Neglect in Childhood

Barbara Knox, M.D.

University of Wisconsin SCHOOL OF MEDICINE AND PUBLIC HEALTH
UW Health American Family Children's Hospital

MYTH: Child Neglect is a Low Grade Form of Child Abuse

WHERE'S THE EVIDENCE?

Where's The Evidence?

- For investigators, this is the most difficult thing
- Always seems like this gray mess
- Many statutes require documentation of harm for felony prosecution

Creating a Neglect Timeline

- Timeline becomes a critical piece of evidence
- Investigators and prosecutors many times shocked at how many small incidents there actually are within a given timeframe

Failure to Thrive Secondary to Neglect

Failure to Thrive Definitions

- **CDC: Weight for Age < 5th percentile or**
- **WHO: Weight for age <2 SD (< 2.3%) or**
- **Down-crossing of 2 major growth percentiles (3rd, 5th, 10th, 25th, 50th, 75th, 90th 95th, and 97th)**

Harper, NS. Neglect: failure to thrive and obesity. Pediatric Clinics of North America 61(2014) 937-957

Malnutrition/Wasting Definitions

- **Acute malnutrition:** inadequate growth for < 3 months
- **Chronic malnutrition:** inadequate growth for ≥ 3 mo includes deficit in height velocity or stunting

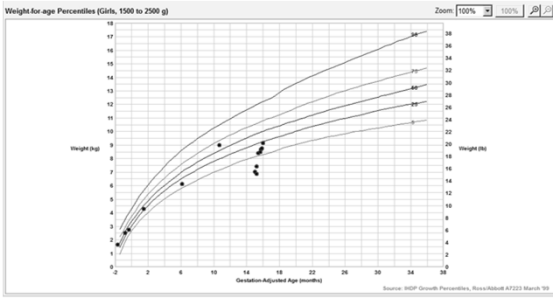
Degree of wasting by Z-score (WHO)

- **Moderate: weight for age - 2 to -3 SD**
- **Severe:** weight for age ≤ -3 SD

Degree of stunting by Z-score (WHO)

- **Moderate: height for age -2 to -3 SD**
- **Severe:** height for age ≤ -3 SD

17 Month Old Female Growth Curve



Utility of Feeding Contracts

Feeding Contract

Goal:
1. To have Sean take in his required calories in order to grow
2. To have Sean gain on the growth curve and stabilize on his own growth curve.

Hospital Goals:
1. For the next 24 hours, continue with nurse assisted parent feedings of Sean in order to allow the nurses to coach parent on Sean's feedings cues.
2. For 48 hours thereafter feedings should be performed by the parent in the hospital with twice daily weights of Sean on the same weighing scale.
3. Has parent to demonstrate understanding and compliance of Sean's feeding regimen.

Goals for Home:
1. Sean must be fed 8 feedings a day.
2. Mother agrees to stick with Sean's feeding plan as scheduled below:

Time	Type/Amount of Feeding
6 AM	Nurse assisted with 1 or 2 ounces of 24 calorie formula with pumice
10 AM	Baby fed on the pumice
2 PM	Nurse assisted with 1 or 2 ounces of 24 calorie formula with pumice
6 PM	Baby fed on the pumice
10 PM	Nurse assisted with 1 or 2 ounces of 24 calorie formula with pumice
2 AM	Baby fed on the pumice
6 AM	24 calorie formula
9 AM	24 calorie formula

Attempt 2-4 oz formula with naps, he will usually take 2 or 3 ounces 10 to 20 minutes after falling asleep.

To mix baby cereal: 2 TBS cereal per 1 ounce formula. May add 1 TBS fruit for flavor.

3. Mother agrees to have a public health nurse come to the home three times per week in order to observe assist with feedings and perform a weight check using the same scale with every visit. Those scheduled visit were to be on Mondays, Wednesdays, and Fridays.
4. Mother agrees to follow up via an appointment with primary care doctor one time per week for a weight check and assessment of overall progress. This office visit will occur every week on Tuesday.
5. Mother agrees to follow up via an appointment with PCP on Thursdays of every week for an assessment and weight check.
6. Mother has agreed to keep a daily feeding log documenting the date, feeding times, type of feeding, amount fed, how Sean did with the feeding, and a weight log documenting the daily weight and who weighed the child.
7. Mother agrees that this plan will remain in place as stated for four weeks duration. At the end of the four weeks time, the plan will be reassessed based upon Sean's feeding progress and overall growth assessment in order to get him compliant with the above stated goals.

I understand the above feeding contract and agree to abide by its contents

_____
Parent(s)

Neglect and Failure to Thrive

Determine if Organic Condition

- Medical tests for organic disorders
- Child fed in controlled environment
- Document growth for several months
- Establish whether parents sought out medical intervention, advice
- Evidence child emotionally deprived also

Neglect and Failure to Thrive

Determine if Organic Condition

- Examine medical records/growth charts for FTT child & siblings
- Failure to keep well baby appointments
- Interview physicians
- Caretaker statements to physician
- Interview lay witnesses with access to child

Failure to Thrive Workup Nutritional History

- Type of food and amount
- Type of liquid and amount
- Feeding behavior (swallowing, drooling, vomiting, oral aversion)
- Child's special health care issues
  - Prematurity
  - Congenital abnormalities
  - Food allergies
  - Neurologic disorder

Failure to Thrive Workup Caregiver and Environment

- Caregiver assessment
  - Psychosocial
  - Medical / nutritional
  - Mental health
  - Drug and alcohol
- Parent – Infant interaction:
  - Attachment
  - Response to needs
- Environment
  - Family (domestic violence)
  - Support system
  - Financial status / food insecurity
  - Housing

Failure to Thrive Workup Physical Examination

- Assessment of the severity of malnutrition (Growth Chart)
- Assessment of possible effects of malnutrition (subcutaneous fat, hair changes, skin infections etc.)
- Identification of dysmorphic features suggestive of a genetic disorder impeding growth
- Detection of underlying disease that may impair growth
- Assessment for signs of possible child abuse

Failure to Thrive Workup Laboratory Evaluation

Initial studies to consider

- CBC
- Chemistry panel including LFTs, phosphorous, magnesium
- Free thyroxine, TSH
- Urinalysis
- HIV testing
- C-reactive protein or ESR

Further studies based on medical history, physical examination findings and risk of refeeding syndrome

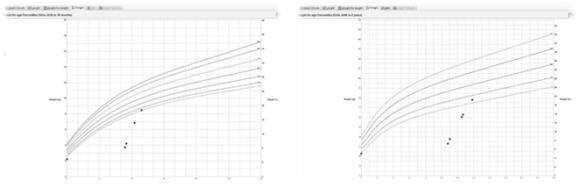
Neglect and Failure to Thrive

Defenses

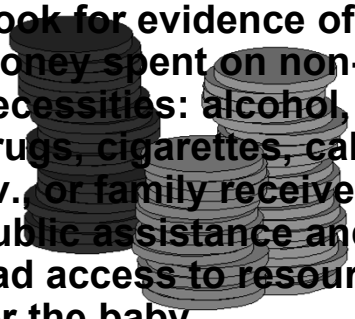
- Underlying medical condition
- Poverty (lack of resources such as transportation, food, etc.)
- Lack of parenting skills - ignorance
- Child wouldn't eat; vomiting; diarrhea
- Congenital - everyone in family is small
- Child healthy until just recently
- Another responsible for caretaking

11 month old twins

Twin A **Twin B**

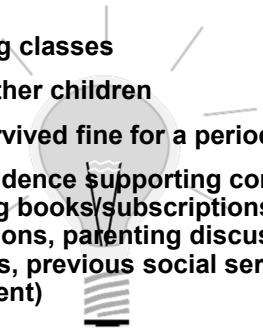


Poverty Defense



Look for evidence of money spent on non-necessities: alcohol, drugs, cigarettes, cable t.v., or family received public assistance and had access to resources for the baby.

Ignorance defense



1. parenting classes
2. raised other children
3. child survived fine for a period of time
4. other evidence supporting competence (parenting books/subscriptions, prescriptions, parenting discussions with peers, previous social service involvement)

DEFENSES

Child was healthy - lost weight rapidly

1. Thorough medical workup should demonstrate whether malnutrition is chronic or acute
2. Very rare that emaciation occurs rapidly

FTT Scene Investigation

- Age appropriate food
- Bottles, cans of formula, mixing instructions
- Freshness of food, evidence of recent purchases
- Diapers and dirty laundry

FTT Scene Investigation

- Evidence other children well fed; photos
- No current photos of victim
- Photos of victim previously (contrast)
- No toys for victim
- Overall condition of home
- Parenting books

"We're all short" Defense

1. Even short children do not waste away
2. Ask physician to adjust chart for premature child.

Medical Neglect

- Delay in seeking medical attention
- Lack of acute medical care
- Failure to attend appointments
- Noncompliance with treatment recommendations
- Lack of well-child care

Medical Neglect

- Accounts for 2.3% of all substantiated cases of child maltreatment*
- Likely underreported

What Does The Literature Say?

PEDIATRICS®
OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

Recognizing and Responding to Medical Neglect
Carole Jenny
Pediatrics 2007;120;1385
DOI: 10.1542/peds.2007-2903

Jenny, C, and the Committee on Child Abuse and Neglect. Recognizing and Responding to Medical Neglect. Pediatrics 2007; 120;1385

Medical Neglect

- Failure to receive necessary care
  -Obvious signs of serious illness are ignored
- Failure to provide necessary care
  -Failure to follow medical instructions once medical advice has been sought

The Medical Provider's Role in Assessing Medical Neglect

- Caregiver may fail to recognize or respond to a child's needs for many reasons
- Effective response by health care professional requires:
  - Comprehensive assessment of child's needs
  - Evaluation of parent(s) resources
  - Parent(s) efforts to provide for the child's needs
  - Options for ensuring optimal health

Jenny, C, and the Committee on Child Abuse and Neglect. Recognizing and Responding to Medical Neglect. Pediatrics 2007; 120;1385

The Medical Provider's Role in Assessing Medical Neglect

- Consider the least intrusive options for managing cases
- Ensure health and safety of the child

Jenny, C, and the Committee on Child Abuse and Neglect. Recognizing and Responding to Medical Neglect. Pediatrics 2007; 120;1385

Diagnosing Medical Neglect: What Factors are Necessary?

- A child is harmed or is at risk of harm because of lack of health care
- Recommended health care offers significant net benefit to child
- Anticipated benefit of treatment is significantly greater than its morbidity, so reasonable caregivers would choose treatment over non-treatment
- Can be demonstrated that access to health care is available and not used
- Caregiver understands the medical advice given

Jenny, C, and the Committee on Child Abuse and Neglect. Recognizing and Responding to Medical Neglect. Pediatrics 2007; 120;1385

Reasons Families Fail to Seek Care Appropriately

- Patient and Parent Factors
  - Poverty or economic hardship
  - Lack of access to care
  - Family chaos and disorganization
  - Lack of awareness, knowledge or skill
  - Lack of trust in health care professional
  - Impairment of caregivers
  - Caregiver's belief systems
  - Child's attitudes and behavior

Jenny, C, and the Committee on Child Abuse and Neglect. Recognizing and Responding to Medical Neglect. Pediatrics 2007; 120;1385

Reasons Families Fail to Seek Care Appropriately

- Medical Provider Factors
  - Misunderstanding of different cultures
    - May be acceptable parenting practices in other cultures
    - American Indian/Alaska Native cultures encourage adolescent medical care autonomy
  - Lack of parent health literacy
    - Parents often misunderstand complicated medical instructions for treatment justification
  - Lack of communication in the medical setting

Jenny, C, and the Committee on Child Abuse and Neglect. Recognizing and Responding to Medical Neglect. Pediatrics 2007; 120;1385

Asthma

- Most common chronic disease of childhood
- More prevalent in African Americans and children living below the poverty level
- Notable trends with increased ER visits and morbidity in this population

10 year old with asthma

- Admitted to ICU with status asthmaticus
- Night before, child had increased cough and wheezing
- Inhaler only had two puffs left and couldn't control the symptoms (Prescription lapsed)
- Last seen by pulmonologist over 1 year ago
- Dad took child off daily medications due to concern of "chronic steroid use"
- Pets a trigger-17 animals in the house
- Dad said Mom responsible for getting child's meds

Definite medical neglect

Asthma and Medical Neglect

- Nonadherence with medical management (occurs in 10-50% of asthma patients)
  - Increased ER visits
  - Hospitalization
  - Deteriorating lung function testing
- Poor adherence to medication
  - Failure to obtain/administer medications
  - Excessive reliance on rescue inhaler

Asthma and Medical Neglect

- Refusal to remove pets or other asthma triggers from the child's environment
- Making a child responsible for his/her own illness
- Environmental exposure to tobacco smoke

18 Month Old Frostbite of Fingers Requiring Amputation

- Mother took child outside to play in snow without mittens for 10 minutes
- Temperature was minus 37degrees F with wind chill
- Sought care 3 hours later after fingers turning red to white
- Three fingers amputated

Case Study-13 year old male

- Right eye hyphema secondary to being shot with BB gun
- Child says was playing in his yard with two friends
- Shooting cans with BB guns
- Put on sweatshirts so they can shoot each other in the chest
- Windy outside and a shot from friend blew up and hit child in eye just below pupil

Case Study-13 year old male

- Aunt home at time of incident
- Saw child down on ground for some time outside in pain
- Difficulty seeing
- Vision worse over next two hours
- Aunt calls mother, who says for child to lay down and place Visine drops in eye

Case Study-13 year old male

- Older brother "very experienced with eye injuries"
- Recommended washing it out with water daily and it will improve
- Vision worsened, increased pain with movement
- Could only lay in bed with eye closed
- Mother stated child did not need to be seen
- Care sought by Aunt SIX days later

Case Study-13 year old male

HCT shows right traumatic hyphema and lens disruption; no foreign body visualized

Case Study-13 year old male

- WHY MEDICAL NEGLECT?
- Failure to receive necessary care that will result in some degree of permanent impaired vision for child, with worst case scenario that child would require an epithelial cell transplant to restore vision in right eye OR become blind with lose the eye
- CPS safety plan=Foster care
- Mom fled hospital with child
- Permanent loss of vision

Case Study-17 Month Old Female

- Family Medicine resident phoned Child Protection Program on Friday afternoon for assistance
- 17 mo female presented with mother to clinic asking for follow up of hand burn
- Mother stated child got hand burned at Grandmother's house out of state and due to lack of funds, wasn't able to get her for 8 months

Case Study-17 Month Old Female

- Mother later admits to detectives "She burnt her hand here"
- "I guess she was crawling around. I guess when she tried to get up, she stuck her hand in the heater"
- Dad was in the living room playing a video game at the time of the injury
- Mom at gas station
- Ran hand under cold water and applied cocoa butter

Case Study-17 Month Old Female

- **Blisters developed on hand**
- **Mom reports not seeking medical care because " I was very scared because I was still in the process with the DCFS people for her other child." "I was scared. They gonna take her from me."**
- **Care sought 6 months later after fingers totally fused**

Case Study-17 Month Old Female

- **Diagnosis: Medical Neglect**
- **Charged with child neglect resulting in great bodily harm**
- **Both parents criminally convicted**

What is Dental Neglect?

AMERICAN ACADEMY OF PEDIATRICS
AMERICAN ACADEMY OF PEDIATRIC DENTISTRY
CLINICAL REPORT
Guidance for the Clinician in Rendering Pediatric Care

Nancy Kellogg, MD; and the Committee on Child Abuse and Neglect

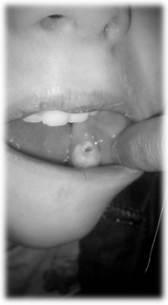
Oral and Dental Aspects of Child Abuse and Neglect

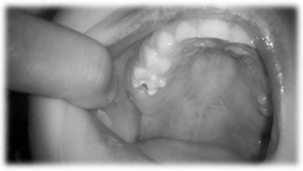
- "The willful failure of a parent or guardian to seek and follow through with treatment necessary to ensure a level of oral health essential for adequate function and freedom from pain and infection."

What is Dental Neglect?

- 4 year old female child
- Severe dental decay in four teeth
  - Visible holes in teeth
  - Sensitive to cold and heat
- Six carries
- Mother stated she was taking care of problem 9 months ago
- Puts child at risk of increased pain and infection

Dental Neglect

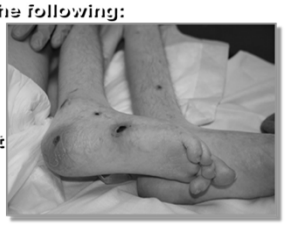


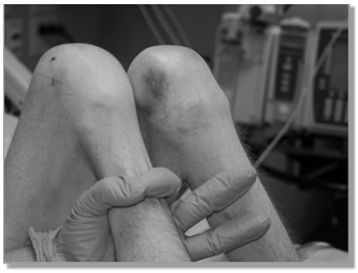


Case Study: 20 Year Old Vulnerable Adult

She is documented to have chronic malnutrition and the physical exam documented the following:

1. Pink mouth lesions
2. Profound bleeding of her gums
3. Decubitus ulcer with black eschar on right foot
4. Large pressure sore on heel of right foot
5. Multiple decubitus ulcers along the right lateral and posterior rib region
6. Eschar on the sacral region
7. Decubitus ulcers on the left lateral foot





Extreme Malnutrition

Nurse caring for patient was able to circumferentially wrap her thumb and 2nd digit around the patient's entire leg below the knee

Case Study: 20 Year Old Vulnerable Adult

- Pediatrician involved in child's care up until age 13 and again prior to hospitalization
- Was not being seen every 6 months as stated in documented medical recommendations to father
- Last weight in medical record: 3 years prior to hospitalization=67 lb.
- Loss of 20 lb.

Case Study: 20 Year Old Vulnerable Adult

- Who was prescribing this child's feedings?
- Extensive medical record review
- Father claiming PCP
- PCP claiming GI doc
- GI doc claiming dietitian
- Dietitian stated she hadn't seen child since age 13 until recently

Case Study: 20 Year Old Vulnerable Adult

- Document these inconsistencies in the medical record
- Need extensive review of all medical records from all care providers
- Need information regarding how formula feed obtained to track how much should be used

Medical Neglect and Mental Illness

- 11 year old girl admitted with severe diabetic ketoacidosis (DKA)
- Concerns of long standing medical neglect
- Diagnosed with diabetes at age 5
- Treated with insulin pump for 9 months
- Mother with obsessive compulsive disorder and anxiety disorder

Medical Neglect and Mental Illness

- One week ago, child became progressively ill at home due to pump failure
- Mother did not follow medical protocol
- Mother refusing to bring child to hospital
- Father had to have mother physically restrained to get child in

Medical Neglect and Mental Illness

- **Is the mother's mental illness a justified excuse?**

Medical Neglect and Religion

PEDIATRICS®
OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

Child Fatalities From Religion-motivated Medical Neglect
Seth M. Asser and Rita Swan
Pediatrics 1998;101;625

Kara Newman Case

- 11 year old female child who was sick with symptoms progressing to death
- Parents refused to treat child with anything other than prayer
- Died of undiagnosed diabetes
- MEDICAL NEGLECT
- Both parents charged and convicted of second-degree reckless homicide

Medical Neglect and Religion

Original Article

Religion and Medical Neglect

Sara H. Sinal, MD, Elaine Cabinum-Foeller, MD, and Rebecca Socolar, MD, MPH

Case Study-16 y.o. female weighing 440 lbs.

- Admitted to ICU with respiratory failure requiring intubation and tracheostomy
- Weighed 440 lbs. (BMI:72 kg/m2)
- Gained 200 lbs. over 2 years
- Diagnoses:
  - -Hypertension
  - -Insulin resistance
  - Nonalcoholic steatosis of the liver
- Is this medical neglect?

Which Cases of Childhood Obesity Might Constitute Medical Neglect?

Childhood Obesity and Medical Neglect

Todd Varness, MD, MPH[a], **David B. Allen, MD**[a], **Aaron L. Carrel, MD**[a], and **Norman Fost, MD, MPH**[a,b]

[a]Department of Pediatrics, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin

[b]Department of Bioethics, University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin

Varness, T, et al. Childhood Obesity and Medical Neglect. Pediatrics. 2009 January; 123(1):399-406

Which Cases of Childhood Obesity Might Constitute Medical Neglect?

- **Removal of child from home justified when three conditions are met:**

1. **High likelihood that serious imminent harm will occur**
2. **Reasonable likelihood that coercive state intervention will result in effective treatment**
3. **Absence of alternative options for addressing the problem**

Varness, T, et al. Childhood Obesity and Medical Neglect. Pediatrics. 2009 January; 123(1):399-406

Which Cases of Childhood Obesity Might Constitute Medical Neglect?

- **Removal of child from home justified when three conditions are met**
- **Not just presence of obesity**
- **Need presence of comorbid conditions critical for determination of serious imminent harm**

Varness, T, et al. Childhood Obesity and Medical Neglect. Pediatrics. 2009 January; 123(1):399-406

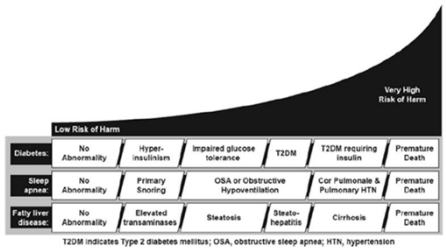
Spectrum of Risk Associated with Obesity: Is There A High Likelihood of Serious Imminent Harm?

TABLE 1 Childhood Obesity Categories

Category	Description
1	Obese children who have no comorbid conditions
2	Obese children who have comorbid conditions that predict serious harm but are reversible in adulthood
3	Obese children who have comorbid conditions that predict serious harm and are not reversible in adulthood
4	Obese children who have comorbid conditions that constitute serious imminent harm in childhood

Varness, T, et al. Childhood Obesity and Medical Neglect. Pediatrics. 2009 January; 123(1):399-406

Spectrum of Risk Associated with Obesity: Is There A High Likelihood of Serious Imminent Harm?



T2DM indicates Type 2 diabetes mellitus; OSA, obstructive sleep apnea; HTN, hypertension

Varness, T, et al. Childhood Obesity and Medical Neglect. Pediatrics. 2009 January; 123(1):399-406

Which Cases of Childhood Obesity Might Constitute Medical Neglect?

- Obese children who have comorbid conditions that predict serious harm and are not reversible after child reaches adulthood

Example:

Hepatic fibrosis resulting from nonalcoholic fatty liver disease

-lifespan shortened by 30 years

-condition could be treated effectively

Varness, T, et al. Childhood Obesity and Medical Neglect. Pediatrics. 2009 January; 123(1):399-406

Which Cases of Childhood Obesity Might Constitute Medical Neglect?


COMMENTARY www.jpeds.com • THE JOURNAL OF PEDIATRICS

Obesity and Neglect: It's about the Child

David B. Allen, MD, and Norman Fost, MD, MPH

Which Cases of Childhood Obesity Might Constitute Medical Neglect?

- Intense opposition to suggestions for CPS involvement in some cases of extreme obesity
- Contrast to general support for action in other conditions that threaten a child's life
- Opposition stems from a fear state action could apply to most cases of severe obesity
- Misperception that such a policy implies judgments about parents

Which Cases of Childhood Obesity Might Constitute Medical Neglect?

Key Concept

1. Extreme obesity alone does not constitute imminent harm, but in rare cases, its health consequences do
2. In these rare cases, medical providers are obligated, as in any situation of child abuse or neglect, to take necessary actions to protect the child

Fatal Child Neglect

- 36% of fatal child maltreatment (NCANDS)
  - -Multiple maltreatment (neglect and PA mostly) 37%
  - -PA accounts for 23%
  - -Medical Neglect 2%
- Chronic process (malnutrition)
- Acute events (supervisory neglect/unsafe environment)

Age at Death

- 46% -<1 year old
- 18% -1 year
- 10% -2 years
- 9% -3 years
- 10% -4-7 years
- 4% -8-11 years
- 5% -12-17 years of age

Deaths Due to Neglect: 25 Year Review

- 16 deaths
- Malnutrition/dehydration/starvation 38%
- Toxic ingestion 12.5%
- Hypo/Hyerthermia 12.5%
- Unusual drowning/aspiration 25%
- Delayed/absent medical therapy 12.5%

Knight LD. Am J For Med Path, 2005;26:221.

What Do You as the Investigator Want NOW!

- Chain of evidence
- Post-mortem skeletal survey before autopsy
- Infant toxicology
- DRUG TEST THE PARENTS IMMEDIATELY

Neglect Fatality Case

- 16 mo male child placed in a modified motorcycle trailer for a nap (while mother and boyfriend at motorcycle rally)
- Temperature outside 84 Degrees F.
- Reportedly last checked on at 2:15 pm
- Found unresponsive in overheated enclosed trailer at 2:45 pm
- EMS called
- At scene, female with cell phone to ear performing CPR
- Taken to hospital –arrived at 2:57 pm with obvious lividity especially in lower extremities

Neglect Fatality Case

- After cooled with ice packs for 20 minutes, rectal temperature still read high above 108 degrees F
  - Measured opened internal trailer temperature of 102 degrees F after scene secured and investigation started (door to trailer had been open since child removed)
  - Rectal thermometer recorded maximum calibration temperature of 108 degrees F

Neglect Fatality Case

- Cause of Death: Acute hyperthermia
- Due to: environmental heat exposure
- Other conditions: Probable cerebral edema and postmortem gastric rupture identified, skin slippage

Defenses:

- Unfortunate accident
- Air conditioner malfunctioned
- We reasonably checked on the baby

Case -Questions from Law Enforcement

- Could this have happened the way mother described it?
  - No.
  - Among 29 children who died of hyperthermia/heat stroke, the shortest interval between time of heat exposure and time of death was one hour (Rane from 1-10 hrs.)
  - Mother should have noted the heat was excessive in the trailer if she had really entered the trailer at her stated intervals
  - Mother should have noticed child was hot to the touch, uncomfortable, and/or drenched in sweat if she had really checked on him.
  - Children with severe heat illness do not breathe quietly, but instead go through a phase of rapid deep respirations followed by gasping

Case -Questions from Law Enforcement

- How long does a child have to be exposed to a high temperature to have a core body temperature of 108 degrees F?
- Depends on the child's baseline temperature, hydration status, and amount of clothing
- Also depends on the degree of environmental temperature
- Study suggests a minimum of 1-2 hours necessary

American Journal of Forensic Medicine and Pathology 22, December 2001, pp374-382

Case-Questions from Law Enforcement

- Would a child's temperature go up with excessive temperature because the body was fighting to regulate the temperature?
- As soon as the body temperature raises more than 1 degree F above baseline (99 degrees F), heat defense mechanisms come into action:
  - Increased blood flow to the skin-allowing the body to radiate heat and increased sweating, allowing cooling by evaporation
  - Hyperthermia occurs once those mechanisms are overloaded
  - Once sweating stops, the body temperature rises rapidly

Case-Questions from Law Enforcement

- What Temperature is needed to kill a child?
  - 41.6-42 Degrees C (106.9-107.6 Degrees F) is lethal within 45 minutes to a maximum of 8 hours
  - Bouchama. Heat Stroke, NEJM 2002;346:1978
- Once the child is dead, will the body continue to heat from external sources only?
  - Yes, it will heat even more rapidly because the body's cooling mechanisms are abolished.
  - Effect of heat on children-How do you get a core body temperature of 108 degrees F?
  - Infants/children exposed to high environmental temperature develop higher core and surface body temps compared with adults despite increased sweating

Neglect Fatalities Case

- EMS called to respond to a 4 mo male infant who is said to be nonresponsive and having breathing problems
- EMS responded to scene and found baby drenched in wet clothing unresponsive
- Intubated and taken to ER, subsequently admitted to PICU
- Pronounced dead during hospital course

Neglect Fatalities Case

- Biologic mother stated she had left the child in the care of paternal grandmother while she went for a "night out on the town with the girls"
- Mother returned to get the baby at 1:30 am
- Paternal GM stated to law enforcement she could smell alcohol on mother's breath and knew she was impaired
- Mother drives to Maternal GM's home
- Upon entering driveway, passes out with car running-heater on full blast
- Awakens at approximately 5:30 am, takes baby into Maternal GM's home
- Finds child unresponsive after removing blanket from car seat
- Child in snowsuit-clothing removed, noted to be diffusely wet

Neglect Fatalities Case

- **Mother charged with Child Neglect, as her actions did intentionally contribute to the neglect of a child resulting in death**

Contact Information

Barbara L. Knox, MD, Medical Director
University of Wisconsin Child Protection Program
blknox@pediatrics.wisc.edu
(608)262-5087