies on the accuracy of information in the Statement of Concern.

The Statement of Concern should include:

1. Type of maltreatment suspected (see list)
2. Description of specific injuries and/or concerns
3. Reasons you are concerned about abuse or neglect (e.g. injuries aren't consistent with history or 2 y/o should not be unsupervised)

This can be used as a prompt to help you include pertinent information when making your report to DCF.

Types of Maltreatment

1. Physical abuse
2. Neglect
3. Sexual abuse/assault
4. Human trafficking
5. Positive newborn drug screen or positive drug screen on child
6. Peer-on-peer assault
7. Emotional abuse
8. Other

Statement of Concern

Segoe UI 9

Current injuries / Condition of child

Segoe UI 9

Child Abuse Reporting Form

Were there other children present in the home where the reported abuse or neglect occurred to which the reported perpetrator may have access/contact?	<input type="radio"/> Yes <input type="radio"/> No	Were photographs taken	<input type="radio"/> Yes <input type="radio"/> No
Was law enforcement notified	<input type="radio"/> Yes <input type="radio"/> No	Agency	<input type="text"/>
Other Comments		Contact name	<input type="text"/>

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What if you aren't sure if you should be concerned or how concerned you should be?

- ▶ Get a second opinion
- ▶ Curbside CPT
- ▶ Note: in Florida for CPT to physically see a child, DCF report must be made; we are available for phone consult with or without a report

If you have questions or want to follow-up on a child who was seen by CPT, you can always call and speak to a physician/APP -
904-633-0300

Thank you for helping to protect our most vulnerable patients!