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Building Strong Wisconsin Families: Evidence-Based Approaches to Address Toxic Stress in Children

Robert M. La Follette
School of Public Affairs
UNIVERSITY OF WISCONSIN–MADISON

Wisconsin Family Impact Seminars

An initiative of the Robert M. La Follette School of Public Affairs, with generous financial support from the University of Wisconsin–Madison Chancellor's Office and Phyllis M. Northway Fund

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Building Strong Wisconsin Families: Evidence-Based Approaches to Address Toxic Stress in Children

Briefing Report for the 37th Wisconsin Family Impact Seminar

FIRST EDITION

Edited by

Heidi Normandin
Director, Wisconsin Family Impact Seminars
La Follette School of Public Affairs
University of Wisconsin–Madison

Steve Kulig
Associate Director, La Follette School of Public Affairs
University of Wisconsin–Madison

Lisa Hildebrand
Sr. University Relations Specialist
La Follette School of Public Affairs
University of Wisconsin–Madison

Kassandra Martinchek
Project Assistant
La Follette School of Public Affairs
University of Wisconsin–Madison

Layout & Production by
Melissa Carlson

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Since 1993, the Wisconsin Family Impact Seminars have provided objective, high-quality research on timely topics identified by state legislators. The seminars promote greater use of research evidence in policy decisions and encourage policymakers to view issues through the lens of family impact. The family impact lens highlights the consequences that an issue, policy, or program may have for families, so policymakers can make decisions that strengthen families for the benefit of their members and the good of society.

The award-winning Family Impact Seminars model is a series of presentations, discussion sessions, and briefing reports for state policymakers, including legislators and their aides, the Governor and gubernatorial staff, legislative service agency analysts, and state agency officials. The seminars provide neutral, nonpartisan opportunities for legislators to engage in open dialogue, foster relationships, and find common ground.

"Building Strong Wisconsin Families: Evidence-Based Approaches to Address Toxic Stress in Children" is the 37th Wisconsin Family Impact Seminar. For additional information and resources, visit our website at **www.wisfamilyimpact.org**.

For information on the Wisconsin Family Impact Seminars, contact:

Heidi Normandin
Director, Wisconsin Family Impact Seminars
Robert M. La Follette School of Public Affairs
University of Wisconsin–Madison
1225 Observatory Dr.
Madison, WI 53706
608-263-2353
hjnorman@wisc.edu

Steve Kulig
Associate Director, Robert M. La Follette School of Public Affairs
University of Wisconsin–Madison
1225 Observatory Dr.
Madison, WI 53706
608-262-8631
skulig@lafollette.wisc.edu

PRESENTERS AT THE 37TH WISCONSIN FAMILY IMPACT SEMINAR

Meghan McCann
Sr. Policy Specialist, Children and Families Program
National Conference of State Legislatures
7700 E. First Pl.
Denver, CO 80230
303-856-1404
meghan.mccann@ncsl.org
http://www.ncsl.org/documents/cyf/CYFProfile_123.pdf

Joshua Mersky
Professor, Helen Bader School of Social Welfare
Co-Director, Institute for Child and Family Well-Being
University of Wisconsin–Milwaukee
1039 Enderis Hall
2400 E. Hartford Ave.
Milwaukee, WI 53211
414-229-5003
mersky@uwm.edu
https://uwm.edu/socialwelfare/people/mersky-phd-joshua/
https://uwm.edu/icfw/

Sarah Enos Watamura
Associate Professor, Department of Psychology
Director, Child Health and Development Lab
Co-Director, Stress, Early Experiences, and Development (SEED) Research Center
University of Denver
Frontier Hall, Room 159
2155 S. Race St.
Denver, CO 80208
303-871-4130
swatamura@du.edu
https://www.du.edu/ahss/psychology/facultystaffstudents/faculty-listing/watamura.html
https://www.du.edu/ahss/psychology/chadlab/index.html

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Since 1993, the University of Wisconsin–Madison has conducted 37 Family Impact Seminars. Each Family Impact Seminar (FIS) is accompanied by an in-depth briefing report that summarizes the latest research on the topic and draws implications for families and policy decisions. These reports along with audio and video of the seminar presentations are online at **www.wisfamilyimpact.org**. Legislators can request a complimentary copy of reports and audio CDs from recent seminars by contacting Heidi Normandin at 608-263-2353 or hjnorman@wisc.edu.

FIS 37 Building Strong Wisconsin Families: Evidence-Based Approaches to Address Toxic Stress in Children ..... January 2019

FIS 36 Opportunities for Strengthening Wisconsin's Workforce ..... January 2018

FIS 35 A Place to Call Home: Evidence-Based Strategies for Addressing Homelessness across Wisconsin ..... January 2017

FIS 34 Training Today's Youth for Tomorrow's Jobs ..... November 2015

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Representative Dave Murphy
Representative Melissa Sargent

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Kassandra Martinchek	La Follette School of Public Affairs UW–Madison, graduate student
Lisa Hildebrand	La Follette School of Public Affairs UW–Madison
Bridget Pirsch	La Follette School of Public Affairs UW–Madison
Andy Lambert	La Follette School of Public Affairs UW–Madison
Ashleigh Grendziak	Human Development and Family Studies UW–Madison, graduate student

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EXECUTIVE SUMMARY

Early childhood is a time of both risk and opportunity for healthy brain development. This briefing report first discusses the prevalence of adverse childhood experiences (ACEs) in the United States and Wisconsin, particularly among low-income mothers. It also discusses toxic stress and how it affects a child's developing brain and body. Throughout, the authors highlight opportunities to strengthen Wisconsin families through evidence-based policy options, including two-generation approaches, and other states' strategies for addressing ACEs and toxic stress in parents and children.

Our early experiences shape us for a lifetime, according to **Sarah Enos Watamura**, Professor of Psychology & Director of the Child Health and Development Lab at the University of Denver. As she discusses in the first chapter, prenatal to age 3 is a time of both vulnerability and opportunity, as young children's brains are developing quickly in response to their environment. ACEs such as abuse, neglect, and household challenges can cause negative changes to the brain and stress the body. This stress can become toxic if the adversities are strong and prolonged, and children do not have a responsive adult caregiver to buffer these negative experiences. Toxic stress can lead to mental and physical illnesses, economic disadvantages, and even reduced life expectancy. New parents also experience changes in their brains that help them become positive, responsive caregivers. These changes may be diminished in parents with depression, a history of toxic stress, or other risk factors, which could lead to poor parenting and unhealthy home environments. Strategic investments in evidence-based programs and policies can support both children and parents during this paired period of major neurobiological change. Two-generation programs (e.g., home visiting) and parenting programs (e.g., Mom Power) can protect children against toxic stress and improve parents' skills and well-being. Policymakers might also consider policies that address parental depression, family financial stress, community resources, family leave policies, and family protective factors.

In the next chapter, **Joshua Mersky**, Professor of Social Work and Co-Director of the Institute for Child and Family Well-Being at the University of Wisconsin-Milwaukee, presents home visiting as an evidence-based option to address trauma and offers one way to expand the program in Wisconsin. To set the stage, he shares that six in 10 (57%) Wisconsin adults have endured at least one potentially traumatic ACE. However, 85% of low-income mothers have endured at least one ACE, and they are twice as likely as the general population to have two or more ACEs. Trauma has intergenerational consequences as well, by increasing parents' risk of problems such as mental health challenges that may impair their ability to care for their children. Home visiting provides intensive, in-home support to vulnerable pregnant mothers and new parents with the goal of preventing childhood trauma and enhancing parents' well-being. In Wisconsin, four evidence-based home visiting programs are being implemented across 31 counties and five tribal regions. Scaling up home visiting programs is a challenge because of their duration and cost. One option for doing so is Family Connects, a promising "light touch" home visiting program being implemented in Racine County that serves all families regardless of income. At a cost of $500 to $700 per family, nurses conduct at least one home visit to assess the infant and family and create a plan for more intensive services if needed. One study found that the reduction in infant emergency medical care alone returned $3 for every $1 spent on the program.

Given the abundance of data on ACEs, state policymakers are interested in cost-effective, evidence-based strategies to prevent and mitigate the consequences of toxic stress, according to the **National Conference of State Legislatures (NCSL)**. In chapter three, NCSL notes that continuous activation of a child's stress response can interfere with long-term health and well-being, and can lead to increased costs to state health care, education, child welfare, and correctional systems. In response, states across the country have implemented various strategies to prevent or address the impact of ACEs and toxic stress, including expanding health screening and treatment, strengthening family protective factors to increase children's resilience, and investing in high-quality early childhood education and care. The chapter provides numerous examples of recent legislative activity, including states that have allowed school-based health centers to provide services to students who do not reside in the school district, expanded treatment programs for pregnant women and women with young children, and implemented a statewide home visiting system using evidence-based models.

In the final chapter, **Charles Morgan**, Program Supervisor at the Wisconsin Legislative Fiscal Bureau, begins with a review of the federal Maternal, Infant, and Early Childhood Home Visiting (MIECHV) program and the conditions under which states can receive funding. Wisconsin's Family Foundations home visiting program receives approximately 45% of its funding from MIECHV, 29% from the Temporary Assistance for Needy Families block grant, 20% from local matching funds, and 6% from general purpose revenue. Family Foundations provides grants of at least $10,000 to local implementing agencies (e.g., counties, private agencies, and Indian tribes) through a competitive process in which applicants are scored on several factors, including the demonstrated need for home visiting services. Currently, 20 local implementing agencies around the state offer at least one of four evidence-based programs: Early Head Start-Home Based Option, Healthy Families America, Parents as Teachers, and Nurse-Family Partnership. Although approximately 75% of adults participating in a home visiting program also are enrolled in BadgerCare Plus, which provides services funded by medical assistance (MA) to low-income individuals and families, home visiting services are not defined as an MA-eligible service. They can be covered, however, under other broadly defined categories such as services for women with high-risk pregnancies and case management for children with complex medical needs.

Since 1993, the nonpartisan Wisconsin Family Impact Seminars have encouraged policymakers to view policies through a family impact lens. This lens acknowledges that families are the most efficient, humane, and economical way to raise the next generation, financially support their members, and care for those who cannot always care for themselves. This report focuses on the risks some Wisconsin families face in raising healthy children. Research indicates that ACEs can be prevented and people who have already endured an ACE can thrive with the right support. Policymakers now have the opportunity to ask questions such as: Which policy decisions strengthen parents' ability to buffer their children against toxic stress? Which policy decisions reduce environmental stressors on the family and thus might prevent ACEs? Which policy decisions help build children's resilience?

EARLY EXPERIENCES MATTER: THE EFFECT OF CHILDHOOD ADVERSITY ON THE BRAIN AND BODY

By Sarah Enos Watamura, Director, Child Health and Development Lab & Associate Professor of Psychology, University of Denver

Our early experiences shape us for a lifetime. Prenatal to age 3 is a time of both vulnerability and opportunity, as young children's brains are developing quickly in response to their environment. Adverse childhood experiences (ACEs) such as abuse, neglect, and household challenges can cause negative changes to the brain and stress the body. The stress can become toxic if these adversities are strong and prolonged, and children do not have a responsive adult caregiver to buffer these negative experiences and help them adapt. Toxic stress can lead to mental and physical illnesses, economic disadvantages, and even reduced life expectancy. New parents also experience changes in their brains that help them become positive, responsive caregivers. These changes may be diminished in parents with risk factors including depression or a history of toxic stress, possibly leading to poor parenting and unhealthy home environments. Strategic investments in evidence-based programs and policies can support both children and parents during this paired period of major neurobiological change. Two-generation programs (e.g., home visiting) and parenting programs (e.g., Mom Power) can protect children against toxic stress and improve parents' skills and well-being. Policymakers might also consider policies that address parental depression, family financial stress, community resources, family leave policies, and family protective factors.

INTRODUCTION

This chapter summarizes four key research findings from brain science that can inform policy: (1) early life experiences, positive and negative, are particularly impactful, (2) stress, especially early life stress, can have profound effects on development, (3) risk and opportunity can be transmitted from one generation to the next, and (4) the birth of a baby opens a special window of opportunity to help two generations at once. Taken together, this research can help policymakers invest in cost-effective, evidence-based policies and programs to prevent and mitigate the effects of early stress.

Early life stress can have profound effects on development.

HOW DO EARLY EXPERIENCES AFFECT THE DEVELOPING FETAL AND INFANT BRAIN?

Decades of research has found that early life is a sensitive time for brain development. The first three years are especially important, as the architecture of the baby's brain is being developed from the bottom up by experiences and environmental inputs. This is a time of both vulnerability and opportunity. It's a time of vulnerability because negative early experiences can weaken the architecture of the brain and shape development in ways that negatively affect physical and mental health, relationships, and achievement into adulthood. It's also a time of opportunity because environmental impacts are so powerful. Effective prevention and intervention programs can prevent negative

experiences from happening and mitigate the effects when negative experiences have already occurred.

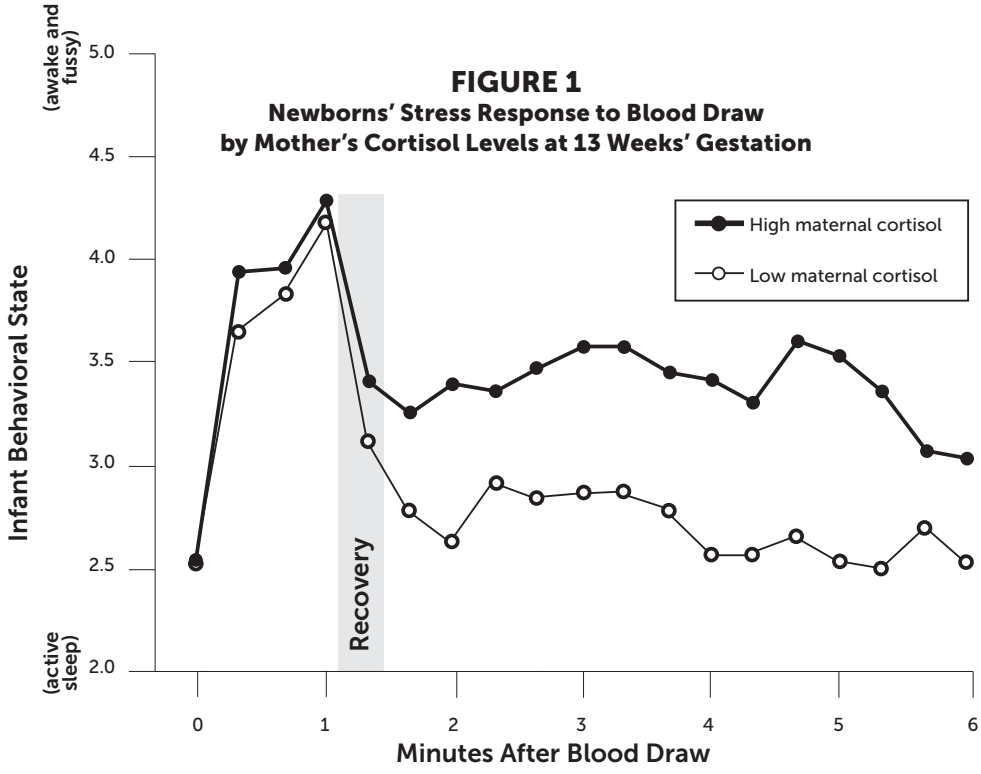
At birth, a baby will have more than 100 billion nerve cells—many more than will ever be needed. Cells are reduced, or pruned, in response to what the baby needs. For example, newborns are born with the ability to hear sounds from any language in the world. This ability drops off sharply during the first year as babies interact in an environment where only one or two languages are spoken.

In adverse situations, babies might mostly see negative emotions, which is stressful for the baby and limits their exposure to a full range of emotions.

Similarly, babies can recognize faces immediately after birth, allowing them to understand and interpret emotions common to their culture. In adverse situations, babies might mostly see negative emotions, which is not only stressful for the baby, but also limits their exposure to a full range of emotions. Due to selective pruning, some babies become very good at detecting negative emotions. These examples illustrate the importance of building a strong foundation of neurobiological development in the early years.

The brain's architecture is being built even before birth. One interesting study examined whether fetuses were affected by maternal stress.[1] The researchers first measured the levels of the stress hormone cortisol in pregnant women throughout their pregnancy. At birth, they measured the babies' behavioral response during their first encounter with stress—a standard blood draw. Although all the babies experienced stress after the blood draw, most recovered after approximately one minute (see Figure 1). Babies whose mothers had high levels of cortisol early in the pregnancy did not recover as quickly. The babies have been followed into adolescence, and those who did not recover as quickly continue to show increased hypervigilance when compared to children not exposed to stress hormones as fetuses.

FIGURE 1
Newborns' Stress Response to Blood Draw by Mother's Cortisol Levels at 13 Weeks' Gestation



Source: Davis, E.P. et al. (2011). Prenatal maternal stress programs infant stress regulation. Journal of Child Psychology and Psychiatry, 52(2), 119-129.

A similar finding was documented in an innovative study of infant brain responses to angry or neutral adult voices.[2] When parents reported more conflict at home, the babies' brains were hypervigilant to angry voices even while they were asleep.

The evidence is clear: the prenatal to age 3 time period is critical for a baby's development. It builds the foundation for future development in adolescence and young adulthood. For this reason, early childhood is the most effective and efficient time to administer evidence-based prevention and intervention programs.

WHAT IS STRESS AND UNDER WHAT CONDITIONS IS IT TOXIC?

Whether due to something as minor as a missed appointment or as major as a life-threatening injury, stress increases our heart rate, blood pressure, and certain hormones (e.g., cortisol). Not all stress is bad. Children need to experience some stress to learn healthy ways to respond to adversity and develop appropriately. Researchers have identified three forms of stress—positive, tolerable, and toxic—that can be useful for framing policy discussions about effective solutions.[3] These categories describe the person's *response* to the stressors, not the apparent *severity* of the event itself. Even a significant stressor can be mitigated, or buffered, if a child has responsive adult caregivers and other resources to support them.

Positive stressors, such as taking an exam, are minor challenges to the body and brain that have a positive effect on development. Some events or experiences are more serious and have the potential to negatively affect a child's development. These events include divorce, injury, or natural disaster. If a child experiences this type of stress but has supportive adults in his life, the child's physiological stress response can return to a healthy baseline. This is considered **tolerable** stress.

Toxic stress results when a child faces strong, prolonged, or frequent adversities without the buffering support of adult relationships. In these situations, the child's brain and body can reorganize in such a way that the architecture becomes adapted to high-threat and low-resource conditions. These adaptations have significant consequences for adult health, achievement, well-being, and even life expectancy. One landmark study that contributes to this understanding is discussed next.

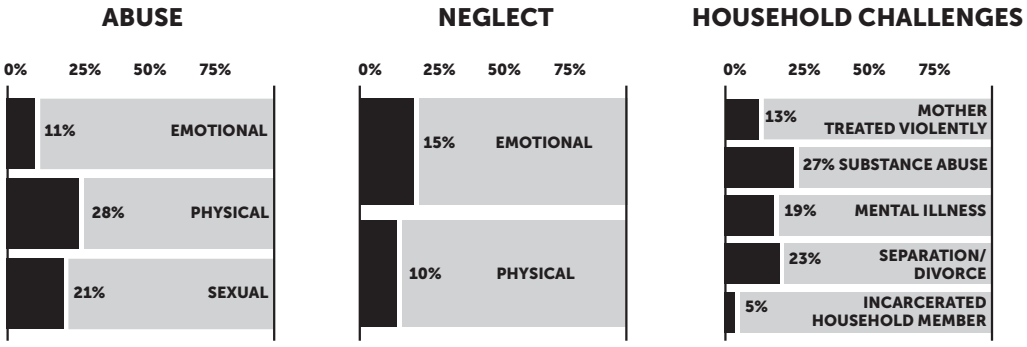
Toxic stress results when a child faces strong, prolonged, or frequent adversities without the buffering support of adult relationships.

WHAT ARE ADVERSE CHILDHOOD EXPERIENCES (ACES) AND WHAT IS THEIR PREVALENCE IN THE UNITED STATES?

In the mid-1990s, a study conducted by the Centers for Disease Control and Prevention (CDC) and Kaiser Permanente looked at the effects of childhood stress.[4] More than 17,000 adults completed a survey that asked about adverse experiences prior to age 18 and evaluated the relationship between these reports and current mental and physical health as documented in their medical record. The study identified 10 adverse childhood experiences (ACEs) that were impactful for later outcomes. These ACEs fall into three categories: abuse, neglect, and household challenges. The most commonly reported ACE was physical abuse, followed by a parent's substance abuse (see Figure 2, next page).

FIGURE 2

Types and Prevalence of Adverse Childhood Experiences (ACEs) among CDC-Kaiser Permanente Study Participants



Source: Centers for Disease Control and Prevention (CDC). https://www.cdc.gov/violenceprevention/acestudy/ACE_graphics.html

ACE scores can range from zero to 10 and are considered an index of a person's cumulative childhood stress exposure.

ACE scores can range from zero to 10 and are considered an index of a person's cumulative childhood stress exposure. Almost two-thirds (64%) of participants reported at least one ACE and 13% reported four or more, suggesting that ACEs are quite common. The respondents in the original study were living in southern California and had private health insurance. They were largely white, educated, and middle-class. Research since then has shown that the prevalence of ACEs in the general population across the U.S. is fairly consistent with the original study.

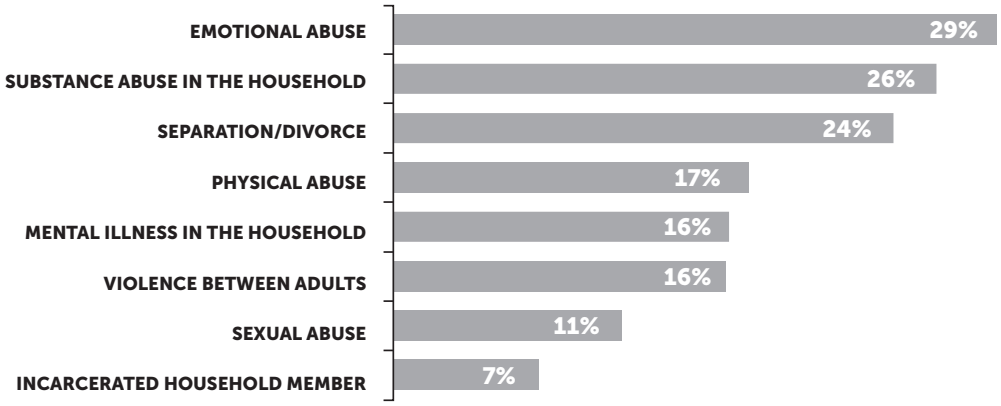
Recent research also has shown that ACEs are more common among people experiencing inequity, including among low-income populations (see Joshua Mersky's chapter in this report). Furthermore, adverse experiences not included in the original study, such as homelessness and bullying, likely have similar long-term effects.

HOW PREVALENT ARE ADVERSE CHILDHOOD EXPERIENCES (ACES) IN WISCONSIN?

Wisconsin is one of a small number of states that has collected data to better understand childhood adversity within its borders. Between 2011 and 2015, data were collected on the annual Behavioral Risk Factor Survey (BRFS) from 25,518 residents (more than the number who participated in the original CDC-Kaiser ACE study).

The results from the Wisconsin survey mirror the results from the original ACE study and from other states.[5] About 57% of respondents reported one or more ACEs, with 14% reporting four or more. Among those who reported at least one ACE, the most common experience was emotional abuse (see Figure 3). (Note: The Wisconsin survey did not assess neglect until 2014 due to difficulties capturing this information on a phone survey.)

FIGURE 3
Prevalence of Specific Types of ACEs among Wisconsin Adults



Source: Child Abuse and Neglect Prevention Board. (2018). Adverse childhood experiences in Wisconsin: 2011-2015 Behavioral Risk Factor Survey findings.

ACEs commonly occur together. There were a number of co-occurring adverse experiences among people who reported four or more ACEs. For example, 64% of people with four or more ACEs reported that a household member was incarcerated, even though it was the least common ACE. Furthermore, 60% of people in this high ACE group witnessed violence between adults and 58% experienced physical abuse.

64% of Wisconsin residents with four or more ACEs reported that a household member was incarcerated, even though it was the least common ACE.

WHAT ARE THE LONG-TERM EFFECTS OF TOXIC STRESS?

A large body of research across many decades has found that ACEs significantly affect both society and the individual. The CDC estimates the total lifetime economic costs associated with child abuse and neglect cases that take place in one year at $124 billion, which is comparable to health conditions such as stroke. Nearly $84 billion of that amount is due to lost productivity, and $25 billion is spent on health care.[6]

Toxic stress has lasting and negative effects on the person, such as:

- Increased prevalence or seriousness of diseases such as cardiovascular disease, diabetes, infection, and some types of cancer.
- Increased likelihood of "risk" factors such as obesity, depressed immune function, and metabolic syndrome that can lead to disease. For example, managing stressful experiences requires a lot of energy, and the body will store energy in fat, particularly in the midline, leading to obesity.
- Impaired cognitive functioning. Stressful events require intense focus, which in turn affects memory and attention.
- Increased risk for mental health problems such as anxiety and depression.
- Accelerated aging, as evidenced by measures of altered DNA replication and cell death signaling.

Perhaps surprisingly, toxic stress also affects life expectancy (see Table 1). In fact, significant childhood stress reduces life expectancy more than twice the reduction due to

smoking. If a person's life expectancy at birth was 80 and they subsequently experienced six or more ACEs, that estimate would drop to 60 years.

TABLE 1
Risk Factors' Effect on Life Expectancy

Risk factor	Reduction in life expectancy
Smoking	10 years[7]
Obesity	6-7 years[8, 9,]
High blood pressure	5 years[10]
Diabetes	7-8 years[11]
Childhood stress	*20 years[12]*

Data from the Wisconsin Behavioral Risk Factor Survey (BRFS) is consistent with these national research studies. The BRFS examined four categories of health:

(1) health risk behaviors (e.g., tobacco use, heavy drinking, no exercise),
(2) general health (e.g., obesity, fair/poor health, bad physical health days),
(3) chronic health conditions (e.g., arthritis, cancer, asthma), and
(4) mental health (i.e., diagnosed depressive disorder).

The prevalence rate of every health condition was higher for respondents reporting four or more ACEs compared to those reporting none.[13] Most strikingly, people with four or more ACEs are three times more likely to be diagnosed with a depressive disorder compared to those with zero ACEs.

Wisconsin residents with four or more ACEs are three times more likely to be diagnosed with a depressive disorder compared to those with zero ACEs.

The research is strong and clear: the higher a person's ACE score, the more likely he or she will experience physical health, mental health, and socioeconomic challenges in adulthood. Yet research also shows that not everyone who has a high ACE score will experience lifelong effects. A key feature of resilient children is the presence of a reliable, stable adult who can prevent, or mitigate, the effects of adversity and help children adapt.

HOW DOES A NEW PARENT'S BRAIN CHANGE AND WHAT HAPPENS WHEN THE CHANGES DO NOT OCCUR?

One fascinating recent discovery is that at the same time infants and young children are experiencing the first and most important time of vulnerability and opportunity, their parents are also in transition. During the first year after a baby's arrival, parents must monitor their newborn's safety, establish caregiving routines, and develop an emotional bond. Research suggests that new mothers and fathers experience changes in their brain structure and activity that improve how they handle stress and increase positive, responsive parenting behaviors. This is achieved through changes in the reward circuit, social information circuit, and emotion regulation circuit. Together these changes help parents attend to, understand, and respond sensitively to their infants' cues.

When parents are highly stressed, depressed, have substance abuse problems, did not receive warm and caring parenting themselves, or have a history of trauma, the changes to their brain may be diminished.[14,15] Without these supportive neurobiological changes, the universal challenges of parenting may be harder to navigate and, when combined with

stressful life experiences, may make positive parenting less likely.

In sum, research has revealed a "paired" sensitive period at the birth of a child; both children and parents are experiencing major neurobiological change. These brain changes are less evident in parents with risk factors such as depression, possibly leading to poor parenting and an unhealthy environment in which to raise a child. This evidence supports investments in programs that target parents and children together to protect against toxic stress and foster healthy growth and development. Programs that may increase these supportive brain changes include Circle of Security, Triple P (Positive Parenting Program), Video-Feedback Intervention to Promote Positive Parenting, and Mom Power. The Mom Power program, for example, is a 13-session group program for high-risk mothers and their young children that focuses on improving mothers' mental health and parenting skills.[16]

WHAT ARE EVIDENCE-BASED POLICY OPTIONS TO ADDRESS CHILD AND PARENTAL ADVERSITY AND STRESS?

Research has revealed a "paired" sensitive period at the birth of a child: both children and parents are experiencing major neurobiological change.

Policymakers have the opportunity to leverage this knowledge about paired sensitive periods into policy and practice. When parents receive support to improve their parenting abilities and their own well-being, a child's environment changes for the better and the child is less likely to experience toxic stress and negative long-term effects.

For families experiencing a lot of stress, we can decrease the stress in the environment, increase the parents' ability to buffer the stress for their children, or both. Environmental stress can be decreased by efforts that:

- alleviate poverty and strengthen the family's financial security (e.g., tax credits, housing, food assistance, job training, and child care assistance),
- increase community resources and support available to families,
- create family leave policies that take into consideration the critical brain development that takes place for both the parent and infant when a child is born, and
- strengthen families and build protective factors, which help families navigate difficulties and promote their well-being (e.g., Wisconsin's Five for Families campaign).

Parents' ability to buffer stress can be increased through programs that support parenting skills and efforts to improve their physical and mental health. Providing services to parents and children at the same time—known as two-generation interventions—is particularly effective in building parents' skills. Evidence-based, two-generation programs such as home visiting can create transformational change for families. Investments in these programs can lead to an upward cycle of opportunity and an end to intergenerational trauma.

Another policy option with great potential is to improve the mental health of new mothers and fathers. Depression is a common occurrence during the transition to parenthood, even more so for parents with a high number of ACEs. Reducing the stigma of depression around the birth of a new baby, in tandem with effective universal screening and treatment, could be quite effective in improving outcomes for both parents and their children.

Finally, much attention is deservedly placed on the healthy neurodevelopment of our youngest children, when prevention and intervention efforts are most cost-effective and

Adolescence is also an important time for neurodevelopment that provides another window of opportunity to implement evidence-based interventions.

efficient. However, adolescence is also an important time for neurodevelopment that provides another window of opportunity for policy action. Evidence-based interventions for adolescents can change their brains and lives as well.

Each state implements various programs and policies that target our youngest children, new parents, and adolescents. To ensure investment in the most effective programs, state policymakers might ask: Can we increase the capacity of existing evidence-based programs? Are these programs incorporating the latest brain science into their work? Do our programs reduce family stress?

KEY TAKEAWAYS AND NEXT STEPS

This chapter summarized research findings that can help policymakers develop evidence-based policies and programs to help vulnerable children and parents. Key takeaways include:

- Prenatal through age 3 is a time of significant neurobiological change in which babies' brains are developing quickly in response to their environment. Policies and interventions that reach children and families during this time are particularly effective and efficient.
- The number of adverse childhood experiences (ACEs) is one measure of a person's cumulative childhood stress. ACEs include abuse, neglect, and household challenges. In Wisconsin, 57% of survey respondents reported one or more ACEs, with 14% reporting four or more. Among those who reported at least one ACE, the most common experience was emotional abuse.
- Toxic stress can result when children face strong, long-lasting, and/or frequent adversities without supportive, responsive adult caregivers. Without these buffering relationships, a child's stress response system stays activated, which can lead to poor brain development and an increased risk for disease and other problems later in life.
- Toxic stress can lead to chronic disease, obesity, impaired cognitive functioning, mental health problems, and accelerated aging. Significant toxic stress can reduce life expectancy by 20 years.
- New mothers and fathers also experience changes in their brain in the months following a baby's arrival. These neural changes improve stress management and promote sensitive and responsive parenting behaviors. Parents who are highly stressed, have depression, or have experienced their own childhood trauma experience fewer neural changes during this period and are less biologically able to deal with the complex challenges and stresses of parenting.

Based on this research, policy options include investments in:

- Evidence-based programs to increase parents' ability to buffer stress for their children. These programs typically focus on parenting skills and parents' physical and mental health.
- Two-generation programs, which provide services to parents and children at the same time. These programs are particularly effective at building parents' skills and increasing their responsiveness to their children's cues. Home visiting is one such program with a strong evidence base.

- Broad efforts that alleviate poverty, increase community resources and support, and strengthen families, with the goal of decreasing the stress that vulnerable families experience.
- Effective identification and treatment of parental depression.

The latest research on brain development offers important insights into the causes and impacts of early life stress. Well-designed policies and programs can support healthy parenting and build a cycle of opportunity for our youngest children.

Sarah Enos Watamura is Associate Professor of Psychology at the University of Denver, where she directs the Child Health and Development Lab and co-directs the Stress, Early Experience and Development (SEED) Research Center. She currently is examining the connection between early toxic stress and later physical health, mental health, and cognitive and educational outcomes. She also is testing programs and approaches that reduce the effects of toxic stress on young children. Her other research interests include children's physiologic (e.g., biological and hormonal) regulation during stress, and the unique stressors and buffers among low-income and immigrant families. Earlier in her career, Watamura was a preschool teacher. She earned her Ph.D. in Human Development from Cornell University.

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SCALING UP HOME VISITING IN WISCONSIN: A TWO-GENERATION STRATEGY TO ADDRESS TRAUMA

By Joshua Mersky, Co-Director, Institute for Child and Family Well-Being & Professor of Social Work, University of Wisconsin–Milwaukee

Trauma is not a rare occurrence. Nearly six in 10 (57%) Wisconsin adults have endured at least one potentially traumatic adverse childhood experience (ACE) such as abuse, neglect, or household challenges. However, 85% of low-income mothers have at least one ACE and they are twice as likely as the general population to have two or more ACEs. Trauma has intergenerational consequences as well, by increasing parents' risk of problems such as mental health challenges that may impair their ability to care for their children. Home visiting is a two-generation approach that can prevent childhood trauma and enhance parents' well-being by providing intensive, in-home support to vulnerable pregnant women and new parents. In Wisconsin, four evidence-based home visiting programs are being implemented across 31 counties and five tribal regions. Scaling up home visiting programs is a challenge because of their duration and cost. One option for doing so is Family Connects, a promising, "light touch" home visiting program being implemented in Racine County that serves all families regardless of income. At a cost of $500 to $700 per family, nurses conduct at least one home visit to assess the infant and family and create a plan for more intensive services if needed. One study found that the reduction in infant emergency medical care alone returned $3 for every $1 spent on the program.

INTRODUCTION

Research on trauma has produced two certain conclusions. First, trauma is prevalent. For example, over 60% of adults in the United States report that they have endured at least one potentially traumatic adverse childhood experience (ACE) such as abuse and neglect, household substance use, or domestic violence.[1] Second, trauma is consequential. Research has shown that ACEs are the leading environmental causes of disorder, disability, and disease.[2] ACEs also increase the risk of low educational attainment, unemployment, and criminal offending.[3,4,5] The more ACEs a person suffers, the worse their outcomes tend to be throughout the life course. Worse still, ACEs do not represent all potentially traumatic events in childhood, and they do not begin to account for various forms of trauma that adults experience.

Yet, we have a reason to be hopeful because there are effective ways to prevent trauma and intervene after it has occurred. Two-generation programs have the potential to mitigate the effects of trauma on parents while also protecting their children from trauma. In this chapter, I document the scope of trauma in Wisconsin, especially in economically distressed communities. I then highlight the promise of home visiting as a two-generation strategy to address trauma. I summarize the state of home visiting in Wisconsin and highlight an innovative home visiting program, Family Connects, that is being implemented in Racine County.

Two-generation programs have the potential to mitigate the effects of trauma on parents while also protecting their children from trauma.

TRAUMA IN WISCONSIN

In recent years, we have learned a great deal about the scope of trauma in Wisconsin.

70% of low-income Wisconsin mothers have endured two or more adverse childhood experiences (ACEs), twice the rate of the general adult population.

A 2018 report commissioned by the Wisconsin Child Abuse and Neglect Prevention Board showed that 57% of Wisconsin adults have endured at least one ACE.[6] Although ACEs are widely distributed in the population, they are not equally distributed. ACEs are more prevalent in low-income families and communities. In Wisconsin, my co-authors and I have documented the prevalence and impact of ACEs in the Families and Children Thriving (FACT) Study, a longitudinal investigation of low-income households receiving home visiting services. We found that 85% of mothers in the study had suffered at least one ACE, and 70% of the women had two or more ACEs—roughly twice the rate of Wisconsin's general adult population.[7] Approximately 40% reported that they were physically abused, and 50% grew up with an adult who abused alcohol or other drugs.[8]

Our research at the Institute for Child and Family Well-Being has uncovered similarly high rates of trauma among other underprivileged groups, including job-seeking men in Milwaukee.[9] But trauma is not just an urban problem. In fact, we found that ACEs are more prevalent among low-income white and Native American women who live mostly outside of urban areas than among black and Hispanic women who live largely in urban areas.[10] Our results reinforced a study of 85,000 adults in the National Survey of Children's Health, which showed that ACEs are more prevalent among low-income whites than low-income blacks and Hispanics.[11]

ACEs are only the beginning of the story, because trauma does not end in childhood. Drawing on lessons from ACE research, we developed the Adult Experiences Survey to measure adverse adult experiences. We found that over 40% of mothers in the FACT Study have been physically abused by a partner or spouse, and almost 60% have been emotionally abused. More than a third (37%) of the women have experienced adult homelessness. We also showed that childhood trauma increases the risk of adult trauma, and that stacking adult trauma on top of childhood trauma increases the risk of depression, anxiety, and posttraumatic stress disorder.[12]

Trauma also has intergenerational consequences. Trauma increases the risk of many problems such as substance abuse and mental health challenges that may impair parents' ability to care for their children. As a result, the trauma parents have experienced can undermine the development of their offspring. For instance, my research has shown that the higher the mother's ACE score, the more likely it is that her children will have emotional and behavioral challenges.[13] As discussed in the previous chapter, strong parent-child connections are critical for children's health and school achievement as well as later success in the labor market. When those connections are missing, children are more likely to experience further adversity in adulthood and pass along this downward cycle to the next generation.

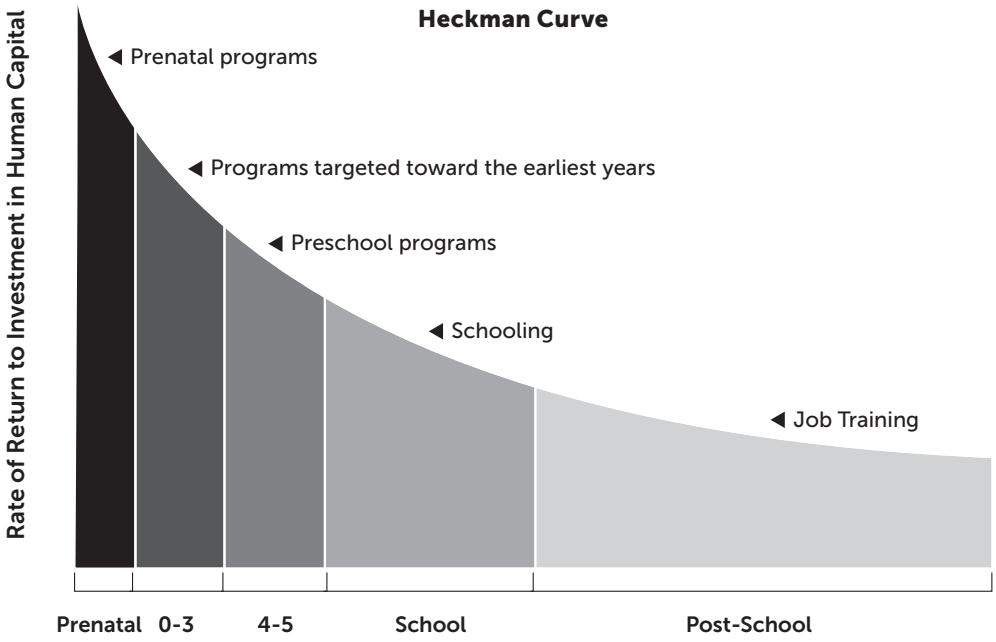
HOME VISITING: AN EVIDENCE-BASED, TWO-GENERATION STRATEGY

Many programs have been designed to either prevent trauma or alleviate the suffering it causes. Two-generation programs have the potential to do both. By serving parents and children together, they hold great promise as a means of interrupting the intergenerational cycle of trauma.

Home visiting is one example of a two-generation approach with a strong evidence base. Home visiting programs provide in-home support and services to enhance the well-being of children and their caregivers. Research indicates that home visiting services can promote maternal and child health, nurturing home environments, and gains in child development. As Nobel Prize-winning economist James Heckman has demonstrated,

interventions like home visiting that target the earliest years are among the most effective and cost-effective investments we can make as a society. The "Heckman Curve" summarizes the large body of research on the returns on investments in various programs (see Figure 1).[14]

FIGURE 1
Returns on Investments in Human Capital by Targeted Age Group
Heckman Curve



Source: James Heckman, Nobel Laureate in Economics, University of Chicago. Retrieved from http://heckmanequation.org/resource/the-heckman-curve/

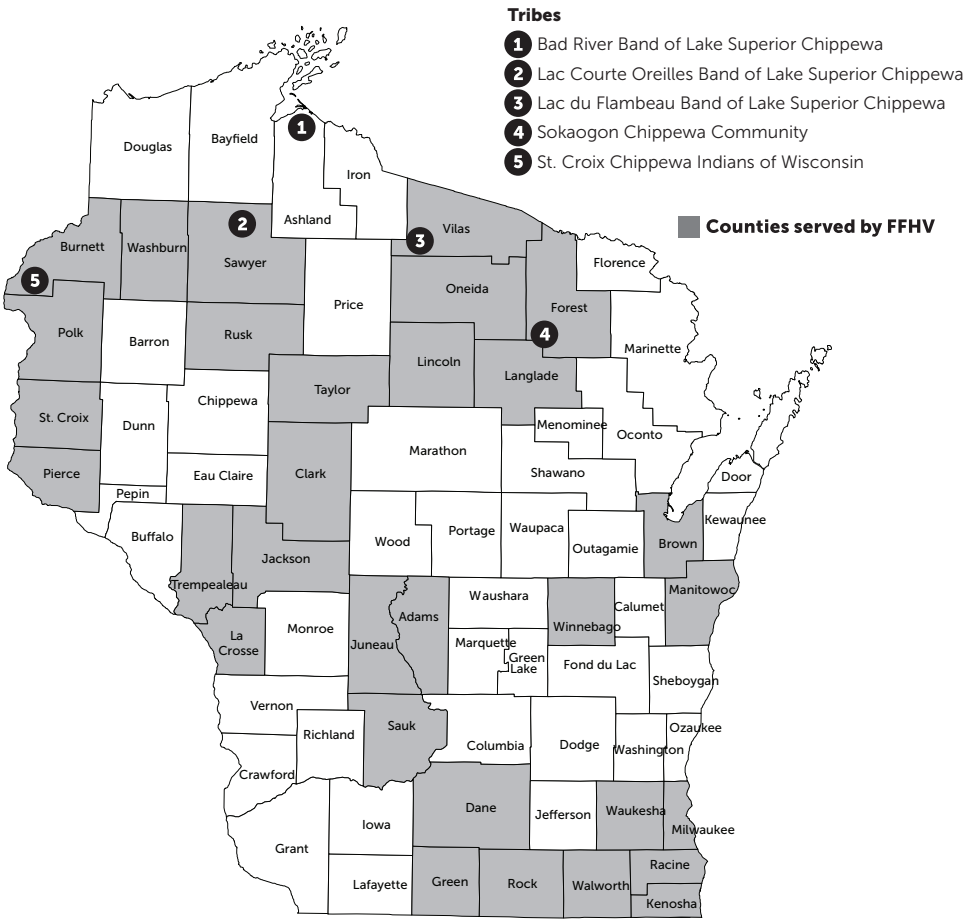
Based on this body of evidence, local, state and federal governments are supporting the implementation of home visiting programs in all 50 states.[15] Since 2011, Congress has allocated more than $2.5 billion in funding to states through the Maternal, Infant, and Early Childhood Home Visiting (MIECHV) program. As of August 2018, 20 home visiting models have met the U.S. Department of Health and Human Services' criteria for evidence of effectiveness.[16] Most of these evidence-based programs begin prenatally, last for multiple years, and serve primarily at-risk children and families.

WISCONSIN'S FAMILY FOUNDATIONS HOME VISITING PROGRAM

Home visiting programs in Wisconsin are coordinated by the Department of Children and Families, in partnership with the Department of Health Services, through the Family Foundations Home Visiting (FFHV) program. FFHV is funded principally by MIECHV, and it receives additional support through Temporary Assistance for Needy Families (TANF) and state general purpose revenue. As shown in Figure 2, FFHV services are currently administered by local implementing agencies (counties or nonprofit organizations) across 31 counties and five tribal regions (see Legislative Fiscal Bureau chapter in this report). In 2017, the program served nearly 1,500 families and provided more than 18,000 home visits.[17]

Home visiting programs are administered across 31 counties and 5 tribal regions in Wisconsin.

FIGURE 2
Wisconsin Counties and Tribal Regions Served by the Family Foundations Home Visiting (FFHV) Program (2018)



Source: Wisconsin Legislative Fiscal Bureau (see chapter in this report).

FFHV prioritizes serving the state's most vulnerable families, particularly pregnant mothers who may lack access to physical and mental health care and need parenting support. The program serves some of Wisconsin's highest-risk communities identified through a 2015 needs assessment that focused on various risk factors, including high rates of infant mortality, child maltreatment, substance abuse, domestic violence, crime, school dropout, poverty, and unemployment. More than 96% of the households served by FFHV have incomes at or below 200% of the poverty line or are eligible for means-tested benefits such as TANF and BadgerCare Plus.

FFHV programs are voluntary and utilize intensive, evidence-based curricula. FFHV currently supports four evidence-based home visiting models: Early Head Start, Healthy Families America, Nurse-Family Partnership, and Parents as Teachers. Along with federally funded initiatives in other states, FFHV selected these models because they

have the potential to improve outcomes in six areas, including two that are directly related to ACEs and trauma (in bold):

- Improved maternal and child health
- **Prevention of child injuries, child abuse, neglect, and maltreatment**
- Increased school readiness and achievement
- **Reduced domestic violence**
- Improved family economic self-sufficiency
- Greater coordination and referrals to other community resources and support

While home visiting programs have great potential to improve the outcomes of children and families, they are not without limitations. These programs aim to serve families for multiple years, but up to two-thirds of families drop out of services early.[18] Most home visiting models are also resource-intensive, costing roughly $7,500 per family per year.[19] Due partly to their duration and cost, they reach only a small fraction of the families that might benefit from services. To illustrate, Wisconsin's FFHV program averages around 650 new enrollments per year, representing less than 1% of families with newborns statewide.[20] Thus, if home visiting is to reach its potential to interrupt the intergenerational cycle of trauma on a large scale, we need to find ways to reach more families.

FAMILY CONNECTS: AN EVIDENCE-BASED, UNIVERSAL HOME VISITING MODEL

Family Connects is a "light touch" home visiting model that aims to ensure all infants and their parents get off to a great start, no matter their socioeconomic status. By serving all families with newborns in a community, the program was designed to have a large-scale impact on public health problems such as child abuse and neglect. The program does so efficiently by matching services to each family's needs. The program begins with outreach to all new parents in a hospital maternity ward, during which an initial home visit is scheduled. At the home visit, which occurs about three weeks after a mother gives birth, a public health nurse completes an assessment of the infant as well as the family's strengths and needs. For most families, the initial home visit is all the support that they require. Yet, families that could benefit from further support may receive ongoing services from their home visitor and other partner agencies in the program's referral network.

An initial randomized trial in Durham, North Carolina, showed that 80% of families accepted services and, of those, 86% successfully completed the program.[21,22] The study found that Family Connects enhanced home environment safety, parenting behavior, and father involvement while reducing child protective service reports and infant emergency medical care. By cutting down emergency medical care alone, this low-cost program ($500 to 700 per family) returned more than $3 for every $1 spent.

By cutting down on emergency medical care alone, Family Connects returned more than $3 for every $1 spent.

FAMILY CONNECTS RACINE COUNTY

Family Connects is now recognized by the federal MIECHV program as an evidence-based intervention, and the model is being disseminated throughout the country. In July 2017, the Central Racine County Health Department (CRCHD) became the first agency in Wisconsin to implement Family Connects. CRCHD adopted Family Connects after it became clear that its long-term home visiting program, while beneficial for

those receiving services, was not reaching the number of families required to achieve its public health goals. CRCHD delivers Family Connects alongside its long-term home visiting program, and the former complements the latter by linking families with greater needs to more intensive services. By offering brief and long-term home visiting services, CRCHD helps ensure that families receive the appropriate level of care—no less and no more. In so doing, CRCHD has developed a model of care that is consistent with a national movement toward precision home visiting.[23]

Family Connects also is helping coordinate trauma-responsive services and resources in Racine County on an unprecedented scale. For example, CRCHD established a close relationship with the Positive Parenting Program (Triple P) that is delivered by Children's Hospital of Wisconsin in Racine. Triple P is an evidence-based family support intervention that has been shown to prevent child maltreatment and reduce emotional and behavioral problems in children who have been maltreated.[24] CRCHD has also collaborated with the Institute for Child and Family Well-Being to train Family Connects nurses to deliver the Trauma Screening, Brief Intervention and Referral to Treatment (T-SBIRT) protocol. T-SBIRT is a 10-minute intervention that has been shown to help assess trauma and increase the likelihood that adults will accept a referral for mental health services.[25]

Racine County employs three Family Connects nurses who are able to serve up to 600 families each year.

At present, CRCHD employs three Family Connects nurses who are able to serve up to 600 families each year—nearly the same number of annual enrollments in the statewide FFHV program. In early 2019, with support from the Child Abuse and Neglect Prevention Board, the Institute for Child and Family Well-Being will launch an 18-month impact study of this innovative program. If the study demonstrates that the program is effective, policymakers could consider expanding local and state funding for Family Connects so that the program can be brought to scale in Racine and other counties. As evidence of its effectiveness and cost-effectiveness gains momentum, universal postpartum home visiting could become a reimbursable standard of care.

KEY TAKEAWAYS AND NEXT STEPS

This chapter discussed several important facts about trauma and highlighted home visiting as a two-generation strategy to prevent trauma and mitigate its effects.

- Trauma is a common occurrence, not a rare event. For example, 57% of Wisconsin adults have endured at least one potentially traumatic adverse childhood experience (ACE) such as abuse, neglect, or household challenges.
- Although trauma is widely distributed in society, it is not equally distributed. Trauma is more prevalent in poor families than the general population.
- Trauma has lasting consequences for all populations, regardless of socioeconomic status. For instance, ACEs are among the leading environmental causes of mental and physical health problems in later life.
- Home visiting is a two-generation strategy with potential to prevent children from experiencing trauma while supporting parents who have experienced trauma.
- Wisconsin's Family Foundations Home Visiting program is a statewide network of agencies that provide evidence-based home visiting services to some of the state's most vulnerable families.

- Most home visiting models are intensive, long-term programs. Although they can be effective, they are difficult to scale up due to their duration and cost.
- Family Connects is a brief, low-cost home visiting program that aims to have a large-scale impact on public health by reaching all families with newborns in a community.
- Family Connects allocates resources efficiently by tailoring the amount of services each family receives based on its level of need.
- Family Connects is an evidence-based model. It has been linked to many important benefits, including lower rates of infant emergency medical care and child protective service reports. The program has been shown to return over $3 for every $1 spent.
- In 2017, the Central Racine County Health Department became the first Family Connects site in Wisconsin. With three public health nurses, the program can serve up to 600 families per year.

In early 2019, with support from the Child Abuse and Neglect Prevention Board, the Institute for Child and Family Well-Being will launch an 18-month impact study of Racine's Family Connects program.

- If the study produces local evidence of impact, policymakers could consider expanding funding for Family Connects in Racine and other localities.
- The Central Racine County Health Department has integrated Family Connects with its long-term home visiting program, which could serve as a model of care for other Wisconsin counties and sites nationwide.
- In the long run, universal postpartum home visiting could become a reimbursable standard of care.

Joshua Mersky is Professor of Social Work at the Helen Bader School of Social Welfare at the University of Wisconsin–Milwaukee, where he also co-directs the Institute for Child and Family Well-Being. His research interests include child maltreatment and other adverse experiences that undermine health and well-being over the life course. Since 2011, he has headed the evaluation of Wisconsin's Family Foundations Home Visiting program. He also leads the Healthy Families Study, a randomized trial of home visiting programs in Milwaukee, and the Families and Children Thriving (FACT) study, a longitudinal investigation of risk and resilience among low-income families in Wisconsin. He recently helped launch the Trauma and Recovery Project, a five-year, $1.8 million project funded by the Substance Abuse and Mental Health Services Administration (SAMHSA). Mersky earned his Ph.D. in Social Welfare from the University of Wisconsin–Madison.

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STATE STRATEGIES TO PREVENT AND MITIGATE THE CONSEQUENCES OF TOXIC STRESS IN CHILDHOOD

By National Conference of State Legislatures Staff

Adverse childhood experiences (ACEs) can interfere with a child's brain development, especially if the child lacks a supportive adult to turn to in times of stress. Over time, continuous stress can become particularly toxic and interfere with a child's long-term health and well-being, and lead to increased costs to state health care, education, child welfare, and correctional systems. However, efforts to build healthy families early in the child's life are particularly effective at preventing ACEs and reducing their damaging effects. States across the country have implemented various strategies to prevent or address the impact of ACEs and toxic stress, such as expanding health screening and treatment, strengthening family protective factors to increase children's resilience, and investing in high-quality early childhood care and education. Recent state initiatives have allowed school-based health centers to provide services to students who do not reside in the school district, supported treatment programs for pregnant women and women with young children, and implemented a statewide home visiting system using evidence-based models.

INTRODUCTION

Decades of research in neurobiology underscores the importance of children's early experiences in laying the foundation for their growing brains. The quality of these early experiences shape brain development, which impacts future social, cognitive, and emotional competence. Adverse childhood experiences (ACEs), defined as potentially traumatic events that occur before the age of 18, can interfere with a person's health and opportunities throughout his or her lifetime—and can even affect future generations. Researchers have identified connections between ACEs and a greater likelihood of developing risky behaviors, chronic health conditions, and poor workforce performance, among other outcomes. Moreover, ACEs can be cyclical. For example, research suggests that children who experience physical abuse may be more likely to commit violence (including abusing or neglecting their own children) and be revictimized in the future.

As a result, some state policymakers are interested in preventing such experiences, mitigating their effects, and reducing the associated costs to state health care, education, child welfare, and correctional systems. This chapter presents research on ACEs and highlights state strategies to prevent and reduce their occurrence and negative effects. These strategies include efforts to increase health screening and treatment, build resilience in children and families, and help parents reduce stress.

Research suggests that children who experience physical abuse may be more likely to commit violence and be revictimized in the future.

WHAT IS TOXIC STRESS?

Nearly all people experience stress in their life, such as the stress felt before an important test or job interview. However, chronic stress sustained over time can be damaging to the body and the brain. This is particularly true for children because the earliest years are a critical time for development.

As discussed in the first chapter by Sarah Enos Watamura, the accumulation of excessive stress in the body (a result of ACEs) interferes with the development of healthy neural,

immune, and hormonal systems and can alter the expression of DNA. Furthermore, when a child lacks a supportive adult to turn to in times of adversity, this continuous stress activation becomes particularly toxic.[1]

TRAUMA: A painful or distressing experience often resulting in lasting mental and physical effects.

ADVERSE CHILDHOOD EXPERIENCE (ACE): A potentially traumatic experience that occurs before 18 years of age. Types of ACEs include:

Abuse: Emotional abuse • Physical abuse • Sexual abuse

Neglect: Emotional neglect • Physical neglect

Household Challenges: Mother treated violently • Household substance abuse • Mental illness in household • Parental separation or divorce • Incarcerated household member

TOXIC STRESS: Extreme or extended activation of the child's stress response system without the presence of adult support.

STRATEGIES TO PREVENT AND MITIGATE ADVERSE CHILDHOOD EXPERIENCES (ACES)

The association of ACEs with various negative outcomes can be costly for states; however, there is evidence of effective strategies to prevent and manage the consequences of ACEs. Efforts that focus on building healthy families early in the child's life are cited as among the most influential means of preventing ACEs and reducing their damaging effects.[2,3]

Early Intervention: Health Screening and Treatment for Children and Parents

Between 14 percent and 20 percent of children in the United States experience a diagnosable mental, emotional, or behavioral disorder, such as depression, anxiety, or obsessive-compulsive disorder.[4] However, for people with ACEs, the likelihood of developing one or more of these disorders is significantly greater. Specifically, those with four or more ACEs are about four times more likely to develop depression and 12 times more likely to attempt suicide.[5] Children with four or more ACEs are also 32 times more likely to have a learning or behavioral issue when compared to children with no adverse childhood experiences.[6] Frequent classroom disruptions, aggression, underperformance, truancy, poor attitude, bullying, and social withdrawal are symptoms commonly expressed by children struggling to manage a learning or behavioral issue.

Schools and child care centers are uniquely positioned to detect children's learning or behavioral issues early and link children to formal assessments and supportive services.

Schools and child care centers are uniquely positioned to detect these issues early and link children to formal assessments and supportive services. Early interventions may mitigate the most dire consequences of childhood trauma and frequently demonstrate positive effects on long-term health.[7,8] Many children report feeling most comfortable receiving health-related services at school and a majority of those accessing mental health services do so through their school.[9,10] Thus, school-based mental health services may prove to be an effective method for addressing the health care needs of children with ACEs. Specifically, efforts by schools and child care settings to consider a child's history

of trauma and subsequent coping strategies—an approach commonly called trauma-informed care—are likely to be highly valuable in mitigating some of the consequences of ACEs.[11] Wisconsin is among the states leading the development of trauma-informed principles and their implementation in schools, communities, and government systems.[12]

Additionally, children who grow up in households with family members who have an untreated substance use disorder (SUD) or mental illness often witness significant dysfunction. Preventing these types of ACEs may require innovative policies that support comprehensive health care for children and parents. For example, parental opioid dependence is increasingly damaging the health of infants and children. Recent data suggests that, on average, every 15 minutes a baby is born in the United States withdrawing from opioids.[13] In response, states have begun integrating addiction treatment into existing home visiting programs, as well as supporting addiction treatment programs designed specifically for pregnant women and women with young children. Kentucky, Ohio, and Vermont, among others, have programs designed specifically for mothers combatting an SUD.[14,15,16] Such efforts to provide comprehensive health services may support better SUD treatment, mental health, and child welfare outcomes.[17]

States have begun integrating addiction treatment into existing home visiting programs, as well as supporting addiction treatment programs designed specifically for pregnant women and women with young children.

Recent state actions:

- In 2015, **Iowa** enacted a law allowing existing community mental health centers and other local service partners to use state block grants to develop a range of youth and family services in schools and clinical settings. These services include school-based mental health projects, mobile crisis intervention services, and mental health assessment capacity building.[18]
- In 2013, **Connecticut** enacted a law allowing school-based health centers to extend their hours and provide services to students who do not reside in the school district. It also allows the centers to provide behavioral health services, expand health care services, conduct community outreach about their services, and receive reimbursement from private insurance.

Strengthen Family Protective Factors and Build Children's Resilience

The Center on the Developing Child at Harvard University offers three principles for policymakers to consider in helping families with young children thrive: enhancing responsive relationships, strengthening core life skills, and reducing sources of stress.[19] These principles target characteristics of the individual, family, and community that are associated with physical health—sometimes referred to as protective factors.[20,21] Protective factors are important because they increase a family's ability to effectively cope and adapt to hardship and change.

This ability to recover and grow from adverse experiences is called resilience.[22] In other words, protective factors, such as strong family bonds, cultivate greater resilience that can help protect children from the detrimental effects of adverse experiences.[23] When children perceive at least one stable, supportive adult in their life, they are less likely to experience toxic stress and develop unhealthy coping strategies, such as bullying or substance misuse. Safe, stable, and nurturing relationships help build resilience, prevent violence, improve mental health, and support health across the lifespan.[24,25,26]

Home Visiting

Developing strong family bonds is a teachable skill, and high-quality home visiting programs are one way to do so.[27] Home visiting is a two-generation, or whole family, prevention strategy that aims to promote infant and child health, foster educational development and school readiness, and prevent child abuse and neglect (see Joshua Mersky's chapter in this report). Home visiting programs employ nurses, social workers, early childhood educators, and other trained professionals to visit families in their homes during pregnancy and early childhood. Home visits focus on linking pregnant women with prenatal care, promoting strong parent-child attachment, coaching parents on learning activities that foster their child's development, and supporting parents' role as their child's first and most important teacher. Home visitors also conduct regular screenings to identify possible health and developmental issues.

Rigorous evaluations of high-quality home visiting programs have shown positive results. These include improved child school readiness, higher-quality parenting, more positive child-parent interactions, improvements in parents' mental health, and a reduction in child abuse and neglect. For families facing added challenges, such as substance use disorder, maternal depression, or limited social or financial support, home visiting programs may be especially beneficial. Cost-benefit analyses show that high-quality home visiting programs offer returns on investment ranging from $1.75 to $5.70 for every dollar spent. The financial returns result from reductions in spending on child protective services, K-12 special education and grade retention, and criminal justice.

Cost-benefit analyses show that high-quality home visiting programs offer returns on investment ranging from $1.75 to $5.70 for every dollar spent.

Today, home visiting programs operate in all 50 states, each with its own goals. Approximately 40 percent of U.S. counties have at least one home visiting agency that offers an evidence-based program.

States rely on a mix of state, private, and federal funds to support home visiting programs. Since 2010, Congress has invested billions of dollars through the Maternal, Infant and Early Childhood Home Visiting (MIECHV) program to help states, territories, and tribes expand and implement evidence-based home visiting (see Legislative Fiscal Bureau chapter in this report).

Other federal funds are available to pay for home visiting, including Title V of the Maternal and Child Health Block Grant Program, Temporary Assistance for Needy Families, Project LAUNCH, Medicaid, Healthy Start, Early Head Start, Child Abuse Prevention and Treatment Act, and the Community-Based Child Abuse Prevention Program. Home visiting enjoys mostly bipartisan support. This is due, in part, to the evidence behind the programs and the return on investment.

Recent state actions:

- In 2015, **Oklahoma** lawmakers enacted the Family Support Accountability Act, which mandates that home visiting programs work in partnership to maximize the opportunities for families to receive services that best fit their needs. It also sets minimum outcomes programs must achieve.[28]
- In 2016, the **Rhode Island** General Assembly enacted the Rhode Island Home Visiting Act, which requires the Department of Health to implement a statewide home visiting system using evidence-based models.[29]
- In 2016, **New Jersey** established a three-year Medicaid home visitation demonstration project to provide ongoing health and parenting information, parent and family support, and links to essential health and social services during pregnancy, infancy, and early childhood.[30]
- Building on its existing home visiting program, **Connecticut** is using a state innovation grant to redirect unused funds from the federal Maternal, Infant, and Early Childhood Home Visiting (MIECHV) program to help home visiting clients find and retain jobs, a service not typically provided by home visiting programs.[31]

Quality Early Child Care and Education

In addition to building secure attachments with caring adults, expanding access to early childhood education is a promising pathway to resilience. Early learning opportunities allow children to think, play, and explore. These activities develop children's executive functions, such as "working memory" (storing and accessing information for a limited time) and self-regulation. Children learn to take turns, manage information, and avoid distractions. The more these abilities are practiced, the stronger they become. Early childhood education also supports social and emotional development, which includes building self-confidence and positive relationships. These critical abilities emerge through mastering new tasks and learning to interact with others. They also instill in children the life skills necessary to be inventive, flexible, and functional adults, and to be resilient in the face of life's challenges.

Moreover, according to a 2018 report by Child Trends and the Alliance for Early Success, preschool participation is associated with markedly better academic outcomes, such as improved math, reading, and language skills.[32] Additionally, high-quality early childhood education may contribute to long-term benefits, including higher earnings, better health, and less criminal activity.[33] Research by James Heckman, a Nobel Prize-winning economics professor at the University of Chicago, found a 13 percent return on investment for high-quality, birth-to-5 early childhood education for each year of a child's life.[34] Because high-quality child care and education equip children with opportunities to establish healthy connections with others and skills to be productive adults, broadening access may help prevent the accumulation of toxic stress commonly associated with ACEs.

Research by James Heckman found a 13% return on investment for high-quality, birth-to-5 early childhood education for each year of a child's life.

Recent state actions:

- In 2017, **Washington** state established a state-supported early childhood education and assistance program. [35]
- In 2017, state lawmakers in **Louisiana** created a special fund to support early childhood education. [36]
- In 2015, **New Hampshire** lawmakers tasked the state's Wellness and Primary Prevention Council to establish a system of family resource centers to provide parental education and support for children from birth to age 5.[37]

KEY TAKEAWAYS AND NEXT STEPS

This chapter highlighted the substantial impact adverse childhood experiences (ACEs) can have on the health and well-being of children and families.

- ACEs are potentially traumatic events that occur before the age of 18. Such experiences can result in toxic stress, which has been shown to interfere with a person's health and other life outcomes. It can even affect future generations.
- ACEs are common across the United States. Approximately two in every three adults report having experienced at least one ACE, while a quarter of adults report experiencing three or more ACEs.
- The impacts of ACEs and toxic stress are not predetermined. State strategies to intervene early can prevent and mitigate the negative impacts.

As discussed in this chapter, states have implemented various strategies designed to prevent, or address the impact of, ACEs and toxic stress. These strategies include supporting early intervention through health screening and treatment, increasing caregiver education through home visiting, and investing in high-quality early childhood care and education. Other strategies not discussed include:

- Identifying existing evidence-based prevention efforts. Learning about initiatives already underway can prevent duplication of efforts.
- Supporting evaluation and needs assessment. Data enables state leaders to identify policy gaps, target limited resources to populations most in need, and understand which strategies are most effective in specific contexts.
- Supporting efforts to increase family economic stability. Efforts to strengthen families' economic security may help reduce parental stress and increase household stability—two factors that can help protect children from abuse and neglect.[38] Policies such as full pass-through child support payments and earned income tax credits are potential mechanisms for reducing ACEs.[39,40,41]

- Increasing access to affordable and stable housing. Housing instability can be thought of as both a cause and a consequence of ACEs. Research suggests that the stress associated with housing instability can increase risk factors for child abuse and neglect, such as harsh parenting practices and maternal depression.[42,43,44]

This chapter was adapted from the following publications:

Bellazaire, A. (2018, August). *Preventing and mitigating the effects of adverse childhood experiences.* Denver, CO: National Conference of State Legislatures.

Harrison, C.L. & May, A. (2018, August). *Home visiting: Improving children's and families' well-being* [LegisBrief 26(31)]. Denver, CO: National Conference of State Legislatures.

National Conference of State Legislatures. (2018, April 26). *Home visiting: Improving outcomes for children* [Web page].

The National Conference of State Legislatures (NCSL) is a bipartisan organization dedicated to serving the lawmakers and staffs of the nation's 50 states, its commonwealths, and territories. NCSL provides research, technical assistance, and opportunities for policymakers to exchange ideas on the most pressing state issues, and is an effective and respected advocate for the interests of the states in the American federal system. NCSL has offices in Denver, Colorado and Washington, DC.

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HOME VISITING SERVICES FOR AT-RISK WOMEN AND FAMILIES IN WISCONSIN

By Charles Morgan, Program Supervisor, Wisconsin Legislative Fiscal Bureau

Wisconsin's Family Foundations home visiting program receives approximately 45% of its funding from the federal Maternal, Infant, and Early Childhood Home Visiting (MIECHV) program. It also receives funding from the temporary assistance for needy families block grant (29%), local matching funds (20%), and general purpose revenue (6%). Family Foundations currently provides grants to 20 local implementing agencies (e.g., counties, private agencies, and Indian tribes) that serve families in 31 counties and 5 tribal areas through at least one of the following evidence-based programs: Early Head Start-Home Based Option, Healthy Families America, Parents as Teachers, and Nurse-Family Partnership. Home visiting services are not an eligible service under the state's medical assistance program, but can be covered under other broadly defined categories such as services for women with high-risk pregnancies.

FEDERAL MATERNAL, INFANT, AND EARLY CHILDHOOD HOME VISITING (MIECHV) PROGRAM

The federal Maternal, Infant, and Early Childhood Home Visiting (MIECHV) program was created as part of the Patient Protection and Affordable Care Act (ACA) in 2010 and codified under 42 USC 711 to strengthen and improve maternal and child health programs, improve the coordination of services for at-risk communities, and identify and provide comprehensive services to improve outcomes for families who reside in at-risk communities. The ACA authorized five years of funding for the program—$100 million in federal fiscal year (FFY) 2010, $250 million in FFY 2011, $350 million in FFY 2012, and $400 million in FFY 2013 and FFY 2014. Subsequent federal legislation authorized $400 million annually for the program for FFYs 2015 through 2022. This funding is used primarily to provide formula and competitive grants to states to support home visiting programs. Of these amounts, 3% is reserved annually for grants to Indian tribes, tribal organizations, and urban Indian organizations, and 3% is reserved annually for technical assistance, evaluation, and research activities specified in the legislation.

The U.S. Department of Health and Human Services (DHHS), Health Resources and Service Administration, and Administration on Children and Families jointly administer the program.

As a condition of receiving grant funding, states were required to conduct a statewide needs assessment within six months of the passage of the ACA that identified: (a) characteristics of communities with the greatest need for home visiting services, as determined by several specified factors, such as concentrations of premature birth, low-birthweight infants, crime, poverty, substance abuse, and domestic violence; (b) the quality and capacity of existing programs or initiatives for home visitation; and (c) the state's capacity for providing substance abuse treatment and counseling services to individuals and families in need of such treatment or services.

The federal statutes specify certain core components of the program and require that MIECHV-funded program use one or more evidence-based home visiting (EBHV) models that meet specified standards.

Federal statutes require that states receiving federal home visiting program funds use one or more evidence-based models that meet specified standards.

At least 75% of a grantee's funding must be used for home visiting models that have existed for at least three years and are research-based, grounded in relevant empirically-based knowledge, linked to program determined outcomes, associated with a national organization or institution of higher education that has comprehensive home visitation program standards that ensure high quality service delivery and continuous program quality improvement, and has demonstrated significant positive outcomes, and participant outcomes, when evaluated using either: (a) well-designed and rigorous randomized controlled research designs, and the results have been published in a peer reviewed journal; or (b) quasi-experimental research designs.

Grantees may use up to 25% of the grant amount for models that conform to a promising and new approach to achieving improvements in specified benchmark areas and participant outcomes; have been developed or identified by a national organization or institution of higher education; and will be evaluated through a well-designed and rigorous process.

The federal legislation specifies that grantees must use MIECHV funds to supplement, not supplant, funds from other sources for early childhood home visitation program or initiatives. Only families that volunteer to receive home visiting services are provided these services.

Grant applicants (states and territories) are required to establish quantifiable, measurable benchmarks for demonstrating that the program results in improvements for participating families in the following areas: (a) improved maternal and newborn health; (b) prevention of child injuries, child abuse, neglect, and maltreatment, and reductions in hospital emergency department visits; (c) improvements in school readiness and achievement; (d) reduction in crime or domestic violence; (e) improvements in family economic self-sufficiency; and (f) improvements in the coordination and referrals for other community resources and supports.

The federal law required grantees to submit a report to DHHS that demonstrates improvement in at least four of these six specified areas during the first three years of the program. Grantees that failed to demonstrate improvement in at least four of these areas were required to implement a plan to improve outcomes in each of the six specified areas.

In 2016, Wisconsin was one of 44 state grantees that demonstrated overall improvement in at least four of the six benchmark areas during the first three years of the program.

In its March, 2016 report to Congress, DHHS concluded that 44 of 53 state grantees, including Wisconsin, demonstrated overall improvement in at least four of the six benchmark areas during the first three years of the program. The percentage of state grantees demonstrating improvement in each benchmark area ranged from 66 to 85 percent across the benchmark areas.

The DHHS Secretary is directed to carry out a continuous program of research and evaluation activities to increase knowledge about the implementation and effectiveness of the MIECHV program, using random assignment designs to the maximum extent feasible. Through its home visiting evidence of effectiveness (HomVEE) project, DHHS has contracted with Mathematica Policy Research, Inc. to conduct a review of research on home visiting programs to determine which home visiting models have evidence of effectiveness. In October, 2018, the DHHS Office of Planning, Research and Evaluation issued a report that details how it conducted the review, and a summary of the results of the review. Additional information on these studies is provided on the HomVEE website (https://homvee.acf.hhs.gov/).

In addition, the federal MIECHV law requires the DHHS Secretary to appoint an independent advisory committee of experts in program evaluation and research, education, and early childhood development to review and make recommendations on the design and plan for a national evaluation of the program. This evaluation, the Mother and Infant Home Visiting Program Evaluation (MIHOPE), is currently focusing on four evidence-based models—the Early Head Start-Home Based Option, Healthy Families America, Nurse Family Partnership, and Parents as Teachers.

WISCONSIN'S CHILD ABUSE AND NEGLECT PREVENTION PROGRAM

Wisconsin's home visiting program, as defined by the Wisconsin statutes, predates the federal MIECHV program by approximately 12 years. Codified under s. 48.983 of the statutes, a comprehensive child abuse and neglect prevention program that includes a home visiting component was created by 1997 Wisconsin Act 293, based on the recommendations of the Legislative Council Study Committee on Child Abuse and Neglect. Initially, the program was administered by the Department of Health and Family Service and authorized under Chapter 46 of the statutes. The program was transferred to the Department of Children and Families (DCF) and renumbered in Chapter 48 when DCF was created as part of 2007 Wisconsin Act 20 (the 2007-09 biennial budget act), effective July 1, 2008.

Under the program, DCF is directed to provide grants to counties, cities, private agencies and Indian tribes, and combinations of these entities, with a minimum of grant award of $10,000. The statutes require DCF to use a competitive process in awarding grants, and specifies information that grant applicants must submit as a condition of receiving grant funding.

The statutes specify how DCF is to use state general purpose revenue (GPR) to fund: (a) grants for home visitation services; (b) grants for start-up and capacity building related to home visitation programs; (c) the nonfederal share of case management services offered under the medical assistance (MA) program for families that receive home visitation services; (d) training; and (e) "flexible funds," an amount not less than $250 per year per family that is set aside for families that receive home visiting services to support ancillary expenses. The statute requires DCF to allocate at least 10% of the GPR funding available in each year to entities that have not previously received grant funding. Grantees are required to match at least 25% of the state grant amount, in funds or through in-kind contributions.

The statutes require each grant recipient to offer all MA-eligible pregnant women in the area served by the grantee the opportunity to undergo a risk assessment to determine whether the woman presents risk factors for poor birth outcomes or for perpetrating child abuse and neglect. Women who are determined to be at risk must be offered home visitation services, commencing during the prenatal period, and continuing until the child reaches the age of three, or age five if the risk factors continue to be present.

DCF is required to conduct, or select an evaluator to conduct, an evaluation of the home visitation program. The statutes specify factors that evaluators must measure, including poor birth outcomes, substantiated reports of child abuse and neglect, emergency room visits for injuries to children, the number of out-of-home placements of children, immunization rates, MA-supported comprehensive physical examinations

Medical assistance-eligible pregnant women who are determined to be at risk must be offered home visitation services.

provided to children, and any other factors DCF determines are appropriate. In addition, each grant applicant must develop a plan for evaluating the effectiveness of its program, including how program outcomes will be tracked and measured.

Wisconsin's home visiting program is supported by four funding sources: two federal programs, general purpose revenue, and local matching funds.

Wisconsin's home visiting program, commonly referred to as the Family Foundations program, is currently supported from four funding sources: (a) federal MIECHV funds; (b) the federal Temporary Assistance for Needy Families (TANF) block grant; (c) GPR; and (d) local matching funds. DCF provides grants to local implementing agencies (LIAs) on a federal fiscal year basis (October 1 through September 30). Table 1 identifies DCF estimates of the total amount of funding that has been budgeted for grants to LIAs, by fund source, during the past five state fiscal years, and estimates of the amounts that would be budgeted for the Family Foundations program in 2019-20 and 2020-21 under DCF's 2019-21 biennial budget request. The table also shows the percentage of the 2018-19 funding estimates that will be supported from each source.

TABLE 1
Family Foundations Grants to Local Implementing Agencies, by Fund Source
State Fiscal Years 2014-15 through 2020-21*

	Estimates					DCF Budget Request		2018-19
	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	% of Total
FED-MIECHV	$7,164,300	$9,342,300	$8,269,600	$5,795,800	$7,177,200	$9,076,900	$9,076,900	**45%**
FED-TANF	912,000	812,100	812,100	4,712,100	4,712,100	4,712,100	4,712,100	**29**
GPR	985,700	985,700	985,700	985,700	985,700	985,700	985,700	**6**
Local Match	2,265,500	2,785,000	2,516,800	2,873,400	3,218,800	3,218,800	3,218,800	**20**
Total	**$11,327,500**	**$13,925,100**	**$12,584,200**	**$14,367,000**	**$16,093,800**	**$17,993,500**	**$17,993,500**	**100%**

* DCF estimates of state fiscal year allocations. DCF administers the program on a federal fiscal year basis.

Allocation of Funding to LIAs in Wisconsin. As required by federal law, DCF has conducted two statewide needs assessments, the first in 2010 and the second in 2015, by collecting data on 18 federally-required indicators and an additional factor (percent minority population—a factor that recognizes racial disparities in poor birth outcomes) from available sources within each county. These indicators were then grouped to create six topic areas: (1) maternal and infant health; (2) poverty and unemployment; (3) crime and domestic violence; (4) education; (5) substance abuse; and (6) child maltreatment, and each topic area was given a weight of 15%, with percent minority population assigned a weight of 10%. DCF then calculated a "z score" that measured how closely the county's values compare to the average county in the state. The z scores were totaled across all indicators for each county, and adjusted based on the weight applied to each topic area. The final county z scores were then ranked in order to identify those counties that were most at risk.

Table 2 summarizes the results of the 2015 needs assessment, by county, and indicates whether each county is currently served by an LIA under the Family Foundations program.

TABLE 2

Wisconsin 2015 Needs Assessment—Family Foundations Program Ranking of Wisconsin Counties

County	Maternal and Child Health	Poverty	Crime	High School Drop Out	Substance Abuse	Child Maltreatment	Minority Population	Total Score	Rank	Family Foundations Services Available
Menominee	0.038	0.541	0.188	0.056	-0.095	0.643	0.679	2.050	1	
Milwaukee	0.384	0.233	0.420	0.245	0.099	-0.041	0.315	1.655	2	X
Burnett	-0.142	0.162	0.044	0.539	0.097	0.184	-0.005	0.880	3	X
Rock	0.155	0.056	0.241	0.128	0.166	0.051	0.051	0.848	4	X
Forest	0.260	0.186	0.055	-0.005	-0.155	0.166	0.074	0.581	5	X
Lincoln	0.004	0.032	0.095	0.665	-0.155	-0.009	-0.055	0.578	6	X
Racine	0.302	0.068	0.090	0.016	-0.072	0.014	0.140	0.558	7	X
Adams	-0.061	0.105	0.015	-0.015	0.166	0.262	-0.006	0.465	8	X
Vilas	0.148	0.152	0.289	-0.157	-0.155	0.120	0.033	0.429	9	X
Winnebago	0.180	-0.062	0.056	0.407	-0.095	-0.060	-0.001	0.425	10	X
Kenosha	0.189	0.028	0.121	0.049	-0.047	-0.041	0.109	0.408	11	X
Oneida	0.012	0.038	-0.018	-0.047	-0.155	0.588	-0.049	0.370	12	X
Jackson	-0.010	0.107	-0.040	-0.086	0.097	0.271	0.024	0.364	13	X
Juneau	0.041	0.083	0.017	0.017	0.166	0.009	-0.020	0.314	14	X
Rusk	0.186	0.042	-0.001	0.039	0.097	-0.014	-0.054	0.295	15	X
Price	0.027	0.005	0.000	0.376	-0.155	0.069	-0.052	0.270	16	
Sauk	-0.017	-0.092	0.071	0.227	0.166	-0.073	-0.018	0.263	17	X
Washburn	0.110	0.035	-0.029	-0.035	0.097	0.097	-0.043	0.231	18	X
Dane	-0.014	-0.116	0.086	0.090	0.166	-0.078	0.076	0.209	19	X
Douglas	0.023	-0.019	0.103	0.017	0.097	-0.014	-0.019	0.189	20	
Langlade	-0.026	0.081	-0.061	-0.047	-0.155	0.372	-0.043	0.121	21	X
Ashland	-0.053	0.204	0.186	-0.054	-0.155	-0.106	0.057	0.080	22	
Sawyer	-0.069	0.279	0.041	-0.062	-0.155	-0.069	0.103	0.068	23	X
Manitowoc	0.102	-0.065	0.080	0.060	-0.095	0.000	-0.018	0.063	24	X
Columbia	0.012	-0.116	0.123	-0.028	0.166	-0.078	-0.034	0.045	25	
Lafayette	0.018	-0.094	-0.067	-0.110	0.166	0.166	-0.042	0.037	26	
Green	0.130	-0.119	-0.040	0.034	0.166	-0.096	-0.044	0.032	27	X
Monroe	0.004	0.026	0.031	0.045	0.097	-0.069	-0.018	0.0119	28	
Jefferson	-0.051	-0.059	0.047	-0.105	0.166	0.000	-0.003	-0.005	29	
Grant	0.001	0.008	-0.068	-0.108	0.166	0.023	-0.051	-0.029	30	
Fond du Lac	0.089	-0.099	0.009	0.092	-0.095	-0.018	-0.012	-0.035	31	
Brown	0.044	-0.084	0.057	0.058	-0.095	-0.083	0.061	-0.042	32	X
Outagamie	0.142	-0.116	0.054	0.039	-0.095	-0.078	0.008	-0.047	33	
Shawano	0.075	-0.011	-0.014	-0.054	-0.095	0.032	0.020	-0.047	34	
Barron	-0.045	0.015	-0.071	0.086	0.097	-0.110	-0.038	-0.067	35	
Walworth	-0.017	0.001	-0.028	-0.002	-0.072	0.000	0.033	-0.085	36	X
La Crosse	-0.084	-0.060	0.143	-0.082	0.097	-0.096	-0.007	-0.088	37	X
Eau Claire	-0.133	0.006	0.058	-0.019	0.097	-0.087	-0.014	-0.091	38	
Chippewa	0.025	-0.051	0.003	-0.013	0.097	-0.133	-0.037	-0.108	39	
Bayfield	-0.070	0.163	-0.092	0.048	-0.155	-0.041	0.038	-0.109	40	
Waupaca	-0.003	-0.039	0.048	-0.007	-0.095	0.014	-0.046	-0.128	41	
Marquette	0.121	0.085	-0.106	-0.020	-0.095	-0.083	-0.042	-0.140	42	
Green Lake	0.068	-0.001	-0.017	-0.122	-0.095	0.051	-0.031	-0.147	43	
Dunn	-0.039	0.023	-0.058	-0.131	0.097	-0.009	-0.032	-0.148	44	
Dodge	-0.020	-0.087	-0.043	-0.053	0.166	-0.124	-0.011	-0.171	45	
Clark	-0.056	0.053	-0.052	-0.102	0.097	-0.078	-0.035	-0.172	46	X
Iowa	-0.093	-0.125	-0.026	-0.047	0.166	0.005	-0.055	-0.175	47	
Iron	-0.311	0.310	-0.003	-0.164	-0.155	0.184	-0.063	-0.201	48	
Waushara	-0.086	0.039	-0.075	0.004	-0.095	0.009	-0.001	-0.204	49	
Crawford	-0.010	0.010	-0.164	-0.126	0.166	-0.078	-0.050	-0.252	50	
Marinette	-0.054	0.048	-0.057	-0.068	-0.095	0.000	-0.052	-0.278	51	
Trempealeau	-0.025	-0.083	-0.069	-0.068	0.097	-0.129	-0.018	-0.294	52	X
Portage	-0.079	-0.006	-0.097	0.045	-0.155	-0.004	-0.02	-0.315	53	
Polk	-0.108	-0.033	-0.070	-0.073	0.097	-0.087	-0.049	-0.322	54	X
Oconto	-0.036	-0.022	-0.106	0.089	-0.095	-0.106	-0.048	-0.324	55	
Florence	-0.159	0.068	-0.107	-0.091	-0.155	0.170	-0.054	-0.328	56	
Richland	-0.105	-0.089	-0.122	-0.050	0.166	-0.092	-0.046	-0.338	57	
Door	-0.095	0.060	-0.094	-0.103	-0.095	0.019	-0.041	-0.351	58	
Pierce	-0.028	-0.101	-0.019	-0.129	0.097	-0.129	-0.045	-0.353	59	X
St. Croix	-0.031	-0.211	-0.063	0.018	0.097	-0.124	-0.040	-0.353	60	X
Wood	-0.061	-0.057	0.017	-0.111	-0.155	0.023	-0.030	-0.374	61	
Marathon	-0.083	-0.064	0.023	-0.054	-0.155	-0.064	0.002	-0.395	62	
Vernon	-0.128	0.013	-0.162	-0.097	0.166	-0.138	-0.057	-0.404	63	
Sheboygan	-0.040	-0.129	0.012	-0.134	-0.095	-0.060	0.030	-0.415	64	
Kewaunee	0.001	-0.114	-0.045	0.047	-0.095	-0.188	-0.048	-0.442	65	
Buffalo	-0.201	-0.073	-0.188	-0.017	0.097	-0.027	-0.057	-0.466	66	
Pepin	-0.054	-0.106	-0.113	-0.152	0.097	-0.096	-0.062	-0.486	67	
Waukesha	0.067	-0.216	-0.108	-0.085	-0.072	-0.119	0.000	-0.532	68	X
Washington	0.003	-0.198	0.011	-0.116	-0.072	-0.152	-0.033	-0.557	69	
Taylor	-0.151	0.023	-0.078	-0.147	-0.155	-0.014	-0.059	-0.580	70	X
Calumet	-0.002	-0.229	-0.122	-0.110	-0.095	-0.096	-0.018	-0.673	71	
Ozaukee	-0.113	-0.242	-0.145	-0.130	-0.072	-0.151	-0.025	-0.878	72	

Although not listed in Table 2, the Family Foundations program provides grant funding to the Great Lakes Inter-Tribal Council, which subcontracts with the Bad River Tribe to provide home visiting services to tribal members in Ashland County.

In March, 2016, DCF released a new request for proposals for implementing the Family Foundations program. The Department scored the applicants on several factors, including the applicants' ability to demonstrate a clear need for evidence-based home visiting services in the proposed service areas, using U.S. Census data, county-level health and child welfare data, local community data from family serving agencies, hospitals and other health care providers, school districts or other organizations, and any additional population need data collected by the applicant.

The grant amount each local implementing agency receives in each year is based on the grantee's need and the availability of funding budgeted for the program.

The grant amount each participating LIA receives in each year is based on the grantee's need, as determined by DCF, and the availability of funding budgeted for the program.

Table 3 identifies the state funding allocations to the LIAs for FFYs 2014-15 through 2018-19, the areas served by each LIAs, and the home visiting model each of the LIAs use in delivering home visiting services.

TABLE 3
Family Foundations Funding Allocations to Local Implementing Agencies
Federal Fiscal Years 2014-15 through 2018-19

Local Implementing Agency County/Tribe Served	Home Visiting Model	2014-15	2015-16	2016-17	2017-18	2018-19
LCO Mino Maajisewin Home Visitation Program						
Lac Courte Oreilles Tribe	HFA	$523,246	$535,264	$436,821	$477,439	$478,542
Children's Social Services (CSSW) Northwoods Healthy Families						
Forest County						
Langlade County						
Lincoln County						
Oneida County						
Vilas County						
Subtotal	HFA	331,169	618,201	618,081	624,781	624,781
Racine County Human Services						
Racine County	HFA	609,864	870,720	901,921	926,921	926,921
Great Lakes Inter-Tribal Council						
Bad River Tribe						
Sokaogon-Chippewa Tribe						
St. Croix Tribe						
Lac du Flambeau Tribe						
Burnett County						
Subtotal	HFA	911,691	1,442,472	1,267,054	1,296,808	1,373,295
Family Services NEW for Healthy Families, Howe, Family & Childcare Resources, and Parent Connection						
Brown County Winnebago County	HFA (Brown HF) & PAT (Howe, FCR,					
Subtotal	Parent Connection)	1,649,209	1,915,478	1,258,100	1,800,000	1,823,166
CSSW- Rock County						
Rock County	HFA & EHS	445,356	516,321	500,000	500,000	500,000
Kenosha Division of Health						
Kenosha County	NFP & PAT	$1,308,540	$1,348,710	$1,222,552	$1,341,069	$1,376,901

Local Implementing Agency County/Tribe Served	EBHV Model	2014-15	2015-16	2016-17	2017-18	2018-19
Adams County Health Department for Adams, Juneau, and Sauk Counties						
Adams County						
Juneau County						
Sauk County						
Subtotal	NFP	262,380	910,803	858,863	860,084	954,098
Madison-Dane Public Health						
Dane County	NFP	N/A	N/A	184,248	291,211	291,211
Easter Seals Southeast WI						
Milwaukee County						
Walworth County						
Waukesha County						
Subtotal	HFA & PAT	N/A	N/A	304,556	343,961	417,690
Family and Children's Center						
La Crosse County	HFA	N/A	N/A	80,488	208,762	208,762
Indianhead Community Action Agency						
Clark County						
Rusk County						
Sawyer County						
Taylor County						
Washburn County						
Subtotal	EHS	N/A	N/A	400,008	448,710	558,840
Unison (SET Ministry)						
Milwaukee County	PAT	N/A	N/A	300,000	300,000	300,000
CSSW - Milwaukee						
Milwaukee County	HFA	N/A	N/A	N/A	225,000	340,800
CSSW-Western						
Jackson, Trempealeau County	HFA	N/A	N/A	N/A	218,320	291,094
Lakeshore CAP Manitowoc County						
Manitowoc County	PAT	249,420	265,600	N/A	211,987	287,259
Next Door						
Milwaukee County	EHS	745,492	745,492	N/A	112,500	450,000
Family Resource Center St. Croix Valley						
St. Croix, Pierce, Polk County	PAT	N/A	N/A	N/A	225,000	309,000
Dane County Parent Council						
Green County	EHS	279,201	335,010	N/A	243,725	324,967
Aurora						
Milwaukee County	HFA	553,566	634,649	N/A	N/A	N/A
Total		**$9,375,493**	**$11,728,318**	**$9,513,718**	**$12,153,598**	**$13,115,497**

Note: EHS=Early Head Start; HFA=Healthy Families America; NFP=Nurse-Family Partnership; and PAT=Parents as Teachers.

HOME VISITING MODELS OFFERED IN WISCONSIN

As of January 1, 2019, DHHS had determined that 20 home visiting models met its criteria that demonstrate evidence of effectiveness.

The LIAs in Wisconsin currently offer home visiting services using four of these models—the Early Head Start-Home Based Option (EHS-HB), Healthy Families America (HFA), Nurse-Family Partnership (NFP), and Parents as Teachers (PAT). As previously indicated, the MIHOPE national evaluation of the MIECHV program will review the evidence of effectiveness of each of these models. HomVEE's descriptions of each of the four home visiting models used by LIAs in Wisconsin these models are provided below.

Early Head Start Home-Based Option. EHS-HBO targets low-income pregnant women and families with children from birth to age three, most of whom are at or below the federal poverty level or who are eligible for Part C services under the Individuals with Disabilities Education Act in their state. The model provides early, continuous, intensive, and comprehensive child development and family support services. EHS programs include home- or center-based services, a combination of home- and center-based programs, and family child care services (services provided in family child care homes).

EHS-HBO services include weekly 90-minute home visits and two group socialization activities per month for parents and their children. Home visitors are required to have a minimum of a Home Visitor Child Development Associate (CDA) or comparable credential, or equivalent coursework as part of an associate's or bachelor's degree.

Healthy Families America sites offer hour-long home visits at least weekly until children are six months old, with the possibility of less frequent visits thereafter.

Healthy Families America. HFA goals include reducing child maltreatment, improving parent-child interactions and children's social-emotional well-being, and promoting children's school readiness. Local HFA sites select the target population they plan to serve and offer hour-long home visits at least weekly until children are six months old, with the possibility of less frequent visits thereafter. Visits begin prenatally or within the first three months after a child's birth and continue until children are between three and five years old. In addition, many HFA sites offer parent support groups and father involvement programs. Sites also can develop activities to meet the needs of their specific communities and target populations.

HFA includes (1) screenings and assessments to determine families at risk for child maltreatment or other adverse childhood experiences; (2) home visiting services; and (3) routine screening and assessment of parent-child interactions, child development, and maternal depression. In addition, many HFA sites offer services such as parent support groups and father involvement programs. HFA encourages local sites to implement additional services such as these that further address the specific needs of their communities and target populations.

Nurse-Family Partnership. NFP is designed for first-time, low-income mothers and their children. It includes one-on-one home visits by a trained registered nurse to participating clients. The visits begin early in the woman's pregnancy (with program enrollment no later than the 28th week of gestation) and conclude when the woman's child reaches the age of two. NFP is designed to improve (1) prenatal and maternal health and birth outcomes, (2) child health and development, and (3) families' economic self-sufficiency and maternal life course development.

Parents as Teachers. The goal of the PAT program is to provide parents with child development knowledge and parenting support, provide early detection of developmental delays and health issues, prevent child abuse and neglect, and increase children's school readiness. The PAT model includes one-on-one home visits, monthly group meetings, developmental screenings, and linkages to needed resources. Parent educators conduct the home visits using structured visit plans and guided planning tools. Local sites offer at least 12 hour-long home visits annually with more offered to higher-need families. PAT serves families for at least two years between pregnancy and kindergarten. PAT affiliate programs select the target population they plan to serve and the program duration.

MEDICAID-SUPPORTED HOME VISITING SERVICES

DCF estimates that approximately 75% of adult clients enrolled in the Family Foundations program are enrolled in the state's BadgerCare Plus program, which provides medical assistance (MA) funded services to individuals and families with low income. In Wisconsin, pregnant women in households with countable income up to 306% of the federal poverty level (FPL) are eligible for coverage under BadgerCare Plus, and remain eligible through the end of the month in which a 60-day postpartum period ends. In determining the household's size (for the purpose of determining the household's income as a percentage of the FPL), the number of children the woman is expecting is included. For example, a woman who is expecting one child and who resides with her husband is considered to be in a three-person household. Currently, 306% of the FPL for a three-person family is $63,587 per year.

If a woman enrolled in BadgerCare Plus receives an MA-eligible home visiting service from an MA-certified LIA, the LIA will submit a claim for reimbursement to the MA program. The MA reimbursement the LIA receives supports the LIA's cost of providing the service, and may be used to meet the 25% local contribution requirement under the Family Foundations program.

Under the state's MA program, home visiting services are not defined as an MA-eligible service, but instead are covered under other broadly defined service categories. Similar to the services offered under the Family Foundations program, these MA-funded services are intended to ensure that certain high-risk MA recipients receive appropriate medical and social services. Home visits are a component of these MA-supported services.

Under the state's medical assistance program, home visiting services are not defined as an eligible service, but instead are covered under other service categories.

There are several services available exclusively to individuals enrolled in the state's MA program.

(1) The MA program provides prenatal, postpartum, and young child care coordination (PNCC) services for women with high-risk pregnancies statewide. These services assist MA recipients and, when appropriate, their families, to gain access to medical, social, educational, and other services related to the woman's pregnancy. Wisconsin Medicaid PNCC services are available to Medicaid-eligible pregnant women with a high risk for adverse pregnancy outcomes during pregnancy through the first 60 days following delivery. PNCC services include all of the following: (a) outreach; (b) initial assessment; (c) care plan development; (d) ongoing care coordination and monitoring; and (e) health education and nutrition counseling services for recipients needing these services.

In Milwaukee County and the City of Racine, the benefit is extended beyond the 60-day postpartum period, and is called child care coordination (CCC). Health education and nutrition counseling services are not part of the CCC benefit.

The state's MA program pays the non-federal share of eligible service costs for both the PNCC and CCC benefit. In state fiscal year 2017-18, the MA program provided reimbursements totaling $4,998,700 (all funds) to fund claims for PNCC and CCC services.

(2) The MA program supports case management services for children with medical complexity. These services are available statewide, and the state pays the non-

federal share of service costs. Under this benefit, hospitals with pediatric medical and surgical specialty areas may provide case management services to individuals under the age of 26 with chronic health conditions that meet certain requirements. These case management services may include a comprehensive assessment and periodic reassessment of the individual's needs, the development and periodic revision of a care plan, and ongoing monitoring and service coordination. In state fiscal year 2017-18, the MA program provided reimbursements totaling $3,108,900 (all funds) to fund claims for these services.

(3) Another MA-supported program provides assessment, case management, and similar services to pregnant women enrolled in managed care organizations—the Obstetric Medical Home (OBMH) program.

Using medical assistance funds, the Obstetric Medical Home program provides assessment, case management, and similar services to pregnant women enrolled in managed care organizations.

In January, 2011, DHS began implementing an OBMH delivery model to serve high-risk pregnant women enrolled in BadgerCare health maintenance organizations (HMOs) in six southeastern counties (Kenosha, Milwaukee, Ozaukee, Racine, Washington, and Waukesha counties). In 2014, the initiative was expanded to include BadgerCare HMO enrollees in Dane and Rock County, and to include pregnant women enrolled in HMOs that serve disabled MA recipients (SSI-HMOs).

Under the OBMH initiative, obstetric clinics that serve as medical homes are reimbursed by HMOs for standard prenatal and postpartum care for their enrollees. However, each participating medical home is eligible to receive a supplemental payment of $1,000 per enrolled member who: (a) enrolled in the first 16 weeks of the pregnancy and remained continuously enrolled throughout the pregnancy; (b) attended a minimum of ten prenatal care appointments with the obstetric provider; (c) remained continuously enrolled during her pregnancy; and (d) had a postpartum appointment within 60 days of delivery. OBMHs receive an additional $1,000 (for a total of $2,000) per eligible member who meets these criteria and has a healthy birth outcome, which is defined as a birthweight of at least 2,500 grams, a gestational age of at least 37 weeks, and no neonatal death within 28 days after delivery.

Program enrollment is limited to women who meet one or more of the following criteria: (a) is less than 18 years of age; (b) is African American; (c) is homeless; (d) has a chronic medical or behavioral health condition which will negatively affect the pregnancy; (e) has a prior poor birth outcome; or (f) meets the criteria for inclusion in the DHS Birth Outcome Registry Network report.

In calendar years 2015 and 2016 (the last year for which complete information is available), clinics received approximately $1,594,000 and $1,428,000 (all funds), respectively, for supplemental payments under the OBMH initiative.

GLOSSARY

ACE score: a number from zero to 10 that measures a person's cumulative childhood stress exposure and risk for physical and mental health and socioeconomic problems. This score is based on 10 adverse childhood experiences (ACEs) identified in a study conducted by the Centers for Disease Control and Prevention (CDC) and Kaiser Permanente in the mid-1990s. Since then, researchers have identified additional adverse childhood experiences (e.g., bullying, homelessness) that also have negative consequences.

Adverse childhood experiences (ACEs): potentially traumatic experiences that occur before age 18. The 10 ACEs identified in a landmark study conducted by the Centers for Disease Control and Prevention (CDC) and Kaiser Permanente are abuse (emotional, physical, or sexual), neglect (emotional or physical), and household challenges (mother treated violently, household substance abuse, household mental illness, parental separation or divorce, or incarcerated family member). Research suggests that the more ACEs a person experiences, the greater the chances for poor physical and mental health and socioeconomic outcomes. Researchers have identified additional adverse childhood experiences (e.g., bullying, homelessness) that also have negative consequences.

Brain architecture: the billions of connections between neurons across different areas of the brain. The early years are the most active period for establishing these connections. Adverse childhood experiences and early toxic stress can weaken the architecture of the developing brain and lead to problems in learning, behavior, and physical and mental health.

Buffering relationships: caring, stable, and supportive adult relationships that help children adapt to potentially traumatic childhood adversities, especially during sensitive periods of early development.

Family Connects: a universal, "light touch" home visiting program that targets all parents of newborns in a geographic area regardless of income or socioeconomic status. Trained nurses visit families in their homes three weeks after the baby's birth to assess child and family well-being, and connect parents to community support services, including more intensive home visiting programs, as needed.

Family Foundations Home Visiting (FFHV): Wisconsin's home visiting program, which currently provides grants to 20 local implementing agencies that serve at-risk families in 31 counties and five tribal areas. The program uses four evidence-based home visiting models: Early Head Start-Home Based Option, Healthy Families America, Nurse-Family Partnership, and Parents as Teachers.

Home visiting programs: in-home support provided to pregnant women and families by a nurse, social worker, or early childhood specialist. These trained professionals provide information on healthy child development, conduct health screenings on the infant and parents, and connect families with community resources and public benefits. Home visiting programs are often referred to as a two-generation approach because they provide support and services to parents and children at the same time. Home visiting programs can be offered to all families in a geographic area, or targeted to high-need, at-risk families. Programs vary in the frequency and number of visits and the time span over which visits are conducted.

Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV): a federal program created in 2010 that provides funding to states, territories, and tribal entities to develop and implement voluntary, evidence-based home visiting programs for pregnant women and families, particularly those considered at-risk. The programs give pregnant women and new parents the resources and skills to raise children who are physically, socially, and emotionally healthy, and ready to learn. Wisconsin's home visiting program, commonly referred to as the Family Foundations program, currently receives MIECHV funds.

Paired sensitive period: the time following the birth of a child in which both children and parents are experiencing major neurobiological changes.

Positive stress: minor challenges to the body and brain that are a normal and essential part of healthy development, characterized by a brief increase in heart rate and mild elevation in stress hormone levels. Examples of positive stressors are immunization injections or taking an exam.

Protective factors: a set of characteristics or strengths of individuals, families, or communities that can help families navigate difficulties, promote family well-being, and reduce the likelihood of child abuse and neglect. The Wisconsin Five for Families campaign is an example of a statewide effort to increase knowledge of five evidence-based protective factors that strengthen families.

Pruning: the reduction of neural connections in the brain that improves the efficiency of brain circuits. The first few years of life are characterized by a rapid proliferation of new neural connections and selective pruning of other connections in response to environmental stimuli.

Resilience: the ability to recover and grow from adverse experiences.

Tolerable stress: temporary activation of a child's stress response system as a result of serious, longer-lasting adversities such as loss of a loved one, natural disaster, or significant injury. In the presence of supportive adults, a child's stress response can return to a healthy baseline, which allows the body and brain to recover from the stressor. In the absence of supportive adults, serious adversities can result in toxic stress.

Toxic stress: excessive activation of a child's stress response system that occurs when a child faces strong, prolonged, or frequent adversities, especially without the support of adults who can provide buffering protection. This type of stress can negatively impact a child's developing brain, and immune, metabolic regulation, and cardiovascular systems.

Trauma: a painful or distressing experience often resulting in lasting mental and physical effects. Adverse childhood experiences (ACEs) can be traumatic if a child lacks the support of stable, responsive adults.

Trauma-informed care (TIC): an approach in which all people at an institution, organization, or program understand the impact of trauma, recognize its signs, and seek to prevent the re-traumatization of clients and patients through responsive organizational policies and practices. Given their greater interaction with people who have experienced trauma, governments, health care systems, and service providers have increasingly adopted a TIC approach.

Two-generation approaches: policies and programs that simultaneously address the needs of children and their parents to help break the cycles of poverty and intergenerational trauma. These approaches draw from research showing that parents' well-being is critical for healthy child development, and a child's well-being affects a parent's ability to be successful in the workplace or at school.

Wisconsin Behavioral Risk Factor Survey (BRFS): an annual telephone survey that collects information about Wisconsin residents' health risk behaviors, chronic health conditions, and use of preventive services. All 50 states participate in this survey as part of the national Behavioral Risk Factor Surveillance System (BRFSS) coordinated by the Centers for Disease Control and Prevention (CDC).

Definitions for brain architecture, buffering relationships, pruning, and the three types of stress were adapted from information on the website of the Center on the Developing Child at Harvard University (https://developingchild.harvard.edu).

THE FAMILY IMPACT GUIDE FOR POLICYMAKERS

Viewing Policies Through the Family Impact Lens

- Most policymakers would not think of passing a bill without asking, **"What's the economic impact?"**
- This guide encourages policymakers to ask, **"What is the impact of this policy on families?" "Would involving families result in more effective and efficient policies?"**

When economic questions arise, economists are routinely consulted for economic data and forecasts. When family questions arise, policymakers can turn to family scientists for data and forecasts to make evidence-informed decisions. The Family Impact Seminars developed this guide to highlight the importance of family impact and to bring the family impact lens to policy decisions.

WHY FAMILY IMPACT IS IMPORTANT TO POLICYMAKERS

Families are the most humane and economical way known for raising the next generation. Families financially support their members, and care for those who cannot always care for themselves—the elderly, frail, ill, and disabled. Yet families can be harmed by stressful conditions—the inability to find a job, afford health insurance, secure quality child care, and send their kids to good schools. Innovative policymakers use research evidence to invest in family policies and programs that work, and to cut those that don't. Keeping the family foundation strong today pays off tomorrow. Families are a cornerstone for raising responsible children who become caring, committed contributors in a strong democracy, and competent workers in a sound economy.[1]

In polls, state legislative leaders endorsed families as a sure-fire vote winner.[2] Except for two weeks, family-oriented words appeared every week Congress was in session for over a decade; these mentions of *family* cut across gender and political party.[3] The symbol of *family* appeals to common values that rise above politics and hold the potential to provide common ground. However, family considerations are not systematically addressed in the normal routines of policymaking.

HOW THE FAMILY IMPACT LENS HAS BENEFITED POLICY DECISIONS

- In one Midwestern state, using the family impact lens revealed differences in program eligibility depending upon marital status. For example, seniors were less likely to be eligible for the state's prescription drug program if they were married than if they were unmarried but living together.
- In a rigorous cost-benefit analysis of 571 criminal justice programs, those most cost-beneficial in reducing future crime were targeted at juveniles. Of these, the five most cost-beneficial rehabilitation programs and the single most cost-beneficial prevention program were family-focused approaches.[4]
- For youth substance use prevention, programs that changed family dynamics were found to be, on average, over nine times more effective than programs that focused only on youth.[5]

QUESTIONS POLICYMAKERS CAN ASK TO BRING THE FAMILY IMPACT LENS TO POLICY DECISIONS:

- How are families affected by the issue?
- In what ways, if any, do families contribute to the issue?
- Would involving families result in more effective policies and programs?

HOW POLICYMAKERS CAN EXAMINE FAMILY IMPACTS OF POLICY DECISIONS

Nearly all policy decisions have some effect on family life. Some decisions affect families directly (e.g., child support or long-term care), and some indirectly (e.g., corrections or jobs). The family impact discussion starters below can help policymakers figure out what those family impacts are and how family considerations can be taken into account, particularly as policies are being developed.

FAMILY IMPACT DISCUSSION STARTERS

How will the policy, program, or practice:

- support rather than substitute for family members' responsibilities to one another?
- reinforce family members' commitment to each other and to the stability of the family unit?
- recognize the power and persistence of family ties, and promote healthy couple, marital, and parental relationships?
- acknowledge and respect the diversity of family life (e.g., different cultural, ethnic, racial, and religious backgrounds; various geographic locations and socioeconomic statuses; families with members who have special needs; and families at different stages of the life cycle)?
- engage and work in partnership with families?

ASK FOR A FULL FAMILY IMPACT ANALYSIS

Some issues warrant a full family impact analysis to more deeply examine the intended and unintended consequences of policies on family well-being. To conduct an analysis, use the expertise of (1) family scientists who understand families and (2) policy analysts who understand the specifics of the issue.

- Family scientists in your state can be found at http://www.familyimpactseminars.org
- Policy analysts can be found on your staff, in the legislature's nonpartisan service agencies, at university policy schools, etc.

APPLY THE RESULTS

Viewing issues through the family impact lens rarely results in overwhelming support for or opposition to a policy or program. Instead, it can identify how specific family types and particular family functions are affected. These results raise considerations that policymakers can use to make policy decisions that strengthen the many contributions families make for the benefit of their members and the good of society.

Additional Resources

Several family impact tools and procedures are available on the Wisconsin Family Impact Seminars website at http://www.wisfamilyimpact.org.

1 Bogenschneider, K., & Corbett, T. J. (2010). Family policy: Becoming a field of inquiry and subfield of social policy [Family policy decade review]. *Journal of Marriage and Family, 72*, 783-803.

2 State Legislative Leaders Foundation. (1995). *State legislative leaders: Keys to effective legislation for children and families*. Centerville, MA: Author.

3 Strach, P. (2007). *All in the family: The private roots of American public policy*. Stanford, CA: Stanford University Press.

4 Aos, S., Miller, M., & Drake, E. (2006). *Evidenced-based public policy options to reduce future prison construction, criminal justice costs, and crime rates*. Olympia: WA State Inst. for Public Policy.

5 Kumpfer, K. L. (1993, September). *Strengthening America's families: Promising parenting strategies for delinquency prevention—User's guide* (U.S. Department of Justice Publication No. NCJ140781). Washington, DC: Office of Juvenile Justice and Delinquency Prevention.

Photo courtesy of Jeff Miller, UW-Madison.

Robert M. La Follette
School of Public Affairs
UNIVERSITY OF WISCONSIN–MADISON