Nuts and Bolts of Recognizing and Responding to Child Maltreatment in the Primary Care Setting

Karen St. Claire, MD
Medical Director,
Child Abuse and Neglect Program and Consultant Service,
Duke University Medical Center
Medical Director,
Duke Child Abuse and Neglect Medical Evaluation Clinic (CANMEC)
How Big is The Problem?
(National Statistics for Reported Child Abuse/Neglect by Caretakers-DHHS)

- 3.5 million reports (6.4 million children) for suspected abuse/neglect received by CPS agencies
- 61% (~2,132,000) reports were screened in for investigation or alternative response by CPS. 17.5% were substantiated.
- 39% reports were screened out
Who Reports Child Maltreatment?

- **61.6%** of reports were by **professionals**:
  - Teachers 17.5%
  - LE/legal professionals 17.5%
  - Social services staff 11.0%
  - Medical/Other Professional 15.5%

- **18.6%** of reports were by **non-professionals**:
  - friends, neighbors, relatives

- **19.8%** of reports were **unclassified**:
  - anonymous, unknown, other
What Types of Maltreatment Are Reported?

- Neglect 79.5%
- Physical Abuse 18.0%
- Sexual Abuse, Psychological Abuse, Medical Child Abuse 2.5%

- A child may have experienced multiple forms of maltreatment and was counted once for each maltreatment type.
- The caretaker may not have inflicted physical or sexual abuse, but may have neglected to protect the child or exposed the child to an injurious environment.
How Many Children Die from Child Maltreatment Each Year?

- 1,520 die from CAN
- 73.9% of child fatalities are < 3 y.o.
- 2.36/100,000 are boys
- 1.77/100,000 are girls
- 39.3% Caucasian, 33% African American, 14.5% Hispanic
- 78.9% fatalities are by one or both parents
Who Abuses and Neglects Children?

- 83.0% were 18-44 years old
- 45.0% were men
- 53.9% were women
- 49.3% were Caucasian
- 20.1% were African American
- 19.5% were Hispanic
Historical Perspective of Child Maltreatment in the United States
Mary Ellen Wilson (1864-1956)

- Born in Hell’s Kitchen, NYC
- Father died, mother had to work
- Boarded with Mary Score. At 2 y.o. turned over to NY Department of Charities when mother missed payments and no showed
- Thomas and Mary McCormick signed an indentured agreement for Mary (illegal)
- Thomas died. Mary married Frances Connolly and moved to apartment on W 41\textsuperscript{st} Street
Mary Ellen Wilson (1864-1956)

- Forced to do heavy labor, regular and severe beatings, locked in closet, slept on floor, insufficient food, no warm clothes
- Concerned neighbors contacted Etta Wheeler, Methodist missionary, who visited apartment
  - Investigated legal options
  - Consulted with Henry Bergh, founder of American Society for Prevention of Cruelty to Animals
- Wheeler and Bergh removed Mary, and took Ms. Connolly to trial (1874). Mary testified at 10 y.o.
My father and mother are both dead. I don’t know how old I am. I have no recollection of a time when I did not live with the Connollys. Mamma has been in the habit of whipping and beating me almost every day. She used to whip me with a twisted whip—a raw hide. The whip always left a black and blue mark on my body. I have now the black and blue marks on my head which were made by mamma, and also a cut on the left side of my forehead which was made by a pair of scissors. She struck me with the scissors and cut me;
Mary Ellen Wilson  
(1864-1956)

I have no recollection of ever having been kissed by any one—have never been kissed by mamma. I have never been taken on my mamma's lap and caressed or petted. I never dared to speak to anybody, because if I did I would get whipped. I do not know for what I was whipped—mamma never said anything to me when she whipped me. I do not want to go back to live with mamma, because she beats me so. I have no recollection ever being on the street in my life.
Mary Ellen Wilson (1864-1956)

- Mary Connolly sentenced to 1 year in jail
- NY Society for Prevention of Cruelty to Children founded (1st)
- Initially placed in Juvenile Home, then custody obtained by Etta Wheeler’s family
- Married Louis Schutt at 24, had 2 children plus his 3 children and adopted another child
- Named first child “Etta”
- Died in 1956 at 92 y.o.
Wake-Up Call for the Medical Profession in the United States
Child Maltreatment

- Legal Definitions/Statutes
  - Each state has its own statutes/laws
- Medical Definitions
  - Diagnoses
  - Differential diagnoses
- Social Definitions
  - Public opinion (CSI, Lifetime Network, etc.)
NC Reporting Statutes for Child Maltreatment

- If you **suspect** child maltreatment you are mandated to report to the appropriate agency
  - DSS/Child Protective Services - G.S. 7B-301, or
  - Law Enforcement - G.S. 90-21.20
- If your report is made in **good faith**, you cannot be held legally liable (G.S. 7B-309)
- If you **fail to report**, you can be held legally liable
- Reporting statutes supersede HIPAA
NC Reporting Statutes for Child Maltreatment (DSS/CPS)

- General Statute 7G-301: If abuse, neglect or dependency is suspected to have been inflicted or caused by a caretaker, you are required to report to the Department of Social Services/Child Protective Services in the county in which the child lives.

  - Know your county DSS/CPS Intake number
  - After Hours/Weekends/Holidays: Call 911 (or Sheriff Office). Ask for CPS on-call SW and leave your phone number.
A clinic nurse or social worker can assist in making a DSS/CPS report, however the clinical provider needs to be involved as the actual reporter to provide important medical information (reason abuse/neglect suspected, concern regarding history, type of forces/mechanism, timing, age/developmental ability).

Failure to report can have severe consequences:
- Some states can fine or prosecute
- Recent $48 million lawsuit against CAP physician for failure to report suspected physical abuse. “A Cook County jury ruled against a prominent Chicago-area child-abuse physician in a $48 million wrongful death and negligence lawsuit.”
NC Reporting Statutes on Child Maltreatment (DSS/CPS)

- Caretaker
- Abused Juvenile
- Sexual Abuse
- Neglected Juvenile
- Psychological/Emotional Abuse
- Dependent Juvenile
NC Reporting Statutes on Child Maltreatment *(DSS/CPS)*

- **Caretaker:** Parent, guardian, custodian or other person responsible for the health and welfare of the juvenile in a residential setting
  - Step parent
  - Foster parent
  - Adult relative entrusted
  - House parent in residential facility
  - Responsible adults in daycare homes/facilities
  - Persons approved by care provider to assume responsibility
NC Reporting Statutes on Child Maltreatment (DSS/CPS)

- Abused Juvenile:
  - Child less than 18 years old
  - Parent, guardian, custodian, caretaker inflicts or allows serious physical injury by non-accidental means
  - Creates or allows substantial risk of serious physical non-accidental injury
  - Uses or allows cruel or grossly inappropriate procedures or devices to modify behavior
NC Reporting Statutes on Child Maltreatment (DSS/CPS)

- **Sexual Abuse:** Parent, guardian, caretaker commits, allows or encourages:
  - Commission of sexual acts against a child including use of the child in pornography or displaying or disseminating pornography to a child
NC Reporting Statutes on Child Maltreatment (DSS/CPS)

- **Neglected Juvenile:**
  - Absence of proper care, supervision or discipline
  - Abandoned
  - Necessary medical care not provided
  - Lives in an environment injurious to welfare
  - Placed for care or adoption in violation of the law
  - Neglect also pertains if another juvenile in the home has died or been subjected to physical or sexual abuse by an adult in the home
NC Reporting Statutes on Child Maltreatment (DSS/CPS)

- **Psychological/Emotional Abuse:**
  - Parent, caretaker, guardian creates or allows serious emotional damage. Evidence of emotional damage includes:
    - Severe anxiety
    - Depression or withdrawal
    - Aggression towards oneself or others
  - Parent, guardian or caretaker encourages, directs or approves delinquent acts including moral turpitude committed by the juvenile
**Dependent Juvenile:**

- There is no parent, guardian or custodian responsible for the juvenile’s care
- The parent, guardian or custodian is unable to provide for the juvenile’s care or supervision
NC Reporting Statutes on Child Maltreatment (LE)

- General Statute 90-21.20:
  - Requires the reporting of wounds, injuries and illnesses possibly resulting from criminal acts (e.g., injuries often seen in EDs such as gunshot wounds and stabbings) to law enforcement.
  - On 12/1/08, G.S. 90-21.20 was expanded to include the duty of reporting to LE any cases of recurrent illness or serious physical injury in a patient less than 18y.o. where the illness or serious injury appears to be the result of non-accidental trauma.
NC Reporting Statutes on Child Maltreatment (LE)

- General Statute 90-21.20:
  - Requirement to report to LE does not replace the requirement to report to DSS/CPS. Rather, the reporter may be required to make two reports.
  - Updated statute ensures that LE is involved early in investigations of serious abuse.
  - LE investigates allegations of CAN if it appears that a crime may have been committed.
  - LE officers and DSS investigators may collaborate but have separate investigations.
Role of the Primary Care Provider in Child Maltreatment

- **Do What You Do Best:**
  - Recognize: CC, PMH, HPI, SH, FH, ROS
  - Evaluate: Exam, labs, consultations
  - Diagnose: Put it all together/interpret findings
  - Recommendations: Treat, report, safety, follow-up, refer
  - Document, document, document: Notes, photos, diagrams

- Medical evaluations are only one piece of the child abuse/neglect “puzzle”
- Medical evaluations are not legal investigations, however medical information can be used by legal agencies as part of their investigations
- “Child Abuse” and “Child Neglect” are valid medical diagnoses, but these are not the same as legal definitions of abuse and neglect
Role of the Primary Care Provider in Child Maltreatment

- Consider relevant **differential diagnoses**
- Use standard Diagnostic Categories (**conclusions**)
  - Clear: report to DSS
  - Probable: report to DSS
  - Suspicious: report to DSS
  - Unknown: no report, but f/u
  - No evidence: no report
- Medical providers often have a higher threshold for reporting suspected abuse/neglect
Risk Factors for Child Maltreatment
(Same for Physical Abuse, Sexual Abuse, Neglect)

- Domestic violence
- Substance abuse
- Prior abuse in the home
- Multiple caretakers
- Mental illness of caretaker(s)
- Disability or prematurity of child
- Lack of family support/social isolation
- Marital, employment, financial stressors
- Inexperience/poor parenting knowledge/skills
Child Abuse: Yellow Flags
(Consider Inclusion of Abuse/Neglect in Differential Diagnoses)

- Multiple ER or Clinic Visits for trivial complaints in an apparently well child
- Question of apnea
- Failure to thrive
- Multiple injuries in the past
- Doctor-shopping
- Non-specific family in crisis
Child Abuse: Red Flags
(Child Abuse/Neglect High on List of Differential Diagnoses)

- Incongruous history for an injury
- Little knowledge of how an injury occurred
- Little desire to know how an injury occurred
- Blame the child – “accident prone”
- Unreasonable expectations for developmental age
- Delay in seeking care
- Dead on arrival (DOA)
Case of Acute Physical Abuse

- **CC:** 11y.o. girl brought to ED after school reported blood on her pants and pain
- **HPI:** child reported mother beat her for going to school late
- **PMH/ROS:** 2 prior incidents of severe physical abuse, several prior DSS reports, otherwise healthy
- **Medical Evaluation:** exam, interviews, record review, documentation, conclusions, recommendations, referrals, follow-up
- **Legal/Social Issues:** reporting, safety, follow-up, court
Recognize Findings that are Normal or Non-Specific for Abuse

- Congenital variations
- Effects of medical conditions
- Reactions to medications, environment
- Changes resulting from infections or inflammatory conditions
- Mimics of abuse
Recognize Accidental versus Inflicted Bruising

- Common in healthy, active children once cruising/walking is achieved
- 35% of ambulatory children develop bruising at least every other week
- Higher incidence in 2-5 year olds
- Most common over bony prominences
Variables Affecting the Appearance of Bruising

- Complexion/skin color
- Depth and force of impact
- Vascularity of impacted skin
- Connective tissue density
- Mechanism of injury
- Time/age of injury

**There is no way to accurately date bruises by appearance alone**
Differential Diagnoses for Non-Inflicted Bruising

- Unintentional: accidents, dyes, tattoos
- Misdiagnosis: mongolian spots
- Infection: impetigo, staph, strep
- Immunologic: vasculitis, contact derm
- Dermatologic: eczema, psoriasis
- Vascular: hemangioma
- Hematologic: ITP, hemophilia
- Congenital: Ehlers-Danlos
- Phyto/photodermatitis
- Folk-healing: coining, cupping
Inflicted/Intentional Bruising

- Question ALL bruising in neonates and young infants
- Question extensive bruising in all infants and children
- Question bruising in protected skin sites
- Question pattern-type or geometric shape bruising
Recognize Accidental versus Inflicted Burns

- Most burns occur at home
- 10-25% of burns in children occur from abuse
- Most burns in children occur between ages 1 to 5 years old
- There is a high mortality associated with inflicted burns
- Scalds are the most common type of inflicted burns
Types of Burn Injuries

- **Scald** burns: hot liquid or oil, steam, emersion
- **Flame** burns
- **Contact** burns: stoves, heaters, irons, curling irons, light bulbs
- **Electrical** and **microwave** burns
- **Chemical** burns
Full Thickness Burns
Water Temperature and Time

- 120 degrees F = 10 min.
- 122 degrees F = 5 min.
- 127 degrees F = 1 min.
- 130 degrees F = 30 sec.
- 150 degrees F = 2 sec.
- 158 degrees F = 1 sec.
Recognize Accidental versus Inflicted Skeletal Injuries

- Occur in 10-50% of abused children
- Are most specific in infants
- Most common type: diaphyseal fractures
- Initial X-Rays: specific to presentation/exam
- **Skeletal survey**: long bones, hands, feet, axial skeleton, skull (25-30 images)
  - Most sensitive < 2 years old
  - Less useful > 5 years old
- Bone scan: may detect subtle fractures
- Repeat x-rays in 2 weeks to detect callous formation
Recognize Accidental versus Inflicted Skeletal Injuries

- **High Specificity:**
  - metaphyseal fxts, posterior rib fxts, scapular fxts, spinous process fxts, sternal fxts

- **Moderate Specificity:**
  - multiple fxts (esp. bilateral), fxts of different ages, epiphyseal separations, vertebral body fxts/subluxations, digital fxts, complex skull fxts

- **Low Specificity:**
  - subperiosteal new bone, clavicular fxts, long bone shaft fxts (unless in infant), linear skull fxts
Non-Abusive Fractures

- **Birth Trauma**: clavicle, humerus, femur
- **Prematurity**: multifactorial
- **Metabolic disorders**: rickets (Vit D), scurvy (Vit C), copper deficiency, Menke’s kinky hair
- **Genetic disorders**: congenital pain indifference, Caffey’s dz, Osteogenesis imperfecta Types I & IV (rare inherited disorder resulting from abnormal collagen synthesis. Causes fragile bones, frequent fractures, easy bruising, blue sclera)
- **Infections**: osteomyelitis, congenital syphilis (long-bone periosteal reaction, metaphyseal irregularity), TB (vertebral involvement, spondylitis/Potts disease)
- **Drug effects**: chemotherapy, vitamins, anticonvulsants, diuretics, hyperalimentation
Recognize Accidental versus Inflicted Head and Intra-cranial Injuries

- Scalp contusions, lacerations, edema, subgaleal hemorrhage
- Skull fractures
- Extra-axial hemorrhages (EDH, SDH, SAH)
- Brain contusions, shearing, edema, infarction, ischemia
- Intra-ventricular hemorrhage
- Ocular injuries
Neuro-Radiology Studies

Head CT                                      Brain MRI
Recognize Accidental versus Inflicted Retinal Hemorrhages

- Can result from birth trauma, accidental head trauma, inflicted head trauma, bleeding disorders, congenital/metabolic disorders, infections/DIC

- In serious inflicted head trauma:
  - Frequently associated with SDH and brain injury
  - Numerous and extensive (multiple layers of the retina), from posterior pole to anterior ora serrata
  - Can be unilateral or bilateral
In infants and children, RHs are unlikely to result from increased ICP alone.

Impact injury to the head may be associated with small numbers of RHs in the posterior pole.

Crush injuries to the head may result in extensive RHs in multiple layers of the retinae.

Severe compressive chest trauma may be associated with RHs.

Normal newborns may have small numbers of superficial RHs, which usually resolve within 2-3 weeks.

RHs can result from ECMO, coagulopathies, vasculitis, SBE, meningitis, severe HTN.
Retinal Hemorrhages
Child Sexual Abuse
Child Sexual Abuse

- **Perpetrators:** usually males who are known to the child, are often in a caretaker role and have repeated access to the child

- **Dynamics:** often gradual and progressive over time. Likely to become more invasive if allowed to continue. Rarely a single event.

- **Presentation:** most cases are past or chronic sexual abuse acutely discovered

- **Physical findings:** 85-95% of sexually abused children have no specific or diagnostic physical findings (video evidence)
Child Sexual Abuse

- **Disclosure**: children are unlikely to disclose about abuse or their method of communicating may not be understood. Disclosure may be delayed, conflicted, or unconvincing.

- **Retraction**: if not supported and protected from negative consequences of disclosing, children may retract their disclosure.
How Sexually Abused Children May Present

- **Behavioral Symptoms:**
  - Sexual Acting Out
  - Depression, Anxiety, Fear
  - Self-injurious Behavior
  - Eating/Sleeping Changes
  - Substance Abuse
  - Excessive Masturbation
  - Aggressive Behavior
  - Promiscuity
  - School Issues
  - Suicide

- **Physical Signs/Symptoms:**
  - Chronic Medical Complaints
  - GI Complaints (stomachaches, encopresis, constipation)
  - Genitourinary Complaints (dysuria, bleeding, discharge)
  - Dermatologic Complaints (bruises, lesions, rashes)
How Do You Examine a Child for Concern of Child Sexual Abuse

- Comprehensive physical exam
- Give child choices when possible
- **Never forcibly restrain** child for exam
- Help child become comfortable with room, equipment, exam positions and techniques
  - Stethoscope, otoscope, colposcope, gloves, swabs
  - **Supine Frog-leg** and **prone Knee-chest positions**
  - Labial **separation** and **traction** techniques
Prone Knee-Chest Position

Marcia Herman-Giddens, P.A.-C., M.P.H.
Duke University Medical Center
Child Protection Team
Orientation of Physical Findings
Tanner Staging

FIGURE 3. Tanner staging of female sexual development.
Hymenal Shapes

- Annular hymen
- Crescentic hymen
- Septate hymen
- Cribiform hymen
- Firmbrilated hymen
Recognize Non-Abusive Genital Conditions

- Labial Adhesions
- Urethral Prolapse
- Periurethral Cyst
- Hemangioma of Hymen
- Imperforate Hymen
- Failure of Midline Fusion
- Vaginal Agenesis
- Lichen Sclerosus
- Diaper Dermatitis
- Group A Strep
- Hypopigmentation
- Behcet’s Disease
- Eczema/Psoriasis
- Tumor
Recognize Non-Abusive Genital Trauma

- Straddle Injury Without Penetration
- Straddle Injury With Penetration
- Kick to Genitalia
- Fall Onto Object
- Water-jet Injury (Associated with Vaginal Tears but Not Hymenal Tears)
- Thermal or Chemical Injury
Recognize Genital Trauma That May Be Inflicted

- Petechiae
- Bruising
- Edema
- Hematoma
- Attenuation
- Vaginal Foreign Body
- Laceration
- Hymenal Notch/Cleft
- Hymenal Transection
- Avulsion of Hymen
- Missing Hymenal Tissue
- Hymenal Scar
Hymenal Transections/Notches/Clefts

Posterior Rim Breaks

Fig. 5. Break in posterior rim hymen.
Recognize Normal and Non-Abusive Anal Findings

- Pectinate Line
- Diastasis Ani
- Anal Dilatation/Gaping
- Failure of Midline Fusion
- Rectal Prolapse
- Anal Tag
- Anal Fistula
- Ectopic Anus
Sexually Transmitted Infections

- Neisseria Gonorrhea
  - Gold Standard: Culture + 2 Conf. Tests
  - Adults/Teens > 14: DNA Probe/PCR
  - Genital Symptoms: Usually in 2-7 days. Can appear up to ~30 days. Purulent discharge, Pain.
  - Treatment: 125-150mg Ceftriaxone IM-uncomplicated infection. (Cefixime/Cipro PO > 45kg)
Sexually Transmitted Infections

- **Chlamydia Trachomatis**
  - Gold Standard: Tissue Culture (Inclusions)
  - Adult/Teens ≥ 14: DNA Probe/PCR
  - Genital Symptoms: Often none. May have thin clear discharge, +/- pain within 5-7 days. Can persist for 1-2 years.
  - Treatment: >45kg - Azithromycin 1gm PO, <45kg - Erythromycin 50mg/kg/day x 10-14 days.
Sexually Transmitted Infections

- **Trichomonas Vaginalis**
  - **Gold Standard:** Culture. Also wet prep and urine if motile.
  - **Genital Symptoms:** Itching and bubbly green discharge in 3-7 days. Can persist 3-6 Weeks.
  - **Treatment:** Metronidazole 40mg/kg x 1 or 15mg/kg/day BID x 7 days. Teens can take 2gm PO x 1 or 500mg PO BID x 7 days.
Sexually Transmitted Infections

- Bacterial Vaginosis - Anaerobe overgrowth. Treat with Metronidazole.
- Molluscum Contagiosum - Can treat with curettage, cryo, laser.
- Mycoplasma Hominis – Azithromycin/Erythro.
- Hepatitis B Virus – Vaccine, Immunoglobulin.
- Human Immunodeficiency Virus – Prophylaxis.
Know Your Local Child Abuse Medical and Mental Health Resources

- Child Abuse Training and Evaluation Centers:
  - Duke Child Abuse and Neglect Program/CANMEC – Durham
  - Beacon Program, UNC Hospital – Chapel Hill
  - Wake Safe Child CAC – Raleigh
  - Teddy Bear Clinic CAC, Vidant Medical Center – Greenville
  - Carousel CAC – Wilmington
  - SR-AHEC Child Abuse Evaluation Center – Fayetteville
  - Wake Forest Baptist Hospital CAN Program – Winston Salem
  - Pat’s Place CAC, Carolina’s Medical Center – Charlotte
  - Mission Hospital, Family Justice Center – Asheville

- Children’s Advocacy Centers of North Carolina:
  - [https://cacnc.org](https://cacnc.org)
  - 35 Accredited CACs and 4 Provisional CACs
Know Your Local Child Abuse Medical and Mental Health Resources

- **DUMC Child Abuse and Neglect (CAN) Program:**
  - Inpatient (DUMC), Emergency Room (DUMC/DRH) and urgent referrals and consults from professionals:
    - 24/7 Pager: (919) 970-0989
    - On-Call: Karen St. Claire MD/CAP, Aditee Narayan MD/CAP, Beth Herold DNP CPNP, Lindsay Terrell MD/CAP, Stephanie MacPherson MD/CAP Fellow

- **Duke CAN Medical Evaluation Clinic (CANMEC):**
  - Outpatient scheduled medical evaluations:
  - Office (8a.m.-5p.m.): (919) 479-2690
  - Intake/Staff Assistant: Caroline Irish
  - Clinic Coordinator/Child Interviewer: Scott Snider, LCSW
  - Child Interviewer: Jessica Hord, LCSW
Know Your Local Child Abuse Medical and Mental Health Resources

- Center for Child and Family Health (Durham):
  - Mental Health Therapists trained in PCIT, TF-CBI
  - Outpatient Appointments: (919) 419-3474

- Private Mental Health Providers:

- Emergency Mental Health Referrals:
  - Acute decompensation or suicidal children
  - DUMC Emergency Department
  - The Durham Center
Know Your Local Child Abuse Medical and Mental Health Resources

- Other referral considerations:
  - Substance abuse intervention
  - Domestic violence counseling
  - Parent-Child Interaction Therapy (PCIT)
  - Legal services (protective shelter, restraining order, legal counseling)
  - Social needs (housing, daycare, food stamps, disability)
  - Additional medical intervention
Long-term Outcomes Related to Adverse Childhood Experiences

- The Adverse Childhood Experiences study (ACE) found a relationship between childhood exposure to abuse and household dysfunction and medical disorders/health problems in adulthood such as:
  - cancer, fractures, ischemic heart disease, liver disease, chronic lung disease
  - smoking, depression, illicit drug use, teen pregnancy, STDs, suicide, obesity, alcoholism, sexual risk behaviors
- [https://www.samhsa.gov/capt/practicing-effective](https://www.samhsa.gov/capt/practicing-effective)