The science of adversity and its growing impact on pediatric practice

Butler University Educational Neuroscience Symposium
September 21, 2019

Jim Bien, MD, FAAP
“Adverse childhood experiences are the single greatest unaddressed public health threat facing our Nation today.”

Robert Block, MD, FAAP
Past President, AAP
Agenda:

• Brief glimpse at brain development and the impact of stress
• Review the science of Adverse Childhood Experiences (ACEs)
• What should medical practices do?
• Think about how educators and pediatricians might work together differently.
Quotes from this morning:

- “This afternoon is about your physiology, your brain state, self-regulation...’ Dr. Lori
- “Don’t count ACEs. Watch their reactions. How do you feel?...be witness to their state.” – Dr. Porges
- “People who have capacity to feel safe and trust others, that is the definition of success.” – Dr Porges
Review of Brain Development

- At birth, most neurons the brain will have are present, approx. 100 billion neurons
- Neuron connections stimulated by experience
- Tremendous overproduction in neuronal connections in first years of life (700/second)
  - approx. 1000 trillion connections by age 3 yrs.
- Selective reduction of neurons and connections among neurons – PRUNING
- Pathways that are nurtured are strengthened and sustained
Synapse density over time

Sequential Development of Functions

Human Brain Development
Neural Connections for Different Functions Develop Sequentially

- Sensory Pathways (Vision, Hearing)
- Language
- Higher Cognitive Function

FIRST YEAR

Birth (Months) (Years)

-8 -7 -6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8 9 10 11 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Core Concepts of Brain Development

- Occurs from the womb through adulthood
- First basic circuits are built, and then complex
- Critical periods of brain development require stimulation.
- The brain flexible early in life, but as it develops and refines its circuitry, it loses much of its flexibility.
The interaction between genetics, the environment, and experience shapes brain architecture.

- Genetics provides the plan
- Environment enables expression of the potential of the genetic plan
- Experience is the interaction of the child with the environment

The brain is designed to be responsive to our experiences; experiences literally influence the formation of its circuitry.
Stress Response: The HPA Axis

- Stress activates
- Release of epinephrine and cortisol.
- Stimulates multiple areas of body and immune system.
Positive Stress Response

Brief increases in heart rate

Mild elevations of stress hormones

Examples:
• Dropping off at Day Camp
• Losing a soccer game
• Overcoming fear of swimming

Possible consequences:
Development of a sense of mastery that is critical for healthy development
Tolerable Stress Response

- More prolonged activation of the stress response system

  - **Examples:**
    - A summer away from home
    - Death of a loved one
    - Persistent discrimination
    - Frightening accident

  - **Possible consequences:**
    - Range from positive to harmful depending on relationships, the environment, prior experiences, and innate factors
Toxic Stress Response

Prolonged activation of stress response systems

**Examples:**
- Physical or emotional abuse
- Chronic neglect
- Exposure to violence
- Extreme poverty

**Possible consequences:**
Lifelong impacts on brain architecture and other parts of the body’s stress response system that increase the risk of stress-related physical and mental illness later in life
Toxic Stress: definition

The excessive or prolonged activation of the physiologic stress response systems in the absence of the buffering protection afforded by stable, responsive relationships.
Bottom Line for Brain Development

When children experience stable nurturing relationships, they foster the development of healthy circuitry.

When children experience unstable, traumatic, abusive or neglectful relationships, they disrupt the circuitry of the brain’s architecture as its being built.
Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults

The Adverse Childhood Experiences (ACE) Study

Vincent J. Felitti, MD, FACP, Robert F. Anda, MD, MS, Dale Nordenberg, MD, David F. Williamson, MS, PhD, Alison M. Spitz, MS, MPH, Valerie Edwards, BA, Mary P. Koss, PhD, James S. Marks, MD, MPH
Categories of ACEs from Felitti and Anda

**ABUSE**
- Physical
- Emotional
- Sexual

**NEGLECT**
- Physical
- Emotional

**HOUSEHOLD DYSFUNCTION**
- Mental Illness
- Incarcerated Relative
- Mother treated violently
- Substance Abuse
- Divorce
## ACE Study’s Percent with ACEs

<table>
<thead>
<tr>
<th>ACE Score</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>36.1</td>
</tr>
<tr>
<td>1</td>
<td>26.0</td>
</tr>
<tr>
<td>2</td>
<td>15.9</td>
</tr>
<tr>
<td>3</td>
<td>9.5</td>
</tr>
<tr>
<td>4 or more</td>
<td>12.5</td>
</tr>
</tbody>
</table>
### Behavior
- Lack of physical activity
- Smoking
- Alcoholism
- Drug use
- Missed work

### Physical & Mental Health
- Severe obesity
- Diabetes
- Depression
- Suicide attempts
- STDs
- Heart disease
- Cancer
- Stroke
- COPD
- Broken bones
ACEs and Odds Ratio: Depression
ACEs and O.R.: Ever Attempted Suicide
ACEs and OR: Smoking
ACEs and OR: Alcoholic
ACEs & OR: IV Drug Use

Bar chart showing the distribution of IV drug use across different ACEs categories:
- 0 ACEs: 0
- 1 ACE: 1
- 2 ACEs: 4
- 3 ACEs: 7
- 4 or more ACEs: 10
ACEs & Odds Ratio: Promiscuity

The diagram represents the odds ratio for promiscuity associated with different levels of ACEs (Adverse Childhood Experiences). The x-axis shows the number of ACEs (0 to 4 or more), and the y-axis represents the odds ratio (0 to 3.5). The data shows an increasing trend in the odds ratio as the number of ACEs increases.
Additional Findings for those with ≥ 4 ACEs

- 2.2 times as likely to have Ischemic Heart Disease
- 1.9 times as likely to have any cancer diagnosis
- 2.4 times as likely to have had a stroke
- 3.9 times as likely to have chronic lung disease
- 1.6 times as likely to have diabetes
ACEs Impact on Mortality

≥ 6 ACEs die nearly 20 years earlier than those with no ACEs

ACEs and Adolescent Pregnancy

(Pediatrics Vol 113 No. 2 Feb 2004)
Parents’ Adverse Childhood Experiences and Their Children’s Behavioral Health Problems

Adam Schickedanz, Neal Halfon, Narayan Sastry, Paul J. Chung

**Results: ADHD Adjusted Odds Ratio by Highest Parent’s ACE Score**

- 0 ACEs
- 1 ACE
- 2-3 ACEs
- ≥4 ACEs

Adjusted Odds Ratio for ADHD Diagnosis:

- 0.5
- 1.0
- 1.44
- 1.42
- 2.07*

*p < 0.05, **p < 0.01, ***p < 0.001

**Emotional Disturbance Odds Ratio by Highest Parent’s ACE Score**

Adjusted Odds Ratio for Emotional Disturbance Diagnosis:

- 0.5
- 1.0
- 1.56
- 1.66
- 4.24**

*p < 0.05, **p < 0.01, ***p < 0.001
Parents’ Adverse Childhood Experiences and Their Children’s Behavioral Health Problems

Adam Schickedanz, Neal Halfon, Narayan Sastry, Paul J. Chung

<table>
<thead>
<tr>
<th>Child Behavioral Outcome Measure or Condition</th>
<th>Mother’s (top) or Father’s (bottom) Adverse Childhood Experience Count</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 ACEs</td>
</tr>
<tr>
<td>(n = 1,979 Children With Data Available on All Parents’ ACE Scores)</td>
<td></td>
</tr>
<tr>
<td>Mothers’ ACEs and Children’s Behavioral Outcomes (Adjusted Odds Ratio or Adjusted Linear Coefficient)</td>
<td></td>
</tr>
<tr>
<td>Hyperactivity (aOR)</td>
<td>Ref</td>
</tr>
<tr>
<td>Emotional or Mental Disturbance (aOR)</td>
<td>Ref</td>
</tr>
<tr>
<td>Behavior Problem Index - Total Score (Adjusted Linear Coefficient)</td>
<td>Ref</td>
</tr>
</tbody>
</table>

| Fathers’ ACEs and Children’s Behavioral Outcomes (Adjusted Odds Ratio or Adjusted Linear Coefficient) |           |           |           |               |
| Hyperactivity (aOR)                          | Ref    | 0.99 (0.5, 1.9) | 0.97 (0.5, 2.0) | 1.29 (0.6, 2.9) |
| Emotional or Mental Disturbance (aOR)        | Ref    | 1.71 (0.5, 5.7) | 0.89 (0.2, 3.2) | 2.43 (0.7, 8.1) |
| Behavior Problem Index - Total Score (Adjusted Linear Coefficient) | Ref    | 0.58 (-0.3, 1.5) | 1.09 (0.04, 2.15)* | 1.09 (-0.4, 2.6) |
The impact of adverse childhood experiences on an urban pediatric population

Nadine J. Burke\textsuperscript{a}, Julia L. Hellman\textsuperscript{a}, Brandon G. Scott\textsuperscript{b}, Carl F. Weems\textsuperscript{b}, Victor G. Carrion\textsuperscript{c,*}

Fig. 2. Learning/behavior problems by ACEs score.

Child Abuse & Neglect 35 (2011) 408-13
Expanding the Concept of Adversity

**American Journal of Preventive Medicine**
Volume 49, Issue 3, September 2015, Pages 354-361

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**Adverse Childhood Experiences: Expanding the Concept of Adversity**

*Peter F. Cronholm MD, MSCE, Christine M. Forke MSN, CRNP, MD, PhD, MPH, Roy Wade MD, MPH, Megan H. Bair-Merritt MD, MSCE, Martha Davis MSIS, Mary Harkins-Schwarz MPH, Lee M. Pachter DO, Joel A. Fein MD, MPH*

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**Table 1. Demographics of the Philadelphia Census, Philadelphia Sample, and the Original Kaiser Sample**

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Philadelphia census (N=1,201,643), %</th>
<th>Philadelphia sample (N=1,784), %</th>
<th>Kaiser samplea, b (N=8,056), %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>38.8</td>
<td>45.2</td>
<td>79.8</td>
</tr>
<tr>
<td>Black</td>
<td>36.1</td>
<td>43.6</td>
<td>4.8</td>
</tr>
<tr>
<td>Latino</td>
<td>11.4</td>
<td>3.6</td>
<td>5.4</td>
</tr>
<tr>
<td>Asian</td>
<td>6.2</td>
<td>3.7</td>
<td>6.3</td>
</tr>
<tr>
<td>Other</td>
<td>7.4</td>
<td>3.9</td>
<td>3.7</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than high school</td>
<td>20.0</td>
<td>10.3</td>
<td>6.0</td>
</tr>
<tr>
<td>High school graduate</td>
<td>35.7</td>
<td>35.0</td>
<td>19.1</td>
</tr>
<tr>
<td>Some college</td>
<td>21.8</td>
<td>19.0</td>
<td>31.5</td>
</tr>
<tr>
<td>College graduate</td>
<td>22.5</td>
<td>35.7</td>
<td>43.4</td>
</tr>
<tr>
<td>Male</td>
<td>46.3</td>
<td>41.7</td>
<td>47.9</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-34</td>
<td>38.8</td>
<td>29.7</td>
<td>10.0</td>
</tr>
<tr>
<td>35-64</td>
<td>46.7</td>
<td>52.2</td>
<td>57.6</td>
</tr>
<tr>
<td>≥65</td>
<td>18.4</td>
<td>18.1</td>
<td>32.4</td>
</tr>
</tbody>
</table>

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**Adversity exposure**

<table>
<thead>
<tr>
<th></th>
<th>Philadelphia sample (N=1,784), %</th>
<th>Kaiser samplea, b (N=8,056), %</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional ACEs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical abuse</td>
<td>38.1</td>
<td>10.8</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Substance using household member</td>
<td>34.8</td>
<td>25.6</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Emotional abuse</td>
<td>33.2</td>
<td>11.1</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Mentally ill household member</td>
<td>24.1</td>
<td>18.8</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Witnessed domestic violence</td>
<td>20.2</td>
<td>12.5</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Sexual abuse</td>
<td>16.2</td>
<td>22.0</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Incarcerated household member</td>
<td>12.9</td>
<td>3.4</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Emotional neglect</td>
<td>7.7</td>
<td>14.8</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Physical neglect</td>
<td>7.0</td>
<td>9.9</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

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**Expanded ACEs**

- Witnessed violence: 40.5
- Felt discrimination: 34.5
- Unsafe neighborhood: 27.3
- Experienced bullying: 8.0
- Lived in foster care: 2.5
The Impact of Racism on Child and Adolescent Health

Maria Trent, Danielle G. Dooley, Jacqueline Dougé, SECTION ON ADOLESCENT HEALTH, COUNCIL ON COMMUNITY PEDIATRICS, COMMITTEE ON ADOLESCENCE
The theory of ACEs Lifelong Impact

- Adverse Childhood Experiences
- Disrupted Neurodevelopment
- Social, Emotional, and Cognitive Impairment
- Adoption of Health-risk Behaviors
- Disease, Disability, and Social Problems
- Early Death
- Death
Resilience

• The single most common factor for children who develop resilience is at least one stable and committed relationship with a supportive parent, caregiver, or other adult.

• Predisposing factors for positive outcomes:
  – facilitating supportive adult-child relationships
  – building a sense of self-efficacy and perceived control
  – opportunities to strengthen adaptive skills and self-regulatory capacities
  – mobilizing sources of faith, hope, and cultural traditions
Prevalence of negative school performance and attitude outcomes by number of ACEs among children ages 6 to 17 (2011–2012 NSCH).

Angelica Robles et al. Pediatrics 2019;144:e20182945
Prevalence of negative school performance and attitude outcomes by number of PFs among children ages 6 to 17.

Angelica Robles et al. Pediatrics 2019;144:e20182945
## Table 1

Prevalence of adverse childhood experiences and characteristics of children studied, 2016 National Survey of Children’s Health (n = 45,287).

<table>
<thead>
<tr>
<th>Adverse Experiences</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent or guardian divorced or separated</td>
<td>21.9</td>
</tr>
<tr>
<td>Parent or guardian died</td>
<td>2.9</td>
</tr>
<tr>
<td>Parent or guardian served time in jail</td>
<td>7.0</td>
</tr>
<tr>
<td>Saw or heard parents or adults slap, hit, kick, punch one another in the home</td>
<td>5.0</td>
</tr>
<tr>
<td>Was a victim of violence or witnessed violence in neighborhood</td>
<td>3.3</td>
</tr>
<tr>
<td>Lived with anyone who was mentally ill, suicidal, or severely depressed</td>
<td>7.1</td>
</tr>
<tr>
<td>Lived with anyone who had a problem with alcohol or drugs</td>
<td>8.1</td>
</tr>
<tr>
<td>Treated or judged unfairly because of his or her race or ethnic group</td>
<td>3.3</td>
</tr>
<tr>
<td>Economic Hardship: Hard to cover basics like food or housing</td>
<td>22.5</td>
</tr>
</tbody>
</table>

**Child Characteristics**

<table>
<thead>
<tr>
<th>Sex</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>50.8</td>
<td>49.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>5 years old or younger</th>
<th>6 to 12 years old</th>
<th>13 to 17 years old</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>32.5</td>
<td>39.3</td>
<td>28.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Non-Hispanic White</th>
<th>Non-Hispanic African-American</th>
<th>Hispanic</th>
<th>“Other” Non-Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>53.8</td>
<td>12.2</td>
<td>23.3</td>
<td>10.7</td>
</tr>
</tbody>
</table>
Early Childhood Adversity, Toxic Stress, and the Role of the Pediatrician: Translating Developmental Science Into Lifelong Health

abstract

Advances in a wide range of biological, behavioral, and social sciences are expanding our understanding of how early environmental influences (the ecology) and genetic predispositions (the biologic program) affect learning capacities, adaptive behaviors, lifelong physical and mental health, and adult productivity. A supporting technical report from the American Academy of Pediatrics (AAP) presents an integrated ecobio developmental framework to assist in translating these dramatic advances in developmental science into improved health across the life span.
AAP Policy Recommendations

1. Psychosocial problems should no longer be viewed as categorically different from the causes and consequences of other biologically based health impairments.

2. The scientific knowledge of ACEs and toxic stress should be fully incorporated into all levels of pediatric training.

3. Pediatricians should adopt a more proactive leadership role in educating families, child care professionals, teachers about toxic stress.
AAP Policy Recommendations

4. Pediatricians should be advocates for the development and implementation of evidence-based interventions that reduce sources of toxic stress and or mitigate their effects.

5. Pediatric Medical Homes should
   - Strengthen anticipatory guidance re: development
   - Actively screen for precipitants of toxic stress
   - Participate in adaptations that expand their ability to support children at risk
   - Identify or advocate for local resources that address risks for toxic stress.
How to begin the conversation

• “I have begun to ask all of the women/parents/caregivers/patients 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/patients in my practice about exposure to violence. May I ask you a few questions?”
Screening Children: Pediatric ACEs and Relevant Life Experiences

• Developed by the Center for Youth Wellness
• Validated for use in clinical settings to assess ACEs experienced by children and teens

• Multiple versions
  • Youth (parent completed)
  • Teen (parent completed)
  • Teen (self-completed)

• Includes “enhanced ACEs”

• Available for download on CYW website or NPPC website
Pediatric ACEs and Relevant Life Events Screener (PEARLS) – Child

To be completed by Caregiver

| Today’s Date: ___________________________ | Date of Birth: ___________________________ |
| Child’s Name: ___________________________ | ___________________________ |
| Your Name: ___________________________ | Relationship to Child: ___________________________ |

Many families experience stressful life events. Over time these experiences can affect your child’s health and wellbeing. We would like to ask you questions about your child so we can help them be as healthy as possible. At any point in time since your child was born, has your child been present when the following experiences happened? Please include past and present experiences. Please note, some questions have more than one part separated by “OR.” If any part of the question is answered “Yes,” then the answer to the entire question is “Yes.”

- Has your child ever lived with a parent/caregiver who went to jail/prison?
- Do you think your child ever felt unsupported, unloved and/or unprotected?
- Has your child ever lived with a parent/caregiver who had mental health issues? (for example depression, schizophrenia, bipolar disorder, PTSD, or an anxiety disorder)
- Has a parent/caregiver ever insulted, humiliated, or put down your child?
- Has the child’s biological parent or any caregiver ever had, or currently has a problem with too much alcohol, street drugs or prescription medications use?
- Has your child ever lacked appropriate care by any caregiver (for example, not being protected from unsafe situations, or not cared for when sick or injured even when the resources were available)?
- Has your child ever seen or heard a parent/caregiver being screamed at, sworn at, insulted or humiliated by another adult? OR Has your child ever seen or heard a parent/caregiver being slapped, kicked, punched beaten up or hurt with a weapon?
- Has any adult in the household often or very often pushed, grabbed, slapped or thrown something at your child? OR Has any adult in the household ever hit your child so hard that you could feel the marks or was injured? OR Has any adult in the household ever threatened your child or acted in a way that made your child afraid that they might be hurt?
- Has your child ever experienced sexual abuse? For example, anyone touched your child or asked your child to touch that person in a way that was unwanted, or made your child feel uncomfortable, or anyone ever attempted or actually had oral, anal, or vaginal sex with your child?
- Have there ever been significant changes in the relationship status of the child’s caregiver(s)? For example a parent/caregiver got a divorce or separated, or a romantic partner moved in or out?

Add up the “yes” answers for this first section: [ ]

- Has your child ever seen, heard, or been a victim of violence in your neighborhood, community or school? (for example targeted bullying, assault or other violent actions, war or terrorism)
- Has your child experienced discrimination (for example being harassed or made to feel inferior or excluded because of their race, ethnicity, gender identity, sexual orientation, religion, learning differences, or disabilities)?
- Has your child ever had problems with housing (for example being homeless, not having a stable place to live, moved more than two times in a six-month period, faced eviction or foreclosure, or had to live with multiple families or family members)?
- Have you ever worried that your child did not have enough food to eat or that the food for your child would run out before you could buy more?
- Has your child ever been separated from their parent or caregiver due to foster care, or immigration?
- Has your child ever lived with a parent/caregiver who had a serious physical illness or disability?
- Has your child ever lived with a parent or caregiver who died?

Add up the “yes” answers for the second section: [ ]
Pediatric ACEs and Relevant Life Events Screener (PEARLS) – Teen (Self Report)

To be completed by Patient

Today’s Date: ___________________ Date of Birth: ___________________

Your Name: ____________________

Many families experience stressful life events. Over time these experiences can affect your health and wellbeing. We would like to ask you questions so we can help you be as healthy as possible.

At any point in time since you were born, have you seen or been present when the following experiences happened? Please include past and present experiences. Please note, some questions have more than one part separated by “OR.” If any part of the question is answered “Yes,” then the answer to the entire question is “Yes.”

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes or No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you ever lived with a parent/caregiver who went to jail/prison?</td>
<td></td>
</tr>
<tr>
<td>Have you ever felt unsupported, unloved and/or unprotected?</td>
<td></td>
</tr>
<tr>
<td>Have you ever lived with a parent/caregiver who had mental health issues? (for example depression, schizophrenia, bipolar disorder, PTSD, or an anxiety disorder)</td>
<td></td>
</tr>
<tr>
<td>Has a parent/caregiver ever insulted, humiliated, or put you down?</td>
<td></td>
</tr>
<tr>
<td>Has your biological parent or any caregiver ever, or currently has a problem with too much alcohol, street drugs or prescription medications use?</td>
<td></td>
</tr>
<tr>
<td>Have you ever lacked appropriate care by any caregiver (for example, not being protected from unsafe situations, or not being cared for when sick or injured even when the resources were available)?</td>
<td></td>
</tr>
<tr>
<td>Have you ever seen or heard a parent/caregiver being screamed at, sworn at, insulted or humiliated by another adult? OR Have you ever seen or heard a parent/caregiver being slapped, kicked, punched beaten up or hurt with a weapon?</td>
<td></td>
</tr>
<tr>
<td>Has any adult in the household often or very often pushed, grabbed, slapped or thrown something at you? OR Has any adult in the household ever hit you so hard that you had marks or were injured? OR Has any adult in the household ever threatened you or acted in a way that made you afraid that you might be hurt?</td>
<td></td>
</tr>
<tr>
<td>Have you ever experienced sexual abuse? For example, has anyone touched you or asked you to touch that person in a way that was unwanted, or made you feel uncomfortable, or anyone ever attempted or actually had oral, anal, or vaginal sex with you?</td>
<td></td>
</tr>
<tr>
<td>Have there ever been significant changes in the relationship status of your caregiver(s)? For example a parent/caregiver got a divorce or separated, or a romantic partner moved in or out?</td>
<td></td>
</tr>
</tbody>
</table>

Add up the “yes” answers for this first section:  

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes or No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you ever seen, heard, or been a victim of violence in your neighborhood, community or school? (for example targeted bullying, assault or other violent actions, war or terrorism)</td>
<td></td>
</tr>
<tr>
<td>Have you experienced discrimination (for example being hassled or made to feel inferior or excluded because of their race, ethnicity, gender identity, sexual orientation, religion, learning differences, or disabilities)?</td>
<td></td>
</tr>
<tr>
<td>Have you ever had problems with housing (for example being homeless, not having a stable place to live, moved more than two times in a six-month period, faced eviction or foreclosure, or had to live with multiple families or family members)?</td>
<td></td>
</tr>
<tr>
<td>Have you ever worried that you did not have enough food to eat or that food would run out before you or your parent/caregiver could buy more?</td>
<td></td>
</tr>
<tr>
<td>Have you ever been separated from your parent or caregiver due to foster care, or immigration?</td>
<td></td>
</tr>
<tr>
<td>Have you ever lived with a parent/caregiver who had a serious physical illness or disability?</td>
<td></td>
</tr>
<tr>
<td>Have you ever lived with a parent or caregiver who died?</td>
<td></td>
</tr>
<tr>
<td>Have you ever been detained, arrested or incarcerated?</td>
<td></td>
</tr>
<tr>
<td>Have you ever experienced verbal or physical abuse or threats from a romantic partners (for example a boyfriend or girlfriend)?</td>
<td></td>
</tr>
</tbody>
</table>

Add up the “yes” answers for the second section:  

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes or No</th>
</tr>
</thead>
</table>


Screening Parents

• Not a validated tool, but based on the original ACE questions, with enhanced ACEs added in.

• Used as a tool to
  1. Educate parents about ACEs and their effects
  2. Create a culture change within practice
  3. Identify families that may need more support

• Goal is never to force a disclosure, but to initiate a conversation
ACE QUESTIONS

HOW MANY of these apply to you during the first 18 years of your life? You don’t have to mark which specific statements apply to you. Write the total in the box:

- Did a parent or other adult in the household often swear at you, insult you, put you down, or humiliate you OR act in a way that made you afraid you would be physically hurt?
- Did a parent or other adult in the household often push, grab, slap or throw something at you OR ever hit you so hard that you had marks or were injured?
- Did an adult or person at least 5 years older than you ever touch or fondle you, or have you touch their body in a sexual way OR attempt or actually have oral, anal or vaginal intercourse with you?
- Did you often feel that no one in your family loved you or thought you were important or special OR your family didn’t look out for each other, feel close to each other, or support each other?
- Did you often feel that you didn’t have enough to eat, had to wear dirty clothes, and had no one to protect you OR your parents were too drunk or high to take care of you or take you to the doctor if you needed it?

HOW MANY of these apply to you during the first 18 years of your life? You don’t have to mark which specific statements apply to you. Write the total in the box:

- Were your parents ever separated or divorced?
- Was your mother or stepmother often pushed, grabbed, slapped, or had something thrown at her OR sometimes or often kicked, bitten, hit with a fist or with something hard?
- Did you ever live with anyone who was a problem drinker or alcoholic, or who used street drugs?
- Was a household member depressed or mentally ill, or did a household member attempt suicide?
- Did a household member go to prison?

HOW MANY of these apply to you during the first 18 years of your life? You don’t have to mark which specific statements apply to you. Write the total in the box:

- Did you experience repeated bullying as a child?
- Did you repeatedly experience discrimination based on ethnicity, skin color or sexual orientation?
- Did you live in a neighborhood that experienced gang-related violence?
- Did you ever live in a foster home or group home?

Comments:

Questions:

Concerns:

I would be interested in:  
  ___ Parenting Classes  
  ___ Parent Support Groups  
  ___ Visiting Home Nurse Programs  
  ___ Twitter Feeds: (helpful hints on parenting)  
  ___ More Information on your Web Site  
  ___ Relief Nursery Services  
  ___ Other (please tell us more) __________________________  

This questionnaire was filled out by: ___ Mom  ___ Dad

Have you filled this survey out before at TCC (for example, with another child)?  
  ___ Yes  ___ No
Do Pediatricians Ask About Adverse Childhood Experiences in Pediatric Primary Care?

Bonnie D. Kerker PhD a, b, g, h, Amy Storfer-Isser PhD a, Molra Szlagyl MD, PhD d, Ruth E.K. Stein MD d, Andrew S. Garner MD, PhD f, Karen G. O’Connor BS g, Kimberly E. Hoagwood PhD b, h, Sarah M. Horwitz PhD b
In light of this information:

• How should educators and physicians work together in supporting children?
Help me learn

• Mrs Mattis’ classroom. An example for me of a regulated classroom.

• What is one thing about your work with children that you think would be helpful for pediatricians to know?

• How might this insight be communicated in your environment/community?
We don’t understand each other’s worlds.

• influenced to see schools in an adversarial light
  – ‘demanding’ diagnoses and medications
  – ‘refusing’ to adequately assist in evaluations
  – Inconsistent communication with physicians.

• 7 year old girl with behavior problems and school failure.

• What is your perception of the medical system as it works with your students?
Partnerships have power.

- BabyTALK and CHIC

- Where have you seen educators and medical professionals collaborating to enhance the development of children?
Together we may be more impactful.

• What might we do together to strengthen support for youth?
• To enable them to thrive?
• To feel safe and trusting?
• To be Successful?