

Prenatal Strategies to Support Families

Building hope and resiliency from the start

ACEs:

Adverse childhood experiences (ACEs) are traumatic events that can dramatically upset a child's sense of safety and well-being.

Introduction



How a child develops is the foundation for a prosperous community in the future. Starting even before birth, a child's brain architecture is being constructed through an ongoing process that continues into adulthood. But many children experience stress early on that damages the early developing architecture of their brain and can undermine their ability to reach their full potential.

Adverse Childhood Experiences, or ACEs, are incidents that can create a toxic level of stress for a child. ACEs can lead to problems in learning and behavior and increase the likelihood of physical and mental illness over time.

In Iowa, more than half of adults report having experienced at least one type of ACE growing up and 14.5 percent of adults report four or more ACEs.¹ ACEs are defined as physical, sexual, emotional abuse, as well as dysfunction in the home from separation/divorce, mental illness, substance abuse, incarceration, or domestic violence. Factors like systemic racism, poverty, and community violence also increase the likelihood of a child experiencing ACEs and can damage their foundation for future growth.²

Iowa's research mirrors national research that shows as the number of reported ACEs increase, so does the likelihood of having poor health, social, and life outcomes. For example, Iowa adults with four or more ACEs are six times more likely to have depression and more than twice as likely to have a heart attack than those with no ACEs.¹

THOSE WHO HAVE EXPERIENCED FOUR OR MORE ACEs COMPARED TO THOSE WITH ZERO ARE:

1.5x  more likely to have diabetes

2x  more likely to report poor health

2.2x  more likely to have a heart attack

3x  more likely to smoke cigarettes

6x  more likely to have clinical depression

HOW CAN WE BUILD A STURDY FOUNDATION FROM THE START?

Children from birth to age 1 are **2x more likely** to suffer abuse than any other one-year age cohort.³

Not only can early experiences of adversity impact individuals' lives, they also can impact future generations. Our experiences may be woven into our children's and even our grandchildren's genetic code.

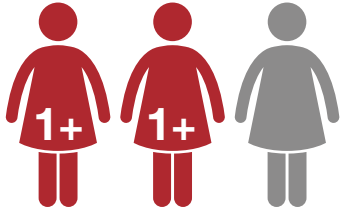
If we are going to reduce trauma and improve health outcomes today, and in the future, we need to start at the beginning. The VERY beginning.

When a community creates healing environments and builds families' connections to services before a child is born, it creates a more durable foundation for the child. This guide explains the science behind focusing on prenatal care and opportunities for early interventions.

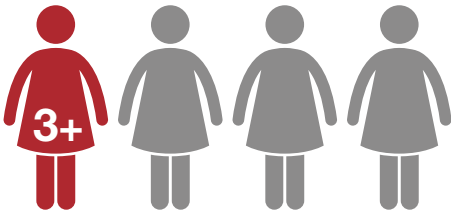
Maternal stress can lead to ACEs for baby

The prenatal period is a critical time in a child's development, setting the architecture of the child's developing brain. The quality of that architecture establishes either a sturdy or a fragile foundation for all development and behavior that follows.

Laying a sturdy foundation starts by supporting parents' well-being and creating the conditions that give children the best start. Yet, research shows that many children are already at risk for experiencing ACEs before being born.⁴



67% of Iowa mothers reported at least one stressor in the 12 months before giving birth



Approximately 25% of mothers are experiencing three or more stressors within the 12 months before giving birth.⁵

MOTHERS ARE EXPERIENCING STRESS

The Pregnancy Risk Assessment Monitoring System (PRAMS) surveys new moms about their behaviors and experiences before, during, and shortly after pregnancy.⁵ Their responses provide insight into health, attitudes, behaviors, and stressors Iowa mothers are experiencing.

Most mothers report stress from moving or having a close family member in the hospital. But many mothers also report significant stressors that mirror the adversity identified in The ACE Study.

PRAMS data related to household dysfunction that can potentially lead to ACEs for a child:

- 11% of Iowa mothers say someone very close to them had a problem with drinking or drugs.
- 3% say they were experiencing physical abuse from a partner before pregnancy.
- 18% state that someone very close to them died within twelve months before the baby was born.
- 27% report sometimes, often, or always feeling depressed since giving birth.⁵

STRESS CAN IMPACT A CHILD FROM THE START

While a parent's past ACEs and level of stress do not mean a child will have ACEs, the data highlights the significant risk already present when a child is about to be born.

According to the American Academy of Pediatrics, "Parent ACEs have been associated with low birth weight and shorter gestational age, maladaptive socioemotional symptoms at age six months, and poor physical and emotional health at eighteen months." Research also shows an increase of stress in mothers correlates to an increase in cortisol levels in the placenta.⁶

We have an opportunity to work with mothers from the start to identify stressors and provide services and support that can help alleviate those stressors, so their children have a greater chance of thriving lifelong.

Maternal stress is often caused by external factors



SOME MOTHERS EXPERIENCE GREATER LEVELS OF TRAUMA

Some populations experience ACEs at a higher rate, putting parents, and their children, at greater risk for poor health, social, and life outcomes. These disparities in health outcomes can grow with each generation.

Black lowans report experiencing 4+ ACEs at double the rate of white respondents. Multiracial respondents report 4+ ACEs at nearly three times the rate of white respondents.¹

The CDC recently expanded its understanding of factors that can influence whether a child experiences trauma to show that poverty, violence, and systemic racism, among other factors, can stack up against a child to create an unsteady foundation.²

SOCIAL CONDITIONS INCREASE LEVELS OF STRESS IN MOTHERS

We see disparities in the stressors expecting moms report through PRAMS data.

Compared with 67% of the total population, here is the percentage of specific populations reporting one or more stressors:

- 80% of African American mothers
- Nearly 69% of Hispanic mothers
- 83% of mothers receiving public health insurance.⁵

Findings also show that:

- 14% of African American Iowa mothers and 7% of Hispanic Iowa mothers say they experienced racial bias in the year prior to the baby being born.
- 20% of African American Iowa mothers receive inadequate prenatal care throughout pregnancy.

Of mothers on public health insurance, 13% experienced six or more stressors, compared with 6% of the total population experiencing this level of stress.⁵

16% of mothers who are living below 185% of the federal poverty level are facing the additional stress of not having enough money to buy food and 14% of these mothers are worried about being able to pay bills.⁵ These mothers are experiencing extreme levels of stress that can impact their children, and on top of that, they may not have access to enough nutrients to be able to feed themselves and their growing baby.

STRESS CAN BE PASSED FROM GENERATION TO GENERATION

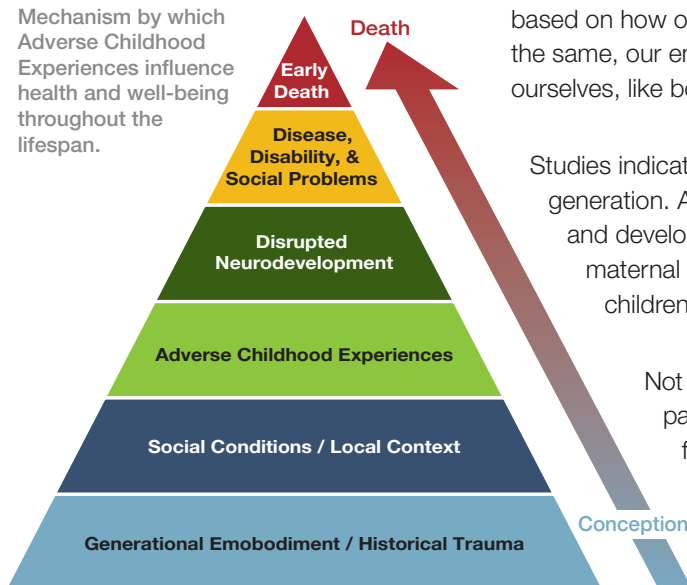
In addition to social stressors, epigenetics explains how ACEs can be passed down from generation to generation.

Each cell contains thousands of genes that make us who we are. These genes can turn on or off to direct the cells how to behave. How we look, sound, and act are based on how our genes are activated. While our basic genetic makeup remains the same, our environment can modify certain genes that then impact aspects of ourselves, like body weight or our stress response system.⁷

Studies indicate that some changes in our code may be inherited by the next generation. A correlation between mothers who experienced adversity in childhood and developmental delays in their children at one year of age suggests that maternal experiences can be transferred and have a long-term impact on children's epigenetic and physical development.

Not only can a parent's stress change the genes that a child inherits, but that parent's genes may also have been modified by historical trauma in their families. Several human studies show this connection among groups living through threatening circumstances. For example, studies of the grandchildren of individuals born immediately following the 1944-1945 Dutch famine show increased rates of heart disease and obesity.⁸

Mechanism by which Adverse Childhood Experiences influence health and well-being throughout the lifespan.



Solutions across two generations

Building the well-being of adults and children together results in a structure that is stronger for the entire family. Some families are on shaky foundations and need a great deal of support. Others may have overcome hard times in the past and need support at times along the way. A family can build their well-being with the right materials, including access to good-paying jobs, a safe home and healthy food, physical and mental health care, and connections to people and opportunities in the community. Below are two opportunities to help shore up parents' foundations. These kinds of two-generational approaches are finding success in long-term impact and cost savings.



CASE STUDY: Nine2Thrive

Based on the 1st Five model, **Nine2Thrive connects expecting mothers with signs of stress to community resources and support. If a mother identifies stressors, such as financial concerns, a lack of help, challenges with housing or accessing food, or substance use, a health care provider will recommend the mother to this program. A community coordinator will then reach out to the family and refer them to services that can help reduce stress. The Nine2Thrive program is being piloted in Broadlawns Medical Center with EveryStep providing the coordination and measuring results. Of the 28 completed cases in the program's first six months, mothers have spoken nine different native languages and 78% live in extreme poverty.**

SOLUTION: EXPAND COMMUNITY SUPPORT COORDINATION TO PRENATAL PERIOD

As Iowa's PRAMS data highlights, expecting mothers are already under a significant amount of stress, even more so for expecting mothers of color and those who live in poverty. Most mothers (87%) do not experience problems receiving prenatal care and 93% report having at least one social support, an essential piece to help cope with stress.⁵

However, more can be done to identify the specific stressors mothers are experiencing while receiving prenatal care and connect mothers to resources that can help reduce those stressors. Successful models in pediatric and family support fields involve referring families who identify areas of stress to a coordinator who can connect the family to the resources they need in the community. More could be done to expand and fund these successful models to focus on expecting parents and to create a warm hand-off if a family needs services in the future. Prenatal providers (including OB/GYNs, family practitioners, midwives, doulas, and home visitors) should receive better education on how to increase access to these programs. Given the significant disparities in stressors reported by expecting mothers of color, community support services should also assess traditional referral sources, practices, and services, and identify strategies to better connect and serve all mothers.

SOLUTION: PROMOTE AND EXPAND HOME-VISITING SERVICES

Home visiting has proven effective in reducing the risk for child abuse and neglect, as well as substance abuse and violence in the home, and increasing community and social supports for families.⁹ Most home-visiting services support families after a child is born. Greater funding and flexibility in current funds could support prenatal engagement with families. Advocates could also lift up the effectiveness of these programs to gain greater public and private support.

CASE STUDY: Kentucky Prenatal Home Visitation Program

Kentucky Prenatal Home Visitation Program saw benefits in health for mother and baby when mothers were enrolled.¹⁰ During pregnancy, visits focus on obtaining regular prenatal care as well as topics such as fetal and early brain development, preparation for newborn, injury prevention, and community resources. Benefits were seen in a decrease in the outcomes noted to the right.

Outcomes	WITHOUT prenatal home visiting	WITH prenatal home visiting
Born preterm	13.7%	10.6%
Low birth weight	12.4%	7.2%
Domestic violence in the home	11%	4%

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