

Are siblings of maltreated children at risk for child maltreatment?

Does child abuse occur in families?

- Big Picture – ACES
- Child maltreatment –
 - Are siblings at risk?
 - Advancing the medical role in child protection
- Recommendations

The Adverse Childhood Experiences (ACE) Study

- The largest study of its kind ever done to examine the health and social effects of adverse childhood experiences over the lifespan (18,000 participants)
- Experiences that represent medical and social problems of national importance.
 - childhood abuse and neglect
 - growing up with domestic violence, substance abuse or mental illness in the home, parental loss, or crime

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Categories of Adverse Childhood Experiences

Abuse, by Category	
Psychological (by parents)	11%
Physical (by parents)	11%
Sexual (anyone)	22%
Household Dysfunction, by Category	
Substance Abuse	26%
Mental Illness	19%
Mother Treated Violently	13%
Imprisoned Household Member	3%

More ACEs – more problems

Smoking

Chronic Depression

Attempted Suicide

IV Drug use


Adverse Childhood Experiences determine the likelihood of the ten most common causes of death in the United States.

Top 10 Risk Factors: smoking, severe obesity, physical inactivity, depression, suicide attempt, alcoholism, illicit drug use, injected drug use, 50+ sexual partners, h/o STD.

The Adverse Childhood Experiences (ACE) Study

Summary of Findings:


- **Adverse Childhood Experiences (ACEs) are very common**
- **ACEs are strong predictors of later health risks and disease**
- **This combination makes ACEs the leading determinant of the health and social well-being of our nation**



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Violence affects the entire household



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Child Abuse - IPV


- The co-occurrence of child abuse and IPV is well documented,
 - in 30% to 60% of families in which either child maltreatment or IPV is occurring, the other form of violence also is being perpetrated. (Edelson, 1999)
- If IPV was occurring in the home during the first 6 months of life, physical child abuse was 3.4 times more likely, and child psychological abuse or child neglect was twice as likely up to the child's fifth year. (McGuigan, 2001)

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Pet Abuse – IPV – Child abuse

- ~75 % of IPV clients with pets reported animal abuse (kicking, punching, mutilation, killing) (Quinslink, 1999)
- > 2/3 of women in DV shelter reported pets threatened or killed by the partner (Ascione, 2005)
- In 53 child-abusing families:
 - Animal abuse in 60%
 - Animal abuse by child in 26% (DeViney, 1983)



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IS THERE DATA TO GUIDE US?

Do we follow the gut or is there literature?
What is our anecdotal experience?
Is this child just a scapegoat? Is he the one who misbehaves?

A look at the literatureand some experience

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Serial Abuse in Children Who Are Shaken

- 24 patients – 12 shaken, 12 shaken impact
- 71% prior abuse or neglect
- 33% previously shaken
- 33% (3/9) families with >one child:
 - 2 or more sibs experienced abuse/neglect
 - 2 children died (one dead, one injured in each of two families)

Alexander 1990



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Fatal Child Abuse

- 14 cases fatal CAN
- Paucity of previous injuries in fatally injured children (2/12 PA deaths)
- Families were known to CPS:
 - 6 previously known to CPS
 - 4/6 known for a different sibling!

• Hicks 1995



Risk to Siblings – 56% households

- In a study of 795 siblings in 400 households of a child who had been abused or neglected,
 - > 44% scapegoated (only index child involved)
- All siblings in 37% of households and
- Some siblings in 20% of households

had suffered some form of maltreatment.



Scapegoated children were more likely to be older and to experience physical or sexual abuse, whereas younger children and index child referrals for neglect, emotional abuse, or mixed abuse were associated with risk to some or all siblings.

Hamilton-Giachritsis 2005

Examining Siblings To Recognize Abuse (ExSTRA)

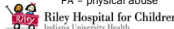

20 Child Abuse Pediatric Centers
Prospective research

ExSTRA Protocols

- Index child: <10 years evaluated by CAP for PA
- Contact child: <10 years shared same environment with index child (excluded commercial day care)
- PA: high likelihood of abuse and at least one serious injury
- Serious Injury:
 - fracture(s),
 - burns of >5% total body surface area,
 - traumatic brain injury, intra-abdominal or intra-thoracic injury,
 - ICU admission, or death

CAP: child abuse pediatrician
PA – physical abuse






ExSTRA Protocols

Screening protocol for contacts – minimum standard

- <6 months: exam by medical provider, skeletal survey neuroimaging (head CT)
- 6 months – 23 months: exam by medical provider and skeletal survey
- 24 months to <5 years: in person exam by CPS or medical provider



- Could recommend more

Hot off the Press – May 2014

- 2890 index children
 - 980 (33.9%) < 6 months
 - 254 (25.9%) bruises
 - 146/254 (57%) isolated bruises
 - **73/146 (50%)** at least one new injury identified
 - » 34/146 (23%) fractures
 - » 40/146 (27%) head injury
 - » 4/146 (3%) abdominal injury

Harper 2014


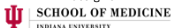
Abusive injuries in siblings: Fractures

- 2890 consultations
 - 627 abused children
 - 479 contact children
 - 134 <24 months old

★Skeletal survey ≥ 1 abusive fracture in 16 contacts (11.9%); 8/16 – multiple fractures; none suspected clinically!

- <6 months: (9/22) 40.9%
- 6-12 months: (4/16) 25.0%
- 12-24 months: (3/63) 4.8%
- Twins: (9/16) 56.3%


Lindberg 2012

Abusive injuries in siblings: Skin

- 2890 consultations
 - 627 abused children
 - 479 contact children
 - 355 (0-5 years)
- Skin injuries: 22 with injuries (6.2%)
 - 19 bruises
 - 2 burns
 - 1 frenulum tear

Lindberg 2012

20.4 % of siblings screened - positive results



1918 contacts of 1196 children assessed by child abuse pediatrician consult**

Screening modality	Per common screening protocol*				Total†		
	Eligible for testing	Testing recommended by CAP	Testing completed	Testing positive	Testing recommended by CAP	Testing completed	Testing positive
Skeletal survey	123	121 (97.6)	100 (75.2)	16 (16.8)	339 (17.7)	246 (73.0)	24 (9.7)
Neuroimaging	25	22 (88.0)	19 (79.0)	0 (0.0)	64 (3.3)	50 (78.1)	0 (0.0)
Physical Examination	353	341 (96.6)	257 (72.8)	22 (8.6)	1297 (67.7)	889 (68.6)	87 (10.8)
Interview	619	619	619	619	441 (23.0)	299 (67.8)	60 (30.1)
Any screening‡	953	942 (98.9)	299 (73.4)	22 (14.7)	1342 (79.0)	882 (65.7)	102 (20.4)

ns, not available.
 *The common screening protocol recommended screening testing for contacts of index children with at least 1 serious injury and a high perceived likelihood of abuse. For these contacts, the protocol recommended physical examination for contacts <6 months of age, skeletal survey for contacts <24 months of age, and neuroimaging for contacts <6 months of age. †Some totals differ from those reported in the initial report because this analysis excludes contacts with multiple index children.
 ‡Yes had completed neuroimaging scans (1 per protocol and 1 outside the protocol) showed skull fractures that had been previously identified by skeletal survey and, per protocol, this was not counted as a newly identified injury.
 §Reported totals for the per protocol screening includes contact interviews, since the protocol did not recommend interviews for any contacts.



More likely to screen: abuse specific injuries, changing history, new injuries by x-ray in index child

Lindberg 2013

Abuse in Siblings

- Overall 20.4 % of siblings screened were found to have positive results
 - Skeletal survey
 - Head CT
 - Physical examination
 - Interview






Evaluation of Siblings

American Academy of Pediatrics



- Siblings, especially twins, and other young household members of children who have been physically abused should be evaluated for maltreatment.
- Imaging should be considered for any siblings younger than 2 years, especially if there are signs of abuse.
- BEWARE – next slide is graphic

AAP, Flaherty 2014



Advancing the medical role in child protection

- PEDS – Pediatric Evaluation and Diagnostic Services
 - cooperative partnership of IU Child Protection Programs and Department of Child Services
 - consultation and education
- Medical care – complete evaluations, sorting out medical and accidental causes, recommend services

Conclusions

- All siblings must be evaluated when abuse is suspected – even if they look well.
- If infants, need HCT and skeletal survey even if they appear well.
- ALL need a safety plan!
- Maltreatment rarely occurs to just one child – if you don't look you won't find it!

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Questions?

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