

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

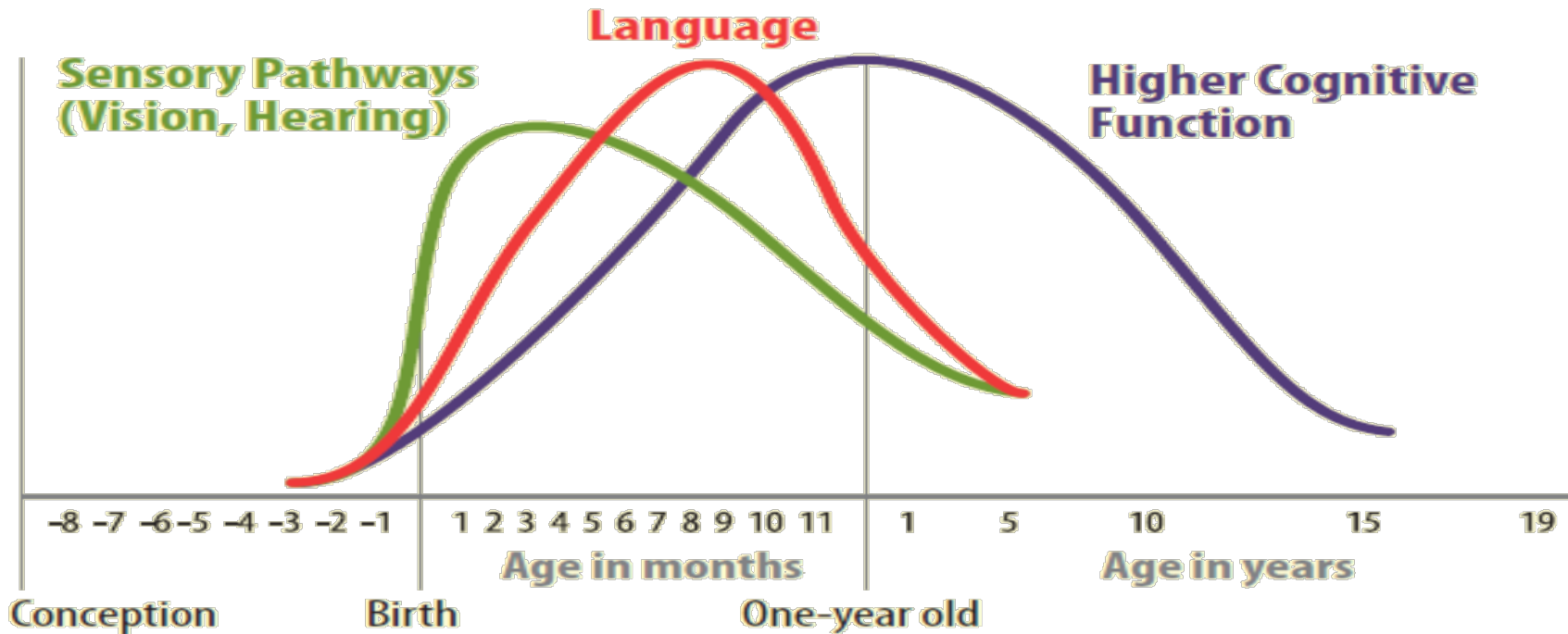
"Ecology becomes biology and together they drive development across the lifespan"

-Andrew Garner, M.D., Ph.D., FAAP

Garner, A. (2013). Translating Developmental Science into Healthy Lives: Realizing the Potential of Pediatrics [PowerPoint Slides].

Brain Development Milestones

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



Pew Center on the States Home Visitation Campaign. (2000). [image adaptation] Nelson, C.A. (2000). In Jack P. Shonkoff and Deborah A. Phillips (Eds.), *From Neurons to Neighborhoods: The Science of Early Childhood Development* (p. 188). Washington, DC: National Research Council and Institute of Medicine, National Academy Press.

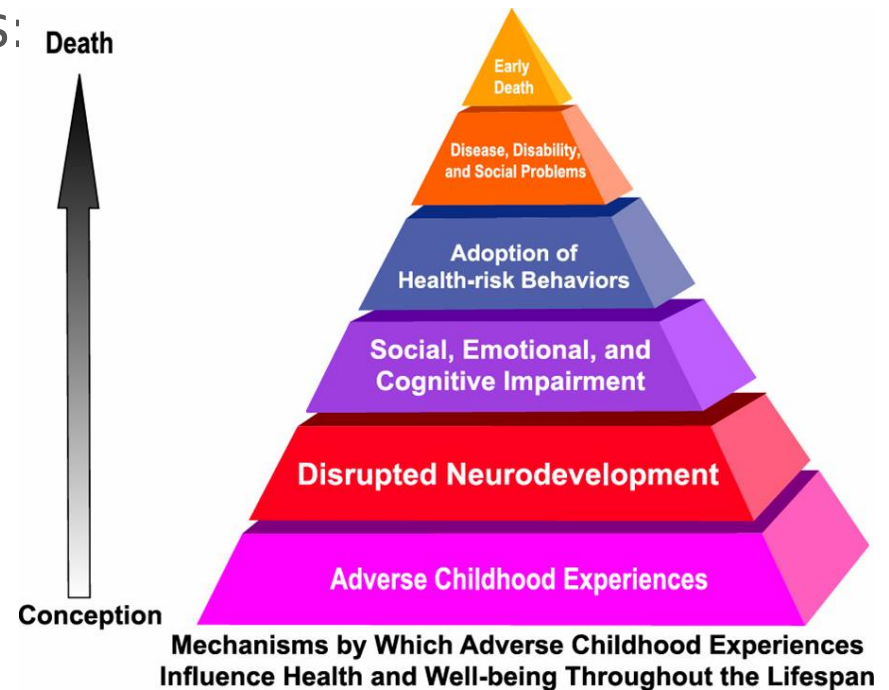
What is Toxic Stress?

“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)

Shonkoff, J., & Garner, A. (2012). The lifelong effects of early childhood adversity and toxic stress. *Pediatrics*, 129(1). 232-246.

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



Slide from Brenda Jones Harden. (2014). Home Moments: Home Visiting to Address Toxic Stress [PowerPoint Slides]. Retrieved from https://s3.amazonaws.com/v3-app_crowdc/assets/events/LlcoEjkC8i/activities/Brenda_Jones_HardinPPT.original.1390919299.pdf.

ACE Categories

	Women	Men	Total
• Abuse	(n=9,367)	(n=7,970)	(17,337)
• Emotional	13.1%	7.6%	10.6%
• Physical	27.0%	29.9%	28.3% 1:4!
• Sexual	24.7%	16.0%	20.7% ←
• Household Dysfunction			
• Mother Treated Violently	13.7%	11.5%	12.7%
• Household Substance Abuse	29.5%	23.8%	26.9% 1:4!
• Household Mental Illness	23.3%	14.8%	19.4% ←
• Parental Separation or Divorce	24.5%	21.8%	23.3% ←
• Incarcerated Household Member	5.2%	4.1%	4.7%
• Neglect*			
• Emotional	16.7%	12.4%	14.8%
• Physical	9.2%	10.7%	9.9%

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

Garner, A. (2013). Translating Developmental Science into Healthy Lives: Realizing the Potential of Pediatrics [PowerPoint Slides].

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

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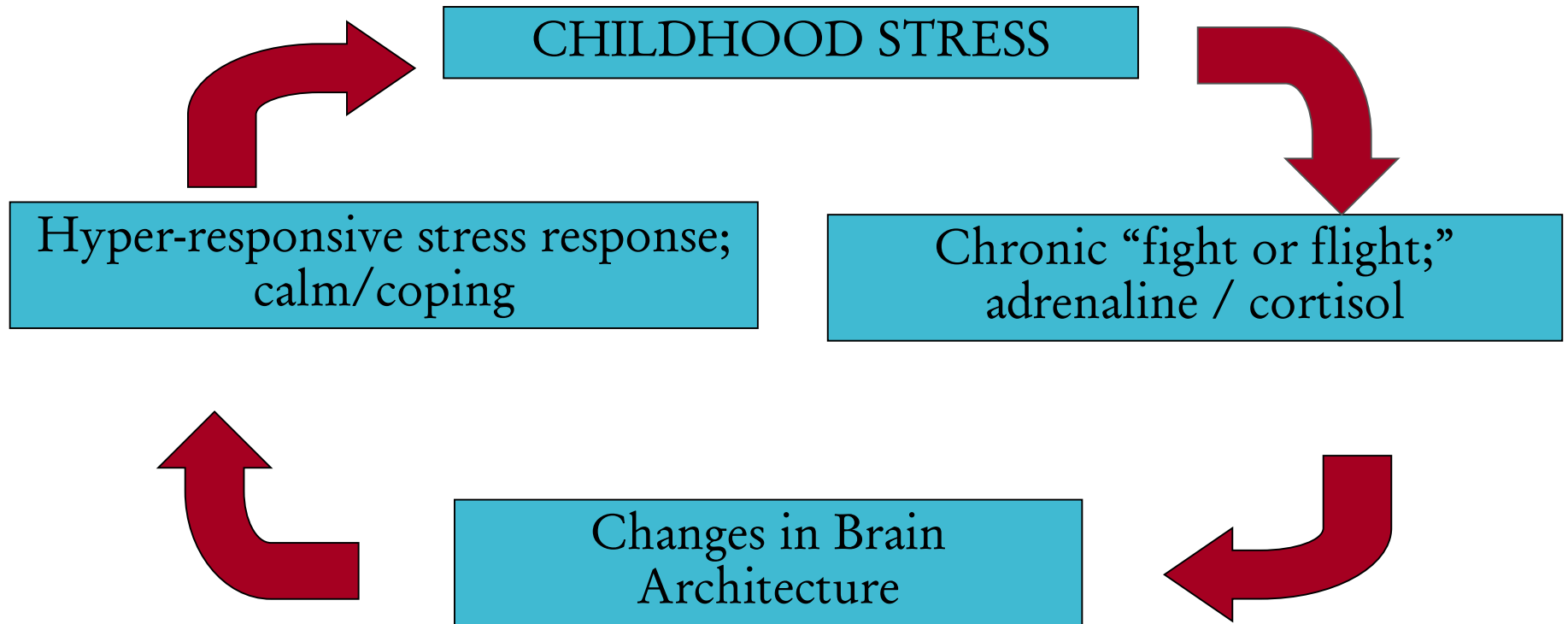
Defining Toxic Stress

➤ **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**)

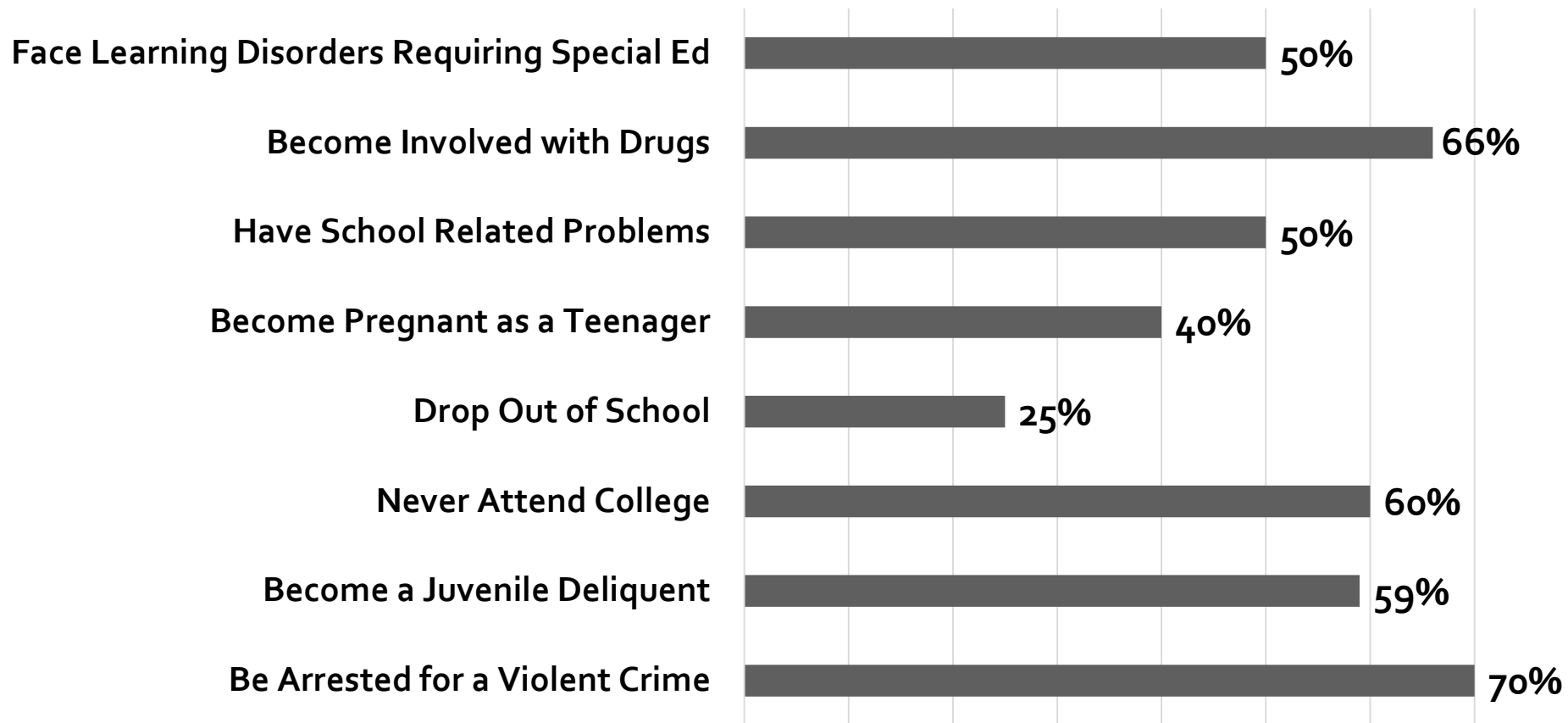
Garner, A. (2013). Translating Developmental Science into Healthy Lives: Realizing the Potential of Pediatrics [PowerPoint Slides].

Impact of Early Stress



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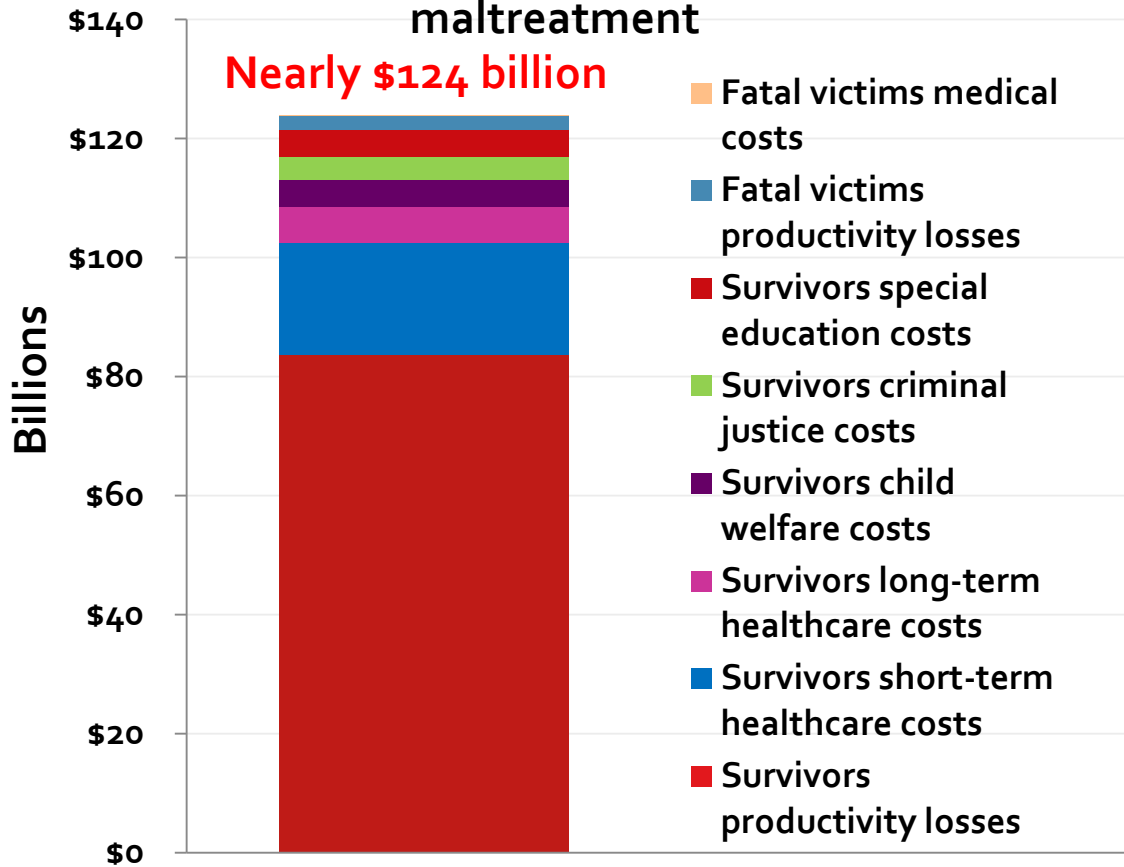
Outcomes of High-Risk Children: Impact of ACES



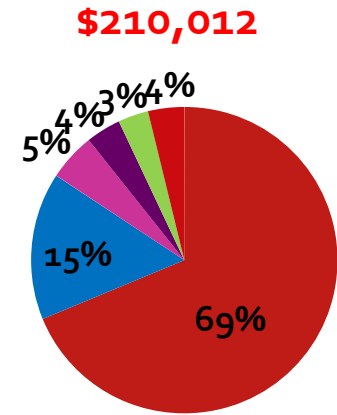
Barnett, W.S., & Masse, L.N. (2002).; Swan, N. (1998).; Campbell, F. A., et al. (2002).; Widom, C., & Maxfield, M. (2001); Reynolds, A., et al. (2001)

Costs of Doing Nothing

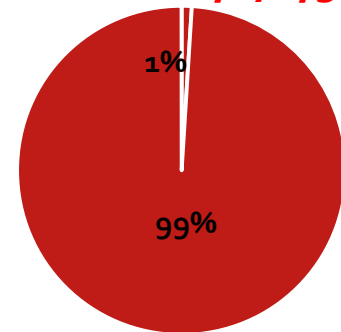
U.S. lifetime cost from one year of child maltreatment



Average lifetime cost per survivor:

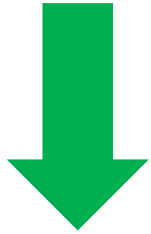


Average lifetime cost per fatal victim: **\$1,272,900**



Outcomes of Family Support Home Visiting

- **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



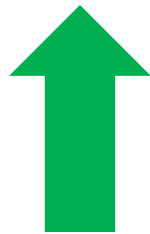
Months Mothers Employed, Education and Job Training, Rates of Living with Father, Spacing Between Child Births

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



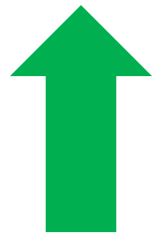
Father Involvement, Parenting Sensitivity and Interaction with Child, Parenting Knowledge, Stimulating Home Environment

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

Olds, D. L., Eckenrode, J., Henderson, C. R., Kitzman, H., Powers, J., Cole, R., . . . Luckey, D. (1997). Long-term effects of home visitation on maternal life course and child abuse and neglect. Fifteen-year follow-up of a randomized trial. *Journal of the American Medical Association*, 278(8), 637-643.

NFP Outcomes

Dependent Variables	Whole Sample			
	Treatment 1 and 2	Treatment 3	Treatment 4	Treatment 1 & 2 vs. 4 (95% CI)
Substantiated Reports of Child Abuse and Neglect	0.54	0.35	0.29	0.77* (0.34 to 1.19)

During the 15-year period after the birth of their first child, in contrast 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).

Dependent Variables	Low-SES Unmarried Sample			
	Treatment 1 and 2	Treatment 3	Treatment 4	Treatment 1 & 2 vs. 4 (95% CI)
Substantiated Reports of Child Abuse and Neglect	0.53	0.63	0.11	1.61* (0.87 to 2.35)

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

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

Olds, D. L., Eckenrode, J., Henderson, C. R., Kitzman, H., Powers, J., Cole, R., . . . Luckey, D. (1997). Long-term effects of home visitation on maternal life course and child abuse and neglect. Fifteen-year follow-up of a randomized trial. *Journal of the American Medical Association*, 278(8), 637-643.



Positive Parenting Program

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

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

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

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

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

Triple P Methodology

Prinz, R. J., Sanders, M. R., Shapiro, C. J., Whitaker, D. J., & Lutzker, J. R. (2009). Population-based prevention of child maltreatment: The U.S. Triple P system population trial. *Prevention Science, 10*(1), 1-12.

- **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

	Triple P Counties		Control Counties		Statistical Significance	Effect Size
	Pre-Intervention	Post-Intervention	Pre-Intervention	Post-Intervention		
Substantiated CM	10.86	11.74	11.12	15.06	P<0.03	1.09
Out-of-home Placements	4.27	3.75	3.10	4.46	P<0.01	1.22
Child CM Injuries	1.73	1.41	1.41	1.69	P<0.02	1.14

Prinz, R. J., Sanders, M. R., Shapiro, C. J., Whitaker, D. J., & Lutzker, J. R. (2009). Population-based prevention of child maltreatment: The U.S. Triple P system population trial. *Prevention Science, 10*(1), 1-12.



SafeCare Methodology

Chaffin, M., Hecht, D., Bard, D., Silovsky, J. F., & Beasley, W. H. (2012). A statewide trial of the SafeCare home-based services model with parents in child protective services. *Pediatrics*, 129(3), 509-515.

- **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



SafeCare Outcomes



- 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 would have 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.

Chaffin, M., Hecht, D., Bard, D., Silovsky, J. F., & Beasley, W. H. (2012). A statewide trial of the SafeCare home-based services model with parents in child protective services. *Pediatrics*, 129(3), 509-515. doi: 10.1542/peds.2011-1840



Healthy Families Methodology

DuMont, K., Mitchell-Herzfeld, S., Greene, R., Lee, E., Lowenfels, A., Rodriguez, M., & Dorabawila, V. (2008). Healthy Families New York (HFNY) randomized trial: Effects on early child abuse and neglect. *Child Abuse & Neglect*, 32(3), 295-315.

- **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

Prevalence	Year 2				P value
	Control		HFNY		
	%	Confidence Interval	%	Confidence Interval	
Minor Physical Aggression <i>Prevention Group</i>	70.02	57.8-63.4	51.04	38.6-63.4	0.02
Psychological Aggression <i>Prevention Group</i>	81.08	69.3-89.1	73.92	61.1-83.7	ns
Harsh Parenting (past week) <i>Prevention Group</i>	61.93	48.7-73.6	40.95	29.2-53.8	0.02
Substantiated Abuse or Neglect <i>Prevention Group</i>	7.42	3.3-15.9	3.36	1.1-10.2	ns

- 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

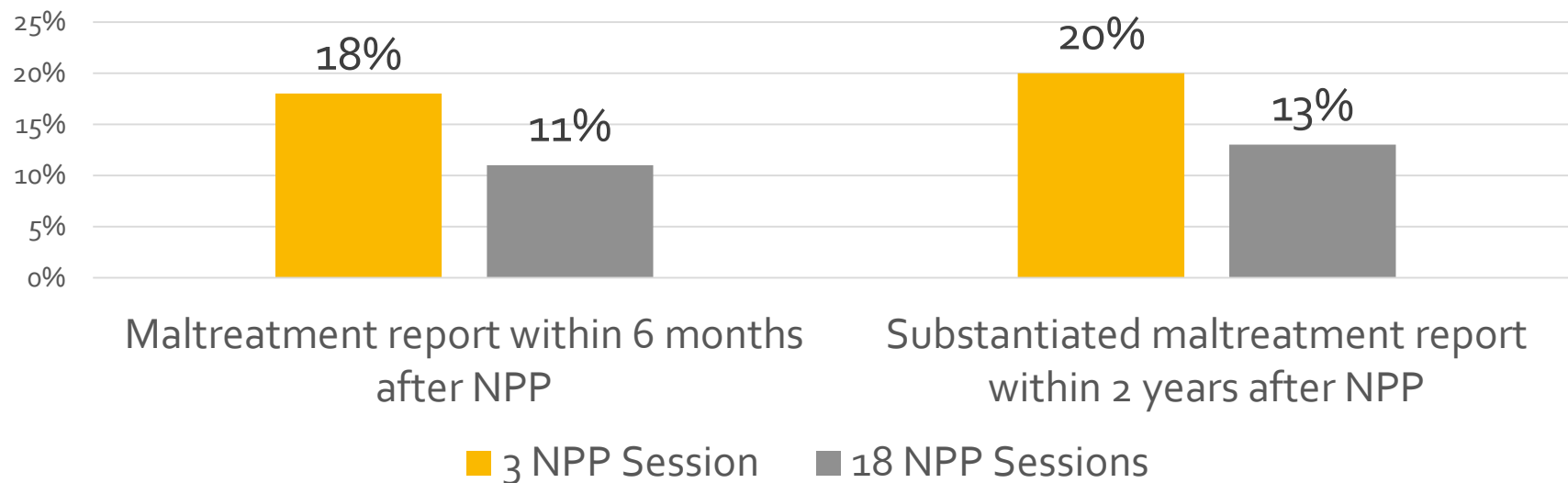
Maher, E. J., Marcynyszyn, L. A., Corwin, T. W. & Hodnett, R. (2011). Dosage matters: The relationship between participation in the Nurturing Parenting Program for infants, toddlers, and preschoolers and subsequent child maltreatment. *Children and Youth Services Review*, 33, 1426-1434.

- **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

Likelihood of Child Maltreatment at Two Time Periods after NPP Participation



Maher, E. J., Marcynyszyn, L. A., Corwin, T. W. & Hodnett, R. (2011). Dosage matters: The relationship between participation in the Nurturing Parenting Program for infants, toddlers, and preschoolers and subsequent child maltreatment. *Children and Youth Services Review*, 33, 1426-1434.

Position of Home Visitors

- 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.*



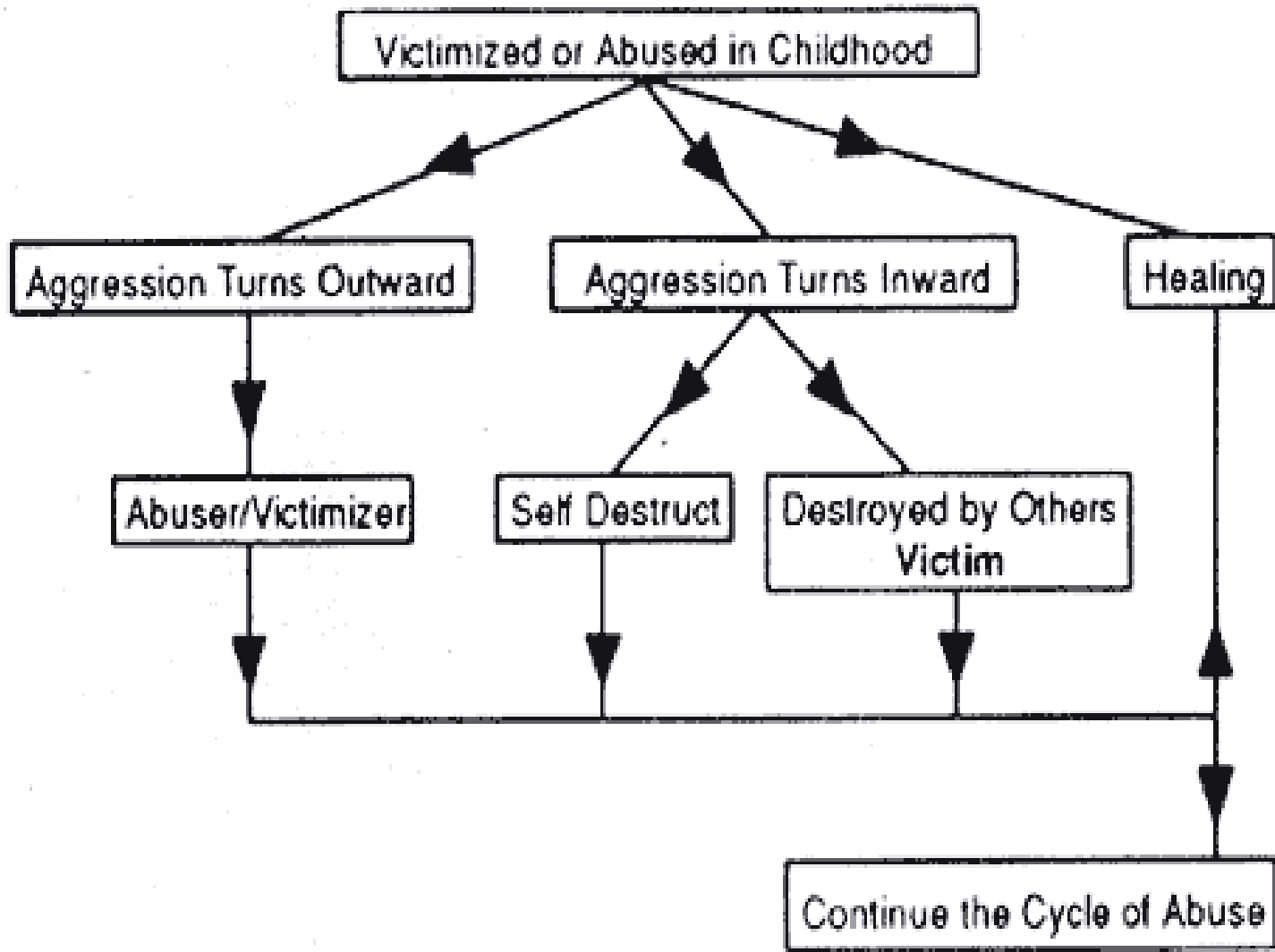
Promoting Home Safety

- 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



Reducing Physical 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.

Peak of Crying
Unexpected
Resists
Soothing
Pain-like Face
Long Lasting
Evening

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
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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!

Slide from Brenda Jones Harden. (2014). Home Moments: Home Visiting to Address Toxic Stress [PowerPoint Slides]. Retrieved from https://s3.amazonaws.com/v3-app-crowdc/assets/events/LlcoEjkC8i/activities/Brenda_Jones_HardinPPT.original.1390919299.pdf.

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



Slide from Brenda Jones Harden. (2014). Home Moments: Home Visiting to Address Toxic Stress [PowerPoint Slides]. Retrieved from https://s3.amazonaws.com/v3-app_crowdc/assets/events/LlcoEjkC8i/activities/Brenda_Jones_HardinPPT.original.1390919299.pdf.

Power to Prevent

- **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.

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