Buffering the Effects of Toxic Stress and Reducing Risk of Child Abuse through Family Support Home Visiting

Presented by
TexProtects, The Texas Association for the Protection of Children
Why are the Early Years Important?

1. Our environment as young children influences genetics (Epigenetics)

2. The first five years are critical for brain development
   - The brain develops about 700 synapses per second (neural connections that transmit information)
   - Brain circuits used are strengthened; those not utilized diminish (Developmental Neuroscience)

*Eco-Bio-Developmental Model of Health and Human Disease*

“Ecology becomes biology and together they drive development across the lifespan”
- Andrew Garner, M.D., Ph.D., FAAP

Brain Development Milestones

Brain Synapse Formation by Age
(700 synapses per second during the early years)

What is Toxic Stress?

“Strong, frequent, and/or prolonged activation of the body’s stress-response system in the absence of the buffering protection of a supportive, adult relationship.” Shonkoff & Garner (2012)

Toxic Stress

- Root of adult physical and mental health issues
- Result of early exposure to risks:
  - Child Maltreatment
  - Parental Depression
  - Parental Substance Abuse
  - Family Violence
  - Incarcerated Parent

### ACE Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Women (n=9,367)</th>
<th>Men (n=7,970)</th>
<th>Total (17,337)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Abuse</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>13.1%</td>
<td>7.6%</td>
<td>10.6%</td>
</tr>
<tr>
<td>Physical</td>
<td>27.0%</td>
<td>29.9%</td>
<td>28.3%</td>
</tr>
<tr>
<td>Sexual</td>
<td>24.7%</td>
<td>16.0%</td>
<td>20.7%</td>
</tr>
<tr>
<td><strong>Household Dysfunction</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother Treated Violently</td>
<td>13.7%</td>
<td>11.5%</td>
<td>12.7%</td>
</tr>
<tr>
<td>Household Substance Abuse</td>
<td>29.5%</td>
<td>23.8%</td>
<td>26.9%</td>
</tr>
<tr>
<td>Household Mental Illness</td>
<td>23.3%</td>
<td>14.8%</td>
<td>19.4%</td>
</tr>
<tr>
<td>Parental Separation or Divorce</td>
<td>24.5%</td>
<td>21.8%</td>
<td>23.3%</td>
</tr>
<tr>
<td>Incarcerated Household Member</td>
<td>5.2%</td>
<td>4.1%</td>
<td>4.7%</td>
</tr>
<tr>
<td><strong>Neglect</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>16.7%</td>
<td>12.4%</td>
<td>14.8%</td>
</tr>
<tr>
<td>Physical</td>
<td>9.2%</td>
<td>10.7%</td>
<td>9.9%</td>
</tr>
</tbody>
</table>

*Wave 2 data only (n=8,667)  Data from [www.cdc.gov/nccdphp/ace/demographics](http://www.cdc.gov/nccdphp/ace/demographics)

Defining Adversity or Stress

Positive Stress

- Brief, infrequent, mild to moderate intensity
- Most normative childhood stress
  - Inability of the 15 month old to express their desires
  - The 2 year old who stumbles while running
  - Beginning school or daycare
  - The big project in middle school

Social-emotional buffers allow a return to baseline (responding to non-verbal clues, consolation, reassurance, assistance in planning)

Builds motivation and resiliency

Positive Stress is NOT the ABSENCE of stress

Defining Toxic Stress

Toxic Stress
- Long lasting, frequent, or strong intensity
- More extreme precipitants of childhood stress (ACEs)
  - Physical, sexual, emotional abuse
  - Physical, emotional neglect
  - Household dysfunction
- Insufficient social-emotional buffering
  (Deficient levels of emotion coaching, re-processing, reassurance and support)
  - Potentially permanent changes and long-term effects
    - Epigenetics (there are life long / intergenerational changes in how the genetic program is turned ON or OFF)
    - Brain architecture (the mediators of stress impact upon the mechanisms of brain development / connectivity)

Impact of Early Stress

Hyper-responsive stress response; calm/coping

Chronic “fight or flight;” adrenaline / cortisol

Changes in Brain Architecture

Outcomes of High-Risk Children: Impact of ACES

- Face Learning Disorders Requiring Special Ed: 50%
- Become Involved with Drugs: 66%
- Have School Related Problems: 50%
- Become Pregnant as a Teenager: 40%
- Drop Out of School: 25%
- Never Attend College: 60%
- Become a Juvenile Delinquent: 59%
- Be Arrested for a Violent Crime: 70%

Costs of Doing Nothing

U.S. lifetime cost from one year of child maltreatment

- Nearly $124 billion

Average lifetime cost per survivor:
- $210,012

Average lifetime cost per fatal victim:
- $1,272,900
Mothers can learn to better care for themselves and have healthier relationships with the father:

- Months on Welfare and Using Food Stamps, Months on Medicaid, Arrests and Convictions, Days in Jail, Prenatal Smoking, Prenatal Hypertension, Depression, Domestic Violence

- Months Mothers Employed, Education and Job Training, Rates of Living with Father, Spacing Between Child Births
Outcomes of Family Support Home Visiting

➢ Parents also can learn how to better care for their children:

- Child Abuse and Neglect, Out of Home Placements, Child Injuries, Safety Hazards in Home, Parenting Harshness

- Father Involvement, Parenting Sensitivity and Interaction with Child, Parenting Knowledge, Stimulating Home Environment
Outcomes of Family Support Home Visiting

- Which ultimately can lead to better outcomes for children:
  - Premature Deliveries, Neurodevelopmental Impairment,
    Language/Cognitive Delays, Psychological Maladjustment,
    Juvenile Arrests and Adjudication
  - Birth Weights, Child Health, Child Behavior, School Readiness,
    Academic and Cognitive Performance
Nurse-Family Partnership Methodology

- **Design:** Randomized Controlled Trial; Elmira, New York
- **Objective:** To examine the long-term effects of NFP on women’s life course and child abuse and neglect.
- **Participants:** 400 pregnant women with no previous live births. 324 participated in the follow-up 15 years later.
  - **There were 4 treatment conditions:**
    - **Treatment 1:** Provided sensory and developmental screening at 12 and 24 months of age
    - **Treatment 2:** Provided screening services offered in treatment 1, plus free transportation for prenatal and well-child care through the child’s 2nd birthday
    - **Treatment 3:** Provided screening and transportation services offered in treatment 2; in addition to being provided a nurse who visited them in the home during pregnancy
    - **Treatment 4:** Provided same services offered in treatment 3 but the nurses continued to visit through the child’s 2nd birthday
- **Follow-up:** 15 Years after birth of first child

## NFP Outcomes

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Treatment 1 and 2</th>
<th>Treatment 3</th>
<th>Treatment 4</th>
<th>Treatment 1 &amp; 2 vs. 4 (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substantiated Reports of Child Abuse and Neglect</td>
<td>0.54</td>
<td>0.35</td>
<td>0.29</td>
<td><strong>0.77</strong>* (0.34 to 1.19)</td>
</tr>
</tbody>
</table>

### Whole Sample

- **Incidence**

### Low-SES Unmarried Sample

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Treatment 1 and 2</th>
<th>Treatment 3</th>
<th>Treatment 4</th>
<th>Treatment 1 &amp; 2 vs. 4 (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substantiated Reports of Child Abuse and Neglect</td>
<td>0.53</td>
<td>0.63</td>
<td>0.11</td>
<td><strong>1.61</strong>* (0.87 to 2.35)</td>
</tr>
</tbody>
</table>

* P=<0.01 (P=<0.05 equals statistical significance)*


During the 15-year period after the birth of their first child, in contract to the comparison group, women who were visited by nurses during pregnancy AND infancy were identified as perpetrators of abuse significant less often (0.29 vs. 0.54 verified reports).

Results are even more significant for the low-SES unmarried sample (0.11 vs. 0.53).
Positive Parenting Program

Level 1: Universal Triple P / Targets ALL parents
Media-based Parent Information Campaign

Level 2: Selected Triple P / Targets 60% of parents
Brief Selective Intervention (e.g., Family practitioners provide information; Large group seminars)

Level 3: Primary Care Triple P / Targets 33% of parents
Narrow Focus Parent Training (e.g., therapy sessions, telephone calls, group sessions)

Level 4: Standard & Group Triple P / Targets 9% of parents
Broad Focus Parent Training (similar to levels 2 & 3 - more intense interactions)

Level 5: Enhanced Triple P / Targets 2% of parents
Behavioral family intervention (intense, individually tailored, adds home visits)
Triple P Methodology


- **Design:** Population Level Randomized Controlled Trial; 18 counties in South Carolina

- **Objective:** To evaluate the impact of implementing Triple P with the existing workforce on population indicators related to child maltreatment (i.e., rates of substantiated child maltreatment, child out-of-home placements, and child hospitalizations and ER visits for maltreatment injuries).

- **Participants:** 18 counties in South Carolina. 9 counties received System Triple P while the 9 received SAU.
  - In addition, dissemination involved Triple P Professional training for the existing workforce (649 service providers). This training was 2-3 days.

- **Follow-up:** 1 year
### Triple P Outcomes

- **35%** reduction in hospitalizations and emergency room visits for child injuries
- **44%** reduction in out-of-home placements
- **28%** reduction in substantiated cases of abuse

<table>
<thead>
<tr>
<th></th>
<th>Pre-Intervention</th>
<th>Post-Intervention</th>
<th>Pre-Intervention</th>
<th>Post-Intervention</th>
<th>Statistical Significance</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substantiated CM</td>
<td>10.86</td>
<td>11.74</td>
<td>11.12</td>
<td>15.06</td>
<td>P&lt;0.03</td>
<td>1.09</td>
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<tr>
<td>Out-of-home Placements</td>
<td>4.27</td>
<td>3.75</td>
<td>3.10</td>
<td>4.46</td>
<td>P&lt;0.01</td>
<td>1.22</td>
</tr>
<tr>
<td>Child CM Injuries</td>
<td>1.73</td>
<td>1.41</td>
<td>1.41</td>
<td>1.69</td>
<td>P&lt;0.02</td>
<td>1.14</td>
</tr>
</tbody>
</table>


- **Design:** Randomized Controlled Trial; Scaled-up statewide trial in Oklahoma
- **Participants:** Participants in 6 regions (2175). Randomized to receive SafeCare or Services as Usual (SAU)
- **Objective:** The study was designed to compare maltreatment recidivism (recurrence) between participants who were referred by CPS to home-based SafeCare services or to comparable home-based services, but without SafeCare modules (SAU)
- **Follow-up:** Approximately 6 years
Recidivism of child abuse occurred less frequently (26%) for those who received SafeCare home visiting compared to SAU.

The SAU group received home-based services comparable to SafeCare but without the SafeCare modules. It is likely the effect size would have been even larger if the SAU had been weaker or meant no services were provided.

According to the study findings, a home-based service system treating 1,000 cases could prevent 64-104 estimated first-year recurrences of abuse by adopting the SafeCare model.

Healthy Families Methodology


- **Design:** Randomized Controlled Trial; New York

- **Objective:** To evaluate the effects of Healthy Families on parenting behaviors in the first 2 years of life

- **Participants:** 1173 families at-risk for child abuse and neglect; Participants were assigned to HFNY or control group (received information and referrals to other services).
  - There was a subgroup, which included first-time mothers under the age of 19 who were enrolled in HFNY at 30 weeks of pregnancy
  - The remaining women were referred to as the “diverse subgroup”

- **Follow-up:** 2 years
## Healthy Family Outcomes

Mother’s abusive and neglectful parenting behaviors toward children by treatment group: Prevention subgroup

<table>
<thead>
<tr>
<th>Prevalence</th>
<th>Year 2</th>
<th></th>
<th></th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Control</td>
<td>HFNY</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>Confidence Interval</td>
<td>%</td>
<td>Confidence Interval</td>
</tr>
<tr>
<td>Minor Physical Aggression</td>
<td>70.02</td>
<td>57.8-60.3</td>
<td>51.04</td>
<td>38.6-63.4</td>
</tr>
<tr>
<td><em>Prevention Group</em></td>
<td>70.02</td>
<td>57.8-60.3</td>
<td>51.04</td>
<td>38.6-63.4</td>
</tr>
<tr>
<td>Psychological Aggression</td>
<td>81.08</td>
<td>69.3-89.1</td>
<td>73.92</td>
<td>61.1-83.7</td>
</tr>
<tr>
<td><em>Prevention Group</em></td>
<td>81.08</td>
<td>69.3-89.1</td>
<td>73.92</td>
<td>61.1-83.7</td>
</tr>
<tr>
<td>Harsh Parenting (past week)</td>
<td>61.93</td>
<td>48.7-73.6</td>
<td>40.95</td>
<td>29.2-53.8</td>
</tr>
<tr>
<td><em>Prevention Group</em></td>
<td>61.93</td>
<td>48.7-73.6</td>
<td>40.95</td>
<td>29.2-53.8</td>
</tr>
<tr>
<td>Substantiated Abuse or Neglect</td>
<td>7.42</td>
<td>3.3-15.9</td>
<td>3.36</td>
<td>1.1-10.2</td>
</tr>
<tr>
<td><em>Prevention Group</em></td>
<td>7.42</td>
<td>3.3-15.9</td>
<td>3.36</td>
<td>1.1-10.2</td>
</tr>
</tbody>
</table>

- At the child’s second year of life, participants (mothers) in HFNY reported significantly fewer acts of physical aggression % harsh parenting
- Lower levels of CA/N during first and second year of life but it was not statistically significant

**Nurturing Parenting Program Methodology**


- **Design:** Quasi-Experimental; Louisiana
- **Objective:** To examine the relationship between NPP dosage and child maltreatment
- **Participants:** 528 caregivers who attended the NPP in ten family resource centers across Louisiana's child welfare population between Oct. 2005 and April 2008. NPP was offered to all families with children under 6 with child abuse and/or neglect allegations
- **Follow-up:** 6 months and 2 years
NPP Outcomes

Home Visitors are in a unique position to prevent child abuse and neglect in the home, as they are in the home during critical developmental periods of the child.

- Home-visitors need to assess for safety of the environment of the client during pregnancy: Most dangerous time for IPV.

- When a young woman becomes pregnant before she’s ready to take care of a child, the risk factors for the entire family escalates. She may have a family background of low wages, welfare, or worse—an abusive pattern that, without intervention, she may be fated to repeat.

- “Terrible things can be prevented and good things can be made to happen with the involvement of home visitors with these families early in their lives.” Quote from David Olds, PhD, Founder of Nurse-Family Partnership.
Promoting Home Safety

- HV can identify hazardous objects in the home and improve the overall safety of the home environment.
- Demonstrate and teach safe behaviors including safe sleep, car seat safety.
- Pillows, blankets and stuffed animals should be removed from the crib to prevent babies from suffocating.
- Covers, pillows, bumper pads, positioning devices, soft mattresses and toys in the crib are associated with the risk of sudden infant death syndrome, a common concern among parents of infants.
- Immediate feedback opportunity to provide families critical guidance.
Breaking the Cycle of Abuse

- Physical, emotional abuse and neglect are often a cycle: many children grow up with parents who were mistreated themselves and don’t know how to parent any differently.

- If parents don’t know what’s appropriate discipline and what’s inappropriate, they might not identify their own parent’s parenting practices as inappropriate—May think ignoring a crying child or spanking an infant is normal “discipline”.

- Neglect is the most common type of child maltreatment such as putting/leaving a child in a dangerous situation, or not meeting the basic physical and emotional needs of a child.
Breaking the Cycle of Abuse

Victimized or Abused in Childhood

Aggression Turns Outward
- Abuser/Victimizer

Aggression Turns Inward
- Self Destruct
- Destroyed by Others Victim

Healing

Continue the Cycle of Abuse
One of the most important tips Home Visitors pass on to young parents is that if a baby is crying inconsolably, it’s OK to take a time out and emotionally regroup.

Mothers consider quieting and comforting the baby as her “job” — if they can’t, they feel there’s something wrong with them.

Important to tell Mom’s and Dad’s it’s OK to put the baby down in a safe place and walk away.

- Period of PURPLE Crying, and give them strategies for managing stressful periods when the baby just will not stop fussing.
Reduction of Abusive Head Trauma

- The Period of PURPLE Crying is an acronym that explains that crying is a normal part of every infant’s development from about 2 weeks of age until about 3 to 4 months of age.

- Teaching young moms and dads that babies are born to cry: That they may cry X many hours a day, it normalizes crying, so it can reduce stress.

- Home Visitors can minimize shaken baby syndrome (form of abusive head trauma and inflicted traumatic brain injury often resulting from violently shaking an infant).

Peak of Crying
UnExpected
Resists
Soothing
Pain-like Face
Long Lasting
Evening
The Importance of PLAY

- **PIVOT** (Victor Bernstein)
  - Use family stressor to transition parent to focus on infant’s development

- Focus on parental affect and infants’ response to affect

- Use cognitive-behavioral strategies to address negative mood/behavior

- Explore parents’ early childhood experience with parents

- Address psychological significance of child to parent

- Use moment-to-moment interactions to promote parental attunement

- Help parents find joy in interaction with infant!

Parent-Child Interaction

- Follow child’s lead
- Use interactive toys
- Use toys/objects in the home
- Engage in symbolic play
- Narrate play
- Introduce turn-taking
- Express positive emotions
- Identify teachable interactions
- Address developmental benefits
- Use self-expression/cultural activities

Home visitors act as advocates by making the topic of abuse and neglect a common discussion in home visitation.

“If we’re not educating and advocating about the prevalence of child abuse for the 0-3 population, then we have no chance at preventing it. People don’t make perfect decisions in the heat of the moment, but if they can have some education and awareness of child abuse, I think they’re more sensitive in their response, or are more prone to ask for help.” Texas Home Visitor
The Power of the Home Visitor

- Help teach parents appropriate developmental milestones of children, which in turn can limit unrealistic expectations of children that often can lead to child maltreatment (potty training, communication, etc.)
- Educate parents on proper feeding, mirroring, playtime to enhance healthy attachment reduce RAD
- Teach parents stress management and emotional refueling, self care.
- Help teach parents the importance of a stimulating home environment and Instructing parents on the importance of speaking to the baby to reduce cognitive delays and deficits decreasing neglect
- The home visitor cannot underestimate the power of role playing as a top teaching aid with the parent and the power of modeling behavior and interactions with the baby and family members, demonstrating self-care, organization, stress management and establish a trusting relationships.


