



Research for Results

THE POWER OF HOME VISITING





ASSOCIATION OF STATE AND TRIBAL HOME VISITING INITIATIVES

The Association of State and Tribal Home Visiting Initiatives (ASTHVI) is a nonprofit, nonpartisan collaboration of state, territorial and Tribal administrators of voluntary home visiting programs supporting pregnant women, young children, and families. Our mission is to assist members in the effective implementation and improvement of home visiting programs including, but not limited to, the Maternal, Infant, and Early Childhood Home Visiting (MIECHV) program. Through peer-to-peer support, ASTHVI facilitates national exchange of innovative practices and problem solving to maximize the benefit of home visiting initiatives to children, families, and society as a whole. ASTHVI and its members pursue opportunities to share information about the impact of home visiting programs in our states and local communities with policymakers, the press, and the public. ASTHVI membership is open to state, territorial, and Tribal officials administering federal or state-funded home visiting programs, and to nonprofit organizations that have been designated to administer grants on behalf of a state, territory, or Tribe(s).

For additional information about ASTHVI membership, please contact staff@asthvi.org.

Acknowledgements

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The Power of Home Visiting: Research for Results

All parents want the very best for their children, yet many struggle to get them off to a strong start.

A child's brain develops faster from birth to age five than at any other period in life, building the springboard for their future learning. Scientists once thought children were blank slates until their fifth birthday. We now know the early years lay a critical foundation for later health, education, and lifetime success. All parents want the very best for their children, yet many struggle to get them off to a strong start. It is a challenge to care for an infant in a household that has no access to a car, or where the closest medical care or job opportunity is two or three bus rides (or a two or three hour drive) away. Parents fighting their own depression or other health problems, or worrying about homelessness or putting food on the table, may also struggle with responding to a crying baby, a whining toddler, or a demanding preschooler.

* In this white paper, the term "parent" refers to mothers, fathers, grandparents, aunts and uncles, and others who are the primary caregivers for young children.

These real-life challenges are the focus of voluntary home visiting programs that help expectant mothers and parents* nurture development and navigate raising young children. Trained home visitors work with families in the home to help parents recognize and promote healthy growth and development. They develop trusted

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relationships with the families they work with, reinforcing positive parenting skills and connecting them to critical community resources such as child care, medical care, housing, and job training. In this way, home visiting can help ensure that parents, babies, and young children get what they need during this critical time, launching a trajectory to break the multi-generational cycle of poverty. This white paper summarizes a sample of recent research findings illustrating the power of home visiting in generating these results.

Although evidence-based home visiting programs have been operating — and producing results — in communities in the U.S. for decades, in 2010, the passage of the Maternal, Infant, and Early Childhood Home Visiting (MIECHV) legislation provided the first federal funding to build a comprehensive state and Tribal-based system of voluntary home visiting services that includes data collection and evaluation, research, and continuous quality improvement. This white paper highlights recent research findings from peer-reviewed studies that can help home visiting practitioners, government policymakers, and others realize the full potential of the MIECHV program.



For practitioners, the findings offer valuable lessons about which home visiting models and approaches are effective or especially promising, and could potentially be replicated successfully in other settings.



For policymakers, the research findings are a testament to the legislative design of MIECHV and its implementation by federal, state, and Tribal partners who are building the body of evidence about effective home visiting models and approaches. This experience can also offer lessons learned that may be valuable to other fields as principles of evidence-based policy are applied in legislation beyond home visiting.

It is our hope that other audiences will find this white paper informative as well. Researchers looking to examine programs and contribute to social policy will find questions raised that beg further exploration of what works, for whom, and under what circumstances. Advocates seeking to understand and explain evidence-based programs will find varied examples of successful interventions across a wide range of outcomes. Although parents and families are not our primary audience, we write our report in language that is accessible to a broad audience.

The MIECHV legislation was one of the first with a “tiered evidence” design, which is now in use across a range of federal social programs. Home visiting models that meet the evidence criteria set forth by the U.S. Department of Health and Human Services are considered “evidence-based practices,” while models that have not yet met that standard can be designated “promising practices.” The MIECHV program design

and its implementation by the Health Resources and Services Administration (HRSA) incentivize state and local decision makers, front-line practitioners, and researchers to collaborate, to:

- Identify home visiting models with the strongest potential for positive impact, based on rigorous research. These models are eligible to receive the largest share of MIECHV funding.
- Support local communities to select evidence-based approaches that best meet their local needs.
- Identify and evaluate promising interventions in order to increase the number of evidence-based models that address the needs of different communities and populations.
- Build a culture of continuous improvement, proactively supporting innovation to better meet the needs of children and families.

Under MIECHV, states and Tribes receive grants that, in turn, are used by local community-based organizations to implement one or more of the home visiting models that have demonstrated effectiveness by improving outcomes in the following benchmark areas specified in law:

- Improving maternal and newborn health
- Reducing child injuries and maltreatment
- Enhancing school readiness and achievement
- Reducing crime or domestic violence
- Improving family economic self-sufficiency
- Enhancing coordination and referrals for relevant support services that help the family achieve positive outcomes.

Evidence-based home visiting models take different approaches to achieving positive outcomes on the key benchmarks outlined above, which enables states and Tribes to choose those that best meet the needs of particular communities. While some models focus on the prenatal and infancy period, others support families with preschool-age children, or work across the first five years of a child's life. They may address health outcomes, education outcomes, or child safety and welfare. Extensive data collection and evaluation create accountability and provide feedback needed to continuously make the services offered to children and families even more effective. In 2016, the last year for which complete data has been released, 98 percent of state and territorial awardees reported improvement in at least four of the six benchmarks for families participating in MIECHV-funded home visiting.

RESEARCH HIGHLIGHTED IN THIS REPORT

This white paper highlights findings from 33 studies examining outcomes in the six MIECHV benchmark areas that offer interesting insights or raise useful issues for further research or consideration. They describe evaluation results, published this decade, from a broad range of evidence-based models, approaches, and geography. For

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each study, the paper provides context to explain the significance of the issue examined, as well as brief summaries of selected findings, the study citation, and some basic information about the research methodology used. The paper also includes a summary chart to help readers identify the evaluations that are most relevant to their interests. With few exceptions, the evaluations included in this paper have been published in peer-reviewed journals, but they are not rated based on their methodological rigor. Intentionally, the summaries predominantly focus on studies that found positive outcomes and impacts, as well as some with mixed results. Positive findings help reaffirm what we are doing well, that could be replicated elsewhere, and paint a picture of the successful practices being employed by programs throughout the country.

CONTINUING TO IMPROVE OUTCOMES FOR CHILDREN AND FAMILIES

There is always tension between implementing an evidence-based model with fidelity to the documented model and adjusting to meet family needs. “Evidence-based” is not the same as “static.” Innovation and continuous quality improvement are at the heart of MIECHV. Results from evaluations deploying a variety of research methods, from long-term randomized control trials to rapid-cycle research, illuminate where variations can be offered to help enhance home visiting’s effectiveness. This white paper examines research on a variety of approaches and innovations, all within the framework of MIECHV evidence-based home visiting models.

In order to promote a culture of ongoing program self-evaluation and continuous quality improvement, HRSA has introduced to home visiting research innovations from other fields. One is the application of rapid-cycle research, which originated with private-sector business and came to home visiting via health care. Using the Institute for Healthcare Improvement’s model to accelerate the pace of change and test changes in real-life settings, interested MIECHV grantees were invited to join Collaborative Improvement and Innovation Networks (CoIINs) that focus on a particular challenge. Together, they tested hypotheses for driving change, collected real-time data documenting results, shared information and strategies, and made ongoing course corrections as needed. We are pleased to include in this white paper selected results from the first two evaluations of CoIIN outcomes to be published in peer-reviewed journals.

Home visiting is producing meaningful results for children and families, using data to help improve and drive continuous improvement. Examples of areas for continued progress, as identified through the experience of home visiting practitioners and confirmed by research, include more effective supports for families facing mental health issues, substance use, and intimate partner violence. We also look to research to inform our work of building a more skilled and experienced work force that is able to engage with families suffering from the impacts of trauma.

Over time, research is improving. Studies that aggregate substantial amounts of data at a high level may omit nuances and helpful information regarding which practices are working best for which families, and in which communities. Taking programs

Positive findings help reaffirm what we are doing well, that could be replicated elsewhere, and paint a picture of the successful practices being employed by programs throughout the country.

off the shelf — even evidence-based programs that have worked elsewhere — and implementing them in a different environment does not always generate the same results. HRSA has pushed to demand precision in research analysis; all individuals in a study may be impacted by home visiting, but impacted differently. Families and communities are complex; to be most useful, research must be equally nuanced. When data is aggregated across models or communities, our most-needed, most valuable findings can be lost. Home visiting demands research methodologies that can capture data about what works for whom, and how best to target our interventions.

MEETING THE NEEDS OF FAMILIES WITH EVIDENCE-BASED PROGRAMS

Home visiting is a vital strategy for improving children’s health, education, and well-being. Big tasks, and big challenges, remain. Currently, only approximately three percent of the children and families who are eligible for, and could benefit from, home visiting have the opportunity to participate. Many communities that are fortunate to have home visiting at all offer only a single approach, which may not be designed to meet all the varied and diverse needs of the children and families who need help. And home visiting does not work in a vacuum to help families tackle serious obstacles — like lack of education, employment, health care, and stable homes. It is a community-based intervention that helps families build the knowledge, skills, and confidence to launch a trajectory of success. Home visiting is most successful when backed up by robust integrated systems that work. Addressing these challenges will take thought and effort by policymakers at the local, state, Tribal, and federal levels.

The expanding body of home visiting evidence opens up important new questions for future research:

- Do positive short-term impacts in parent and child health lead to **longer-term impact** in health, school achievement, and financial self-sufficiency?
- Under what conditions does a model that works in one community **generate the same outcomes in a similar community** in a different state or Tribe?
- Do positive impacts on health and well-being result in a **measurable return on investment** in other government programs?
- How do we **increase engagement** between home visitors and researchers to help tease out vital on-the-ground knowledge and shape strong hypotheses to test?
- How do we best take advantage of growing access to administrative data, so we can **reduce the cost of conducting studies** to answer questions from both practitioners and policymakers?

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- **And, when much of the research published in peer-reviewed journals is inaccessible without a subscription, how do we make sure the programs that need it have **timely access to new findings**, presented in language and formats that make them accessible and usable?**

We ask these questions because the members of the Association of State and Tribal Home Visiting Initiatives (ASTHVI) are the state and Tribal administrators of MIECHV grants and other funds dedicated to voluntary home visiting. In this role, ASTHVI members are simultaneously managers of the premiere federal evidence-based policy program, consumers of data and research, and spokespeople for MIECHV. The task that has been given to home visiting is immense: we ask home visitors to develop relationships that support change in some of the most intimate aspects of family life, in order to create better life-long opportunities for children. We are witnesses to the impact of this important strategy to support parents striving to do better for their children. It is imperative that we understand more fully our accomplishments, our challenges, our opportunities, and most importantly, how to build ever-more effective approaches to scaffold the success of young children and their families.

	<p>1 Maternal And Newborn Health</p>
	<p>2 Child Injuries And Maltreatment</p>
	<p>3 School Readiness And Achievement (Includes Parent-Child Interaction)</p>
	<p>4 Crime Or Domestic Violence</p>
	<p>5 Family Economic Self-Sufficiency</p>
	<p>6 Coordination And Referrals</p>

Benchmarks

The Maternal, Infant and Early Childhood Home Visiting legislation establishes six benchmark subject areas for eligible home visiting programs in their work with families. States, Tribes, and territories must select at least four of the six benchmarks on which to focus, and demonstrate that their MIECHV programs contribute to measurable improvements in those areas for participants. Grantees track and report on family progress on the measures associated with the selected benchmarks.

Benchmarks

- 1 Maternal and newborn health
- 3 School readiness and achievement
- 5 Family economic self-sufficiency
- 2 Child injuries and maltreatment
- 4 Crime or domestic violence
- 6 Coordination and referrals

STUDY TITLE	LEAD AUTHOR	PROGRAM MODEL(S)	GEOGRAPHIC REGION	TOPIC AREAS	PG #
<ul style="list-style-type: none"> ● <i>A Clinical Trial of In-Home CBT for Depressed Mothers in Home Visitation</i> 	Ammerman	Healthy Families America Nurse-Family Partnership	KY, OH	<ul style="list-style-type: none"> • Maternal depression 	18
<ul style="list-style-type: none"> ●● <i>National Home Visiting Collaborative Improves Developmental Risk Detection and Service Linkage</i> 	Arbour	Healthy Families America Nurse-Family Partnership Parents as Teachers	AK, FL, GA, IN, MI, NJ, OH, PA, White Earth Nation	<ul style="list-style-type: none"> • Developmental screening • Developmental referrals 	20
<ul style="list-style-type: none"> ●●● <i>Paraprofessional-delivered Home-visiting Intervention for American Indian Teen Mothers and Children: 3-year Outcomes from a Randomized Controlled Trial</i> 	Barlow	Family Spirit	Southwestern U.S. Tribal nations	<ul style="list-style-type: none"> • Child behavior • Maternal depression • Parent-child interaction • Substance use 	22
<ul style="list-style-type: none"> ●●● <i>SafeCare Colorado Program Evaluation Report 2014-2017</i> 	Beachy-Quick	SafeCare	CO	<ul style="list-style-type: none"> • Child health • Child injury and maltreatment • Home safety • Parent-child interaction 	24
<ul style="list-style-type: none"> ●● <i>Promoting Supportive Parenting in New Mothers with Substance-use Problems: A Pilot Randomized Trial of Residential Treatment-based Parenting</i> 	Berlin	ABC	NC	<ul style="list-style-type: none"> • Parent-child interaction • Substance use 	28
<ul style="list-style-type: none"> ● <i>Healthy Beginnings Home Visitation Program Evaluation: Year 4 Report</i> 	Bjerke	Healthy Families America Nurse-Family Partnership	FL	<ul style="list-style-type: none"> • Birth-related outcomes • Father involvement 	30
<ul style="list-style-type: none"> ● <i>School Performance in Elementary, Middle, and High School: A Comparison of Children Based on HIPPIY Participation During the Preschool Years</i> 	Brown	HIPPY	TX	<ul style="list-style-type: none"> • Early language and literacy • Parent engagement 	32
<ul style="list-style-type: none"> ●● <i>Is a Structured, Manualized, Evidence-Based Treatment Protocol Culturally Competent and Equivalently Effective Among American Indian Parents in Child Welfare?</i> 	Chaffin	SafeCare	OK (Tribal nations)	<ul style="list-style-type: none"> • Child maltreatment • Home safety • Parent-child interaction 	34
<ul style="list-style-type: none"> ● <i>Preventing Child Maltreatment: Examination of an Established Statewide Home-Visiting Program</i> 	Chaiyachati	Parents as Teachers	CT	<ul style="list-style-type: none"> • Child maltreatment 	36

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● <i>Evaluation of a Wraparound Process for Children Exposed to Family Violence</i>	Crusto	Child FIRST	CT	<ul style="list-style-type: none"> • ACEs • Child maltreatment • Parent-child interaction 	38
● ● <i>Randomized Controlled Trial of Universal Postnatal Nurse Home Visiting: Impact on Emergency Care</i>	Dodge	Family Connects	NC	<ul style="list-style-type: none"> • Child injury • Emergency medical care • Referrals for addl. care 	40
● <i>A Prospective Cohort Study of Influences on Externalizing Behaviors Across Childhood: Results From a Nurse Home Visiting Randomized Controlled Trial</i>	Enoch	Nurse-Family Partnership	TN	<ul style="list-style-type: none"> • Child externalizing behaviors • Maternal health • Substance use • Tobacco use 	44
● ● <i>Impact of a Kentucky Maternal, Infant, and Early Childhood Home-Visitation Program on Parental Risk Factors</i>	Ferguson	HANDS	KY	<ul style="list-style-type: none"> • Child development and well-being • Fathers • Parent-child interaction • Parental mental health and lifestyle behaviors 	46
● <i>Evaluation of Early Childhood Home Visiting to Prevent Medically Attended Unintentional Injury</i>	Folger	Healthy Families America	OH	<ul style="list-style-type: none"> • Child injury 	48
● ● <i>The Effect of Early Head Start on Child Welfare System Involvement: A First Look at Longitudinal Child Maltreatment Outcomes</i>	Green	Early Head Start	AK, CA, KS, MI, VT, WA	<ul style="list-style-type: none"> • Child maltreatment 	50
● <i>A Randomized Trial of Weight Change in a National Home Visiting Program</i>	Haire-Joshu	Parents As Teachers	MO	<ul style="list-style-type: none"> • Maternal health • Obesity 	52
● ● <i>Does Home Visiting Benefit Only First-time Mothers? Evidence from Healthy Families Virginia</i>	Huntington	Healthy Families America	VA	<ul style="list-style-type: none"> • Child health • Home environment • Maternal health 	54
● ● ● <i>Improving Adolescent Parenting: Results from a Randomized Controlled Trial of a Home Visiting Program for Young Families</i>	Jacobs	Healthy Families America	MA	<ul style="list-style-type: none"> • Educational attainment • Intimate partner violence • Maternal health 	56

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STUDY TITLE	LEAD AUTHOR	PROGRAM MODEL(S)	GEOGRAPHIC REGION	TOPIC AREAS	PG #
● <i>The Home Instruction for Parents of Preschool Youngsters Program's Relationship with Mother and School Outcomes</i>	Johnson	HIPPY	TX	<ul style="list-style-type: none"> Behavioral concerns Early language and literacy Parent-child interaction 	58
● ● ● <i>Long-Term Impact of a Cell Phone-Enhanced Parenting Intervention</i>	Lefever	SafeCare	MA, NJ	<ul style="list-style-type: none"> Child behavioral concerns Child maltreatment Maternal depression Parent-child interaction 	60
● ● ● <i>A Randomized Control Trial of Child FIRST: A Comprehensive Home-based Intervention Translating Research Into Early Childhood Practice</i>	Lowell	Child FIRST	CT	<ul style="list-style-type: none"> Child behavior Child development Child maltreatment Parent-child interaction 	62
● ● ● <i>Tribal Maternal, Infant, and Early Childhood Home Visiting: A Report to Congress</i>	Lyon	Family Spirit	National (Tribal)	<ul style="list-style-type: none"> Birth-related outcomes Child injury Child maltreatment Family economics self-sufficiency School readiness and achievement 	66
● <i>A Mixed Methods Evaluation of Early Childhood Abuse Prevention within Evidence-based Home Visiting Programs</i>	Matone	Early Head Start Nurse-Family Partnership Parents as Teachers	PA	<ul style="list-style-type: none"> Child injury Child maltreatment 	68
● ● <i>Projected Outcomes of Nurse-Family Partnership Home Visitation During 1996-2013, USA</i>	Miller	Nurse-Family Partnership	National	<ul style="list-style-type: none"> Child injury Child maltreatment Crime Economic self-sufficiency Maternal / child health Tobacco use 	70

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STUDY TITLE	LEAD AUTHOR	PROGRAM MODEL(S)	GEOGRAPHIC REGION	TOPIC AREAS	PG #
● <i>Impact of HIPPY on Home Learning Environments of Latino Families</i>	Nievar	HIPPY	TX	<ul style="list-style-type: none"> • Early language and literacy • Home environment • Parent self-efficacy • School readiness and achievement 	72
● ● <i>A Home Visiting Parenting Program and Child Obesity: A Randomized Trial</i>	Ordway	Minding the Baby	CT	<ul style="list-style-type: none"> • Child obesity • Parent-child interaction 	74
● <i>Involvement in Early Head Start Home Visiting Services: Demographic Predictors and Relations to Child Parent and Outcomes</i>	Raikes	Early Head Start	National	<ul style="list-style-type: none"> • Early language and literacy • Parent-child interaction 	76
● ● ● <i>Minding the Baby: Enhancing Reflectiveness to Improve Early Health and Relationship Outcomes in an Interdisciplinary Home-Visiting Program</i>	Sadler	Minding the Baby	CT	<ul style="list-style-type: none"> • Child health • Child maltreatment • Parent-child interaction 	78
● <i>Habit Formation Intervention to Prevent Obesity in Low-income Preschoolers and their Mothers</i>	Salvy	Healthy Families America HIPPY	AL, CA	<ul style="list-style-type: none"> • Maternal and child health • Obesity 	80
● ● <i>Addressing Maternal Depression in Home Visiting: Findings from the Home Visiting Collaborative Improvement and Innovation Network</i>	Tandon	Healthy Families America Nurse-Family Partnership Parents as Teachers	National	<ul style="list-style-type: none"> • Depression screening and referrals • Maternal health 	84
● <i>Status of Breastfeeding and Child Immunization Outcomes in Clients of the Nurse-Family Partnership</i>	Thorland	Nurse-Family Partnership	National	<ul style="list-style-type: none"> • Breastfeeding • Immunization 	86
● <i>Status of Birth Outcomes in Participants of the Nurse-Family Partnership</i>	Thorland	Nurse-Family Partnership	National	<ul style="list-style-type: none"> • Maternal health • Preterm birth 	88
● ● <i>Kentucky Health Access Nurturing Development Services Home Visiting Program Improves Maternal and Child Health</i>	Williams	HANDS	KY	<ul style="list-style-type: none"> • Child maltreatment • Maternal health • Preterm birth 	90



Rosa and Angelica

Model: Nurse-Family Partnership

In 2017, Rosa, a 16-year-old mom from Lancaster, Pennsylvania, testified before the U.S. House Ways and Means Subcommittee about her experience in the Nurse-Family Partnership program and how her nurse home visitor, Beth Russell, helped her to become a confident mother. Rosa was joined at the hearing by her 20-month-old daughter Angelica.

Rosa was 14 years old when she found out she was pregnant, and she was unsure how she would take care of a baby and continue high school. Her nurse home visitor, Beth, was there for her to help her have a healthy pregnancy. When Rosa experienced difficult pain during her pregnancy, Beth helped her learn what was going on with her body, when to get medical care, and how to take care of herself and stay healthy.

As a teen mother, Rosa experienced a lot of stress and disrespect from her peers. Angelica's father, who Rosa thought would be with her to raise their baby girl, was not around and no longer a part of their life. Sometimes, Rosa shared, she just needed to vent, and nurse Beth was always there for her when Rosa was unsure of herself. Beth gave Rosa confidence that she could be a strong mother for her baby, and helped her to be the mom she wanted to be for her daughter.

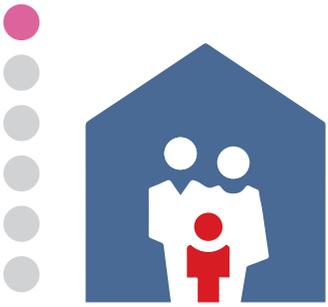
After her baby was born, Rosa had so much to learn about taking care of her newborn. It was difficult to keep up with her high school classes, and she started to fall behind in her school work. Nurse Beth did not let her

lose sight of her goals for school. Together, Beth helped Rosa develop a routine for her daughter and find time to study. Rosa is planning on going to vocational-technical school next year, and Beth has helped her at every step to achieve her goal.

Rosa is now in her junior year of high school. Her daughter Angelica is almost two years old, and is a healthy and bright toddler who loves reading and pointing out things around her.

Rosa told the Committee, "...I know that I am doing the right things for her. Angelica makes me happy every day, and I am so proud to see how much she has learned and how much she has grown."

Continuing, she said, "I don't know what it must be like to be a teen mom without this support, and I know there are so many more new moms just like me who are in need of it. Having a nurse like Beth, who I could trust with questions about my health when I was pregnant, breastfeeding when I was a new mom, child development as she grows, and life goals — helped me to be a successful parent."



Using In-home Therapy to Reduce Postpartum Depression

One in five children in the United States live in households with majorly or severely depressed parents. Mothers suffering from depression are more likely to have negative interactions with their children and are less likely to implement practices that help prevent harm to their children, such as using car seats and smoke alarms. This study examined the effectiveness of cognitive behavioral therapy (CBT) sessions provided alongside standard home visiting sessions in reducing depression in new mothers. The study showed reduced depression in the group receiving only home visiting services, as well as the group receiving both home visiting services and cognitive behavioral therapy. Additionally, the group receiving cognitive behavior therapy showed lower rates of depressive severity and an increase in overall functioning. These results illustrate that the studied home visiting program, particularly when paired with mental health services, can help reduce the presence and severity of depression in new mothers.

Study: A Clinical Trial of In-Home CBT for Depressed Mothers in Home Visitation

FAMILIES IN THE STUDY WERE FROM URBAN, SUBURBAN, AND RURAL AREAS OF SOUTHWESTERN OHIO AND NORTHERN KENTUCKY:



Average age:
21.9 years old



87 percent of mothers were unmarried



76 percent of them earned less than \$20,000 per year



In addition to depression, about **three-fourths** of the mothers had other psychiatric disorders

This study investigated the effects of in-home cognitive behavioral therapy paired with standard home visiting sessions to assist new mothers with depression. Cognitive behavioral therapy is a widely-recognized form of psychotherapy used to treat depression and anxiety.

The 77 mothers in the study, who had all been diagnosed with clinical depression, were receiving home visiting services through the Every Child Succeeds program using either the Nurse-Family Partnership or Healthy Families America curriculum. They were from urban, suburban, and rural areas of southwestern Ohio and northern Kentucky. The average age was 22 years old. Of the mothers in the study, 87% were unmarried, and 76% of them made less than \$20,000 per year. In addition to depression, about three-fourths of the mothers had other psychiatric disorders.

Approximately half of the mothers in the study were randomly assigned to receive 15 weekly in-home cognitive behavior therapy sessions conducted by a trained therapist, which occurred alongside standard Every Child Succeeds home visiting sessions. The other half received the standard home visiting sessions, but no cognitive behavior therapy.

Researchers found that the mothers receiving cognitive behavior therapy were less likely to receive a diagnosis of clinical depression during follow-up visits, compared to mothers who did not receive these services. In fact, 71% of the mothers who received therapy no longer met the criteria for Major Depressive Disorder, compared to 30% in the group not receiving therapy. All mothers in the study, both those receiving and not receiving cognitive behavior therapy, were

Researchers found that the mothers receiving cognitive behavior therapy were less likely to receive a diagnosis of clinical depression during follow-up visits compared to mothers who did not receive these services.

**MOTHERS IN THE PROGRAM
GROUP DEMONSTRATED:**



Reduced depression and improved overall functioning



Lower levels of Major Depressive Disorder



Lower levels and less severity of depression

Using In-home Therapy to Reduce Postpartum Depression

shown to have significant reductions in depression and improved overall functioning when comparing pre-treatment to post-treatment outcomes. These results were maintained from post-treatment to a 3-month follow-up assessment for both groups; longer-term impacts will require additional research. This research illustrates the positive impacts that the studied home visiting program, particularly when paired with a targeted mental health intervention, can have on new parents struggling with depression.

STUDY CITATION

Ammerman R.T., Putnam, F.W., Mekibib, A., Stevens, J., Teeters, A.R., & Van Ginkel, J.B. (2013). A Clinical Trial of In-Home CBT for Depressed Mothers in Home Visitation. Behavior Therapy, 44(3), 359-372. doi:10.1016/j.beth.2013.01.002.

STUDY METHODOLOGY

Randomized clinical trial (RCT)

INTERVENTION

In-Home Cognitive Behavioral Therapy (IH-CBT) conducted by a trained therapist alongside standard home visiting sessions (SHV)

SAMPLE SIZE

*Baseline: 93 mothers (47 IH-CBT; 46 SHV)
Analytic: Same sample – analysis used intent-to-treat approach and techniques that accounted for missing data and that used all data in estimating effects
Actual samples of families continuing in the study were:
Post-treatment follow-up: 88 (43 IH-CBT; 45 SHV)
3-month follow-up: 77 (39 IH-CBT; 38 SHV)*

DATA SOURCE

Clinical psychiatric interviews, self-report measures of depression, clinician ratings of depression severity, diagnosis of major depressive disorder, Global Assessment of Functioning

PERIOD OF DATA COLLECTION FOLLOWING TREATMENT

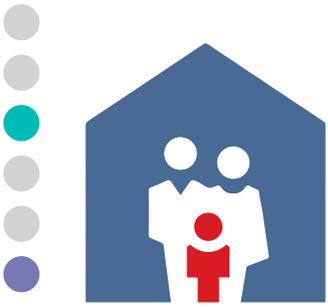
Two time points: Post-treatment, 3-month follow-up

STATISTICALLY SIGNIFICANT RESULTS

There was a difference between in-home cognitive behavioral therapy and standard home visiting mothers at post-treatment and follow-up. For both groups, there were reductions in depression measures and improved overall functioning from pre-treatment to post-treatment and pre-treatment to follow-up, but no changes from post-treatment to follow-up.

Mothers in the in-home cognitive behavioral therapy group were less likely to receive a diagnosis of Major Depressive Disorder at post-treatment and follow-up compared with mothers in the standard home visiting group.

As compared to the standard home visiting group, mothers also receiving in-home cognitive behavioral therapy reported lower levels of depression, received lower clinician ratings of depressive severity, and demonstrated increased overall functioning over time.



Mitigating Risks of Developmental Delays Through Home Visiting

One in four children under the age of five in the U.S. has developmental risks or delays. Research shows early detection is key to lessening the impact of these developmental issues later in life. According to the American Academy of Pediatrics, early detection is best accomplished through ongoing and periodic surveillance and screening in partnership with parents. Despite this, fewer than half of children with delays are identified before starting school, and only 10 percent of those identified receive services. The Maternal, Infant and Early Childhood Home Visiting (MIECHV) program has adapted from private industry and health care a rapid-cycle approach to real-time, data-driven experimentation and adaptation to accelerate quality improvement and strengthen home visiting outcomes. This approach is known as the Home Visiting Collaborative Improvement and Innovation Network (HV CoIIN). It is being used to tackle particular challenges in home visiting, including improving the early identification of developmental issues and linking children to support services. This study, one of the first peer-reviewed publications based on HV CoIIN research, showed home visiting programs participating in the HV CoIIN quality improvement process were more likely to identify children with developmental or behavioral concerns, and connect more families to appropriate services.

Study: National Home Visiting Collaborative Improves Developmental Risk Detection and Service Linkage

HEALTHY FAMILIES AMERICA
NURSE-FAMILY PARTNERSHIP
PARENTS AS TEACHERS

Home visiting offers a promising approach to improving early detection of developmental risk and linkage to services. Yet, developmental surveillance is not common practice in all home visiting programs, and rates of screening and linkage to services vary. The U.S. Maternal and Child Health Bureau formed the Home Visiting Collaborative Improvement and Innovation Network (HV CoIIN) to undertake rapid-cycle continuous quality improvement efforts on a number of specific topics. This HV CoIIN focuses on early detection of developmental risk and increasing links to community services for children in home visiting programs. The 13 participating home visiting programs in the early detection CoIIN spanned eight states and one Tribe, serving a total of 1,400 economically disadvantaged families.

The home visiting programs participating in this CoIIN tested strategies for improving early detection of developmental risks and increasing linkages to supportive services. Examples of improvements adopted by the participating programs throughout the study included:

Continuous quality improvement is a promising approach to raise the standard of practice for home visiting, resulting in improved public health outcomes.

- Incorporating development surveillance into every home visit.
- Strengthening home visitors' ability to explain and normalize the screening process for families, use the screening and assessment tool, discuss screening results with families, and share with families activities that promote healthy development.
- Utilizing trackers, automated reminders, and enhanced materials to make it easier for families to support their children's developmental needs.
- Establishing reliable procedures for linking with community supports.

AS A RESULT OF THE COIIN:



83 percent of children with an identified developmental concern received support



88 percent of children were screened every six months

Mitigating Risks of Developmental Delays Through Home Visiting

Home visiting programs in the CoIIN increased the percentage of children with an identified developmental concern receiving support from 67% at baseline to 83%. Parents asked about developmental concerns during visits increased from 74% at baseline to 96%, and children screened every six months increased from 70% at baseline to 88%. These results exceeded the published benchmarks for early detection in pediatric practices and are comparable to other successful models that coordinate services for children with developmental concerns.

Researchers concluded that home visiting can play an important role in improving early detection of developmental risks in children and linking children with developmental delays to support services. Additionally, they determined that continuous quality improvement is a promising approach to raise the standard of practice for home visiting, resulting in improved public health outcomes.

Understanding how home visiting programs can best adapt promising interventions within the evidence-based practice established for their model (i.e., maintain model fidelity) is a key area for future investigation. Additional future research may also demonstrate the long-lasting impact of continuous quality improvement efforts, including CoIINs, on home visiting programs' ability to address other challenging or emerging health issues.

STUDY CITATION

Arbour, M., Mackrain, M., Cano, C., Atwood, S., & Dworkin, P. (2017). National Home Visiting Collaborative Improves Developmental Risk Detection and Service Linkage. American Academy of Pediatrics, 140(3). doi: 10.1542/peds.2017-2150.

STUDY METHODOLOGY

Single group pre/post study design. Data analyzed using established methods for identifying "special cause variation," or variation that is unlikely due to chance alone. These analysis methods are analogous to statistical significance in traditional enumerative statistics.

INTERVENTION

Enhancements to improve early identification of and response to developmental risks

SAMPLE SIZE

1,400 families were served by the 13 participating home visiting programs

DATA SOURCE

Data reported by participating home visiting programs

PERIOD OF DATA COLLECTION FOLLOWING TREATMENT

The collaborative lasted 29 months.

STATISTICALLY SIGNIFICANT RESULTS

The percent of children with an identified developmental concern who received support increased from 67% at baseline to 83%.

Parents asked about developmental concerns increased from 74% at baseline to 96%, and children screened every six months increased from 70% at baseline to 88%.



Home Visiting in Native American Communities Supports Teen Mothers

All families served by home visiting programs face significant challenges. However, Native American women are less likely to receive early and ongoing prenatal care, and Native American adolescents have the highest rates of teen pregnancy, substance use, suicide, and dropping out of school of any racial or ethnic group in the country. This study examined the impact of a program designed specifically for and with native populations to serve young mothers. It found young families receiving voluntary home visiting services demonstrated more effective parenting, reduced maternal risks, and improved child developmental outcomes. This provides both evidence and hope that carefully designed home visiting programs can make a difference in some of the most disadvantaged and under-resourced communities in America.

Study: Paraprofessional-delivered Home-visiting Intervention for American Indian Teen Mothers and Children: 3-year Outcomes from a Randomized Controlled Trial

NATIVE AMERICAN TEENS AGED 12–19 FROM FOUR SOUTHWESTERN U.S. RURAL RESERVATION COMMUNITIES PARTICIPATED IN THIS RANDOMIZED CONTROL TRIAL. OF THE 322 YOUNG WOMEN ENROLLED:



18 years old was the average age



One-third had a high level of depressive symptoms

Native American teens aged 12–19 years from four southwestern U.S. rural reservation communities participated in this randomized control trial. Of the 322 young women enrolled, the average age was 18 years, and most were first-time mothers, unmarried, and with insecure housing. They had a high rate of substance use, and one-third had a high level of depressive symptoms. One group was randomly assigned services from the Family Spirit home visiting program, in addition to optimized standard care. The control group received only optimized standard care, which consisted of transportation to prenatal and well-baby clinic visits, pamphlets about child care and community resources, and referrals to local services.

Family Spirit is designed for pregnant women and families with children younger than age three years in Native American communities. It aims to promote mothers' parenting skills, while assisting them in developing coping and problem-solving skills to overcome individual and environmental stressors.

The intervention for this evaluation included 43 structured lessons following a format in keeping with the culture of Native American children and families. Positive parenting lessons focused on reducing behaviors associated with early childhood behavior problems. Additional content addressed maternal behavior and mental health challenges that can impede positive parenting. In addition to substance use, externalizing behaviors, such as acting out or being destructive, and internalizing behaviors, such as experiencing depression or anxiety, were addressed. Each home visit was designed to last no more than one hour, and visits decreased in frequency over time. Home visits occurred weekly through the third trimester of pregnancy, biweekly until the baby was four months old, monthly until the first birthday, and bimonthly through three years of age.

MOTHERS RECEIVING THE FAMILY SPIRIT INTERVENTION HAD MORE EFFECTIVE PARENTING, FEWER EMOTIONAL AND BEHAVIORAL PROBLEMS, AND LOWER USE OF MARIJUANA AND ILLEGAL DRUGS.



33 percent lower odds of any illegal drug use in the past 30 days by mothers in Family Spirit, compared to the control group



Children experienced less depression or anxiety

Home Visiting in Native American Communities Supports Teen Mothers

Children in the Family Spirit program scored higher in three developmental categories that predict better behavior outcomes in later childhood and adolescence. They were roughly one-third less likely than children in the control group to indicate clinical risk for emotional or behavioral problems in childhood or adolescence, based on a standardized assessment.

Based on assessments given at 2 months to 36 months postpartum, mothers receiving the Family Spirit intervention had significantly more effective parenting, fewer emotional and behavioral problems, and lower use of marijuana and illegal drugs. As captured during the assessment period, the odds of marijuana use in the last 30 days by mothers in the Family Spirit program was 35% lower than in the control group. Similarly, the odds of any illegal drug use in the past 30 days by mothers in Family Spirit was 33% lower than in the control group.

The study's limitations included the extent to which it could be generalized to other communities, and potential bias inherent in self-reported results. However, it provided promising evidence that home visiting can generate results in some of our most challenged communities, including those with shortages of nurses and mental health specialists, where home visitors are necessarily community-based paraprofessionals.

STUDY CITATION

Barlow, A., Mullany, B., Neault, N., Goklish, N., Billy, T., Hastings, R., ... & Carter, A. (2015). Paraprofessional-delivered home-visiting intervention for American Indian teen mothers and children: 3-year outcomes from a randomized controlled trial. American Journal of Psychiatry, 172(2), 154-162.

STUDY METHODOLOGY

Randomized control trial (RCT)

INTERVENTION

Participation in the Family Spirit home visiting program

SAMPLE SIZE

322: 159 assigned to intervention group and 163 assigned to control group

DATA SOURCE

*Self-report (standardized assessments)
Parent-report (standardized assessments)
Observational measures*

PERIOD OF DATA COLLECTION FOLLOWING TREATMENT

Data was collected at nine time points over the course of the intervention.

STATISTICALLY SIGNIFICANT RESULTS

From pregnancy to 36 months postpartum, mothers in the intervention group had greater parenting knowledge and parental locus of control, fewer depressive symptoms and externalizing problems, and lower past month use of marijuana and illegal drugs.

Children in the intervention group had fewer externalizing, internalizing, and dysregulation problems, such as acting out and being destructive, or experiencing depression or anxiety.



Supporting Safer and More Stable Environments for Young Children in Colorado

Child abuse and neglect exacts a significant toll on our nation's children and economy, with estimates of over \$80 billion in annual costs for a range of issues. This includes costs of investigations, foster care, medical and mental health treatment, and later spending for special education, juvenile and adult justice, chronic health problems, and other costs. Preventing abuse and neglect, and promoting safe and stable families are longstanding goals aimed at assuring children's well-being. This evaluation of SafeCare Colorado examined whether participation in a voluntary home visiting program reduced parent and child re-involvement with the child welfare system. The evaluation found that after completing the program, families within the program group were significantly less likely to have a child in an out-of-home placement.

Study: SafeCare Colorado Program Evaluation Report 2014–2017

PARTICIPATING FAMILIES HAD PAST CHILD WELFARE INVOLVEMENT OR A MINIMUM OF THREE RISK FACTORS.

Researchers at Colorado State University examined child welfare outcomes by the SafeCare Colorado program on behalf of the Colorado Department of Human Services. Evaluators tested the hypothesis that successful completion of all three program courses — Home Safety, Child Health, and Parent-Infant Interaction or Parent-Child Interaction — will reduce parent and child re-involvement with child welfare. Outcomes were compared to a group of families who did not complete the SafeCare program.

The evaluation examined outcomes for a total of 123 families who had a recent child welfare assessment in the state's data system and who completed training on all three topic modules. Child welfare re-involvement was defined as subsequent referrals, assessments, and/or out-of-home placements that took place following completion of the program.

Families in the treatment group were less likely to have a child in an out-of-home placement.

Families received home visiting services through SafeCare, which is a research-based parenting program for families with children from birth to five years old. It addresses three key risk factors for child abuse and neglect: the parent-child relationship, home safety, and child health. Families were eligible to participate in SafeCare Colorado if they had at least one child under the age of six years, and either had past child welfare involvement or met a minimum of three risk factors such as teen parenthood, living below the poverty line, or single parenthood. During the study period, referrals were made to SafeCare sites, with the majority coming from child welfare departments (67%), self-referrals (11%), and medical providers (6%). The remaining 16% came from a range of other service providers or sites.



Families in the treatment group were **less likely** to have a child in an out-of-home placement

Supporting Safer and More Stable Environments for Young Children in Colorado

Families enrolled in the program are offered training in three distinct topic areas: Home Safety, Child Health, and Parent-Infant Interaction or Parent-Child Interaction. Each of the SafeCare module trainings is conducted over six 60- to 90-minute sessions that typically occur weekly. All topics use a similar teaching model — an assessment session, followed by four sessions of training, and a final re-assessment session. The program is delivered by parent support providers who receive intensive coaching.

After completing all three modules of the SafeCare program, families in the treatment group were significantly less likely to have a child in an out-of-home placement. In fact, none of children in the study sample experienced an out-of-home placement during the 12 months following completion of the program, compared to 7% of children in the comparison group. The percentage of subsequent out-of-home placements for the SafeCare Colorado group is lower than for the comparison group, and the difference is statistically significant, suggesting the program is helping parents create safer and more stable homes.

STUDY CITATION

Beachy-Quick, K., Lee, C., McConnell, L., Orsi, R., Timpe, Z. & Winokur, M. (2018). SafeCare Colorado Program Evaluation Report 2014-2017. Colorado State University, Social Work Research Center, School of Social Work.

STUDY METHODOLOGY

Quasi-experimental evaluation design that was used to measure SafeCare Colorado child welfare outcomes. Researchers used propensity score matching to create a comparison group of families who did not complete the SafeCare Colorado program to serve as the control group.

INTERVENTION

Home visits providing training in three modules focused on Home Safety, Child Health, and Parent-Infant Interaction or Parent-Child Interaction

SAMPLE SIZE

123

DATA SOURCE

Colorado Department of Human Services TRAILS Data

PERIOD OF DATA COLLECTION FOLLOWING TREATMENT

12 months following completion of program

STATISTICALLY SIGNIFICANT RESULTS

After completing the SafeCare Colorado program, families within the program group were less likely to have a child in an out-of-home placement.



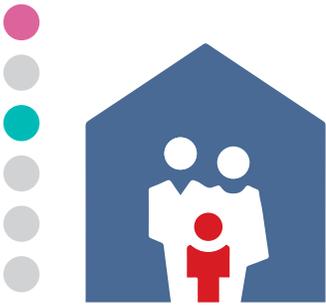
Josh and Alley

“It’s never going to be easy to be a single parent, but this program has sure helped me make the best out of the hand of cards I was dealt, and I’m thankful for them.”

Josh never thought he would be a father, much less a single dad. He grew up in an unstable home environment and had started down a path of using alcohol and other substances. He was accustomed to only having to take care of himself. But three years ago, Josh’s daughter, Alley, was born prematurely with methadone and marijuana in her system. As a result, Alley was moody, had tremors, and couldn’t catch her breath.

Josh and his girlfriend were referred to a Healthy Families America program. At first, Josh was in and out of Alley’s life, and rarely participated in home visits. When his girlfriend was sent to jail, Josh petitioned for custody and re-enrolled with Healthy Families. At that time, Alley was behind in many developmental areas. She rarely spoke, and when she did, she was hard to understand — unless she was cursing. Not knowing better, Josh would laugh at Alley’s behavior; when he had to discipline her, he spanked her and called her names. But Josh was committed to participating in the Healthy Families program.

Josh’s Family Support Specialist helped him learn new ways of parenting and disciplining Alley. She also taught him many other skills and connected him to other community resources. Now, Josh is sober and drug free. He has permanent custody of Alley. He has a job and is saving money to buy a house for himself and his daughter. He no longer spansks or calls Alley names. Instead, he redirects her and teaches her right from wrong. He also taught his family how to do the same. Alley has become a happy, healthy, talkative, and inquisitive little girl. She is on track developmentally — and she no longer curses. Josh reports, “I have a happy, healthy, three-year-old daughter. We go to church together, go to the park together, and read stories together. Now, don’t get me wrong, she’s still a three-year-old, so there are times I get frustrated with her; but, thanks to my Family Support Specialist, I know how to deal with those challenges in the right way. It’s never going to be easy to be a single parent, but this program has sure helped me make the best out of the hand of cards I was dealt, and I’m thankful for them.”



Positive Early Interventions for New Mothers in Substance Use Treatment

An estimated six million children in the United States live with a parent who uses drugs or alcohol. Children raised by parents who are abusing substances are at higher risk of being abused and neglected, having attachment issues, and being placed in foster care. This small study examined the effects of an attachment-based parenting program, Attachment and Biobehavioral Catch-up (ABC), provided to mothers receiving residential treatment for substance-use disorders. While the results were not statistically significant, researchers concluded the program shows promise in teaching mothers the parenting skills they need to promote the optimal development of their young children while they are also undergoing treatment. Longer-term follow up to determine whether impact on maternal behavior persists is also needed.

Study: Promoting Supportive Parenting in New Mothers with Substance-use Problems: A Pilot Randomized Trial of Residential Treatment-based Parenting



75 percent had previously received inpatient treatment for substance-use disorders



Over 50 percent had previously received inpatient mental health treatment



All but one reported experiencing at least one form of childhood abuse or maltreatment themselves

The objective of this study was to test the feasibility and efficacy of an attachment-based parenting program called Attachment and Biobehavioral Catch-up (ABC) when used to supplement residential substance-use treatment for new mothers.

All the mothers in the study were receiving at least two months of apartment-style residential substance-use disorder treatment, and had infants between the ages of 1 month and 20 months old. Of the mothers in the study, 86% were White, had a high school diploma or GED, and were single, divorced, or widowed; 91% of the women were receiving public assistance; three-fourths had previously received inpatient treatment for substance-use disorders; and a little over one half had previously received inpatient mental health treatment. All but one of the mothers reported experiencing at least one form of childhood abuse or maltreatment themselves. Mental health issues were very common among the mothers: two-thirds reported symptoms indicative of clinical depression, and one-third reported symptoms of generalized anxiety disorder.

The pilot study included 21 mothers. Eleven received the ABC parenting program, while 10 received a “light” version: brief, home-based appointments with clinicians. During the light sessions, clinicians assessed mother and child well-being, and provided mothers with a developmentally appropriate book for their child. By contrast, the mothers who received the ABC parenting services

had 10 one-hour sessions conducted in their apartments by a parenting coach. The coaches assessed both mother and child well-being. They provided explicit coaching in nurturance, following the child’s lead, and reducing behavior which may frighten children. Two sessions were also devoted to understanding and “overriding” one’s own

Researchers concluded integrating attachment-based parenting services with substance-abuse treatment could help to break intergenerational cycles of child abuse and neglect.

THIS PRELIMINARY RESEARCH PROVIDES INITIAL SUPPORT FOR PARENTING-FOCUSED HOME VISITS TO NEW MOTHERS IN RESIDENTIAL TREATMENT FOR SUBSTANCE USE DISORDERS.

Positive Early Interventions for New Mothers in Substance Use Treatment

parenting history, non-nurturing instincts, or both. Both groups of mothers received the services of the drug-use treatment facilities, which included daily drug screenings, group and individual counseling, case management, and child care. Parenting services offered by the facilities to both groups of mothers were limited, but included information sessions on topics such as developmental milestones, and referrals to community programs whose services were typically provided only to parents with children preschool aged and older.

Within two weeks of completion of the intervention, researchers conducted a 30- to 40-minute interview with the mothers. While the results were not statistically significant, researchers found the mothers who had received the ABC visits had higher levels of “sensitive parenting” behavior. Sensitive parenting means parents are attuned to their child’s cues and respond to their child’s behaviors consistently and appropriately. Sensitive parenting has been shown to provide an optimal environment for early childhood development.

While the information gained from this research is preliminary, it does provide initial support for a service approach providing parenting-focused home visits to new mothers in residential treatment for substance-use disorders. Researchers concluded that integrating attachment-based parenting services with substance-abuse treatment could help break intergenerational cycles of child abuse and neglect. They suggest future research be focused on expanding the study’s sample size and diversity among those participating in the study.

STUDY CITATION

Berlin, L., Shanahan, M., & Appleyard Carmody, K. (2013). Promoting Supportive Parenting in New Mothers with Substance-use Problems: A Pilot Randomized Trial of Residential Treatment-based Parenting. Infant Mental Health Journal, 35(1), 81-85. doi: 10.1002/imhj.21427.

STUDY METHODOLOGY

Randomized control trial

INTERVENTION

Participation in the ABC home visiting program

SAMPLE SIZE

21 mothers were enrolled (11 women in ABC group, 10 women in control group)

DATA SOURCE

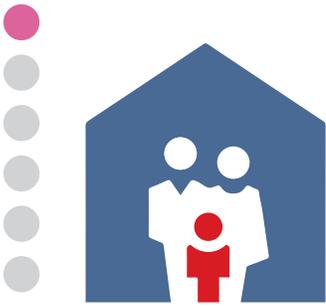
Childhood Trauma Questionnaire; Center for Epidemiologic Studies Depression Scales; Generalized Anxiety Disorder 7-item Scale; Maternal Behavior Q-Sort

PERIOD OF DATA COLLECTION FOLLOWING TREATMENT

One time point: A 30-40 minute post-intervention observation was conducted by a trained observer within 2 weeks of mothers’ completion of the intervention.

STATISTICALLY SIGNIFICANT RESULTS

No statistically significant findings. Preliminary study.



Improving Birth Outcomes with Florida Home Visiting

The United States has the sixth greatest number of preterm births in the world per year, and over 8 percent of babies are born with low birth weight. Preterm birth and low birth weight can lead to infant death or disabilities, including breathing and feeding problems, vision and hearing issues, cerebral palsy, and developmental delays. The National Academy of Medicine has estimated that annual costs for premature births in the U.S. are \$26 billion. This multi-year study examined a range of outcomes related to home visiting programs in Florida. Researchers found home visiting significantly improved birth weight, gestation, and prenatal care outcomes. These key health outcomes, in turn, can have lifelong positive effects for children and their families, and decrease costs for health care and education systems. Researchers also found fathers' involvement increased the time families participated in home visiting and improved the likelihood of program completion.

Studies: Healthy Beginnings Home Visitation Program Evaluation: Outcome Evaluation of Healthy Families Florida, Nurse-Family Partnership, and Healthy Beginnings Nurses Prenatal Services and Healthy Beginnings Home Visitation Program Evaluation: Year 4 Report

The Children's Services Council of Palm Beach County in Florida commissioned a four-year evaluation of home visiting programs that are part of its Healthy Beginnings System of Care. One of these programs is Healthy Families Florida, which uses the Healthy Families America curriculum to promote child wellbeing and prevent abuse and neglect. Families are enrolled prenatally, or until the child is three months old. Home visits are conducted weekly until the child is six months old, after which services become less frequent but can last until the child's fifth birthday.

Year Four of the Healthy Beginnings System evaluation included over 1,000 families, evenly divided between the treatment group and comparison group. Researchers found Healthy Families Florida positively impacted gestation time, with babies born a week and a half later, on average, to mothers participating in the program, compared to the control group. Additionally, 91% of Healthy Families mothers had full-term births, compared to only 73% of non-Healthy Families mothers. Babies born to Healthy Families mothers weighed an average of 11% more than babies born to mothers not in the program (6.8 pounds compared to 6.1 pounds).

Families with an engaged father remained in the program longer.

A mother's marital status was less of a factor in determining birth-related outcomes if she participated in Healthy Families Florida than if she did not. This indicates the program may be effective in reducing the outcome gap between single and married mothers.

The Year Four evaluation also included findings related to the Nurse-Family Partnership. The Nurse-Family Partnership is designed for first-time, economically disadvantaged mothers and their children. It includes one-on-one home visits between

YEAR 1: OUTCOME EVALUATION OF HEALTHY FAMILIES FLORIDA, NURSE-FAMILY PARTNERSHIP, AND HEALTHY BEGINNINGS NURSES PRENATAL SERVICES AND YEAR 4: HEALTHY BEGINNINGS HOME VISITATION PROGRAM EVALUATION



Healthy Families Florida positively impacted gestation time, with **babies born a week and a half later**, on average, to mothers participating in the program compared to the control group



91 percent of Healthy Families mothers had full-term births, compared to only **73 percent** of non-Healthy Families mothers



Babies born to Healthy Families mothers weighed an average of **11 percent more** than babies born to mothers not in the program (6.8 pounds compared to 6.1 pounds)

Improving Birth Outcomes with Florida Home Visiting

a trained public health registered nurse and participating clients. Visits begin early in the woman’s pregnancy, with program enrollment no later than the 28th week of gestation, and conclude when the child turns two years old.

Researchers found a significant positive relationship between the involvement of fathers and a family’s participation in the program. Families with an engaged father remained in the program longer, participated in more home visits, and were more likely to complete the program. Father engagement similarly impacted the participation of Healthy Family Florida families.

The authors suggest future research focus on: understanding the program aspects that improve outcomes for families, and explaining why the marital status of mothers might influence home visiting program outcomes.

STUDY CITATION

Bjerke, E., Scuello, M., Wilkens, D., Zhu, J. (Metis Associates) (2017) Healthy Beginnings Home Visitation Program Evaluation: Year 4 Report, Children’s Services Council of Palm Beach County.

STUDY METHODOLOGY

Quasi-experimental design

INTERVENTION

Participation in Florida’s Healthy Beginnings home visiting programs

SAMPLE SIZE

533 in the comparison group and 533 in the groups participating in home visiting

DATA SOURCE

Analytic files developed in Year One and Year Three, service delivery information, subsequent pregnancies and births, service termination/ completion dates, and updated outcome information

PERIOD OF DATA COLLECTION FOLLOWING TREATMENT

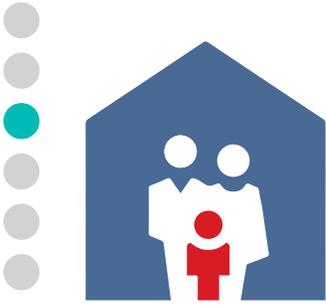
Various

STATISTICALLY SIGNIFICANT RESULTS

Participation in Healthy Families Florida had a positive effect on the number of weeks of gestation, full-term births, and birth weight.

Nurse-Family Partnership families in which the father was involved remained in the program longer than families in which the father was not involved, received more home visits, and were more likely to complete the program.

Father engagement was associated with similar results for Healthy Families Florida families.



Engaging Parents Promotes School Readiness and Later Success

All parents want their children to be healthy and ready to learn. Extensive research demonstrates the importance of a child's early years in developing a solid scaffolding upon which to build future learning, and parent involvement is a critical factor in children's school success. Children with parents who aren't certain how best to be involved in their early education often miss out on early development opportunities, and are therefore at risk for a range of subsequent poor outcomes. Researchers at Yale University, for example, found that three-quarters of students who are poor readers in third grade will likely remain poor readers in high school. Home visiting programs such as Home Instruction for Parents of Preschool Youngsters (HIPPY) embrace the notion that parents are a child's first and best teacher. This evaluation found the HIPPY intervention, delivered when children were three to five years old, resulted in a range of higher school performance outcomes that were sustained in third, fifth, seventh, and ninth grades. These results suggest gains made through home visiting can be long-lasting and reinforce the benefits of systematic support for parent involvement that can promote school success.

Study: School Performance in Elementary, Middle, and High School: A Comparison of Children Based on HIPPY Participation During the Preschool Years



More than 70 languages were spoken in children's homes



78 percent of children were eligible for free or reduced-price school lunch programs

This study investigated the long-term impact of the HIPPY program on children's school success at various levels, including elementary, middle, and high school. Children's school success was measured by school attendance, retention rates, discipline problems, scores on the state's mandatory standardized tests, and pass rates on standardized tests.

This study population included two groups of children in a large, urban school district in Texas. All the children in this study had been enrolled in the same school district since kindergarten. The district had a diverse student population, with 66.5% Hispanic, 4.6% White, 27.7% African American, 1% Asian, and .2% Native American children. The district reported almost 70 different languages spoken in children's homes. The vast majority of children in the study group (over 78%) were eligible for the school's free or reduced-price lunch program.

Children's participation in HIPPY during the preschool years had a positive relationship with school performance in 3rd, 5th, 7th, and 9th grades.

The study compared school performance of children who participated in HIPPY with a comparison group of similar students who had preschool experience other than HIPPY. To be eligible for the HIPPY program, a 3-, 4- or 5-year-old child must be economically disadvantaged, academically at risk, or homeless, which are typical of the challenges home visiting programs seek to overcome.

HIPPY strives to build the confidence and ability of parents to prepare their children for success in school. The program also fosters parent involvement in school and community life, which helps contribute to their child's successful school experiences.

SCHOOL PERFORMANCE IN ELEMENTARY, MIDDLE, AND HIGH SCHOOL: A COMPARISON OF CHILDREN BASED ON HIPPY PARTICIPATION DURING THE PRESCHOOL YEARS



Children who participated in HIPPY had **higher rates of school attendance**



Lower rates of grade retention



Lower rates of multiple discipline referrals



Higher achievement scores on state-mandated tests in reading and math



Higher passing rates on state-mandated tests in reading and math

Engaging Parents Promotes School Readiness and Later Success

HIPPY paraprofessionals from the same community as the families being served offer weekly, hour-long home visits for 30 weeks per year, during which parents are trained to carry out school readiness activities with their children. In addition, parents are invited to attend two-hour group meetings at least six times per year. The HIPPY group in this study consisted of 516 children who were flagged by school records as having participated in the program at 3, 4, or 5 years of age and were classified as either 3rd, 5th, 7th, or 9th graders. The study found children’s participation in HIPPY during the preschool years had a positive relationship with school performance in 3rd, 5th, 7th, and 9th grades. Specifically, children who participated in HIPPY had higher rates of school attendance, lower rates of grade retention, lower rates of multiple discipline referrals, higher achievement scores on state-mandated tests in reading and math, and higher passing rates on state-mandated tests in reading and math.

These results reaffirm the positive effects of a parental involvement model on at-risk children’s development and school performance, and suggest home visiting programs can prepare children for the success in school needed to potentially break cycles of poverty. Study authors recommended future researchers compare school performance of children in the HIPPY group versus the general population. They also strongly recommended that future researchers “investigate aspects of parent functions such as their parenting skills, attitudes toward parenting, expectations for their child, ways of interacting with their child, and so forth in order to determine whether and how these aspects affect their child’s HIPPY experience along with the child’s later school performance.”

STUDY CITATION

Brown, A., & Lee, J. (2014). School Performance in Elementary, Middle, and High School: A Comparison of Children Based on HIPPY Participation during the Preschool Years. School Community Journal, 24(2), 83-106.

STUDY METHODOLOGY

Retrospective study

INTERVENTION

Home Instruction for Parents of Preschool Youngsters weekly home visits

SAMPLE SIZE

1,132

DATA SOURCE

Existing data, including the state-mandated achievement test (TAKS: Texas Assessment of Knowledge and Skills) scores, attendance records, school retention, discipline referrals, and special education placements

PERIOD OF DATA COLLECTION FOLLOWING TREATMENT

The studied group consisted of children who were flagged by the school records as having participated in the HIPPY program at 3, 4, or 5 years of age and were classified at the time of the study as 3rd, 5th, 7th, or 9th graders.

STATISTICALLY SIGNIFICANT RESULTS

In all four grades, HIPPY children had higher rates of school attendance, were retained in-grade less often, had fewer repeat discipline referrals, and scored higher and had higher pass rates on the Reading and Math TAKS than matching children without HIPPY experience.



Reducing Child Welfare Cases Among Oklahoma Native American Families

Children need and deserve stable, loving families as they grow and mature. It is no surprise that children who are removed from their homes and placed in foster care due to parental abuse and neglect suffer a range of negative impacts. These can include struggling to form normal attachments to adults, poor physical, mental and emotional health, and lower cognitive and academic functioning. This study concluded that the SafeCare home visiting intervention was as effective in reducing recurring child welfare involvement among Native American families as with non-Native American families. The results showed that families participating in SafeCare had fewer additional reports of child abuse or neglect than families receiving a less structured alternative. This study illustrates that home visiting can give children an improved chance to experience a consistent home environment instead of enduring the insecurity of foster care and the child welfare system.

Study: Is a Structured, Manualized, Evidence-Based Treatment Protocol Culturally Competent and Equivalently Effective Among American Indian Parents in Child Welfare?

NATIVE AMERICAN FAMILIES IN THE STUDY DEMONSTRATED SIGNIFICANT STRESSORS FROM MULTIPLE SOURCES



17 percent did not consistently have home heating



31 percent had no access to a car



15 percent of caregivers reported not having enough food in the house for two consistent meals per day

This study sought to determine whether the SafeCare home visiting program was as effective in reducing subsequent reports of child abuse and neglect among Native American families as it had been shown to be among non-Native American families. The data came from an original study, which included 2,259 families, 354 of whom self-identified as Native Americans. This relatively large number of Native American families enabled researchers to draw conclusions about the relevance for this group. SafeCare addresses three key risk factors for child abuse and neglect: the parent-child relationship, home safety, and child health.

One adult per household was enrolled in the study, with the emphasis on the child's primary caregiver. Of the participating families, 94% of the caregivers were women, and all families had prior child welfare referrals. Native American families in the study demonstrated significant stressors from multiple sources, including: 38% who had not completed a high school diploma or GED, 80% with income below the federal poverty line, 8% with no indoor plumbing, 17% without consistent home heating, 18% with no telephone, and 31% with no access to a vehicle. Two-thirds of the families enrolled lived in small communities, and 14% in rural areas. Household insecurity and violence was also common, including: 15% of caregivers reported not having enough food in the house for two consistent meals per day; 43% reported having been physically abused as children; 41% reported having been sexually abused as children, and 45% reported some history of domestic violence in their current household.

SafeCare was equally effective in reducing child welfare referral recidivism among Native American and non-Native American caregivers.

FAMILIES RECEIVING SAFECARE HOME VISITS:



Experienced a nearly **25 percent** reduction in recurrent involvement in the child welfare system

Reducing Child Welfare Cases Among Oklahoma Native American Families

Home visits took place at least once a week for six months. For the SafeCare treatment group, the visits were highly structured and focused on addressing parent-child interaction, basic caregiving structure and parenting routines, home safety, and child health. The control group also had home visits, but they did not use an evidence-based curriculum, were less structured, and tended to follow the lead of clients with respect to the content of the visits. Families were typically followed for slightly more than six years following completion of their home visits. To determine the number of reports of child abuse or neglect after enrollment, researchers used administrative data from the statewide child welfare report database. All reports to the child welfare agency were counted, not solely substantiated child neglect or abuse.

Native American caregivers with preschoolers (the population for whom the model was designed) receiving SafeCare home visits were less likely to be the subject of additional reports of child abuse or neglect, or to have fewer additional reports of child abuse or neglect, than Native American families who received a series of home visits without the SafeCare curriculum. Although no cultural adaptations were made to the home visiting model, Native American families receiving SafeCare home visits experienced a nearly 25% reduction in recidivism, or recurrent involvement in the child welfare system. Almost no recidivism reduction was observed with caregivers who had children older than preschoolers, outside the age group for which the intervention was designed. Researchers concluded that SafeCare is equally effective in reducing child welfare referral recidivism among Native American and non-Native American caregivers.

STUDY CITATION

Chaffin M, Bard D, Bigfoot D, and Maher, E. 2012. Is a Structured, Manualized, Evidence-Based Treatment Protocol Culturally Competent and Equivalently Effective Among American Indian Parents in Child Welfare: Child Maltreatment. 17(3)242-252

STUDY METHODOLOGY

2 X 2 cluster design

INTERVENTION

Participation in the SafeCare home visiting program

SAMPLE SIZE

354 Native American caregivers in overall sample of 2,175

DATA SOURCE

Child welfare agency reports

PERIOD OF DATA COLLECTION FOLLOWING TREATMENT

6 years

STATISTICALLY SIGNIFICANT RESULTS

Families receiving SafeCare home visits experienced a nearly 25% reduction in recurrent involvement in the child welfare system.



Statewide Home Visiting Program Reduces Child Maltreatment

In 2016, Child Protective Service agencies received an estimated 4 million referrals involving allegations of maltreatment for more than 7 million children in 2016. One in four children experience some form of abuse or neglect in their lifetimes; three-quarters of those are cases of neglect. Maltreatment rates are five times higher for children in economically disadvantaged families. Abused and neglected children may suffer from immediate physical injuries, as well as emotional and psychological wounds. Such adverse childhood experiences place children at increased risk for costly life-long problems, including poor health, injury, and substance use. This study examined whether participants in a state-wide home visiting program using Parents as Teachers would have lower levels of child abuse and neglect than those eligible, but not receiving services. It found a 22 percent decrease in the likelihood of substantiated cases of neglect, but no significant impact on physical abuse. These results add to the complicated emerging picture of how home visiting can address the public health crisis of child abuse and neglect.

Study: Preventing Child Maltreatment: Examination of an Established Statewide Home-visiting Program

PARTICIPATING FAMILIES HAD AT LEAST 3 OF 17 RISK FACTORS OR HAD A HISTORY OF SUBSTANCE USE, PSYCHIATRIC CARE, DEPRESSION, OR MARITAL AND FAMILY PROBLEMS

In Connecticut, high-risk families participating in a statewide home visiting program for first-time mothers were compared to a group of families who were eligible for the home visiting program but did not participate. The goal of the study was to determine if participation in home visiting reduced the incidence of child abuse and neglect. Using the state's Child Protective Service records, three outcomes were compared: investigated reports of maltreatment, substantiated reports of maltreatment, and out-of-home placements.

The treatment group was made up of high-risk families who were identified by a standardized screening process that assessed factors known to increase the risk of child maltreatment, including teen motherhood, social isolation, and housing instability. A family was determined to be high-risk if they had any three of 17 risk factors, or a history of substance use, psychiatric care, depression, or marital and family problems. The comparison group consisted of eligible families who declined or were unable to participate.

Connecticut's Nurturing Families Network sought to screen every first-time mother in the state, either before she gave birth or shortly afterwards, to identify high-risk families.

Screening was conducted at obstetricians' offices, community partner sites, and birthing hospitals, yielding a large study sample of over 7,000 families. The program provided services to support parenting and early childhood development. Enrolled families could receive home visits, which used the Parents as Teachers curriculum, until the child reached five years of age. Visits were conducted in English or Spanish. On average, families received two visits per month.

Three outcomes were compared: investigated reports of maltreatment, substantiated reports of maltreatment, and out-of-home placements.

FAMILIES PARTICIPATING IN PARENTS AS TEACHERS:



Were **22 percent** less likely to be the subjects of substantiated reports of maltreatment, with specific impact on the occurrence of neglect

Statewide Home Visiting Program Reduces Child Maltreatment

Researchers found the families who received the Parents as Teachers curriculum were 22% less likely to be the subjects of substantiated reports of maltreatment, with specific impact on the occurrence of neglect. For participating families who did have a substantiated report, this event occurred at a later age than for the comparison group. The authors noted that additional research is needed to clarify whether disclosing information about home visiting participation to CPS might affect CPS' decision making, which would help clarify the independent impact of home visiting on maltreatment. There was also a smaller percentage of home visiting program families with an out-of-home placement than comparison families (2.7% vs. 3.6%), but this result was not statistically significant. These findings add to the complex picture regarding the evidence of home visiting as an intervention to address child maltreatment and will help to inform future approaches.

STUDY CITATION

Chaiyachati, B. H., Gaiher, J. R., Hughes, M., Foley-Schain, K., & Leventhal, J. M. (2018). Preventing child maltreatment: Examination of an established statewide home-visiting program. Child Abuse & Neglect, 79, 476-484. doi:10.1016/j.chiabu.2018.02.019

STUDY METHODOLOGY

Retrospective observational study

INTERVENTION

Parents as Teachers (PAT) curriculum added to the Nurturing Families Network (NFN) program

SAMPLE SIZE

*Total of 7,386 families
Intervention group: 2,662
Comparison group: 4,724*

DATA SOURCE

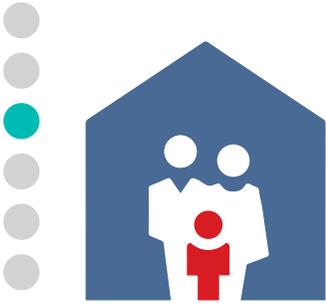
Connecticut Child Protective Services (CPS) records

PERIOD OF DATA COLLECTION FOLLOWING TREATMENT

CPS data was collected from January 1, 2008 to December 31, 2013 for children born between January 1, 2008 and December 31, 2011.

STATISTICALLY SIGNIFICANT RESULTS

Home visiting was associated with a 22% decrease in the likelihood of substantiated reports of neglect. However, there was no statistically significant difference in the likelihood of physical abuse. Home visiting families who did have a substantiated report of neglect tended to experience this event at a later age than those in the comparison group.



Leveraging Home Visiting to Mitigate the Impacts of Trauma

Strong evidence has emerged in the past few decades demonstrating how a child's exposure to violence — among other adverse childhood events (ACEs) — can lead to lifelong health, behavioral, and social problems, including substance use. Studies have linked a greater number of ACEs with an increased risk of heart disease, cancer, bone fractures, chronic lung or liver diseases, diabetes, and stroke. Those with the most ACEs, four to six or more, tend to have higher rates of mental illness. There is an urgent need to understand the characteristics of programs that can help identify young children exposed to violence, and assure they receive optimal support to mitigate impacts and build resilience. This evaluation in Bridgeport, Connecticut found that participation in the Child FIRST home visiting program was associated with a significant decrease in the number of potentially traumatic events that children experienced, including family and community violence. It also helped both children and parents alleviate post-stress symptoms. These results indicate that home visits with this focus can help strengthen families torn by violence.

Study: Evaluation of a Wraparound Process for Children Exposed to Family Violence



87 percent of children had witnessed family violence



9 percent had been physically injured and were the intended victims of abuse



5 percent had been exposed to other types of family violence

This study examined a sample of 82 children and their families in Bridgeport, Connecticut to evaluate the impact of the Child and Family Interagency Resource, Support, and Training (Child FIRST) program on improving outcomes of children exposed to violence. Child FIRST aims to decrease the incidence of emotional and behavioral disturbance, developmental and learning problems, and abuse and neglect among high-risk young children and families. Child FIRST includes a comprehensive assessment and coordination of wraparound services and supports tailored to a family's specific needs.

When assessed at the beginning of the study, 87% of children had witnessed family violence, 9% had been physically injured and were the intended victims of abuse, and 5% had been exposed to other types of family violence. Children ranged in age from under one year to six years old, with an average age of three years and four months; 56% were boys, and 44% were girls. The ethnic mix included 55% Latino/Hispanic, 27% Black/non-Hispanic, and 9% White. Eighty-seven percent were enrolled in Medicaid, a proxy for economic disadvantage.

After screening for children's exposure to violence, families eligible for inclusion in the study received home visits from clinicians in the Child FIRST program. A mental health

From the time of entry into the program until program discharge, the study found children experienced significantly fewer traumatic events. Participation decreased the frequency of intrusive behaviors, such as nightmares and flashbacks. Children also showed fewer behaviors such as avoiding places and situations reminiscent of a traumatic event, and emotional numbing typically associated with exposure to a trauma.

EVALUATION OF A WRAPAROUND PROCESS FOR CHILDREN EXPOSED TO FAMILY VIOLENCE



Children experienced a **decrease in potentially traumatic events**, including family violence



Children experienced **fewer post-traumatic stress** thoughts and behaviors



Parents experienced **decreases in all aspects of parenting stress**

Leveraging Home Visiting to Mitigate the Impacts of Trauma

clinician and care coordinator worked as a team to provide services that included a comprehensive assessment of child and family needs, observation and consultation in care and education settings, development of a family and child plan of care, a parent-child mental health intervention, and care coordination. The program typically lasted 6 to 12 months, depending on a family’s needs.

From the time of entry into the program until program discharge, the study found children experienced significantly fewer traumatic events. Participation decreased the frequency of intrusive behaviors, such as nightmares and flashbacks. Children also showed fewer behaviors typically associated with exposure to a trauma, such as avoiding places and situations reminiscent of a traumatic event and emotional numbing. Parents reported statistically significant decreases in all aspects of parenting stress. These results suggest home visiting programs specializing in serving children exposed to violence can have significant impacts on a child’s well-being, helping to prevent serious problems later in life.

STUDY CITATION

Crusto, C. A., Lowell, D. I., Paulicin, B., Reynolds, J., Feinn, R., Friedman, S. R., & Kaufman, J. S. (2008). Evaluation of a wraparound process for children exposed to family violence. Best Practices in Mental Health, 4(1), 1-18.

STUDY METHODOLOGY

Pre-test/post-test

INTERVENTION

Participation in the Child FIRST home visiting program

SAMPLE SIZE

82 children and their families who were enrolled in Child FIRST

DATA SOURCE

Self-report, parent-report, structured interview, administrative data

PERIOD OF DATA COLLECTION FOLLOWING TREATMENT

Participants were assessed at intake and 90-day follow-up

STATISTICALLY SIGNIFICANT RESULTS

A decrease over time in the number of potentially traumatic events children experienced, including family and non-family violence events.

Decreases over time in children’s post-traumatic stress-intrusive thoughts and post-traumatic stress-avoidance behavior.

Decreases in self-reported stress associated with the parenting role among caregivers.



Universal Approach Reduces Expensive Emergency Room Visits

All parents with a new baby can use help in the first few months, when they are learning to take care of their child and create a safe home environment. This study examined a universal in-home screening program designed to provide a brief parenting intervention to all area families, and then connect families with community resources (including more intensive home visiting programs) as needed, based on individual assessments. Participation in the program led to a 50 percent reduction in overall emergency medical care across the first 12 months of life, compared to families that did not participate. The study results suggested that, where services are available to respond to referrals, a universal triage approach can save money by keeping young children out of the most expensive health care setting — the emergency room. It provided insights about how a home visiting intervention could serve all new families with careful dosing to target resources based on family needs.

Study: Randomized Controlled Trial of Universal Postnatal Nurse Home Visiting: Impact on Emergency Care

THE STUDY LOOKED AT 549 FAMILIES WHO HAD A CHILD BORN IN DURHAM COUNTY:



About half of the families had parents who were married



62 percent were enrolled in Medicaid or had no health insurance

This study examined how a North Carolina program called Durham Connects (now known as Family Connects), which serves all area parents, would impact emergency room visits in the child's first year. The evaluation looked at 549 families who had a child born in Durham County. Of these families, 40% were White, 37% were African American, and 23% were Other or Multiracial, with 26% reporting Hispanic ethnicity. About half of the families included parents who were married. Sixty-two percent were enrolled in Medicaid or had no health insurance.

Families who participated in Durham Connects were compared to a control group receiving services as usual. Program group families receive: four to seven scripted in-person or telephone contacts, with the first beginning during the hospital stay at the time of birth; one to three in-home visits by a nurse between three and eight weeks of infant age; one or two nurse contacts with community service providers and maternal and infant health care providers; and an in-person or telephone follow-up one month later to reinforce community connections. The intensity of services varied according to the family's assessed level of risk.

A score of 1 (low risk) in a particular area received no subsequent intervention. For a score of 2 (moderate risk), the nurse delivered a brief, evidence-based intervention on the specific topic over one to three sessions. For a score of 3 (high risk), the nurse used motivational interviewing to connect the family with community resources (e.g., short-term loans, treatment of depression or substance use, etc.) tailored to address the particular need. A score of 4 (imminent risk) received emergency intervention. A final session four weeks after the nurse completed the case reinforced community connections.

During home visits, the nurse engaged the mother (and father, when possible) in brief educational interventions organized as 20 "teaching moments," and assessed health



The program led to a **50 percent** reduction in overall emergency medical care across the child's first 12 months of life



Families had **85 percent** fewer hospital overnights for their infants

Universal Approach Reduces Expensive Emergency Room Visits

and psychosocial risk across different areas, such as child care plans, parent-infant relationship, management of infant crying, family violence, parent mental and physical health, infant health, and health care plan coverage.

The results show the program led to a 50% reduction in overall emergency medical care across the child's first 12 months of life. This impact held across all groups of families studied, including those with and without medical risk at birth, uninsured and insured families, ethnic minority and majority families, single-parent and two-parent families, and families with boys and girls. Family participation in Durham Connects was associated with 85% fewer overnight stays in the hospital for infants than the comparison families. The study reported significant savings on medical care costs for privately insured families who received home visits, suggesting that private health care insurers and families may benefit from making home visiting services a covered health care cost. While encouraged by the results, researchers noted that this program does not replace the need for more intensive programs, but rather serves as a universal screening and triage tool to ensure optimal matching and follow-through of families with services. Overall, it provides a provocative take on the question, "What if home visits were offered to all new parents, with services then distributed according to those with the most needs?"

STUDY CITATION

Dodge, K., Goodman, W., Murphy, R., O'Donnell, K., & Sato, J. (2013). Randomized Controlled Trial of Universal Postnatal Nurse Home Visiting: Impact on Emergency Care. PEDIATRICS, 132(Supplement), S140-S146. doi: 10.1542/peds.2013-1021m

STUDY METHODOLOGY

Randomized control trial

INTERVENTION

Participation in the Durham Connects program

SAMPLE SIZE

521

DATA SOURCE

Administrative records from Durham County hospitals were scored through age 12 months for total emergency department visits since initial hospital discharge and total hospital overnights.

PERIOD OF DATA COLLECTION FOLLOWING TREATMENT

One year

STATISTICALLY SIGNIFICANT RESULTS

Between birth and age 12 months, families randomly assigned to Durham Connects utilized 50% less total infant emergency medical care than control families.

Between age 6 and 12 months, families who received Durham Connects utilized 31% less emergency medical care than comparison families during this time period.

Families enrolled in Durham Connects had 85% fewer hospital overnights for their infants than comparison families.



Zakiyyah and Azariah

I do believe that children who start kindergarten already behind can very quickly get the message that they aren't as smart or talented as their classmates, even if it's because they didn't have the best opportunities...



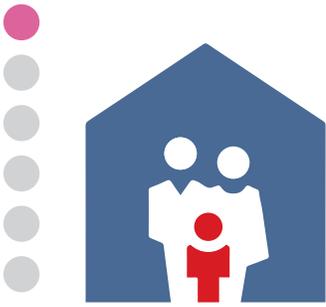
I got introduced to HIPPY eight years ago, when my godson Amari was three years old. As an active godparent, I assisted him with the activities and books his home visitor left for us.

I do believe that children who start kindergarten already behind can very quickly get the message that they aren't as smart or talented as their classmates, even if it's because they didn't have the best opportunities for learning their letters, numbers, and social skills before arriving at school. So I didn't want that to happen to Amari. It was very important to me and his family that Amari would be on a level playing field with other kindergarteners. And thanks to HIPPY, he was! I'm proud to say that Amari is now 11 and in 6th grade, in an advanced honors program at school.

Having gone through HIPPY with my godson, I thought it better prepared me for when it came time to teach my daughter, Azariah. In many ways, it did; however, when I still found myself struggling with helping my own child, we decided to enroll in HIPPY for support.

My home visitor, Miss Nicole, has provided the guidance to help me interact with Azariah with more patience. She has definitely influenced my parenting style for the better. Working collaboratively, she has helped me understand patience, the importance of time management, other free community activities available for Azariah, and helped me set educational expectations and goals that are appropriate for her age. It also allowed us to provide daily structure with simple lessons, including math, writing, and reading development skills. HIPPY trains home visitors from our community, which helps create an important bond and level of trust. I believe this is very important as you have someone coming into your HOME.

In addition to weekly visit with Miss Nicole, I have also taken advantage of the many monthly Family Workshops, which are group meetings on topics like financial literacy or parenting. These meetings not only help me, but also have given me a chance to meet other parents, contribute to the discussion, and use my social worker skills to help others who might be struggling more.



Long Range Impact: Home Visiting Outcomes in Young Children and Adolescents

A child's behavior is influenced by a wide range of factors, including their parents, their environment, and their genetics. Previous research has confirmed the importance of early childhood experiences for later life, and shown that home visiting programs can positively impact a child's behavioral trajectory. This study examined the impact of the Nurse Home Visiting program — now known as Nurse-Family Partnership — on negative child behaviors from ages 2 years through 18 years. The study documented that the strongest predictor of children's externalizing behaviors at age 18 years (activities such as smoking, use of alcohol and drugs, and aggression) was the presence of externalizing behaviors at younger ages. The study also showed the Nurse Home Visiting program had a beneficial impact on behavior for children whose mothers showed high levels of self-efficacy.

Study: A Prospective Cohort Study of Influences on Externalizing Behaviors Across Childhood: Results from a Nurse Home Visiting Randomized Controlled Trial

DATA ON 600 CHILDREN WAS COLLECTED AT THEIR BIRTH AND THEN AGAIN AT AGES 2, 6, 12, AND 18 YEARS OF AGE.

PARTICIPATING MOTHERS WERE IMPACTED BY AT LEAST TWO OF THREE RISK FACTORS:



Single motherhood



Less than 12 years of education



Unemployment

This study was designed to investigate the impact of genetic and maternal influences, as well as the Nurse Home Visiting program, on the development of “externalizing behaviors” in children through the age of 18 years. “Externalizing behaviors” or “externalizing disorders” measured in the study included aggression, smoking, alcohol use, and drug use.

Participants for the study were recruited in Memphis, Tennessee from 1990–1991. Data on 600 children was collected at their birth, and then again at ages 2, 6, 12, and 18 years. The majority of the mothers in the study were first-time African American mothers from highly disadvantaged urban areas. They were also impacted by at least two of three risk factors: single motherhood, less than 12 years of education, and unemployment.

Some families in the study were offered prenatal care, developmental screenings, and referral services. Other families in the study were offered these same services, in addition to the intensive Nurse Home Visiting program. Those participating in Nurse Home Visiting had, on average, 8 home visits during pregnancy, and 28 visits between birth and the child's second birthday.

Mothers completed questionnaires during pregnancy to assess their mental health and “self-efficacy,” a person's belief in her ability to act in a way that will achieve a certain goal or accomplish a specific task. The mothers also periodically reported on their own smoking and drug and alcohol use, as well as detailing their child's actions and behaviors.

The study results confirmed the importance of early childhood interventions for future behavior: the strongest predictor of children's externalizing disorders at age 18 was the presence of externalizing disorders at age 12, and the strongest predictors of externalizing disorders at age 6 and 12 were the presence of externalizing behaviors at younger ages. The study showed a mother's self-efficacy and mental health during pregnancy and children's early years also had lasting impacts on child behavior. Researchers concluded

Poor maternal mental health in pregnancy had a strong adverse effect on the child's externalizing disorders up to age 12.

Long Range Impact: Home Visiting Outcomes in Young Children and Adolescents

poor maternal mental health during pregnancy had a strong adverse effect on the child's externalizing disorders up to age 12, and maternal smoking at the child's age of 12 was linked to poorer outcomes for the child.

The study found that Nurse Home Visiting had a positive effect on children's externalizing disorders at age two years, and an interactive effect with maternal self-efficacy. Home visits had a positive effect on young children's behavior in the group of children whose mothers had high self-efficacy; these children had much better outcomes on measures of externalizing disorders. Further, the group of mothers who were randomly selected to receive home visits demonstrated significantly better self-efficacy scores than the groups of mothers who did not receive home visits.

STUDY CITATION

Enoch, M.A., Kitzman, H., Smith, J., Anson, E., et al. (2016) A Prospective Cohort Study of Influences on Externalizing Behaviors Across Childhood: Results from a Nurse Home Visiting Randomized Controlled Trial. Journal of the American Academy of Child and Adolescent Psychiatry, 55(5): 376-382, doi:10.1016/j.jaac.2016.02.007.

STUDY METHODOLOGY

Randomized control trial

INTERVENTION

The treatment group was provided free transportation for scheduled prenatal care, plus developmental screening and referral services for the child at ages 2, 6, and 12 years, in addition to intensive nurse home visiting during pregnancy and through the child's second birthday.

SAMPLE SIZE

600 children

DATA SOURCE

Survey questionnaire, DNA tests from saliva samples

PERIOD OF DATA COLLECTION FOLLOWING TREATMENT

Data was collected on the intervention and control groups when the child was born, then again at age 2, 6, 12, and 18 years.

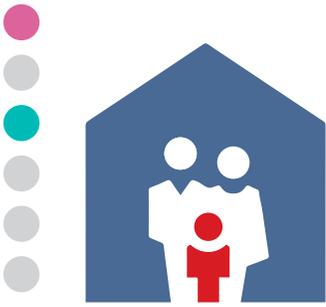
STATISTICALLY SIGNIFICANT RESULTS

There was a positive effect of Nurse Home Visiting on externalizing disorders at age 2 years, and an interactive effect with maternal self-efficacy. The Nurse Home Visiting group had better self-efficacy scores compared with the other three groups.

Overall, the strongest predictors of composite externalizing disorders at age 6 and 12 were measures of behavior at earlier ages. Externalizing disorders at age 12 was the strongest predictor of behavior at age 18.

Mothers' Pearlin Mastery, a measure of self-efficacy, measured in pregnancy, had a strong effect on the prevalence of children's externalizing disorders at age 18.

Maternal mental health measured during pregnancy had a persistent effect on externalizing disorders at 2, 6, and 12 years of age; poorer maternal mental health was associated with worse childhood behaviors.



Moving the Needle on Parental Risk Scores

Parents in communities surrounded by poverty face a number of interrelated challenges. This study assessed the impact on families with young children of a home visiting program offered by a central Kentucky health department. Risk scores were used to assess parents on a range of issues affecting family health, such as positive mental health, coping, and anger management skills. The evaluation found that after participation in the program, initial high-risk scores that were associated with negative health and well-being significantly decreased for both mothers and fathers.

Study: Impact of a Kentucky Maternal, Infant, and Early Childhood Home-Visitation Program on Parental Risk Factors



80 percent of mothers self-identified as Hispanic/Latino



90 percent of fathers were employed



64 percent of mothers and **74 percent** of fathers had completed less than a high school diploma or GED

This exploratory study examined the impact of two inter-related programs offered by a local Kentucky health department to address parental risk factors for the purpose of improving outcomes for young children. The programs evaluated were Health Access Nurturing Development Services (HANDS) and Healthy Babies are Worth the Wait (HBWW). HANDS is offered through local health departments to overburdened first-time parents during pregnancy or before the child is three months old. The HBWW program mirrors HANDS and uses the same curriculum, but focuses on parents who have already had one or more children. Unlike many other studies, risk factors among both fathers and mothers were assessed.

Sixty-four families were included in the study. The average age for mothers was 26 years; fathers averaged 27 years old. Nearly 80% of the mothers self-identified as Hispanic/Latino. Sixty-four percent of mothers and 74% of fathers reported completing less than a high school diploma or GED; close to half of the mothers (41%) and fathers (42%) had not completed either. Fewer than one-third of the mothers were employed, and 70% of them were unmarried. Of the fathers in the program, 90% were employed. Only eight families experienced preterm delivery (less than 37 weeks' gestational age), and 61 babies weighed at least 5.5 pounds at birth. Ninety-five percent of the mothers reported breastfeeding, and 90% of families reported neither they nor anyone living in the household with the infant smoked. A majority of mothers agreed to be screened for depression and receive information and counseling throughout the program.

HANDS begins family interventions and services prenatally, and continues through the child's first two years. In this study, families spent an average of 29 months enrolled in HANDS and HBWW. Visitors initially conduct home visits frequently, and lessen them as children meet milestones and parents build and improve parenting skills and self-sufficiency. Home visitors share information about positive health behaviors and caregiving, while providing social support to meet families' diverse needs and reduce stressors. They concentrate on parent/child interaction, parental sensitivity, and parental knowledge of child development. Nurses and social workers are utilized for

OF THE PARTICIPANTS IN HANDS AND HBWW:



95 percent of mothers reported breastfeeding



90 percent of families reported neither they nor anyone living in the household with the infant smoked

Moving the Needle on Parental Risk Scores

family needs assessments, and paraprofessionals and professionals provide outreach, linking families to medical care and other community resources. HBWW mirrors the design and curriculum of HANDS.

A screening tool known as The Parent Survey was implemented pre- and post-intervention to assess parental risks and needs, based on factors such as parents' lifestyle behaviors and mental health, anger management, expectations of infant development and behavior, and plans for discipline. The results showed total risk scores for both mothers and fathers decreased significantly from pre- to post-intervention assessment in four of the six dimensions measured: lifestyle behaviors and mental health, coping skills and support systems, stresses, and anger management skills.

The authors called for additional research on the impact of home visiting on fathers, and concluded “programs designed to promote healthy pregnancies and child development may benefit from beginning prenatally and continuing at least two years, providing social support, fostering parental knowledge, skill development and problem solving, insuring proper medical care, and connecting parents with relevant community resources.”

STUDY CITATION

Ferguson, J., & Vanderpool, R. (2012). Impact of a Kentucky Maternal, Infant, and Early Childhood Home-Visitation Program on Parental Risk Factors. Journal of Child and Family Studies, 22(4), 551-558. doi: 10.1007/s10826-012-9610-4

STUDY METHODOLOGY

Exploratory study: Retrospective case control study

INTERVENTION

Health Access Nurturing Development Services (HANDS) and Healthy Babies Are Worth the Wait (HBWW)

SAMPLE SIZE

64 families

DATA SOURCE

HANDS and HBWW data were obtained from an urban county health department in central Kentucky.

PERIOD OF DATA COLLECTION FOLLOWING TREATMENT

Data was collected at the beginning and conclusion of service (i.e. pre-test/post-test), with service delivery averaging 29 months.

STATISTICALLY SIGNIFICANT RESULTS

Total risk scores for mothers decreased from pre- to post-intervention assessment. Total risk scores for fathers also decreased from pre- to post-intervention assessment.

Parental risk decreased for both mothers and fathers in four of the six dimensions after participation in HANDS and HBWW: lifestyle behaviors and mental health, coping skills and support system, stresses, and anger management skills.



Home Visiting Increases Likelihood of Health Care in Cases of Child Injury

Accidental childhood injuries are common; about 11 percent of all children from birth to age five visit emergency rooms due to accidents each year. Accidental deaths have decreased over the last 100 years, but have not dropped as much as reductions in deaths due to causes such as infectious disease. In this study, researchers examined whether a home visiting program that provides home safety education and help parents conduct home hazard assessments might reduce unintentional childhood injuries. Results showed that children who received home visits actually had a higher rate of medically-attended accidental injuries, as measured by visits to hospital emergency rooms. Because children participating in home visits did not experience a higher rate of hospitalizations than their peers, researchers hypothesized that home visiting may have the effect of promoting the use of health care services for the treatment of injuries.

Study: Evaluation of Early Childhood Home Visiting to Prevent Medically Attended Unintentional Injury

STUDY INCLUDED 5,458 FIRST-TIME MOTHERS AND THEIR CHILDREN IN HAMILTON COUNTY, OHIO. PARTICIPATING MOTHERS HAD AT LEAST ONE OF THE FOLLOWING CHARACTERISTICS:



Younger than **18 years** of age



Entered late into **prenatal care**



Single, or were **economically disadvantaged**

This study evaluated the effect of home visiting on the risk for medically attended unintentional injury during and after the home visiting program occurred. “Medically attended unintentional injury” is defined as accidental injuries to the child, including falls, being struck by an object, or being cut or burned, for which the child is seen by a medical professional in a hospital or emergency room setting.

The participants in this study included 5,458 first-time mothers and their children in Hamilton County, Ohio. Participating mothers had at least one of the following characteristics: they were younger than 18 years of age, single, economically disadvantaged, or entered late into prenatal care.

Half of the mothers received home visiting services through Every Child Succeeds, which utilizes the Healthy Families America home visiting model. The other half of mothers received no home visiting services. Treatment group mothers received weekly or biweekly home visits during pregnancy, and weekly visits after the child was born, tapering to monthly visits until the child’s third birthday. The home visiting curriculum included efforts to improve safety and reduce hazards, including home hazard assessments, and the use of safety devices such as cabinet locks. It also promoted a “medical home,” where patient care is coordinated through the primary care provider. The curriculum encouraged parents to recognize potential hazards and supervise their children appropriately.

Researchers found that, counter to their hypothesis, the proportions of children with medically attended unintentional injuries — specifically, visits to the emergency room — were higher in the treatment group. From birth to age two years, children whose families received home visits were 19% more likely to have medically attended unintentional injuries. From birth to three years, they were 27% more likely to have medically attended unintentional injuries. Although emergency room visits were more common, there was no significant difference between the two groups

The additional injuries in the home-visited group were not repeat injuries.



Children were more likely to have medical attention for unintentional injuries



Children were not more likely to be hospitalized

Home Visiting Increases Likelihood of Health Care in Cases of Child Injury

in hospitalizations. The most frequent injuries seen in the study were falls (44% of injuries) or being struck by or against an object (17% of injuries). The additional injuries in the home-visited group were not repeat injuries, which is considered a possible sign of abuse, but instead were consistent with those of the comparison group.

Researchers posited that these findings may indicate that mothers receiving home visiting are more likely to seek health care for their child. The researchers suggested that future studies measure injuries treated across health care settings, not just in hospitals; that the severity of injuries be more explicitly measured; and that psychosocial factors, such as mental health, and household factors be taken into account to gain a more well-rounded picture of the effects of home visiting.

STUDY CITATION

Folger, A. T., Bowers, K. A., Dexheimer, J. W., Sa, T., Hall, E.S., Van Ginkel, J. B., Ammerman, R. T. (2017). *Evaluation of Early Childhood Home Visiting to Prevent Medically Attended Unintentional Injury*. *Annals of Emergency Medicine*, 70(3): 302-310. DOI: <http://dx.doi.org/10.1016/j.annemergmed.2017.01.029>.

STUDY METHODOLOGY

Retrospective, quasi-experimental study

INTERVENTION

Participation in the Every Child Succeeds home visiting program and in a minimum of one home visiting group

SAMPLE SIZE

The analytical study sample was comprised of 5,458 participants: 2,729 mother/child pairs in the home visiting group, matched with 2,729 mother/child pairs in the comparison group.

DATA SOURCE

Ohio birth records, Every Child Succeeds home visiting program data, the Hamilton County Injury Surveillance System data

PERIOD OF DATA COLLECTION

Time points: Birth, 2 years, 3 years, 5 years

STATISTICALLY SIGNIFICANT RESULTS

In the home visiting group, the proportions of children with medically attended unintentional injuries from birth to 2 years and birth to 3 years (19% and 27%, respectively) were significantly higher than in the comparison group (16% and 24%, respectively).

The risks for medically attended unintentional injury from birth to 2 years and birth to 3 years were higher in the home visiting group, relative to the comparison group. The risk was highest from birth to 2 years, indicating that participation in home visiting was associated with a 17% higher risk for medically attended unintentional injury. This risk was observed for emergency department (ED) visits, and not hospitalizations.

Children of mothers engaged prenatally and postnatally in home visiting had a 30% greater risk for medically attended unintentional injury than children in the comparison group from birth to 2 years. There was a small increase in medically attended unintentional injury risk with each additional home visit, indicating a positive trend for the birth to 3-year interval.

In the secondary unmatched analysis, the risk for medically attended unintentional injury from ages birth to 2 years was higher in the home visiting group, compared to participants who were referred but declined home visiting.



Reducing Child Maltreatment Through Home Visiting

According to the U.S. Department of Health and Human Services, more than 4 million reports of child abuse and neglect were filed in 2016, involving more than 7 million children. The physical, emotional, and mental impacts of maltreatment can be life-long and intergenerational. The economic cost of child abuse totals an estimated \$124 billion each year. This study examined the impacts of Early Head Start in preventing child abuse and neglect. The study showed preliminary evidence Early Head Start has positive outcomes in reducing child maltreatment, including reducing the likelihood of child maltreatment between the ages of five years and nine years, reducing subsequent child maltreatment, and reducing the frequency of child welfare reports with a primary allegation of physical and/or sexual abuse.

Study: The Effect of Early Head Start on Child Welfare System Involvement: A First Look at Longitudinal Child Maltreatment Outcomes

OF THE MOTHERS IN THE STUDY:



51 percent had not earned a high school diploma



64 percent were unemployed



27 percent were living with a spouse



100 percent of families had income below the federal poverty level, with **22 percent** below one-third of the federal poverty level

This study examined whether Early Head Start, a program that provides early childhood and family development services for families with children through age two years, reduces childhood abuse and neglect in economically disadvantaged families. The program can be offered as either center-based or home-based. Researchers drew from child welfare records, as well as data on families from seven of the sites in the national Early Head Start randomized control trial, known as the Early Head Start Research and Evaluation Project. Of the seven sites included in this study, four offered solely the home-based (home visiting) program, one was located at a center (similar to traditional Head Start, for infants and toddlers), and two were a combination of both home visiting and center-based approaches.

The 1,247 young children and their families included in the study were offered enrollment in Early Head Start, and their outcomes were compared to families who remained on a wait list but could access other services in the community instead. Mothers were either pregnant or had a child under the age of 12 months at the time of enrollment. All families had incomes at or below the federal poverty level; 22% earned less than a third of the federal poverty limit. Of the mothers in the study, 51% had not earned a high school diploma, 64% were unemployed, and 27% were living with a spouse. Forty-five percent of the mothers were White, 19% were African American, and 31% were Hispanic.

Early Head Start provides intensive comprehensive child development and family support services to economically disadvantaged infants and toddlers and their families, as well as support to caregivers, by promoting parent self-sufficiency and healthy family functioning. Sites utilize one or both service approaches: home visiting, in which families receive weekly 90-minute home visits in addition to group socialization activities, or center-based child development services with at least two home visits per year.

Researchers found that children between the ages of five years and nine years who had participated in the Early Head Start group were significantly less likely to have a child

Reducing Child Maltreatment Through Home Visiting



Early Head Start children ages 5-9 had **38 percent** fewer total number of child welfare encounters



Early Head Start children also had **fewer** combined physical and sexual abuse reports



On average, children enrolled in EHS had **more neglect** reports per child as compared to the control group

welfare encounter than their peers in the control group. Children ages five years to nine years whose families had participated also had 38% fewer total number of child welfare encounters, and they were less likely to be physically or sexually abused. Participants had significantly more neglect reports per child before the age of five, compared to non-Early Head Start families; the rates of neglect were similar after the age of five. Researchers hypothesize the increase in reports of neglect may be due to surveillance bias, that is, neglect was more readily identified in families participating in the treatment group.

Researchers concluded that these findings presented preliminary evidence that Early Head Start reduces the likelihood of child abuse and neglect between the ages of five years and nine years, reduces subsequent child abuse and neglect, and reduces the frequency of child welfare reports with a primary allegation of physical and/or sexual abuse. Researchers posited that the decreased likelihood of subsequent child welfare encounters may be explained by the many connections to services and supports that are central to the Early Head Start model, regardless of whether it is offered in centers or in the home. They suggested that future studies utilize a larger sample, representative of all Early Head Start families, and include a longer follow-up period to clarify the program's role in preventing child abuse and neglect.

STUDY CITATION

Green, B., Ayoub, C., Bartlett, J., Von Ende, A., Furrex, C., & Chazan-Cohen, R. et al. (2014). The effect of Early Head Start on child welfare system involvement: A first look at longitudinal child maltreatment outcomes. Children and Youth Services Review, 42, 127-135. doi: 10.1016/j.childyouth.2014.03.044.

STUDY METHODOLOGY

Intent to treat. The study used administrative data from state welfare agencies to examine the impact of EHS on documented abuse and neglect among children from 7 of the original 17 programs in the national Early Head Start randomized controlled trial, EHSREP.

INTERVENTION

Participation in Early Head Start

SAMPLE SIZE

1,247 young children and their parents

DATA SOURCE

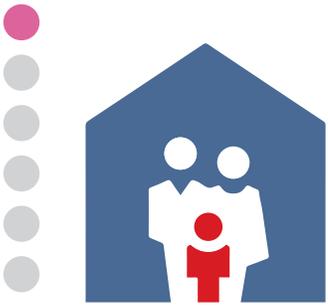
Administrative records from child welfare agencies for EHSREP participants were obtained through electronic matching of identifying information for a 13-year period. Additionally, the researchers conducted case file reviews for all instances where there was either a substantiated report or out-of-home-placement in four sites.

PERIOD OF DATA COLLECTION

Up to nine years of age

STATISTICALLY SIGNIFICANT RESULTS

- *Children between the ages of five years and nine years who participated in EHS were less likely than five- to nine-year-old children who did not participate to have a child welfare encounter during this developmental period.*
- *Children between the ages of five years and nine years who participated in EHS had 38% fewer total number of child welfare encounters during this period than five- to nine-year-old children who did not receive EHS.*
- *EHS program participants also had fewer combined physical and sexual abuse reports, compared to the control group.*
- *Children enrolled in EHS had more neglect reports per child as compared to the control group on average.*



Achieving a Healthier Weight for New Mothers: Home Visiting Program Teaches Healthy Habits

It is no secret the United States is facing an obesity epidemic. People who are overweight or obese are at greater risk for a range of costly chronic diseases, including diabetes, heart disease, and other conditions. Even relatively small reductions in weight can impact health outcomes; a 2.2 pound weight loss is associated with a 16 percent reduction in the likelihood of developing diabetes for individuals who are overweight or obese, and an overall 1 percent reduction in BMI would reduce the number of cases of diabetes in the U.S. by an estimated 2 million people. Mothers face unique obstacles to avoiding obesity when maternal weight gain is maintained after childbirth and is compounded by additional pregnancies. Additionally, the challenges of parenthood, including sleep deprivation, fatigue, stress, and lack of child care and time, can make achieving healthy lifestyle habits difficult. Leaders of the Parents as Teachers home visiting program in St. Louis, Missouri adopted a supplemental program component aimed at reducing the number of mothers who were overweight or obese and had preschool-age children. Among other positive outcomes, researchers found, on average, a differential weight gain of more than 10 pounds between program participants and mothers receiving home visiting alone. Because mothers often influence their children's eating and activity habits, there is potential for these benefits to pass on to the next generation. The study shows promise for home visiting to help address one of the nation's highest public health priorities.

Study: A Randomized Trial of Weight Change in a National Home Visiting Program

The gradual approach of 24 months, compared to a more typical three-to-six month weight loss intervention, allowed small but meaningful changes in behavior to take hold among program participants, researchers hypothesized.

In St. Louis, Missouri, a new intervention called Healthy Eating & Active Living Taught at Home (HEALTH) was incorporated into the Parents as Teachers home visiting program and studied to determine its impact. HEALTH was derived from the U.S. Diabetes Prevention Program. The program focuses on specific lifestyle behaviors likely to impact calorie intake, such as limiting sugar-sweetened beverages, substituting fruits and vegetables for high-calorie snacks, limiting portions, increasing physical activity by walking 30 minutes a day, and decreasing sedentary activities, such as watching television.

Mothers in the study were overweight or obese, and had at least one preschool-aged child at risk for being overweight. Just over half of the study participants received Women, Infants, and Children Program benefits (an indicator of economic disadvantage), 61% were married, and 32% were African American.

Participants who were randomly assigned to the intervention group received Parents as Teachers home visits with the supplemental HEALTH curriculum. The control group received the Parents as Teachers services alone. Both groups were eligible to receive up to 36 visits over 24 months, with the number of visits varying based on family need. Participants receiving the HEALTH curriculum completed significantly more home visits than participants receiving home visiting as usual.

Researchers sought to find out if adding the HEALTH curriculum to the existing home visiting program resulted in a significant difference in the percentage of women who

THE STUDY FOUND 26% OF WOMEN PARTICIPATING IN THE HEALTH PROGRAM ACHIEVED A 5% WEIGHT REDUCTION AT 24 MONTHS, AN INCREASE FROM 18% AT 12 MONTHS.



26 percent of women participating achieved a 5% weight reduction at 24 months



15 percent more women achieved a 5% weight reduction than those in the control group



At 24 months, the control group continued to gain weight, while those in the weight-loss intervention maintained their weight loss

Achieving a Healthier Weight for New Mothers: Home Visiting Program Teaches Healthy Habits

were able to achieve a target weight reduction of 5%. While this difference may appear modest, it is clinically meaningful with regard to chronic disease, such as diabetes.

The study found 26% of women participating in the HEALTH program achieved a 5% weight reduction at 24 months, an increase from 18% at 12 months. This is 15% more women achieving a 5% weight reduction than those in the control group and is statistically significant. Looked at another way, at 12 months, there was more than a 6-pound difference in weight gain between the intervention and standard care groups, and at 24 months, more than a 10-pound difference. Furthermore, at 24 months, the control group continued to gain weight, while those participating in the weight-loss intervention were able to maintain their weight loss. These differences were also reflected in BMI measures; the intervention group decreased its BMI, while the comparison group increased BMI at both 12 months and 24 months.

This study suggests a weight loss intervention can achieve significant outcomes among overweight and obese women when incorporated into home visiting. Researchers hypothesized that the gradual approach of 24 months, compared to a more typical 3- to 6-month weight loss intervention, allowed small but meaningful changes in behavior to take hold among program participants. The researchers recommended scaling up evidence-based programs such as HEALTH to benefit more people and foster policy and program change on a lasting basis.

STUDY CITATION

Haire-Joshu, D., Schwarz, C., Steger-May, K., Lapka, C., Schechtman, K., Brownson, R., & Tabak, R. (2018). A Randomized Trial of Weight Change in a National Home Visiting Program. American Journal of Preventive Medicine, 54(3), 341-351. doi: 10.1016/j.amepre.2017.12.012

STUDY METHODOLOGY

Stratified randomized control trial

INTERVENTION

Parents as Teachers home visits with supplemental lifestyle intervention

SAMPLE SIZE

230 women were randomized into the study; 179 women followed through.

DATA SOURCE

Participants answered questionnaires and had their height, weight, waist circumference, and blood pressure measured in a clinical setting. Participants' height, weight, and waist circumference were obtained according to methods used by the National Health and Nutrition Examination Survey. Blood pressure was measured in accordance with American Heart Association guidelines. Additionally, behavioral assessments were administered using the National Health and Nutrition Examination Survey Dietary Screener Questionnaire.

PERIOD OF DATA COLLECTION

At 12 and 24 months following enrollment in the study

STATISTICALLY SIGNIFICANT RESULTS

Fifteen percent more women participating in the HEALTH program achieved a 5% weight reduction than those in standard care. At 12 months, intervention participants lost .7kg (1.5 lbs.) on average, whereas usual care participants gained 2.1 kg (4.6 lbs.) By 24 months, there was a 4.7 kg (10.4 lbs.) difference between groups with the HEALTH group sustaining their weight loss and the control group continuing to gain weight.



Does Home Visiting Benefit New and Experienced Parents Alike?

This study examined whether home visiting participation and outcomes differ for first-time mothers when compared to mothers with multiple children. Utilizing data from the Healthy Families Virginia program over a 12-year period, researchers determined there were no major differences for the two groups. Instead, they determined participation level, including intensity of services and amount of time in the program, was a more significant determinant of outcomes. Researchers concluded that all mothers, regardless of the number of children, could benefit from access to home visiting programs; in fact, many of the mothers who could most benefit from home visiting have more than one child.

Study: Does Home Visiting Benefit Only First-time Mothers?: Evidence from Healthy Families Virginia

Mothers who stayed in the program longer, and who had more intensive services, had better immunization rates for their children and more enriching home environments.

This study was designed to compare home visiting participation and outcomes of women who have more than one child to women having their first child. Researchers hypothesized that mothers who have had previous births would participate less fully in, and have less significant outcomes from, home visiting programs than would first-time mothers.

Researchers used data from Healthy Families Virginia evaluations between 1999 and 2011. The mothers included in the study were a mix of first-time and non-first-time mothers, all of whom were enrolled in the Healthy Families Virginia home visiting program. The first-time mothers in the study tended to be younger and less educated, while the mothers who already had children were more likely to be older and to have completed high school. The mothers with previous children had higher risk scores for history of maltreatment, substance use, criminal history, and involvement with the child welfare system. They were also more likely to have poorer coping skills, more stressors and concerns, and a higher likelihood of using punitive discipline.

Healthy Families Virginia is based on the Healthy Families America home visiting model. Participating Virginia families who are deemed to be at risk of child maltreatment and in need of parenting support services receive home visits once per week for the first six months of their child's life, followed by less frequent visits over time. The curriculum focuses on developing effective problem-solving skills, improving parenting techniques, ensuring children are being immunized, and connecting the family with support services in the community.

Researchers measured: 1) program involvement, including time in the program, number of home visits, and intensity of services; 2) completion of the 16 immunizations recommended by the American Academy of Pediatrics before the child is five years old; 3) parent score on an instrument measuring aspects of the child's home environment known to foster cognitive development; and 4) percentage of mothers who gave birth to another child less than 24 months after the birth of their first child.

Does Home Visiting Benefit New and Experienced Parents Alike?

Researchers did not find evidence to support their hypothesis that first-time mothers have greater participation and program outcomes than mothers who have previously had children. Program outcomes between the two groups were consistent and were strongly predicted by a combination of participation and demographics. Mothers who stayed in the program longer, and who had more intensive services, had better immunization rates for their children and more enriching home environments. Researchers also found all mothers who had participated in Healthy Families Virginia delayed subsequent birth rates well beyond the national average, with no difference between first-time and experienced mothers.

Researchers concluded home visiting services are valuable for and should be available to all mothers, not just first-time mothers. Targeting only first-time mothers would miss 71% of economically disadvantaged families who maltreat their children, and would exclude 40% of young, single mothers who are suspected of child maltreatment. Because serving multi-child families can require more resources and effort, researchers also investigated best practices for providing services to them. They found qualitative evidence showing it was helpful to have more experienced home visitors matched with the more experienced mothers, as well as flexibility around the number of home visits.

The authors proposed the need for quantitative research to investigate their qualitative finding that multi-child families are better served by more experienced home visitors. Finally, they discussed the need for research examining mental health differences between first-time mothers and mothers with multiple children.

STUDY CITATION

Huntington, L., & Galano, J. (2013). Does home visiting benefit only first-time mothers?: Evidence from Healthy Families Virginia. Zero to Three, 33(3), 24-30.

STUDY METHODOLOGY

*Two-part study: Part 1 (quantitative): retrospective data analysis
Part 2 (qualitative): focus group (with HFV program managers)*

INTERVENTION

Participation in Healthy Families Virginia home visiting program

SAMPLE SIZE

Not specified

DATA SOURCE

Home Observation for Measurement of the Environment (HOME); tool for collecting data on compliance with recommended immunizations and subsequent birth rates not specified

PERIOD OF DATA COLLECTION

Data was drawn from Healthy Families Virginia participants between 1999 and 2011

STATISTICALLY SIGNIFICANT RESULTS

When researchers controlled for the effects of a mother's demographic and risk characteristics, whether or not she had previous children was not correlated with her participation in the program. Instead, a mother's participation in the home visiting program was correlated in varying degrees to her risk score, age, race, employment, and education.

A mother's participation in the home visiting program predicted her child's completion of immunizations. A mother's number of previous births was not a significant predictor of the family's home enrichment score, either at time of enrollment or when the child was at least 12 months old. A family's home enrichment scores could be predicted by their time in the program and the intensity of home visits.

All mothers showed a statistically significant increase in home enrichment scores between initial enrollment and assessment when the child was 12 months old. There was no significant difference between home enrichment scores of first-time and experienced mothers at either measurement point.



Improving Teen Parenting: Results from a Massachusetts Program for Young Families

Adolescent mothers face a wide range of challenges. Navigating the transition to adulthood and figuring out whether and how to continue their education is challenging enough without also making the difficult shift to parenthood. Only about 40 percent of teen mothers complete high school, and fewer than 2 percent finish college by age 30. Teen mothers have higher incidences of substance use and depression, and a greater probability of having been victims of abuse as a child. This study examined the impact of the Healthy Families Massachusetts home visiting program, which serves young first-time parents, on parenting skills, child development, educational attainment, family planning, and maternal health and well-being. The program was found to have wide-ranging positive outcomes, including doubling college attendance and decreasing engagement in risky behaviors.

Study: Improving Adolescent Parenting: Results from a Randomized Controlled Trial of a Home Visiting Program for Young Families

OF THE 433 MOTHERS PARTICIPATING IN THE PROGRAM:



59 percent reported financial difficulties



Over 50 percent of the mothers had been abused or neglected as children



Over 33 percent were diagnosed with clinical depression

This study examined the effects of the Healthy Families Massachusetts program, a statewide home visiting program serving first-time, adolescent parents under 21 years old. The program aims to prevent child maltreatment by supporting effective and positive parenting. It also seeks to improve educational attainment and employment opportunities for parents, and promote child and parent health and well-being. Researchers investigated outcomes related to parenting, child health, parental education and employment, family planning, and maternal health and well-being.

Mothers in the program were twice as likely to start college than mothers who didn't participate in the program.

The 704 study participants were first-time mothers between the ages of 16 and 21, with a mean age of almost 19 when their child was born. Of the mothers, 37% were White, 36% were Hispanic, and 19% were African American. A majority of the mothers (59%) reported financial difficulties. Prior to enrollment in Healthy Families Massachusetts, 19% of study participants received public cash assistance, while 17% received public food assistance. Over half of the mothers had been abused or neglected as children, and over a third were diagnosed with clinical depression.

Of the mothers in the study, 61% participated in the program. The remaining 39%, the control group, instead received information about child development and referrals to community services. Program mothers received biweekly home visits before giving birth, weekly visits for six months after the birth, and additional visits based on family need.

Researchers found the Healthy Families Massachusetts program was successful across a range of outcomes. Mothers in the program were twice as likely to start college than mothers who didn't participate in the program. Participants also reported less parenting

FIRST-TIME MOTHERS BETWEEN THE AGES OF 16 AND 21, WITH A MEAN AGE OF 18.8 WHEN THEIR CHILD WAS BORN.



Nearly twice as likely to have finished **more than one year of college**



Less likely to have engaged in **risky behavior**



Less likely to report intimate-partner **violence**

Improving Teen Parenting: Results from a Massachusetts Program for Young Families

stress and were significantly less likely to engage in risky behaviors, including substance use, fighting, and unprotected sex. One year after the program, Healthy Families mothers reported higher rates of condom use and less intimate-partner violence; both of these effects were reduced, though still meaningful, when measured two years after program completion. Researchers did not find significant effects on reduction of child maltreatment, high school graduation attainment, or employment outcomes.

The study authors noted several limitations. Data included all mothers assigned to receive home visiting services, even though 14% chose not to enter the program, and thus did not obtain program services. This means results might not have provided a fully accurate picture of the positive effects of the Healthy Families Massachusetts program. Researchers also pointed out that having a home visitor in the home regularly could increase reports to child welfare agencies, compared to families who do not have a home visitor.

STUDY CITATION

Jacobs, F., Easterbrooks, M. A., Goldberg, J., Mistry, J., Bumgarner, E., Raskin, M., & Fauth, R. (2015). *Improving adolescent parenting: results from a randomized controlled trial of a home visiting program for young families*. *American Journal of Public Health*. <http://dx.doi.org/10.2105/AJPH.2015.302919> [e-View Ahead of Print].

STUDY METHODOLOGY

Randomized control trial

INTERVENTION

Participation in Healthy Families Massachusetts home visiting program

SAMPLE SIZE

704 mothers included in the final sample, with 433 in the program group and 271 in the control group

DATA SOURCE

Phone interviews, in-person interviews, and data from Massachusetts child protection, public health, transitional assistance, and education agencies

PERIOD OF DATA COLLECTION

24 months after enrollment

STATISTICALLY SIGNIFICANT RESULTS

By 24 months, HFM mothers were nearly twice as likely as control mothers to have finished more than one year of college.

At 12 months, HFM mothers were more likely than control group mothers to report using condoms (this effect was reduced by 24 months).

At 24 months, program mothers were less likely than control group mothers to have engaged in risky behaviors (substance use, fighting, and unprotected sex) in the previous month. They were also less likely to have used marijuana.

At 12 months, program mothers were less likely than the control group mothers to report intimate-partner violence (this effect was reduced by 24 months).



Engaging Parents to Improve School Readiness and Achievement

Active engagement in a child's education takes time and effort on the part of parents, but pays a variety of dividends. Students with parents who are involved in their schooling tend to have fewer behavioral problems and better academic performance. Academic disadvantages start early; for economically disadvantaged children, chronic early absence predicts the lowest levels of educational achievement at the end of fifth grade. This study examined the impact of a home visiting program in Texas and found a range of positive outcomes, including increased involvement of mothers in academic-related activities in the home, improved school attendance, and better results on math achievement tests.

Study: The Home Instruction for Parents of Preschool Youngsters Program's Relationship with Mother and School Outcomes

Teachers of children whose parents had participated in HIPPY reported that almost 85% of the children entered kindergarten ready to learn, as measured by their adaptability and verbal behavior in the classroom.

This evaluation examined the impact of the HIPPY program on children's early academic success in four different ways: kindergarten school readiness and other school outcomes; third-grade math and reading achievement; first-year parent involvement in school and home; and second- or third-year parent school involvement. The study group consisted of families in two North Texas communities that were characterized by high poverty levels and low student standardized test scores. Families participating in the program also tended to have low parental literacy levels, lack of parental involvement, and limited English proficiency. Seventy-nine percent of HIPPY mothers were Latina, and 76% predominantly spoke Spanish.

Participants received home visits through the Home Instruction for Parents of Preschool Youngsters (HIPPY) program, which offers weekly, hour-long home visits for 30 weeks per year, and two-hour group meetings at least six times per year. Home visits are delivered by trained paraprofessionals who typically come from the same community served by a HIPPY site. The overall goal of HIPPY is to promote preschoolers' school readiness and support parents as their children's first teacher by providing instruction to parents in the home.

The majority of students in the communities where the study was conducted were considered at risk for poor academic outcomes. This study showed by completion of kindergarten, HIPPY students had attended pre-kindergarten at a much higher rate, attended school more regularly, and were not held back in the grade as often as their non-HIPPY classmates. Teachers of children whose parents had participated in HIPPY reported that almost 85% of the children entered kindergarten ready to learn, as measured by their adaptability and verbal behavior in the classroom.

Mothers of children in the HIPPY program showed increased involvement in academic-related activities in the home following the first year of the program. Results from state-mandated achievement tests showed third-grade students who had previously participated in the HIPPY program scored significantly higher on the math achievement tests than their non-HIPPY peers. HIPPY children did not fare better on reading in



Third-grade students who had previously participated in the HIPPY program scored significantly **higher on math achievement** tests than their non-HIPPY peers



HIPPY students had **better overall attendance** and were not retained in-grade as often

Engaging Parents to Improve School Readiness and Achievement

this study, which researchers attributed to a greater number of children in the study group speaking Spanish in the home as preschoolers, compared to their peers in the comparison group.

Researchers recommended additional investigation into the relationship between the length of participation in the program and the level of parent involvement on outcomes. Overall, the results indicate this program is increasing parental involvement critical to a child's success and improving several important school outcomes.

STUDY CITATION

Johnson, U. Y., Martinez-Cantu, V., Jacobson, A. L., Weir, C. (2012). The Home Instruction for Parents of Preschool Youngsters Program's Relationship with Mother and School Outcomes. Early Education & Development, 23(5): 713-727. doi: 10.1080/10409289.2011.596002.

STUDY METHODOLOGY

Quasi-experimental design with post hoc matching design

INTERVENTION

Participation in the Home Instruction for Parents of Preschool Youngsters program

SAMPLE SIZE

Variable depending on analysis. Eighty-seven mothers for the effects of HIPPY on parent involvement; 92 kindergarten teachers of HIPPY children were surveyed; 279 kindergartners who participated in the HIPPY program were matched with 279 non-HIPPY students for kindergarten retention; for standardized test comparisons, a total of 108 prior HIPPY students and 108 matched non-prior HIPPY students were included in the analysis.

DATA SOURCE

Parent involvement interview; kindergarten teacher survey; school outcomes (enrollment in pre-kindergarten, attendance, kindergarten retention, scores on a state-mandated achievement test)

PERIOD OF DATA COLLECTION

Three time points: Initial survey at Week 2 of HIPPY program; follow-up survey at completion of 9-month HIPPY program; survey completed by kindergarten teachers in spring 2008

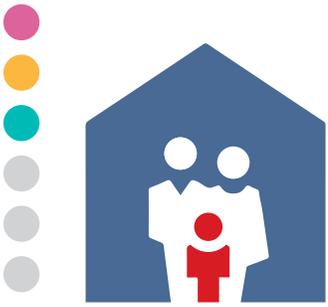
STATISTICALLY SIGNIFICANT RESULTS

Mothers of children in the HIPPY program had increased involvement in academic-related activities in the home following the first year of the program.

The HIPPY program had a positive effect on school outcomes. Kindergarten teachers of HIPPY students reported the majority began school ready to learn.

At the kindergarten level, HIPPY students had better overall attendance, were not retained as often, and attended pre-kindergarten at higher rates than their non-HIPPY peers.

Results from state-mandated achievement tests showed third-grade students previously participating in the HIPPY program to have better results on the math achievement tests than their non-HIPPY peers.



Checking In: How Supplemental Text Messaging Improved Home Visiting Outcomes

Wouldn't it be great if babies came with instruction manuals? Research shows poor parenting practices in the first three years can increase risks for developmental and behavioral problems later in a child's life. Many home visiting programs aim to avoid later risks by providing parents with the knowledge and skills needed to shape positive parent/child interactions. This study looked at the effectiveness of enhancing a home visiting program with frequent text messages. After one year, children whose mothers received home visiting services enhanced with cell phone text messages demonstrated behavior that was more cooperative and less aggressive than children in the control group. An unexpected finding showed mothers in this group had lower levels of depression. The results suggested that home visiting programs may be able to extend their effectiveness by utilizing low-cost and widely available cell phone technology.

Study: Long-Term Impact of a Cell Phone-Enhanced Parenting Intervention

MOTHERS WERE ELIGIBLE FOR THE STUDY IF THEY HAD A PRESCHOOL-AGED CHILD, AS WELL AS AT LEAST ONE OF THE FOLLOWING RISK FACTORS:



Younger than 18 years of age at the birth of the child



Less than a **high school diploma** or equivalent



Economically disadvantaged



Mothers in the study had an average annual estimated family income of **\$18,608**

Texts can be an important tool for reinforcing new skills and information. This study assessed whether a cell phone-supported version of the parenting skills taught in the SafeCare home visiting program improved long-term parenting practices, maternal depression, and children's aggression. In this study, one group received the standard SafeCare curriculum; one group received the SafeCare curriculum enhanced with cell phone text messages and weekly calls to the mother; and the control group received no study intervention. SafeCare aims to prevent and address factors associated with child abuse and neglect and typically provides 18 to 22 weeks of education and support to parents with children from birth to age five years.

In total, 371 mothers and their children were recruited to participate in this randomized control trial. Mothers were eligible for the study if they had a preschool-aged child and at least one of the following risk factors: 1) less than 18 years of age at the birth of the child; 2) less than a high school diploma or equivalent; 3) receiving financial assistance; or 4) meeting the income eligibility requirements for the local WIC or Head Start programs. Mothers in the study had a mean age of 29 years old, and an average annual estimated family income of \$18,608. Mothers self-identified as Hispanic (46%), African American (33%), White non-Hispanic (17%), and Mixed Race or Asian American (4%).

In the first home visiting session, mothers selected from a list of typical daily routines two to three routines in which they would like to see improvements in their family. The chosen routines were made the focus of five sessions. Intervention was introduced through play, with family coaches explaining the rationale for recommended parent/child interactions. A family coach modeled the use of recommended steps with the child, and then the mother was asked to practice. The interventions were taught in an average of five semi-weekly sessions, typically lasting from 90 minutes to two hours.

In addition to the standard intervention, some families in the studied group received two text messages a day. The content of the messages was individualized for each

Utilizing low-cost text messaging technology can enhance and extend the benefits of the SafeCare home visiting model.



Mothers saw a reduction in depression



Parenting skills and parenting interactions improved

Checking In: How Supplemental Text Messaging Improved Home Visiting Outcomes

mother and related to the current focus of that week’s intervention. The majority of the texts were questions pertaining to the intervention or prompts to use the new skills. Some additional texts offered suggestions for free- or low-cost activities in the community or supportive messages to the mother. These mothers also received weekly check-in calls between home visits, in which the family coach inquired about the use of newly learned interaction techniques, mother and child activities, and child behavior.

The study found mothers in both the standard and cell phone-enhanced groups scored significantly higher than control group mothers on parenting skills and parenting interactions. Children in both intervention groups scored significantly higher than control group children on cooperative behavior, and children in the cell-enhanced group also scored significantly higher than the control group on aggressive behavior. Mothers in both intervention groups with high pre-test depression scores also saw a significantly greater reduction in depression when compared to control group mothers, a finding that was not anticipated by researchers at the outset of the study. The authors suggested future research to examine how parenting interventions can lead to improvements in children’s behavior, which, in turn, reduces depression and subsequently improves parenting practices over time. They also suggested further examination of how this approach builds stronger social networks. Additional results indicated that mothers who received text messages and calls were significantly more likely to remain in the program, both during its most active phase and during the follow-up period. This suggests utilizing low-cost text messaging technology can enhance and extend the benefits of the SafeCare home visiting model.

STUDY CITATION

Lefever, J. E., Bigelow, K. M., Carta, J. J., Borkowski, J. G., Grandfield, E., Mccune, L., ... Warren, S. F. (2017). Long-Term Impact of a Cell Phone-Enhanced Parenting Intervention. Child Maltreatment, 22(4), 305-314.

STUDY METHODOLOGY

Randomized control trial

INTERVENTION

Participation in the Parent/Child Interactions (PCI) program with cell phone enhancement

SAMPLE SIZE

371 mother/child pairs

DATA SOURCE

Parenting measured by Keys to Interactive Parenting Scale and PCI checklist. Child Behavior measured by Child Behavior Rating Scale and Behavior Assessment Scale for Children-2-Parent Report Scale. Maternal Depression measured by Beck Depression Inventory II.

PERIOD OF DATA COLLECTION

Follow-up post-tests completed at 6 and 12 months post-intervention

STATISTICALLY SIGNIFICANT RESULTS

At the 12-month post-test, mothers in both intervention groups showed higher scores than the control group mothers on measures of parenting skills and parenting interactions. Children in the text message intervention scored higher than those in the control group on cooperative behavior and externalizing behavior on the 12-month post-test. Compared to control group mothers, mothers with high pretest depression scores had a greater benefit (i.e., reduction in depression) if they participated in either one of the interventions, but the effect size was bigger for those in the text message group. Mothers not receiving text messages were more likely than mothers in the text group to drop out of the study.



Improving Mental Health in Families with Multiple Serious Needs

The quality of the home environment is strongly related to early cognitive and language development and later achievement in school. Sensitive and responsive parent/child relationships are associated with stronger cognitive skills in young children, as well as enhanced social competence and work skills later in school. Children of depressed parents are more likely to have behavior problems, academic difficulties, and health problems. This study examined the impacts of the Child FIRST home visiting program on child and maternal mental health and other well-being outcomes. Families participating in Child FIRST showed significant improvement in child social-emotional functioning and language development, as well as parent mental health. These results illustrated some of the potential family-wide impacts of home visiting related to positive, lifelong outcomes for children and their parents.

Study: A Randomized Control Trial of Child FIRST: A Comprehensive Home-based Intervention Translating Research into Early Childhood Practice

ELIGIBLE FAMILIES PRESENTED MULTIPLE SERIOUS NEEDS, INCLUDING SOCIAL-EMOTIONAL OR BEHAVIORAL PROBLEMS AND PSYCHOSOCIAL RISK.



26 percent had experienced homelessness



41 percent had a history of substance use



28 percent had prior child protective services involvement

This randomized control trial investigated the effects of Child FIRST, a home-based psychotherapeutic intervention program, on positive family outcomes, including lower levels of child emotional, behavioral, and/or language problems, lower levels of maternal mental health issues, lower levels of involvement with child protective services, and increased utilization of community resources and supports.

In total, 157 families from Bridgeport, Connecticut participated in the study. Families were eligible to participate if their child was between six months and three years old, screened positive for social-emotional or behavioral problems, and/or if the parent screened high for psychosocial risk. The families presented multiple serious needs. Of those in the Child FIRST treatment group, 26% had experienced homelessness, 41% had a history of substance use, and 28% had prior child protective services involvement. The control group had similar challenges.

Children who had received home visits had improved language skills and fewer social-emotional and behavioral problems.

The children averaged 19 months old, and many had clinically significant social-emotional behavioral problems or language delays. Additionally, the families had numerous unmet social service needs, including for medical and mental health care, adult education, and family support. The control group did not participate in Child FIRST but was assessed periodically at the same points as the treatment group.

Families in the treatment group were visited at home on a weekly basis for 45 to 90 minutes. During the visits, families received comprehensive services and supports with the goal of decreasing environmental stressors and addressing family needs. The visits were also designed to enhance parent/child relationships in order to improve the child's social-emotional and cognitive development.

AFTER CHILD FIRST PARTICIPATION, FAMILIES SHOWED:



Less child protective services involvement



Reduced psychopathology symptoms



Families accessed **91 percent** of the support services they sought

Improving Mental Health in Families with Multiple Serious Needs

The families were assessed 6 months, 12 months, and 3 years after participation in the program to determine longer-term outcomes. Researchers found the children who had received home visits had improved language skills and fewer social-emotional and behavioral problems. Compared to those who had not received home visits, the Child FIRST mothers had less parenting stress at the 6-month follow-up, lower psychopathology symptoms after 12 months, and less child protective service involvement after 3 years. Finally, the Child FIRST program was also found to be effective at increasing the families’ access to community-based services, including health and mental health care, and education.

Together, these results showed Child FIRST had wide-ranging outcomes likely to positively impact both child and family well-being over time. The authors suggested further research to examine the program’s impact in other communities, to test alternate study designs, and to investigate relationships between different variables within the current study.

STUDY CITATION

Lowell, D. I., Carter, A. S., Godoy, L., Paulicin, B., & Briggs-Gowan, M. J. (2011). A randomized controlled trial of Child FIRST: A comprehensive home-based intervention translating research into early childhood practice. Child development, 82(1), 193-208.

STUDY METHODOLOGY

Randomized control trial

INTERVENTION

Participation in the Child FIRST home visiting program

SAMPLE SIZE

157 families

DATA SOURCE

Self-report, parent report, interviews, Child Protective Services records

PERIOD OF DATA COLLECTION

6 months, 12 months, 3 years

STATISTICALLY SIGNIFICANT RESULTS

Child FIRST children had improved language and externalizing symptoms, compared to the control group. Child FIRST mothers had less parenting stress at the 6-month follow-up, lower psychopathology symptoms at 12-month follow up, and less child protective service involvement at 3 years post-baseline, relative to control group mothers. Intervention families accessed 91% of wanted services, relative to 33% in the control group.



Emma's Story

I also learned some parenting skills that I had never really known before, such as tips for resolving conflicts between them, and the importance of a routine.

I didn't hear about Parents as Teachers

until my youngest daughter was a couple months old. At the time, I felt somewhat self-conscious in my abilities to take care of my kids. I mean, some days it felt like all we did was survive! Between the sleepless nights, my postpartum depression, and trying to balance caring for not one, not two, but three humans — I can remember just how overwhelming life felt!

I joined Parents as Teachers hoping that someone could teach me how to balance parenting an 8-year-old, a 3-year-old, and a newborn. What I gained was reassurance that I was already a good mom, that I didn't need someone to teach me how to tune in to my children's needs. I also gained ideas for fun activities that enhanced my children's development (not just the baby's, but ALL of my children), as well as a deeper understanding about their development levels. I also learned some parenting skills that I had never really known before, such as tips for resolving conflicts between them, and the importance of a routine.

We all enjoyed seeing Susan (our parent educator) each time she came to visit, and it was so nice to have her support and encouragement through the ups and downs of those few years. Thanks to her and the Parents as Teachers curriculum, my children are all thriving in school now. And I am confident, without a doubt, that I am a good parent.



Tribal Home Visiting Builds Community and Improves Family Outcomes

Native American and Alaska Native communities face major disparities in well-being derived from historical trauma, including poorer outcomes related to health, education, labor force participation, and economic opportunity. For instance, 32 percent of native families with children under five years old live in poverty, which is double the rate for the general population. This report examined the outcomes of a cohort of Tribal Maternal, Infant, and Early Childhood Home Visiting Program grantees. The program was shown to improve family outcomes related to child and maternal health, abuse and neglect, academic achievement, domestic violence, and self-sufficiency.

Study: Tribal Maternal, Infant, and Early Childhood Home Visiting: A Report to Congress



71 percent of participants had a family income at or below the federal poverty level



59 percent were unemployed



96 percent had not obtained a bachelor's degree

This report examined the implementation of the Tribal Home Visiting Program, a part of the federally-funded Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV). The 13 Tribes and Tribal organizations included in the report are diverse in size, organizational structure, capacity, and culture. They are located in 14 states from remote Alaska to the rural Midwest, to major Southwest and West Coast metropolitan areas. Some of the grantees are located on reservations, while others are in urban areas; some grantees serve a single Tribe, while others serve multiple Tribal communities.

Families participating in the Tribal Home Visiting Program often face multiple compounding challenges, including poverty, substance use, and domestic violence, issues related to extensive historical trauma, and discrimination. Of the families served by the grantees, 71% of participants had a family income at or below the federal poverty level, 59% were unemployed, and 96% had not obtained a bachelor's degree.

The report summarizes program performance for the grantees during the period covering federal fiscal years 2012 to 2014. The grantees originally received funding in 2010, and they implemented a range of home visiting models depending on the needs of their individual communities. About half selected Parents as Teachers as their primary home visiting model. Other grantees chose Family Spirit, Nurse-Family Partnership, SafeCare Augmented, Parent-Child Assistance Program, or Home Instruction for Parents of Preschool Youngsters. One grantee chose to implement two of these models.

To develop their analysis, researchers reviewed demographic, services, and performance data submitted by the grantees, and informal group interviews were conducted. They

Families participating in the Tribal Home Visiting Program are often facing multiple compounding challenges, including poverty, substance use, and domestic violence, issues related to extensive historical trauma, and discrimination.

OF THE FAMILIES SERVED BY THE GRANTEES:



85 percent of programs reduced child injuries, child abuse, neglect or maltreatment and emergency department visits



77 percent indicated increased family economic self-sufficiency

Tribal Home Visiting Builds Community and Improves Family Outcomes

found over three-fourths of the grantees demonstrated overall program improvement. Grantees made progress on specific benchmarks:

- 62% improved maternal and newborn health outcomes
- 85% reduced child injuries, child abuse, neglect, or maltreatment and emergency department visits
- 69% reported improved child school readiness and achievement
- 77% saw decreased crime or domestic violence
- 77% indicated increased family economic self-sufficiency

Additionally, grantees improved their capacity for developing, implementing, and evaluating their home visiting services. This will facilitate use of the data for self-evaluation, technical assistance, and continuous quality improvement to enhance future outcomes for Tribal children and families.

STUDY CITATION

Lyon, K., Geary, E., Sparr, M., Buckless, B., Salvador, M., & Morales, J. (2015). Tribal Maternal, Infant, and Early Childhood Home Visiting: A Report to Congress (OPRE Report #2015-88). Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services. (Not peer reviewed.)

STUDY METHODOLOGY

Implementation/Descriptive

INTERVENTION

Participation in the Tribal Home Visiting Program; various home visiting models

SAMPLE SIZE

13 grantees

DATA SOURCE

Demographic, service utilization, and performance measurement data submitted by the grantees to the Administration for Children and Families; informal group interviews; existing documents and reports on the Tribal Home Visiting Program and published literature

PERIOD OF DATA COLLECTION

Summarizes Fiscal Year 2012 to 2014 program performances for grantees awarded grants in 2010

STATISTICALLY SIGNIFICANT RESULTS

A majority (77%) of the 13 grantees demonstrated overall improvement in the benchmark areas in the three-year period. Within each benchmark area, the percentage of grantees demonstrating improvement ranged from 62% to 85%.

Key predictors of positive child and family outcomes, such as increased prenatal care, screening rates for maternal depression, and decreased rates of child maltreatment have improved. In addition to program improvements in benchmark areas, grantees built capacities for developing, implementing, and evaluating home visiting services, enabling continuous quality improvement.



New Considerations for Reducing Child Abuse

The consequences of child abuse and neglect are numerous and potentially devastating, including both short- and long-term physical and mental health issues, decreased educational attainment, trauma, changes to brain architecture, difficulty managing emotions, and reduced ability to establish positive and rewarding relationships with others. Home visiting offers a potential avenue to reduce child maltreatment because it focuses on an interval when children are at high risk, and focuses on strengthening protective factors within a family and linking them to supportive resources, such as health care and child care. Previous studies on the effectiveness of home visiting in preventing child abuse have produced inconclusive and sometimes conflicting results. This study of three home visiting programs in Pennsylvania found no evidence of positive program effects on abuse, but offers new insights by identifying implementation factors potentially limiting program effectiveness and important opportunities for improvement.

Study: A Mixed Methods Evaluation of Early Childhood Abuse Prevention within Evidence-based Home Visiting Programs

OUTCOMES FROM EARLY HEAD START, NURSE-FAMILY PARTNERSHIP, AND PARENTS AS TEACHERS

This study was performed within the Commonwealth of Pennsylvania’s Maternal, Infant, and Early Childhood Home Visiting (MIECHV) program evaluation and sought to determine the impact of home visiting programs on child abuse. It compared outcomes for children enrolled in Nurse-Family Partnership (NFP), Parents as Teachers (PAT), and Early Head Start (EHS) to a similar group of children whose mothers were eligible for Medicaid in Pennsylvania from 2008 to 2014. The main outcome for this study was the presence of an abuse episode or high-risk injury episode documented in the child’s medical record.

The study included clients enrolled in MIECHV-funded services at 22 local Nurse-Family Partnership programs, 9 Parents as Teachers programs, and 7 Early Head Start programs. These were chosen to supply a representative sample of agencies, based on program size, location, and model type. They were compared to children in families with similar characteristics from the same local areas. Across all models, the majority of clients were unmarried and non-Hispanic White ethnicity. Compared to Parents as Teachers and Early Head Start, however, the Nurse-Family Partnership clients were most likely to be under the age of 18 and most likely to be Hispanic. The researchers also conducted in-depth interviews with 150 staff and clients from 11 program sites.

The vast majority of serious and abuse-related injuries take place while the child is in the care of a non-client caregiver, often an intimate partner.

This study found quantifiably increased risk of early childhood abuse-related injury among children of MIECHV clients, compared to non-program-enrolled comparison children across three home visiting programs (NFP, EHS, and PAT) implemented in a large state. Among client children experiencing abuse, elevated rates of fracture, dislocation, and crush injuries were seen in comparison to client children experiencing non-abuse related injuries.

New Considerations for Reducing Child Abuse

While findings like these are not new to the field, a strength of this study is the inclusion of information and hypotheses of why home visiting programs may struggle in reducing rates of child abuse. The instances of child abuse assessed in interviews described events where harm occurred to the child outside of the client's oversight while under the supervision of a non-home visiting client caregiver. The researchers noted the data are reflective of other information described by program sites, suggesting that the vast majority of serious and abuse-related injuries take place while the child is in the care of a non-client caregiver, often an intimate partner. The study also cites data showing that home visitors themselves do not report high levels of proficiency in guiding discussions with parents related to sensitive topics such as maltreatment and violence, and interviews revealed a number of clients did not recollect the topic ever being raised.

To address these gaps, the authors suggested that as programs encourage clients to engage in educational and professional advancements, it is important to address the newly created child care needs. Additionally, the role of non-clients in child abuse highlights the importance of delivering program curriculum to as many of the caregivers in contact with children as possible. Noting that "it is naïve to expect home visiting to achieve strong outcomes without a well-integrated and -resourced service network," the authors concluded that programs and clients would benefit from curriculum that more directly and proactively addresses child maltreatment, as well as knowledge of and access to timely, affordable, and quality child care and health care options.

STUDY CITATION

Matone, M., Kellom, K., Griffis, H., Quarshie, W., Faerber, J., Gierlach, P., ... & Cronholm, P. F. (2018). A mixed methods evaluation of early childhood abuse prevention within evidence-based home visiting programs. Maternal and Child Health Journal, 1-13.

STUDY METHODOLOGY

Mixed methods: Quantitative: Entropy-balanced and propensity score matched retrospective cohort analysis comparing children of Pennsylvania Nurse-Family Partnership (NFP), Parents as Teachers (PAT), and Early Head Start (EHS) enrollees and children of Pennsylvania Medicaid eligible women from 2008 to 2014.

Qualitative: In-depth interviews with 150 staff and clients from 11 programs were analyzed using a modified grounded theory approach.

INTERVENTION

Participation in Nurse Family Partnership (NFP), Parents as Teachers (PAT), or Early Head Start (EHS)

SAMPLE SIZE

Quantitative: The entropy-balanced NFP cohort included 8,736 clients enrolled in 22 NFP programs between 2008 and 2014, matched to 165,033 comparisons. The propensity score matched PAT cohort included 851 clients enrolled in 9 PAT programs, matched to 2,929 comparisons. EHS cohort included 866 clients enrolled in 7 EHS programs, propensity score matched to 3,100 comparisons. Qualitative: A total of 150 interviews were conducted with program administrators (25), agency staff (49), and home visiting clients (76).

DATA SOURCE

Quantitative: Multisource administrative data file constructed from social security numbers, names, and dates of birth that included program enrollment, vital statistics (birth and death), welfare eligibility, and medical assistance claim files; Medicaid claims.

Qualitative: Interviews

PERIOD OF DATA COLLECTION

24 months

STATISTICALLY SIGNIFICANT RESULTS

This study demonstrated quantifiably increased risk of early childhood abuse-related injury among children of MIECHV clients, compared to non-program enrolled comparison children. Qualitative data illustrated the circumstances of, and program response to, client issues related to child maltreatment.



Estimating Cost Savings from a Home Visiting Program

The U.S. Department of Health and Human Services has highlighted improved maternal and child health as an important public health goal. Mother and child well-being not only determines the health of the next generation, it predicts future challenges and costs for families, communities, and the health care system. This analysis utilized data from previous outcome evaluations of the Nurse-Family Partnership home visiting model to estimate the potential cost savings generated by the participation of the 177,517 young mothers and their babies who were enrolled in the program through 2013. The study represents a first step in the daunting task of projecting the potential cost savings of taking home visiting programs to scale, and concludes that investments in Nurse-Family Partnership programs more than pay for themselves in avoided health care and social costs.

Study: Projected Outcomes of Nurse-Family Partnership Home Visitation During 1996–2013, United States

Investments in Nurse-Family Partnership programs more than pay for themselves in avoided health care and social costs.

Rather than report on results from new research, this analysis used data from previous evaluations of the Nurse-Family Partnership home visiting model to make estimated projections of the program’s cost-saving impact achieved by enrolling 177,517 families between 1996 and 2013. Nurse-Family Partnership is one of the most highly-studied home visiting models, with evaluations in multiple randomized trials and other analyses. The study’s author systematically reviewed evaluation findings for 21 different outcomes, and calculated effects on three more. Outcomes from the program’s national data system were included, and other information was sought to fill gaps in some trials.

Nurse-Family Partnership is designed for first-time, economically disadvantaged mothers and their children. It includes one-on-one home visits between a trained public health registered nurse and participating clients. Visits begin early in the woman’s pregnancy, with program enrollment no later than the 28th week of gestation, and conclude when the child turns two years old. The program is designed to improve prenatal health and outcomes and child health and development, as well as families’ economic self-sufficiency and/or maternal life course development.

The study estimated that the total cost of providing Nurse-Family Partnership services to this group from 1996 to 2013 was roughly \$1.6 billion. Authors estimated that by 2031, those program enrollments will eliminate the need for 4.8 million person-months of child Medicaid spending, and will reduce estimated spending on Medicaid, Temporary Assistance to Needy Families (TANF), and food stamps by \$3.0 billion (present values in 2010 dollars). These savings alone represent a return of almost two-to-one.

In addition, this analysis projected that by 2031, Nurse-Family Partnership program enrollments from 1996 to 2013 will have further increased the return on investment by reducing the incidence of the following costly events:

- infant deaths
- preterm births
- dangerous closely-spaced second births
- child maltreatment incidents

Estimating Cost Savings from a Home Visiting Program

- use of subsidized child care
- property and public order crimes (such as vandalism and loitering) by youth, and youth arrests
- violent crimes by youth
- youth substance use
- smoking during pregnancy
- pregnancy complications
- childhood injuries
- intimate-partner violence incidents

Nurse-Family Partnership is also estimated to generate cost savings from promoting the following outcomes:

- improved language development
- increased breast-feeding
- increased compliance with immunization schedules

Researchers noted several limitations to the outcomes and cost savings analysis. Some outcomes were only evaluated in one trial, while others focused on a singular demographic population and may not be broadly replicable. Impact estimates were less certain for outcomes such as child maltreatment and medically treated injuries where nurse presence can increase reporting or change treatment decisions. Also, when taking a program to scale, model fidelity and the ability to replicate all outcomes becomes more of a challenge and is difficult to estimate.

Nonetheless, researchers noted the broad array of outcomes supported by evidence points to Nurse-Family Partnership as a sound investment. The program saves society money while improving the lives of participating economically disadvantaged mothers and their children, and benefits society more broadly by reducing crime and reliance on the safety net.

STUDY CITATION

Miller, T. R. (2015). Projected outcomes of nurse-family partnership home visitation during 1996–2013, USA. Prevention Science, 16(6), 765-777.

STUDY METHODOLOGY

Systematic review, Secondary data analysis

INTERVENTION

Participation in the Nurse-Family Partnership home visiting program

SAMPLE SIZE

23 reports

DATA SOURCE

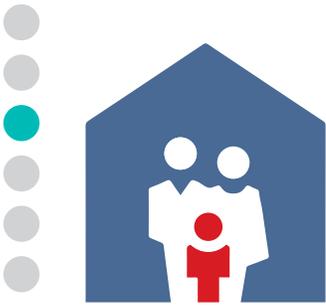
Various

PERIOD OF DATA COLLECTION

Not applicable

STATISTICALLY SIGNIFICANT RESULTS

*Reduced smoking during pregnancy
 Reduced pregnancy-induced hypertension
 Fewer preterm births
 Fewer infant deaths
 Improved birth spacing
 Reduced intimate-partner violence
 Fewer childhood injuries and instances of maltreatment
 Improved language development
 Fewer criminal offenses and reduced substance use
 Increased immunizations
 Reduced TANF and food stamp payments
 Reduced need for Medicaid; lower costs if enrolled in Medicaid
 Reduced need for subsidized child care*



Texas Home Visiting Program Empowers Latino Family Engagement

The U.S. Department of Education has found that significant educational achievement gaps exist between economically disadvantaged children and children of color and their higher-income and White peers. For instance, in 2017, 51 percent of White students and 64 percent of Asian students were at least proficient in fourth-grade mathematics. However, only 26 percent of Hispanic students and 19 percent of African American students were shown to be proficient. These achievement gaps often start well before kindergarten, since some children have less access to learning and development opportunities starting at birth. This study investigated the effects of the Home Instruction for Parents of Preschool Youngsters (HIPPY) program on home environments and third-grade education outcomes for Latino families. The results showed that families participating in HIPPY had more educationally enriched home environments, and children who had participated in HIPPY had significantly higher mathematics scores in third grade when compared to their peers who had not participated in HIPPY. The researchers concluded the program provides culturally-sensitive services to improve educational achievement for Latino children.

Study: Impact of HIPPY on Home Learning Environments of Latino Families

ALL THE PARTICIPANTS WERE LATINO AND FROM SPANISH-SPEAKING FAMILIES.



Mothers were **31 years old** on average



93 percent were married



The median household income was between **\$15,000 and \$25,000**



54 percent of participating children were three years old and **45 percent** were four years old

This two-part study was designed to determine the effects of the HIPPY home visiting program on Latino families that speak Spanish in a school district in the southwestern United States. The researchers studied both the parental self-efficacy and home environment of families participating in HIPPY and those not participating, as well as school achievement of children who had participated in HIPPY as compared to peers who had not participated.

The HIPPY curriculum focuses on language development and early literacy, problem solving, logical thinking, and social/emotional skills. It runs for 30 consecutive weeks, during which the parents receive weekly home visits from a trained home visitor who is typically from the same community. During the visits, which are designed to increase parent involvement and school readiness, parents receive a packet containing developmentally appropriate games to play and activities to do with their children throughout the week. Parents in the HIPPY program are taught skills designed to build confidence and help them be actively involved in their child's education. Families receive HIPPY services for up to three years between the child's age of three years and five years.

Families in the study either received HIPPY services or were on the waitlist. The first study cohort, which researchers used to examine program impacts on the home environment, included 54 HIPPY families and 54 families on the waiting list. All the participants were Latino and from families who spoke Spanish. The mothers were, on average, 31 years old, and the vast majority (93%) were married. The median household income was between \$15,000 and \$25,000. The average household contained 2.3 adults and 2.3 children. The participating children were three years old (54%) and four years old (45%). The second study cohort, which researchers used to investigate academic

Texas Home Visiting Program Empowers Latino Family Engagement

outcomes, consisted of 131 former HIPPY participants in the third grade at the time of the study, and a comparison group of 131 third-grade students with similar demographics. The children all attended school at a diverse urban school district in Texas.

In Cohort 1, researchers found the home environment was more enriched for children in the HIPPY program than for those not participating. Enriched environments contained more learning materials, and children were offered a greater variety of learning experiences and academic preparatory activities. HIPPY parents demonstrated more self-efficacy than their peers on the waitlist. These findings held true when controlling for maternal education, depression, and stress.

In Cohort 2, the group that had participated in HIPPY scored significantly higher on the math section of the state achievement test than children who had not participated in HIPPY. This effect was statistically significant even when controlling for family income. No significant difference was found in the reading scores of the HIPPY participants and their peers, which researchers believe could be due in part to differences in English fluency between the HIPPY participant group and the comparison group.

The researchers concluded that HIPPY provides culturally-sensitive services to improve the educational achievement of Latino children. They attributed the academic success of past HIPPY participants to the enriched home environments these children experienced from ages three years to five years, and also to their parents' active involvement in their education. Both are fostered by the HIPPY curriculum. The authors suggested future research could examine fidelity to the HIPPY model, and they encouraged further investigation to collect and analyze information about children who receive more than one supportive service.

STUDY CITATION

Nievar, M. A., Jacobson, A., Chen, Q., Johnson, U., Dier, S. (2011). Impact of HIPPY on home learning environments of Latino families. Early Childhood Research Quarterly. 26: 268-277. doi: 10.1016/j.ecresq.2011.01.002.

STUDY METHODOLOGY

Cohort 1: Quasi-experimental design | Cohort 2: Cross-sectional study

INTERVENTION

*Cohort 1: Participation in the HIPPY program
Cohort 2: Previous participation in the HIPPY program*

SAMPLE SIZE

*Cohort 1: 108 (54 families participating in the HIPPY program, 54 families on the waitlist for the HIPPY program)
Cohort 2: 262 (131 former HIPPY program participants in the third grade and 131 third graders with similar demographics)*

DATA SOURCE

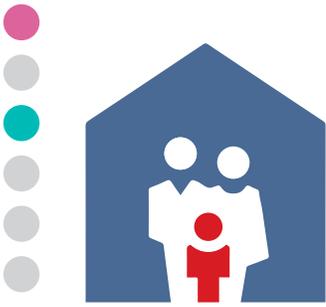
*Cohort 1: Baseline demographic survey and follow-up observation and questionnaire
Cohort 2: Achievement scores; Parenting Stress Index; Parental Involvement and Efficacy scale; Center for Epidemiological Survey-Depression (CES-D); Home Observation for Measurement of the Environment (HOME) measure*

PERIOD OF DATA COLLECTION

Cohort 1: Two time points – initial demographic survey and follow-up observational visit after six months in HIPPY program | Cohort 2: Third grade

STATISTICALLY SIGNIFICANT RESULTS

*Cohort 1: HIPPY participation predicted home environment more strongly than did parental income, maternal education, parental efficacy, maternal depression, and parenting stress, with home environment more enriched for children in the HIPPY intervention program.
Cohort 2: The HIPPY intervention group scored higher on the math section of the state achievement test than the comparison group of third graders. HIPPY impacted third-grade math achievement despite family income differences.*



Building on Home Visiting Relationships to Address Childhood Obesity

Childhood obesity can lead to dangerous medical problems later in life, including heart disease, type-2 diabetes, cancer, high blood pressure, and asthma. Furthermore, obese children and teens are more likely to become obese adults, compared to non-obese children. Childhood obesity rates have tripled over the last 40 years, coupled with concerning racial and ethnic disparities. The Centers for Disease Control and Prevention reports that 26 percent of Hispanic children and 22 percent of African American children were overweight or obese compared to 14 percent of White children. Factors present during pregnancy and the first two years of life can influence the risk for obesity in later childhood. This study examined a group of predominantly Latina mothers to determine whether receiving home visiting services starting prenatally would have an impact on their children's weight from birth to age two years. It found these children were significantly less likely to be obese at two years of life compared to children in the control group. Considering the serious health consequences and increased health care spending associated with obesity-related diseases, this evaluation provided promising evidence of the potential impact of starting obesity prevention early through home visiting.

Study: A Home Visiting Parenting Program and Child Obesity: A Randomized Trial

FIRST-TIME MOTHERS WHO LIVED IN MEDICALLY UNDERSERVED COMMUNITIES AND RECEIVED PRENATAL CARE AT TWO INNER-CITY COMMUNITY HEALTH CLINICS WERE INVITED TO PARTICIPATE.



Most families were living at or below the federal poverty level



A **majority** had a high school education



33 percent were teenagers

The goal of this study was to determine if the Minding the Baby home visiting program would decrease the number of children who were overweight and obese early in life. First-time mothers who lived in medically underserved communities and received prenatal care at two inner-city community health clinics were invited to participate. The communities are culturally and ethnically diverse, with most families living at or below the poverty level. About one-third of the mothers were teenagers, and the majority were Hispanic, single, and with a high school education.

Women in the control group received standard group prenatal and primary care at the community health clinics. Women in the intervention group received standard care along with the Minding the Baby program. The program is designed for first-time mothers living in economically disadvantaged settings. It is based on a model of care that bridges primary care and infant mental health services by pairing a pediatric nurse practitioner with a licensed clinical social worker to conduct home visits. The home visitors meet with families separately on an alternating schedule, beginning in the second or third trimester of pregnancy until the child's second birthday. Visits occur weekly until the child's first birthday, and then transition to every other week.

Researchers collected data on a range of maternal characteristics known to be associated with childhood obesity, including maternal mental health, rapid infant weight gain, and feeding other than breastfeeding. The main outcome measure was prevalence of overweight and obesity at age two, using standard Centers for Disease Control guidelines.

Children who received services from Minding the Baby were significantly less likely to be obese at two years of life.

**FOR PARTICIPATING MINDING
THE BABY FAMILIES:**



Just **3 percent** of children were considered obese compared to **20 percent** in the control group

Building on Home Visiting Relationships to Address Childhood Obesity

Results indicated children who received services from Minding the Baby were significantly less likely to be obese at two years of life than children in the control group. At age two, 20% of children in the control group were obese, compared to slightly more than 3% of children participating in Minding the Baby. Additionally, children in the intervention were significantly more likely to weigh in the normal range at age two. Because the families were predominantly Hispanic, researchers noted the results may not be generalizable to non-Hispanic African American and non-Hispanic White families. Even so, given the obesity epidemic among the Hispanic community, these results showed significant promise. The researchers suggested Minding the Baby's interdisciplinary approach to improve parent/child relationships and support positive parenting behaviors during the first two years of life might lower the rate of overweight and obesity among children, and called for additional research to better understand how obesity prevention can be embedded more broadly in home visiting. They noted that "by focusing broadly on attachment, health, mental health, parenting, and life course outcomes, we aimed to prevent difficulties rather than interrupt them once begun," and called for additional research to better understand the specific program mechanisms that contribute to success in obesity prevention.

STUDY CITATION

Ordway, M. R., Sadler, L. S., Holland, M. L., Slade, A., Close, N., & Mayes, L. C. (2018). A home visiting parenting program and child obesity: A randomized trial. Pediatrics, e20171076.

STUDY METHODOLOGY

Randomized controlled trial

INTERVENTION

Participation in the Minding the Baby home visiting program

SAMPLE SIZE

158 children

DATA SOURCE

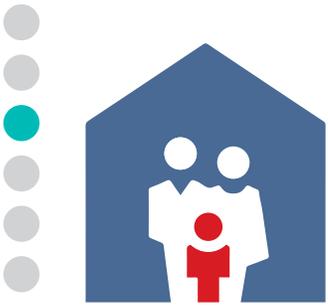
Self-report questionnaires, Semi-structured interviews

PERIOD OF DATA COLLECTION

27 months post-enrollment

STATISTICALLY SIGNIFICANT RESULTS

Children who received services from Minding the Baby were less likely to have obesity at two years of life, compared with children in the control group. The rate of obesity was higher in the control group (20%) compared with the intervention group (3%) at this age.



A Two-Generation Approach to Improving Child Outcomes

Addressing the complex needs of economically disadvantaged families requires a multifaceted approach. Research has demonstrated that across home visiting programs and a wide range of family issues, there is a common set of inputs that contribute to positive outcomes. These include the willingness and ability of families to fully participate in the program; the appropriateness of the curriculum, information, and services available to families; and the extent to which the home visiting program addresses the challenges and barriers faced by economically disadvantaged families. This study examined the role of parent involvement in Early Head Start in order to better understand the factors driving positive outcomes for families. The research suggested that the amount of time parents engage in the program varies by family characteristics, and that the quality and content of home visits are strongly linked to child and parent outcomes.

Study: Involvement in Early Head Start Home Visiting Services: Demographic Predictors and Relations to Child and Parent Outcomes



25 percent did not speak English as a first language



Almost 33 percent of mothers were teenagers when their child was born



30 percent of mothers in the study lived with a husband or partner



45 percent of mothers had not finished high school when the study began

This study sought to investigate the role of parent involvement in home visiting in order to better understand how to maximize program impact. Researchers structured their study to examine three key contributors to parental involvement in home visiting:

- dosage (number of home visits, duration in the program, length of visits, and intensity of service)
- the relationship between demographic/family factors and level of engagement (maternal risk factors such as teen parenting, no high school degree, receipt of welfare benefits, not being married, not being in school or working, housing mobility, and low levels of verbal ability)
- components of the home visiting program itself (such as the extent to which the home visits are child-focused)

Study authors ran further analyses to determine the impacts of engagement variables on child and parental outcomes. Child outcome variables were measured by infant development and picture vocabulary tests. Parent variables included parent supportiveness, home environment, and maternal depression. Early Head Start participants receive a 90-minute visit each week and two group socialization activities per month. The study drew from multiple measures over a range of time points.

Data on families included in the study was taken from 11 of the 17 Early Head Start programs that participated in the Early Head Start Research and Evaluation study. The 11 programs are located in urban and rural areas in the eastern, midwestern, and western United States. Of the study participants, 45% were White, 25% were African American, and 27% were Hispanic. One quarter of the study participants did not speak English as a first language. Almost one-third of the mothers were teenagers when their child was born; 30% of the mothers in the study lived with a husband or partner. Forty-five percent of the mothers in the sample had not finished high school when the study began, and 17% were enrolled in school or training.

A Two-Generation Approach to Improving Child Outcomes

Researchers found many home visiting involvement variables were significantly associated with child and family outcomes, and the ways families were involved in the program appeared to influence child and parental outcomes. The extent of child-focused activity during the visit was significantly related to cognitive and language development, parental support for children’s language and learning, as well as overall positive home environments. Parent engagement was related to mental health, which suggests home visiting services may be effective in addressing mental health issues of parents, if the home visitor is able to engage the mother. Findings suggested quality and content of visits are more strongly linked to outcomes than the quantity of visits.

The study, consistent with other research, showed family demographics and characteristics are powerful predictors of parent involvement in home visiting and program outcomes. For instance, parents of children with disabilities stayed in Early Head Start longer and were rated as more engaged. The researchers also found differences by race and ethnicity. White families received higher-intensity services and more home visits, but were not rated as more engaged. Hispanic families who did not speak English were rated as more engaged in the program than their peers who spoke English, regardless of ethnicity. African American families received less child-focused activity during home visits, as did mothers rated more “at risk” — an important finding, given that child-focused home visits were correlated with more positive outcomes. The researchers posited the reason for less child-focused home visits could be these families had a greater need for basic supportive services.

Researchers suggested home visiting programs be encouraged to sharpen their focus on “the inputs and outputs desired in order to determine for which families the program is reaching its mark and for whom new approaches may need to be found.” They also recommended new investments and research to learn how to best engage the parents with the most risk factors.

STUDY CITATION

Raikes, H., Green, B. L., Atwater, J., Kisker, E., Constantine, J., Chazan-Cohen, R. (2006). Involvement in Early Head Start home visiting services: Demographic predictors and relations to child and parent outcomes. Early Childhood Research Quarterly, 21: 2-24. doi: doi:10.1016/j.ecresq.2006.01.006.

STUDY METHODOLOGY

Within-program evaluation using a variety of regression analytic methods

INTERVENTION

Participation in the Early Head Start program

SAMPLE SIZE

The sample for the study included 11 of the 17 programs that participated in the Early Head Start Research and Evaluation study. The full descriptive sample was between 372 and 579 participants, depending on the measure. Due to incomplete data in certain cases, the regression sample was between 179 and 231 participants, depending on the measure.

DATA SOURCE

Baseline survey, child assessment and parent interviews conducted by program, Parent Services interviews; other data sources such as staff reports

PERIOD OF DATA COLLECTION

Multiple time points: Assessments of children and interviews with parents when children were 14, 24, and 36 months of age; Parent Services Interviews at 7, 16, and 28 months after initial program enrollment; additional assessments carried out as well

STATISTICALLY SIGNIFICANT RESULTS

Findings in this complex study included numerous correlations between levels of parent engagement and (1) dosage, (2) family characteristics, and (3) certain components of the Early Head Start program. For example, single parenthood was associated with mean length of visits, engagement of the mother during visits, and percentage of visits spent on child-focused activities. Parents who were rated as more globally engaged in the program and more engaged during home visits were about half as likely to report symptoms associated with moderate depression when children were 36 months of age. And quantity and quality of home visiting involvement did not initially predict the outcome, but child-focused activity did account for significant variance in the model.



Building Maternal-Infant Attachment through Home Visits

The attachment, or emotional closeness, children have to their parents can have significant consequences on their development. Secure attachment helps children prepare for independence, and can play an important role in their own future parenting. Children who have strong attachment to their parents are more comfortable learning and exploring, and have a higher sense of overall well-being. A “reflective” parent understands how emotions work, and views a child’s behaviors in light of the child’s mental state, not the parent’s. Reflective parents are more likely to have healthy attachments with their children. This study examined a group of mothers participating in the Minding the Baby home visiting program to determine the program’s outcomes on mother/infant attachment, parenting, and health. Results showed children of mothers receiving home visits had higher rates of strong attachment to their parents. This study illustrated home visiting can lead to more reliable and safe parent/baby relationships, which has positive lifelong impacts on the child.

Study: Minding the Baby: Enhancing Reflectiveness to Improve Early Health and Relationship Outcomes in an Interdisciplinary Home-Visiting Program

A TOTAL OF 105 FAMILIES PARTICIPATED IN THE STUDY, AND ALL PARTICIPANTS WERE FIRST-TIME MOTHERS FROM MEDICALLY UNDERSERVED COMMUNITIES.



Mothers were **20 years old** on average



Mothers averaged **11 years** of schooling (less than a high school diploma)

This study sought to determine the effects of the Minding the Baby home visiting program on attachment, parenting, and health outcomes. A total of 105 families participated in the study, and all participants were first-time mothers from medically underserved communities. The participant population was 62% Latina and 28% African American. The mean age of the participating mothers was 20 years old; on average, the highest grade level attained by the mothers was 11 years of schooling (less than a high school diploma).

The program group received weekly home visits from the mother’s late second trimester/early third trimester until the child’s first birthday. Between the child’s first and second birthdays, the families received biweekly home visits. Visits were carried out on an alternating basis by a team made up of a nurse practitioner and social worker. The comparison group received routine prenatal and postnatal office visits, well-baby health care visits, and monthly information sheets about child rearing and child health.

Minding the Baby mothers parented in more sensitive, less “frightening” ways.

The study indicated that Minding the Baby had a positive effect on health, attachment, and parenting outcomes. Overall, the group participating in Minding the Baby was more likely than the control group to have infants with secure attachments (72% vs 53%), although the effect appeared to be stronger for older mothers and was not statistically significant when looking at only teen mothers. However, teen mothers participating in Minding the Baby were nearly 12 times more likely to have healthy communication patterns with their children than those in the control group, a finding that was statistically significant. Teen mothers with less than a 12th grade education saw improvement in parental reflective functioning compared to control group mothers.

THE STUDY SHOWED:



Mothers were **three times** more likely to have infants with secure attachments



Teen mothers were nearly **12 times** more likely to have healthy communication patterns with their children



Children were **more likely** to be up to date on immunizations

Building Maternal-Infant Attachment through Home Visits

Researchers concluded Minding the Baby mothers parented in more sensitive, less “frightening” ways. A strong trend toward lower rates of child welfare referrals was also found in the families receiving home visits.

Babies born to mothers receiving home visiting services were significantly more likely to be up to date on immunizations during their first year. By age two, both groups were found to be up to date with immunizations; this may have been the result of a statewide outreach program aimed at immunizing all children by age two. Minding the Baby mothers also delayed subsequent childbearing. This suggests they were managing their own lives in a more deliberate way, which will have positive impacts on their entire family over the long term. This study demonstrated home visiting can lead to changes in parenting skills and other behaviors that give children a stronger foundation on which to build success in life.

STUDY CITATION

Sadler, L. S., Slade, A., Close, N., Webb, D. L., Simpson, T., Fennie, K., & Mayes, L. C. (2013). *Minding the Baby: Enhancing Reflectiveness to Improve Early Health and Relationship Outcomes in an Interdisciplinary Home-Visiting Program*. *Infant Mental Health Journal*, 34(5), 391-405. doi:10.1002/imhj.21406

STUDY METHODOLOGY

Randomized control trial: nested two group experimental design

INTERVENTION

Participation in the Minding the Baby home visiting program

SAMPLE SIZE

105 families

DATA SOURCE

Demographic interview, written research instruments, clinical interview regarding mother's experience of pregnancy/expectations about baby, health records (reviewed at 12 and 24 months), videotaped mother/child sessions (face-to-face interaction at 4 months, Strange Situation Procedure at 12-14 months), written questionnaires at 12 and 24 months, Parent Development Interview administered at 24 months

PERIOD OF DATA COLLECTION

Both groups were followed for 27 months. Follow-up was 3 months after final session, with health records reviewed at 12 months and then again at 24 months.

STATISTICALLY SIGNIFICANT RESULTS

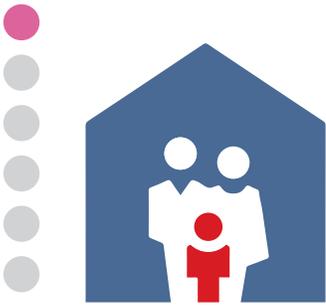
At 12 months, the Minding the Baby group was more likely to be up to date on immunizations than the control group.

Minding the Baby mothers had fewer instances of rapid subsequent childbearing

Minding the Baby participants were more than three times more likely as the control group to have infants with secure attachments.

Teen mothers participating in Minding the Baby were nearly 12 times more likely to have healthy communication patterns with their children.

Minding the Baby teen mothers with less than a 12th grade education saw improvement in parental reflective functioning compared to control group mothers.



Home Visiting Represents An Untapped Opportunity to Reduce Childhood Obesity

Childhood obesity rates have tripled over the last 40 years, with economically disadvantaged populations and racial minorities experiencing the greatest impact. Obesity can lead to heart disease, type-2 diabetes, cancer, high blood pressure, and asthma. As children age, the prevalence of obesity increases, with 14 percent of children ages 2 to 5 years, 18 percent of children ages 6 to 11 years, and 20 percent of children ages 12 to 19 years having obesity. However, research shows factors present during pregnancy and the first two years of life can influence the risk of obesity later in childhood. Home visiting programs present a potential opportunity to reach families during these critical early years. Multiple researchers have examined the impact of specialized obesity prevention enhancements to home visiting programs on maternal and/or child weight. A growing body of research is developing, with recent and ongoing studies building on prior findings. Researchers used promising findings from a pilot conducted in California with Healthy Families America to inform the first random-controlled trial in this area. It will assess the effectiveness of a habit-based intervention to prevent obesity among underserved preschool-age children and their mothers, delivered as part of a home visiting program. Random assignment of Alabama HIPPY families to treatment and control groups was completed in summer 2018, and families began to receive home visiting services as usual, or home visiting plus an evidence-based nutrition and physical activity enhancement, in September. Results of this ongoing research will be released in early 2020.

Studies: Habit Formation Intervention to Prevent Obesity in Low-income Preschoolers and their Mothers: A Randomized Controlled Trial Protocol

Home Visitation Programs: An Untapped Opportunity for the Delivery of Early Childhood Obesity Prevention

CHILDHOOD OBESITY RATES HAVE TRIPLED OVER THE LAST 40 YEARS, WITH ECONOMICALLY DISADVANTAGED POPULATIONS AND RACIAL MINORITIES EXPERIENCING THE GREATEST IMPACT.

Current approaches to childhood obesity prevention have had limited success, but the one-to-one interaction that is a hallmark feature of home visiting programs offers a different strategy to address this intractable problem. Home visiting may be more effective in reducing early childhood obesity than other programs because it eliminates barriers to services posed by transportation or child care constraints; reaches parents and children before the age of school entry; helps bring about positive changes in the home itself, where nutrition and physical activity habits are formed; and enables ethnically and racially diverse families to access culturally relevant services.

This theory was tested by a small pilot intervention called Childhood Obesity Prevention @ homE, or Contrarrestar Obesidad: Programa para niños En casa (COPE) that was added to the Healthy Families America home visiting model in an underserved region north of the Los Angeles metropolitan area. COPE seeks to integrate evidence-based nutrition and physical activity strategies into the curriculum of home visiting programs. It provides a family-centered lifestyle intervention and builds healthy social networks within a family's community. COPE promotes repetition, practice, mastery, and maintenance of healthy lifestyle skills. It also links families with local resources, such as community gardening and cooking classes, and with other families to foster the development of social networks that support long-term maintenance of healthy behavior.

In the pilot, 50 mothers and infants between 1 month and 12 months old were randomly assigned to either the home visiting service with the COPE curriculum

Current approaches to childhood obesity prevention have had limited success, but the one-to-one interaction that is a hallmark feature of home visiting programs offers a different strategy to address this intractable problem.

Home Visiting Represents An Untapped Opportunity to Reduce Childhood Obesity

or home visiting alone. Researchers reported initial positive results after six months, including lower consumption of sugar-sweetened beverages by both mothers and infants, lower average daily caloric intake by mothers, and weight loss versus weight gain by the control group. This preliminary work in California supported the feasibility and efficacy of including obesity prevention as part of home visiting services. It also revealed that an intervention designed to target several complex behaviors simultaneously was not conducive to long-lasting habit formation.

A related study in Alabama is building on these findings, using a more targeted approach that focuses on repeated practice of a smaller number of key behaviors. The Alabama research will examine the effectiveness of an obesity-prevention curriculum called HABITS as part of the Home Instruction for Parents of Preschool Youngsters (HIPPO) home visiting model. This study is the first random-controlled trial to assess the impact of a habit-based intervention to prevent obesity among underserved preschool-age children and their mothers, delivered as part of a home visiting program. Participants include 298 mothers and their children enrolled in HIPPO, who were randomly assigned to either HABITS or home visiting as usual for nine months. If the research documents positive outcomes, the partnership between the HIPPO home visiting model and HABITS improves the potential to disseminate cost-effective and sustainable evidence-based obesity efforts on a larger scale.

STUDY CITATIONS

Salvy, S., Dutton, G., Borgattic, A., Young-Il, Kim. Habit formation intervention to prevent obesity in low-income preschoolers and their mothers: A randomized controlled trial protocol. Contemporary Clinical Trials, Jul 2018, Vol. 70.

Salvy, S., de la Haye, K., Galama, T, and Goran, M. Home visitation programs: An untapped opportunity for the delivery of early childhood obesity prevention. Obesity Rev. 2017 Feb; 18(2): 149–163. doi: 10.1111/obr.12482.

Salvy, S., de la Haye, K. COPE, Childhood Obesity Prevention at Home: Integrating Childhood Obesity Prevention into Home Visiting; presentation.

STUDY METHODOLOGY	<i>Various</i>
INTERVENTION	<i>Sustained, weekly, in-home obesity prevention as an enhancement to services delivered by standard home visitation programs.</i>
SAMPLE SIZE	<i>Various</i>
DATA SOURCE	<i>Observation and measurement</i>
PERIOD OF DATA COLLECTION	<i>Various</i>
STATISTICALLY SIGNIFICANT RESULTS	<i>Results pending</i>



The Vance Family

A two-year-old in the Vance* family of seven began receiving Early Head Start home visiting services in September 2017 while the family lived in a remote RV camp site at Fish Lake, in Oregon. The family could not afford housing in Rogue Valley, where dad Michael worked, so they shared a small RV camper that was in need of repair.

Their home visitor, Vicki, began facilitating home visits at the campground, assessing the needs of the two-year-old and her family and bringing needed supplies and child development resources. The mother, Susan, doesn't drive due to epilepsy, and

Michael commuted to work, only able to visit the campground on weekends. This left Susan and their five children very isolated. The three older children were not enrolled in school due to a lack of transportation. Two had been diagnosed with autism.

After about five weeks of hard work to locate potential family supports, the Vances were able to move to an RV park in Medford, where Vicki continues to provide weekly home visits in the driveway of the RV space or in the community laundry room. The move allowed Michael to spend each evening at home with his family, and placed the family close to community resources and public schools.

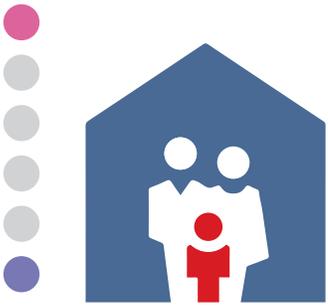
Transportation continued to be a major obstacle for the Vance family. The home visitor was able to provide transportation so the children could register for elementary school and complete appointments for evaluations. Access to local transportation provider Translink, which helps people get to medical appointments, enabled Susan to obtain needed medical care for herself and get her two youngest children — her two-year-old (the Early Head Start participant) and

her one-year-old — to the doctor for their immunizations. The family was then referred to a health clinic within walking distance of their new Medford RV park for further health needs. Michael, a veteran, was able to receive medication for depression.

Collaboration with their Head Start community health worker, Emily, helped the Vance family connect to additional local resources, including access to the YMCA (for showers), food from local food pantries, and clothing needs. Emily also connected Susan to the Starting Strong program, founded by their Oregon Health Plan coordinated-care provider. Starting Strong provides vouchers to mothers each time they show up for health appointments such as well child exams and immunizations. The vouchers can be exchanged for diapers, wipes, strollers, and other critical family needs.

Susan is deeply grateful for the information, education, and parenting support from the Early Head Start Home-Based program. It has enabled her two-year-old and other children to be healthier, happier, and ready for a bright future.

**Names have been changed.*



Innovative Collaboration Reduces Maternal Depression

An estimated 20 percent of economically disadvantaged women experience major depression, and 35-40 percent experience depressive symptoms. According to the National Academy of Sciences, about one in five children live in households with majorly or severely depressed parents. Depressed mothers are more likely to have poor parenting skills. Children of depressed mothers are more likely to have behavior issues, academic difficulties, and health problems. Depressed mothers are also more likely to be unemployed, compared to nondepressed mothers. This study examined whether a focused, rapid-cycle quality improvement initiative known as the Home Visiting Collaborative Improvement and Innovation Network (HV CoIIN) could strengthen the capacity of home visiting programs to screen and treat depressed new mothers, with the goal of helping more mothers who screened positive for depression achieve a 25 percent reduction in depressive symptoms. Home visiting programs participating in this innovative approach improved depression screening rates from 84 percent to 96 percent. The rate at which women with positive depression screens accessed evidence-based services increased as well, from 42 percent to 66 percent. Ultimately, 60 percent of mothers experienced at least a 25 percent improvement in their depression symptoms, up from a baseline of 51 percent experiencing that level of progress. The study showed home visiting programs' engagement in state-of-the-art quality improvement initiatives can help to close gaps in maternal depression screening and treatment.

Study: Addressing Maternal Depression in Home Visiting: Findings from the Home Visiting Collaborative Improvement and Innovation Network

This study presented results from the first national application in home visiting of a quality improvement method known as the Breakthrough Series Model. State Maternal, Infant, and Early Childhood Home Visiting program grantees and their local partners were invited to participate in federally funded Collaborative Improvement and Innovation Networks (CoIINs) to utilize the Breakthrough Series Model. This quality improvement method recruits teams of direct service providers and other stakeholders to pursue one shared goal during a defined time period, usually 9 to 18 months. Each team develops a problem-solving approach to test, using real-time data collection and analysis and exchange of information and feedback among the network to support adaptation and innovation. This particular CoIIN addressed the challenge of postpartum depression. Eight states with 14 local home visiting program partners were selected to participate. The local programs utilized four evidence-based models: Healthy Families America, Healthy Steps, Nurse-Family Partnership, and Parents as Teachers. Together, the programs served close to 1,500 families. The CoIIN facilitated learning sessions, action periods, and “plan-do-study-act” cycles designed to realize a 25% reduction in depressive symptoms in women who screened positive for depression three months after they accessed services.

Home visiting programs worked to achieve this goal by increasing both the number of women screened for depression within three months of enrollment

Continuous quality improvement initiatives such as CoIINs can promote and quickly disseminate effective use of evidence-based practices to improve home visiting services.

OF THE PARTICIPATING MOTHERS:



60 percent who tested positive for depressive symptoms saw at least a **25 percent** reduction in their symptoms after three months



Depression screening rates improved to **96 percent**



Mental health service access for women with depression improved to **66 percent**

Innovative Collaboration Reduces Maternal Depression

and birth, and the number of women with a positive screen who accepted a referral to evidence-based services and accessed services.

The study found 60% of women who tested positive for depressive symptoms saw at least a 25% reduction in their symptoms after three months, compared to a baseline of 51% of women at the beginning of the CoIIN initiative. A shift of seven points above the baseline over seven months signaled meaningful improvement. Depression screening rates improved from 84% to 96%, and evidence-based service access increased from 42% to 66% among women with positive depression screens. To achieve this progress, programs focused on:

- developing in-house capacity to implement alternative interventions for postpartum depression prevention and treatment (e.g., Mothers and Babies, and Moving Beyond Depression, respectively)
- improving techniques to engage families in conversations about maternal depression, act on referrals, and manage their own treatment
- improving case management processes that supported screening, acceptance of referrals, and treatment follow-up

These results suggested continuous quality improvement initiatives such as CoIINs can promote and quickly disseminate effective use of evidence-based practices to improve home visiting services. Given the enormous impact of maternal depression on child and family well-being, the federal Maternal and Child Health Bureau will work with an additional set of home visiting programs on addressing this issue. The authors recommended future research on implementation science, or how programs adapt key interventions with fidelity and sustain evidence-based practices.

STUDY CITATION

Tandon, D., Mackrain, M., Beeber, L., Topping-Tailby, N., Raska, M., Arbour, M., Addressing Maternal Depression in Home Visiting: Findings from the Home Visiting Collaborative Improvement and Innovation Network.

STUDY METHODOLOGY

Single study design. Researchers analyzed data using established methods for identifying “special cause variation,” or variation that is unlikely due to chance alone. These analysis methods are analogous to statistical significance in traditional enumerative statistics.

INTERVENTION

Policies and protocols for depression screening and home visitor response to screening results as enhancements to standard home visiting (multiple models)

SAMPLE SIZE

1,578

DATA SOURCE

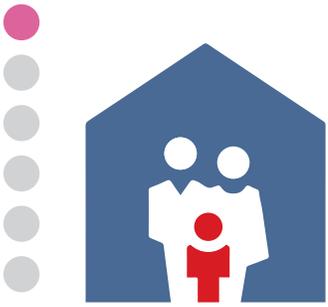
Local implementing agencies submitted monthly data

PERIOD OF DATA COLLECTION

Data collected over 24 months during the collaborative

STATISTICALLY SIGNIFICANT RESULTS

Participation in the CoIIN resulted in improvements in depression symptoms from 51% to 60% of women in the program. It also improved depression screening rates from 84% to 96% and evidence-based service access from 42% to 66% among women with positive depression screens.



Support for Mothers Improves Breastfeeding and Immunization Rates

Research shows breastfeeding has numerous positive impacts on babies, including reduced risk of illnesses such as pneumonia, serious colds, and gastrointestinal, respiratory, ear, and throat infections. Breastfeeding is also associated with a 36 percent reduced risk of Sudden Infant Death Syndrome, and lower rates of adolescent and adult obesity. Breastfeeding has positive benefits for mothers, too, including a reduced risk of postpartum depression and breast and ovarian cancers. Immunizations are another important key to health, offering protection from diseases and health complications in childhood and later in life. This study examined the impacts of the Nurse-Family Partnership home visiting program on breastfeeding and immunization. Researchers found families who participated in home visiting had more positive breastfeeding and immunization outcomes than similar families who did not participate.

Study: Status of Breastfeeding and Child Immunization Outcomes in Clients of the Nurse-Family Partnership

This study investigated the impact of Nurse-Family Partnership on breastfeeding and immunizations. Data on over 19,000 mothers who received nurse home visits were examined to determine breastfeeding rates, while data on more than 8,000 mothers in the program were used to determine on-time immunization rates. These mothers were compared to a control group of mothers with similar demographics who did not receive Nurse-Family Partnership services, using information from major national data sets.

Nurse-Family Partnership serves mothers beginning no later than 28 weeks of gestation. Mothers participating in the program receive routine home visits from a specially-trained registered nurse who provides information and care to improve infant and maternal health and well-being. Nurses support mothers in breastfeeding when it would be in the best interest of the mother and child, as well as encouraging regular well-child visits, which include scheduled immunizations.

For the study, researchers investigated whether children were ever breastfed, and whether they continued to be breastfed at six months and one year old. They also investigated whether the children's immunizations were up to date at four different points in time.

Families participating in the program had overall significantly higher breastfeeding and immunization rates than children in the control group.

Researchers determined families participating in the program had overall significantly higher breastfeeding and immunization rates than those in the control group. For instance, at 6 months of age, 90% of children in the program had up-to-date immunizations, compared to 76% of children in the control group. At 2 years of age, 95% of children in the program had up-to-date immunizations, compared to 84% of children in the control group. Additionally, Nurse-Family Partnership mothers

CHILD IMMUNIZATION OUTCOMES:



90 percent of children at six months of age in the program had up-to-date immunizations



95 percent of children at two years of age in the program had up-to-date immunizations

Support for Mothers Improves Breastfeeding and Immunization Rates

had a significantly increased likelihood of beginning breastfeeding, and continuing to breastfeed for 6 and 12 months. The study found two exceptions to this pattern: mothers in the program were less likely to breastfeed exclusively at 6 months than the control group, and there was no significant difference between the two groups in immunizations at 12 months of age.

Researchers noted limitations in the study. Specifically, parents who did not complete Nurse-Family Partnership (and thus are not included in the data) were more likely to be teenage, non-Hispanic Black, unmarried, and without a high school diploma or GED than the comparison group. These are known demographic factors related to poorer outcomes for breastfeeding and immunization status. While researchers did attempt to account for these factors in their statistical methodology, they warn that the positive study outcomes could be partially due to attrition bias.

STUDY CITATION

Thorland, W., Currie, D., Wiegand, E. R., Walsh, J., & Mader, N. (2017). Status of breastfeeding and child immunization outcomes in clients of the Nurse-Family Partnership. Maternal and Child Health Journal, 21(3), 439-445.

STUDY METHODOLOGY

A cross-sectional design was employed to characterize NFP clients and contrast them with the children of economically disadvantaged, first-time mothers.

INTERVENTION

Participation in Nurse-Family Partnership home visiting program

SAMPLE SIZE

From the National Survey of Children's Health data set, a sample of 3,923 children were compared with 19,242 children from the NFP cohort who had records of breastfeeding behavior at either 6 or 12 months of age (65% of the NFP birth cohort). From the National Immunization Survey data set, a sample of 14,867 observations was compared with 8,139 NFP clients with immunization data.

DATA SOURCE

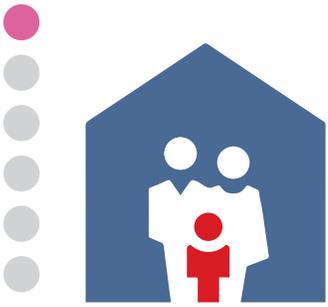
The NFP metrics drew together variables from standardized forms completed during home visits at 6, 12, 18, and 24 months after the child's birth by nurses trained in data collection procedures. Comparison data came from the National Survey of Children's Health data and National Immunization Survey data.

PERIOD OF DATA COLLECTION

24 months

STATISTICALLY SIGNIFICANT RESULTS

NFP clients were more likely to have ever breastfed and maintain breastfeeding at 6 and 12 months, but less likely to exclusively breastfeed at 6 months. NFP clients were more likely to be up to date on immunizations at 6, 18, and 24 months of age than the control group, with no significant difference at 12 months.



Home Visiting Program Shows Lower Incidence of Preterm Births

Children who are born early or who have low birth weights can be at risk for increased health problems later in life. A baby's brain, lungs, and liver fully develop during the crucial final weeks of pregnancy. Babies born preterm are more likely to experience breathing and feeding problems, vision and hearing difficulties, cerebral palsy, and developmental delays, and they may have learning and behavioral problems once they reach school age. Premature births in the United States are associated with costs of approximately \$26.2 billion every year. This study examined the birth outcomes of women participating in the Nurse-Family Partnership (NFP) home visiting program as compared to women not participating in the program. The results indicated that while no significant difference in birth weight was found, NFP participants had significantly lower incidence of preterm births.

Study: Status of Birth Outcomes in Participants of the Nurse-Family Partnership



27 percent of mothers were African American, **29 percent** Hispanic, and **22 percent** White non-Hispanic



50 percent did not have a high school diploma or GED



25 percent of mothers were younger than 18, and **75 percent** were younger than 23 years old

The goal of this study was to compare birth outcomes between participants in Nurse-Family Partnership and mothers who did not receive services from the program. Researchers compared 27,195 enrollees to non-participating mothers with similar maternal age, race/ethnicity, smoking status, education, and marital status. Researchers investigated birth outcomes, including early preterm birth (defined as babies born at less than 32 weeks of gestation), preterm birth (less than 37 weeks of gestation), early term birth (less than 39 weeks of gestation), very low birthweight (3.31 pounds or less), and low birthweight (5.51 pounds or less).

Of the mothers enrolled in Nurse-Family Partnership, 27% were African American, 29% Hispanic, and 22% White non-Hispanic. One quarter of the mothers were less than 18 years old, one quarter were 18 or 19 years old, and one quarter were 20–22 years old. About half did not have a high school diploma or GED. Researchers used vital records data to pair participants with mothers who had similar demographic characteristics to construct a non-participant control group.

Participants were significantly less likely than comparison group mothers to have early preterm, preterm, or early term births.

The program typically serves mothers beginning no later than 28 weeks of gestation. Participating mothers receive routine home visits from a specially-trained registered nurse who provides care to improve infant and maternal health and well-being, including a focus on a healthy pregnancy.

Researchers concluded that mothers enrolled in Nurse-Family Partnership showed more favorable birth outcomes, compared to women in the non-treatment group. Overall, participants were significantly less likely than comparison group mothers to have early preterm, preterm, or early term births. Researchers found that less than

**IN THE NURSE-FAMILY
PARTNERSHIP:**



Mothers were **less likely** to have early preterm, preterm, or early term births

Home Visiting Program Shows Lower Incidence of Preterm Births

9% of the treatment group had preterm births, compared with 12% of mothers who did not receive nurse home visits. No significant difference in low birth weight was observed. These results indicated that Nurse-Family Partnership interventions may have a positive impact on pregnant mothers' ability to carry babies to term. The authors suggested the need for future randomized control trial research to replicate the findings and further examine factors that can contribute to birth outcomes.

STUDY CITATION

Thorland, W., & Currie, D. W. (2017). Status of birth outcomes in participants of the Nurse-Family Partnership. Maternal and Child Health Journal, 21(5), 995-1001.

STUDY METHODOLOGY

Retrospective cohort study design

INTERVENTION

Participation in Nurse-Family Partnership home visiting program

SAMPLE SIZE

27,195 mother/child pairs

DATA SOURCE

Databases were constructed from the NFP data warehouse, as well as from national vital records birth data provided by the Centers for Disease Control and Prevention, National Center for Health Statistics (NCHS).

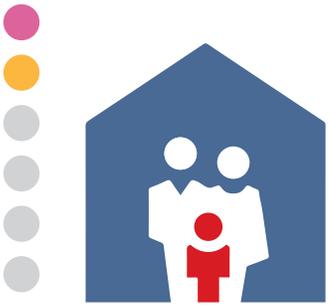
PERIOD OF DATA COLLECTION

N/A

STATISTICALLY SIGNIFICANT RESULTS

The incidence of preterm births in NFP participants was lower than in matched controls (less than 9% vs. 12%, respectively).

No significant difference in low birth weight was observed.



Improving Childbirth Outcomes for Mother and Baby with Home Visiting

Babies born too early or too small are at risk for a range of challenges and poor outcomes. These include expensive hospitalizations during infancy and learning and behavioral problems throughout childhood. In addition to causing heartache for families, premature births can also affect parents' ability to work, compounding costs to both families and society. In 2007, the Institute of Medicine estimated total costs of prematurity at \$26.2 billion annually. This study examined the outcomes of an initiative in Kentucky called the Health Access Nurturing Development Services (HANDS) Home Visiting Program. It found HANDS participants were more likely to have adequate prenatal care, less likely to be diagnosed with pregnancy-induced hypertension, and less likely to have a complication during delivery. Moreover, HANDS participants were less likely to have a newborn with low birth weight or to deliver prematurely. Participation in the HANDS program also led to reductions in child maltreatment, another focus of the intervention. The results indicated that home visiting designed to address maternal and child health outcomes can provide expectant and new mothers with the services needed to assure a healthy pregnancy and delivery, and improve newborn outcomes on a variety of health and safety measures.

Study: Kentucky Health Access Nurturing Development Services Home Visiting Program Improves Maternal and Child Health

OF THE 4,506 FAMILIES STUDIED, 88% WERE WHITE, FIRST-TIME MOTHERS. HANDS MOTHERS WERE SIGNIFICANTLY MORE LIKELY TO RECEIVE ADEQUATE PRENATAL CARE.



78 percent were enrolled in Medicaid



33 percent had less than a high school education



26 percent less likely to have a pre-term birth

The Kentucky Health Access Nurturing Development Services (HANDS) program is a state-developed evidence-based home visitation program for new and expectant at-risk first-time parents. This study examined whether participants in HANDS would be more likely to have an adequate number of prenatal care visits, deliver healthier infants, experience fewer complications during pregnancy, and see reduced reports of child maltreatment.

In order to participate in HANDS, mothers go through a two-step screening and enrollment process. First, they must meet at least two of the following criteria that research shows put them and their baby at greater risk for poor outcomes: unemployment, isolation, history of substance use, unstable housing, limited parental education, domestic violence, poor prenatal care, and maternal depression. Potential participants who meet these eligibility requirements participate in a face-to-face interview with a community health nurse or other professional who assesses additional family challenges, including the mother's perceptions of the new infant, parental substance use, poor mental health, current stressors, parental history of abuse as a child, anger management skills, and whether the child was unplanned or at other risk for poor bonding.

Of the 4,506 families studied, 88% were White, first-time mothers. Approximately one-third had less than a high school education, and 78% were enrolled in Medicaid. The families studied received home visits designed for first-time families. Each family was provided information for problem solving and parenting skills development, as well as referrals for assistance in meeting basic needs such as housing, food, health care, and other required services. Home visitors worked with parents to set individual family goals to shape the content of future home visits. During the prenatal period,



Mothers were **46 percent** less likely to have an infant with low birth weight



Families were **47 percent** less likely to have a substantiated report of child maltreatment

Improving Childbirth Outcomes for Mother and Baby with Home Visiting

weekly home visits focused on obtaining regular prenatal care, and on topics such as fetal development, early brain development, preparation for newborn care, injury prevention, and utilizing community resources. HANDS home visitors used a parent/child interactive curriculum called Growing Great Kids, which focuses on building the relationship between parent and child and improving protective factors. All family visits covered general pregnancy and child development information, but each family also set individual goals. Specific content was targeted to each family based on those goals.

Researchers found that, compared to comparison group mothers, HANDS mothers were significantly more likely to receive adequate prenatal care. HANDS participants were 26% less likely to have a preterm birth, 46% less likely to have an infant with low birth weight, and 47% less likely to have a substantiated report of child maltreatment. Other significant results included reductions in pregnancy-related hypertension, maternal complications during delivery, and an increase in maternal receipt of nutritional food through WIC. Study authors highlighted that increased numbers of home visits were correlated with stronger outcomes. They noted potential bias in the study toward mothers who may have been more motivated toward behavior change, since only about half of all initial referrals actually received HANDS home visits. Nevertheless, the findings indicated home visiting programs focused on health outcomes, such as HANDS, can deliver substantial improvements in maternal and child health.

STUDY CITATION

Williams, C. M., Cprek, S., Asaolu, I., English, B., Jewell, T., Smith, K., & Robl, J. (2017). Kentucky Health Access Nurturing Development Services Home Visiting Program Improves Maternal and Child Health. Maternal and Child Health Journal, 21(5), 1166-1174. doi:10.1007/s10995-016-2215-6.

STUDY METHODOLOGY

Quasi-experimental study with matched comparison group analysis

INTERVENTION

Participants who were referred to HANDS and completed the referral screen and assessment, and had at least one home visit

SAMPLE SIZE

4,506 families

DATA SOURCE

Children's live birth certificates. Some additional data was obtained from the Department for Community Based Services (DCBS), Division of Child Protection and Safety.

PERIOD OF DATA COLLECTION

Multiple outcomes measured at birth; other outcomes assessed at child's first birthday.

STATISTICALLY SIGNIFICANT RESULTS

Compared to control group mothers, HANDS mothers were less likely to have:

- *A preterm birth*
- *An infant with low birth weight*
- *A substantiated report of child maltreatment*
- *Pregnancy-related hypertension*
- *Maternal complications during delivery*

HANDS mothers were also more likely than control group mothers to have adequate prenatal care.

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