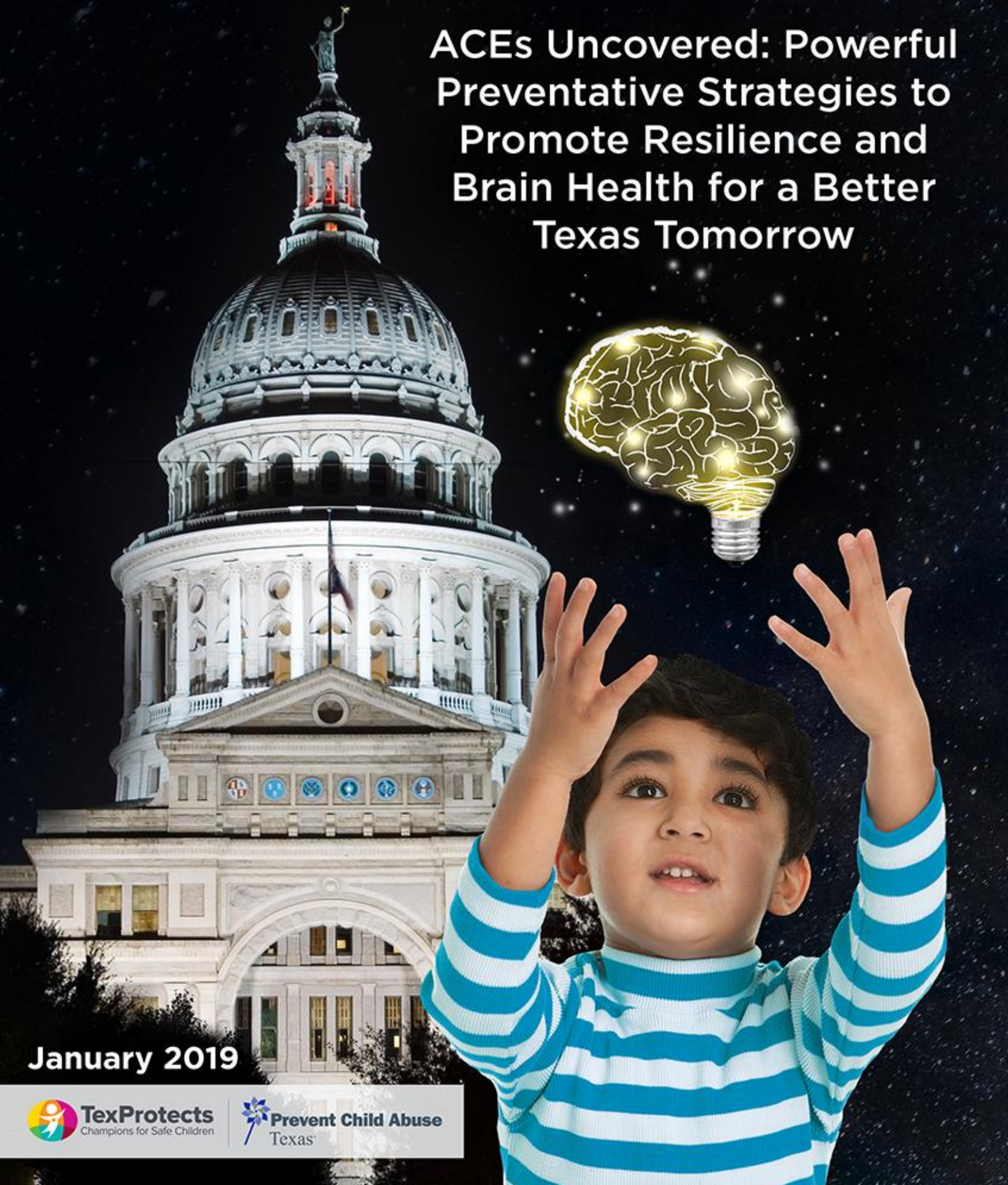
Science Meets Policy

ACEs Uncovered: Powerful Preventative Strategies to Promote Resilience and Brain Health for a Better Texas Tomorrow



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TexProtects
Champions for Safe Children
Prevent Child Abuse
Texas

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Our Mission

TexProtects' mission is to reduce and prevent child abuse and neglect through research, advocacy and education. We effect change by organizing and educating our members to advocate for increased investments in evidence-informed child abuse prevention programs, CPS reforms, and treatment programs to heal abuse victims. Our goal is to create broad-scale, systemic change via major public policy innovations of child protection systems and to leverage private funds with public funds to bring high-impact prevention solutions to scale.

TexProtects engages in research, advocacy, and education to achieve our mission. We advocate for better policies, reforms and appropriate increases in federal, state and local funding for three priority areas: 1) Prevention through increasing investment in proven child abuse prevention programs; 2) Protection through strengthening and reforming the CPS system; and 3) Healing through ensuring victims receive adequate and accessible treatment. TexProtects is the Texas chapter of Prevent Child Abuse America.

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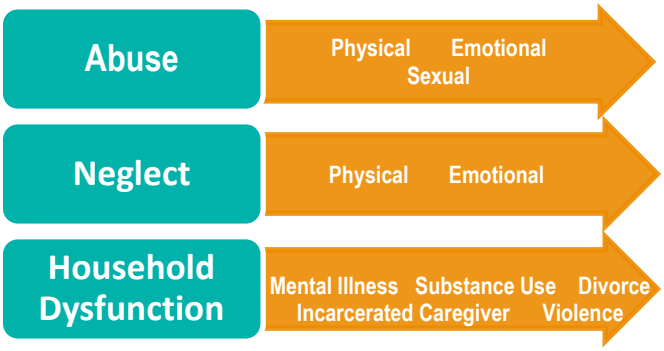
Executive Summary

In both the public and private sectors, Texas has dedicated initiatives that seek to prevent child maltreatment and other forms of trauma experienced in early childhood. Over the last several decades, Texas has passed legislation that continues to strengthen these prevention and intervention efforts. However, Texas lacks comprehensive statutes designed to specifically address the various root causes of childhood abuse, neglect, and other negative events. Research from the past decade and continuing studies provide a greater understanding of Adverse Childhood Experiences (ACEs), **which can result in trauma that changes the architecture and development of a child's brain and can impact them throughout their lifespan, as well as future generations of their family.**

The Centers for Disease Control and Prevention (CDC)-Kaiser Permanente study, begun in 1998, recognizes 10 different ACEs which fall under three categories: a) child abuse (three distinct ACEs), b) child neglect (two distinct ACEs), and c) household dysfunction (five distinct ACEs). Child maltreatment alone makes up half of the 10 recognized ACEs. Subsequent studies have identified further adverse events that affect children's lives. Just under 26% of Texans have at least one ACE and almost 24% of all Texans have experienced two or more adversities—percentages that are well above the national average.



Texas children with two or more ACEs:

- 17.2% have repeated a school grade as compared to 2.7% with no ACEs
- 31% more likely to have 2 or more chronic health conditions compared with 10.5% with no ACEs
- 59% have no medical home where they can get ongoing care

Without supportive relationships and environments to cope, a child's early exposure to adversity can result in chronic disease, mental health challenges, changes in brain architecture, and poor educational outcomes that can pass down to future generations. The accumulation of multiple adverse experiences in a child's life can create even greater risk for negative life outcomes.

Not only do ACEs impact the individual across a lifetime, Texas suffers an immense economic loss due to negative outcomes of child maltreatment and other ACEs, as financial analyses show. Child maltreatment alone is one of Texas' costliest social issues. In their *2018 Prevention Task Force* report, the Department of Family and Protective Services (DFPS) estimated Texas will spend an estimated $1.75 billion on child protection services in Fiscal Year 2019. Other analyses estimate the negative emotional, behavioral, and physical outcomes of ACEs cost further billions. Negative impacts from ACEs can also be linked to costs across sectors: social services, healthcare, adult criminal justice and juvenile justice, education, loss of productivity and an individual's lifetime earnings, and other business and workforce costs.

The original ACE study and subsequent research build new urgency around strengthening prevention and treatment of the trauma related to childhood adversity across all sectors and at the primary, secondary, and tertiary prevention levels. Preventing and mitigating the factors leading to ACEs can save a child from trauma and dramatically increase their chance for healthy cognitive, physical, and emotional development and their ability to become economically secure, well-educated, and productive community members.

Resiliency is the ability of a child, family, or community to recover, heal, and grow in a functional, healthy, adaptive, and integrated way over the passage of time after facing challenging and stressful situations.

So how do we prevent childhood adversity from happening, and if it does happen, how do we treat the resulting trauma?

Texas must invest in prevention and treatment efforts that foster resiliency in children and families and in the communities in which they reside. Resiliency is the ability of a child, family, or community to recover, heal, and grow in a functional, healthy, adaptive, and integrated way over the passage of time after facing challenging and stressful situations. Resiliency is a way for children and adults to build coping skills to combat symptoms of trauma related to ACEs.

Creating community environments that support families and children, and that promote positive family communication, routines, and habits, can be powerful protective and treatment factors for children who have experienced adversity.

Emerging research shows that adversity must be examined as a collective impact on a child's wellbeing. A child's ability to cope with adversity is determined not only by their own capacity, but by the intersecting environments (e.g. school, church, home, neighborhood) that affect their lives. When certain systemic and individual barriers are present, children are at higher risk of social, emotional, physical, and economic failure.

Texas must view ACEs as a multisystemic public health issue.

Texas must view ACEs as a multisystemic public health issue. To prevent and treat ACEs and the environmental and social factors that lead to them, Texas must support a statewide strategic collaboration across multiple sectors—including government, nonprofit, philanthropic, business, and more. Texas should also further invest in evidence-informed, trauma-informed home visiting programs, screening tools, and training approaches to keep children and families from becoming at risk of child maltreatment and other ACEs.

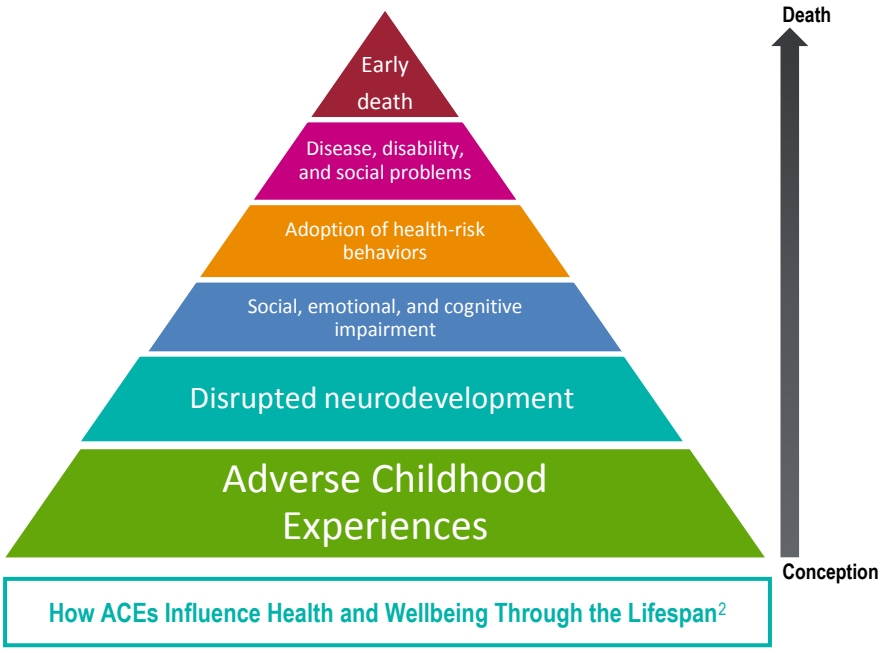
TexProtects recommends the Texas legislature take the following actions:

1. **Develop and implement a statewide strategic plan to address the causes and symptoms of Adverse Childhood Experiences (ACEs).**
2. **Enhance and expand mandated trauma-informed trainings.**
3. **Strengthen investments in community-based, targeted primary child abuse prevention programs.**
4. **Leverage existing data and research opportunities.**

INTRODUCTION

Adverse Childhood Experiences (ACEs) are certain stressful or traumatic early life experiences of child abuse, child neglect, and/or household dysfunction that are strongly related to negative outcomes throughout a person's lifespan.[1] The original ACE study's findings were pivotal in understanding how experiences in early childhood can affect the development, health, productivity, and success of an individual.

Continuing research shows that a child's exposure to a single traumatic event can affect their **wellbeing**—and the accumulation of multiple adverse experiences in a child's life can create even greater risk for negative life outcomes.[2] Among many other outcomes, research has found that ACEs are linked to an increased likelihood of altered brain development, trouble in school, pre-term births and health complications during pregnancy in mothers, leading causes of maternal mortality, substance use disorders and other risky behaviors, mental illnesses, chronic diseases, and early death. These health risks are widespread in Texas, costing the state billions in taxpayer dollars each year.



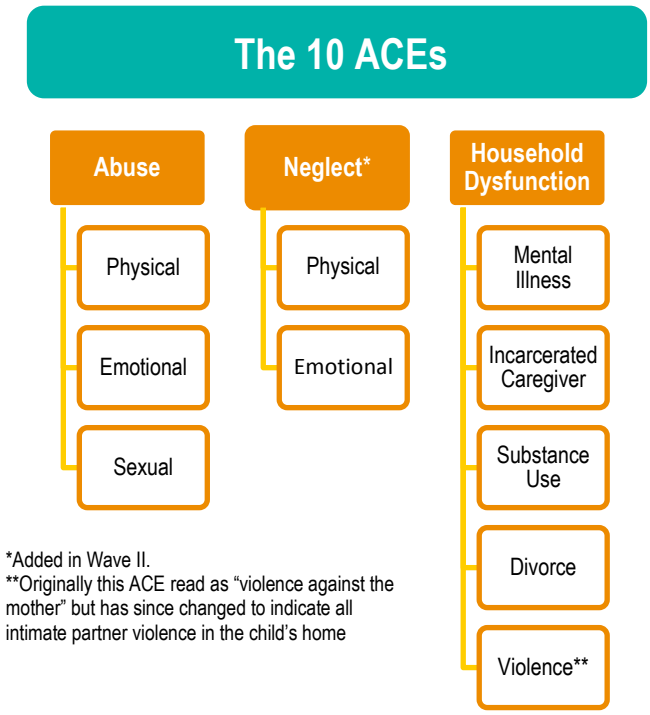
How ACEs Influence Health and Wellbeing Through the Lifespan[2]

The objectives of this report are to provide:

1. background on the original ACE study and the prevalence of ACEs,
2. discussion on the health and economic impact of ACEs in Texas and nationwide,
3. discussion on the need for multisystemic prevention efforts,
4. an examination of evidence-informed prevention and intervention programming,
5. an analyzation of current federal and state legislation regarding trauma-informed care and ACEs, and
6. policy recommendations for Texas for the 86th legislative session.

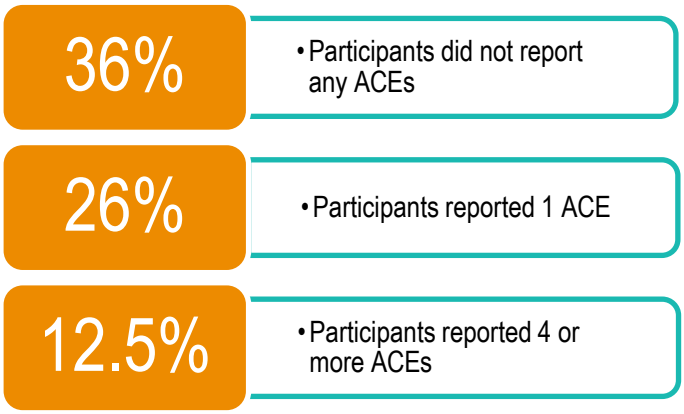
The Original ACE Study

In 1998, Felitti, Anda, and colleagues set out to understand the relationship between negative experiences in early childhood and the resulting health problems that can occur later in life.[3] This was the first study to look at these correlations. Both Wave I and Wave II of the study led to the development of the ACEs Questionnaire, which identified a total of 10 types of childhood trauma and household dysfunction considered to put a child at risk (see graphic to the right and *Appendix A*).[4] The researchers calculated ACE scores based on the number of "yes" responses an individual gave to each category, which could range from zero to 10, with 10 indicative of highest risk. Each exposure counted as one point, regardless of how many instances occurred.[5] The original questionnaire (Wave I) did not include questions on childhood neglect.[3]



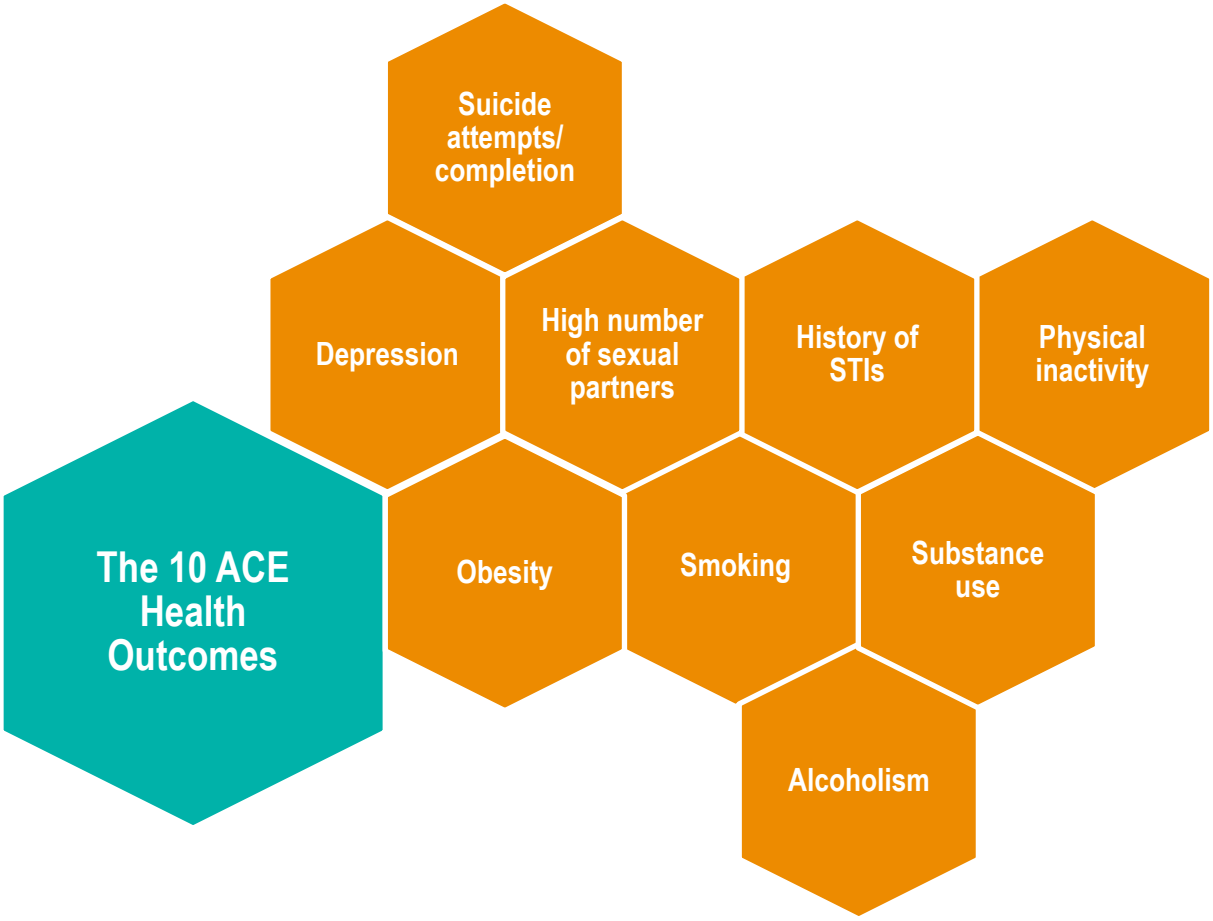
Wave II expanded on the data gathered in Wave I with the inclusion of questions about child neglect. The study has, to date, more than 17,300 adult members of a San Diego Kaiser Permanente Health Plan overall (combined data from Wave I and Wave II).[6] The participants from both waves were mostly white, with some college experience or higher education degrees, and 46.4% were over the age of 60. The study participants were more evenly split along gender demographics, with 54% of the participants reported as female and 46% reported as male. The most current results (2016) estimated that more than 64% of those surveyed had one or more instances of child abuse, child neglect, and/or household dysfunction (see *Figure 1*).[7]

Figure 1: 2016 ACE Study Results[7]



Researchers examined the participants' questionnaire responses along with their extensive social and medical histories to understand the potential relationship of

ACEs to risky behaviors and health challenges.[8] Felitti et al. found that ACE scores were strongly associated with chronic disease in adulthood. The study identified 10 negative health outcomes (see graphic below) that are likely to increase based on the number of ACEs an individual has and which contribute to the rate of disease exhibited in the United States.[3]

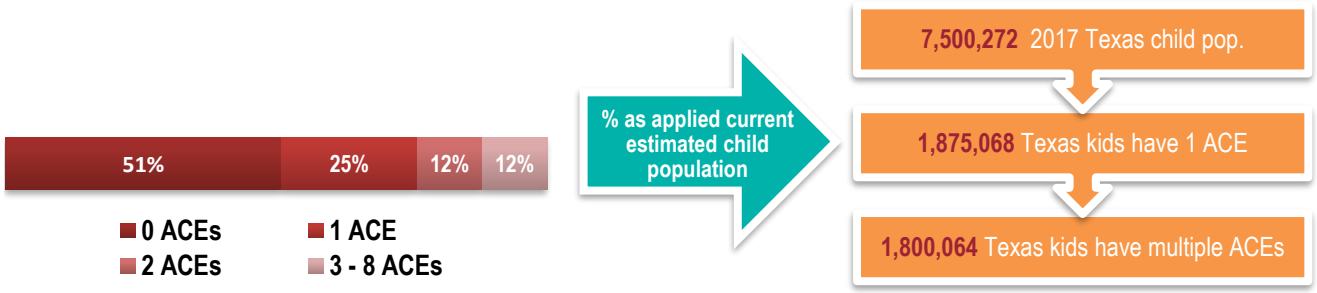


The study also noted the interactive and cumulative nature of ACEs. Exposure to one type of ACE increased the likelihood of being exposed to others.[9] In addition, the risk of negative health outcomes later in life increased with the number of adverse events.[3] The understanding of these experiences as cumulative stressors is a fundamentally different approach than traditional understandings of trauma, which analyze individual events or experiences without looking at the broader context of adversity.[5]

Prevalence of ACEs in Children

Understanding the prevalence of ACEs across different states and communities will be critical in determining the most effective approach to prevention and treatment. Using the most current National Survey of Children's Health (NSCH) data from 2016, Child Trends compiled data on 8 ACEs that are representative at both the national and state level. In Texas, more than 25% of children were found to have experienced one adverse experience and 12% were found to have experienced between three and eight. This survey did not include experiences of abuse and neglect. TexProtects applied these 2016 numbers to the most current estimated Texas child population in 2017 (see *Figure 2*).

Figure 2: Estimated Prevalence of ACEs in Texas Children (2016) as Applied to the 2017 Population



Since the original ACE study, organizations, hospitals, clinics, and mental health professionals have created modified questionnaires to include other identified childhood adversities (e.g. death of a parent, environmental factors, inability for the family to afford food and housing, experience of war, etc.). Health professionals and agencies are using these assessments to fill in the knowledge gap regarding the prevalence of childhood adversity in individuals at the national, state, and community levels. Other surveys are used as screening tools to guide those in the helping professions in providing adequate care for their patients and clients (see *Screening Tools*).

National Survey of Children's Health Results (Texas vs. National)

The most current weighted data from the National Survey of Children's Health (NSCH) asked select households from across the United States to self-report on a multitude of indicators related to the specific health and wellbeing of one child in the household.[12] NSCH collects the data from their survey in a comprehensive database showing the prevalence of ACEs in children at the national and state levels. The Health Resources and Services Administration (HRSA) Maternal and Child Health Bureau (MCHB) funds and directs the survey. In 2016 and 2017, a revised version of the survey was conducted through the mail by the Census Bureau and is in progress for 2018.[10] TexProtects uses the 2016 NSCH data

throughout this report as a way to compare the prevalence of ACEs and their related negative outcomes in Texas children to those documented nationwide. Although 2017 data has been released, not all indicators are weighted to provide accurate estimations at the state and national level.

The survey asks nine questions related to childhood adversity, including five questions from the original ACE study (not including child maltreatment) and four additional questions that NSCH determined were also prevalent childhood adversities.[12]

In 2016, an estimated 3.4 million Texas children experienced 1 or more childhood adversities.

NSCH asked respondents to identify to the best of their knowledge whether their child EVER experienced any of the following:[11]

Original ACE study questions:

a) Parent or guardian divorced or separated
b) Parent or guardian served time in jail
c) Saw or heard parents or adults slap, hit, kick, punch one another in the home
d) Lived with anyone who was mentally ill, suicidal, or severely depressed
e) Lived with anyone who had a problem with alcohol or drugs

Additional NSCH ACE questions:

f) Treated or judged unfairly because of his or her race or ethnic group
g) Parent or guardian died
h) Was a victim of violence or witnessed violence in his or her neighborhood

Respondents were also asked to indicate i) whether they were able to afford the food and housing that they needed in the past year, which was an additional ACE question on basic needs included in the results.

NSCH estimated in 2016 that more than 1.6 million Texas children had experienced two or more childhood adversities, which is 10 percentage points above the national average (see *Figure 3*, *Table 1*, and *Appendix B*).[12,24]

Figure 3: ACEs Comparison - Texas vs. Nation (2016)[12]

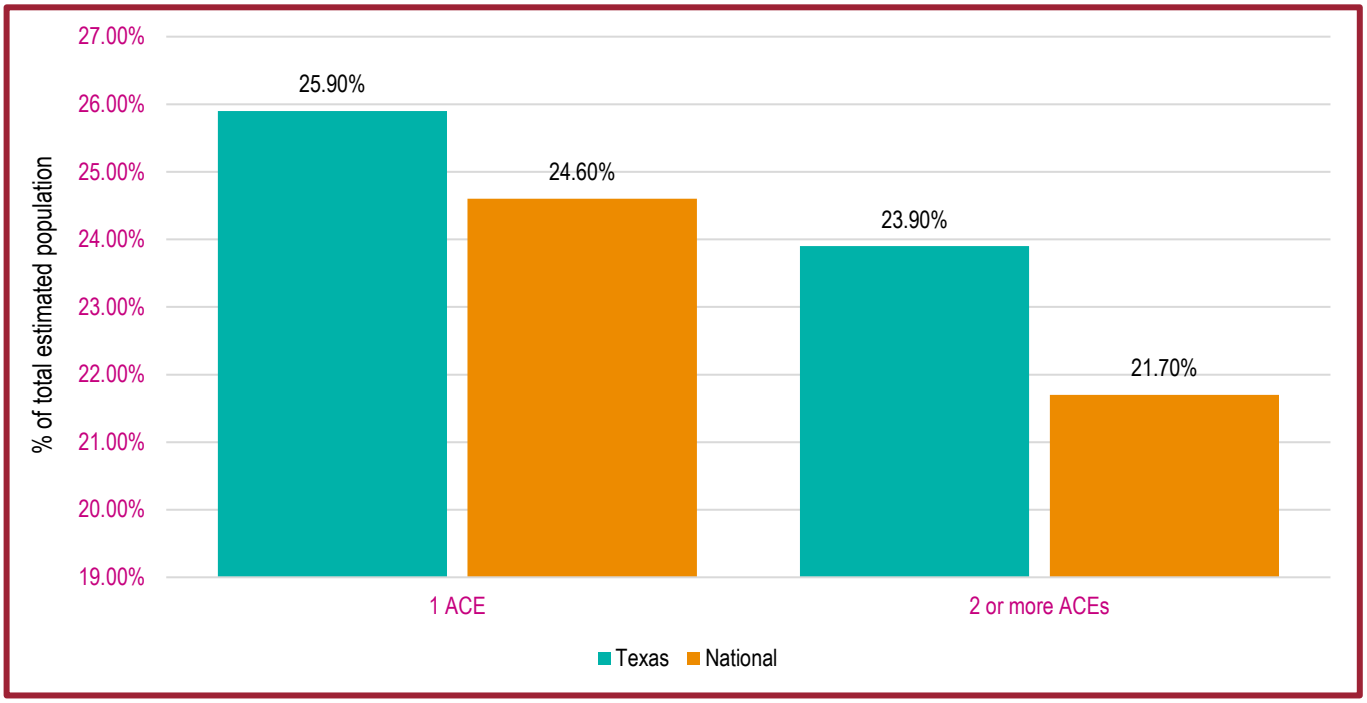


Table 1: Prevalence of Specific ACEs in Children—Texas vs. Nation (2016)[12,a]

Questions Taken from the Original ACE Study	Texas	National
Parent or guardian divorced or separated	27.2%	25%
Parent or guardian served time in jail	9.2%	8.2%
Saw or heard parents or adults slap, hit, kick, punch one another in the home	7.4%	5.7%
Lived with anyone who was mentally ill, suicidal, or severely depressed	6.9%	7.8%
Lived with anyone who had a problem with alcohol or drugs	11%	9%
Additional ACEs Questions Identified by NSCH	**Texas**	**National**
Parent or guardian died	3.7%	3.3%
Was a victim of violence or witnessed violence in his or her neighborhood	4%	3.9%
Treated or judged unfairly because of his or her race or ethnic group	4.7%	3.7%
Parent or guardian has a tough time covering food and housing on the family's income (very often)	7.1%	6.4%

Prevalence of Child Abuse and Neglect

The 2016 NSCH survey did not include data on child abuse and neglect (half of all surveyed original ACEs). Instead, statistics on confirmed cases of child abuse and neglect are through state agencies and through the National Data Archive on Child Abuse and Neglect (NCANDS). These numbers must be taken in stride, however, as many child abuse and neglect cases go unreported.

The Texas Department of Family and Protective Services (DFPS) confirmed more than 63,000 children as victims of abuse in 2017, an 8% increase from

[a] Does not include the fives ACEs of child maltreatment.

2016.[13] Of those victims, almost half were under the age of 5. The state confirmed 172 child fatalities due to child maltreatment in 2017.[13] After an investigation by Child Protective Services (CPS), 19,782 children were in foster care and 23,460 families were referred to community and in-home resources and support (Family Based Safety Services, or FBSS). More than 10% of families who had received services related to child maltreatment through protective services had another confirmed case of child abuse or neglect within one year, the five-year recurrence rate jumps to 16.8% (see related costs in *Economic Impact*).[13,14] DFPS no longer releases one-year recurrence rates in their annual Data Book.

In 2017, Texas confirmed more than 63,000 children as victims of child maltreatment.

Behavioral Risk Factor Surveillance System

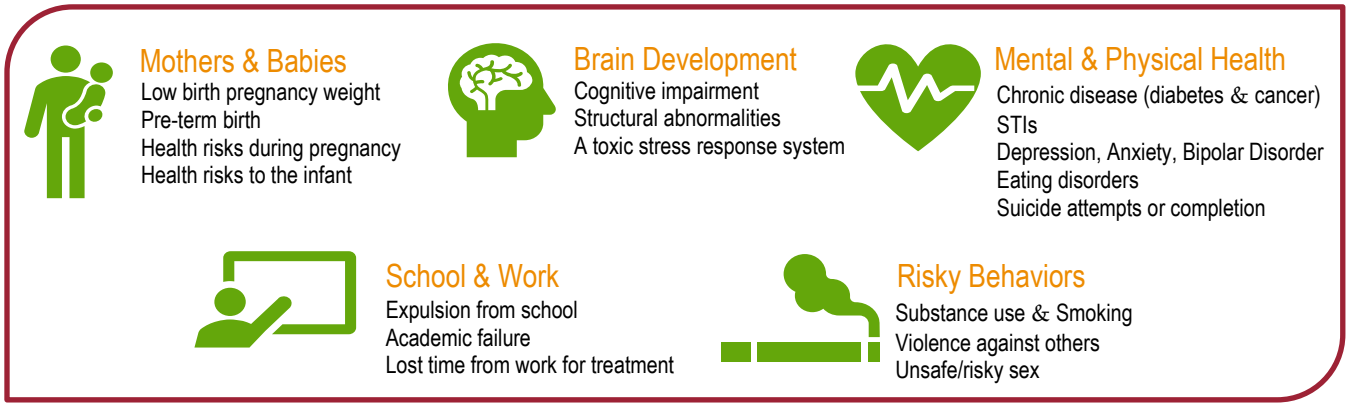
The Behavioral Risk Factor Surveillance System (BRFSS) is the CDC's collection of state- and territory-specific data on chronic health conditions, health-related risk behaviors, and use of preventative services.[15] Through the BRFSS, some states have also begun collecting data on childhood adversity. The CDC adapted the original Wave I ACE study into an optional survey module asking about child abuse and household challenges during an adult's first 18 years of life, leaving out questions about neglect.[16] In 2010, a record number of states included this module in their state-specific BRFSS surveys: Hawaii, Maine, Nebraska, Nevada, Ohio, Pennsylvania, Utah, Vermont, Washington, and Wisconsin. Washington, D.C. also added the module.[16] The combination of state-reported findings were similar to those of the original Wave I ACE study, with almost two-thirds of surveyed adults reporting at least one ACE. More than one in five respondents said they had experienced three or more adversities as children.[16]

As early as 2002,[17] Texas began including the ACEs module in its annual state-specific BRFSS surveys intermittently. Most recently, the state included this module in the 2015 Texas BRFSS survey, but has not included it since then.[6] To more accurately calculate the prevalence of ACEs in Texas, the state should consider adding the ACEs BRFSS module to the state-specific questionnaire each year.

The Impact of ACEs

Since the initial ACE study,[3] research has looked at how trauma resulting from ACEs affects brain development, academic and career achievement, and immediate and long-term health.[6] Children who experience ACEs can have immediate emotional, behavioral, and physical consequences. Negative health risks associated with ACEs also follow a person well into adulthood. Maternal ACEs can affect the mother and child during conception, pregnancy, and postpartum stages (see *Figure 4*).[6,18]

Figure 4: Potential Effects of ACEs Through the Lifespan



Impact on Wellbeing Through the Lifespan

The Impact of Toxic Stress on Health Outcomes

Studies have found that the trauma resulting from ACEs can change the structure of a child's brain and become hardwired into the overall biology of a child through the genes in their DNA.[20] A child's neural circuits for handling stress are especially malleable, or plastic, during their gestational and early childhood development. The child's early experiences can shape how actively these stress circuits switch on and how well they can be contained and shut off.[20]

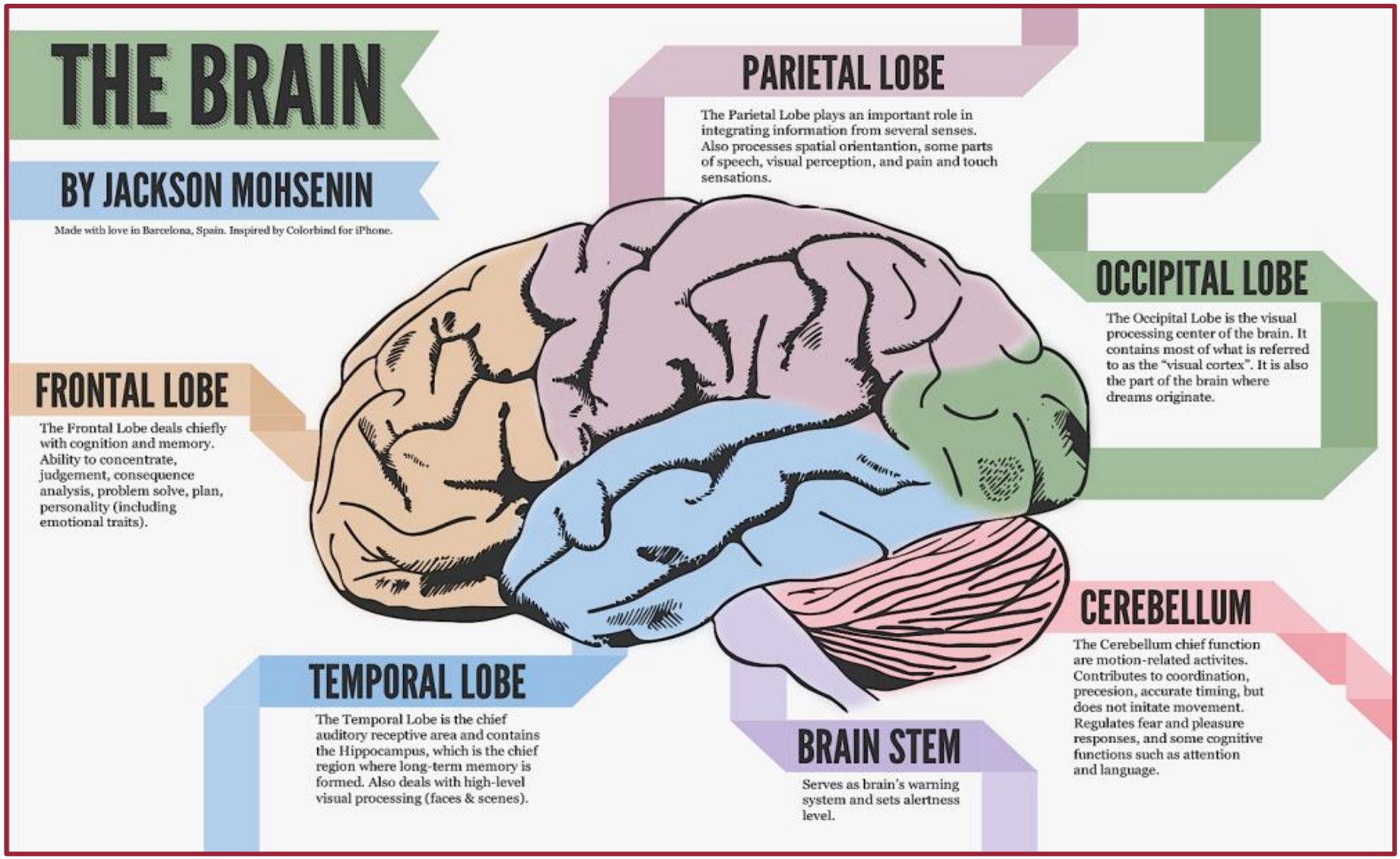
Learning how to deal with mild to moderate stress, or **positive stress**, is a healthy part of a child's development. When a child feels threatened, their neural circuits prepare their body and brain to protect themselves by increasing their heart rate, blood pressure, and stress hormones (e.g. cortisol, epinephrine, and norepinephrine). This physiological response is known as the "flight, fight, or freeze" response. However, the child's stress response can become prolonged if the child has inadequate support and coping mechanisms to help them deal with chronic, uncontrollable circumstances.[19]

A prolonged stress response can lead to **toxic stress** (see graphic to the right), where the brain is then continuously flooded with potentially harmful stress hormones and the development of their brain architecture and other organs can be impaired.[20] Toxic stress due to childhood trauma related to ACEs can also affect gene expression and development of a functional immune system.[21] This prolonged response can increase the risk for stress-related disease and cognitive impairment throughout a child's life.[20]

Some studies have shown smaller brain volumes in children with maltreatment-related trauma and Posttraumatic Stress Disorder (PTSD).[22] Additionally, the brain's prefrontal cortex (at the front of the frontal lobe, see *Figure 5*) is the brain region that is most susceptible to damage during childhood and early adolescence.[23] Studies have indicated childhood maltreatment and its resulting trauma may result in a lower volume and abnormally matured prefrontal cortex.[22] This part of the brain plays a major role in higher level motor control, control of inhibitions, attention, memory, expression of personality, emotion and motivation regulation, and managing learned social behavior.[35] Child maltreatment and the resulting trauma may also result in less-developed grey matter—a major component of an individual's central nervous system.[22,23]

Other areas of the brain have also shown to be negatively affected by trauma related to child maltreatment, for example, a) the cerebellum, which sits at the back of the skull and regulates muscular activity; b) hippocampus located in the temporal lobe, which is responsible for learning and memory; c) the amygdala, also in the temporal lobe, which controls emotional processing, assessment of threatening information, behavioral regulation, fear conditioning, and memory of emotional events; d) the corpus callosum, which connects the left and right brain and facilitates communication of emotion and higher cognitive processes between the two sides; and other parts of the brain.[35]

Figure 5: The Regions of the Brain



Immediate Impact on Children

In addition to long term effects on behavior and health, ACEs can begin to impact a child's life immediately after the adverse event. The 2016 National Survey of Children's Health (NSCH) looked at negative mental, physical, and behavioral outcomes as they correlated to children with ACEs.[12] Other research has also studied these negative short-term impacts.[19,24]

Behavioral and school-related challenges

The effects of trauma can often present as behavioral, social-emotional, and academic difficulties, as well as lowered IQ, significant impairments in short- and long-term memory, and attention deficits[12,35] that will impact the rest of a child's life.[24]

Compared to those with no reported ACEs, children (ages 3 through 5) with two or more ACEs are over four times more likely to experience three or more social and emotional challenges (see graphic to the right).[24] Two-thirds of children (ages 6 through 17) nationwide who bully, exclude other children, or are themselves bullied, have experienced one or more ACE.[12] Almost 40% of children (ages 6 through 17) in Texas who have two or more ACEs are bullied, picked on, or excluded by others.[12]

Beginning with kindergarten, 17.2% of children (ages 6 through 17) in Texas with two or more ACEs have repeated a grade, as compared to 2.7% of children with no ACEs.[12] Research has also found that on average, children (ages 3 through 5) who experience ACEs have a 75% chance of being expelled from preschool.[19] And school-aged children with at least three ACEs are three times more likely to fail academically, five times more likely to have low school attendance, six times more likely to have behavioral issues, and four times more likely to have health challenges. [19,25]

Texas children—2 or more ACEs:

- 6.3x more likely to have repeated a grade
- 3x more likely to have 2 or more chronic health conditions
- 4.4x more likely to have visited the emergency room more than once

Physical health challenges

NSCH reported that children[b] who have experienced at least one ACE are more likely to have a chronic medical condition that requires routine healthcare services.[26] From an NSCH list of 27 possible health conditions,[c] 31% of children in Texas who have experienced two or more ACEs also have two or more chronic medical conditions, compared to 10.5% of children with chronic conditions who have not experienced adversity. In Texas, just over 59% of children with two or more ACES have no medical home where they can receive coordinated, ongoing, comprehensive care throughout their childhood, as compared to half of children with no ACEs.[12] Compared to children with no ACEs, Texas children who have two or more ACEs are 4.4 times more likely to have visited the emergency room at least twice in their lifetime.[12]

Child maltreatment and other ACEs

Three-fourths of former foster youth report experiencing more than five ACEs.[27,28] Children at risk for, or who have already experienced, child maltreatment compounded with other ACEs are more than twice as as likely to have health complaints than those with no child maltreatment ACEs.[19] These children are nearly four times more likely to have an illness requiring a physician's care.[19,29] Between 50% and 80% of children in foster care also meet criteria for mental health disorders[30] and 23% experience concurrent mental health disorders.[28]

U.S. child victims of maltreatment:

- 2x more likely to have health complaints
- 4x more likely to have an illness requiring a physician's care

Long-term Impact on Adults

Mental Health Challenges

Studies have linked childhood adversity to long-term adult mental health challenges such as depressive disorders, anxiety, social phobias, bipolar disorder, and eating disorders.[8,31] The more a person has been exposed to childhood adversity, the more negative behavioral and mental health outcomes they are likely to face. those with multiple ACEs are significantly more likely than individuals with no ACEs to report low life satisfaction, frequent depressive symptoms, and anxiety.[31] Those with six or more ACEs are 2.7 times more likely to attempt suicide, 3.7 times more likely to report drug use, and 2.8 times more likely to report moderate to heavy drinking.[31]

Adults—6 or More ACEs:

- 2.7x more likely to attempt suicide
- 3.7x more likely to report drug use
- 2.8x more likely to report moderate to heavy drinking

[b] NSCH defines children as ages 17 and under, unless otherwise noted.

[c] List of health conditions: a) allergies; b) arthritis; c) asthma; d) blood disorders; e) brain injury/concussion/head injury; f) cerebral palsy; g) cystic fibrosis; h) diabetes; i) Down Syndrome; j) epilepsy or seizure disorder; k) genetic or inherited condition; l) heart condition; m) frequent or severe headaches/migraines (age 3-17); n) Tourette Syndrome (age 3-17); o) anxiety problems (age 3-17); p) depression (age 3-17); q) behavioral and conduct problem (age 3-17); r) substance use disorder (age 6-17); s) developmental delay (age 3-17); t) intellectual disability (age 3-17); u) speech/other language disorder (age 3-17); v) learning disability (age 3-17); w) other mental health condition (age 3-17); x) Autism or Autism Spectrum Disorder (age 3-17); y) Attention Deficit Disorder or Attention-Deficit/Hyperactivity Disorder (age 3-17); z) hearing problems; and/or aa) vision problems.

Other symptoms are also tied to ACEs, such as panic reactions, hallucinations, sleep disturbances, memory disturbances, poor anger control, and impaired stress response.[33] Throughout their lifespan, individuals who have one or more ACE show an increased likelihood of social difficulties such as interpersonal challenges, violence and victimization, incarceration, and impaired performance at school and work.[8] Exposure to childhood adversity has been found to increase low self-esteem, low self-adequacy, emotional instability, and a negative world view.[8]

While all these negative outcomes are unfavorable, depression is one of the most concerning, as it has been found to lower life expectancy by as much as 28.9 years—about twice as many as the years lost to early death from chronic illnesses.[32,33] Depression also is a primary risk factor for suicide.[32,33] Depression is most strongly linked to the ACEs of emotional abuse, emotional neglect, and household mental illness.[32,33]

Emotional abuse and neglect and parental mental illness can result in depression later in life, which lowers life expectancy by as much as 28.9 years.

Behavioral and Physical Challenges

An increasing exposure to ACEs multiplies the chances of adults engaging in risky behaviors and experiencing disease.[34] Brain studies on children and adults who have a history of early childhood maltreatment suggest links between child abuse and deficits in impulse control and processing emotions.[35] Adults may adopt compensatory high-risk behaviors that can further erode their mental, behavioral, and physical health.[21] For example, trauma can change the neural circuits that regulate stress and negative emotions. As a result, individuals with ACEs may become more susceptible to using substances as a coping mechanism to compensate for their biological differences.[36]

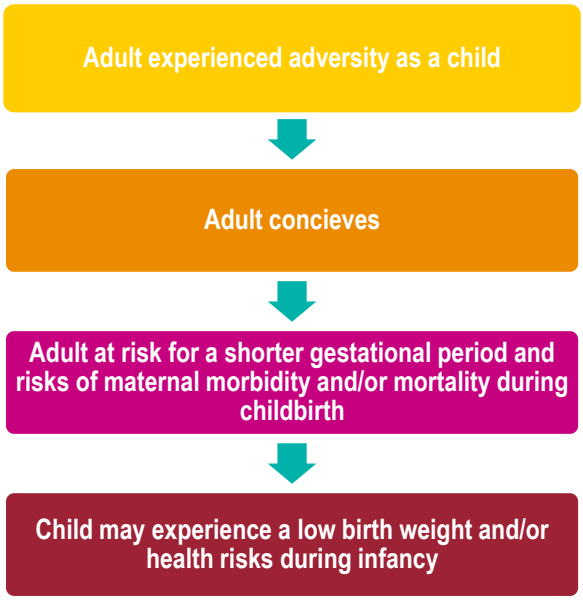
A systematic review of 42 studies found that individuals reporting a history of ACEs engaged in various health-risk behaviors.[37] These individuals were more likely to smoke,[38,39] binge drink,[40] and use substances.[41] Sexual abuse had the strongest association with sexual risk behavior, delinquency, and suicidality when compared to other combinations of ACEs.[42] Furthermore, individuals with ACE histories were more likely than individuals without ACE histories to engage in risky behavior at vulnerable times in their development, such as during pregnancy and adolescence.[36,43] Changes in brain chemistry and architecture result in increased prevalence of these risky behaviors in populations exposed to adversity.

With or without risky behaviors, adults with ACEs are much more likely to suffer the effects of chronic illness, disease and disability. To be specific, an individual's indication of four or more ACEs is associated with increased odds for diabetes, myocardial infarction, coronary heart disease, stroke, disability caused by health, and use of special equipment because of disability.[37]

Adults with 4 or more ACEs are at higher risk of heart disease, diabetes, and stroke.

Intergenerational Impact from Maternal ACEs on Health

Emerging research also suggests that **maternal ACEs**, a mother's childhood trauma, impacts reproductive health.[46,47,48] Trauma resulting from maternal ACEs can affect the mother's pregnancy and the child through their first few months of infancy. The more adversity a mother experiences in childhood, the more likely they will experience health risks during and post pregnancy, often resulting in negative health outcomes for their infant.[44] Maternal ACEs have been linked to perinatal depression and socioemotional problems for infants less than six months old.[45,46]



The effects of ACEs on the mother can carry through to their children. Mothers who experienced the ACEs of parental incarceration, substance use, or household mental illness are more likely to have a child with at least one developmental risk factor as identified by the Parents' Evaluation of Developmental Status (PEDS) assessment (e.g. problems using arms and legs, problems using hands and fingers, slow to use language, etc.), compared with mothers with no adverse experiences.[47] Mothers who use substances, smoke cigarettes, and/or have psychological disorders as a result of ACEs have reported reduced birth weights and shortened gestational periods for their infants.[48] Compounding the intergenerational effects of ACEs (see the graphic above and to the right), pregnant mothers with behavioral risk factors such as substance use dependencies—and other ACE-related health outcomes such as hypertension, diabetes, and obesity—are at higher risk of severe maternal morbidity or mortality.[49,50,51,52]

Adverse Childhood Experiences are common, highly interrelated, and exert a powerful cumulative impact on human development, which becomes evident in problems across the lifespan.[6,18,53,54]

Economic Impact

The United States and Texas suffer from a tremendous economic cost due to negative outcomes of child maltreatment and other ACEs, as evidenced by current financial analyses on both direct and indirect costs. Negative emotional, behavioral, and physical outcomes of ACEs cost trillions of dollars nationwide, according to various financial analyses. Expenditures from social services, child welfare services, healthcare, adult criminal justice and juvenile justice, education, loss of productivity and an individual's lifetime earnings, and other business and workforce costs all can be correlated to negative health impacts from ACEs.[55] However, Texas data related to the comprehensive expenditures of ACEs are lacking and are needed in the future to calculate expenditures more representative of state costs.

Child Maltreatment Costs

The Perryman Group estimated Texas spent $451 billion on all social costs and lost earnings related to non-fatal child maltreatment.

Child maltreatment is one of Texas' costliest social issues—physically, emotionally, and fiscally. Although the linkage of child maltreatment to negative health outcomes should be enough to spur action in promoting policy to prevent and treat child maltreatment, efforts have been made to calculate the substantial fiscal cost in a comprehensive way. Direct child welfare services and social expenditures for services provided to children and families cost billions to trillions in Texas and the United States. The Perryman Group estimated the United States spent $5.84 trillion (2014 dollars) in total costs over the lifetime of those affected by just one year of child maltreatment in 2014 (see *Table 2* and *Appendix D*). The total lifetime social costs and lost earnings for Texas were estimated at $451 billion, including $3.5 billion in total health costs.[55]

Table 2: U.S. Total Lifetime Costs Related to Non-Fatal Child Maltreatment (2014)55

Impact on Business Activity	Real Gross Cost	Total Loss in Personal Income	Total Employment Years Lost	Total Costs
Lost earnings	$2.1 trillion	$1.3 trillion	22 million	**$4.7 trillion**
Educational	$45.3 billion	$27.5 billion	457,936	**$99.2 billion**
Adult crime	$27 billion	$16.4 billion	273,250	**$59.2 billion**
Juvenile crime	$11.1 billion	$6.7 billion	113,010	**$24.4 billion**
Social welfare	$42.5 billion	$25.8 billion	430,037	**$93.2 billion**
Adult health	$109.7 billion	$74.5 billion	1.2 million	**$223.5 billion**
Childhood health	$270.9 billion	$184 billion	3.1 million	**$552 billion**

The CDC estimated the average national per-person cost of child maltreatment was $830,928 in 2015.[d] The lifetime cost for each child fatality due to abuse or neglect was estimated to be $16.6 million.[e,56]

TexProtects estimates Texas spent $52.9 billion in lifetime costs associated with confirmed child abuse and neglect victims in 2017.[f] *Table 3* shows the number of children or families served by child welfare services, the cost of providing services to each child or family, and the total cost of services.

Table 3: Cost of Texas Child Welfare Services in 2017[g,57,13]

Services	Number in 2017	Cost of each	Total Cost 2017
Confirmed Victims	63,657	$830,928	$52.9 billion
Fatalities	172	$16,615,186	$2.9 billion
Placements in Foster Care	19,782	$32,904	$650.9 million
Families referred to FBSS	23,460	$3,868	$90.7 million
Investigations	174,740	$1,403	$245.2 million

The 85th Texas Legislature's *General Appropriations Act* calculated DFPS would receive more than $1.75 billion in spending on Child Protective Services and direct child maltreatment for the 2019 fiscal year. The dollars are funded through the state's general revenue fund and federal funding and grants.[58]

Texas Child Protective Services will spend an estimated $1.75 billion in the next fiscal year.

To calculate a more accurate cost of child maltreatment and other ACEs in Texas, the state should consider analyzing current data on the costs of substance use, mental illness treatment, incarceration, and domestic violence using either CDC or Perryman Group methodologies.

[d] This value includes intangible costs due to pain, suffering, and grief attributable to the child maltreatment experienced among victims and communities.
[e] This value includes estimates of short- and long-term health care costs, child welfare costs, criminal justice costs, and special education costs.
[f] Estimates calculated using CDC estimated costs and a report from the DFPS 2018 Prevention Task Force.
[g] This table does not include other direct costs related to child maltreatment.

Programs, Approaches, and Community Efforts to Prevent and Treat ACEs

The main goal of ACEs prevention and treatment efforts is to build resiliency in children and families, and the communities in which they reside. TexProtects defines **resiliency** as the ability of a child, family, or community to recover, heal, and grow in a functional, healthy, adaptive, and integrated way over the passage of time after facing challenging and stressful situations.[59] Resiliency allows for children and adults to build coping skills to combat symptoms of trauma related to ACEs.[60] Creating community environments that support families and children, and that promote positive family communication, routines, and habits, can be powerful protective and treatment factors for children who have experienced adversity.[19,47,61]

Resiliency is the ability of an individual or community to recover, heal, and grow in a functional, healthy, adaptive, and integrated way over the passage of time after facing challenging and stressful situations.

The National Survey of Children's Health (NSCH) measures a family's resilience through their ability to a) talk together about what to do when the family faces a problem, b) work together to solve the problem, c) know they have strengths to draw on when facing a problem, d) stay hopeful even in difficult times, and e) afford basic needs like food or housing. In Texas and nationwide, children who have two or more ACEs live in families who report meeting none to one of the above indicators at a rate three times higher than those who have no ACEs.[12]

NSCH found that children and families who live in poverty and unsafe or rundown neighborhoods, and caregivers who do not feel that they have emotional support for parenting, are less likely to have high rates of resiliency. These and other social determinants can also affect the occurrence of childhood adversity. In Texas, children who have two or more ACEs are two times more likely to live in families whose income falls below 99% of the poverty level.[12] Children in Texas who have two or more ACEs have caregivers who report living in unsafe neighborhoods three times more than those who

Texas Children—2 or More ACEs:

- 2x more likely to live in households living below 99% of the poverty level
- 3x more likely to live in unsafe neighborhoods
- 2.6x more likely to live in a community with poorly kept or dilapidated housing
- 1.5x more likely to live in an unsupportive neighborhood or community

have not experienced adversity.[12] Texas children with two or more ACEs are almost three times more likely to live in poorly kept or dilapidated housing than those without ACEs.[12] The rate of Texas children who have two or more ACEs living in unsupportive communities is one-and-a-half times more likely than those who do not have ACEs. In Texas, 32.1% of caregivers who have children under the age of 17 report feeling they have no emotional help with parenthood, as compared to 24.7% of caregivers nationwide.[12]

The early support of a caring adult can build a child's resiliency and prevent/mitigate the damaging effects of stress responses to ACEs.

The most effective ways of addressing trauma and toxic stress, and creating healthier children and families, requires supportive community environments that allow for full engagement of families in building resiliency skills so that they may best care for their children.[24] Research has shown that a supportive, responsive relationship with a caring adult, introduced early in life, can build a child's resiliency and prevent or mitigate the damaging effects of a child's stress responses to adverse experiences.[61] Secure attachment of children to their caregivers is an important protective factor and essential in building resiliency against ACEs.[62,63,64,65] Two other core protective factors are associated with building resiliency in the child: a) the child's individual capacities and b)the sense of belonging a child has with other individuals and supportive community environments (including faith and cultural communities).[64,65]

Researchers have identified three important ACEs prevention strategies that include community involvement to build resiliency: a) identify effective community strategies to bring about change, b) align community network structures, and c) build a collective capacity to support and implement those strategies.[66] Throughout Texas, this will require a multisystemic framework that encourages stakeholder collaboration across all sectors (see graphic to the right).

To have an effective community-wide impact, implementing collaborative prevention strategies to build resiliency and prevent ACEs will also require long-term coordination, leadership, infrastructure, and communication support.[66] Texas should invest in all levels of prevention efforts to build resiliency at the individual, family, and community levels. These efforts should include collaboration among multiple private and public systems and the support and further implementation of trauma-informed, evidence-informed programs (see *Figure 6*).

Figure 6: Ways to Build Resilience in Texans

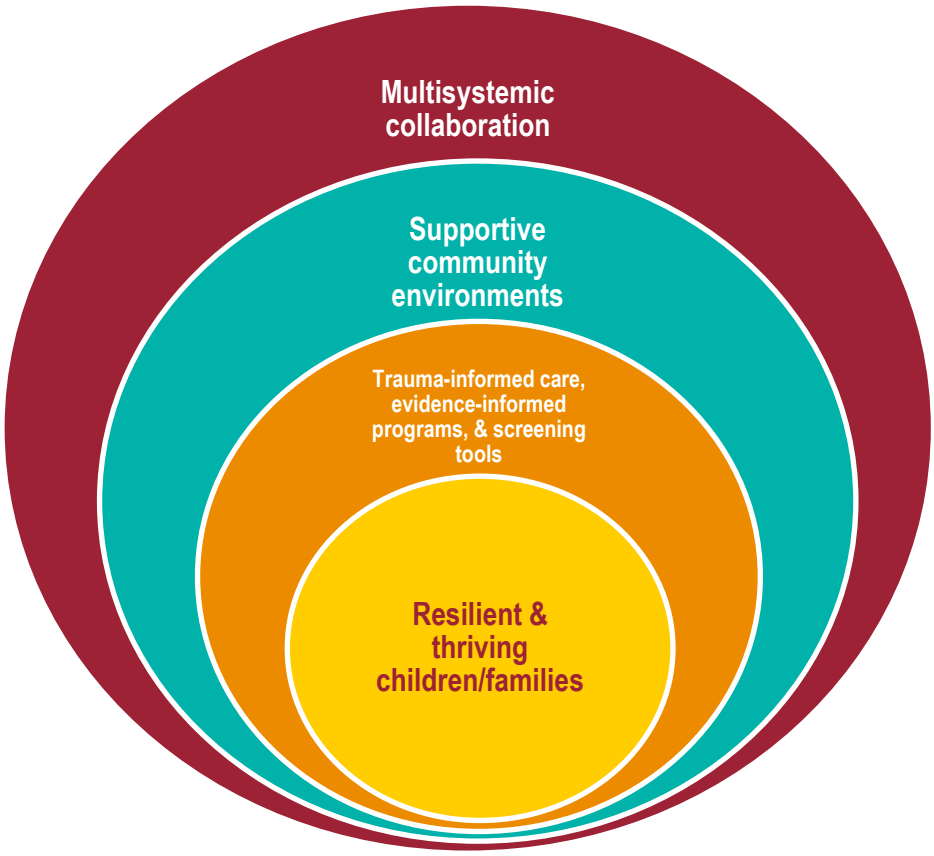
Initiatives, such as the Building Community Resilience Collaborative and the Texas Children's Commission's Statewide Collaboration on Trauma-Informed Care, are working to build multisystemic, collaborative frameworks to address ACE-related trauma and negative social determinants of health in children's and families' communities. Texas must view ACEs as a multisystemic public health issue. **Multisystemic approaches** can create solutions to the problems that affect all systems that impact a child's life (e.g. school, religious community, government, healthcare). They see building resiliency and prevention of adversity as a public health issue—one that involves more than hospitals and other medical services. Karen DeSalvo, former U.S. Department of Health and Human Services assistant secretary for health, defines public health as "what we do together as a society to ensure the conditions in which everyone can be healthy."[67,68]

> **Public health is what we do together as a society to ensure the conditions in which everyone can be healthy.**
>
> **—Karen DeSalvo**

Texas must also view preventing and treating ACEs as a public health issue. It will take collaboration across multiple sectors—including government, nonprofit, philanthropic, business, and more—to prevent and treat not only childhood adversity, but the environmental and social factors that can lead to ACEs. These **cross-sector collaborations**, informed by a multisystemic public health lens, take advantage of each stakeholder's diverse area of expertise and resources. Stakeholders then jointly work together to ensure the health and safety of children and families. A Texas multisystemic collaboration to prevent and treat ACEs will foster supportive community environments, which in turn foster trauma-informed, evidence-informed programs and screening tools. This chain

of support will result in resilient and thriving children and families (see *Figure 7*). Society is positively impacted when children are raised in thriving families and

Figure 7: Systems of Building Resiliency from a Public Health Lens



supportive communities that prevent and treat ACEs.[19] TexProtects believes building resiliency in children and families is a public health issue that touches all economic, educational, social, government, and environmental systems.

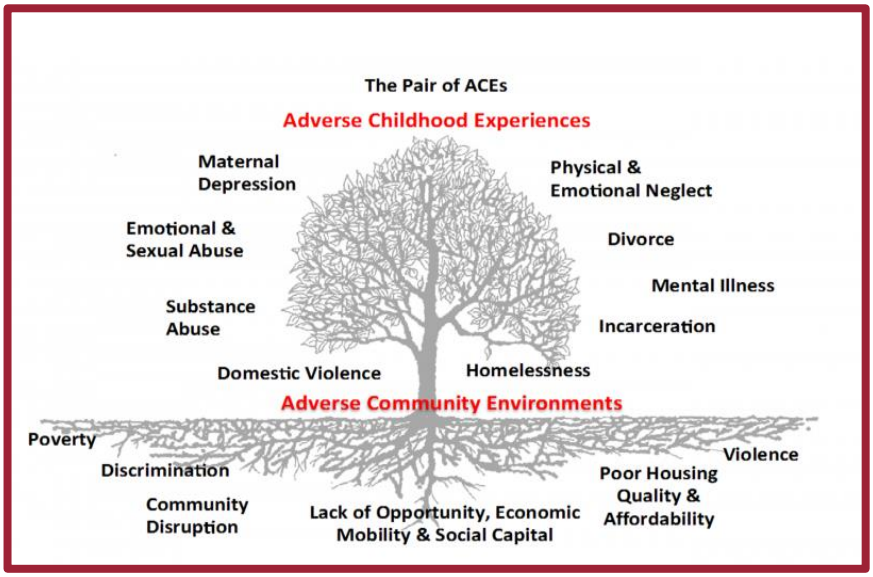
Frameworks for Cross-Sector Collaboration

Not much evidence-informed guidance exists on how to create collaborative, cross-sector and community-based informed partnerships to prevent and treat ACEs.[69] However, many communities are working by trial-and-error to implement and fund programs that bring together community, medical and mental healthcare, juvenile justice, child welfare, environmental, government, and school organizations. Texas can learn from already-developed models like the example initiatives discussed in this section to create a collaborative community that uniquely fits Texas' needs.

Building Community Resilience

The Building Community Resilience Model (BCR) emphasizes that preventing childhood adversity and building resiliency is about true systems change. BCR provides a process through which community, public, and private services can collaborate to create supportive community environments and prevent what the group calls the "Pair of ACEs."[70] Wendy Ellis and the BCR Collaborative, through the Milken School of Public Health at George Washington University, designed the "Pair of ACEs" tree (see *Figure 8*) to refer to both Adverse Childhood Experiences and **adverse community environments**, which are neighborhoods steeped in systemic inequities (e.g. lack of affordable and safe housing, limited access to social and economic mobility, violence, etc). The BCR collective asserts that the Pair of ACEs compound one another and create an increasingly negative cycle of "ever worsening soil that results in withering leaves on the tree."[71]

Figure 8: The Pair of ACEs Tree71



The BCR model is based on four sets of individual and community adaptive capacities (see graphic to the right)., including a) the community's ability to sustain economic development; b) community residents' possession of **social capital**, or the social networks and supports that include family and other community members; c) community member-social services communication; and d) **community competence**, or the ability to collaboratively set and achieve goals related to civic engagement, self-management, and collective empowerment for community advocacy and engagement.[69]

The collaborative suggests introducing its process through a phased strategic implementation which allows coordinated efforts among medical and mental health providers, social services, and other private and public community-based partners.[70] Phase one of the model focuses on enabling child health systems and their stakeholders to assess their readiness for building community resilience. During this phase, communities work with BCR to build an infrastructure for cross-sector collaboration and gather data. In phase two, communities select and implement prevention programs aimed at addressing factors of toxic stress. Stakeholders work to leverage their expertise in their respective areas and share data on how to best work together to comprehensively address the Pair of ACEs.[69] The model is based on a two-year qualitative interview and focus group analysis that explored systemic barriers and gaps in service that hindered communities' abilities to address ACEs.

To help communities use this model, the BCR collaborative provides tools that help stakeholders navigate introducing policy and educating others on the Pair of ACEs. These tools, as well as direct consultation with the collaborative, help communities a) identify their strengths, b) develop a shared understanding on their specific adverse environments, and c) develop goals to change those environments and prevent and mitigate childhood adversity. The collaborative is currently piloting this model in Cincinnati, Ohio; Oregon; Washington, D.C.; Alive and Well Communities Missouri-Kansas (MO-Kan); and through the Resilient Dallas initiative in Texas.[70]

Resilient Dallas

Dallas has collaborated with the BCR collective to help guide the city's Resilient Dallas strategy and organizational platform to address community parity (e.g. economic hardship and poor-quality living environments) and health disparities (see *Figure 9*). BCR provides direct technical assistance, learning opportunities, a communication platform, and policy support to the Dallas initiative.[72]

Resilient Dallas began implementation in the spring of 2017 through the 100 Resilient Cities (100RC) initiative and a partnership between the City of Dallas Office of Resilience and the Community Council.[73] The Rockefeller Foundation pioneered the 100RC initiative to encourage cities to create their own resiliency strategy. Some of the 100 cities are also using components of the BCR model. Currently, 100RC provides a) expert support for development of a resilience strategy; b) access to solutions, service providers, and partners from all sectors who will help implement the developed resilience strategy; and c) membership of a global network of 100RC cities to promote a bidirectional transfer of information.[73]

The Dallas BCR collaborative originally begun through Children's Health and then transitioned to the city of Dallas and Community Council in 2017. It focused on initiatives which address health disparities, economic hardships, and other ACEs.[61] Their Family University initiative educates caregivers about resources and opportunities for parenting support and how to access

Figure 9: Dallas City Resilience Framework[61]

Figure 10: Resilient Dallas—Goals*

*Not all goals shown

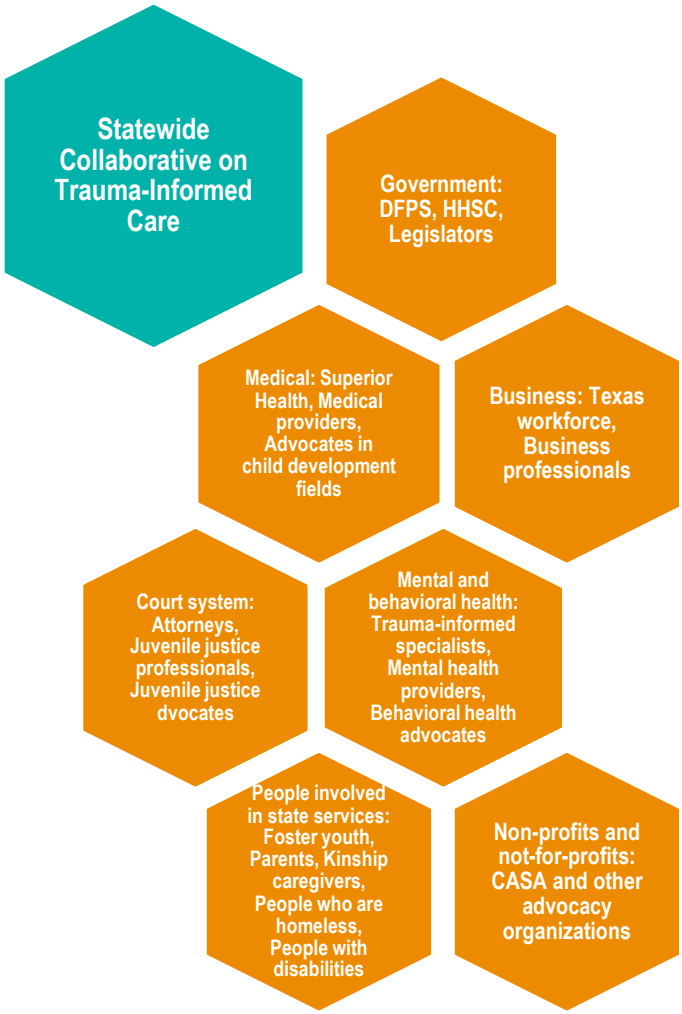
other programs.[72] Integrated Behavioral Health embeds behavioral health clinicians in pediatric medical teams so that they can intervene as soon as they identify the presence of ACEs. The initiative is connecting adolescents in their school settings to needed services through telemedicine and other technologies. Dallas also created a program focusing on increasing enrollment for low-income children in the Children's Health Insurance Plan (CHIP).[72] The Resilient Dallas partnership is working on implementing programs and informing policy to achieve their goals in the coming years (see *Figure 10*).

The Statewide Collaborative on Trauma-Informed Care

The Supreme Court of Texas Children's Commission has initiated a Statewide Collaborative on Trauma-Informed Care. The goal of the collaborative is to elevate trauma-informed policy in the Texas child welfare system by focusing on creating a statewide strategy to support: a) system reform; b) organizational leadership; c) cross-systems collaboration; and d) community-led efforts with data-informed initiatives to develop champions, consensus, and funding.

The collaborative was initiated in July 2017 following a study by the Meadows Mental Health Policy Institute on Trauma Informed Care in Texas. Workgroups have been established in each of the four focus areas. Workgroups include diverse stakeholders across multiple sectors (see graphic to the right). After the workgroups establish strategies toward their specific goals, the Children's Commission intends to publish a blueprint that will lay out a path toward a trauma-informed Texas, not just in the child welfare system but in all systems that impact children and families.

This model is an innovative and proactive way stakeholders from multiple systems can work collaboratively to analyze current practice and create a plan toward impactful, long-term, comprehensive change.



Trauma-Informed Approaches to Understanding and Treating ACEs

One way to combat ACEs across systems is to implement **trauma-informed approaches** to educating and providing aid to children and families who are at risk of child maltreatment and/or have experienced one or more adversities. Trauma-informed care approaches acknowledge that an individual's history of trauma may be influencing their behaviors, physical and mental health, and relationships.[74]

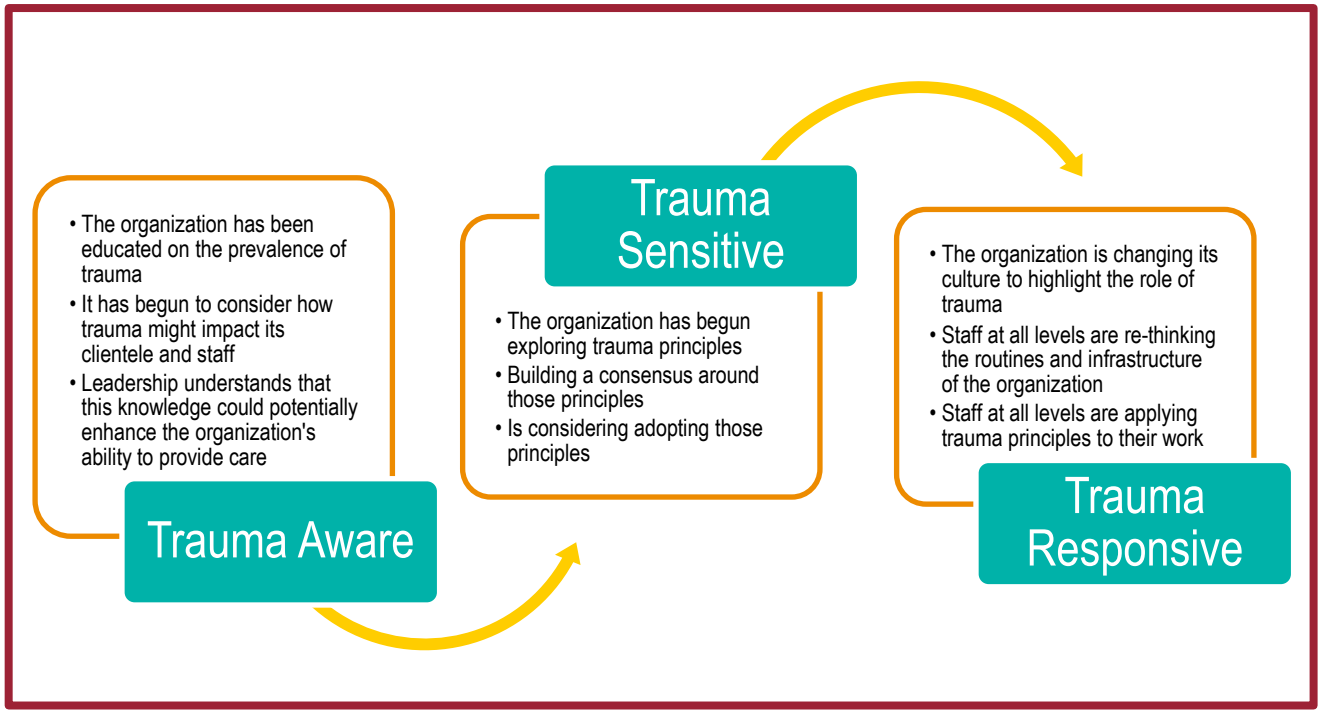
The Substance Abuse and Mental Health Services Administration (SAMHSA) has identified six core trauma-informed care principles that can be used across multiple settings to identify whether an approach is trauma-informed (see graphic to the right).[75,74] According to SAMHSA, programs that use these approaches seek to actively resist retraumatization of the individual by providing care that understands the widespread impact of trauma, appropriate paths to recovery, and signs and symptoms of trauma. These approaches respond by using knowledge about trauma to inform policies, procedures, and practices.[74] Trauma-informed approaches also address and provide support for the **secondary trauma** that staff could experience through working with individuals who have experienced childhood adversity and related trauma.

The Missouri Model of Trauma-Informed Organizations

The Missouri State Trauma Roundtable, consisting of public and community organizations, created the **Missouri Model** in 2014. The model is a set of informal and informational guidelines to help interested stakeholders determine how they should integrate trauma principles. The strategies also guide stakeholders in how to increase their level of trauma-informed care.[76] The model is built on the idea that implementation of trauma-informed approaches is an ongoing change process, not a program that can be implemented, left alone, and then monitored by a fidelity checklist. The model was built to ensure agencies: a) do no harm, b) continue to assess and increase the effectiveness of trauma-informed approaches, and c) develop a common language and framework for the discussion and awareness of trauma.[76] Organizations are

ranked as either: 1) Trauma-Aware, 2) Trauma-Sensitive, or 3) Trauma-Responsive (see *Figure 11* for the definitions of these terms). Communities and state-wide systems could apply this model to assess how organizations have implemented trauma-informed care training and approaches (see *Appendix E*).[76]

Figure 11: The Missouri Model Levels of Becoming Trauma Informed[76]



Trauma-Informed Training in Texas

Multiple trauma-informed care trainings exist for individuals working with children. Currently, Texas law requires child welfare, juvenile justice, and state hospital systems to provide trauma-informed trainings for professionals, staff, and caregivers. Texas does not mandate training for public education professionals, but the Texas 85th Legislature did pass laws in 2017 authorizing trauma-informed care training to count toward continuing education credits for teachers and principals (see *Texas Legislative Efforts to Address ACEs*).[77]

DFPS Trauma-Informed Care Training

The Department of Family and Protective Services (DFPS) offers a two-hour online training module for caregivers of children and social service providers. It is state-mandated that each foster, kinship, and adoptive parent receive trauma-informed care training each year;[78] however, they may take any training approved by the state, not only the DFPS training. Prospective foster or adoptive parents must also take a trauma-informed care training prior to getting their home verified or approved to foster/adopt a child,[78] but they are not required to use the DFPS training. Staff of child-placing agencies and residential

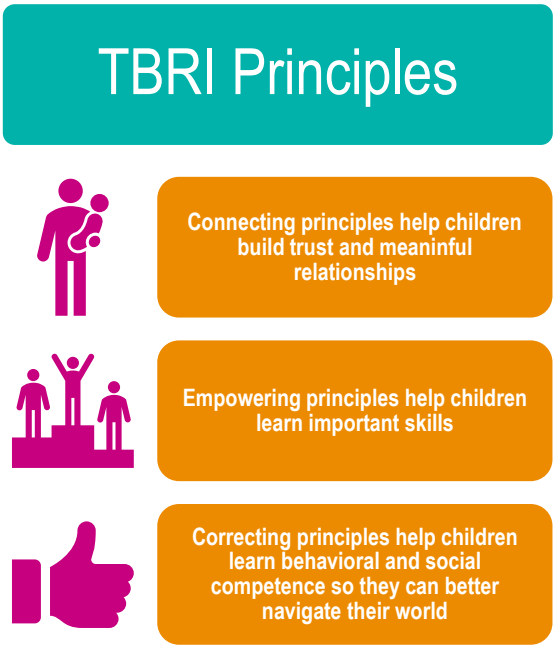
operations must also be trained in trauma-informed care.[78] This module seeks to foster greater understanding of trauma-informed care and toxic stress in children. The training is available online through the DFPS website for free. Mental health professionals can also take this online module for continuing education credits.[78]

DSHS Addressing ACEs through Trauma-Informed Care

The Texas Health and Human Services Commission (HHSC) and the Texas Department of State Health Services (DSHS) offer a training module on the Texas Health Steps website. It is available as continuing education for helping professionals.[79] The goal is to help medical and mental health providers recognize ACEs, toxic stress, and trauma. Participants also learn how to screen for health consequences of ACEs in children and adolescents and provide culturally-competent trauma-informed care. The program also instructs how to apply ethical guidelines for reported suspected abuse and neglect.[79]

Trust-Based Relational Intervention

Trust-Based Relational Intervention (TBRI) is a therapeutic model for caregivers of children age 17 and under and other child welfare stakeholders. TBRI is based on attachment theories, sensory processing, and neuroscience research.[80] Karyn Purvis, Becker Razuri, and colleagues found that introducing the TBRI model to caregivers of adoptive children significantly lowered scores for conduct problems, hyperactivity/inattention, and emotional concerns.[80] Research has also found that adoptive children had significantly lower anxiety, depression, anger/aggression, and posttraumatic stress arousal after the TBRI model was introduced to their caregivers.[80]



This training model, based on three main principles (see graphic above and to the right), educates caregivers and other child welfare stakeholders on how best to provide effective, trauma-informed support and treatment for at-risk children. Trainings are available online or face-to-face in groups and are used internationally in family homes, residential treatment facilities, group homes, schools, and camps.[81] In Texas, some private state contractors and child welfare organizations are using the TBRI model to help train stakeholders, including various local chapters of Texas CASA[82] and local residential and group homes in multiple cities.

ChildTrauma Academy

The ChildTrauma Academy started at the University of Chicago and then moved to the Baylor School of Medicine in Houston when the founder, Dr. Bruce Perry, became the Chief of Psychiatry at the school's Texas Children's Hospital. The academy is now independent from the medical school and is a not-for-profit. Perry created the *Neurosequential Model of Therapeutics* (NMT) and the *Neurosequential Model in Education* (NME) to educate mental health and school professionals about how to help them apply knowledge of healthy brain development and developmental trauma to their work.[83] Perry also created the *Neurosequential Model*-Sport training to help athletic coaches and trainers understand developmental trauma.[83]

While efforts have burgeoned across many Texas systems there is still a scarcity of best practice trauma-informed trainings and approaches that effectively work across systems to prevent ACEs. Efforts are underway in other states that can serve as models for Texas. For more information on in-state trauma-informed trainings, refer to the Trauma-Informed Care Consortium of Central Texas[84] and the October 2015 Texas CASA report *Understanding Trauma-Informed Care in the Texas Child Welfare System*.[85] Regarding out-of-state training programs, refer to the National Center for Trauma-Informed Care Training[86] and the Trauma Center.[87]

Screening Tools

As previously mentioned, home visitors, medical and mental health professionals, and other helping professionals are using modified in-person assessments of childhood adversity and/or resiliency to provide adequate, trauma-informed care to families and children. These tools are used across the social services, education, and health sectors; however, much of the assessed information about an individual is siloed in each organization's medical charts, clinical notes, etc. Finding systems for sharing this data across multiple sectors could avoid duplication of effort for organizations and families as well as minimize the retraumatization that can occur during screening conversations.

TexProtects believes ACEs and resiliency screening tools are useful for opening up the conversation of childhood adversity, adverse community environments, and protective factors with clients who are seeking help and resources. Screening for childhood adversity and resiliency provides practitioners with understanding of the potential needs of the child. However, screening alone is not enough. We must also train Texas clinicians how to prevent and treat symptoms of ACEs and provide support to children and families.

It is also important for practitioners to follow up with children and families after using screening tools so that clients can access appropriate resources catering

to their specific needs. However, not much evidence exists on the efficacy of most screening tools in their ability to encourage children and families to seek out much-needed resources.

The American Academy of Pediatrics (AAP) recommends routine screening for toxic stress and ACEs[88] but does not endorse or approve any specific screening tools. The AAP does provide access to some assessments for health providers through their Resilience Project webpage[89] and their Screening Time resource website.[90] The ACEs Connection website also provides a list of different types of ACE surveys.[91] These resources include information on separate ACEs surveys for assessing parents, children, and adolescents. Some tools are self-report; others are led by the practitioner during the checkup.

People's Community Clinic Pilot

Some clinics, such as People's Community Clinic (PCC) in Austin, are piloting studies to assess whether using screening tools are effective in getting clients connected to resources.[92] PCC has piloted the use of the Center for Youth Wellness Adverse Childhood Experiences Questionnaire (CYW ACE-Q)[93] combined with several questions designed to elicit family strengths. The clinic is comparing the tool with an approach that instead uses an information and resource foldout card developed by Futures Without Violence (see sample to the right)[94] to prompt conversations about ACEs-type stressors, instead of providing the questionnaire. Parents of children who are seen at the clinic are either given the CYW ACE-Q tool or the resource card during their visit.[92]

Like the original ACE study questionnaire from Vincent Felitti and Robert Anda,[3] The CYW ACE-Q calculates cumulative exposure to ACEs.

Simple Steps Reduce Stress

What can you do right now, today, to help yourself and your kids?

- Stop what you're doing for a few minutes and take some deep breaths until you feel calmer. Check out "Tactical Breather Trainer," a free cell phone app.
- Identify parenting issues that are especially stressful (like potty training, homework, or bedtime) and if someone can help or do those things for you.
- Talk with a trusted friend, family member, or find a support group for mothers or fathers to connect with other parents. Join an online parenting community (www.healthypace.com/parenting).

Positive Parenting

Sometimes you forget there are simple things you can do to connect with your child and help them feel loved. These activities also help build their brains and social skills and help them do better in school.

- ✔ Read, play imaginary games, and laugh with your child.
- ✔ Help your child talk about how they are feeling and find the words to describe their emotions.
- ✔ Help your child find something they are really good at.

Write down 3 positive things you did today with your child. You'll be able to see how your choices help you be a better parent and help your child thrive.

American Academy of Pediatrics
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FUTURES WITHOUT VIOLENCE
FuturesWithoutViolence.org

INSTITUTE FOR SAFE FAMILIES
www.instituteforsafefamilies.org

Every parent needs support at some point. There are great confidential, helpful, and nonjudgmental numbers to call 24/7. In addition, there is an app that can help too. Scan the code to the right for more information.

Childhelp: 1 800-4A-CHILD (422-4453)
If you are feeling frustrated or angry with your child or just need to talk

Treatment referral:
1 800-662-HELP (4357)
Referral service for substance abuse and mental health issues

National Fatherhood Institute:
www.fatherhood.org

The screening tool targets children and adolescents from birth to age 19. Parents of the child are asked to respond to 17-19 items that ask how many types of adverse experiences apply to their child, but the questionnaire does not ask them to mark the specific experiences that apply. The questionnaire is available in three versions: a) ACE-Q child and b) ACE-Q teen where the parent reports for the child/adolescent; and c) ACE-Q teen (self-report), where the adolescent reports for themselves.[93]

The "Connected Parents, Connected Kids" resource from Futures Without Violence includes information on 24/7 parent support lines, steps to reduce parental stress, tips on positive parenting, and markers of a strong family. The card also provides information on difficult childhoods and related health effects.[94]

The PCC pilot study assesses each tool for how easily the parents use and accept the tool, the ease of the provider's use and acceptance of the tool, and the number of referrals to family support resources that resulted from the use of each tool. The evaluation so far has found high levels of acceptability from both parents and providers for both approaches, although the levels were slightly higher for the resource cards. The study found no signifcant difference in the frequency of referrals to resources between the two tools.[92]

Safe Environments for Every Kid

Safe Environment for Every Kid (SEEK) is one screening model that is well-supported by research evidence. Texas SEEK is currently being implemented in Texas under the Healthy Outcomes through Prevention and Early Support (HOPES) initiative funded through the Department of Family and Protective Service's (DFPS) Prevention and Early Intervention (PEI) Program (see *Programs Implemented in Texas*, *Appendix G*, and *Appendix E* for more information, including cost estimates of implementation). The SEEK Parent-Questionnaire-R (PQ-R) screens for parental depression, parental substance use, parental major stress, intimate partner violence in the home, household food insecurity, and harsh child punishment.[109] The survey is completed in advance by the clients and then given to the SEEK-trained medical professional at the beginning of a routine checkup. The practitioner then makes appropriate referrals to resources already available in the community. The screening tool seeks to prevent child maltreatment, improve primary pediatric care, and provide a framework for medical professionals to identify and assess risk factors for childhood trauma. SEEK recommends administering the survey before regular checkups for the first five years of a child's life.[109]

Families who used SEEK had:

- 1.8x fewer instances of possible medical neglect
- 2.9x fewer delayed immunizations
- 1.5x less likely to have at least 1 CPS report

Research on SEEK implementation found that mothers given this assessment and then provided resources from their child's primary care physician reported less psychological aggression and fewer minor physical assaults against or by their partners and against their children during conflict.[95] Pediatricians who used this model report lower rates of child maltreatment in patients and fewer child protective services reports, instances of possible medical neglect, and children with delayed immunizations, as well as less harsh punishments as reported by parents.[96]

WHO and the ACE International Questionnaire

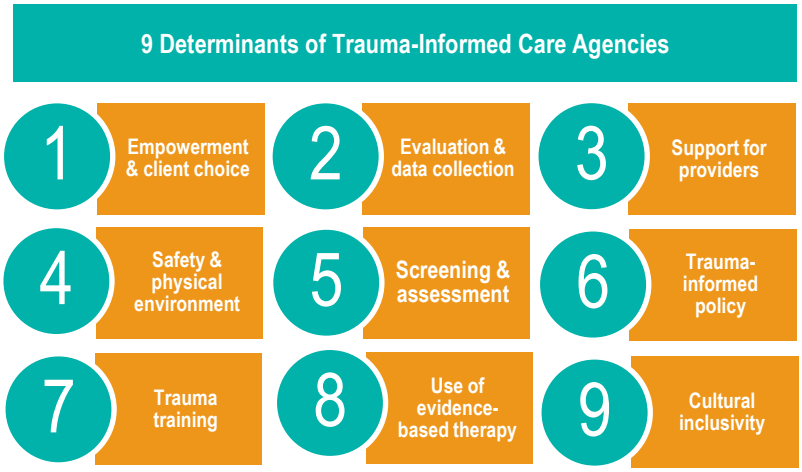
The World Health Organization (WHO) created the ACE International Questionnaire (ACE-IQ), designed to be administered to adults 18 years and older. It is meant to be combined with other health surveys to allow for further analysis of the link between ACEs and their negative outcomes. The survey measures ACEs in all countries, including the United States. The 43-question survey asks about family and intimate partner dynamics; household dysfunction; childhood physical, sexual, and emotional abuse; peer violence; witnessing community violence; and exposure to wars and/or collective violence.[97] Although WHO encourages researchers to collect data on communities that administer the ACE-IQ, WHO does not collect this data as an organization. The ACE-IQ screening tool is currently undergoing validation and efficacy testing through pilot programs.[98]

Tying it All Together: TICC of Central Texas

The Trauma-Informed Care Consortium of Central Texas (TICC), led by the Austin Child Guidance Center, ties together a localized multisystemic framework with trauma-informed trainings and screening tools.[99] TICC meets quarterly to share information, network, and coordinate trauma-informed trainings across sectors. Stakeholders include mental health professionals, medical professionals, school personnel, law enforcement, juvenile justice professionals, and others.[100]

The consortium maintains a website that provides resources on trauma screenings, trainings, and help for those who have experienced or are experiencing trauma. The consortium also publishes a trauma-informed newsletter; the Trauma-Informed Organizational Readiness Survey; and recommendations on trauma screening tools and assessments standards used in child welfare; early childhood intervention (ECI); **home visiting**; inpatient and outpatient mental health; juvenile justice; medical hospitals and pediatric/primary care checkups; schools; and shelters.[99]

TICC's survey looked at nine areas of trauma-informed care (see graphic to the right) and how agencies in central Texas are providing services. The 2016 organizational review surveyed representatives from 79 unique organizations, half of which identified as a mental health agency or school.[101]



TICC found that from these organizations, 287 trauma trainings were provided to 5,790 professionals across multiple sectors.

TICC Survey Findings:

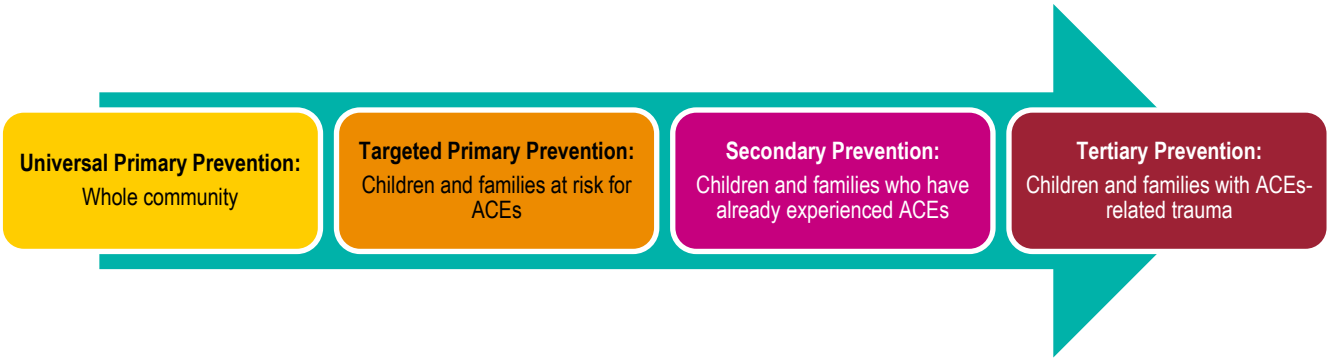
- 30% of agencies screen all clients for trauma & suicide
- 88% involve clients in decision-making
- 43% survey clients on safety in their physical environment
- 46% track the number of trauma survivors
- 77% have a LGBTQ+ friendly policy
- 52% have an official policy against restraint & seclusion
- 21% have trauma-informed policy

Data like that of the TICC's Trauma-Informed Organizational Readiness Survey should be collected throughout the entire state, not just in central Texas.

Through following the TICC's example, the state could gain further knowledge on how organizations are providing trauma services to children and families. By looking at the efficacy of the TICC's cross-collaborative model, Texas could begin to duplicate and expand efforts to create resiliency in children and families and treat the trauma resulting from childhood adversities.

Child Maltreatment Prevention and Intervention Initiatives

In the effort to prevent and treat the five ACEs related to child maltreatment, it is necessary to invest in and implement programs that are both trauma- and evidence-informed. In addition to trauma-informed trainings and screening tools (see *Trauma-Informed Trainings in Texas* and *Screening Tools*) used by professionals working with children, other prevention and intervention programs are also helping to prevent, reduce, and encourage children and families to heal from childhood adversity and adverse community environments.



Universal primary prevention programs, such as some of those available under the DFPS Prevention and Early Intervention (PEI) Program, are directed at the entire population of a community, whether that is the larger Texas community or a localized community within a city or town. Other, more **targeted primary prevention** services seek to provide resources and alleviate negative factors (e.g. experiencing ACEs other than child maltreatment and/or living in adverse community environments) that could lead to child abuse and neglect in at-risk populations. Texas must provide outreach and resources at all levels, including secondary and tertiary prevention. **Secondary prevention** programs aim to reduce the negative outcomes of maltreatment and prevent its recurrence. **Tertiary prevention** programs provide support services, for those who need help healing from the trauma of child maltreatment (see *Appendix F* and the graphic below). Texas should further invest in all levels of prevention initiatives—especially home visiting programs, screening tools, and trauma-informed approaches—to keep children and families from becoming at-risk of child maltreatment and other ACEs.

The term **evidence-based practice** comes from David Sackett, who defined it as "the conscientious, explicit and judicious use of current best evidence in

making decisions about the care of the individual."[102] The idea of being **evidence-informed** adds a more person-centered approach to practices, allowing programs to include their own practice-based knowledge. TexProtects believes utilizing evidence-informed programs to solve public health challenges allows stakeholders to apply well-researched and/or practice-based knowledge to the decision-making, training, and provision of services with the aim of improving best practices for positive outcomes in children and families.

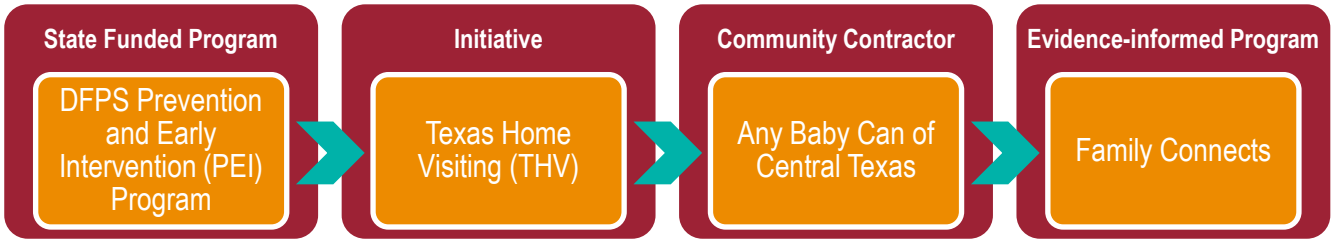
We must utilize evidence-informed programs to solve public health challenges with the aim of improving positive outcomes for children and families.

The recently passed *Family First Prevention Services Act*[120] (Family First; see Federal Policies to Address ACEs) redirects federal funding to prioritize prevention and keep children from experiencing the trauma of entering the child welfare system. It funds early intervention so that children can remain safely at home by targeting problems that are known to drive abuse and neglect: substance use, mental health issues, and lack of parenting skills. When foster care is needed, Family First prioritizes the least restrictive, family-like settings for children and evidence- and trauma-informed treatment centers for children who require specialized care. Texas has the opportunity to dramatically expand access to these types of prevention services by capitalizing on the opportunity to draw down these federal funds.

Programs Implemented in Texas

Private and public providers in Texas have already implemented programs and tools to prevent and/or mitigate childhood maltreatment and household dysfunction and the resulting trauma. These include the trauma-informed trainings and approaches previously mentioned (see *Trauma-Informed Trainings in Texas*). The Texas Health and Human Services Commission (HHSC) and the Texas Department of State Health Services (DSHS) fund initiatives (e.g. Texas Home Visiting) who then contract with providers already in local communities (e.g. Any Baby Can). The local community contractors then subcontract with evidence-informed programs (e.g. Family Connects) to supply services to at-risk children and families. These organizations provide prevention and education programs in local communities (see *Figure 12*).[103]

Figure 12: Example of Prevention and Early Intervention (PEI) State Funding Flow103



Not all programs are available across Texas, and some of these initiatives do not have strong evidence of their efficacy working in the local Texas communities they do serve. Further analysis of their efficacy is needed at a community level to ensure children and families are receiving resources and care that fit their needs. Most programs are free of charge, voluntary, and often used as secondary prevention programs for families referred through Child Protective Services to Family-Based Safety Services (FBSS). According to the DFPS 2018 Prevention Task Force report, if the state's PEI services could help avoid 5% (1,786) of families being referred to FBSS, the department would save more than $9.4 million. If PEI services could prevent 3% (593) of children being removed from their home, the department would save upwards of $20.3 million.[104]

Home visiting programs with multiple outcomes are good for children and families and economically efficient.

TexProtects suggests the state invest in and expand evidence-informed home visiting programs to prevent and treat ACEs. Evidence-informed family support parent education programs, such as Nurse-Family Partnership (NFP) and other home visiting programs, have proven to reduce child maltreatment up to 50% and build protective factors within families. Home visiting programs demonstrate that child wellbeing can be positively affected by a single well-designed intervention.[108] These programs use the latest research on child development, the effects of trauma, and childhood adversity to influence child and family knowledge, attachment, and behaviors in ways that will impact outcomes across multiple domains and generations.[108] TexProtects believes wellbeing in one domain often impacts wellbeing in other domains; a program with multiple outcomes is not only good for children and families but economically efficient.

HOPES: Healthy Outcomes through Prevention and Early Support

HOPES (Healthy Outcomes through Prevention and Early Support) targets at-risk families with children age 5 and younger to address child maltreatment and increase protective factors.

HOPES is based on the ideas that child maltreatment:

- Impacts the whole community,
- is an intergenerational cycle, and
- needs a public health approach.

HOPES also asserts that families require community-based support to thrive.

The state-funded initiative contracts with community-based organizations to provide home visits. It allows for communities to develop protective factors and reduce risk factors for families who are considered vulnerable. The program includes collaborations between child welfare, early childhood education, and other child and family services.

The HOPES goals are to strengthen families in the following six areas of protective factors:

1. nurturing and attachment,
2. knowledge of child development,
3. parental resilience,
4. social connections,
5. concrete supports, and
6. social and emotional competence.[105]

The project is currently implemented in 22 counties.

Benefits of Project HOPES

- Participants reported that the following improved for participating families, regardless of whether they fully completed the program:
  - family functioning
  - social support
  - concrete supports
  - child development
  - knowledge of parenting
  - caregiver-child interactions
  - improved child and caregiver behaviors
  - caregiver confidence
- Families reported an increased attachment to and nurturing of their children, which increased the longer they stayed in the program

Texas Home Visiting

Texas Home Visiting (THV) is a free, voluntary program funded through DFPS PEI. Licensed or certified health professionals visit at-risk pregnant women and/or families with children under the age of 6 to prevent child maltreatment and provide evidence-informed parent education and local early childhood systems-building.[106]

THV seeks to encourage:

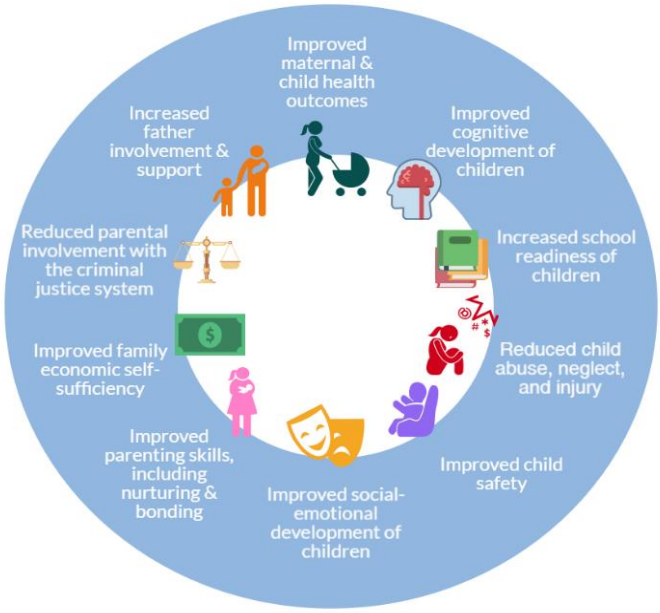
- improved maternal and child health,
- positive parenting, and
- healthy child development and school readiness.

The program matches at-risk parents (i.e. low-income, under age 21, poor maternal health, underemployment or unemployment, preterm birth, and/or low parental education)[105] with a nurse, an experienced parent in the community, or another trained professional or volunteer. The home visitor answers questions, gives advice and guidance, and recommends services to the family.[106]

THV contracts with home visiting programs like Nurse-Family Partnership and Family Connects to teach parents skills and connect families to support services without the family having to find childcare, navigate transportation elsewhere, or meet in an unfamiliar setting. Home visiting improves positive protective factors in children and families (see *Figure 13*)[107] and can help provide a foundation during the earliest and most critical years of a child's life.[108]

THV is implemented in 21 rural and urban counties in Texas. In Fiscal Year 2016, THV served 5,465 children and families.[105]

Figure 13: THV Outcomes[107]



THV Measured Outcomes from DFPS

- 99% of children had no substantiated maltreatment
- Almost half of the families served showed an increase in household income during the first year
- 72% of referrals given by home visitors resulted in the family receiving services
- 14% increase in days that parents read with or to their children
- 67% of parents said they had an increase in their ability to cope with parental stress

Nurse-Family Partnership

Nurse-Family Partnership (NFP) is a prevention program targeting first-time mothers of low socioeconomic status. Specially trained nurses provide regular home-visiting services to mothers, beginning prenatally through the child's second birthday.[105]

The NFP program promotes:

- positive pregnancy outcomes;
- competent caregiving;
- positive health behaviors, such as immunizations and breastfeeding;
- child health and development;
- economic self-sufficiency; and
- father involvement.

NFP also seeks to prevent:

- domestic violence,
- inadequate time between birth and another conception, and
- preterm birth.

Nurses use a variety of developmental screening and diagnostic tools to tailor the program to the unique needs of each family. Mothers must be willing to receive a home visit by the end of the 28th week of pregnancy. The program calls for approximately 64 visits for 60 to 75 minutes on a stepped model: at first, visits happen weekly; then every other week; and finally, every month.[109]

NFP is currently being implemented in 42 states, including Texas.[110] NFP began in Texas in 2006 and since then, has grown to serve 24 counties through 14 contractors, and 23 implementing sites. DFPS reported that NFP served 3,293 clients in Fiscal Year 2018. NFP is also funded under the HOPES and Texas Home Visiting (THV) PEI programs. Large-scale evaluations have concluded a return of $5.70 for every $1 spent on NFP.[110]

Benefits of Nurse-Family Partnership

- DFPS reported that, in Texas:
  - 87.5% of all NFP clients showed a decrease in marijuana or alcohol use from the time of intake to the end of pregnancy
  - 100% of babies born to clients were up to date with their vaccinations at age 1
- Research shows consistent, long-term results up to 18 years after a child's birth:
  - 89% increase in maternal employment
  - 68% increase in father involvement
  - 48% decrease in child maltreatment

Family Connects

Family Connects is an evidence-informed model that combines engagement and alignment of community service providers with short-term nurse home visiting. Family Connects is designed to be delivered to all families with newborns, free-of-charge.[111]

Family Connects promotes:

- positive parenting behaviors,
- the age-appropriateness and safety of the home environment (e.g. having age-appropriate toys and outlet covers),
- parental mental health and well-being,
- the use of high-quality early care and education programs, and
- families' connections to community-based resources.

Nurses asses maternal and infant health and other risks. Families do not need to have an identified risk factor, unlike many other home visiting programs. It is less intensive than other home visiting programs, involving only a few visits, beginning within weeks after delivery. The recruitment of families and scheduling for home visits is done in the hospital within approximately 24 hours of birth before the caregivers and newborn child are discharged. This program provides one to three home visits, with the first visit lasting one-and-a-half to two hours, three weeks after the family has left the hospital. Four weeks after the case is closed, families receive a follow-up phone call to ensure connections to community resources. [112]

Implementation is underway in Travis, Bastrop, Bexar, and Victoria counties as pilots currently funded under the Texas Home Visiting program.[112]

Benefits of Family Connects

- Research shows that eligible children and families had:
  - fewer emergency room medical care visits from infancy to 12 months
  - Higher-quality home environment
  - 14% more connections to existing community services and resources
- Participating caregivers:
  - Demonstrated more positive parenting behaviors
  - Were more likely to choose higher-quality child care
  - Reported 28% less anxiety in mothers

ACEs Legislative and Policy Efforts

Federal and state policies are fundamental in ensuring that programs intended to prevent and treat ACEs are effective. Coordinated policy efforts establish adequate funding streams and allocate appropriate resources so that programs can operate with fidelity and the greatest impact. Cost incurred from needed intervention and treatment services (e.g. substance use, mental illness, adverse community environments, etc.) have spurred federal and state governments to call for expanded trauma-informed, evidence-informed prevention of child maltreatment and early childhood trauma. Few federal and state statutes target prevention and treatment of ACEs and their resulting trauma. However, some legislation has begun to address the need for prevention and intervention efforts through a variety of direct and indirect policies.

Federal Policies to Address ACEs

The Child Abuse Prevention and Treatment Act (CAPTA)[113] was originally enacted in 1974 and has been amended several times.[114] It has become one of the key pieces of federal legislation that guides child protection in the United States. CAPTA was most recently amended by the *Justice for Victims of Trafficking Act of 2015*[115] and the *Comprehensive Addiction and Recovery Act of 2016*.[116] Title V, section 503 of the act modified the CAPTA state plan requirement for infants identified as being affected by substance use and/or withdrawal symptoms, or by fetal alcohol spectrum disorders. The act added criteria to state plans to ensure the safety and wellbeing of infants following the caregivers' and child's discharge from the hospital after birth. States were required to address the health and substance use disorder treatment needs of the infant and affected caregivers, and to develop safe care plans for infants affected by all substance use (not just illegal substance use, as was the requirement prior to this change).

Although laws such as CAPTA exist to protect children in the realm of child welfare, TexProtects' analysis suggests there is limited federal legislation specifically targeted at preventing and treating ACEs. The *Violence Against Women Reauthorization Act of 2013* is one of a few pieces of legislation that has done so.[117] The law primarily addressed provisions to protect and serve victims of: a) domestic violence, b) dating violence, c) sexual assault, and d) stalking. One paragraph within the law was dedicated to grant funding for researching the impact of ACEs on adult victimization and poor health outcomes, and how to reduce or prevent such impacts.[117] Additionally, federal programs such as Women, Infants and Children (WIC) and Temporary Assistance for Needy Families (TANF) provide family support, which may impact stresses related to ACEs, but did not directly target prevention and intervention of ACEs. The *Alleviating Adverse Childhood Experiences Act*[118] and *Trauma-Informed Care for Children and Families Act*[119] were introduced during the 115th congress, but did

not pass through committee hearings.

Recent Federal Legislation Addressing ACEs and Trauma-informed Practices

January 1974: *Child Abuse Prevention and Treatment Act* (CAPTA) is enacted. CAPTA set a federal definition for child abuse and neglect, provided federal funding and guidance to states and Native-American tribes and/or tribal organizations for prevention efforts, assessment, investigation, prosecution, and treatment. CAPTA identified the federal role in supporting research, evaluation, technical assistance, and data collection activities. It established the Office on Child Abuse and Neglect and a national clearinghouse of child abuse/neglect information.

December 2013: Part of the *Violence Against Women Reauthorization Act* was dedicated to grant funding for researching the impact of ACEs on adult victimization and poor health outcomes, and how to reduce or prevent such impacts (P.L. 113-4).

May 2015: The *Justice for Victims of Trafficking Act* amended CAPTA to require states to develop a plan for their child protective services systems that shows the states have in effect and are enforcing a law requiring: 1) identification and assessment of all reports involving children known or suspected to be victims of sex trafficking; and 2) training child protective services workers in identifying, assessing, and providing comprehensive services for children who are sex trafficking victims (P.L. 114-22).

July 2016: The *Comprehensive Addiction and Recovery Act* modified the CAPTA state plan requirement for infants born and identified as affected by substance use and/or withdrawal symptoms or fetal alcohol spectrum disorders (P.L. 114-198).

February 2018: The *Family First Prevention Services Act* (Family First) reformed federal child welfare financing streams to provide prevention services to families in imminent risk of child abuse or neglect to keep children from entering foster care or from being placed in group care (H.R. 253).

2017-2018, 115th Congress: The *Alleviating Adverse Childhood Experiences Act* of 2017 would have amended Title XIX of the Social Security Act to allow state Medicaid to cover services furnished under early childhood home visitation. This bill is designed to improve specific outcomes for participating families in areas related to a) maternal and newborn health, b) child health and development, c) school readiness and academic achievement, d) crime and domestic violence, e) economic self-efficiency, f) parenting skills, and g) resource coordination (H. R. 3291). This bill was defeated.

The *Trauma-Informed Care for Children and Families Act* of 2017 was introduced in the Senate in March 2017 to address the psychological, developmental, social, and emotional needs of children, youth, and families who have experienced trauma. The bill would have amended the *Public Health Service Act*, the *Elementary and Secondary Education Act of 1965*, Title XIX of the *Social Security Act*, and other laws to revise or establish provisions related to trauma. The bill included provisions regarding the National Child Traumatic Stress Initiative, Performance Partnership Pilots, health professional shortage areas, and training of school personnel, court personnel, and health care providers (S. 774). This bill was defeated.

Family First Prevention Services Act

The *Family First Prevention Services Act* (Family First)[120] was signed into law as part of the Bipartisan Budget Act of February 9, 2018. This bill reforms the federal child welfare financing streams, Title IV-E and Title IV-B of the *Social Security Act* by prioritizing prevention and improving care for children who have experienced child abuse and neglect. Family First is one of the first pieces of federal legislation that invests in and supports families who are at risk for the five child maltreatment ACEs; it allows states to prioritize and expand services to children who are "at imminent risk"[h] for entering foster care. This funding also allows expanded services for children and adolescents in foster care who are pregnant or parenting. Family First reroutes money from costly secondary and tertiary preventions and interventions toward evidence based, trauma-informed targeted primary prevention activities. Family First will provide funding to prevention programming that impacts mental health, substance use disorders, and lack of parenting skills which are all known risk factors for child abuse and neglect as well as other childhood adversity. [121]

States may defer to implement Family First as late as October 1, 2021, but may begin implementation at any date in between October 1, 2019 and October 2021.[122] In November 2018, DFPS announced that it had submitted a 2-year delay in implementation of Family First. The stated reasons included lack of evidence-informed services, accredited providers, and guidance from the federal government.[123] Although Texas has opted to defer implementation past the October 2019 date, the state may still implement Family First anytime before the 2021 date once the guidance and infrastructure is in place to do so. Texas will benefit immensely from drawing down Family First funds, which will help expand support for targeted primary prevention programming for families and children who have experienced the adversities of child abuse and/or neglect.

Other State Legislation on ACEs

Although the gaps in ACEs federal legislation are evident, this problem can be remedied with supplemental laws passed by individual states. As such, ACEs legislation at the state level has become a more pressing advocacy priority within the last few years. A scan conducted by the National Conference of State Legislatures found that 40 ACEs-related bills had been introduced across 18 states (see a summary on the next page).[124]

While some states are in the earlier stages of researching and planning, others have taken a more direct approach by immediately incorporating ACEs principles and training into state programs and services. There is a concerted effort to quickly understand how to prevent childhood ACEs; however, taking a slower approach to understand the full impact of ACEs is still a high need. Laws

[h] Individual states will define "at imminent risk."

such as these can strengthen communities by bolstering the quality of care and resiliency of affected children and adults through community-based services and state child welfare systems. Washington State was the first state to enact legislation explicitly referring to ACEs back in 2011, and others such as Vermont, Tennessee, Massachusetts, and Utah have followed.[125]

Recent Federal Legislation Addressing ACEs and Trauma-informed Practices

Washington State: House Bill 1965 defined ACEs and established a planning group to identify ACE exposure reduction and prevention strategies, which yielded a committee report to the legislature in 2012 (H.B. 1965, 62nd Legis., 2011-2012). In 2018, Washington continued this work through the passage of House Bill 2861. This law called for the development of a five-year strategy to improve trauma-informed care in early learning institutions to prevent expulsion of children with emotional and behavioral problems resulting from childhood adversity (H.B. 2861, 65th Legis., 2017-2018).

Massachusetts: In 2014, Massachusetts signed into law the *Safe and Supportive Schools Framework*, which was intended to create a statewide trauma-sensitive school system (H.4376, 118th Legis, 2013-2014). Later, funding was allocated to create a full-time staff member at the Department of Elementary and Secondary Education to aid schools in carrying out the law's provisions. Rather than mandating requirements, the state invited schools to apply for grants to further those goals with the aim of removing barriers to positive change.

Utah: Utah's legislature passed House Concurrent Resolution 10 in 2017, encouraging state officers, agencies, and employees to implement trauma- and evidence-informed interventions and practices to build resilience in children and adults who have experienced ACEs (Utah H.C.R. 10, 2017).

Vermont: In 2017, Vermont passed House 508, which acknowledged the impact of ACEs and their prevalence in the state, incorporated ACEs principles into their trauma-informed system of care, and created a work group and response plan to investigate, prevent, and intervene after exposure to ACEs (Vt. H.508, 2017).

Tennessee: The Tennessee General Assembly appropriated $1.2 million for Fiscal Year 2017-2018 for ACEs research (a recurring amount that carries over to the 2019-2020 fiscal year) and $420,000 for the ACEs Awareness Foundation (Tennessee S.B. 2552/H.B.2644, 2017). The ACES Awareness Foundation is part of the Building Strong Brains: Tennessee ACEs collaborative. The initiative was created by the Tennessee Department of Children's Services. It is a statewide cross-sector ACEs effort to bring together government agencies, social services, health care providers, insurance companies, private businesses, community organizations, and philanthropists. A recurring appropriation mandate funds 27 programs for Fiscal Year 2019 through the General Assembly and is continuing eight of their community innovations from previous fiscal years.

Texas Legislative Efforts to Address ACEs

Texas currently has laws in place that address trauma-informed care and prevention efforts. Texas has made recent improvements on mandating trauma-informed practices through the passage of seven bills between the 82nd and 84th legislative sessions. Six laws mandate trauma-informed training for the professionals who are most likely to encounter children and families who have experienced traumatic events and adverse experiences. These professionals include child welfare workers, juvenile justice professionals, state hospital personnel, state supportive living center employees, and foster caregivers.[126] These laws have excluded teachers and school administrators, who spend a great amount of time with most Texas children. Legislation regarding schools have focused instead on including trauma-informed disciplinary alternatives in schools for children under third grade and keeping evidence-informed general prevention programming lists up to date but have not mandated their use. Other legislation has mandated trauma assessments for children entering Texas foster care.

None of the current Texas laws explicitly take into account the original ACE study and subsequent research on childhood adversity. However, in the 85th session, the legislature passed H.B. 674, which aimed to develop and implement disciplinary alternatives, including evidence- and trauma-informed practices, to keep children under third grade from out-of-school suspension.[127] Several other bills died in committee, including H.B. 1699, 2335, 3887, and 4083, which would have a) created a framework to address trauma and ACEs as barriers to student learning, b) enhanced existing mandated trauma-informed trainings for child-care workers and child protective services caseworkers, c) further addressed trauma training for school personnel, and d) addressed trauma screening and trauma-informed training within Medicaid managed care.

During the upcoming 86th legislative session, Texas will have the opportunity to follow the legislative trends being set at the federal level and by other states who are considered frontrunners in the ACEs movement.

Recent Texas Legislation Addressing Trauma-informed Practices

September 2011: Senate Bill 219 mandated the Department of Family and Protective Services (DFPS) to include trauma-informed programming and services in any trainings for foster parents, adoptive parents, kinship caregivers, caseworkers, and supervisors (Tex. S.B. 219, 82nd Legis., 2011-2012).

June 2013: The legislature required direct staff at state hospitals to provide trauma-informed training related to the protection and care of persons who are children, elderly, or disabled (Tex. S.B. 152, 83rd Legis., 2013-2014).

September 2013: Senate Bill 7 required the Department of Aging and Disability Services (DADS) to provide training in trauma-informed practices for professionals working on behavioral intervention teams supporting individuals with developmental disabilities and behavioral health needs who are at risk for institutionalization (Tex. S.B. 7, 83rd Legis., 2013-2014). The Legislature also passed a bill requiring trauma-informed training for probation officers, juvenile supervision officers, correctional officers, and court-supervised community-based personnel related to the care of juveniles who have experienced trauma through human trafficking (Tex. S.B. 1356, 83rd Legis., 2013-2014).

September 2015: The legislature required DFPS to determine and evaluate policy to ensure certain caregivers receive at least 35 hours of pre-service training before verification as a foster care or adoptive home. DFPS must also determine and evaluate home screening, assessment, and pre-service training requirements used by substitute care providers (Tex. H.B. 781, 84th Legis., 2015-2016). State Supported Living Centers and intermediate Care Facilities for people with intellectual disabilities are required to provide web-based trauma-informed training for new employees, under DADS (Tex. H.B. 2789, 84th Legis., 2015-2016). DFPS is required to provide developmentally appropriate comprehensive assessments for children who are entering conservatorship within 45 days of the child's entrance into DFPS care. The tool must include a trauma assessment and an interview with at least one person who has knowledge about the child's ongoing mental health needs (Tex. S.B. 125, 84th Legis., 2015-2016).

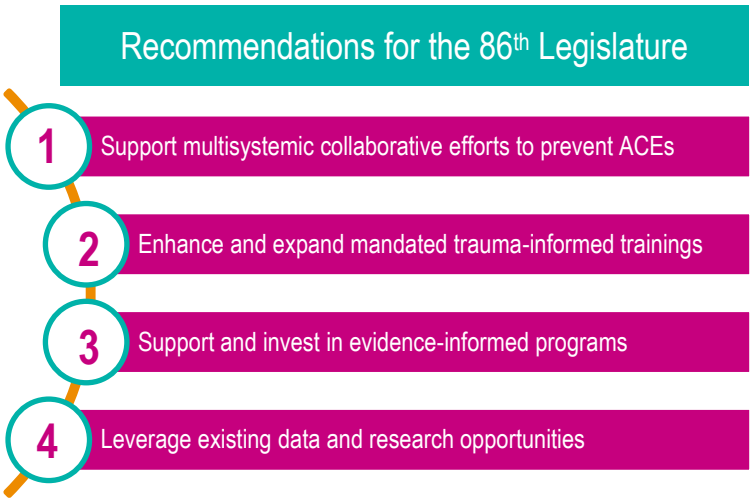
June 2017: House Bill 674 developed and implemented disciplinary alternatives, including evidence- and trauma-informed practices, to keep children under third grade from out-of-school suspension (Tex. H.B. 674, 85th Legis., 2017-2018).

Implications and Recommendations

Much of the current federal and other state legislation takes a passive approach to intervening among ACEs. While federal guidelines allow certain provisions, such as trauma-informed trainings or grants for promotion of evidence-informed programs, few laws mandate their implementation or address ACEs directly. Some states and communities are working on proactive solutions, such as systems-building, strategic planning and implementation initiatives, but many states lack sufficient policies directly targeting ACEs. Without supportive policy measures informed by multisystemic approaches, evidence-informed programs are unable to adequately address the needs of those who have experienced early adversity. Creating cohesion between policy initiatives and program implementation will allow for the effective prevention and reduction of ACEs.

Current Texas statute does not adequately provide services and paths to healing for the estimated 3.4 million Texas children[12] experiencing adversity. Legislation around ACEs must be introduced to prevent such adversity and promote resiliency in children and families. The original ACE study conducted by Vince Felitti, Robert Anda, and colleagues changed the perception of early adversity in the field.[3] Rather than interpreting each negative event separately, adversity must be understood as a concept which impacts young children throughout the lifespan.

Policy Recommendations



To adequately address ACEs in Texas, a collaborative, cross-sector approach must be implemented. A multilevel effort includes promoting state policies which enhance federal legislative guidance and bridge the gap between legislative intentions and community practices. Involving multiple systems requires the identification and inclusion of all state and local, public and private stakeholders that provide services, programming, and resources for those who are either in danger of or have already been affected by ACEs. Cross-sector collaboration would include government agencies and their staff, court systems, school systems, nonprofit and not-for-profit organizations, environmental organizations, hospitals and health care organizations, and many more. TexProtects has four recommendations for legislators to consider during the 86th legislative session.

1) Develop and Implement a Strategic Plan to Address Causes and Symptoms of ACEs

ACEs cover a broad range of exposures that are currently governed by different entities. While overlap clearly exists between types of ACEs, the response to each type is handled quite differently. A multisystemic approach, such as the one suggested by the Building Community Resilience model,[69] is necessary to integrate efforts to address the large impact of childhood adversity. Texas should invest in, support, and increase cross-sector collaboration with already existing agencies that address trauma. These include state agencies, child welfare organizations, schools, medical and mental health services, social services, criminal justice, and businesses.

This collaboration should be an interconnected public health and social service approach that includes training and education that will facilitate a cultural change around the prevention and treatment of ACEs. This framework should build resilience in children, families, and communities through trauma-informed, evidence-informed services. Building an infrastructure for this approach is a critical first step. Fundamental concerns such as poverty, access to basic needs, and informal support structures such as community organizations and family systems must also be taken into consideration when developing a system of care and resulting legislation. This recommendation is supported by the Building Community Resilience Collaborative, which suggests specific identifies certain funding opportunities available to state who facilitate collaboration.[128] It is also supported by the Child & Adolescent Health Measurement Initiative (CAHMI), which recommends the U.S. and states "cultivate the conditions for cross-sector collaboration to incentivize action and address structural inequities," as one of their four priorities to address ACEs and promote child wellbeing.[129]

2) Enhance and Expand Mandated Trauma-Informed Trainings

Texas currently has six laws which mandate trauma-informed trainings for professionals in the child welfare, juvenile justice, and state mental and behavioral health care fields. The state must expand these laws to ensure that the types of trauma-informed training models used are evidence-informed and updated every two years.

2a) Texas should incorporate the science on ACEs, early brain development, and resilience in trauma-informed training programs across all sectors, not just school systems. This includes programs in child welfare, juvenile justice, medical and behavioral health care, law enforcement, and community agencies. All evidence- and trauma-informed training models should prepare state professionals and contractors to know how to prevent, mitigate, and respond to ACEs and meet the needs of children and families who have experienced trauma. This recommendation is supported by the Building Community

Resilience Collaborative.[128]

2b) Although some Texas laws mandate training for professionals in certain fields, most trainings and professional development topics are not mandated and are often allowable electives to maintain certification. Teachers have such a critical impact on the lives of their students that training on trauma-informed care should be mandatory and school policies should reflect ACEs principles to create safe and supportive learning environments for children and youth of all ages. TexProtects recommends this be done through:

- creating a trauma-informed learning environment,
- promoting a safe school climate and education about trauma,
- providing predictable and supportive learning environments,
- developing a sense of school community'
- teaching social skills (e.g. conflict resolution, emotional/behavioral literacy, social communication, bullying prevention), and
- building safe spaces for students to calm themselves and and otherwise self-regulate when experiencing behavioral and emotional challenges related to trauma.

2c) Texas should develop and obtain continuing medical education focused on trauma-informed practices and early brain development through the Accreditation Council for Continuing Medical Education (ACCME) for OBGYNs, pediatricians, primary care practitioners, and other physicians as necessary as part of their 48 required CMEs every two years.

3) Strengthen Investments In Community-Based, Child Abuse Prevention Programs

Texas should implement policies that primarily support evidence-informed prevention and intervention programs. Promoting and allocating appropriate state funds to evidence-informed programming can ensure prevention and treatment of ACEs for vulnerable communities. Organizations that provide evidence-informed interventions would be able to maximize positive results with Texas' support. The state should identify flexible grant funding or incentives for partnerships and community engagement. The state should also draw down Federal Family First Title IV-E funding as soon as possible to support and expand both primary and secondary prevention programming for children and families identified as at imminent risk for the five child maltreatment ACEs.

4) Leverage Existing Data and Research Opportunities

The state should use existing data and research methods as an opportunity to collect more information on the prevalence of ACEs and prevention efforts that seek to lessen the effects of ACEs-related trauma. In this way, the state will be able to most effectively ensure the resiliency of children, families, and communities. This recommendation for states to leverage data and research to

combat ACEs is supported by CAHMI.[129]

4a) To more accurately calculate the prevalence of ACEs in Texas, the state should consider adding the ACEs BRFSS module to the state-specific questionnaire each year.

4b) To calculate a more accurate cost of child maltreatment and other ACEs in Texas, the state should consider analyzing current data on the costs of substance use, mental illness treatment, incarceration, and domestic violence using either CDC or Perryman Group methodologies.

4c) Data like that of the TICC's Trauma-Informed Organizational Readiness Survey should be collected throughout the entire state. Through following the TICC's example, the state could gain further knowledge on how organizations are providing trauma services to children and families. By looking at the efficacy of the TICC's cross-collaborative model, Texas could begin to duplicate and expand efforts to create resiliency in children and families and treat the trauma resulting from childhood adversities.

Glossary of Terms

Adverse Childhood Experiences (ACEs) refer to the negative and/or traumatic experiences a child faces early in life. These events vary in severity. Untreated trauma resulting from ACEs can disrupt emotional, behavioral, and physical health throughout the lifespan.

Adverse community environments refer to community inequities like limited economic mobility, poverty, discrimination, unsafe neighborhoods, poor housing conditions, violence in the community, and substance use. Adverse Community Environments compound the negative health risks associated with ACEs.

Cross-sector collaboration refers to collaboration across multiple sectors—including government, nonprofit, philanthropic, business, and more—to prevent and treat not only childhood adversity, but the environmental and social factors that can lead to ACEs. A *multisystemic framework* would include cross-sector collaboration.

Community competence refers to a community's capacity work collaboratively to identify the needs of the community, problem-solve, and set and achieve goals.

Evidence-based practices refer to the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of the individual. **Evidence-informed practices** add a person-centered approach to practice, allowing programs and clinicians to include their own practice-based knowledge.

Home visiting programs refer to initiatives that provide targeted services to families and children in their residential home or in their local community.

Levels of prevention in the context of ACEs: Universal primary prevention efforts are provided to the whole community. **Targeted primary prevention** efforts provide resources to alleviate risk factors in sub-populations of the community. **Secondary prevention** efforts focus on resources and education for individuals with ACEs so that negative outcomes do not escalate and/or reoccur. **Tertiary prevention** efforts provide resources and treatment to those who have experienced trauma, toxic stress, chronic disease, and other negative impacts of ACEs.

Maternal ACEs refer to the adversities a mother experienced early in life. Maternal ACEs have intergenerational effects.

Missouri model: A stepped look at how organizations are trained in trauma approaches. Under this model, **Trauma-Aware** organizations know the prevalence of trauma in society have begun to consider the impact trauma may have on their clients and staff. The **Trauma-Sensitive** organization has begun to explore, build a consensus around, and consider adopting trauma-informed care principles. **Trauma-Responsive** organizations have begun to change their organizational culture to highlight the role of trauma through rethinking routines and procedures.

Multisystemic approach/lens refers to the viewpoint that public health problems must be solved with the help of all systems that impact children and families' lives. This includes public and private agencies, nonprofits, businesses and companies, and more. A **multisystemic framework** would be a structure that guides agencies in creating a multisystemic approach through *cross-sector collaboration*.

Resilience and **resiliency** refer to the ability of an individual or community to recover, heal, and grow in a functional, healthy, adaptive, and integrated way over the passage of time after facing challenging and stressful situations.

Secondary trauma is trauma that is experienced by caregivers or helpers who are providing services to people who are themselves experiencing trauma.

Social capital refers to the interpersonal relationships, organizations, institutions, and other societal assets that can be used to gain advantages in the larger society.

Stress: Positive stress refers to mild to moderate stress that can be managed with the help of intrinsic and external coping mechanisms. **Toxic stress** is defined as a persistent exposure to adverse experiences or other traumatic events without adequate support and services.

Trauma-informed care and trauma-informed approaches refer to ways of providing services to people that understand and recognize the role that trauma could play in life. These types of programs ask the child "What happened to you?" instead of "What's wrong with you?"

Wellbeing is measured through family, social, economic, health, and physical environments and individual health, behavior, safety, and education indicators. These factors influence the likelihood of a child becoming a well-educated, economically secure, healthy, and productive adult.

APPENDICES

Appendix A: ACEs Calculator

This ACEs calculator asked questions related to child abuse and neglect and household dysfunction. These questions are akin to the ones asked on the WAVE II ACE Questionnaire from the CDC-Kaiser Health study.

While you were growing up, during your first 18 years of life:

1. Did a parent or other adult in the household **often or very often s**wear at you, insult you, put you down, or humiliate you? **Or** act in a way that made you afraid that you might be physically hurt?
If yes enter 1 _____

2. Did a parent or other adult in the household **often or very often** push, grab, slap, or throw something at you? **Or ever** hit you so hard that you had marks or were injured?
If yes enter 1 _____

3. Did an adult or person at least 5 years older than you **ever** touch or fondle you or have you touch their body in a sexual way? **Or** attempt or actually have oral, anal, or vaginal intercourse with you?
If yes enter 1 _____

4. Did you **often or very often** feel that no one in your family loved you or thought you were important or special? **Or** your family didn't look out for each other, feel close to each other, or support each other?
If yes enter 1 _____

5. Did you **often or very often** feel that you did not have enough to eat, had to wear dirty clothes, and had no one to protect you? **Or** your parents were too drunk or high to take care of you or take you to the doctor as needed?
If yes enter 1 _____

6. Were your parents **ever** separated or divorced?
If yes enter 1 _____

7. Was your mother or stepmother: **Often or very often** pushed, grabbed, slapped, or had something thrown at her? **Or sometimes, often, or very often** kicked, bitten, hit with a fist, or hit with something hard? **Or ever** repeatedly hit at least a few minutes or threatened with a gun or knife?
If yes enter 1 _____

8. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?
If yes enter 1 _____

9. Was a household member depressed or mentally ill, or did a household member attempt suicide?
If yes enter 1 _____

10. Did a household member go to prison?
If yes enter 1 _____

Now add up your "Yes" answers: _____. This is your ACE Score.

Source: Brackmann, A. L. (2018). The Adverse Childhood Experiences (ACE) study. [Slides and materials from webinar].

Appendix B: 2016 National Survey of Children's Health Data as Related to ACEs[4]

Children are defined as ages 17 and under, unless otherwise noted. Percentages and population estimates are weighted to represent the child population in the United States with a 95% confidence interval width (in select cases, this may exceed 20 percentage points).

Indicator	Texas						National					
	No ACES		1 ACE		2 or More ACEs		No ACEs		1 ACE		2 or More ACEs	
	%	Pop Est	%	Pop Est	%	Pop Est	%	Pop Est	%	Pop Est	%	Pop Est
Children with or without an Adverse Childhood Experience[1]	50.3	3,516,695	25.9	1,809,879	23.9	1,670,877	53.7	38,647,370	24.6	17,687,522	21.7	15,610,547
Birth Outcomes												
Low birthweight (<2,500 grams)	9.3	305,680	13.8	235,503	12.7	193,298	8.3	2,978,646	9	1,458,111	11.3	1,598,172
Premature birth (>3 weeks before due date)	8.6	294,296	12.6	226,693	10.3	170,116	10.2	3,886,438	12.1	2,108,365	13.1	2,003,784
School-related Outcomes (ages 6-17 only)												
Since starting kindergarten, child repeated a grade	2.7	56,384	9.8	129,364	17.2	236,945	4.4	1,029,014	6.9	838,098	11.8	1,473,907
Bullies, picks on, or excludes others	6.4	134,092	6.8	89,375	3.6	49,248	4.5	1,049,777	5.3	640,210	11	1,381,386
Is bullied, picked on, or excluded by others	15.1	317,040	31.1	410,769	31.9	437,899	15.3	3,527,127	23.7	2,877,684	35.2	4,407,117
Healthcare and Health Outcomes												
Hospital emergency room visit (one)	14.1	494,825	18.4	329,224	13.6	227,529	12.5	4,804,041	16.6	2,928,826	19.2	2,972,100
Hospital emergency room visits (2 or more)	2.2	77,591	5.5	98,184	9.7	161,769	3.3	1,270,908	5.5	967,306	8.6	1,328,505
Does not have coordinated, ongoing, comprehensive care within a medical home	51.1	1,797,240	72.8	1,317,402	59.1	988,094	44.9	17,325,409	56.7	10,029,310	60.2	9,392,355
Currently receives special services to meet their development needs (speech/occupational therapy)	1.9	67,940	5.7	100,600	6.5	107,872	5.2	1,968,532	7.6	1,322,749	10.5	1,626,116
Currently has one health condition[2]	15.9	560,140	20.1	363,943	13.9	232,963	18.3	7,075,385	20.7	3,656,877	20.3	3,171,616
Currently has two or more health conditions[3]	10.5	369,964	17	306,860	31	517,664	11.6	4,473,892	19	3,366,575	34.4	5,367,000
Family Household Conditions												
Lives below 0-99% of the poverty level	16	561,193	27.5	497,231	33.5	559,763	13.1	5,078,269	25.7	4,543,267	36.2	5,647,578
Lives below 100-199% of the poverty level	19.5	6,84,948	29.8	539,028	28.9	483,493	17.6	6,803,580	27	4,778,562	27.5	4,298,004
Someone smokes in the household	8.4	295,304	12.6	227,662	21.7	357,450	9.2	3,541,268	18.5	3,245,257	30.8	4,774,913
Parents/guardians have no parenting support[2]	32.3	8,685,443	39.5	690,454	23.1	3,777,870	22.7	8,685,443	28.8	5,024,585	24.4	3,777,870
Family Resiliency												
Family has one or fewer qualities of resilience during difficult times	6.3	217,464	10.1	183,091	19.2	320,305	5.1	1,951,770	9.2	1,616,812	16.1	2,498,511
Family is sometimes/never likely to stay hopeful in difficult times	3.9	134,303	8.9	161,661	10.8	179,778	4.2	1,595,021	8.0	1,401,070	12.9	2,006,276
Family is sometimes/never likely to know they have strengths to draw on when facing a problem	6.7	228,645	11.3	195,471	25.1	412,930	7.1	2,702,271	12.7	2,195,803	21.1	3,246,979
Family Resiliency												
Family sometimes/never works together to solve problems they are facing	9.0	305,892	18.4	332,608	28.6	476,651	8.8	3,350,792	14.2	2,490,443	23.8	3,677,127
Family sometimes/never talks together about what to do when facing a problem	8.7	302,214	22.1	400,872	35	448,436	9.7	3,729,659	15.3	2,670,356	23.9	3,702,535

Indicator	Texas						Texas					
	No ACES		1 ACE		2 or More ACEs		No ACEs		1 ACE		2 or More ACEs	
	%	Pop Est	%	Pop Est	%	Pop Est	%	Pop Est	%	Pop Est	%	Pop Est
Neighborhood Conditions												
Lives in community with dilapidated housing	6	205,494	15.9	279,928	17.9	297,896	8.8	3,367,957	14.4	2,515,460	23	3,526,797
Does not live in a safe neighborhood	4.8	165,245	6.9	125,521	14.8	245,504	3.6	139,337	7	1,217,606	11.4	1,756,450
Does not live in a supportive neighborhood[4]	43.7	1,490,688	56.4	1,015,304	69.4	1,135,214	37.6	14,206,547	51.9	9,011,535	60.2	9,259,455

[1]NSCH ACEs measures include: a) divorce/separation of caregivers, b) caregiver death, c) caregiver served/serving time in jail/prison, d) witness intimate partner violence, e) victim/witness of neighborhood violence, f) lived with mentally ill person, g) lived with substance user, h) experienced racism, and i) family cannot afford basic needs on family's income. Child Abuse/Neglect is not an indicator in this study. All surveys reported by a parent/guardian of only one child's experiences living in the home.

[2]List of health conditions: a) allergies; b) arthritis; c) asthma; d) blood disorders; e) brain injury/concussion/head injury; f) cerebral palsy; g) cystic fibrosis; h) diabetes; i) Down Syndrome; j) epilepsy or seizure disorder; k) genetic or inherited condition; l) heart condition; m) frequent or severe headaches/migraines (age 3-17); n) Tourette Syndrome (age 3-17); o) anxiety problems (age 3-17); p) depression (age 3-17); q) behavioral and conduct problem (age 3-17); r) substance use disorder (age 6-17); s) developmental delay (age 3-17); t) intellectual disability (age 3-17); u) speech/other language disorder (age 3-17); v) learning disability (age 3-17); w) other mental health condition (age 3-17); x) Autism or Autism Spectrum Disorder (age 3-17); y) Attention Deficit Disorder or Attention-Deficit/Hyperactivity Disorder (age 3-17); z) hearing problems; and/or aa) vision problems.

[3] Emotional help includes: a) emotional support from a spouse, b) emotional support from other family members or close friends, c) emotional support from a health care provider, d) emotional support from a place of worship or religious leader, e) emotional support from advocacy or support group, f) emotional support from a peer support group, and/or g) emotional support from a counselor or other mental health professional.

[4]Supportive neighborhood is defined by whether a) people help each other out within the neighborhood/community, b) people watch out for each other's children in the neighborhood/community, and c) the family knows where to go for help when they encounter difficulties in the neighborhood/community.

Source: Child and Adolescent Health Measurement Initiative (2016). Data resource center for child and adolescent health: NSCH interactive data query. Available from www.childhealthdata.org

Appendix C: 2016 National Survey of Children's Health Children and ACEs Data

Note: NSCH weighted percentages and population estimates to represent child population in the United States with a 95% confidence interval width.

Children who have or have not experienced childhood adversity as defined by NSCH	Texas						National					
	No ACES		1 ACE		2 or More ACEs		No ACEs		1 ACE		2 or More ACEs	
	%	Pop Est	%	Pop Est	%	Pop Est	%	Pop Est	%	Pop Est	%	Pop Est
	50.3	3,516,695	25.9	1,809,879	23.9	1,670,877	53.7	38,647,370	24.6	17,687,522	21.7	15,610,547

Questions Taken from the Original ACE Study	Texas		National	
	%	Pop Est	%	Pop Est
Parent of guardian divorced or separated	27.2	1,856,745	25	17,668,667
Parent or guardian served time in jail	9.2	627,546	8.2	5,749,103
Saw or heard parents or adults slap, hit, kick, punch one another in the home	7.4	504,171	5.7	4,020,228
Lived with anyone who was mentally ill, suicidal, or severely depressed	6.9	470, 878	7.8	5,487,519
Lived with anyone who had a problem with alcohol or drugs	11	747,387	9	6,358,004
Additional ACEs Questions Identified by the National Survey of Children's Health	**Texas**		**National**	
	%	**Pop Est**	**%**	**Pop Est**
Parent or guardian died	3.7	252,293	3.3	2,351,057
Was a victim of violence or witnessed violence in his or her neighborhood	4	275,020	3.9	2,710,505
Treated or judged unfairly because of his or her race or ethnic group	4.7	318,541	3.7	2,604,679
Parent or guardian has a tough time covering food and housing on the family's income (somewhat often)	21.3	1,485,284	19	13,596,890
Parent or guardian has a tough time covering food and housing on the family's income (very often)	7.1	496,484	6.4	4,610,644

Source: Child and Adolescent Health Measurement Initiative (2016). Data resource center for child and adolescent health: NSCH interactive data query. Available from www.childhealthdata.org

Appendix D: Lifetime Costs Related to Non-Fatal Child Maltreatment in the United States (2016)

Estimated Lifetime Cost Impact on Business Activity	Real Gross Product	Total Loss in Personal Income	Total Number of Employment Years Lost	Total Costs
Lost Earnings[1]	$2,165,310,794,660	$1,322,482,760,975	22,050,950	**$4,790,521,167,140**
Educational[2]	$45,352,453,203	$27,517,331,313	$457,936	**$99,246,738,364**
Adult Crime Costs[2]	$27,061,790,116	$16,419,580,242	273,250	**$59,220,487,837**
Juvenile Crime Costs[2]	$11,192,116,842	$6,790,750,345	113,010	**$24,492,194,215**
Incremental Social Welfare Costs[2]	$42,589,459,361	$25,840,901,228	430,037	**$93,200,359,226**
Incremental Adult Health Expenditures[6]	$109,741,799,838	$74,540,373,177	1,279,227	**$223,551,847,345**
Incremental Childhood Health Expenditures[6]	$270,998,362,891	$184,071,330,431	3,158,946	**$552,042,929,321**

[1] This measure captures the social costs of the losses in lifetime earnings associated with the occurrence of non-fatal child maltreatment in 2014. They are fully adjusted for 1) the potential substitution of other workers in the labor market, 2) production losses associated with a reduced supply of labor, and 3) the spin-off effects on both suppliers and consumer spending as a result of the reduced productive capacity.
[2] Funded primarily through public sector sources.
[6] Funded through uncompensated care, federal programs, higher private insurance premiums and state and local tax revenues.

Source: The Perryman Group (2014). Suffer the little children: An assessment of the economic costs of child maltreatment. Waco, TX.

Appendix E: The Missouri Model

Level	Key Task	Definition	Processes	Indicators
Trauma Aware	Awareness and attitudes	The organization is aware of the prevalence of trauma and has begun to consider that it might impact their clientele and staff	• Leadership understands how knowledge about trauma could enhance their ability to fulfill their mission and seeks out additional information on the prevalence of trauma for the population served • Awareness training • People are made aware of how/where to find additional trauma information • The organization explores next steps	Most staff: • Know what the term "trauma" means • Are aware that knowledge about the impact of trauma can change the way they see and interact with others/clients Staff reference the impact of trauma informally during conversation
Trauma Sensitive	Knowledge, application, and skill development	The organization has already begun: • Exploring the principles of trauma-informed care within their environment and daily work • Building consensus around the principles • Considering the implications of adopting the principles • Preparing for change	• Leadership and staff have processed the values of a trauma-informed approach • The organization identifies existing strengths, resources and barriers to change, as well as practices that are consistent/inconsistent with trauma-informed care • Leadership leads process of reflection to determine readiness for change The organization begins to: • Identify internal trauma champions and find ways to hire people who reflect alignment with trauma-informed principles • Examine its commitment to consumer involvement and what next steps could be taken • Review tools and processes for universal screening of trauma • Identify potential resources for trauma specific treatment	• The organization values/prioritizes the trauma lens • A shift in perspective happens • Trauma is identified in the mission statement or other policies • Trauma training is required for all staff, including new staff orientation • Basic information on trauma is available and visible to both clients and staff through different mediums • Direct care workers begin to seek out opportunities for learn new trauma skills • Management recognizes and responds to compassion fatigue and secondary trauma in staff
Trauma Informed	Leadership	The organization has begun to change their culture to highlight the role of trauma At all levels of the organization, staff begin to rethink the routines and infrastructure of the organization	Planning and acting Begin integration of principles into staff behaviors, practices, and supports: • Addressing staff trauma • Self-care • Supervision models • Staff development • Staff performance evaluations Begin integration of principles into organizational structures: • Environmental review • Record-keeping revised • Policies and procedures reexamined • Self-help and peer advocacy incorporated	• Staff applies new knowledge about trauma to their specific work • Language is introduced throughout the organization that supports safety, choice, collaboration, trustworthiness, and empowerment • The organization has policies that support addressing staff's initial and secondary trauma • All clients are screened for trauma and/or a "universal precautions" approach is used • People with lived experience are engaged to play meaningful roles throughout the agency • Environmental changes • Trauma-specific assessment and treatment models are available for those who need them • The organization has a ready response for crisis management that reflects trauma-informed values

Source: Missouri Department of Health and Partners (2014). Missouri model: A developmental framework for trauma informed.

Appendix F: Levels of Child Maltreatment Prevention

This table further explains the levels of prevention as they relate to ACEs and child maltreatment. In the subsequent appendices these levels of prevention for each program are indicated by their associated number: 1a, 1b, 2, and 3.

Prevention Level	*Universal Primary (1a)*	*Targeted Primary (1b)*	*Secondary (2)*	*Tertiary (3)*
Target population	General population of a community.	Sub-populations of a community that has experienced childhood adversity and/or is at-risk for child maltreatment, but who are not involved with child protective services.	Members of the community that are involved with CPS in low-risk cases.	Members of the community who are involved with CPS in high-risk cases and require trauma support services and resources for healing.
Goals	To educate the public on best practices in preventing the pair of ACEs.	Prevent and reduce indicators of ACEs and/or child maltreatment and improve protective factors.	Reduce the prevalence and negative outcomes of ACEs and child maltreatment. Prevent recurrence of childhood adversity.	Reduce effects and symptoms of trauma, toxic stress, chronic disease, and other negative outcomes related to ACES. Provide resources for healing from ACEs and child maltreatment.
Example programs	Triple P/ Positive Parenting Program Nurse-Family Partnership	Texas Home Visiting (THV) SafeCare Parents as Teachers (PAT)	Military Families and Veterans Pilot Prevention Program (MFVPP) Community Based Family Services (CBFS)	Services to At-Risk Youth (STAR) Trust-Based Relational Intervention (TBRI)

Appendix G: Prevention and Early Intervention (PEI) Programs Funded Through DFPS

Note: See Appendix C for the Level of Prevention key and *Appendix H* for an explanation of Example Programming acronyms and program descriptions.

Initiative	Start Date	Population	Example Programming**	Level of Prevention*	Kind of Initiative	Related ACEs or risk factors	Description	Contractors	Counties Served (FY16)	Families Served (FY17)	Projected Families Will Serve 2019[3]	Funded FY 2016	Cost/ Family (FY16)
Community Based Family Services (CBFS)	2008	Children 0-17	Building Strong Families Nurturing Parenting Parenting Wisely	1b 2	Home visiting Case management	Child A/N	Serves families that have been investigated by Child Protective Services with no confirmation of child abuse/neglect OR a confirmation of the allegation as a low-risk situation. Contractors provide an initial home visit to assess families' needs and create a service plan.	2	11	420	N/A	$608,465	$1,449
Community Youth Development (CYD)	1995	Youth ages 6-17 who live in/attend school in one of the targeted zip codes	N/A	1b 2 3	Academic support services Mentoring programs	Child A/N Social/ emotional challenges	Provides services to promote child and caregiver protective factors and prevent negative outcomes by funding local programs that reduce referrals to juvenile probation and juvenile delinquency. It offers 9 program services: a) youth-based class/activity, family-based class/activity, b) family focused service, c) recreational services, d) academic support services, e) life skills classes, f) mentoring, g) youth leadership development, and h) youth advisory committee business.	14	13	15,542	17,040	$6,143,980	$395
Fatherhood EFFECT I and II	2013 (I)/ 2015 (II)	Fathers with children 0-18	24/7 Dads	1b 2	Wraparound services Basic needs support	Child A/N	Both phase I and II provide training and resources to fathers to reduce incidents of child abuse/neglect. The programs include parenting classes. Contractors provide a) basic needs support, b) childcare, c) transportation, and d) community resource referrals. Weekly classes are provided in both English and Spanish.	4	6	295	756	$768,915	$2,606
Home Visiting, Education and Leadership (HEAL)	2014	Adults expecting or who already have at least one child age 0-17	Triple P Parenting Family Connections SafeCare	1a 1b 2	Home visiting Wraparound services Public awareness	Child A/N	Seeks to increase community awareness of existing prevention services in local communities, strengthen child abuse prevention efforts in the community and the home, and encourage families to engage in available services. Its goals are to keep children safe and increase the number of families reporting further development of at least one protective factor.	3	5	253	N/A	$790,843	$3,126

Initiative	Start Date	Population	Example Programming	Level of Prevention*	Kind of Initiative	Related ACEs or risk factors	Description	Contractors	Counties Served (FY16)	Families Served (2017)	Projected Families Will Serve 2019[3]	Funded FY 2016	Cost/ Family (FY16)
HELP & HOPE	2010	All Texas residents	N/A	1a	Public awareness Reduce barriers to resources	Child A/N	A web-based initiative that serves as a universal strategy to a) promote healthy parenting, b) help caregivers manage stress, c) support communities in serving families, d) normalize seeking help, and d) connect those in need to state resources. Goals are to a) encourage all caregivers to develop positive parenting skills and b) increase protective factors to lower risk of child abuse/neglect.	N/A	All	255,316	N/A	N/A	N/A
Helping through Intervention and Prevention (HIP)	2014	Expecting or parenting former/current foster youth Families with a newborn and history of child A/N, fatality, or termination of rights	Nurturing Parenting STEP Triple P Parenting	1b 2	Home visiting Parent education Basic needs support Screening	Child A/N	Provides targeted families with a home-based assessment, home visiting, caregiver education, and basic needs support up to $200. The goal is to keep children safe and show an increase in at least one protective factor.	10	68	29	380	$300,200	$10,352
Healthy Outcomes through Prevention and Early Support (HOPES)	2014	Families with children 0-5 at risk for child A/N	24/7 Dad PAT NFP SafeCare	1b 2	Home visiting Wraparound services	Child A/N	Addresses child abuse/neglect prevention by focusing on community collaboration in targeted counties. Seeks to increase protective factors of families served.	22	39	2,634	4,660	$14,219,848	$5,399
Military Families and Veterans Pilot Prevention Program (MFVPP)	2015-2016	Military families and veterans who have a history of or are at risk for child A/N or family violence	Common Sense Parenting STEP Common Sense Parenting	1b 2 3	Home visiting Wraparound Services Promotes multisystemic approach	Child A/N	Goals are to a) prevent child abuse/neglect in military communities; b) help military and veteran caregivers have more positive involvement in their child's life; c) improve caregivers' capacity to provide emotional, physical, and financial support to their child; and d) build community coalitions focused on prevention.	3	3	119	949	$2,159,162	$18,144
Texas Nurse-Family Partnership (NFP) Program	2006	First-time mothers and their children prenatal-2	NFP	1b 2	Home visiting Screening	Child A/N Domestic violence Health risks due to maternal ACEs	Specially trained nurses tailor services to each family's needs and help promote positive health behaviors and competent care-giving through a variety of screening and diagnostic tools. Goals are to 1) improve: a) pregnancy outcomes, b) child health and development, and c) economic self-sufficiency of the family; 2) reduce domestic violence; and 3) promote father involvement.	14	22	2,765	2,400	$11,442,680	$4,138

Initiative	Start Date	Population	Example Programming	Level of Prevention*	Kind of Initiative	Related ACEs or risk factors	Description	Contractors	Counties Served (FY16)	Families Served (2017)	Projected Families Will Serve 2019[3]	Funded FY 2016	Cost/ Family (FY16)
Room to Breathe	2010	All families, health care professionals, and child safety advocates	N/A	1a	Public awareness	Child A/N	Promotes the American Academy of Pediatrics guidelines for safe sleep for infants. This initiative uses a) the web, b) mobile phone advertising, c) online and TV advertising, d) print materials, and e) targeted outreach. The goal is to reduce the number of infant sleeping deaths and raise awareness on safe sleep practices for infants.	N/A	All	70,557	N/A	$436,177	$6
Services to At-Risk Youth (STAR)	1983	Families with youth age 18 who are dealing with issues at home or school, including running away	N/A	2 3	Counseling services Emergency respite care	Child A/N Social/ emotional challenges	Provides individual and family a) crisis intervention counseling services, b) youth and parenting skill classes, and c) short-term emergency respite care. Goals are to a) keep children safe from abuse/neglect, b) achieve better outcomes for the families after 90 days of services, and c) keep children out of the juvenile justice system. Counseling is offered by appointment at the child's school, home or in the community.	28	All	24,974	14,675	$20,664,693	$827
Statewide Youth Services Network (SYSN)	2008	Children ages 6-18	N/A	1b 2	Mentoring programs	Social/ emotional challenges	Provides juvenile delinquency prevention programs, including a) school and community-based mentoring programs, b) youth leadership development, and c) youth skill building. Goals are to increase protective factors for and in youth.	2	All	4,015	2,147	$3,050,000	$760
Texas Families Together and Safe (TFTS)	1995	Families at risk for child A/N and children 0-17	N/A	1b 2 3	Reduce barriers to resources Promotes multisystemic approach	Child A/N	Goals are to a) make family support services more available, efficient and effective; b) help children stay in their own homes; and c) help local programs, government agencies, and families work together.	4	21	2,592	N/A	$2,582,247	$996
Texas Home Visiting (THV)	2012	Pregnant women/families with children 0-5 with at least 1 risk factor	Family Connects PAT Early Head Start - Home Based	1b	Home visiting Promotes multisystemic approach	Child A/N Health risks due to maternal ACEs	Provides home visiting services with the goals of a) improving maternal and child health, b) preventing child abuse and neglect, c) encourage positive parenting, and d) promote child development and school readiness. Risk factors include: a) low income, b) caregiver under age 21, c) poor maternal health, d) underemployment or unemployment, e) preterm birth, and/or f) low parental education.	18	21	5,465	3,858	$17,816,232	$3,260

1 Texas Department of Family and Protective Services (2018a). Prevention and early intervention program directory. Retrieved from https://www.dfps.state.tx.us/About_DFPS/Reports_and_Presentations/PEI/documents/2017/PEI_Program_Directory.pdf;

2 Texas Department of Family and Protective Services (2017). Prevention and early intervention outcomes: Rider 38 outcomes report. Retrieved from https://www.dfps.state.tx.us/Prevention_and_Early_Intervention/documents/Rider_38_Outcomes_Combined_Report.pdf

3 Texas Department of Family and Protective Services (2018b). Prevention and early intervention: Fiscal year 2019 business plan. Retrieved from http://www.dfps.state.tx.us/About_DFPS/Reports_and_Presentations/PEI/documents/2018/2018-09-13_FY19_PEI_Business_Plan.pdf

Appendix H: State-Funded Prevention Programs Implemented in Texas

Program	Population[1,2]	Level of Prevention	Kind of Program	Related ACEs or risk factors	Description[1,2]	Funded Under[3,4]	Cost /Family (Annual)[2,3]	ROI[2,3]	Level of Evidence
24/7 Dads	Father figures of children ages 0-17	1b 2	Parent education Group classes	Child A/N	Weekly 2-hour groups for 12 weeks. Goals are to a) teach parenting skills to fathers to change their attitudes; b) improve their knowledge and abilities; and c) increase their self-awareness, compassion, and responsibility.	Fatherhood EFFECT	N/A	N/A	N/A
AVANCE	Women/families with children prenatal-3 at risk for child A/N	1b	Parent education Case Management Home visiting	Child A/N Social/emotional challenges	A 9-month, bilingual parenting curriculum which aims to directly impact a child's social, emotional, behavioral, and physical health. Caregivers learn how to make toys out of common household materials and use them as tools to teach their children school readiness. Monthly home visits (lasting 30-45 minutes) and community-based classes (3 hours) are provided. During classes, early childhood enrichment is provided. Risk factors include families with a) low income, b) low parental education, c) teen parenthood, d) geographical/social marginalization, and e) toxic stress	HOPES	N/A	N/A	Casey: Potentially supported under Family First Act[2] CEBC: Supported [1]
Centering Pregnancy	Women prenatal-postpartum	1b	Group classes Parent education	Child A/N Health risks due to maternal ACEs	A two-model small group program. Pregnancy model: 10 sessions; Parenting model: 8-9 sessions. It takes 12-24 months for women to complete a combination of both programs. Both models emphasize assessment, education, and support to empower women to make healthy lifestyle choices for themselves and their babies.	HOPES	N/A	N/A	N/A
Common Sense Parenting	Caregivers of children 6-16	1b	Group classes Parent education	Child A/N Social/emotional challenges	A group-based class for caregivers that teaches them ways to improve their child's positive behavior and decrease negative behavior. Also seeks to teach caregivers how to improve communication to build strong families. The class is comprised of 6 weekly sessions that meet for 2 hours.	MFVPP	N/A	N/A	CEBC: Supported[1] Casey: Potentially supported under Family First Act[2] Crime Solutions: Promising[6]
Early Head Start - Home Based	Low-income women with children prenatal-3	1b	Parent education Home visiting	Child A/N	The goals are to a) enhance childhood development, b) better the caregivers' skills, and c) provide needed services. These goals are achieved through weekly home visits, socialization events, educational classes, and more.	THV	$3,089	$0.13/$1[9]	CEBC: Promising[3] Casey: Potentially promising under Family First Act[2]
Effective Black Parenting Program (EBPP)	Black caregivers of children 0-17	1b 2	Group classes Parent education	Child A/N Substance Use Social/emotional challenges	A weekly 3-hour session or a 1-day, 6.5-hour session, where caregivers learn to prevent and treat a) child abuse, b) child behavior disorders, c) substance use, and d) parental stress. Promotes a) cultural pride, b) improved child school performance, c) improved family cohesion, d) coping skills when experiencing racism, e) avoiding cultural self-disparagement, and f) teaching tolerance.	HIP	N/A	N/A	CEBC: Promising[1] Casey: Potentially promising under Family First Act.[2]

Program	Population[1,2]	Level of Prevention	Kind of Program	Related ACEs or risk factors	Description[1,2]	Funded Under[3,4]	Cost /Family (Annual)[2,3]	ROI[2,3]	Level of Evidence
Family Connections (FC)	Families of children 0-17 at risk for child A/N	1b 2 3	Home visiting Parent education Basic needs support	Child A/N Mental illness Substance use	Seeks to prevent child maltreatment and help families meet their basic needs. Its goals are to increase family protective factors and decrease risk factors and improve child safety, wellbeing, and permanency outcomes. It addresses a) families' poor household conditions, b) financial stress, c) inadequate social support, d) unsafe caregiver-child interactions, e) poor adult functioning, and f) poor family resources. Requires at least 1 hour per week of in-home, face-to-face prevention services for 3-4 months, with optional 90-day extension if needed.	HEAL HOPES	$3,089	$857	CEBC: Promising[1] Casey: Potentially promising under Family First Act[2]
Family Connects	Parents of children 0-2	1	Home-visiting Parent education	Child A/N Health risks due to maternal ACEs	The program involves 3-7 home visits. The nurse will do health check-ups on both the baby and the mother, answer any questions, and provide any other services needed.	THV	$700	$3.02/$1	Casey: Potentially well supported under Family First Act[2]
Home Instruction for Parents of Preschool Youngsters (HIPPY)	Parents of children 3-5	1b	Home visiting Parent/child education	Social/emotional challenges	A home-based, school readiness program. Caregivers are provided curriculum, books, and materials designed to strengthen their child mentally, emotionally, and physically. Trained coordinators visit the home and a) answer questions, b) roleplay activities with the caregivers, and c) support the family throughout the process.	HOPES	$2,050	$0.88/$1	CEBC: Supported.[1] Casey Family Programs: Potentially supported under Family First Act.[2]
Incredible Years (IY)*	Parents, teachers, and children 4-8	1b	Parent/teacher Education	Social/emotional challenges	A series of 3 developmentally-based curricula for caregivers, teachers, and children. The program is meant to promote emotional and social competence while also preventing, reducing, and treating behavior and emotional problems in children. The goals are to a) improve caregiver-child interactions; b) improve teacher-student interactions; and c) prevent/reduce conduct disorders, academic underachievement, violence, and more.	HOPES	2,215	$1.79/$1	CEBC: Well supported.[1] Casey Family Programs: Potentially well-supported.[2] Blueprints: Promising.[5] Crime Solutions: Effective.[6]
Nurse-Family Partnership (NFP)	First-time mothers and their children prenatal-2	1b	Home visiting Parent education Screening	Child A/N Domestic violence Health risks due to maternal ACEs	Specially trained nurses tailor services to each family's needs and help promote positive health behaviors and competent care-giving through a variety of screening and diagnostic tools. Goals are to 1) improve: a) pregnancy outcomes, b) child health and development, and c) economic self-sufficiency of the family; 2) reduce domestic violence; and 3) promote father involvement.	NFP HOPES THV	$4,138	$5.70/$1[8]	Blueprints: Model program[5] Crime Solutions: Exemplary[6] CEBC: Well-supported[1] Casey: Potentially well-supported under Family First Act[2]
Nurturing Parenting	Families at risk for child A/N with children 0-18	1b 2 3	Home visiting Parent education	Child A/N Domestic violence	Sessions runs 2-3 hours once a week for 12-45 weeks. Programs can be implemented in groups or home sites. Program features activities to foster a) positive parenting skills and self-nurturing, b) home practice exercises, and c) family nurturing time. Goals are to a) decrease the number of new offenses, b) increase self-esteem, c) improve family bonding, d) improve caregiver-child communication, and e) decrease family violence.	HOPES HIP CBFS	$1,597	N/A	Casey: Potentially promising under Family First Act[2]

Program	Population[1,2]	Level of Prevention	Kind of Program	Related ACEs or risk factors	Description[1,2]	Funded Under[3,4]	Cost /Family (Annual)[2,3]	ROI[2,3]	Level of Evidence
PADRE	Male caregivers with/at-risk for substance use who have children 0-6	1b 2 3	Parent education Group classes	Child A/N Substance use	A 15-week educational parenting group and including intensive case management. PADRE's goals are to help male caregivers become well-equipped to handle parenting through the development of life skills and healthy lifestyles.	DSHS	N/A	N/A	N/A
Parenting Wisely	Families of children 3-18 who are either in the home or in residential care	1b 2 3	Parent education Home visiting	Child A/N	Easy to use, affordable, interactive parenting skills education programs. Includes interactive CDs, evidence-informed DVDs, online training, and a variety of parent education programs to address the needs of caregivers at all stages.	CBFS	N/A	N/A	CEBC: Promising[1]
Parents as Teachers (PAT)	High-risk families with children prenatal-kindergarten entry	1b 2	Home visiting Parent education	Child A/N Substance use Mental illness Chronic health conditions	Eligibility requirements for enrollment are site-specific. Includes at least 12 home visits annually. Families with 2 or more high need characteristics receive 24 visits for at least 2 years. Goals are to a) increase caregiver knowledge of early childhood development and improve parenting practices, b) provide early detection of developmental delays and health issues, c) prevent child abuse and neglect; and d) increase children's school readiness and school success. Risk factors include a) teen parents, b) low income, c) low parental education, d) history of substance use, and e) chronic health conditions affecting caregivers or children.	MFVPP HOPES HEAL THV	$2,652	$765	CEBC: Promising[1]
Period of Purple Crying	Families with newborn infants prior to leaving hospital	1a	Parent education	Child A/N	Curriculum includes a 10-minute DVD and about 5 minutes of a follow-up conversation with medical personnel. A DVD and brochure are then provided to caregivers to take home and share with others. Goals are to a) reduce child abuse, especially incidents of Abusive Head Trauma (AHT); b) reduce caregiver frustration due to excessive crying; and c) increase caregiver knowledge of AHT and Shaken Baby Syndrome (SBS).	HOPES	$4.50	N/A	CEBC: Promising[1]
SafeCare	Caregivers of children 0-5 at risk for/with a history of child A/N	2 3	Home visiting Parent education	Child A/N	The program can be in the child's adoptive home, biological home, foster home, or kinship home. It targets 3 main risk factors for child abuse/neglect: a) the caregiver-child relationship; b) home safety; and c) child health. The modules focus on a) reducing future incidents for child abuse and/or neglect, b) increasing positive caregiver-child interaction, c) improving how caregivers invest in their children's health, and d) enhancing home safety and caregiver supervision.	HEAL HOPES	$1,950	$3,563	CEBC: Promising/Supported[1] Casey: Potentially supported under Family First Act[2]
Safe Environment for Every Kid (SEEK)	Families at risk for child A/N with children 0-5	1b	Screening Reduce barriers to resources	Child A/N	Pediatricians provide an assessment of the family and refer to any appropriate outside care. Goals are to improve pediatric care, prepare professionals, identify families with risk factors for child maltreatment, strengthen families, support caregivers, promote child health and safety, and prevent child abuse/neglect.	HOPES	N/A	N/A	CEBC: Well supported[1]

Program	Population[1,2]	Level of Prevention	Kind of Program	Related ACEs or risk factors	Description[1,2]	Funded Under[3,4]	Cost /Family (Annual)[2,3]	ROI[2,3]	Level of Evidence
Stewards of Children	Families with children 0-5	1b	Parent education	Child A/N	A 2-hour training that teaches adults how to properly prevent, recognize and react to child sexual abuse. The program has commentary from abuse survivors, experts in the field, and more. The goals of this program are to a) increase knowledge and awareness about child sexual abuse, b) improve child protective behaviors, and c) improve policies/organizations.[4]	MFVPP	Online $10/ person	N/A	CEBC: Promising[1] Crime Solutions: Promising[6]
Systematic Training for Effective Parenting (STEP)	Caregivers with children 0-17	1b 2	Group classes Parent education	Child A/N	This program contains a curriculum to teach caregivers effective ways to a) relate to their children, b) encourage cooperative behavior, and c) change dysfunctional relationships. STEP is offered in 3 separate programs that contain guides, tools, videos, and handbooks.	MFVPP HIP	N/A	N/A	CEBC: Promising[1]
Triple P Parenting/Positive Parenting Program	Caregivers of children 0-16 at risk for child A/N	1b 2	Home visiting Parent education	Child A/N Domestic violence Substance use Mental illness Social/emotional challenges	Includes 1-10 home visits, depending on the needs of the family. Goal 1 is to promote a) family independence and health; b) non-violent, protective and nurturing environments; and c) child development, growth, health, and social competencies. Goal 2 is to reduce a) child abuse, b) mental illness, c) behavior problems, d) delinquency, and e) homelessness. Goal 3 is to enhance a) caregiver competence, b) resourcefulness, and c) self-sufficiency. Services may be delivered individually, face-to-face, in group meetings, with telephone assistance, or are self-directed.	HEAL HIP HOPES	$5,306	$6.06/$1	CEBC: Supported[1] Casey: Potentially well supported by Family First Act[2] OJJDP: Effective[10] Blueprints: Promising[5]

1 California Evidence-Based Clearinghouse for Child Welfare. Available from http://www.cebc4cw.org/

2 Casey Family Programs (2018). Interventions with special relevance for the Family First Prevention and Services Act (FFPSA).

3 Texas Department of Family and Protective Services (2018). Prevention and early intervention program directory. Retrieved from https://www.dfps.state.tx.us/About_DFPS/Reports_and_Presentations/PEI/documents/2017/PEI_Program_Directory.pdf;
4 Texas Department of Family and Protective Services (2017). Prevention and early intervention outcomes: Rider 38 outcomes report. Retrieved from https://www.dfps.state.tx.us/Prevention_and_Early_Intervention/documents/Rider_38_Outcomes_Combined_Report.pdf

5 Blueprints for Healthy Youth Development. Available from http://www.blueprintsprograms.com

6 National Institute of Justice, Crime Solutions.gov. Available from https://www.crimesolutions.gov/

7 Head Start Website: https://eclkc.ohs.acf.hhs.gov/about-us/article/head-start-program-facts-fiscal-year-2016

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9 Washington State Institute for Public Policy. Benefit-cost. Available from http://www.wsipp.wa.gov/BenefitCost

10 Office of Juvenile Justice and Delinquency Prevention. Available from https://www.ojjdp.gov/mpg/Program

Appendix I: Other Prevention Programs Implemented in Texas (Not Funded by the State)

Program[3]	Population	Level of Prevention	Kind of Program	Related ACEs or risk factors	Counties Served	Description	Cost /Family (Annual)	ROI	Level of Evidence
Exchange Parent Aide	Families with children from birth to age 12 who are considered at risk for child A/N	1b 2	Parent education	Child A/N Domestic violence	Dallas	10-12 weekly visits continuing for at least 1 year. Goals are to replace patterns of abusive behavior in caregivers with effective skills for nonviolent parenting and reduce child abuse/neglect. Services are family-centered and focus on child safety, problem solving skills, parenting skills, and social support.[1,2] Texas served 50 families through this program in 2013.[5,6]	$30,007	N/A	Casey Family Programs: Potentially promising under Family First Act[2]
Healthy Families America	Families with children prenatal to age 5	1b 2	Home visiting Promotes a multisystemic approach	Health risks during infancy linked to maternal ACEs	Concho, Runnels, Tom Green, Dallas, and Travis	This program provides weekly home visits to newborns and their families until the child is at least 6 months old. Home visits then occur less often until child is age 3. Goals are to a) build and sustain community partnerships to engage overburdened families, b) strengthen caregiver-child relationships, c) promote child health and development, and d) enhance overall family functioning by reducing risk and increasing protective factors.[1]	$389,210	$0.56/$1[8]	OJJDP: Promising[7] CEBC: Promising[1] Crime Solutions: Promising[4] Casey Family Programs: potentially well-supported under Family First Act[2]
Parents Anonymous	All families	1a	Parent education Group classes Community-based	Child A/N	N/A	Facilitated support group that encourages caregivers to play active roles in the development of their children through support and educative knowledge. Caregivers practice new behaviors at home and discuss results in the group each week. The weekly group is free, open-ended, and ongoing. Children meet in a separate group while caregivers meet.[2]	N/A	N/A	Casey Family Programs: Potentially promising under Family First Act[2]

1 California Evidence-Based Clearinghouse for Child Welfare. Available from http://www.cebc4cw.org/
2 Casey Family Programs (2018). Interventions with special relevance for the Family First Prevention and Services Act (FFPSA).
3 Texas Department of Family and Protective Services (2017). Prevention and early intervention outcomes: Rider 38 outcomes report. Retrieved from https://www.dfps.state.tx.us/Prevention_and_Early_Intervention/documents/Rider_38_Outcomes_Combined_Report.pdf
4 National Institute of Justice, Crime Solutions.gov. Available from https://www.crimesolutions.gov/
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