Learning Objectives

1) Identify the ten Adverse Childhood Experiences (ACEs)
2) Describe the development of chronic disease in relation to ACEs
3) Describe the core tenets of trauma-informed primary care.
The Adverse Child Experiences (ACE) Study

Over 17,000 adults (predominantly White, middle class)

Followed longitudinally for 15+ years

Given a questionnaire about childhood life experiences

Analysis of health over time

ACE score correlated to risk of disease as an adult

The three types of ACEs include

<table>
<thead>
<tr>
<th>ABUSE</th>
<th>NEGLECT</th>
<th>HOUSEHOLD DYSFUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical</td>
<td>Physical</td>
<td>Mental Illness, Incarcerated Relative</td>
</tr>
<tr>
<td>Emotional</td>
<td>Emotional</td>
<td>Mother treated violently, Substance Abuse</td>
</tr>
<tr>
<td>Sexual</td>
<td></td>
<td>Divorce</td>
</tr>
</tbody>
</table>

Toxic Stress Can Also Be Caused By...

- Community violence
- Bullying
- Discrimination
- Death of parent/guardian
- Separation from caregiver via foster care / immigration detention

https://centerforyouthwellness.org/health-impacts/

Childhood Adverse Experiences Found to be Very Common

<table>
<thead>
<tr>
<th>Number of Adverse Childhood Experiences (ACE Score)</th>
<th>Women</th>
<th>Men</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>34.5</td>
<td>38.0</td>
<td>36.1</td>
</tr>
<tr>
<td>1</td>
<td>24.5</td>
<td>27.9</td>
<td>26.0</td>
</tr>
<tr>
<td>2</td>
<td>15.5</td>
<td>16.4</td>
<td>15.9</td>
</tr>
<tr>
<td>3</td>
<td>10.3</td>
<td>8.6</td>
<td>9.5</td>
</tr>
<tr>
<td>4 or more</td>
<td>15.2</td>
<td>9.2</td>
<td>12.5</td>
</tr>
</tbody>
</table>
Dose Response Measure

Association between ACEs and Negative Outcomes

ACEs have been found to have a graded dose-response relationship with 40+ outcomes to date.

<table>
<thead>
<tr>
<th># of ACEs</th>
<th>Risk for Negative Health and Well-being Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Low</td>
</tr>
<tr>
<td>1</td>
<td>Moderate</td>
</tr>
<tr>
<td>2</td>
<td>High</td>
</tr>
<tr>
<td>3</td>
<td>Very high</td>
</tr>
<tr>
<td>4</td>
<td>Extreme</td>
</tr>
<tr>
<td>≥5</td>
<td>Maximum</td>
</tr>
</tbody>
</table>

*This pattern holds for the 40+ outcomes, but the exact risk values vary depending on the outcome.

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Risk of Disease for ACES of 4 or More

<table>
<thead>
<tr>
<th>Condition</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ischemic heart disease</td>
<td>2.2</td>
</tr>
<tr>
<td>Any Cancer</td>
<td>1.9</td>
</tr>
<tr>
<td>Chronic Bronchitis or emphysema (COPD)</td>
<td>3.9</td>
</tr>
<tr>
<td>Stroke</td>
<td>2.4</td>
</tr>
<tr>
<td>Diabetes</td>
<td>1.6</td>
</tr>
<tr>
<td>Ever attempted suicide</td>
<td>12.2</td>
</tr>
<tr>
<td>Severe obesity</td>
<td>1.6</td>
</tr>
<tr>
<td>Two or more weeks of depressed mood in the past year</td>
<td>4.6</td>
</tr>
<tr>
<td>Ever used illicit drugs</td>
<td>4.7</td>
</tr>
<tr>
<td>Ever injected drugs</td>
<td>10.3</td>
</tr>
<tr>
<td>Current smoker</td>
<td>2.2</td>
</tr>
<tr>
<td>Ever had a sexually transmitted disease</td>
<td>2.5</td>
</tr>
</tbody>
</table>

**Source:** Felitti, 1998

https://centerforyouthwellness.org/cyw-aceq/
Mechanisms by Which ACES Impact Adult Health

Costs of Child Abuse and Trauma

- CDC 2012 Key findings:
  - The estimated average lifetime cost per victim of nonfatal child maltreatment includes:
    - $32,648 in childhood health care costs
    - $10,530 in adult medical costs
    - $144,360 in productivity losses
    - $7,728 in child welfare costs
    - $6,747 in criminal justice costs
    - $7,999 in special education costs
  - The estimated average lifetime cost per death includes:
    - $14,100 in medical costs
    - $1,258,800 in productivity losses

https://www.cdc.gov/media/releases/2012/p0201_child_abuse.html - accessed June 10, 2018
Core Tenets of Trauma Informed Primary Care

MANAGING ACES in the PRIMARY CARE SETTING

Call for Action - Treating Toxic Stress

1) Screen
2) Educate
3) Collaborate with community to prevent Toxic Stress
4) Provide Treatments for Toxic Stress
Screening for Toxic Stress and ACES

AAP 2012 recommends screening for risk factors in your population:

- Maternal depression
- Parental substance abuse
- Community or home violence
- Food Scarcity
- Poor Social connectedness
Examples of Screeners

- ACE Screening Tool
- Parental ACE Screening Tool
- Resiliency Questionnaire
- Seek Parent Screening Questionnaire
- Survey of Well Being of Young Children

*Please email for full zip file of screens

Example: CYW Adverse Childhood Experiences

**Section 1. At any point since your child was born...**

- Your child’s parents or guardians were separated or divorced
- Your child lived with a household member who served time in jail or prison
- Your child lived with a household member who was depressed, mentally ill or attempted suicide
- Your child saw or heard household members hurt or threaten to hurt each other
- A household member swore at, insulted, humiliated, or put down your child in a way that scared your child OR a household member acted in a way that made your child afraid that s/he might be physically hurt
- Someone touched your child’s private parts or asked your child to touch their private parts in a sexual way
- More than once, your child went without food, clothing, a place to live, or had no one to protect her/him
- Someone pushed, grabbed, slapped or threw something at your child OR your child was hit so hard that your child was injured or had marks
- Your child lived with someone who had a problem with drinking or using drugs
- Your child often felt unsupported, unloved and/or unprotected
Example: CYW Adverse Childhood Experiences (2/2)

Section 2. At any point since your child was born...

- Your child was in foster care
- Your child experienced harassment or bullying at school
- Your child lived with a parent or guardian who died
- Your child was separated from her/his primary caregiver through deportation or immigration
- Your child had a serious medical procedure or life threatening illness
- Your child often saw or heard violence in the neighborhood or in her/his school neighborhood
- Your child was often treated badly because of race, sexual orientation, place of birth, disability or religion

Education and Resources to Support Parents and Prevent ACES
AAP Education Tools - Poster Campaign

AAP Parent Education Handouts

Brochures on Parenting Strategies
Brochures on Child Stress and Health Effects
Brochures on Building Child Attachment

Available in Spanish/English
Community Engagement Initiatives to Increase Resiliency

AAP recommends pediatric practices strengthen connections to community resources for their patients.

Early Therapeutic Intervention for At-Risk Families
Secondary Prevention Programs - Example SPR

Skills for Psychology Recovery

6 Brief modules designed to help survivors of disaster/trauma cope better in months after trauma

Skills for Psychological Recovery - Modules

- Goal Setting / prioritizing
- Problem Solving
- Promoting positive activities
- Managing emotional reactions
- Promoting Helpful Thinking
- Rebuilding social connections

https://www.nctsn.org/resources/skills-psychological-recovery-spr-online, Accessed 6-25-2018
Secondary Prevention Programs - Triple P Level III

- Triple P (Positive Parenting Program) -
- Suite of interventions of varying intensity for parents of children 0-18
- Designed for public health use in Australia, now available commercially in US

http://www.triplep.net
Secondary Prevention Programs - Triple P Level III

- Triple III - Primary Care
- 4 15-30 min consultations (phone or in person)
- Optional 2 1 hour group seminars
- Content targets specific behavioral problems - e.g., sibling aggression, shopping misbehavior
- Builds parent skills in:
  - ABC analysis of behavior
  - Building a change plan with prevention, rewards / punishments
  - Tracking data over time

Evidence-based Interventions to Intervene Early with ACES

- Trauma therapy
  - Trauma Focused CBT
  - Child and Family Traumatic Stress Intervention
  - Trauma and Grief Component Therapy

- Behavior modification / Parenting support therapies
  - Parent Child Interaction Therapy
  - Triple P - Positive Parenting Program - Level 4 and 5
  - Brief Behavioral Intervention

https://www.nctsn.org/treatments-and-practices, accessed 6-12-2018
Implementation Example - The TCHP Centers for Children and Women

TCHP The Center for Children and Women
Location of the Facility

Center Patient Demographics

20,000 Patients ALL Covered by Medicaid OR CHIP
Funding - Medical Home Capitated Payment Model

- Flat fee per patient member
- 100% Risk model

Value:
- No fee for service = ability to innovate
- Value on prevention and maintenance

Integrated Interdisciplinary Teams

- OB/GYN
- Pediatrics
- Behavioral Health
- Optometry
- Speech
- Nutrition
- Pharmacy
- Health Education
- Dentistry
- Lab
- Radiology
- Care Coordination
Center Examples - Center Psychosocial Screening Tools

- ASQ - development
- MCHAT - Autism
- PSC-17 School age disruptive behaviors
- PHQ-9 Depression
- HITS - Interpersonal Violence
- Food insecurity
- EPDS - Edinburgh Depression

The TCHP Center Community Engagement Initiatives

- Free Boys & Girls Club Memberships
- Dynamo Soccer Clinics
- Reach out and Read Programs
- Keep Fit Club
- Waterpark passes
- 100$ rebate on sports/rec fees
Community Health Connections - Center Classes

Keep Fit Exercise Classes  
Cooking Classes  
Breastfeeding Classes  
Becoming a mom classes  
Triple P classes  
School Outreach and Inservices

Center Example - Patient Education Resources

Bilingual Patient education videos in the lobby

- Managing Child Stress  
- Healthy Eating  
- Positive activities
Center Secondary Prevention and Early Intervention Programs - BH TEAM

5 FTE BH clinicians (Psychologist lead, mix of PHD, LPC and LCSW)

1 psychiatrist

2 social workers (LMSW)

BH Care Interventions at the Center

Screening

Evidence-based Therapy

Care Coordination

Social Work Resourcing

Diagnostic Assessment

Medication Management
Center Evidence-Based Psychotherapy Interventions

RUBI protocol - Disruptive Behaviors in Children with Developmental Delay
Brief Behavioral Intervention
CBT - Depression and Anxiety
Trauma Focused CBT
Skills For Psychological Recovery

Evidence-Based Treatments

- Focus on Modular Delivery
- Standardized Protocol across providers
- Providers all use the same patient education tools in the EMR
Thoughts / Questions

Thank you!

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