

# Visualizing a Collaborative Strategy To Reduce Toxic Stress in Rhode Island

A Work In Progress

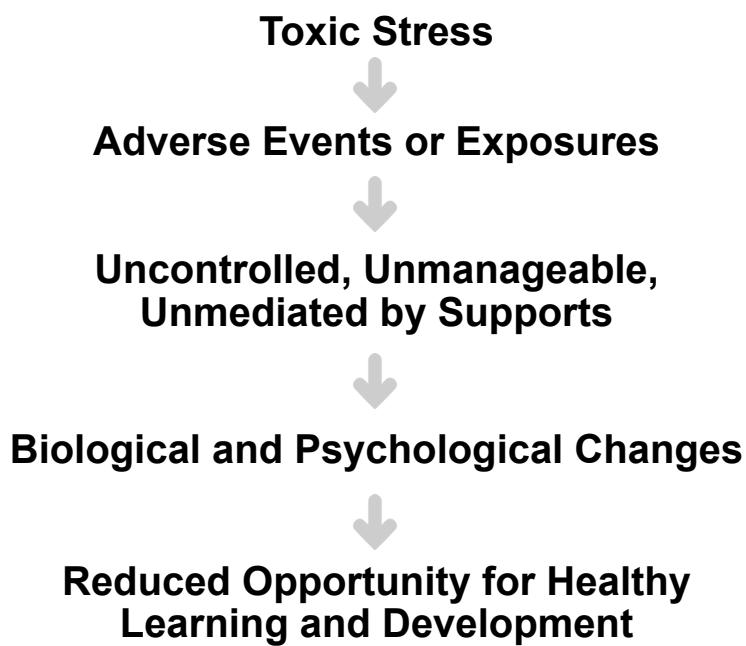
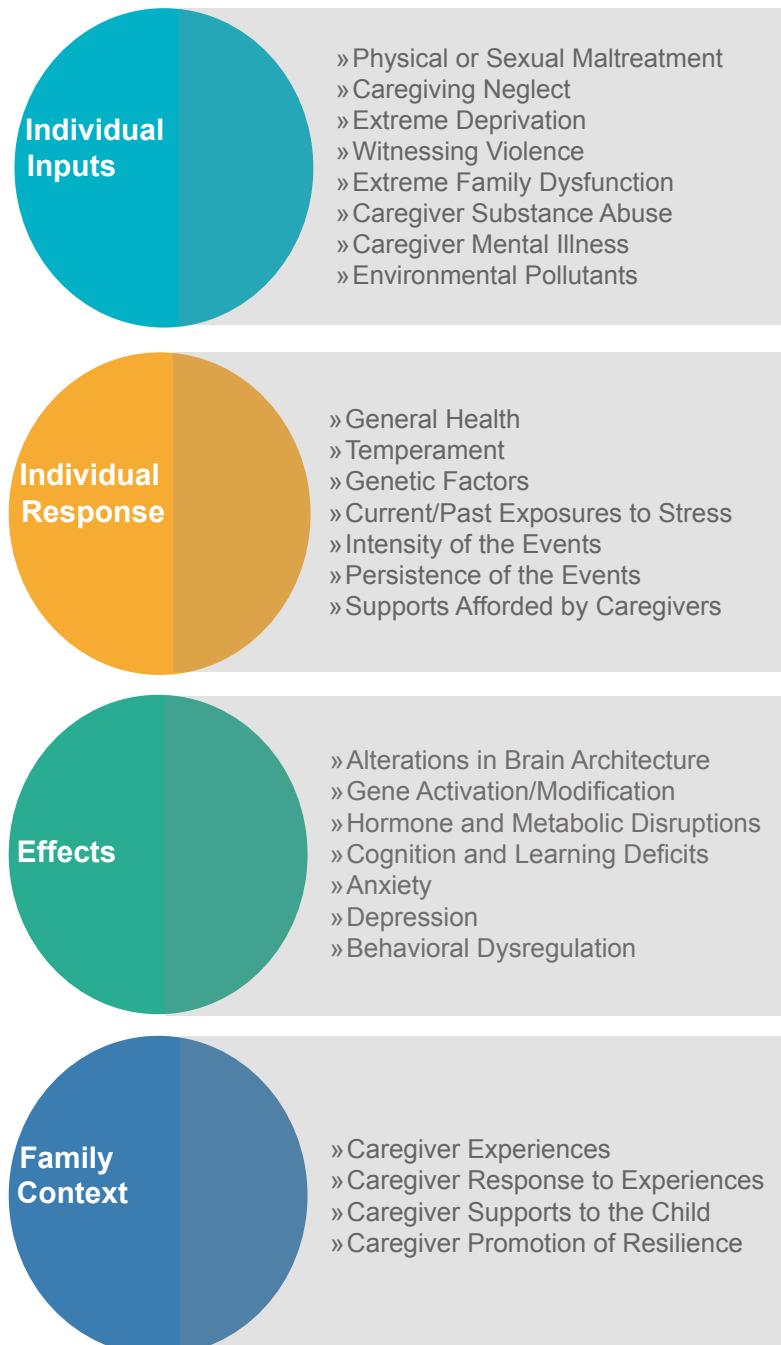
**Stress** is a part of everyday life, and most of us do not have long-lasting problems adjusting to stress. To cope with everyday events, children invoke biological, psychological, social, and/or physical-action responses.

In the face of adverse or traumatic events, a child's mobilized responses are more likely to be ineffective, resulting in the stress response remaining active. Such prolonged activation increases the potential for enduring changes in physiologic and neurologic systems

When such enduring changes compromise children's adaptation, we refer to this long-term series of events as toxic stress

Source: Rhode Island Department of Health

## Factors Associated with Toxic Stress:



### Read More About Toxic Stress:

<http://rikidscount.org/IssueAreas/EarlyLearningandDevelopment/ToxicStress.aspx>  
<https://docs.google.com/viewer?url=http%3A%2F%2Fwww.health.ri.gov%2Fpublications%2Fpresentations%2F2015Toxic-Stress.pdf>  
<http://newsletter.convergenceri.com/stories/The-high-cost-of-toxic-stress-in-children,1225>



# Data: Rhode Island KIDS COUNT

Founded in 1994, Rhode Island KIDS COUNT works to improve the health, safety, education, economic security, and development of Rhode Island's children. Published annually since 1995, The Rhode Island KIDS COUNT Factbook is the primary publication of Rhode Island KIDS COUNT.

The following indicators from The 2015 Rhode Island KIDS COUNT Factbook tracks progress on factors directly related to toxic stress:

- » Infants Born at Highest Risk
- » Child Abuse and Neglect
- » Children of Incarcerated Parents
- » Children Witnessing Domestic Violence
- » Children in Poverty
- » Racial and Ethnic Disparities
- » Evidence-Based Family Home Visiting

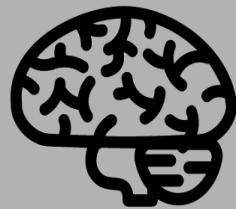
## Find out more at:

<http://rikidscount.org/IssueAreas/EarlyLearningandDevelopment/ToxicStress.aspx>

<http://www.rikidscount.org/>

Infants, Toddlers, and their Families in Rhode Island, June 2015

Child Poverty in Rhode Island, January 2015



## Research Efforts

Many researchers from disparate fields seek to understand the causes and effects of toxic stress. The work of Kevin Bath, Ph.D, an Assistant Professor in the Department of Cognitive, Linguistic, and Psychological Sciences at Brown University, focuses on understanding emotional development, and the mechanisms through which early life adversity alters brain development to increase susceptibility to later emotional dysfunction. Specifically, Professor Bath is interested in the role of neurotrophins in brain organization and the impact of early life psychological stress or exposure to prescription drugs on neurodevelopmental outcomes.

"Our current work has identified novel consequences of early life stress on brain development," claims Bath, "specifically, that some circuits in the brain show accelerated maturation in response to stress."

Many other research efforts focus on the effects of environmental exposures and their role in the development and maintenance of toxic stress related outcomes. For instance, Anna Aizer has been examining the disproportionate exposure to environmental toxins, particularly lead, in African American populations and the effects of these exposures on academic outcomes.

## Find out more at:

Inequality in Lead Exposure and the Black-White Test Score Gap, August 2015

<http://newsletter.convergenceri.com/stories/The-high-cost-of-toxic-stress-in-children,1225>

<http://newsletter.convergenceri.com/stories/Research-into-early-life-stress-on-brain-development-may-change-equation,1729>

<http://newsletter.convergenceri.com/stories/Programming-brain-cells-to-turn-their-own-light-on-and-off-like-a-firefly,1684>



# Neighborhoods: Health Equity Zones

Health comes from where you live, work, play and pray, and the access you have to healthy resources is often determined by your zip code.

Access to quality clinical health care represents only 20 percent of what determines health and well-being, according to the Centers for Disease Control and Prevention. The other 80 percent revolves around factors of the environment, health behavior and the social and economic determinants that occur outside a doctor's office.

The Rhode Island Department of Health, in partnership with communities across the state, has created 11 local health equity zones to support innovative approaches to preventing chronic disease, improving birth outcomes, and improving the social and environmental conditions of our neighborhoods.

The eleven HEZ partners include municipal leaders, residents, businesses, transportation and community planners, law enforcement, education systems and health systems, among others. These groups will look at the factors that drive poor health outcomes, and create action plans based on strategies that have been shown to be successful.

## Find out more at:

[www.health.ri.gov/projects/healthequityzones](http://www.health.ri.gov/projects/healthequityzones)

A New Way to Invigorate South County's Health Explained in 7 Easy Points, October 2015

<http://newsletter.convergenceri.com/stories/An-action-plan-to-redefine-health-equity-and-community-in-Rhode-Island,1343>

<http://newsletter.convergenceri.com/stories/A-tale-of-two-conferences-on-the-cusp-of-changing-the-conversation-on-health,1510>



# Interventions: Home Visiting

The Rhode Island Department of Health (HEALTH) offers family visiting services to expecting parents and those with children under age three. Family Visitors are trained nurses, social workers, community health workers, and other professionals. They are trained to connect with families in culturally sensitive ways, and to help families identify and achieve their goals. Visits take place wherever the family feels most comfortable: their home, a community center, at a WIC or agency office, etc...

One aim of family visiting is to ameliorate the effects of many factors related to toxic stress. In this way, Family Visitors aim to:

- » Increase positive parenting practices
- » Reduce child maltreatment
- » Improve family economic self-sufficiency
- » Improve maternal and child health
- » Reduce juvenile delinquency, family violence, and crime

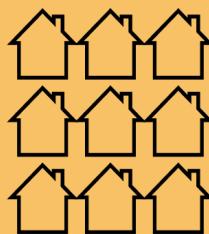
## Find out more at:

<http://www.health.ri.gov/familyvisiting/>

[http://health.ri.gov/programs/detail.php?pgm\\_id=176/](http://health.ri.gov/programs/detail.php?pgm_id=176/)

[http://health.ri.gov/programs/detail.php?pgm\\_id=169/](http://health.ri.gov/programs/detail.php?pgm_id=169/)

[http://health.ri.gov/programs/detail.php?pgm\\_id=13/](http://health.ri.gov/programs/detail.php?pgm_id=13/)



# Healthy Housing

Housing is a critical determinant of health for children and families. According to the Green and Healthy Homes Initiative, a “green and healthy home” is dry, clean, ventilated, free from pests and contaminants, well-maintained, energy efficient and safe.

However, many Rhode Island families suffer from unhealthy homes; each year, one in twelve Rhode Island children under age 6 have lead poisoning; the rate is one in five in Providence. Rhode Island has a high prevalence (81%) of renter-occupied homes built before 1978 (when lead paint was banned) and historically poor maintenance of its aging housing stock.



Source: Green and Healthy Homes Initiative

The majority of exposures occur in low-income properties where chipping paint and lead dust hazards are prevalent. Rhode Island's distressed housing stock also contributes to higher energy bills, over 4,600 emergency room visits each year from household-related injuries (half in children under age six) and more than 2,000 asthma related emergency room visits.

Families burdened by high energy, medical, and maintenance costs — generated by fixable problems with their homes — often do not have the resources they need to properly maintain the health, safety and energy efficiency of their home. Without the ability to abate these hazards and make necessary repairs, families are caught in a cycle of illness and economic hardships that limit their ability to meaningfully contribute to the well-being and advancement of their families and often results in further housing blight.

When families are living in homes with health hazards such as mold, radon, and extreme temperature, where factors such as poverty, environmental contamination, and poor design combine to cause or exacerbate diseases such as asthma, allostatic load (“toxic stress”) is increased and leads to disparities in health in many ways.

Many services exist to help homeowners and residents achieve green and healthy homes, although resources can be confusing and intermittently available. However, some of the state's best resources may be found below.

Program	Resources	Find out more at:
Childhood Lead Action Project	Education and advocacy	<a href="http://www.leadsafekids.org">http://www.leadsafekids.org</a>
Green & Healthy Homes Initiative	Free comprehensive home repair interventions to improve home health and energy efficiency	<a href="http://www.ghhi.org">http://www.ghhi.org</a>
City of Providence Lead Safe Program	Financial assistance to make homes lead-safe	<a href="http://www.providenceri.com/planning/lead-safe-providence-program">http://www.providenceri.com/planning/lead-safe-providence-program</a>
Rhode Island's Regional Community Assistance Partnerships	Weatherization Assistance Program (WAP) & Low Income Home Energy Assistance Program (LIHEAP)	<a href="http://www.ricommunityaction.org/agencies.asp">http://www.ricommunityaction.org/agencies.asp</a>