8th Annual Pediatric Conference and the Karen W. Teel, MD Lectureship

A Symposium on Early Childhood Adversity: The ABCs of Toxic Stress

Friday, January 16, 2015

dell children’s
medical center of central texas

A member of the Seton Family of Hospitals
Child Maltreatment and Obesity: Associations, Implications, and Taking Action

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Objectives

- Discuss the association between child maltreatment and future obesity
- Identify ways to integrate our knowledge of the associations between child maltreatment and future obesity to enhance our ability to care for these patients
- Recognize when childhood obesity may constitute medical neglect and learn how to augment the medical home’s approach to such children
Sexual abuse medical evaluations

• “eating more lately and has gained 7 to 8 pounds in the past 6 months”

• “gained about 8 pounds in the past few months”

• “gained approximately 20 pounds since February”
Dr. Felitti

• Internist, Director of Preventive Medicine at Kaiser Permanente

• “Counterintuitive clinical experiences” which led to pilot research which was the foundation for the ACE Study

• Presentation in Bloomington, MN for Academy on Violence and Abuse in April 2011
“Index Case”

- Patient went from 408 lbs to 132 lbs in 51 weeks
- Regains 37 lbs in 3 WEEKS
- “Sleep eating”
- Discloses hx of sexual abuse by grandfather
- Propositioned by co-worker, triggers “sleep eating”
- Familial obesity does not necessarily mean *genetic*
So what are the associations between child maltreatment and obesity?
Childhood Abuse and Adult Obesity

- **Body weight and obesity in adults and self-reported abuse in childhood**

  - Estimated associations between self-reported child abuse and body weight/risk of obesity
  - Retrospective cohort study- 13,777 participants
  - 66% reported some type of abuse
  - Physical, verbal, and sexual abuse associated with increased weight in adulthood
  - Risk of BMI>30 increased most strongly with history of physical abuse
  - Risk of BMI>40 even more strongly associated with abuse
  - Risks augmented with increasing number of types and severity of abuse
• **History of sexual abuse and obesity treatment outcome** (King, Clark, and Pera. Addictive Behaviors. 1996; Vol. 21. No. 3. pp. 283-290.)
  
  – Participants enrolled in 26-week weight management program (behavior therapy + very low calorie diet)
  
  – 22 of these participants reported history of sexual abuse (matched with random sample of 22 patient who denied, no significant difference in demographics)
  
  – Sexual abuse victims:
    • Lost significantly less weight
    • Demonstrated more non-adherence to program
    • Had higher rates of mental health problems
Child Sexual Abuse and Outcomes by Gender

- Retrospective cohort study, >17,000 participants
- 25% women and 16% men reported any type of CSA as a child
- 20% of male victims of CSA-perpetrator was female acting alone
- Rates of poor behavioral, mental, social outcomes (substance abuse, suicidality/depression, marital/family discord) was similar for men and women.

- Examined gender differences among adolescents with a history of sexual abuse suggested that
  1) females were more likely to engage in internalizing behaviors (suicide ideation, disordered eating), and
  2) males were more likely to exhibit externalizing behaviors (delinquency, heavy drinking)
Childhood Neglect and Adult Obesity

- Parental neglect during childhood and increased risk of obesity in young adulthood (Lissau and Sorenson. Lancet 1994; 343: 324-27)
  - Information obtained from random sample of 987 3rd-grade children in Copenhagen
  - Follow-up information was obtained for 756 (85%) of original sample
  - Parental support as measured by teacher reports had significant effect on childhood obesity
  - Children with poor hygiene 9.8 times more likely to be obese in young adulthood
  - Analysis for separate groups (overweight vs. obese) and comparing group of children already obese or overweight to those who weren’t produced similar results
ACEs and Health Outcomes in EARLY ADOLESCENCE

• **Adverse Childhood Experiences and Child Health in Early Adolescence**
  (Flaherty, et. al., JAMA Pediatrics 2013)

  – Prospective analysis of 933 children for whom interviews and questionnaires were completed at intervals (from ages 4-14)
  – By age 14, 57% of children had experienced neglect and 57% had experienced caregiver depression
  – 33% physical abuse, 15% sexual abuse, 33% psychological abuse
  – 57% of children had experienced at least 3 different adverse childhood events
  – Strong graded relationship between number of adversities and any health problem
  – Relatively strong effects of concurrent adversities on any health problem, somatic concerns, and caregiver’s report of poor health
Obesity and Maltreatment Associations in CHILDHOOD


• CPS data for ~5800 children involved in investigations for abuse/neglect:
  – 1 in 6 children who live in homes without abuse/neglect are obese
  – 1 in 5 children who live in homes with poverty are obese
  – 1 in 4 children who may have been victims of abuse/neglect are obese
Domestic Violence and Childhood Obesity


- ~1600 children in study
- Prospective cohort, mother interviewed until children age 5
- After controlling for factors such as maternal obesity and depression, children whose mothers reported chronic IPV were 1.8 times more likely to be obese
- Link was stronger in female children and homes in unsafe neighborhoods
What causes childhood obesity?

• Dietary patterns
• Physical Activity Levels
• Sedentary Activities

• Social determinants
  – Poverty
  – Unsafe neighborhoods
  – Lack of social support network
  – Chronic sleep deficit
  – Some medications, including psychoactive meds

Image credit: Susan Terwilliger, Binghamton University

A Symposium on Early Childhood Adversity: The ABCs of Toxic Stress
Psychological Impact of Abuse
Psychological Impact of Sexual Abuse

  – **Traumatic sexualization:** premature and distorted sexualization
    • Results in increased sexual behaviors or avoidance/inhibition
  – **Betrayal:** by perpetrator who served in caregiver capacity or caregiver who fails to be protective following a disclosure
    • Lack of trust as impetus for anger, depression, extreme dependency
  – **Stigmatization:** victims are blamed or told to keep secret, “damaged goods”
    • Shame and guilt → self-mutilation, suicidal behaviors
  – **Powerlessness:** inability to prevent or stop abuse
    • Results in anxiety, fear, low self-esteem
Psychological Impact of Physical Abuse

- Externalizing behaviors
  - Antisocial behavior, aggression, substance abuse

- Internalizing behaviors
  - Depression, anxiety, suicidality, PTSD
Psychological Impact of Neglect

- Wide range of behavioral and emotional problems
- Disordered self-regulation/control
- Attachment/Trust Issues
- Social Ineptitude
- Higher frequency of engagement in high-risk behaviors
Trauma-Informed Pediatric Care of Obese Children
“Trauma-Informed” Services

• Not designed to treat trauma but are sensitive to trauma-related issues in survivors/victims

• Based on the recognition that many behaviors and symptoms are directly related to trauma that causes or contributes to mental and physical health consequences
Why do we need to do this?
• Most children are exposed to at least one (and often more than one) traumatic event by age 17
  – Physical assault
  – Sexual assault
  – Maltreatment by caregiver
  – Bullying
  – Witness to domestic violence/other violence
  – Property victimization

• Majority of children reported a traumatic event in the past year

• ~48% experienced >1 type of victimization
• ~15% >5 types
• ~4.9% >9 types
Recommendations

• Adopt “ecobiodevelopmental framework as a means of understanding social, behavioral, and economic determinants of lifelong disparities in physical and mental health.” (Do not distinguish psychosocial problems as different from consequences of other health issues)

• Educate trainees to link between childhood toxic stress and biosystemic disruptions that can lead to lifelong impairments in health and behavior

• Strengthen anticipatory guidance and encourage adoption of positive parenting techniques

• Screen for precipitants of toxic stress that are prevalent in community

• Participate in innovative service-delivery adaptations that expand the ability of the medical home to support children at risk

• Identify (or advocate for the development of) local resources that address risks for toxic stress in community
Where do we start?

1. Minimize traumatic aspects of medical care
   - Reduce pain, fear, and anxiety associated with care and procedures whenever possible
2. Provide all pediatric patients with basic support and information
   - Assess families for fears/worries, optimize pain management, and work with parents to help them provide effective support for their child. (D-E-F protocol, healthcaretoolbox.org)
3. Screen to identify those who may need more help
   - Provide anticipatory guidance about stress reactions and ways of coping. Assess for more severe distress or risk factors, and make appropriate referrals for additional services if warranted.
4. Maximize continuity of care
   - Help ensure that all those caring for a child are aware of any traumatic stress reactions as well as effective coping resources.
5. Remain aware of one’s own stress
   - Pay attention to the challenges of caring for ill and injured children, and promote good self-care.
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Identifying trauma-How do I ask?

• What types of violence am I prepared to start asking about? What is the prevalence in my particular community?
  – Consider maternal depression, parental substance abuse, domestic or community violence, food scarcity, poor social connectedness

• Which visits will I begin to ask screening questions?

• How will I ask the questions? Pre-visit questionnaire versus direct interview?
  – If questionnaire, who will distribute, explain to patients, and get it to the provider? How do I ensure patient privacy as they answer the questions?
  – If direct interview, what decision supports will help me remember the questions?

• How do I document results?
How do I ask?

• Few standardized tools for pediatric practices
• Need to remember to be respectful of confidentiality and privacy
• Key message: “You aren’t alone, it’s not your fault, and I can help.”
Sample Scripting:

• “I have begun to ask all of the parents / caregivers in my practice about their family life as it affects their health and safety, and that of their children. May I ask you a few questions?”

• “Violence is an issue that unfortunately effects everyone today and thus I have begun to ask all families in my practice about exposure to violence. May I ask you a few questions?”

– Identifying and Responding to Domestic Violence: Consensus Recommendations for Child and Adolescent Health.

– From www.futureswithoutviolence.org.
### When do I ask?

<table>
<thead>
<tr>
<th>Type of violence</th>
<th>Infancy / Early Childhood</th>
<th>School aged</th>
<th>Early Adolescence</th>
<th>Middle &amp; Late adolescence</th>
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<td>Household Violence</td>
<td>XX</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>School Violence</td>
<td>XX</td>
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<td>Community Violence</td>
<td></td>
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</tr>
<tr>
<td>Dating Violence</td>
<td></td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
</tr>
</tbody>
</table>

**Also consider screening if presenting with symptoms that correlate with potential exposures to violence**

“Since the last time I saw your child, has anything really scary or upsetting happened to your child or anyone in your family?”

(Cohen, Kelleher, & Mannarino, 2008)
For positive responses-Now What?

• Assess the child and parent’s immediate safety
  – Physical evidence of abuse/neglect?
  – Has the child been directly threatened?
  – In cases of IPV does the parent have a plan to keep child safe?

• Assess threat of harm to self or others

• Protective Factors/Resiliencies

• Resources

• Don’t forget education and prevention
  – “Young children sense when their parents are stressed or when there are big changes in their environments”
  – “These are common responses to upsetting events in very young children”
  – “There are things you can do to help your child be reassured that she is safe”
  – “Your safety is my first concern. Getting help and support for you will be the best thing for your child.”
Identify and Maintain a Resource List:

- Child abuse hotline
- Hospital or health plan social workers
- Family to Family Network (www.familytofamilynetwork.org)
- Public Health Department
- AAP for parents (healthychildren.org)
- Mental health organizations/Counseling Services
- DV shelters/support groups
- Safe Start Center: www.safestartcenter.org
  - Healing the Invisible Wounds: Children's Exposure to Violence - Quick Reference Card
- National Child Traumatic Stress Network:
  - http://nctsn.org/resources/audiences/parents-caregivers
    - Parenting in a Challenging World
    - Finding Help
    - Treatments that Work
    - What is child traumatic stress?
Resources for Providers

- The National Child Traumatic Stress Network
  - http://nctsn.org
- National Scientific Council on the Developing Child
  - http://www.developingchild.net
- Safe Start Center
  - www.safestartcenter.org
- The International Society for Traumatic Stress Studies
  - http://www.istss.org
- Child Trauma Academy
  - http://www.childtrauma.org
- Child Sex Abuse Prevention and Protection Center. You can find helpful materials and resources to use in your practice and to pass on to caregivers, such as “Warning Signs of Sexual Abuse” and “Nine Questions to Ask When Selecting a Program for Your Child.”
  - http://www.stopitnow.org
Practice Resources

• AAP Resources:
  – Connected Kids
  – Feelings Need Checkups Too
  – Bright Futures – www.brightfutures.org
  – Bright Futures in Practice: Mental Health
  – www.aap.org/medhomecev

• AAP Medical Home series:
  – http://www2.aap.org/sections/childabusementattack/MedHomeCEV.cfm#Education

• www.medicalhomeinfo.org – tips for identifying community resources
National Resources

• National Domestic Violence Hotline:
  – 800-799-SAFE (800-799-7233) or TDD: (800-787-3224).

• Family Violence Prevention Fund website
  www.futureswithoutviolence.org

• www.thatsnotcool.com – website for teens about dealing with cyber-bullying

• www.stopbullying.gov
1) Follow Up
2) Follow Up
3) Follow Up
4) Follow Up
5) Follow Up

- Our resources and referrals are only as good as the ability/willingness of the family to pursue them.
- Identify barriers to utilizing resources/accessing services
Childhood obesity as a form of neglect
Medical Neglect Definition

- Non-adherence to medical recommendations
- Delay in seeking or failure to seek health care
Factors necessary for diagnosis:

1. A child is harmed or is at risk of harm because of lack of health care
2. The recommended health care offers significant net benefit to the child
3. The anticipated benefit of the treatment is significantly greater than its morbidity, so that reasonable caregivers would choose treatment over non-treatment
4. It can be demonstrated that access to health care is available and not used
5. The caregiver understands the medical advice given
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Childhood Obesity as a Form of Neglect

- **State intervention in life-threatening childhood obesity** (Murtaugh and Ludwig, 2011)
  - Severe obesity (BMI>99th percentile)-children with energy imbalances of up to 1000 kilocalories per day="profoundly dysfunctional” eating habits and activity levels.
  - Immediate and potentially irreversible health consequences such as type II DM
  - Hyperglycemia + insulin resistance + poor diet + sedentary lifestyle + poor adherence to treatment= significantly increased risk of vascular disease
Childhood Obesity as a Form of Neglect

- Magnitude of neglect is determined by amount of harm or risk of harm along with chronicity

- Inorganic failure to thrive as neglect has historically been addressed by state agencies

- Only a few states have legal precedent for overfeeding and obesity as neglect (including Texas)

- Mandated reporter laws may obligate physicians to report chronic caregiver neglect resulting in poor health outcomes
Childhood Obesity as a Form of Neglect

• Intermediate State Interventions:
  – In-home social supports
  – Parenting classes
  – Counseling services
  – Financial assistance

• More Intensive Alternatives:
  – Removal from caregivers/Foster care placement
  – Surgery
Childhood Obesity as a Form of Neglect

• Caveats to state intervention:
  – Rare genetic disorders related to obesity
  – Impractical for all children at or above 99th percentile
  – Variable quality of foster care; no guarantees of reduction in morbidity
So when does childhood obesity constitute medical neglect?
Criteria for Obesity as Medical Neglect

– *Childhood Obesity and Medical Neglect* (Varness et. al., Pediatrics 2009)

• Reporting is justified when:
  (1) a high likelihood that serious imminent harm will occur AND
  (2) a reasonable likelihood that coercive state intervention will result in effective treatment AND
  (3) the absence of alternative options for addressing the problem
Pediatrician’s response: Most collaborative, least restrictive

- Facilitate interpreter services when appropriate.
- Assess family’s perspective on and understanding of child’s condition and the proposed treatment
- Counsel and educate families on instructions for medication administration, risks/benefits of treatment/procedures
- Consider expanding the circle of caregivers and educate them as well
- Empower the family to participate in plan development

Pediatrician’s Response

• Consider written contract

• Enlist community resources
  – Transportation services, financial aid, respite care, support groups, etc.

• Arrange for directly observed therapy and/or home nurse visits when appropriate

• Consider partial hospital or day-hospital programs

• Refer to CPS if there is harm or risk of harm from lack of medical care

Final Thoughts

- Children who have suffered maltreatment (abuse and neglect) are at higher risk of experiencing poor physical and mental health outcomes.
- These outcomes can be seen earlier than adulthood.
- Health practitioners must be cognizant of how childhood trauma is associated with presentations of physical and mental health signs and symptoms in children and adulthood and recognize that these associations are as significant as any other biological or environmental factor in child health.
- Health practitioners should evaluate whether they are providing care in a truly trauma-informed context and analyze gaps in accomplishing this goal.
Final Thoughts

• A practice that has a plan for identifying trauma, responding to trauma, and following up to ensure resources are utilized is a practice that will improve outcomes for children.

• There are opportunities in the child welfare system to perform surveillance of weight-related data for children in foster care, educate case workers and foster caregivers in healthy lifestyle promotion, and develop and test obesity interventions in this vulnerable population that is already socially and economically disadvantaged.

• Interventions that occur at the point when maltreatment is identified not only have the opportunity to make children safer, but they can potentially make children healthier.
“Life's most persistent and urgent question is, 'What are you doing for others?'”

-Martin Luther King, Jr.
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