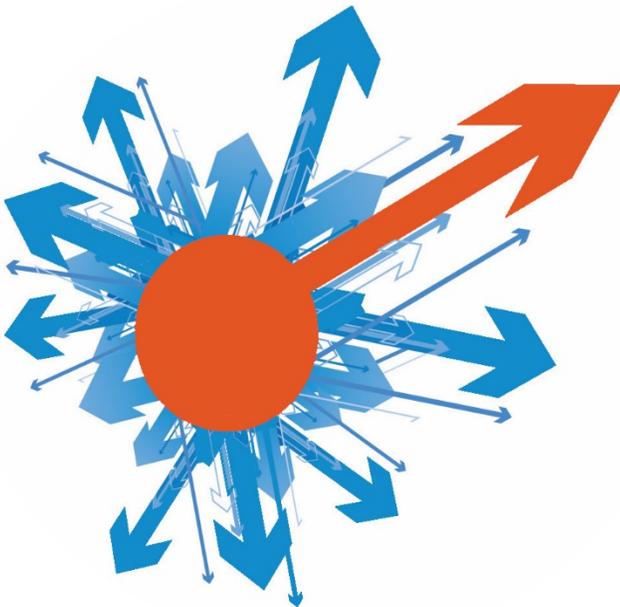


# A Paradigm Shift Toward Development of Equitable Population-level Solutions

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**The typical response to solving social problems has been to provide policies and programs only to those deemed “at risk.”**

But what happens when the whole population suddenly becomes “at risk?” The COVID-19 pandemic illuminated our outdated approaches and inequitable systems. Piece-meal solutions are no longer adequate to tackle population-level needs. We need to readjust our thinking. We call for an equitable, population-level solution, more like a public health approach, which is a paradigm shift from our approaches to past social problems.

The COVID-19 pandemic created unprecedented challenges for communities and families across the country. Families are experiencing stress not limited to: challenges with healthcare access, financial burdens, child care closures, and mental health needs. These challenges may be heightened for families bringing home a newborn. Research demonstrates that times of crisis see increases in substance use, child abuse, and intimate partner violence.<sup>1</sup>

The earliest months of human life are foundational for later development—including social, emotional, and brain development—with the physical and mental health of the parents playing a critical role. Too many families of newborn infants have unmet needs that keep them from achieving successful outcomes for their children, and most communities are not organized in ways that identify and serve these families effectively. In this brief, we focus on the population of families during the earliest moments of an infant’s life.

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<sup>1</sup>Child Trends. Retrieved from: <https://www.childtrends.org/during-the-covid-19-pandemic-telehealth-can-help-connect-home-visiting-services-to-families>. Accessed June 1, 2020.

## **What is the Family Connects Model?**

Family Connects International (FCI) offers an evidence-based model that combines engagement and alignment of community service providers with short-term nurse home visiting beginning in the first month after birth. Family Connects is designed to be delivered to all families with newborns, voluntarily and free-of-charge. The Family Connects model aims to create systems change at the population level—advancing the well-being of all infants and their families by ensuring they have a medical home and are provided with physical and mental-health screenings, comprehensive assessments, and connections to community resources that support their individual family needs and preferences, including more targeted services such as intensive home visiting programs, in the critical first months following birth.

By offering Family Connects to all families in a community, Family Connects improves health outcomes at the population level and normalizes the need for community support. The three components of the Family Connects model include:

- 1) Nurse home visiting: Registered nurses visit all families with newborns to provide a health assessment for infant and caregiver, offer supportive guidance about maternal and infant health, and connect the family to needed community resources.
- 2) Community alignment: An iterative process that requires close attention to context, relationships, systems, and data to ensure coordination within the model and across the community.
- 3) Data and monitoring: The FCI Database is a clinical documentation and reporting system that allows local implementing sites to manage and assign cases to nurses, document assessments, track referrals, and use reports to monitor key performance indicators.

Randomized controlled trials of Family Connects published in *Pediatrics*, the *American Journal of Public Health*, and *JAMA Network Open* have shown positive effects for families in a number of key areas. The first trial in 2009-2010 showed:

- In contrast with control infants, infants randomly assigned to Family Connects had 50% lower rates of infant emergency room visits and hospital overnight stays in the first year of life; these results were sustained through the fifth year of life.
- Family Connects mothers were 28% less likely to report possible postpartum clinical anxiety.
- Family Connects mothers reported significantly more positive parenting behaviors, such as hugging, comforting and reading to their infants; no significant differences were found in negative parenting behaviors.
- Family Connects mothers expressed increased responsiveness to, and acceptance of, their infants.
- Home environments were improved—homes were safer and had more learning materials to support infant development.
- Community connections were 15% higher for Family Connects families.
- When using out-of-home child care, Family Connects families used higher quality care.

The second randomized controlled trial took place in 2014. Results from this trial have shown:

- Community connections were 13% higher for Family Connects families.

- Family Connects mothers were 30% less likely to experience possible postpartum depression or anxiety.
- Family Connects families were more likely to use out-of-home child care.
- As the number of birth risks increased, Family Connects infants experienced fewer emergency department visits, but more hospital overnight stays.
- Family Connects mothers were more likely to complete their six-week postpartum health check but also had more emergency department visits. (*The manuscript noted that the difference in emergency department visits might be due to an effect of Family Connects on mothers' increased awareness of their own health needs in the fourth trimester period.*)<sup>2</sup>

### **Family Connects: Flexibility and Response during Crisis**

As the coronavirus spread in the early months of 2020, Family Connects International supported Family Connects sites across the country with the transition from in-person nurse home visits to serving families through telehealth and telephonic support.<sup>3</sup> Communities with the Family Connects model had already laid the groundwork for a population-level infrastructure to reach families. The goal of Family Connects is not only to complete home visits but to support communities in transforming the broader system of care for families. The following examples outline how the three core components of the model reached families, met needs, and connected to the broader community.

#### ***Nurse Home Visit: Modifications to continue support***

In response to the pandemic, FCI advised all sites to temporarily shift the model to provide telehealth and/or telephonic support. FCI advised sites to follow local administrative guidelines regarding consent procedures with the use of telehealth or telephonic support and provided guidance regarding documentation. Coronavirus restrictions in most locations eliminated in-hospital bedside enrollment of families into the Family Connects program. Local sites created new ways to partner with birth hospitals, medical practices, and community partners to ensure that families of newborns continued to receive invitations to receive a modified Family Connects service such as providing a brochure at bedside or ensuring families were informed about the Family Connects program by their pediatrician or obstetrician.

The postpartum period is already a risk for social isolation and maternal depression. As a response to increased concerns for families, Family Connects sites such as Santa Barbara,

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<sup>2</sup> Dodge KA, Goodman WB, Bai Y, O'Donnell K, Murphy RA. Effect of a Community Agency–Administered Nurse Home Visitation Program on Program Use and Maternal and Infant Health Outcomes: A Randomized Clinical Trial. *JAMA Netw Open*. 2019;2(11):e1914522. doi:10.1001/jamanetworkopen.2019.14522

<sup>3</sup> Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services defines telehealth “as the use of electronic information and telecommunications technologies to support and promote long-distance clinical health care, patient and professional health-related education, public health and health administration. Technologies include videoconferencing, the internet, store-and-forward imaging, streaming media, and terrestrial and wireless communications.” <https://www.healthit.gov/topic/health-it-initiatives/telemedicine-and-telehealth>

California, and Tarrant County, Texas, offered online drop-in “baby cafes.” The baby cafes created a virtual space for families to socialize and support each other. Local Family Connects sites also offered interactive sessions for families using video conferencing. Topics included infant crying, safe sleep, and other subjects of interest. Several Family Connects sites expanded their efforts to help families by offering support to families with older children, program graduates, and families in nearby communities. For example, some sites reached out to their program alumni to determine if they had any need for support. Alumni also proactively contacted local Family Connects sites to ask for help due to new challenges such as unemployment and a renewed need for community connections. Nurses also made extra efforts to drop off resources, diapers, or educational materials at family’s homes.

***Community Alignment: Collaboration and coordination as the safety net frayed***

With the economic fallout from the coronavirus, the fragile safety net in communities frayed. Communities with Family Connects sites were poised to quickly address and share information changing due to COVID-19. The relationships and networks that are formed as part of the Community Alignment work can be “activated” during a crisis to gather, update, and disseminate changes to agency information for the benefit of nurses and community partners. An example of this can be seen in Durham, North Carolina, where the Family Connects program partnered with healthcare providers to expand their community referral resources to support proactive outreach to families. The Family Connects community alignment specialist’s awareness of the rapidly changing resources within Durham helped equip healthcare providers to meet their patient’s needs. Collaboration and integration across platforms such as 211, Aunt Bertha, UniteUs, and Help Me Grow can help establish resource coordination at national and local levels. The Commonwealth Fund called these “tech-enabled platforms that connect people and providers to social services” a way to coordinate across silos.<sup>4</sup>

***Data: A window to community-wide need***

In addition, data from post-visit connection (PVC) calls, which occur one month after a family has received a home visit, provide a window to community-wide needs regarding access to services, barriers to care, and shifting needs. Ensuring families receive services to which they were referred has been especially important during the pandemic, as critical services such as food pantries faced increased demand, volunteer shortages, and supply disruptions. In response to these challenges, local site staff identified barriers, worked to develop new connections to community resources, used data to quickly identify trends in community resources, and shared this community-level information with collaborative partners to deepen their impact and collective response.

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<sup>4</sup>Shoshannah Brown, "How Cities Can Provide Rapid Relief for Vulnerable People During the COVID-19 Crisis," To the Point (blog), Commonwealth Fund, Apr. 24, 2020. <https://doi.org/10.26099/d6ty-8f67>

## **Proposed Solutions: Creating an infrastructure through a universal population health system such as Family Connects**

The COVID-19 pandemic highlights existing health and social inequities, a tattered social support network that could not respond to meet rising needs, and a perpetually underfunded and understaffed public health system.

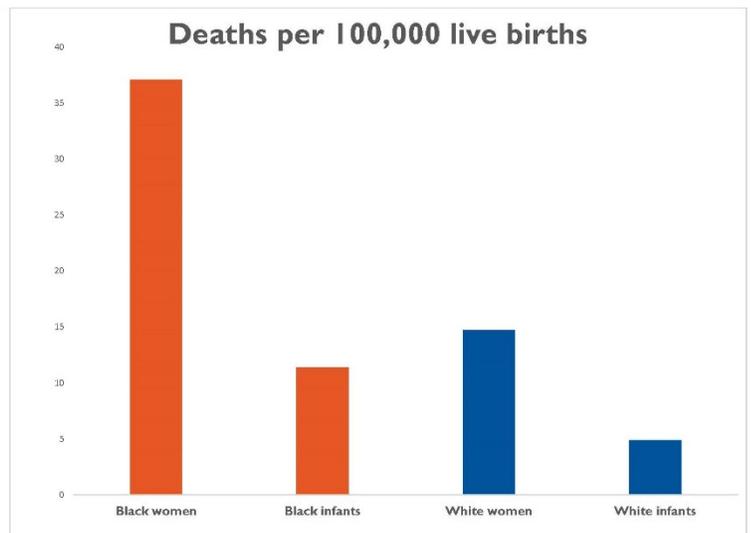
The Family Connects model provides infrastructure that supports a population reach for all families with newborns within a community. Such an approach can build in other universal touchpoints for families with young children to create a coordinated system of care throughout the lifespan. The following policy changes are critical to the support for children and families:

### ***Maternal Health: Re-envisioning postpartum care***

The American College of Obstetricians and Gynecologists (ACOG) issued a committee opinion recommending that all women have contact with their OB/GYN or other clinician within the first three weeks postpartum, which is a modification from the prior standard of having contact at six weeks postpartum.<sup>5</sup>

The authors of the ACOG committee opinion specifically mention nurse home visitors as alternative providers of this visit, *citing research on the Family Connects model*. In the United States, most birth mothers independently navigate the postpartum transition until the traditional postpartum visit between four to six weeks after delivery. As many as 40% of mothers do not attend a postpartum visit, and attendance rates at postpartum appointments are even lower among those with limited resources, such as unstable housing, communication challenges, or transportation barriers.<sup>6</sup>

Furthermore, while the U.S. maternal mortality rate continues to rise, racial disparities persist in maternal and infant mortality rates.<sup>7</sup> Black women die at three times the rate of white women (37.1 per 100,000 live births for black women; 14.7 per 100,000 live births for white women)<sup>8</sup>, and black infant mortality



<sup>5</sup>Auguste, T., & Gulati, M. Copyright by American College of Obstetricians.

<sup>6</sup> Auguste, T., & Gulati, M. Copyright by American College of Obstetricians.

<sup>7</sup> Centers for Disease Control and Prevention. Pregnancy Mortality Surveillance System. Retrieved from: <https://www.cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm>. Accessed June 1, 2020.

<sup>8</sup>Hoyert, D. L., & Miniño, A. M. (2020). Maternal mortality in the United States: changes in coding, publication, and data release, 2018.

rates are higher than those of white infants (11.4 per 100,000 live births for black infants; 4.9 per 100,000 live births for white infants).<sup>9</sup>

**Racism is the  
risk factor—  
not Black skin,  
not Race.**

**- Dr. Joia Creer  
Perry**

Dr. Joia Creer Perry, founder of the National Birth Equity Collaborative, provided expert testimony before the House Energy and Commerce Committee in January 2020 regarding inequities in maternal mortality:

“Racism is the risk factor—not Black skin, not Race. Race is a social and political construct. Maternal mortality extends beyond the period of pregnancy or birth. Nine months of prenatal care cannot counter underlying social determinants of health inequities in housing, political participation, transportation, education, food, environmental conditions, and economic security; all of which have racism, classism, and gender oppression as their root causes. We have data that shows that a Black woman who initiates prenatal care in the first trimester has a worse outcome in birth than a White woman with late or no prenatal care.”<sup>10</sup>

Any approach to improving postpartum care must address racial equity.

### ***Infant Health: Maintaining an extension of the medical home***

Attention to maternal health is just as critical as infant health during the postpartum period. This “fourth trimester” period “moves the conversation forward from treating mothers and infants as separate individuals to considering them as mutually regulating dyads.”<sup>11</sup>

Fear of exposure to the coronavirus also affected infant health. Since the coronavirus outbreak, Family Connects nurses reported concerns among caregivers regarding attending well-child visits for fear of exposing their newborn to coronavirus in a medical setting—some even foregoing well-child visits and scheduled vaccinations. Data shows that immunization rates for measles, mumps, and rubella have dropped by as much as 50%.<sup>12</sup>

Given family concerns about venturing out for medical visits, Family Connects became even more important to families as a trusted extension of the newborn’s medical home and a voice to reinforce the importance of well-child visits for reasons that included, but were not limited to, immunizations. Newborns face numerous risks in the first month of life, including feeding difficulties, jaundice, and dehydration, all of which can emerge between pediatric appointments. It can be challenging to learn how to care safely for newborns, and challenges are compounded

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<sup>9</sup> Centers for Disease Control and Prevention. Infant Mortality. Retrieved from:

<https://www.cdc.gov/reproductivehealth/maternalinfanthealth/infantmortality.htm#chart>. Accessed June 1, 2020.

<sup>10</sup> “Expecting More: Addressing America’s Maternal and Infant Crisis.” Written testimony of Joia Creer-Perry, MD, to the U.S. House of Representatives Subcommittee on Health, Employment, Labor and Pensions, the Subcommittee on Workforce Protections and the Committee on Education and Labor. January 28, 2020.

<sup>11</sup> Verbiest, S. B., Tully, K. P., & Stuebe, A. M. (2017). Promoting maternal and infant health in the 4th trimester. *Zero to Three, 37*(4), 34-44.

<sup>12</sup> Hoffman, J. (2020). Vaccine rates drop dangerously as parents avoid doctor’s visits. *New York Times*. April 23.

by fear of venturing to the doctor and stay-at-home orders that restrict in-person support from family and friends. In this environment, Family Connects nurses, even via telephonic or telehealth support, can reinforce evidence-based education on feeding, safe sleep, and appropriate responses to crying. As needed, nurses also connect families to community resources to offer longer-term support.

### ***Toward Equity: Utilizing universal, population-wide programs to address disparities***

“The Family Connects strategy to address disparities is paradoxical. The way to reduce disparities is to provide services for all and then to individualize plans to meet a particular family’s needs. This is the strategy of public education and universal health care, and Family Connects applies it to social and psychological services,” said Dr. Kenneth Dodge, creator of Family Connects and William McDougall Professor at the Duke University Sanford School of Public Policy. A high-quality public health system that supports everyone in a triaged manner, rather than the historical strategy of creating programs targeted only to the poor, can be a key strategy to address disparities. Everyone deserves the same high-quality services and supports. Dodge notes that a universal approach prevents marginalization and labeling, and it ensures that each person receives specific resources and supports that are tailored to his or her needs and preferences.

The coronavirus pandemic highlighted the inequities and vulnerabilities of our society and the inadequacy of current policies. As we work together to navigate this crisis, we must look honestly at the shortcomings of our current systems and ask how we can strengthen our infrastructure and build better more equitable systems for children and families. Repairing the drivers of health and social inequities will not be an easy or quick fix. Such work must include a long-term vision for dismantling existing inequitable structures if it is to truly meet the goal of healthy futures for all families. We have an opportunity to develop policies and systems that strengthen our economy and families and form a foundation to support health and well-being for all.

Recent data demonstrate that the virus disproportionately affected racial and ethnic minorities.<sup>13</sup> The structural inequities that are contributing to a disproportionate impact of the coronavirus on minority populations are noted by Dr. Jack Shonkoff and Dr. David Williams in their statement from the Harvard Center on the Developing Child on April 27, 2020:

“Higher rates of *exposure* to the virus are associated with employment in ‘essential’ services without adequate protection from infection, residing in tight quarters, and hourly wage jobs without paid sick leave or the ability to work from home, among other risk factors. These conditions are much more likely to be experienced by African Americans, Hispanic Americans, and Native Americans. Extensive evidence from the social sciences has documented highly inter-related, structural inequities that have led to these conditions and been sustained through multiple policies and service systems over a long period of time. For example, residential segregation driven by legal and financial barriers, greater exposure to air pollution and environmental toxins, and less access to affordable, nutritious food and green space for exercise and stress reduction are all the

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<sup>13</sup> Center for Disease Control and Prevention. COVID-19 in Racial and Ethnic Minority Groups. Retrieved from: <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/racial-ethnic-minorities.html>. Accessed on June 1, 2020.

result of a complex web of zoning regulations, economic policies, and social marginalization that could be changed. These deeply embedded, discriminatory policies, compounded by unconscious biases, also result in many people of color having less access to high quality health care (exacerbated by language barriers) and higher rates of unequal treatment in the health care system."<sup>14</sup>

Shonkoff and Williams note the factors of adverse childhood experiences that can contribute to adults with a higher level of susceptibility to disease and chronic illness. Childhood exposure to intense family stress associated with poverty, racism, and other forms of economic or social disadvantage can negatively impact the immune and metabolic systems and leave one vulnerable to chronic health impairments, as well as post-traumatic stress and other psychiatric disorders. Any path forward needs to incorporate attention to creating early childhood foundations for healthy adult lives for all.

### ***Public Health Collaboration: Investing in health for all***

The pandemic highlighted the deficiencies in our public health system. “Health care spending grew by 52% in the past decade, while the budgets of local health departments shrank by as much as 24%,” according to a 2019 report from the public health nonprofit Trust for America’s Health, and the C.D.C.’s budget remained flat. Today, public health claims just 3 cents of every health dollar spent in the country. The results of that imbalance were apparent long before COVID-19 began its march across the globe. Local health departments eliminated more than 50,000 jobs—epidemiologists, laboratory technicians, public information specialists—between 2008 and 2017. That’s nearly 23% of their total work force.<sup>15</sup>



**Only 3 cents of  
Every health care  
dollar spent  
in the U.S. goes to  
public health**

The call for rebuilding a new and equitable public health system is echoed in a recent article authored by Health Leads:

“We cannot wait until we have ‘climbed the curve’ of COVID-19 to take care of our communities. We need to start the rebuild now. While the front-line health care and public health teams are working to address this virus, those of us focused on essential resources must work together to ensure there is local access to food, shelter, and mental health services for those that are at home, especially as we see the supply chain deteriorating. This moment in time demands a new level of collaboration, partnerships, and investment, not only in the band-aids but also in the root causes that have been in play long before COVID-19. These efforts must extend beyond a “stimulus package” to a rebuilding of disjointed systems – and ensure we are not replicating or reinforcing the deep inequities in how those health, justice and education systems operate. While this

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<sup>14</sup> Center on the Developing Child, Harvard University. Thinking About Racial Disparities in COVID-19 Impacts Through a Science-Informed, Early Childhood Lens. Retrieved from: <https://developingchild.harvard.edu/thinking-about-racial-disparities-in-covid-19-impacts-through-a-science-informed-early-childhood-lens/>. Accessed on June 1, 2020.

<sup>15</sup> Interlandi, J. (2020). The US approach to public health: “Neglect, panic, repeat.”. New York Times, April 9.

pandemic will put unprecedented pressure on our health care system, the aftermath – if we remain flat-footed – will further threaten the lives of not only our most vulnerable but the livelihoods of all Americans.”<sup>16</sup>

### ***Home Visiting Models: Encouraging temporary flexibility***

During non-crisis operations, evidence-based home visiting models supported by rigorous research are delivered with fidelity in order to ensure confidence in anticipated outcomes. However, as discussed above, evidence-based models such as Family Connects need the flexibility to make temporary modifications to support families during a crisis. Temporary modifications such as utilizing telehealth, reaching families earlier and more often, providing material supports, and offering support for older children in the home may even enhance the impact of an evidence-based model during a crisis.

### **Family Connects improves health outcomes at the population level**

This global pandemic emphasized the inequities and health disparities that exist in our current society. It also demonstrated that a perpetually under-funded and under-staffed public-health system is ill equipped to address our nation’s needs—needs that will continue beyond the urgent pandemic response and will also require further investments in prevention. We cannot return to business as usual. To return to the system and structures of the past is to accept an environment rapt with inequalities and inefficiencies. It is time that we reimagine and rebuild. The return should not be to “normal” but rather to create a “new normal” that centers upon approaches to care with a focus on equity.

By incorporating an infrastructure that includes population-wide systems such as Family Connects, by building a strong and equitable public health system, and by encouraging flexibility for evidence-based home visiting programs during a crisis, we can carve a path forward that connects every caregiver and child to the healthy future that they deserve.



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[www.familyconnects.org](http://www.familyconnects.org)

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<sup>16</sup> Health Leads. Flattening The Next COVID-19 Curve – Our Essential Resources. Retrieved from: <https://healthleadsusa.org/communications-center/blog/flattening-the-next-covid-19-curve/>. Accessed June 1, 2020.