





Addressing Toxic Stress In Young Children In Rhode Island: Children's Cabinet

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Objectives

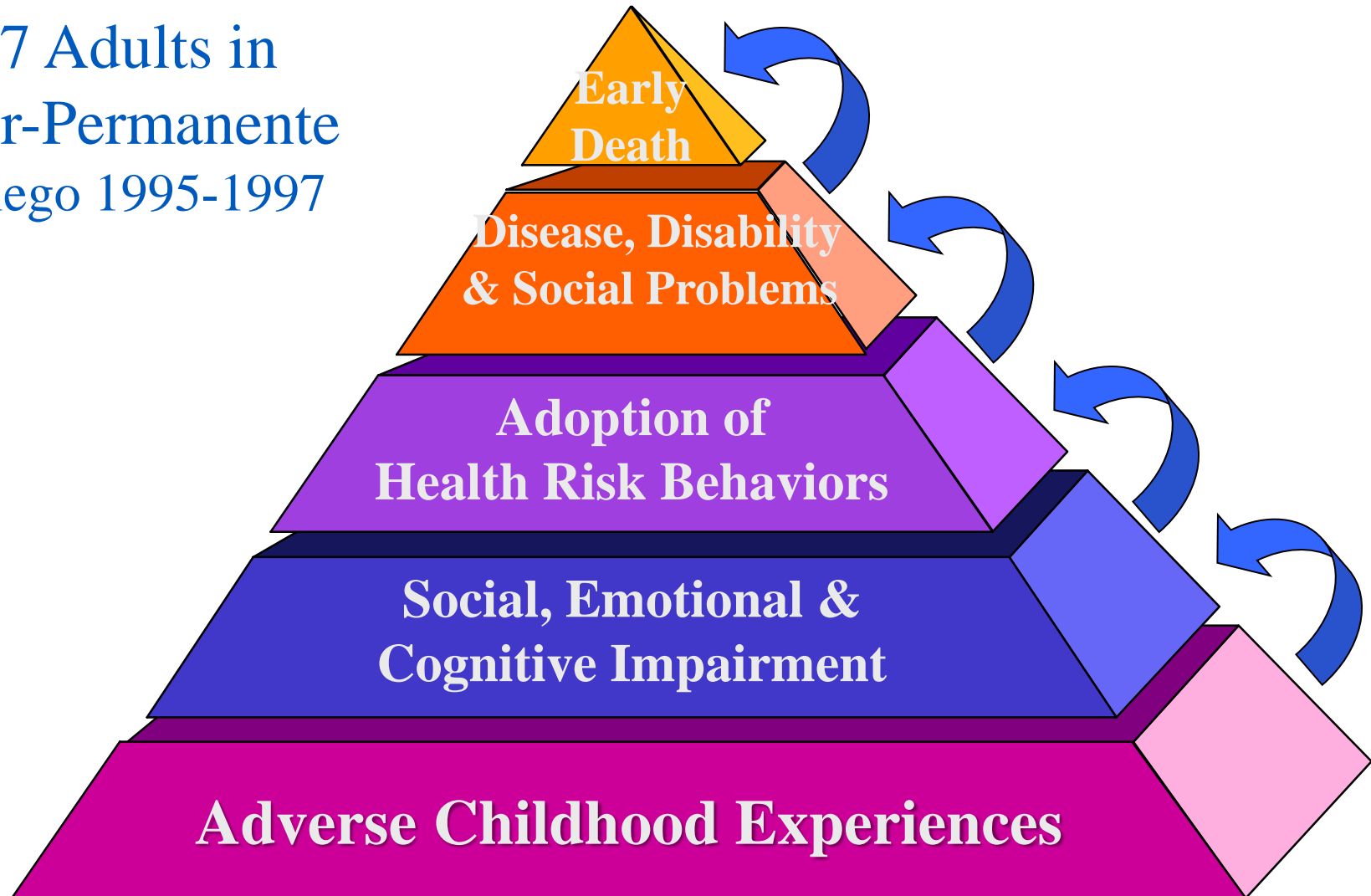


- Review of terms and concepts: ACEs, toxic stress, stress physiology
- Overview of Rhode Island Toxic Stress Project
- Vision for a public health response to toxic stress in Rhode Island

Adverse Childhood Experiences: ACE Model

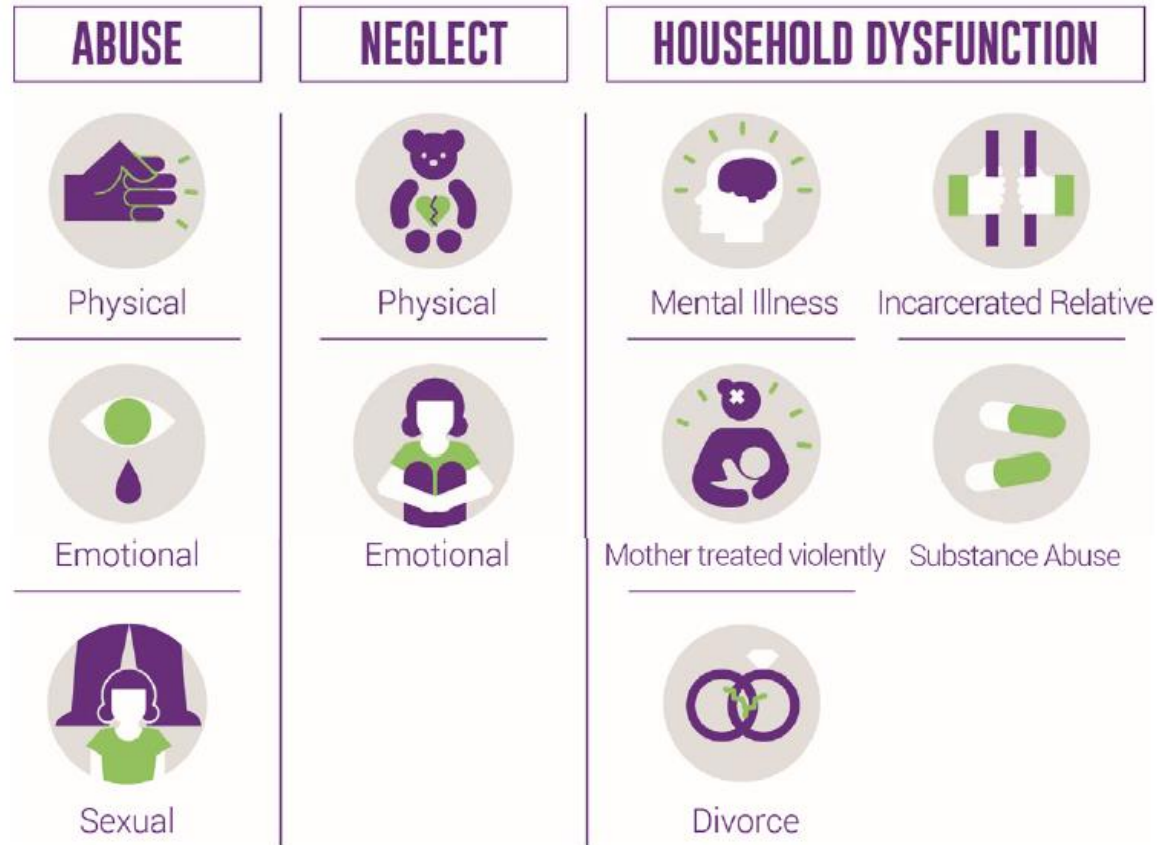


17,337 Adults in
Kaiser-Permanente
San Diego 1995-1997



10 Classic ACEs

The three types of ACEs include



ACEs in Rhode Island Children



≥ 1 Adverse Childhood Experience	48 %
≥ 2 Adverse Childhood Experiences	23 %
Socioeconomic Hardship	29 %
Parental Separation/Divorce	19 %
Household Drug or Alcohol Problem	12 %
Household Mental Illness	11 %
Victim/Witness of Neighborhood Violence	9 %
Witness Domestic Violence	7 %
Parental Incarceration	5 %
Experienced Racial Prejudice	3 %
Death of a Parent	3 %

Harvard Center for the Developing Child Model of Stress



Positive Stress	Tolerable Stress	Toxic Stress
<ul style="list-style-type: none">• Normal and essential part of healthy development• Brief increases in heart rate and blood pressure• Mild elevations in hormonal levels• Example: tough test at school. Playoff game.	<ul style="list-style-type: none">• Body's alert systems activated to a greater degree• Activation is time-limited and buffered by caring adult relationships• Brain and organs recover• Example: death of a loved one, divorce, natural disaster	<ul style="list-style-type: none">• Occurs with strong, frequent or prolonged adversity.• Disrupts brain architecture and other organ systems.• Increased risk of stress-related disease and cognitive impairment.• Example: abuse, neglect, caregiver substance abuse

Intense, prolong, repeated, unaddressed 

Social-Emotional buffering, Parental Resilience, Early Detection, Effective Intervention 



Examples of Stress

- Giving up a toy
- Getting an immunization
- First day at preschool
- Death in family
- Contentious divorce
- Natural disaster
- Terrorism
- Child abuse or neglect
- Exposure to violence
- Parent mental illness/substance abuse
- Cumulative burden of chronic financial hardship

Positive Stress

- A mild/normative degree of adversity or threat
- Caring and responsive adult helps child cope
- Brief increase in heart rate, mild stress hormone elevation
- Conquering => healthy social-emotional development

2012 AAP Policy Statement on Toxic Stress



Tolerable Stress

- Greater degree of adversity or threat
- Serious, more intense stress response
- Tolerable - only if protective, caring adult relationships are available to facilitate coping

2012 AAP Policy on Toxic Stress





Toxic Stress – definition

Toxic stress occurs when individuals have adverse events or exposures that are uncontrollable, unmanageable, and/or unmediated by caregiver/community supports, resulting in biological/psychological changes that may reduce the opportunity for healthy learning and development.

Toxic Stress

- Serious, prolonged, or frequent adversity
- Chronic activation of the body's stress system
- Prolonged because of lack of protective, supportive adult relationships
- Enduring changes in brain, immune system, epigenetic processes, behavior, and emotions





Individual Response

- Tolerable and toxic stress can result from the same examples/experiences
 - death in the family can become toxic
 - exposure to violence can become tolerable
- It depends, in part, on the intensity/repetition of the experience and the **supportive** (or non-supportive) relationships

Stress Response Physiology



Continuous activation of the stress hormone response is the basis for the physical and behavioral symptoms of toxic stress

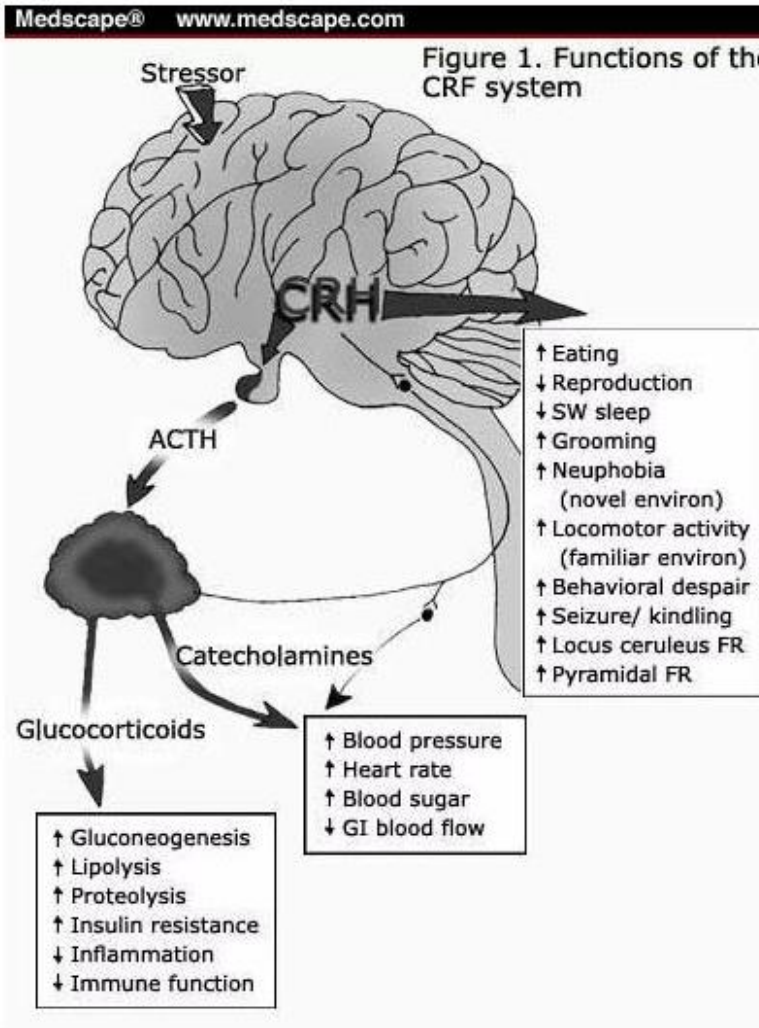
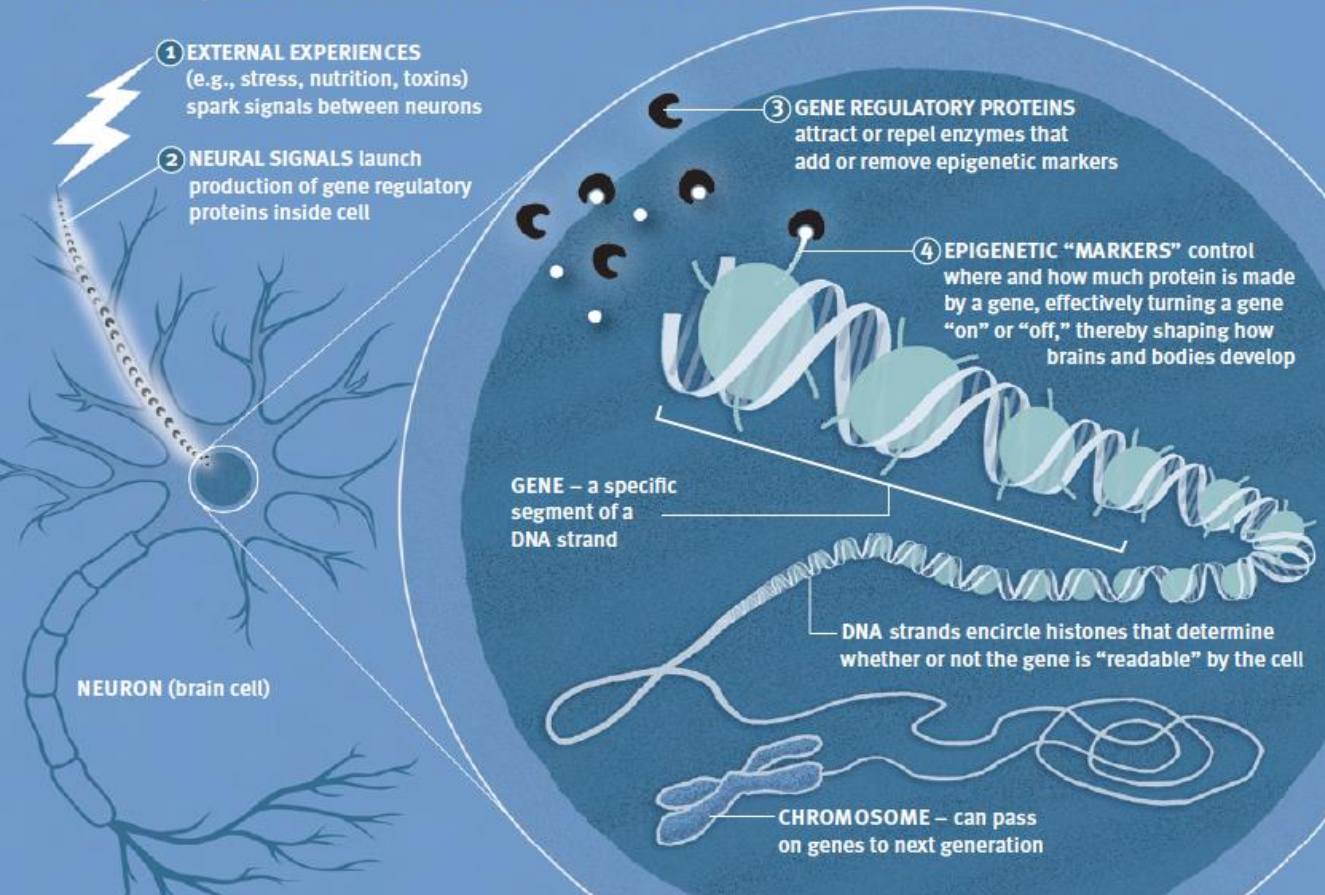


Figure 1. Functions of the CRF system.

<http://img.medscape.com/fullsize/migrated/editorial/clinupdates/2000/142/tu03.fig1.jpg>

Toxic Stress Impacts

How Early Experiences Alter Gene Expression and Shape Development



Epigenetics

Continuous activation of the stress hormone response can also cause to changes to brain structure:

- Cell protein changes
- DNA gene expression changes

Responses to Trauma or Toxic Stress

Table 3. Child's Response to Trauma: Development and Learning

AGE	EFFECT ON WORKING MEMORY	EFFECT ON INHIBITORY CONTROL	EFFECT ON COGNITIVE FLEXIBILITY
Infant / toddler / pre-schooler	Difficulty acquiring developmental milestones	<ul style="list-style-type: none"> • Frequent severe tantrums • Aggressive with other children 	<ul style="list-style-type: none"> • Easily frustrated • Difficulty with transitions
School-aged child	<ul style="list-style-type: none"> • Difficulty with school skill acquisition • Losing details can lead to confabulation, viewed by others as lying 	Frequently in trouble at school and with peers for fighting and disrupting	<ul style="list-style-type: none"> • Organizational difficulties • Can look like learning problems or ADHD
Adolescent	<ul style="list-style-type: none"> • Difficulty keeping up with material as academics advance • Trouble keeping school work and home life organized • Confabulation increasingly interpreted by others as integrity issue 	<ul style="list-style-type: none"> • Impulsive actions which can threaten health and well-being • Actions can lead to involvement with law enforcement and increasingly serious consequences 	Difficulty assuming tasks of young adulthood which require rapid interpretation of information: eg, driving, functioning in workforce

Rhode Island Toxic Stress Initiative



- In 2013, RI DOH received a grant from the Maternal and Child Health Bureau
- \$140,000/year for 3 years
- Develop a system to respond to toxic stress/trauma in children birth to three years of age

Objectives



1. Enhance systems of recognition, response, and intervention to improve outcomes for children, birth to three years of age, who experience toxic stress and/or trauma
2. Support a state/community infrastructure as a mechanism for aligning policies and programs to ensure that Rhode Island families who experience toxic stress can access services to mitigate its impact and support them to reach their full potential

Project Team



- Professional leaders in
 - Early childhood systems building
 - Primary care
 - Mental and behavioral health
 - Family visiting
 - Early care and education
 - Healthy environments
 - Public health
 - Research and evaluation
 - Consumer perspective
- State Agency Partners: BHDDH, DCYF, DHS, EOHHS, RIDE

Scope of Work



- Define toxic stress
- Identify or develop a screening tool to identify risk for toxic stress
- Develop training to support primary care and home visiting professionals to effectively screen for and address toxic stress
- Identify, implement, and evaluate effective interventions to address the factors that can lead to toxic stress

Prevention/Intervention



Prevention

- Anticipatory guidance around positive parenting and violence exposure reduction

Targeted Intervention

- Family Visiting Programs
- Parenting programs
- Early Intervention

Treatment

- Evidence-based trauma treatment approaches
 - Parent Child Interaction Therapy (PCIT)
 - Trauma-based Cognitive Behavioral Therapy

Outcomes



Short Term

- Increase awareness and understanding of toxic stress
- Train primary care providers and family visitors to screen for toxic stress
- Pilot behavioral health consultation in primary care and family visiting programs to address toxic stress

Outcomes



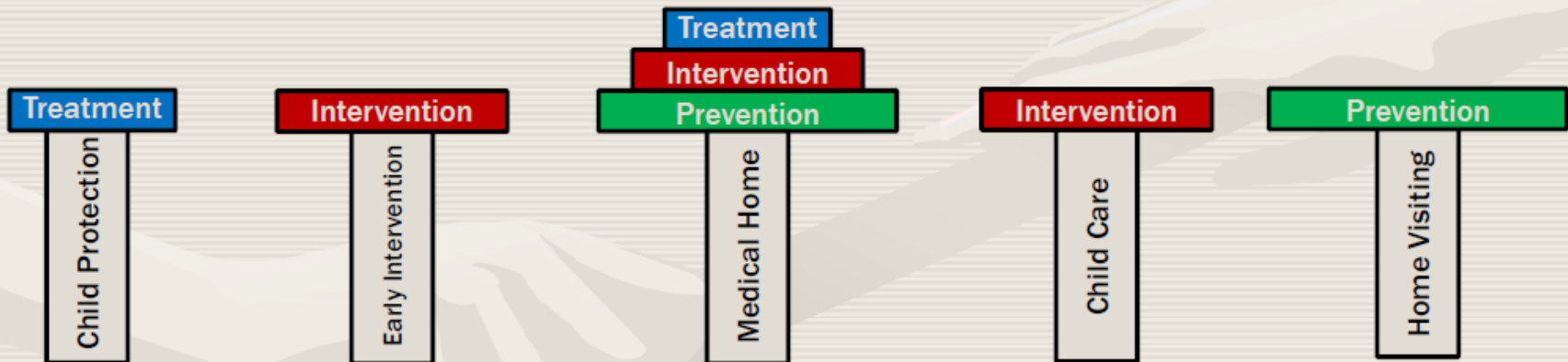
Long Term

- Trauma-informed practices used by all programs serving children and families in Rhode Island
- Increased capacity of evidence-based interventions for those experiencing, or at risk of experiencing, toxic stress
- State agencies have a coordinated approach to mitigating toxic stress that impacts young children and their families

Public Health Approach



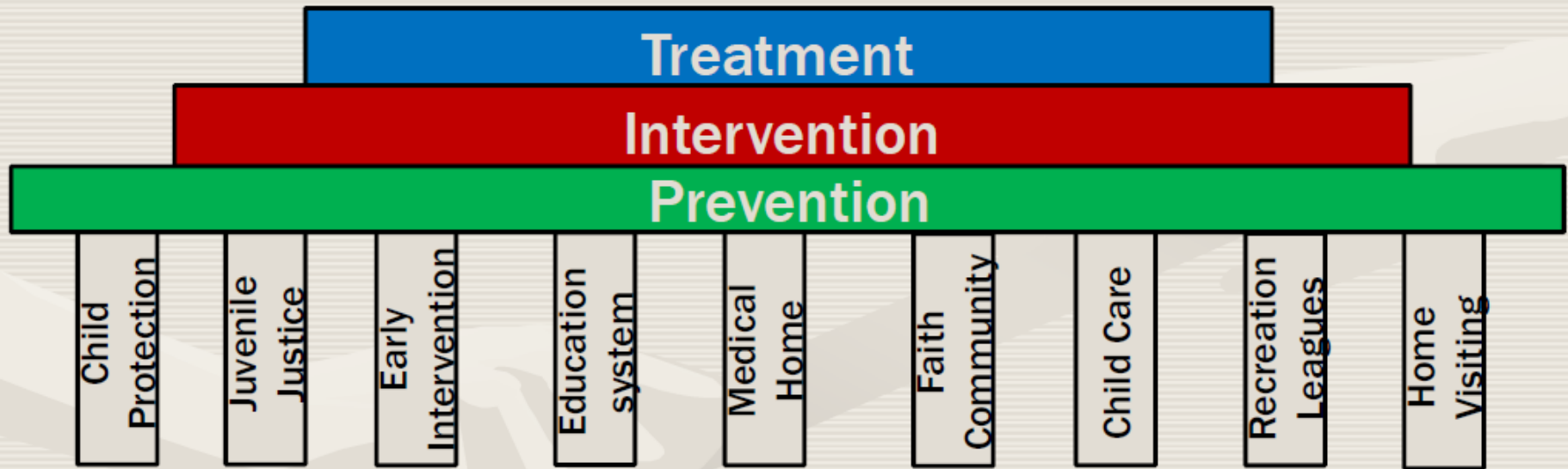
From Individual Pillars ...



Public Health Approach



... to a Network of Pillings!





Next Steps

- Continue work to increase awareness and understanding of toxic stress
- Determine the capacity of Rhode Island to support families who experience toxic stress with existing programs
- Recommend new strategies to address toxic stress if needed



Next Steps

- Implement training for primary care providers and family visitors to support families who experience toxic stress
- Implement a statewide workgroup to address toxic stress in Rhode Island

Conclusion



Mitigating the impact of toxic stress and improving outcomes for families requires:

- Family-centered, multi-generation approach
- Accessible community-based services
- Multi-agency collaboration
- Integrated systems of referral and response

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