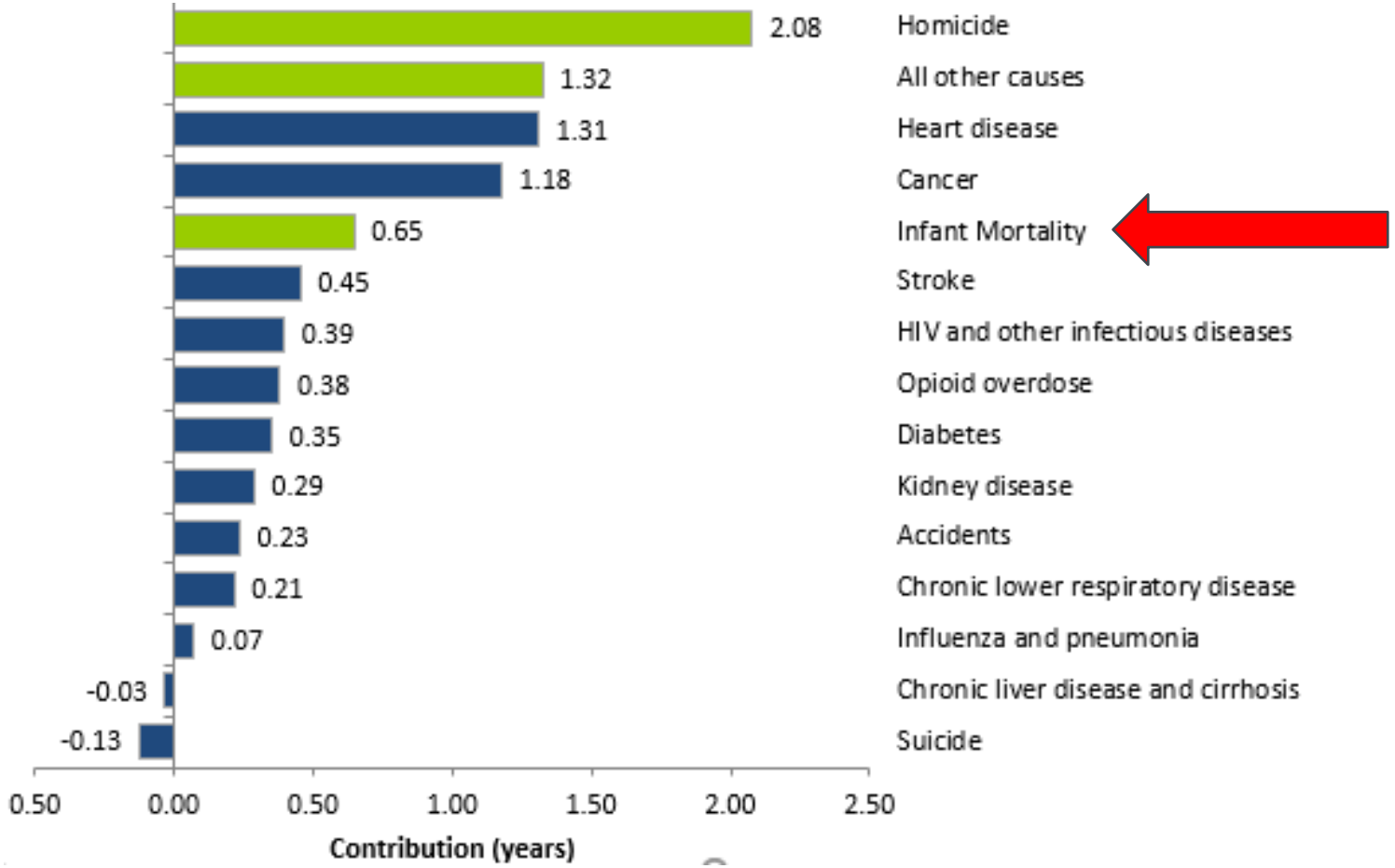
CDPH
Chicago Department of Public Health

Maternal, Infant, Child and Adolescent Health

CDPH Board of Health Meeting – July 21, 2021

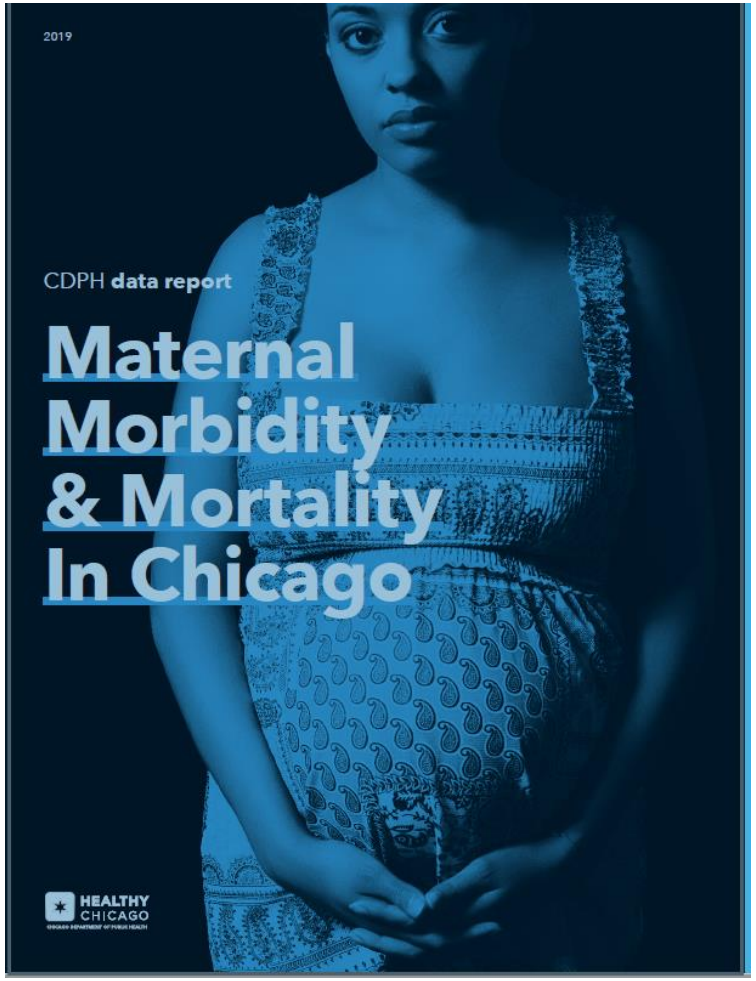
Data – Infant Mortality and Morbidity

Number of years contributed by cause to the life expectancy gap, Non-Latinx white and Non-Latinx Black, 2016-2017



Data – Maternal Mortality and Morbidity

- Severe maternal morbidity rate is 2.5x higher for Black women
- Pregnancy-associated mortality ratio is 6x higher for Black women
- Women living in communities of high economic hardship have the highest rates of severe maternal morbidity and mortality



Partnerships to Improve MCH Outcomes

START EARLY
Champions for Early Learning

All Hands Health Network
A Lurie Children's Collaboration

Planned Parenthood of Illinois

Chicago Public Schools

BEST BABIES ZONE

EVERTHRIVE ILLINOIS
CHAMPIONS FOR HEALTH EQUITY

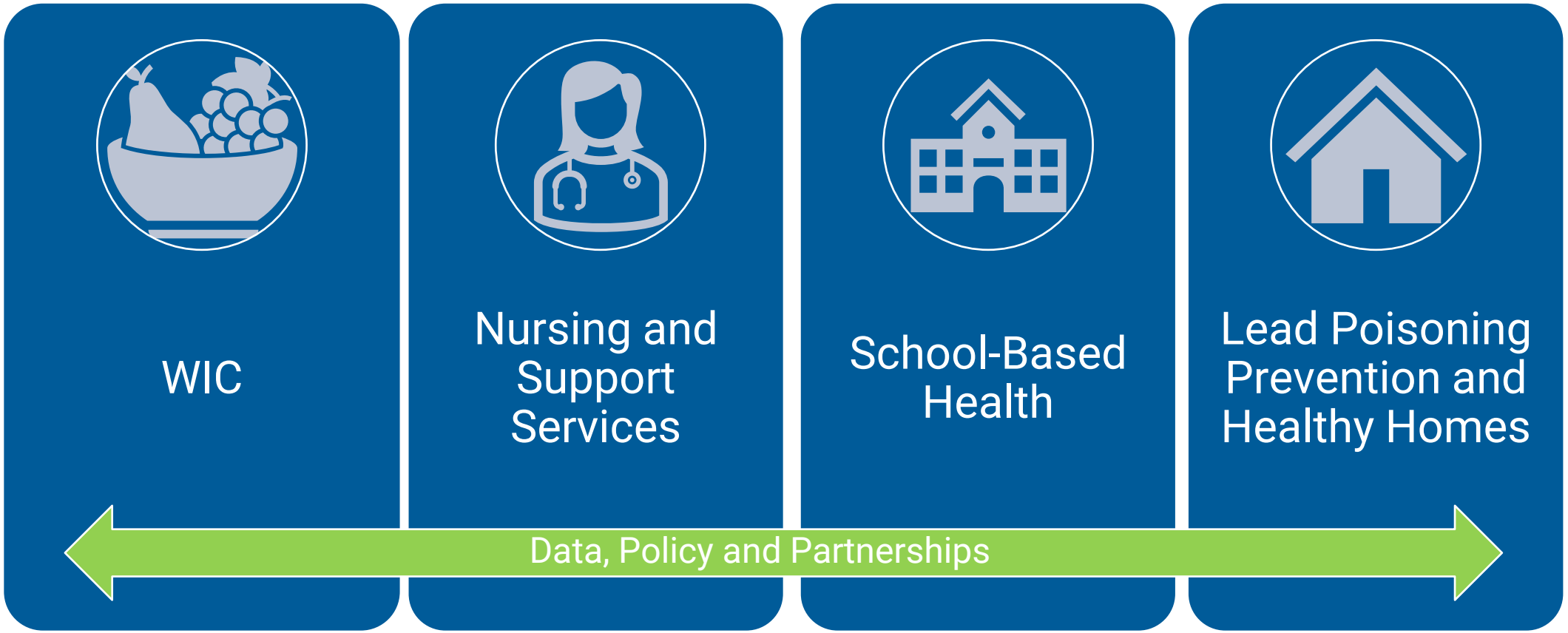
Chicago Collaborative for Maternal Health

PHIMC
Public Health Institute of Metropolitan Chicago

I PROMOTE-IL
INNOVATIONS TO IMPROVE MATERNAL OUTCOMES IN ILLINOIS

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

MICAH Bureau (Maternal, Infant, Child and Adolescent Health)



WIC (Women, Infant and Children) Program

- CDPH is the largest provider of WIC (Special Supplemental Nutrition Program) services in the Chicago with a current caseload of 24,138 clients seen across 6 CDPH-run sites and 5 delegate-run sites

- WIC provides:
  - Access to healthy foods
  - Nutrition education
  - Breastfeeding support
  - Health Screenings
  - Referrals to additional services

WIC WOMEN, INFANTS, & CHILDREN

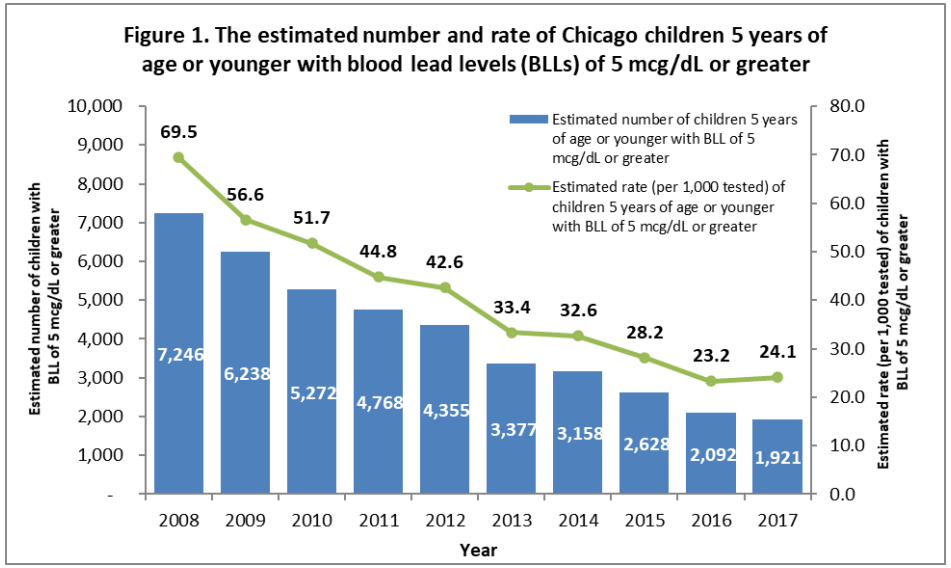
- It works:
  - Reduces risk of prematurity, low birth weight, infant death, obesity, child neglect, and food insecurity

School-Based Health Services

Vision	Oral Health	Sexual Health (CHAT)
Comprehensive vision exams and free eyeglasses for grades K-12 More than 147,000 pairs of eyeglasses and 285,840 eye exams	Dental education, exams, cleanings, fluoride treatment and dental sealants for grades K-12 More than 1 million children served	Sexual-health education, optional and confidential testing for gonorrhea and chlamydia, and counseling with a health educator for grades 9-12 Condom access and educational resources

Lead Poisoning Prevention & Healthy Homes

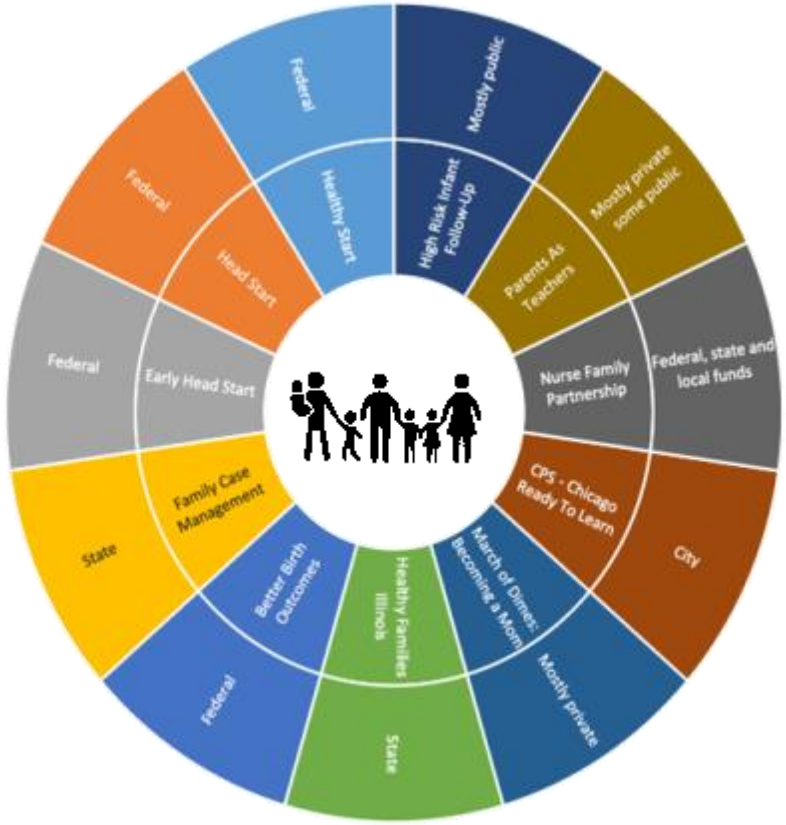
- Families with children under 6 who test at a blood lead level of 5 micrograms per deciliter or greater receive:
  - Nurse case management to families for education and connections to health and other resources
  - Free home lead inspection from CDPH
  - Financial and technical support for mitigation of lead hazards and other healthy home safety improvements
  - Prevention through community and provider engagement and education



Nursing and Support Services

FAMILY CONNECTS CHICAGO

A System in Need



- Systems not coordinated; creating duplication and families slipping through cracks
- Many services not evidence-based
- Services focus on families pre-determined to be at-risk
- Families face barriers to locating and enrolling in services

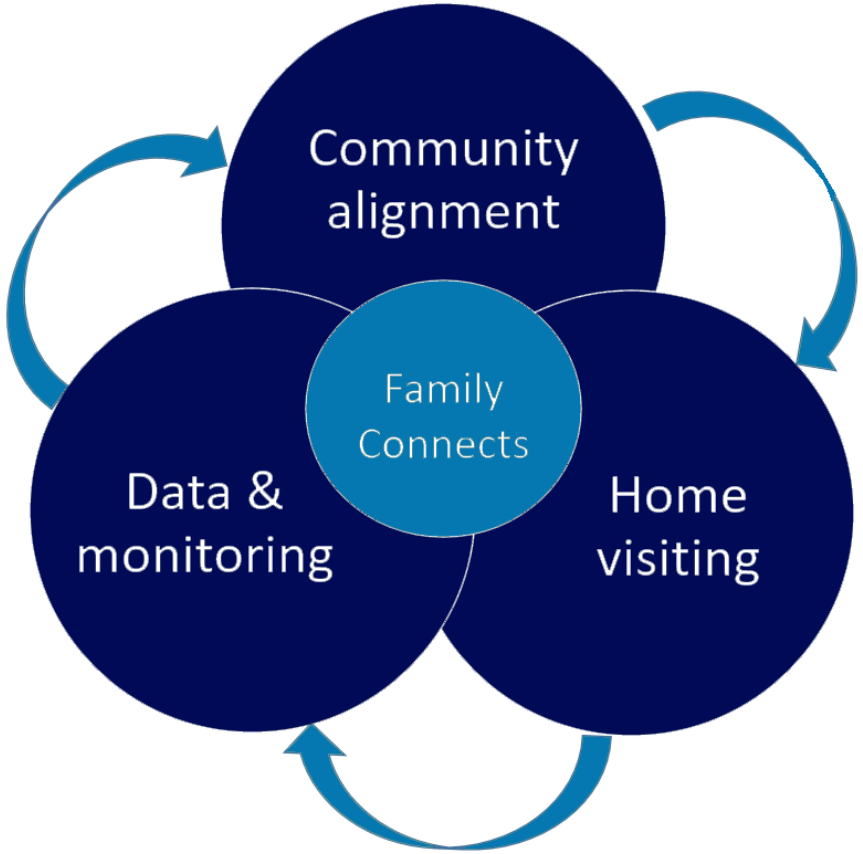
Universal Newborn Supports System

- Identify and prioritize family needs by screening mothers and newborns for health, safety, and family well-being
- Connection to services based on families' needs– with a warm hand off to ensure families are successfully connected
- Improve agency coordination to ensure a seamless experience for participants using follow-up services
- Identify and address gaps in service delivery in order to improve resource allocation and inform policy

Family Connects

How the Model Works

Core Components of the System



Family Support Matrix Domains

Support for Health Care	1. Maternal Health
	2. Infant Health
	3. Health Care Plans
Support for Infant Care	4. Child Care Plans
	5. Parent-Child Relationship
	6. Management of Infant Crying
Support for a Safe Home	7. Household Safety/Material Supports
	8. Family and Community Safety
	9. History with Parenting Difficulties
Support for Parent(s)	10. Parent Well Being
	11. Substance Abuse in Household
	12. Parent Emotional Support

Each factor is rated as:

1 = No family needs
2 = Needs addressed during visit
3 = Community resources needed
4 = Emergency intervention needed

Community Alignment Domains

Evidence Based Program

- Decreases maternal anxiety by 34% overall and closes the racial disparity by 89%
- Decreases emergency medical care by 33% and closes the racial disparity gap by 14%
- Mothers more likely to complete their 6-week post-partum health check
- Home environments were safer, and homes had more materials to support infant learning and development
- Families reported more connection to community resources and more frequent use of services

See appendix for citations and more information

Chicago Pilot of Family Connects

Primary sites are hospitals

Organize referrals around hospitals, where 98% of births take place

Diversity to maximize learning

Select mix of hospitals to reach many populations, provide range of infrastructure and capacity, and offer lessons for scaling

Leverage existing resources

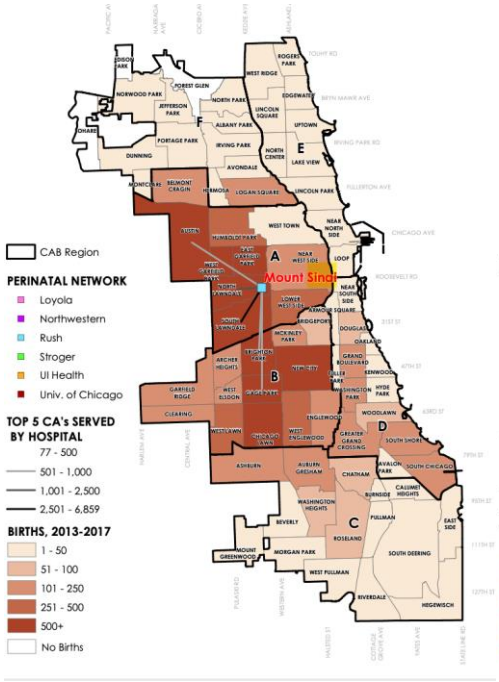
Establish CDPH as execution lead, using existing nurses, with potential for additional staffing through hospitals

Establish a proof point

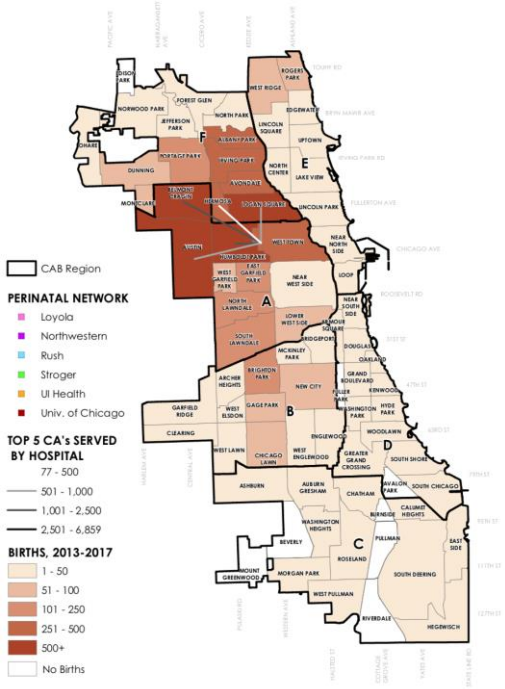
Reach enough families to ensure a large sample size that can make the case for going to scale

Current Pilot Hospital Partners

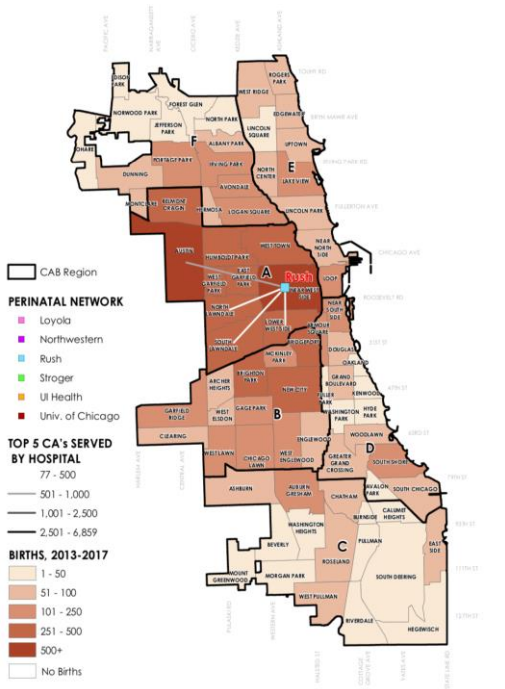
Mount Sinai Hospital



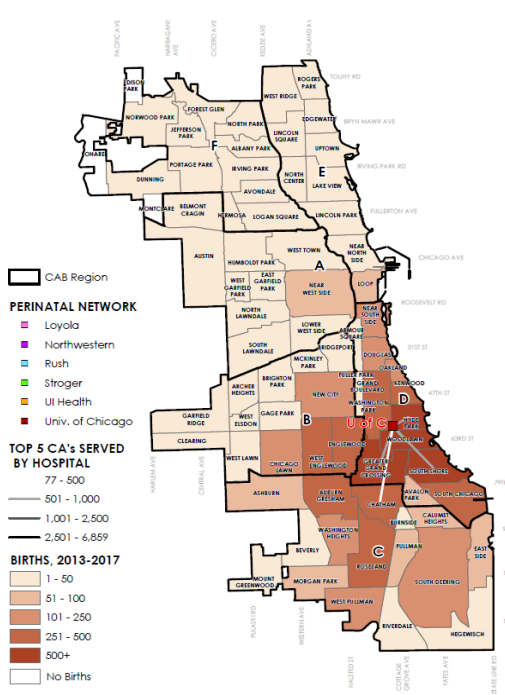
Humboldt Park Hospital



Rush University Medical Center

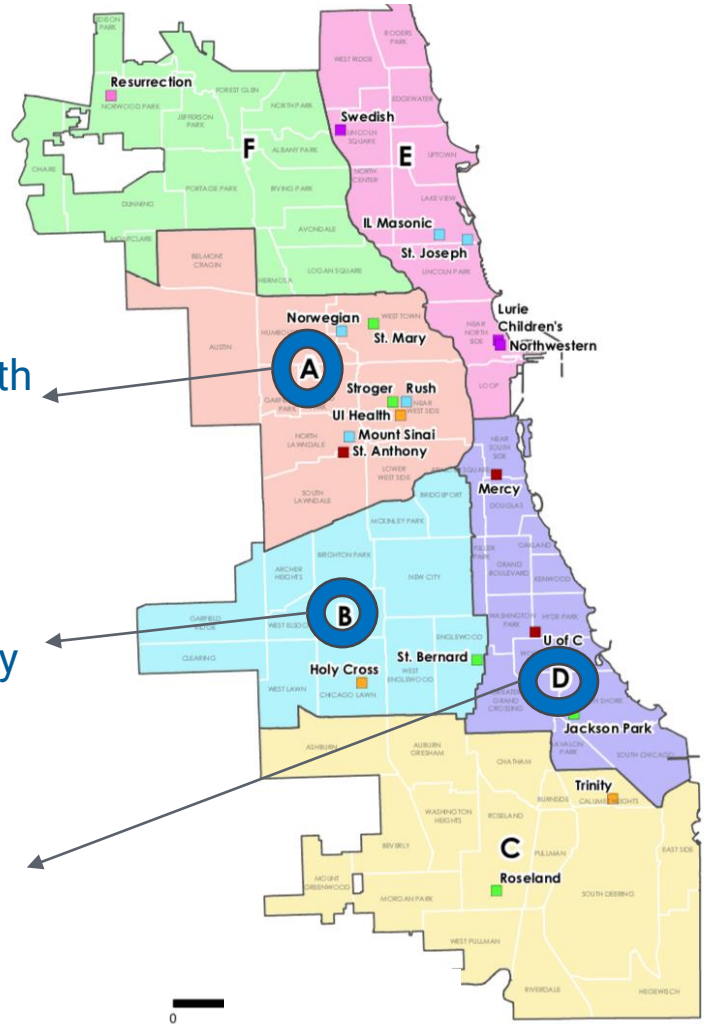


UChicago Medicine



~5,400 births per year

Citywide Advisory Council + Regional Community Alignment Boards



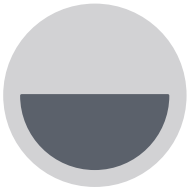
Sinai Health System

Sinai Community Institute

Everthrive Illinois

- Provide transparency and accountability
- Improve family connections with health care and hospital providers
- Provide community-led expertise
- Activate resources to fill needs across a range of human services

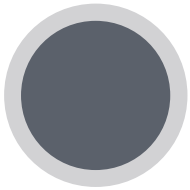
Evaluation



Implementation Evaluation

Years 1-2:

Identify how to adapt the model to a large urban landscape; establish realistic plans for future scale; lay the foundation for impact evaluation



Impact Evaluation

Years 3-5:

Show how program is impacting maternal and child well-being, early learning, service delivery, and service costs across diverse settings and populations

What We are Learning

- Sustained engagement and buy-in of hospital leadership and floor staff is key to success
- Getting the data systems and data flow in place is complex and challenging
- Taking time to engage stakeholders for input, design and feedback is critical
- Need robust engagement strategy to ensure reach needed for certification (60% of eligible population completing the home visit) as a program provider

Discussion: Provider Engagement

- Success hinges on our ability to reach universality and align with other initiatives
- Multiple strategies needed to educate and cultivate providers (hospital and community based) to support and champion the **implementation, scale and sustainability** of FCC and its **integration into whole family health and healthy communities**
  - forming a Healthcare Provider Council, engaging social service providers through the CABs, targeted marketing

Which stakeholders we should engage to promote awareness of the pilot and intention to scale? What is the right timing for this engagement? How can we build on the energy and other work related to maternal child health happening across the public health system?

CDPH
Chicago Department of Public Health

Thank you!

For more information, please contact:
Jennifer.vidis@cityofchicago.org


Chicago.gov/Health


HealthyChicago@cityofchicago.org


@ChicagoPublicHealth


@ChiPublicHealth

Appendix

Guadalupe Alcazar, City of Chicago

People don't care what you know, until they know that you care. I keep this in mind when reaching out to my clients. Caring starts with taking the time to listen. On two occasions listening has ultimately brought about the goals of Family Connects.

On the first occasion, I was reaching out to a mom who had lost her baby at birth. She had tried so hard to conceive over a period of 17 years. She was incredibly heart-broken and unable to stop crying during our conversation.

She kept apologizing, but I told her there was no reason to apologize and that I was there to listen. Letting her know that the feelings she was experiencing were normal validated her. I told her that it was good for her to voice her feelings, and that I felt honored that she had chosen to talk to me. I let her know that there is hope, and things will get better. At the end of our conversation I was able to provide a needed and accepted resource for counseling.

On another occasion a different client was experiencing domestic abuse. She initially denied any domestic violence, although I was cognizant of the possibility. I was able to address her physical issues with education and referrals.

On our second visit my client confided that she was indeed experiencing domestic violence. My client was ready to leave her husband at this point, but worried about being able to afford a divorce lawyer. I provided her with a referral for free legal assistance and additional supports. My client felt empowered to take some difficult steps towards protecting herself and her child.

Guadalupe Alcazar, RN, BSN, CLS
Public Health Nurse II
Chicago Family Case Management
City of Chicago

Kathryn Kaintz, Rush

I had a patient who during my initial supportive call was tearful, endorsed feeling sad and depressed since delivery, and reported that she sometimes felt passively suicidal.

She had good support at home, was seeing her OB regularly and even had a social work consult.

Unfortunately, despite these services she was still given inadequate and slow follow-up. She was not provided with immediate resources and was still unsure of how to proceed at the time of our visit.

I connected her with the Mom's Line which can be used to connect with a counselor immediately and 24/7, and contacted her OB for a psychiatry referral.

Within 3 days we worked together to find her a talk therapy appointment that specialized in postpartum depression.

It is so difficult for an individual in the midst of depression to do much of anything—especially with a newborn! I appreciate that Family Connects provides an extra check-in point for patients to ensure their care plans are moving forward and to make the process of setting up supports easier.

"Through her Family Connects visit I was able to catch this patient who had unintentionally fallen through the care coordination gaps."

Kathryn Kaintz, BSN, RN
Community Health RN
Family Connects Chicago
Rush University Medical Center

Crystal Kimbrough, City of Chicago

COMMUNITY RESOURCES…THE NEED OF ONE HELPING THE MANY

This FC encounter involved a young adult, first time mother, who was living with her partner (father of baby) and his family in his mother's home. This new mother had secured her own housing situation, for herself and baby, with plans to move the following month. There was suspected IPV in the relationship as per completed screener.

Mother had identified need for furniture and other housing items for herself and baby's safe new start and transition. From past, Case Management and Care Coordination, I had knowledge of a community resource that offered free furniture and other essential home needs for families in similar circumstances. I had successfully utilized this community resource in the past.

Utilizing our tool NOW POW, I searched for the resource however it was not listed. Within the tool itself there is a very "user friendly" feature that allows the user to reach out to NOW POW IT department for possible adding resource/vendor to the tool. I still had the community resource contact person's name and number. I reached out to the contact to assure the resource was still functioning and they okayed me to provide their contact information to NOW POW.

Not only was I able to assist the family with their furniture needs, NOW POW receive my request, researched, reached out to the community resource and completed their specific vetting process. The community resource is now loaded on NOW POW so that ***now the need of one can help the many***‼

Crystal Kimbrough RN BSN MBA CCM
Public Health Nurse II
City of Chicago

Darlene Hepburn, Rush

One of the best parts of following up with families a couple of weeks after having the baby is being able to talk about breastfeeding.

A lot of people think if they stopped breastfeeding then they can't do it at all. I love telling parents that ship hasn't sailed.

I talked to one mom and she said she really wanted to breastfeed. But she remembers the nurses in the hospital saying that if she didn't breastfeed in the beginning, she wouldn't have any milk.

Her baby had lost some weight from discharge and was having a hard time latching. She decided to stop breastfeeding so that she could be sure the baby would gain weight. She was beyond thrilled when I told her she could still try and breastfeed.

I think a lot of time we don't realize the impact we have on patients, unless we are the first ones to detect a problem. However, the great part of Family Connects is that we help everyone even if it is not with a medical emergency.

I spoke to another mom who wanted to breastfeed exclusively and was feeling really bad that she was not able to produce enough milk. In my mind, it was a very average visit. I sent her my normal follow up email which included all the things we discussed, and this was her response:

"Thank you so much for meeting with me yesterday. It was very helpful talking with you and learning from you! Thank you for answering all of my questions. It is reassuring to know that we can hold the baby a lot these first few months and let him fall asleep in our arms, without worrying that it's becoming a habit yet. Today we also tried tummy time on the floor like you suggested, rather than on the bed, and it went well!"

-Excerpt from Mom's email to Darlene Hepburn

Darlene Hepburn, MA, BSN, RN-BC
Family Connects Chicago
Rush University Medical Center

RCT I evaluation results: Age 6-month in-home interviews

Compared to control families, Durham Connects-eligible families had:

- More connections to community services / resources
- More mother-reported positive parenting behaviors
- Higher quality and safer (blinded observer-rated) home environments
- Higher quality child care for those that chose out of home care
- Less maternal reported anxiety

Dodge, K.A., Goodman, W.B., Murphy, R.A., O'Donnell, K., Sato, J., & Guptill, S. (2014). Implementation and randomized controlled trial evaluation of universal postnatal nurse home visiting [Special Issue]. American Journal of Public Health, 104, S136-S143. https://doi.org/10.2105/AJPH.2013.301361

RCT I evaluation results: Child hospital administration records

Results at infant age 12 months from aggregate hospital records

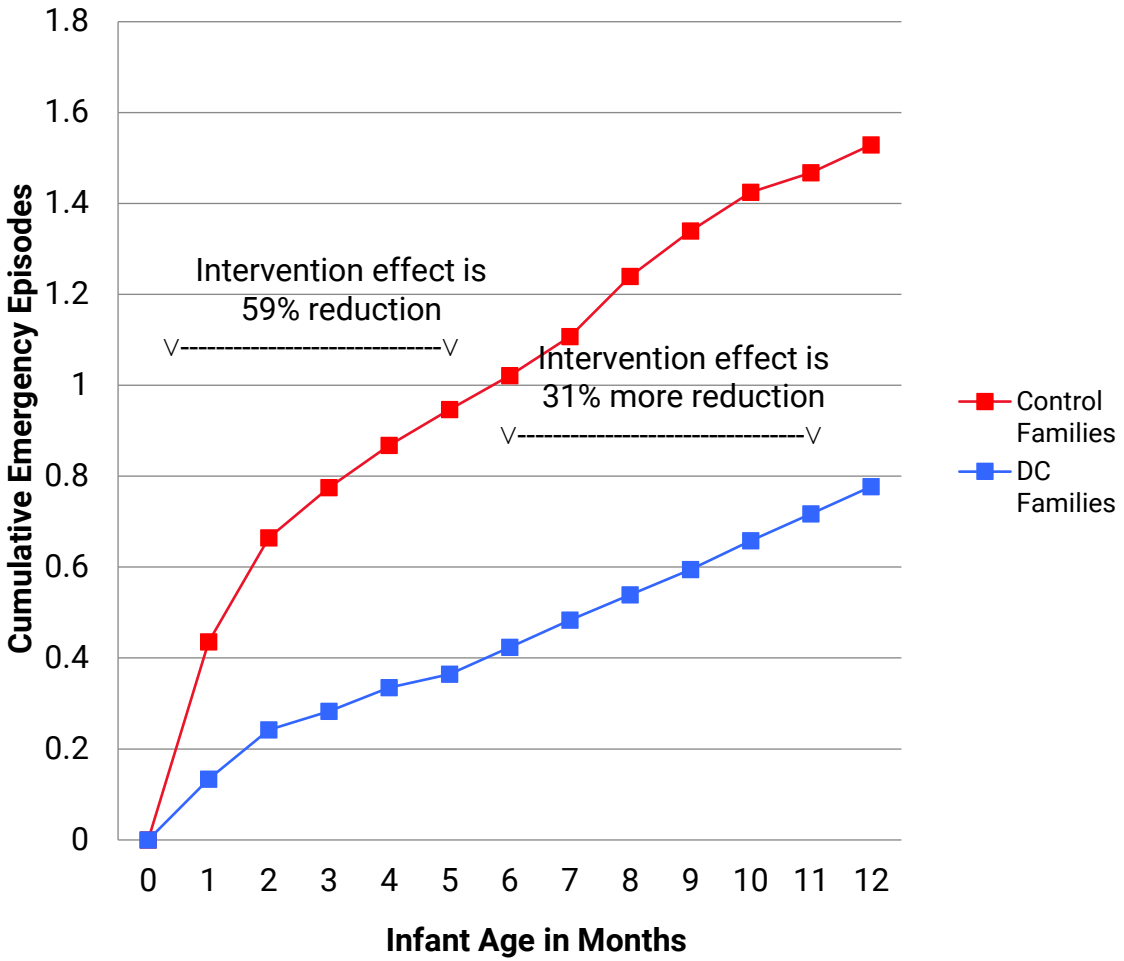
- *50% less total infant emergency medical care (ER visits + overnights in hospital)*

Results at infant age 24 months from aggregate hospital records

- *37% less total infant emergency medical care (ER visits + overnights in hospital)*

For every $1 spent, a little over $3 was saved.

*See final slide in deck for citations



RCT II evaluation results: Age 24 months

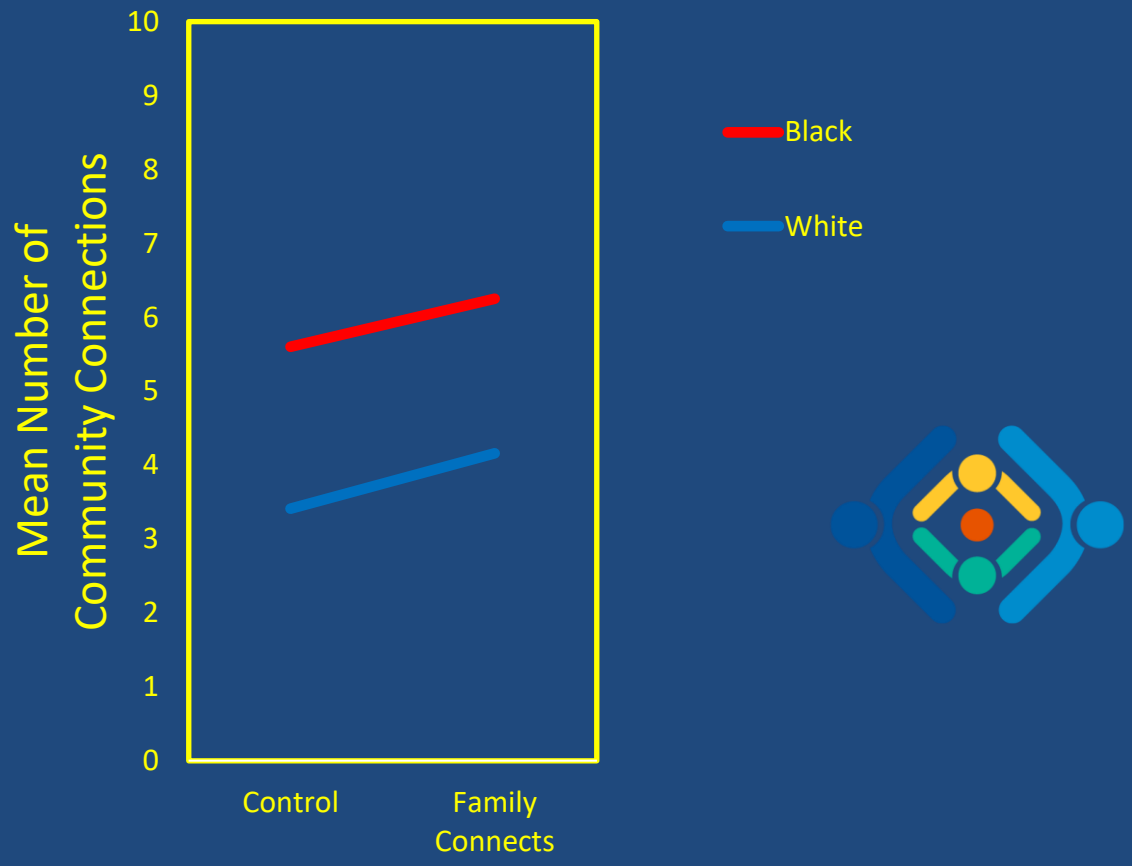
Compared to control families, Durham Connects-eligible families had:

- More connections to community services / resources
- Higher use of out-of-home child care
- Less maternal reported anxiety and depression
- Lower rates of CPS investigations for suspected abuse or neglect
- More likely to complete maternal six-week postpartum health check
- More emergency department visits for mothers
- Fewer emergency room visits but more hospital overnights for infants as birth risk increased

Dodge, K.A., Goodman, W.B., Bai, Y., O'Donnell, K. & Murphy, R.A. (2019). A randomized controlled trial of a community agency-administered nurse home visitation program's effects on program use and maternal and infant health outcomes. JAMA Network Open, 2(11), e1914522. https://doi.org/10.1001/jamanetworkopen.2019.14522.

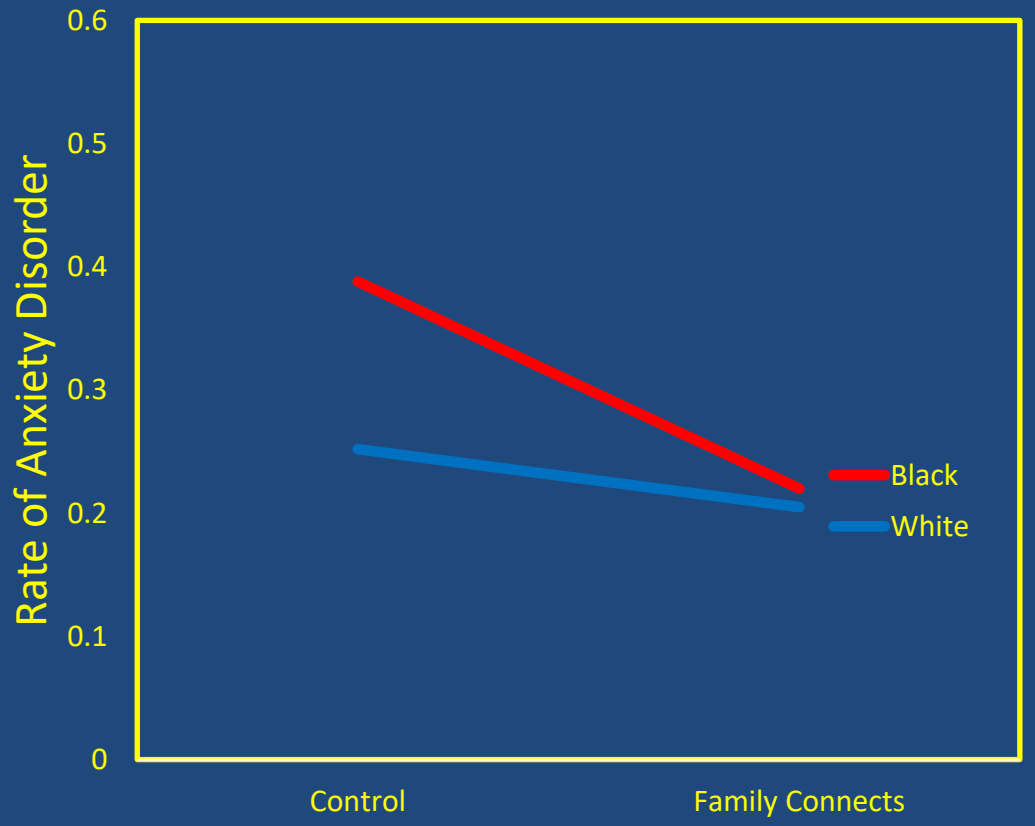
Family Connects RCT I Implementation Findings

1. Strong participation (80% participate. 86% of participating complete program)
2. High needs (94% report a need: half resolved by nurse and half connected to community)
3. Positive impact on access to community resource for Black & White families



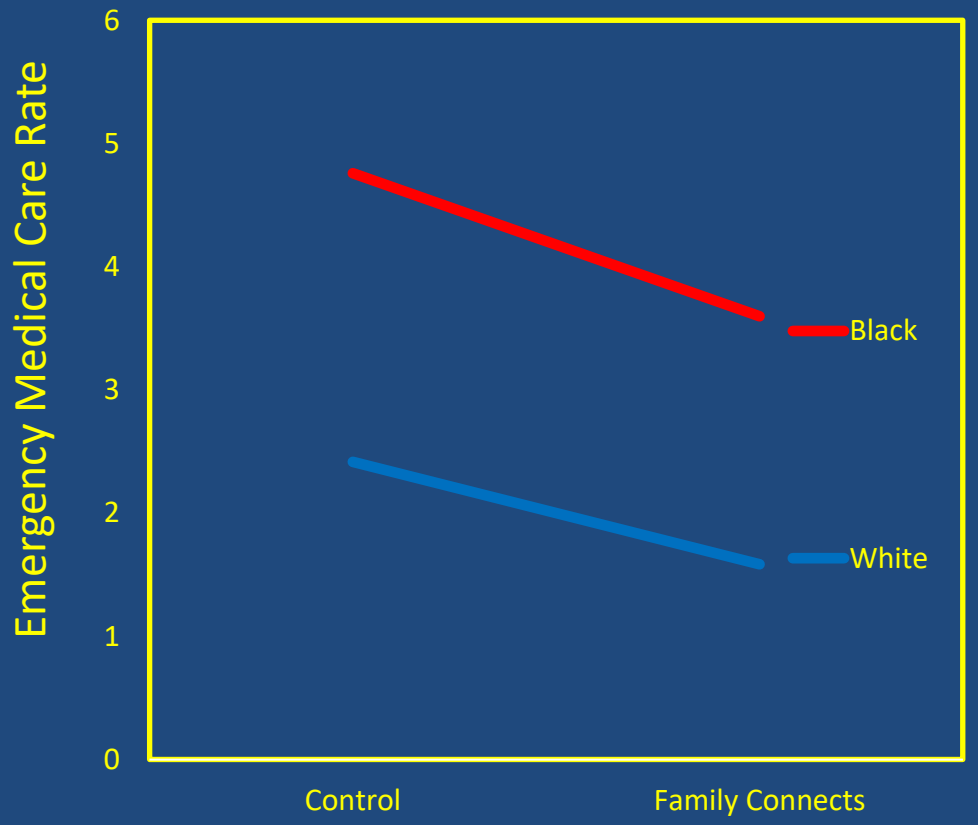
Dodge, Goodman, Murphy, O'Donnell, Sato, & Guptill, AJPH, 2013).

RCT I. Family Connects at age 6 months:
--decreases maternal anxiety disorder by 34%
--and closes race disparity by 89%



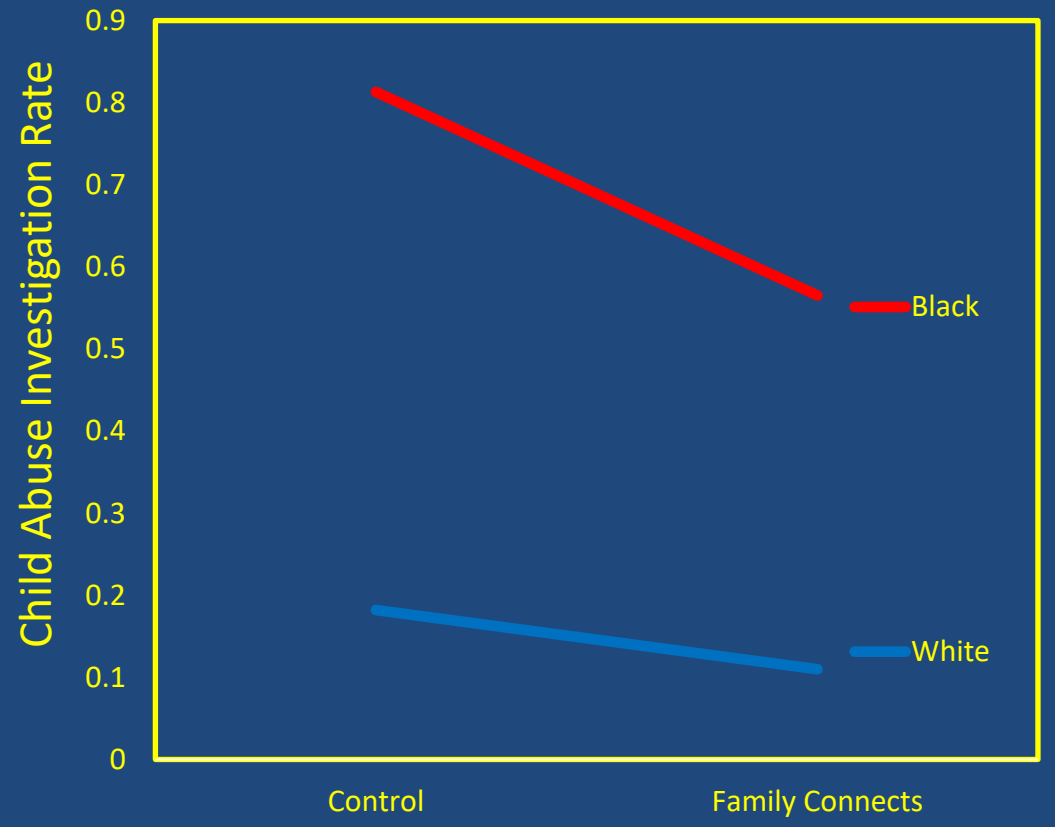
Dodge, Goodman, Murphy, O'Donnell, & Sato, Pediatrics, 2013).

RCT I. Family Connects at age 60 months:
--decreases emergency medical care by 33%, and
--closes race disparity by 14%.



Goodman, Dodge, Bai, Murphy, & O'Donnell, 2021).

RCT I. Family Connects at age 60 months:
--decreases child abuse investigations by 39%, and
--closes race disparity by 28%.



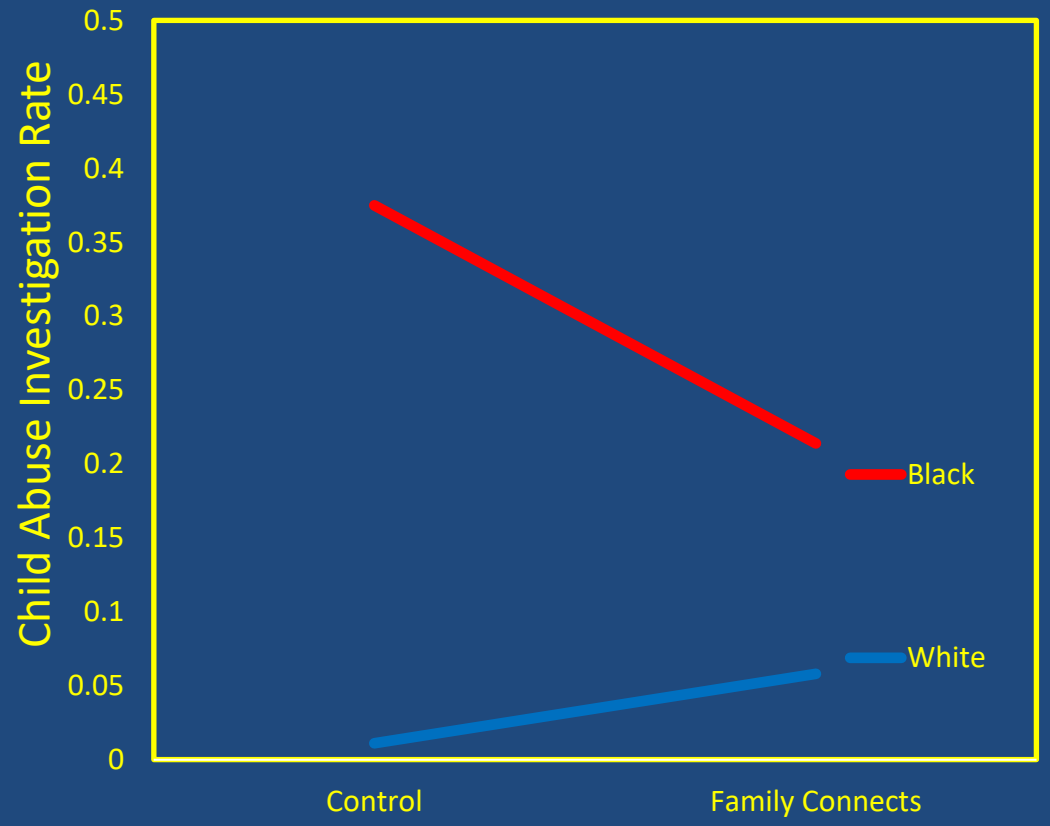
Goodman, Dodge, Bai, Murphy, & O'Donnell, 2021).

REPLICATION: RCT II

Family Connects:

--decreases child abuse investigations by 44%, and

--reduces race disparity by 57%.



Dodge, Goodman, Bai, O'Donnell, & Murphy, JAMA Network Open, 2019).

Sources

- Dodge, K.A., Goodman, W.B., Bai, Y., O'Donnell, K. & Murphy, R.A. (2019). A randomized controlled trial of a community agency-administered nurse home visitation program's effects on program use and maternal and infant health outcomes. JAMA Network Open, 2(11), e1914522. https://doi.org/10.1001/jamanetworkopen.2019.14522.
- Goodman, W.B., Dodge, K.A., Bai, Y., O'Donnell, K. & Murphy, R.A. (2019). Randomized controlled trial of Family Connects: Effects on child emergency medical care from birth – 24 months. Development and Psychopathology, 31, 1863-1872. https://doi.org/10.1017/S0954579419000889
- Dodge, K.A. & Goodman, W.B. (2019). Universal reach at birth: Family Connects. Future of Children, 29(1), 41- 60. https://doi.org/10.1353/foc.2019.0003.
- Dodge, K.A., Goodman, W.B., Murphy, R.A., O'Donnell, K., Sato, J., & Guptill, S. (2014). Implementation and randomized controlled trial evaluation of universal postnatal nurse home visiting [Special Issue]. American Journal of Public Health, 104, S136-S143. https://doi.org/10.2105/AJPH.2013.301361
- Dodge, K.A., Goodman, W.B., Murphy, R.A., O'Donnell, K., & Sato, J. (2013). Randomized controlled trial evaluation of universal postnatal nurse home visiting: Impacts on child emergency medical care at age 12- months [Special Issue]. Pediatrics, 132, S140-S146. https://doi.org/10.1542/peds.2013-1021M