

Adversity & Toxic Stress: What Does It Mean to Your Patients?

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LEARNING OBJECTIVES

- Explore frameworks that connect population health principles, clinical care and the social determinants of health
- Discuss the concept of ACEs, toxic stress and long term impact of ACEs to adult health
- Discuss how to incorporate ACE/Toxic Stress informed approach to promote resilience and better health outcomes... *in a practical way*

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OVERVIEW

- Frameworks
- ACEs/Toxic Stress/Epigenetics
- Population Health and Clinical Response
- Public Health Approach using Community Resources to Supplement Clinical Support
 - Nurse Family Partnership
 - Triple P
- Practical Steps and Interventions

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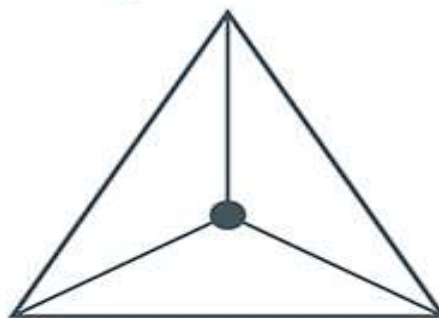


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INSTITUTE FOR HEALTHCARE IMPROVEMENT TRIPLE CARE

Population Health



Experience of Care

Per Capita Cost

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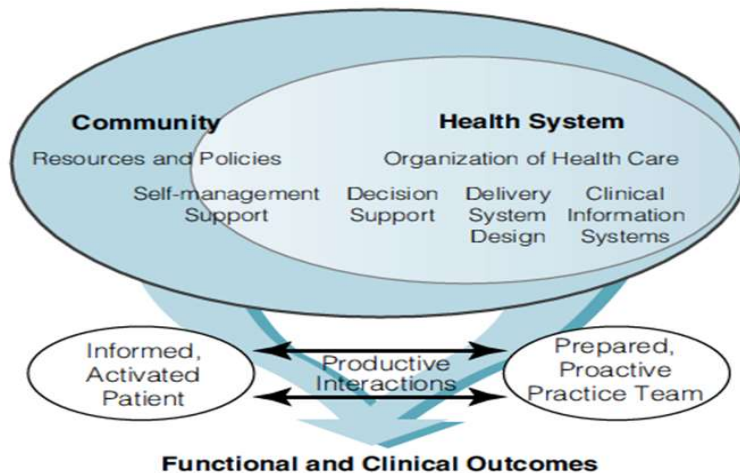


Institute for Healthcare Improvement. IHI Triple Aim Initiative. 2017.
<http://www.ihl.org/Engage/Initiatives/TripleAim/Pages/default.aspx>

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MODEL FOR IMPROVEMENT OF CHRONIC ILLNESS CARE

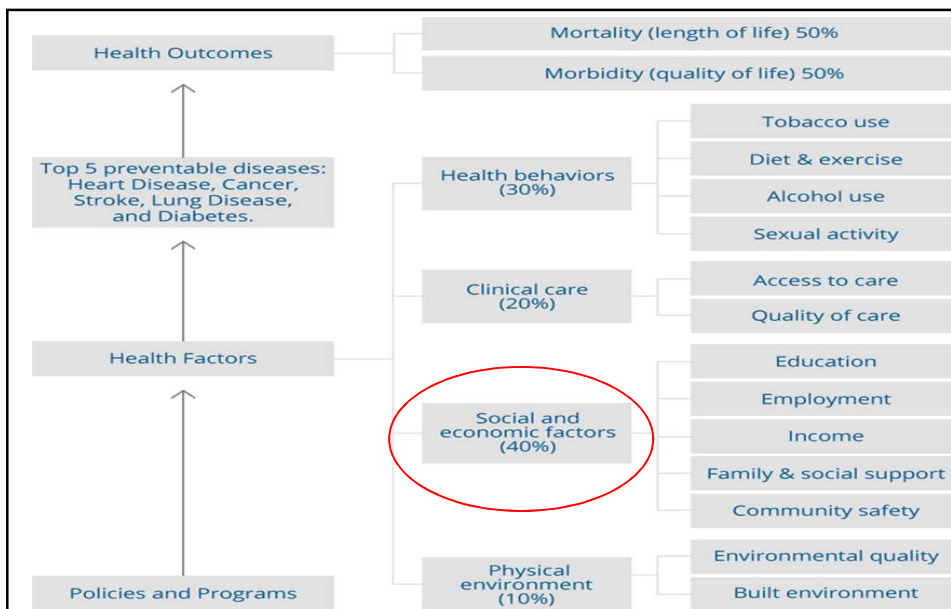


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Wagner, EH. *Chronic Disease Management: What Will It Take to Improve Care for Chronic Illness? Effective Clinical Practice.* 1998;1:2-4.
http://www.acponline.org/clinical_information/journals_publications/ecp/augsep98/cdm.pdf

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The Clinton Foundation. <http://www.clintonfoundation.org/our-work/initiatives/clinton-health-matters-initiative/scaling-solutions/scaling-solutions-overview>

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WHAT ARE THEY?

ACEs are
ADVERSE CHILDHOOD EXPERIENCES











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The Robert Wood Johnson Foundation Infographic: The Truth About ACEs
<http://www.rwjf.org/en/about-rwjf/newsroom/infographics/the-truth-about-aces.html#/embed>

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The three types of ACEs include

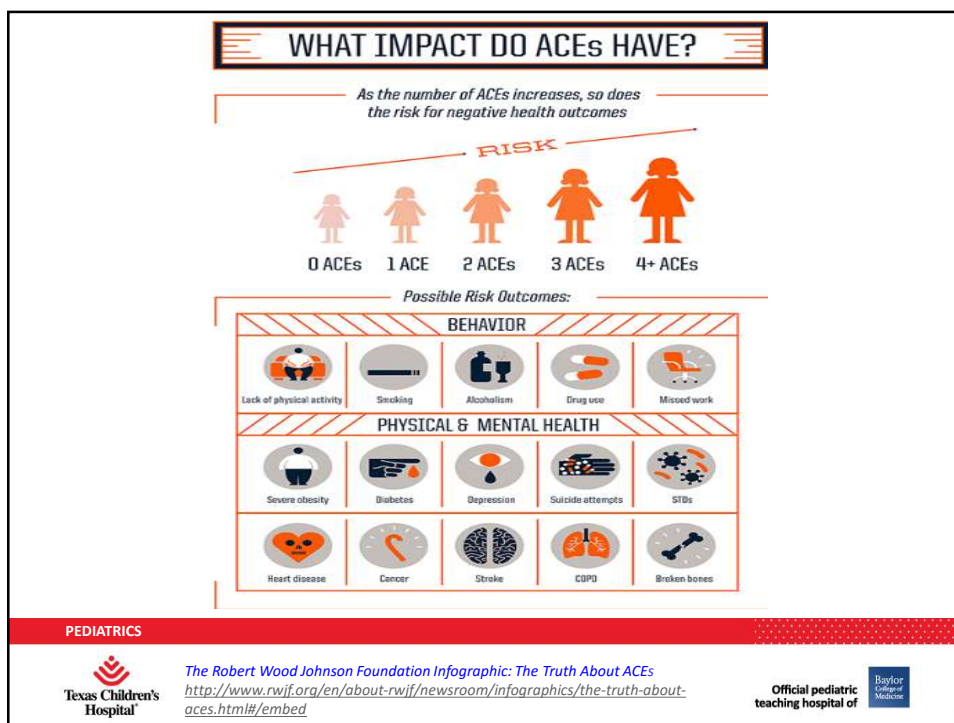
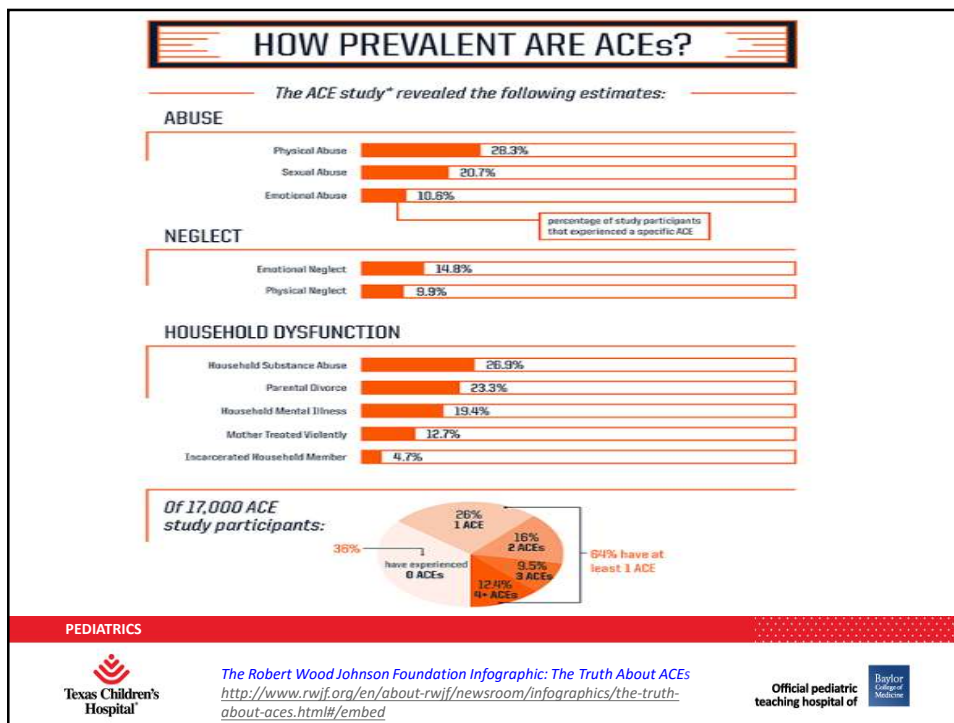
ABUSE	NEGLECT	HOUSEHOLD DYSFUNCTION	
 Physical	 Physical	 Mental Illness	 Incarcerated Relative
 Emotional	 Emotional	 Mother treated violently	 Substance Abuse
 Sexual		 Divorce	

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The Robert Wood Johnson Foundation Infographic: The Truth About ACEs
<http://www.rwjf.org/en/about-rwjf/newsroom/infographics/the-truth-about-aces.html#/embed>

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ACES AS A RISK FACTOR FOR POOR PHYSICAL HEALTH AND MORTALITY

≥ 4 ACEs	Adjusted Odds Ratio
Ischemic heart disease	2.2
Any cancer	1.9
Stroke	2.4
Chronic bronchitis/emphysema	3.9
Diabetes	1.6
Hepatitis	2.4

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Felitti VJ, Anda RF, Nordenberg D, Williamson DF, Spitz AM, Edwards V, Koss MP, Marks JS. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: the adverse childhood experiences (ACE) study. *American Journal of Preventive Medicine* 1998;14:245–258.

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Number of categories of adverse childhood exposure and the adjusted odds of risk factors including current smoking, severe obesity, physical inactivity, depressed mood, and suicide attempts

≥ 4 ACEs	Adjusted Odds Ratio
Current smoker	2.2
Severe obesity	1.6
No leisure-time	1.3
Two or more weeks of depressed mood in the past year	4.6
Ever attempted suicide	12.2

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Felitti VJ, Anda RF, Nordenberg D, Williamson DF, Spitz AM, Edwards V, Koss MP, Marks JS. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: the adverse childhood experiences (ACE) study. *American Journal of Preventive Medicine* 1998;14:245–258.

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Long-term Impact: ACE Studies

Outcomes

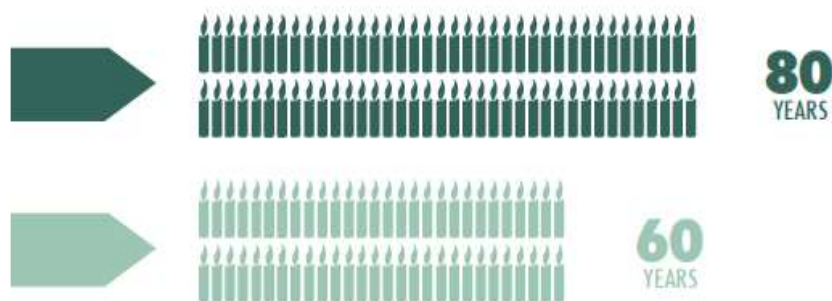
- Persons who had experienced **4** or more **ACEs**
 - compared to those who had none:
 - 4 – 12 fold increased health risks for alcoholism, drug abuse, depression, and suicide attempt;
 - 2 – 4 fold increase in smoking, poor self-rated health, high # sexual partners, and STDs; and
 - 1.4 - 1.6 fold increase in physical inactivity and severe obesity
- The number of categories of **ACEs** showed
 - a graded relationship to the presence of adult diseases including:
 - **ischemic heart disease, cancer, chronic lung disease, skeletal fractures, and liver disease.**

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LIFE EXPECTANCY

People with six or more ACEs died nearly **20 years earlier on average** than those without ACEs.

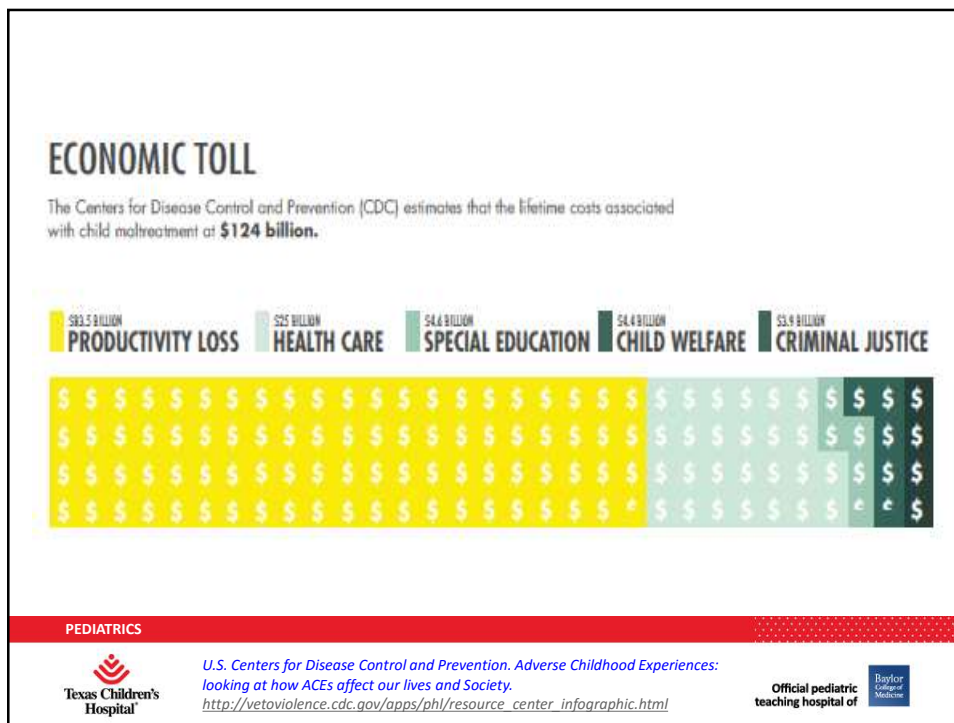


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U.S. Centers for Disease Control and Prevention. Adverse Childhood Experiences: looking at how ACEs affect our lives and Society.
http://vetoviolence.cdc.gov/apps/phl/resource_center_infographic.html

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CRITICAL CONCEPT

Childhood Adversity has Lifelong Consequences.

Significant adversity in childhood is strongly associated with unhealthy lifestyles and poor health decades later.

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ADVERSE CHILDHOOD EXPERIENCES (ACE) THE ACE PYRAMID



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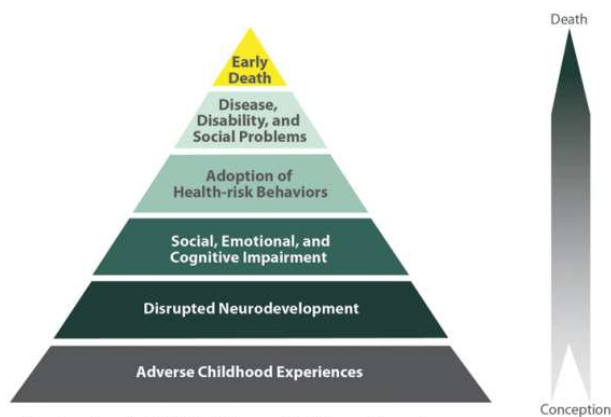


U.S. Centers for Disease Control and Prevention. Injury Prevention & Control: Division of Violence Prevention The ACE Pyramid
<http://www.cdc.gov/violenceprevention/acestudy/pyramid.html>

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THE ACE STUDY



Mechanism by Which Adverse Childhood Experiences Influence Health and Well-being Throughout the Lifespan

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U.S. Centers for Disease Control and Prevention. About the CDC-Kaiser ACE Study.
<https://www.cdc.gov/violenceprevention/acestudy/about.html>

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TWEAKING THE ACES

ACES:

- Emotional abuse
- Physical abuse
- Physical neglect
- Emotional neglect
- IPV in mother
- Household mental illness
- Household substance use
- Incarcerated household member
- Parental separation/divorces


ACEs* plus:

- Property victimization
- Peer victimization
- Exposure community violence
- SES
- Close relationship with severe accident/illness
- Below-average grades
- Parents always arguing
- No good friends

Urban ACEs:

- Experiencing racism
- Witnessing violence
- Living in an unsafe neighborhood
- Living in foster care
- Experiencing bullying

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Finkelhor, D., Turner, H. A., Shattuck, A., & Hamby, S. L. (2013). Violence, Crime, and Abuse Exposure in a National Sample of Children and Youth: An Update. JAMA Pediatrics, 2013, 167(7), 614-621.

Institute for Safe Families. The Philadelphia Urban Ace Study. 2013.

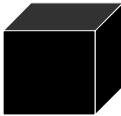
<http://www.instituteforsafefamilies.org/philadelphia-urban-ace-study>

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LINKING CHILDHOOD EXPERIENCES AND ADULT OUTCOMES

Childhood Adversity →  → Poor Adult Outcomes

Advocacy to minimize childhood adversity (e.g. - efforts to address poverty, food scarcity, domestic violence, parental substance abuse)

Health and social services to deal with adverse outcomes (e.g. - efforts to address the behavioral, social, health and economic consequences)


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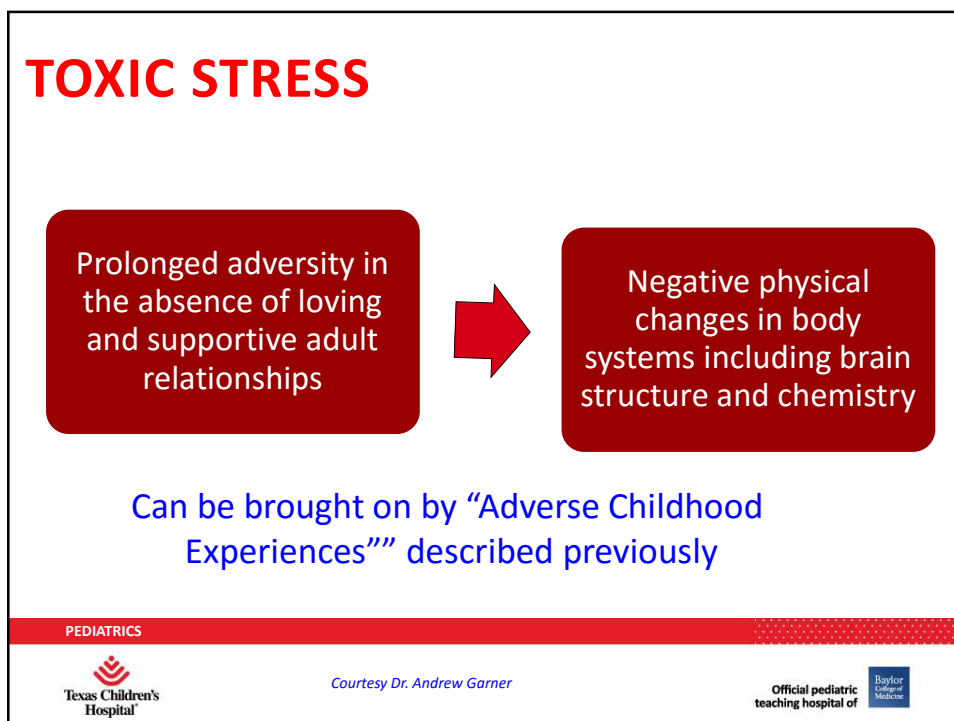
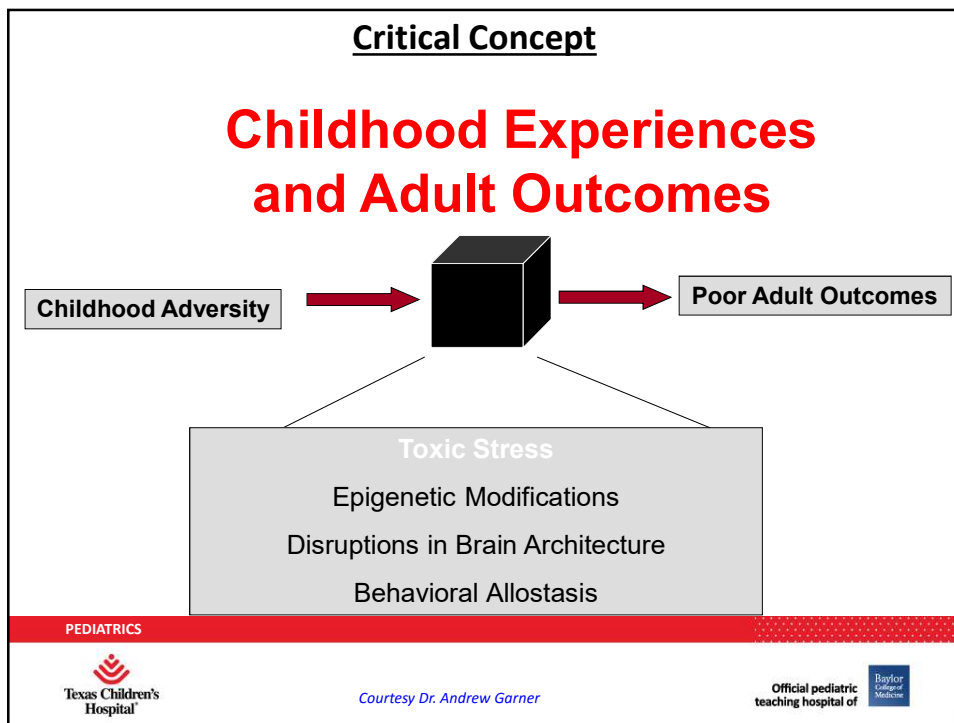
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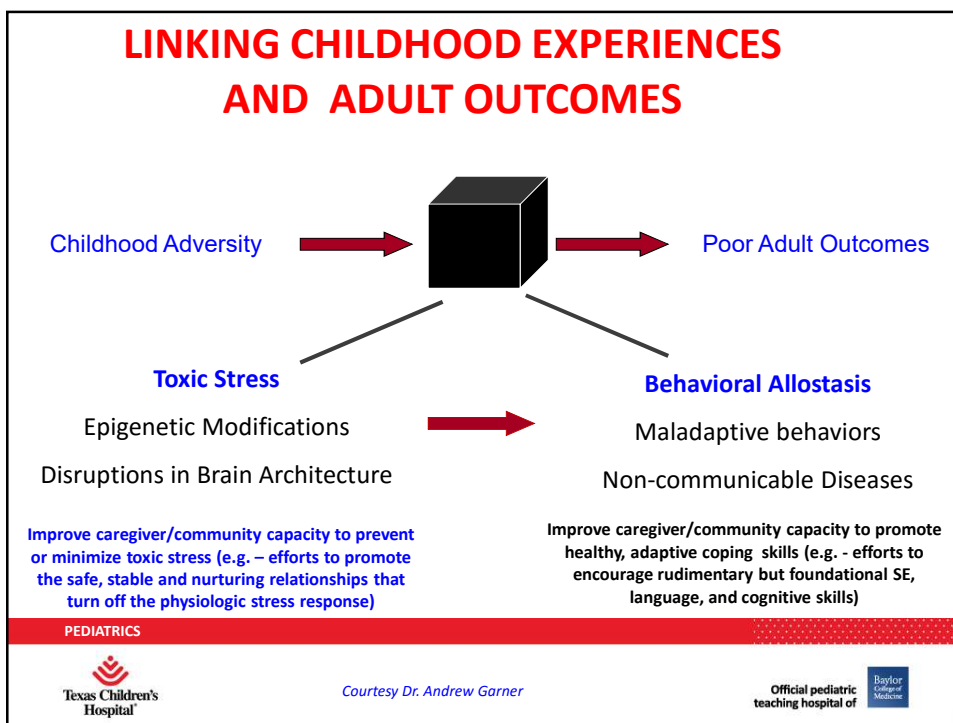
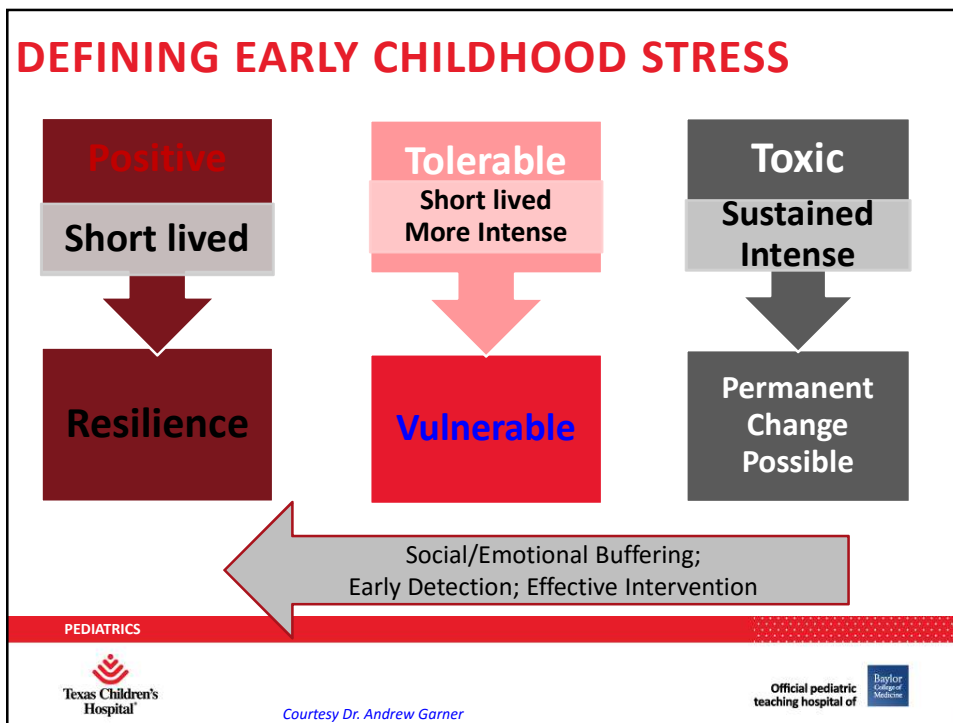
Courtesy Dr. Andrew Garner

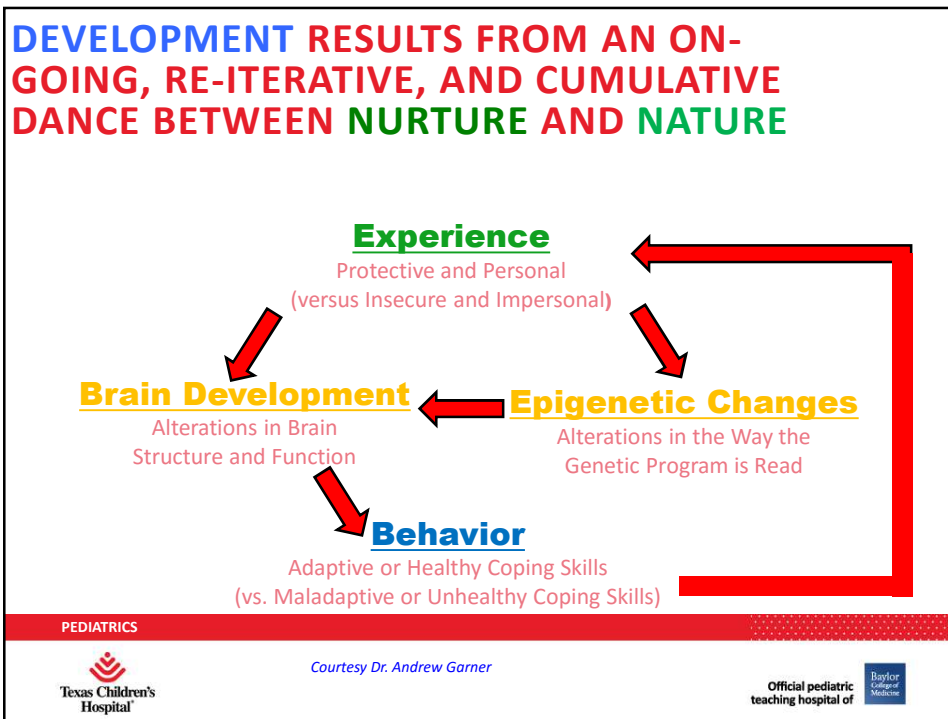
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“PRE-EMINENT PRIORITY” OF PREVENTION

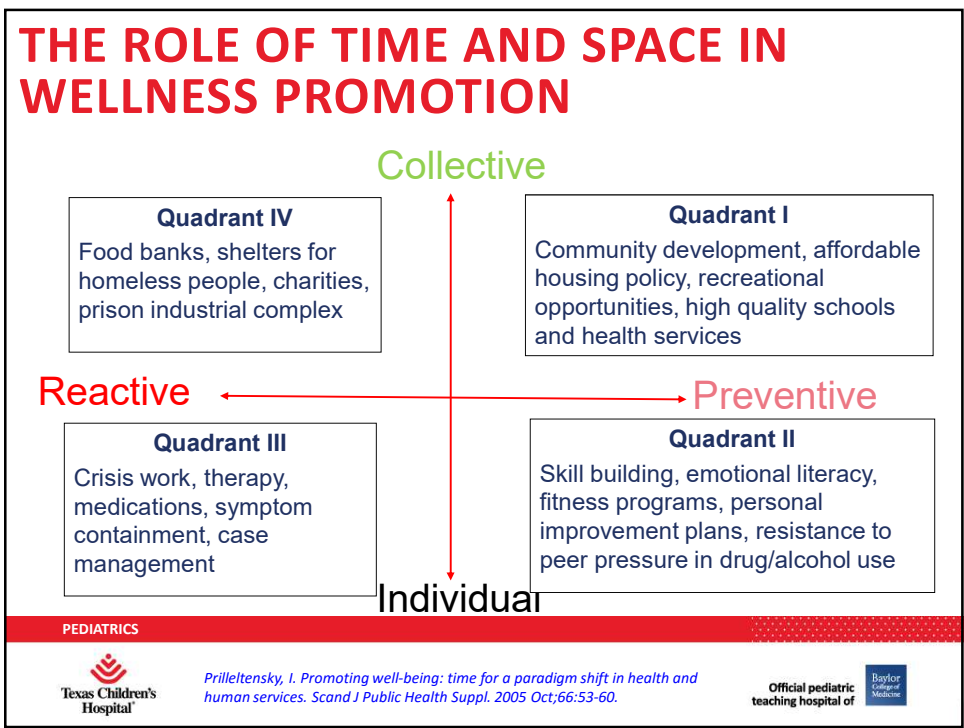
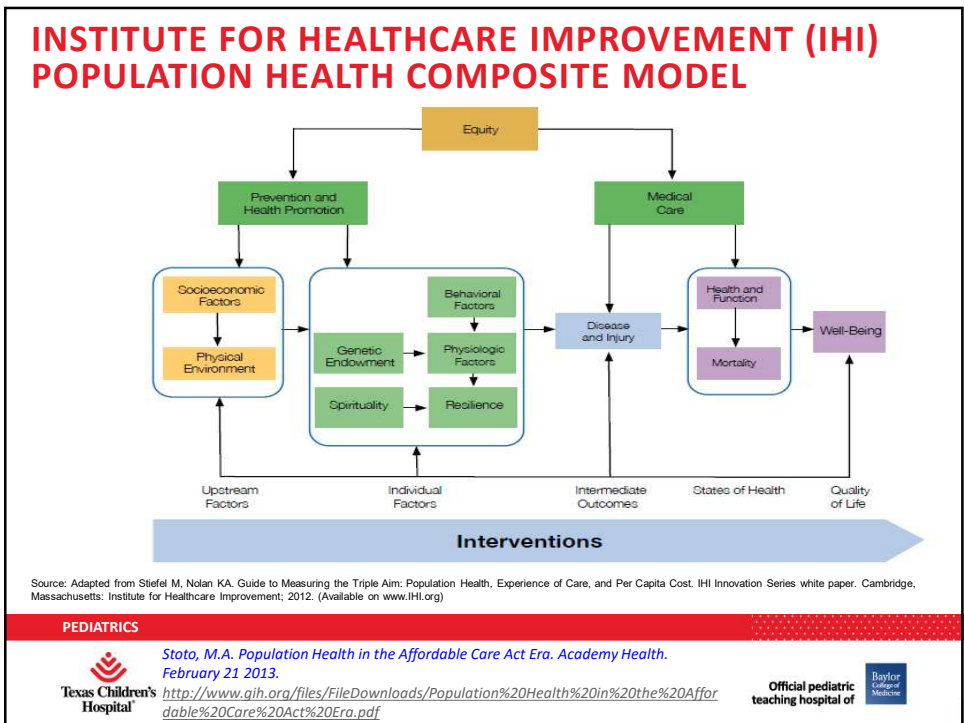
- Neuro-protective
 - Brain development, HPA axis regulation are experience-dependent
- Social-emotional buffering
 - Promotes positive: parenting, attachment, social-emotional skills

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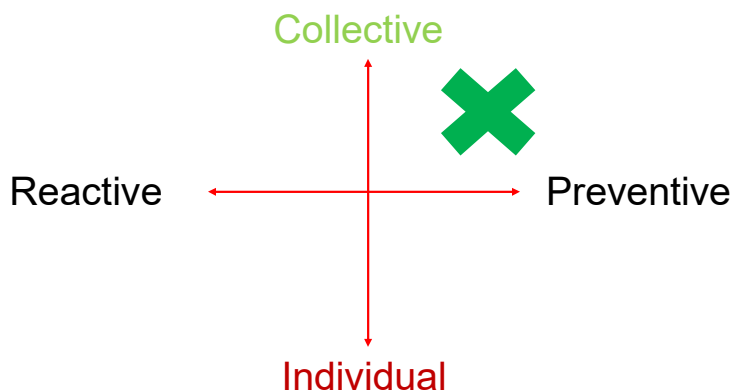


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THE ROLE OF TIME AND SPACE IN WELLNESS PROMOTION



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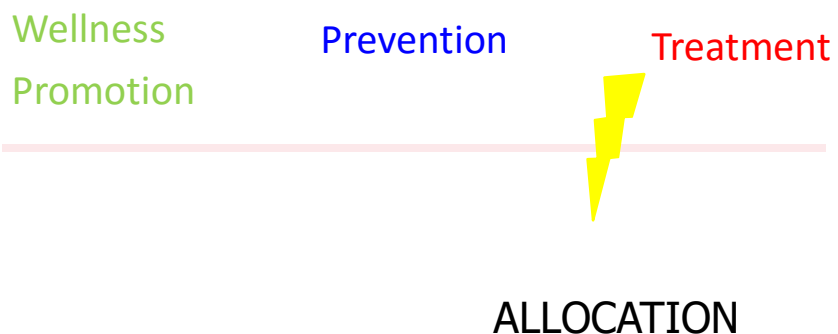


Prilleltensky, I. Promoting well-being: time for a paradigm shift in health and human services. Scand J Public Health Suppl. 2005 Oct;66:53-60.

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CONTINUUM OF SERVICES TOO LITTLE, TOO LATE



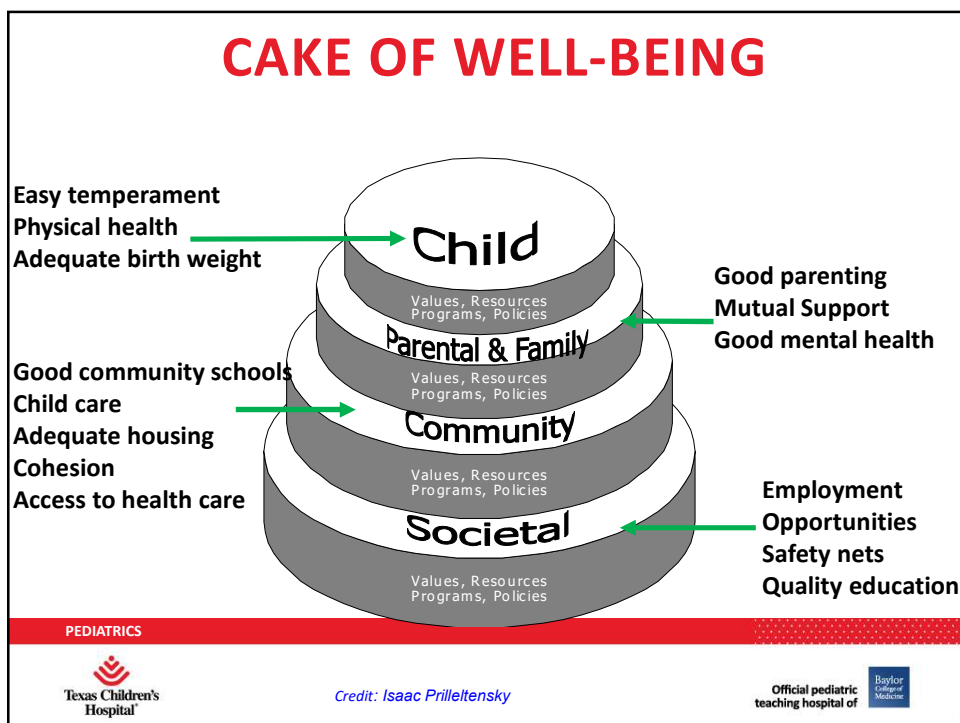
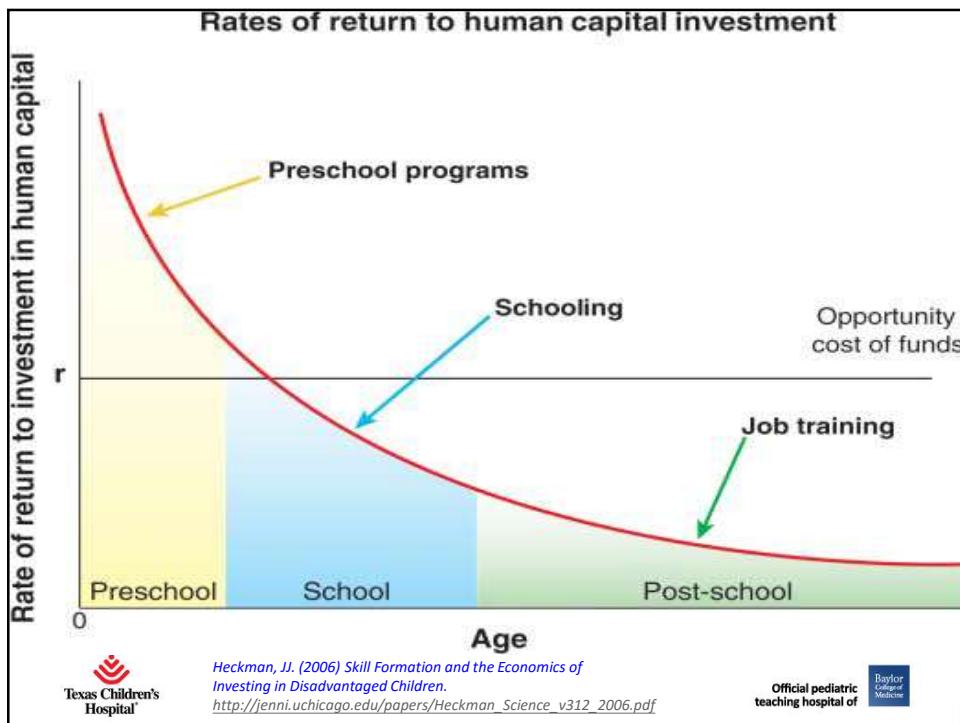
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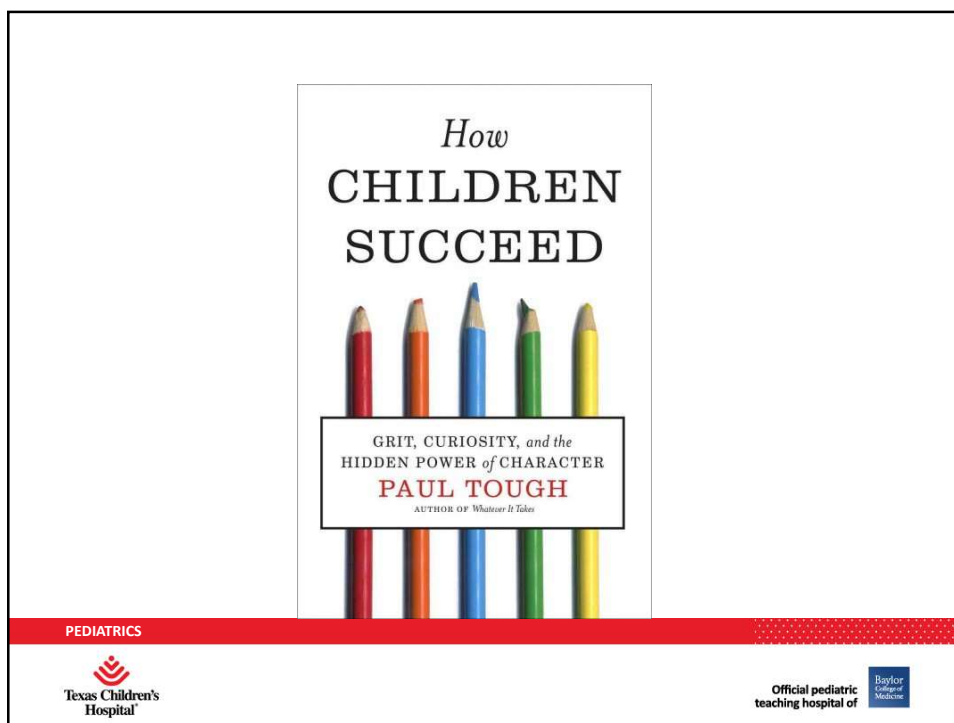
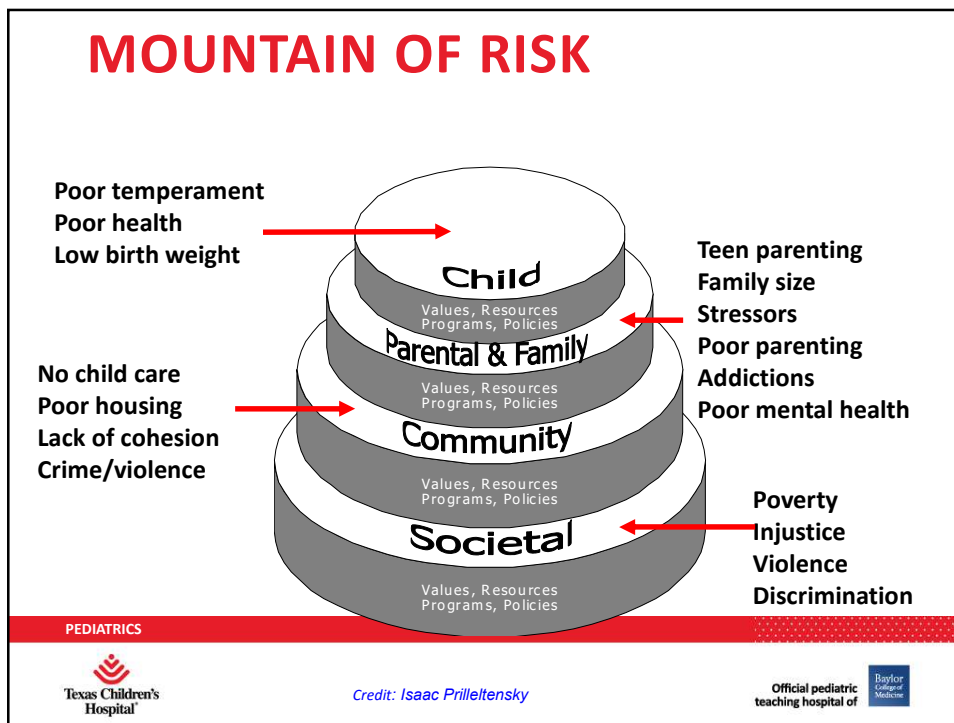


Prilleltensky, I. Promoting well-being: time for a paradigm shift in health and human services. Scand J Public Health Suppl. 2005 Oct;66:53-60.

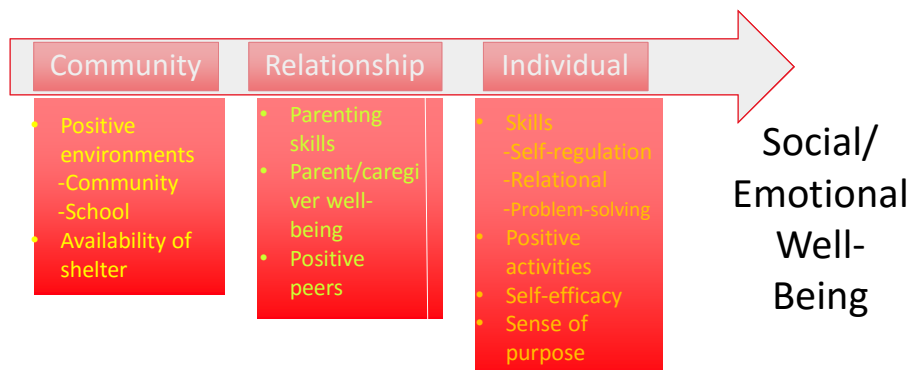
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PROTECTIVE FACTORS WITH THE MOST EMPIRICAL SUPPORT



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U.S. Health and Human Services. Administration for Children, Youth and Families 2013.
http://www.acf.hhs.gov/grants/open/foa/files/HHS-2013-ACF-ACYF-CO-0637_0.htm

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INTERVENTION APPROACHES

- Universal
 - Exercise
 - Mindfulness
- Support
 - Home visitation
 - SEEK
 - Triple P
 - Mentoring
 - Web-based
- Therapeutic
 - TF-CBT (Trauma Focused Cognitive Behavioral Therapy for children 5 and over)
 - PCIT (Parent Child Interactive Therapy)
 - CPP (Child Parent Psychotherapy)
 - Attachment tx (Attachment Therapy)
- Pharmacologic
- Prevention Models
 - CFTSI (Child and Family Traumatic Stress Intervention)
 - CARE (Child Abuse Response and Evaluation)

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U.S. Health and Human Services. Administration for Children, Youth and Families 2013.
http://www.acf.hhs.gov/grants/open/foa/files/HHS-2013-ACF-ACYF-CO-0637_0.htm

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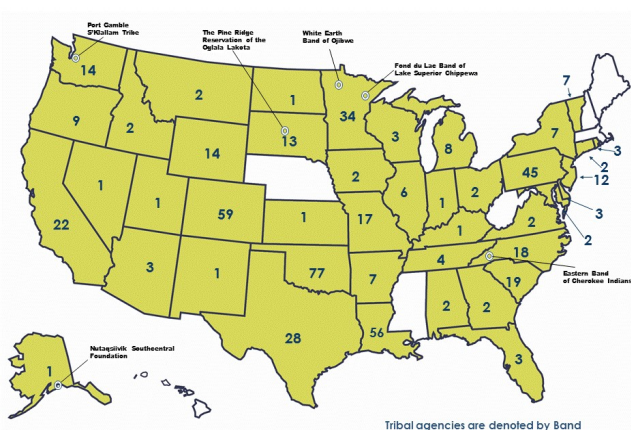
NURSE-FAMILY PARTNERSHIP

- Evidence-based
- Partners first time mothers with registered nurses
- Has been proven to dramatically reduce rates of child abuse, arrests in youth under 15, frequency of emergency room visits ...
- Every dollar invested in Nurse-Family Partnership can yield **up to five dollars in return.**

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NURSE-FAMILY PARTNERSHIP IS A GROWING, NATIONAL PROGRAM



43

513

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Program Goals

- Improve pregnancy outcomes including decreased prematurity
- Improve child health and development (well visits, immunizations, school readiness & parent child attachment)
- Decreased subsequent pregnancies
- Improved parent economic self-sufficiency

Key Program Components

- First-time, at-risk mothers
- Registered nurses
- Intensive services (intensity, duration)
- Focus on behavior
- Program fidelity

Why Nurses?

- Knowledge, judgment and skills
- High level of trust, low stigma
- Credibility and perceived authority
- Nursing theory and practice at core of original model

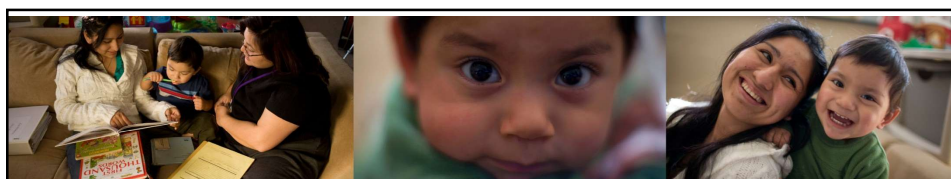
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- **Self Efficacy:** According to Albert Bandura, self-efficacy is "the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations." In other words, self-efficacy is a person's belief in his or her ability to succeed in a particular situation. Bandura described these beliefs as determinants of how people think, behave, and feel (1994).
- **Human Ecology:** According to Urie Bronfenbrenner The ecological systems theory holds that we encounter different environments throughout our lifespan that may influence our behavior in varying degrees. These systems include the micro system, the mesosystem, the exosystem, the macro system, and the chronosystem
- **Attachment:** According to Ainsworth & Bowlby Attachment is a deep and enduring emotional bond that connects one person to another across time and space. Attachment theory provides an explanation of how the parent-child relationship emerges and influences subsequent development.

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TRIALS OF THE PROGRAM

Dr. Olds' research & development of NFP continues today...



1977

Elmira, NY

Memphis, TN

Denver, CO

Participants: 400

Population: Low-income whites

Studied: Semi-rural area

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Monetary Benefits to Society



- The RAND Corporation estimates Nurse-Family Partnership can return up to \$5.70 for each \$1 spent on the program.*

Savings accrue to government from **decreased spending** on:

- health care
- criminal justice
- child protection
- mental health
- education
- public assistance

And **increased taxes** paid by employed parents

- Nurse-Family Partnership ranked among the highest programs reviewed in terms of net benefit to society among pre-K, child welfare, youth development, mentoring, youth substance prevention and teen pregnancy prevention programs. A 2012 cost-benefit update by WSIPP estimated long-term benefits of almost \$23,000 per participant.** (*Washington State Institute for Public Policy 2012*)

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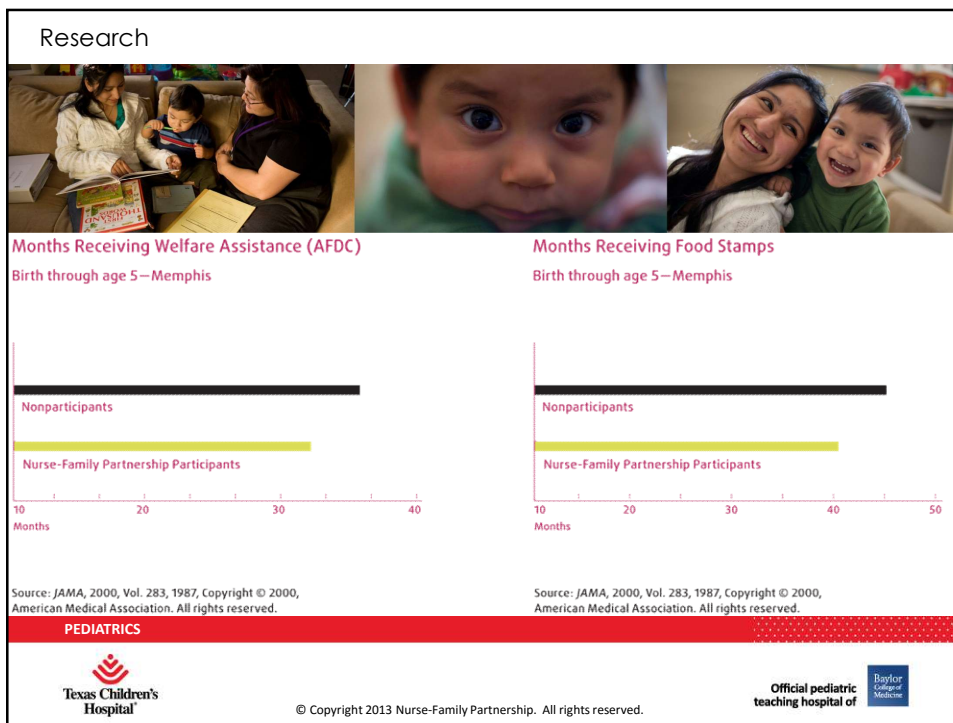


* RAND Corporation 1998, 2005; return for highest risk families

** Savings related to low birth weight, child injuries and immunizations not included

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“If you want to invest societal resources where they will have the biggest benefit for all of us, clearly the evidence is there now that protecting children from the worst kinds of deprivation in their youngest years will result in more functional, capable, prosocial citizens.”
Martha Farah, director of the Center for Cognitive Neuroscience at the University of PA 3.2.09



TIME

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PARENT EDUCATION

Parenting education is designed to improve parenting skills and family communication, prevent child and family problems, and educate parents on child development and positive parenting practices with a goal of developing safe, stable, and nurturing parent-child relationships.

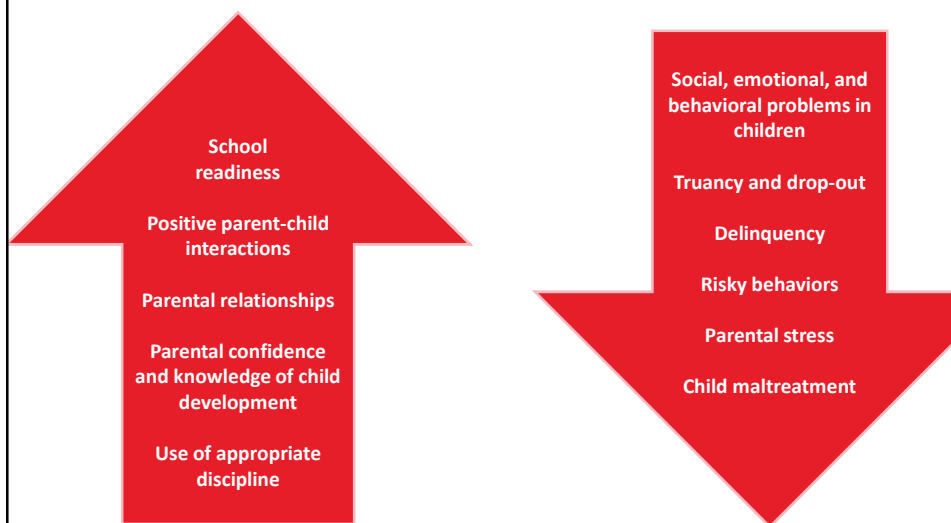
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WHY PARENT EDUCATION?



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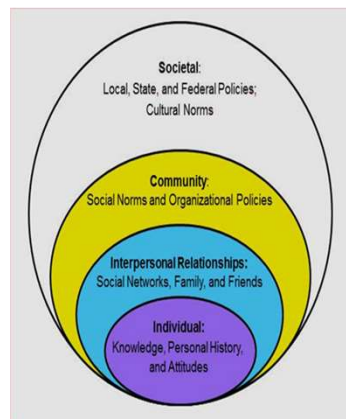


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A PUBLIC HEALTH MODEL FOR EVIDENCE-BASED PARENT EDUCATION

- Focuses on populations, not individuals
- Emphasis on prevention, not treatment
- De-stigmatizes attending parent classes
- Addresses multi-levels of influence
- Keeps low-risk families from becoming high-risk and provides intensive services to high-risk families
- Cost-effective



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POSITIVE PARENTING PROGRAM (TRIPLE P)

- A coordinated system of programs
- Multi-level programs of increasing intensity
- All developmental periods, infancy to adolescence
- A public health model of parent education and support
- Aim is to:
 - Promote children's healthy development
 - Prevent children's social, emotional and behavioral problems
 - Prevent child maltreatment
 - Strengthen parenting at a population level
 - Destigmatize seeking information and support
- 30+ years of research

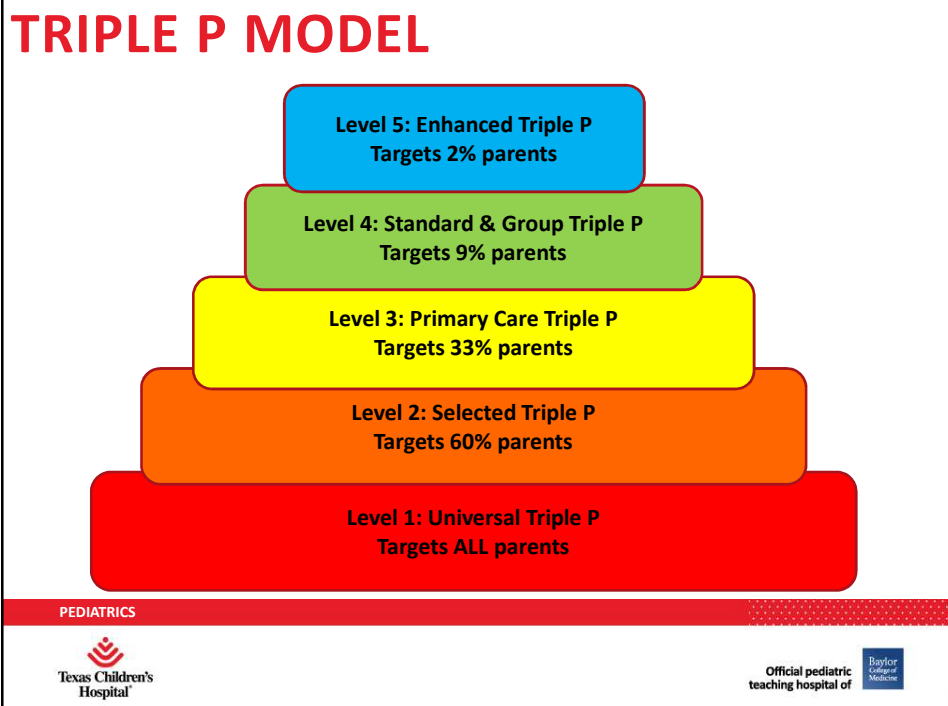
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Sanders, M.R., Cann, W., & Markie-Dadds, Carol. *The Triple P-Positive Parenting Programme: A Universal Population-Level Approach to the Prevention of Child Abuse*. *Child Abuse Review*. 2003;12:155-171

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U.S. TRIPLE P POPULATION STUDY

- Targeted parents of children 0 – 7 years of age in 18 counties in South Carolina
- Primary outcomes were population outcome measures collected by state agencies pre-intervention and 2 years post-intervention

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TRIPLE P (POSITIVE PARENTING PROGRAM)

- Trial randomized 18 counties in South Carolina
- Over 13,000 families served
- Media, parenting education, counseling
- Child Maltreatment (exp. Counties)
 - Pre: 10.86/1000 to post: 11.74/1000
- Child Maltreatment (control Counties)
 - Pre: 11.12/1000 to post 15.06/1000 ($p < .03$)

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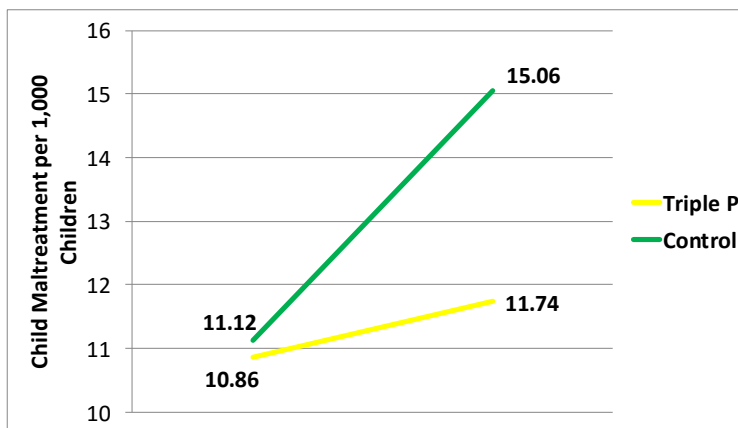


Prinz, R.J., Sanders, M.R., Shapiro, C.J., Whitaker, D.J., & Lutzker, J.R. Population-Based Prevention of Child Maltreatment: The U.S. Triple P System Population Trial. 2009; 10:1-12.

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CHILD ABUSE RESPONSE AND EVALUATION



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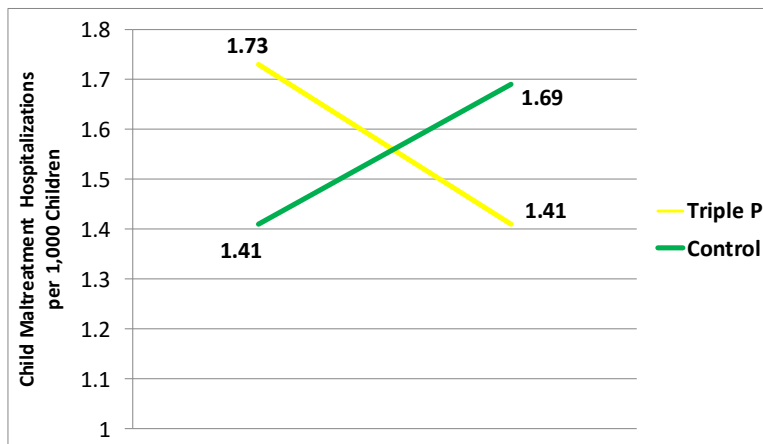


Prinz, R.J., Sanders, M.R., Shapiro, C.J., Whitaker, D.J., & Lutzker, J.R. Population-Based Prevention of Child Maltreatment: The U.S. Triple P System Population Trial. 2009; 10:1-12.

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CHANGES IN RATES OF HOSPITALIZATIONS FROM CHILD MALTREATMENT



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Prinz, R.J., Sanders, M.R., Shapiro, C.J., Whitaker, D.J., & Lutzker, J.R. Population-Based Prevention of Child Maltreatment: The U.S. Triple P System Population Trial. 2009; 10:1-12.

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PARENT EDUCATION IN HARRIS COUNTY

- There are more than **1 million** children in Harris County
- There are more than **90,000 births** in Harris County each year
- Approximately **10,000 – 15,000 parents** attend a parenting class each year
- Requests for parent education have increased by 60% between 2008 - 2011
- Less than one-third of parents are receiving evidence-based parenting classes

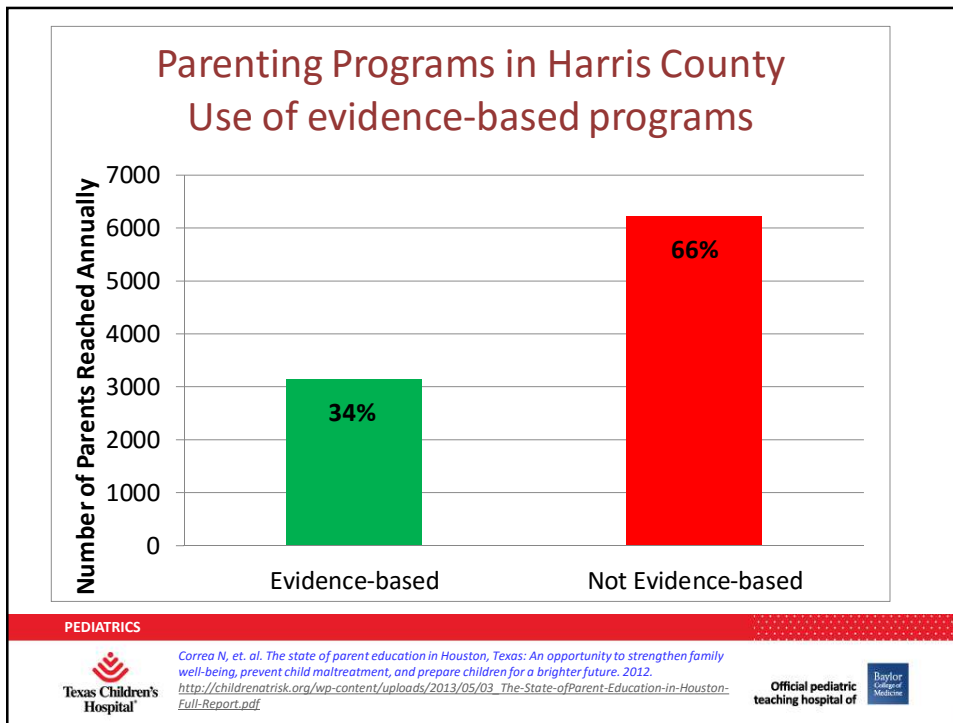
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Correa N, et. al. The state of parent education in Houston, Texas: An opportunity to strengthen family well-being, prevent child maltreatment, and prepare children for a brighter future. 2012.
http://childrenatrisk.org/wp-content/uploads/2013/05/03_The-State-of-Parent-Education-in-Houston-Full-Report.pdf

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ACEs Connection

Healthy, happy kids grow up to create a healthy, happy world.

HOME GROUPS CALENDAR BLOG MEDIA CHATS ACTIVITY ACESTOOHIGH.COM DISCUSSIONS SURVEYS

About

This community of practice uses trauma-informed, resilience-building practices to prevent Adverse Childhood Experiences (ACEs), and to change systems to stop traumatizing already traumatized people.

ACES CONNECTION NETWORK OVERVIEW

ACEsTooHigh is a news site for the general public on all things ACEs-, trauma-informed, and resilience-building. ACEsConnection is a social networking site for all people interested in implementing ACEs-, trauma-informed, and resilience-building practices. Robert Wood Johnson Foundation and The California Endowment. Provide funding and support.

GOALS

Prevention, Resilience-Building and Systems Change. Prevent adverse childhood experiences (ACEs); build resilience in individuals, families and communities; change systems so they no longer traumatize already traumatized people.

Community of Practice for Collective Impact. Support cross sector collaborations in all 30,000 cities and towns nationwide through in-person and online actions.

ACESTOOHIGH.COM

Solutions-oriented news site. Reports on the epidemiology, neurobiology, biomedical and epigenetic consequences of ACEs, and resilience research. Covers how people, organizations, agencies and communities are implementing practices based on the research. Includes developments across all sectors- education, juvenile justice, criminal justice, public health, medicine, mental health, social services, cities, counties, states, and more.

ACESCONNECTION.COM

Community of Practice for Collective Impact. What comes after Facebook? Interest-based communities of practice. A *community of practice* is a type of social network in which people work together to set and implement goals. *Collective impact* is the commitment of a group of people from different sectors to a common agenda for solving a specific social problem. ACEs Connection is a *community of practice* that uses trauma-informed and resilience-building practices to prevent ACEs and further trauma.

MEMBERS

All Members

COMMENTS

Last time I checked, there were about 400 "journalist members" of the ISTSS (International Society for Traumatic Stress Studies), and...
7 hours ago

It is so hard to get to some minds. That is why I rack my brain trying to think of different ways to interact with folks who just...
9 hours ago

I'm still surprised when I read stories like this that interview only people from the criminal justice system, and none or few from...
9 hours ago

Very interesting, Patrick. Thanks for posting this. I think the effectiveness of campaigns should be evaluated, too. Re the...
9 hours ago

Thank you for sharing this Samantha. The previous Governor of Alaska implemented a "Choose Respect" campaign years ago. They spent a lot...
16 hours ago

Yeah!!!! We are the medicine!!!! Calling all

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<http://www.acesconnection.com/about>

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ACES = Adverse Childhood Experiences

HOME
ACES 101
GOT YOUR ACE SCORE?
ACES IN ACTION
ACES CONNECTION
RESEARCH
RESOURCES
ABOUT

Horses help kids recover from adverse childhood experiences

January 6, 2015
By JoAnn Richi
in ACE Study, Adverse childhood experiences, Child trauma, Solutions, Trauma
1 Comment



Baylie is eight years old. Born to a mother addicted to cocaine and an alcoholic father, removed from her parents at six months and covered with bruises and cigarette burns, Baylie (not her real name) has spent her childhood shuffled from one foster home to another. She rarely speaks, makes little eye contact with adults, shows no interest in playing with kids her age, and recoils from any attempt at physical affection.

'Invisible Scars' trailer out; documentary is story of healing journey from child sex abuse

December 8, 2014
By Jane Ellen Stevens
in ACE Study, Adverse childhood experiences, Child abuse, Resilience
6 Comments



Johanna Janis's documentary about her experiences with child sex abuse and other childhood adversity will be out next year, when she'll be taking it to film festivals before distributing it.

Although the beginning focus of her story is child sex abuse, it unwinds with many other issues that emerged from her childhood adversity. With Dr. Vincent Felitti, co-founder of the CDC-Kaiser Adverse

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RT @brigidmccaw: Affordable Care Act - Generation approach to ending poverty. Includes addressing ACEs. Just released Aspen Institute <http://...> 3 months ago

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PRACTICAL APPROACHES/ POLICY IMPLICATIONS

- Utilize violence prevention interventions in your community.
- Adopt clinical approaches that support children/ adults in “turning off” their stress response in a healthy way.
- Develop and provide access to specific treatment for high risk children or adults to address the altered stress response.
- Advocate for a public health/ population health approach to address the environmental, developmental risks to life long health.
- **Primary prevention focus**
- **Population focused (rather than individual)**
- **Multidisciplinary**
- **Action-oriented**
- **Relies on:**
 - Evidence to solve problems
 - Systematic approaches to planning and evaluating interventions

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QUESTIONS



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Model of childhood adversity distinguished between the dimensions of threat and deprivation. Depicts the degree to which commonly studied forms of adversity can be organized among these dimensions.

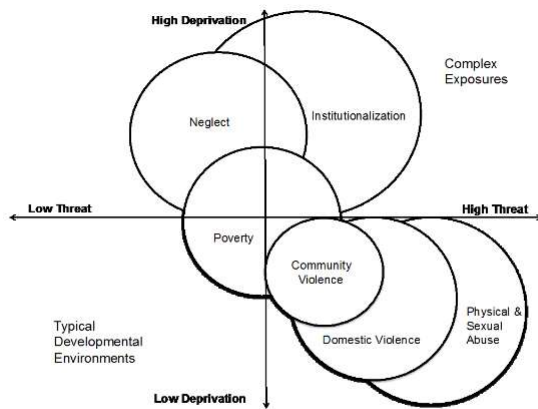


Figure 1: Our model of childhood adversity distinguished between the dimensions of threat and deprivation. The figure depicts the degree to which commonly studied forms of adversity can be organized along these dimensions.

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