Introductions

- Marie A. Clark, MD, MPH
- Jerri Rose, MD
- Jennifer Wolford, DO, MPH
- Ross Myers, MD
- Allayne Stephans, MD
- Keith Ponitz, MD

Workshop Goal

**Goal:** to prepare participants to instruct pediatric residents about Adverse Childhood Experiences (ACEs) with novel and interactive methods

Workshop Objectives

- After participating in this workshop, participants will be able
  1. To relate the importance of teaching adverse childhood experiences (ACEs) to pediatric residents
  2. To demonstrate the use of three methods of teaching ACEs
  3. To apply models for creating competency-based assessments of residents participating in ACEs curricula

Workshop Agenda

- Review ACE research, recommendations, and relevance to trainee education
- Participate in demonstrations of three novel approaches for teaching ACEs
  - CityMatCH Life Course Game
  - Home Visits: Providing Trauma-Informed Care
  - Harvard Center on the Developing Child Resiliency Game
- Discuss competency-based assessments for ACEs instruction
- Summary:
  - Questions
  - Evaluation
Adverse Childhood Experiences
Research, Recommendations and Relevance

Begin at the Beginning

The Original ACEs Study
- Ongoing collaboration between Kaiser Permanente (Vincent J. Felitti, MD) and the CDC (Robert J. Anda, MD, MS)
- Approached 26,000 adults undergoing well care at Kaiser San Diego Dept of Preventive Medicine
- 17,421 participated and completed a questionnaire

ACE Study Demographics

<table>
<thead>
<tr>
<th>Demographic Categories</th>
<th>Percent (N = 17,337)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>54%</td>
</tr>
<tr>
<td>Male</td>
<td>46%</td>
</tr>
<tr>
<td>Race</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>74.8%</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>11.2%</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>7.2%</td>
</tr>
<tr>
<td>African-American</td>
<td>4.6%</td>
</tr>
<tr>
<td>Other</td>
<td>1.9%</td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
</tr>
<tr>
<td>19 – 29</td>
<td>5.3%</td>
</tr>
<tr>
<td>30 – 39</td>
<td>9.8%</td>
</tr>
<tr>
<td>40 – 49</td>
<td>18.6%</td>
</tr>
<tr>
<td>50 – 59</td>
<td>19.9%</td>
</tr>
<tr>
<td>60 and over</td>
<td>46.4%</td>
</tr>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>Not HS Graduate</td>
<td>7.2%</td>
</tr>
<tr>
<td>HS Graduate</td>
<td>17.6%</td>
</tr>
<tr>
<td>Some College</td>
<td>35.9%</td>
</tr>
<tr>
<td>College Grad or</td>
<td></td>
</tr>
</tbody>
</table>

ACE Criteria
- Recurrent physical abuse
- Recurrent emotional abuse
- Contact sexual abuse
- An alcohol or drug abuser in the household
- An incarcerated household member
- Someone who was chronically depressed, institutionalized, or suicidal
- Mother treated violently
- One or no parents, or parents divorced
- Emotional or physical neglect

ACE Questionnaire

Finding Your ACE Score
While you were growing up during your first 18 years of life:
1. Did a parent or other adult in the household abuse you physically? Yes No
2. Did a parent or other adult in the household abuse you sexually? Yes No
3. Did a parent or other adult in the household abuse you emotionally? Yes No
4. Did someone in the household abuse you emotionally or sexually? Yes No
5. Did your parents frequently argue or hit each other? Yes No
6. Did you often or very often feel that no one in your family loved you or thought you were important or special? Yes No
7. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs? Yes No
8. Did a household member depressed or attempted suicide? Yes No
9. Did someone in the household use a weapon or threaten to use a weapon? Yes No
10. Did a household member use or be in a relationship with someone who used a weapon or threatened to use a weapon? Yes No

Now add up your “Yes” answers: _______ This is your ACE Score.

ACE Results
- 12.6% of the population had an ACE score ≥ 4
- Dose-Response relationship between adverse childhood events and multiple “organic” diseases
COPD

- Compared to people with ACE = 0, those with ACE ≥ 4 had:
  - 2.6 × the risk of prevalent COPD
  - 2.0 × the risk of incident hospitalizations,
  - 1.6 × the rates of prescriptions (p<0.01 for all)
- Associations only modestly reduced when adjusted for smoking!!
- The mean age at hospitalization decreased as ACE increased (p<0.01)


Toxic Stress Throughout the Lifespan

- Surveillance for Childhood Adversity
  - “Has anything bad, sad or scary happen to you or your child recently?”
  - “Did anything bad, sad or scary happen to you as a child?”
- Screening for Childhood Adversity
  - Survey of Wellbeing of Young Children (SWYC) - Sheldrick, Perrin et al.
  - Safe Environments for Every Kid (SEEK) - Dubowitz et al., 2008/2011
  - Childhood ACE SCORE (cACE Score; Marie-Mitchell et al., 2013)

What Happens If I Get a Positive ACE Score?

- Educate Families
  - Exposure to trauma may be related to problems with function and behavior
  - Fight or flight response is “overactive”
Trauma-Informed Anticipatory Guidance

- Many of these suggestions you already know and share with families!
- Frame your guidance through a trauma-informed lens

New AAP Resource:
Trauma Toolbox for Primary Care

1) Adverse Childhood Experiences and the Lifelong Consequences of Trauma
2) Addressing Adverse Childhood Experiences and other types of Trauma in the Primary Care Setting
3) The Medical Home Approach to Identifying and Responding to Exposure to Trauma
4) Bring Out the Best in Your Children
5) When Things Aren’t Perfect: Caring for Yourself and Your Children
6) Protecting Processor Wellness: Working with Children Affected by Traumatic Exposures
7) Helping Foster and Adoptive Families Navigate Trauma

Critical Concept:
Regardless of what the precipitants are, unmitigated childhood stress leads to changes in the genome, brain and behavior that have long-term consequences

Relevance to Trainees
- ACGME: Pediatric residency programs should have "ambulatory experiences to include elements of community pediatrics and child advocacy."
- ACEs are appropriately taught as part of education in child advocacy
- Because ACEs impact life course trajectories, they should be an integral element of resident education

Innovative Methods to Teach ACEs
Life Course Game
Home Visiting
Resilience Game
Let’s Play a Game!

Discussion
- Did this experience resonate with any of your personal or your patients’ experiences?

Life Course Game
- Create your own:
  - Available through MCH Life Course Toolbox
  - Game PDF’s available to print for free
  - Facilitator’s guide Included
  - Add your own game pieces

Home Visiting: Trauma Informed Care
- Home visiting with well-trained specialists is an important opportunity to support the capacity of mothers to:
  - Develop safe, supportive, nurturing relationships early in life to help buffer the response to adversity later in life
  - Encourage the rudimentary but foundational social-emotional, language, and cognitive skills that promote resilience and the adoption of healthy, adaptive coping skills

The Family Medicine Experience

- ACGME program requirements for family medicine residents: Two home visits during residency
- Family medicine residents’ perception of home visits:
  - higher patient satisfaction
  - more comprehensive care (particularly for vulnerable patients),
  - greater job satisfaction for the physician
  - greater understanding that social, familial, and environmental factors are powerful determinants of patient health
  - transformation of the provider-patient medical power dynamic to a “partnership” in which families serve “as educators for the conveyance of family-centered medical care”


Home Visiting Opportunities

- Home Institution:
  - Coordinate with resident continuity patients
  - Complex care service
- Community Partners:
  - Nurse Home Visiting Programs (Rainbow)
  - Local child and family services agency (Pittsburgh)

Home Visiting Challenges

- Resident schedule coordination with families/community partner schedules
- Community safety
- Medical record documentation

Discussion

- What local opportunities can you leverage to create home visiting experiences for your residents?

Resilience Game

Resilience

- Genetic and experiential inputs to stress reactivity
- Children with strong reactions may be relatively more sensitive to their context
- Highly sensitive children are
  - Less resilient in non-supportive contexts
  - BUT perform better than less sensitive peers in supportive contexts
Competency-Based Evaluations

Resilience Game

“Orchid” and “Dandelion”

Resident Evaluations

- ACGME Milestone structure
- ACE teaching is a unique opportunity to assess some of the more difficult to measure competencies
- Potential competencies addressed:
  - Interpersonal and Communication Skills
  - Professionalism
  - Systems-based Practice

Interpersonal and Communication Skills

- Relevant Sub-competencies
  - ICS 1: Communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds

Professionalism

- Relevant Sub-competencies:
  - PROF 1: Humanism, compassion, integrity, and respect for others, based on the characteristics of an empathetic practitioner
Systems-based Practice

- Relevant Sub-competencies
  - SBP 1: coordinate patient care within the health system relevant to their clinical specialty
  - SBP 3: work in interprofessional teams to enhance patient safety and improve patient care quality

Evaluation Strategies

- Feedback from instructors and/or partners with home visits
  - Challenge: may be difficult to elicit meaningful comments
- Resident Written Reflections
  - Challenge: may require multiple reflections, leading to decreased effort for each
- Resident Self-evaluation with Sub-Competencies
  - Challenge: another written assignment

Memos to Myself

"Teaching social determinants of child health in a pediatric advocacy rotation: small intervention, big impact"

- Pediatric interns completed ‘Memos To Myself’ after the Advocacy rotation
- The curriculum impacted residents’ realization regarding family circumstances; reflections regarding self and personal practice; and knowledge about advocacy issues and community partnerships for solutions

Sample Evaluations

- Life Course Game
  - Resident participation in post-game discussion
  - Written reflection: "What new insights did you gain about factors that influence health?"
- Home Visits
  - Input from home visit partner - may not be staff member
  - Family survey
  - Written reflection: "Reflect on the home visit as an opportunity to understand the impact of ACEs on child health."
- Resilience Game
  - Written Reflection: "How does resiliency influence child health?"

Discussion: Large Group

- How could you implement competency-based evaluations in your own program?
- What method (feedback/reflection/other) would you use?
- Which sub-competencies would you address?

Summary

- Adverse childhood experiences (ACEs) are common, have a significant impact on health and are relevant to pediatric resident education
- Three innovative methods to teach ACEs are:
  - Life Course Game
  - Home Visiting
  - Resilience Game
- Competency-based assessments of residents participating in ACEs curricula capture difficult-to-measure milestones
Questions and Comments?

Acknowledgements

- Dr. Ruth Stein and Dr. Andrew Garner for their invaluable help and advice with this project
- Residents at UH Rainbow Babies and Children's Hospital, Children's Hospital of Pittsburgh and Children's Hospital at Montefiore
- APA Educational Scholars Program, including special assistance from Dr. Wendy Hobson-Rohrer
- APPD Workshop Committee for the opportunity to share and discuss our curricula
- All of you for your participation and ideas!

Evaluation

- Please complete your workshop evaluations for our session - we appreciate your feedback!

E-mail marie.clark@uhhospitals.org to request any additional materials.