MomsFirst

Local Evaluation 2020

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Description of MomsFirst

MomsFirst is a home visiting program, providing outreach, case management, interconceptual care and health education, designed to help mothers[1] and families thrive during pregnancy and throughout their baby's first 18 months of life. MomsFirst serves pregnant women and teens living in the City of Cleveland who are at high-risk for a poor birth outcome. Specific recruitment efforts seek to enroll pregnant women and teens who are incarcerated in the county jail, residing in homeless shelters, or receiving in-patient chemical dependency treatment. These women and their families experience complex circumstances that place them at increased risk for poor health, pregnancy and birth outcomes. The MomsFirst adolescent component works with pregnant high school students and their parents to ensure these young women have a healthy pregnancy, a healthy baby, and a plan for a successful future. All of these efforts are aimed at eliminating racial disparities in infant mortality by reducing the number of families of color who experience the death of a baby before their first birthday. In 2020, MomsFirst worked to achieve the following objectives for participating women and families:

1. an infant mortality rate below the Healthy People 2020 goal of 6.0 infant deaths per 1,000 live births;
2. fewer than 7.8% of all babies born at low birth weight (<2,500 grams); and
3. fewer than 1.4% of all babies born at very low birth weight births (<1,500 grams).

MomsFirst was established in 1991 as the City of Cleveland's Healthy Family/Healthy Start program. Healthy Start was enacted that same year by the Maternal and Child Health Bureau to address and reduce disparities in infant mortality experienced in communities across the United States at high-risk for poor birth outcomes. In its 29th year of existence, Healthy Start currently funds 101 programs in 36 states and the District of Columbia; MomsFirst is one of these programs. MomsFirst also receives funding from Cuyahoga County's Office of Early Childhood: Invest In Children, Ohio Department of Medicaid, and the City of Cleveland General Fund.

[1] While MomsFirst recognizes that not all pregnant or birthing people identify as women or mothers, all of the individuals served by MomsFirst, including those served in 2020, do identify as women. Therefore, the terms women and mother will be used throughout this report.

Figure 1. *Healthy Start Approach*

Healthy Start works to reduce infant mortality and adverse perinatal outcomes by focusing on four approaches (see Figure 1). These evidence-based approaches are linked to improving birth outcomes and reducing infant mortality. Healthy Start has identified Benchmarks (19 in total) for achieving each of the four approaches and corresponding Performance Measures that identify service activities and strategies for meeting each Benchmark. The 2020 data highlighting MomsFirst's progress toward each Benchmark are presented in the Healthy Start Benchmarks and Performance Measures Section to follow.

MomsFirst has used a braided funding approach to ensure that all home visiting services delivered, regardless of which particular funding source is used to cover operating expenses, employ the core elements of Healthy Start. This financial model ensures a seamless approach to prenatal home visiting in the city and strengthens the MomsFirst brand. Nevertheless, the largest portion of MomsFirst funding comes from its Healthy Start award, of over $1 million each year. The Project will remain funded at this level for the next three years. . The focus continues to be on quality vs. quantity of services, enhancing infrastructure, increasing staff development, and implementing curricula and practices to fidelity.

MomsFirst Collaborations, Activities, and Collective Impacts

To prevent infant mortality and eliminate the racial disparity between Black and White infant deaths in the City of Cleveland, MomsFirst has continued to actively cultivate strong partnerships with other maternal and child health initiatives at the local, regional, and national levels. These collaborations have led to leveraging funds, expansion of resources, and greater efforts and activities aimed at reducing poor birth outcomes.

At the Local Level

- In 2020, MomsFirst continued its longtime collaboration with two Cleveland Department of Public Health (CDPH) health centers offering women's health services, including the Women, Infants, and Children's nutrition program. MomsFirst also maintains a strong partnership with the Cleveland Office of Minority Health within the CDPH and continues to leverage the City's Healthy Cleveland Initiative for the benefit of maternal and child health outcomes in Cleveland.
- MomsFirst maintains active participation in the Healthy Neighborhoods sub-committee of the Healthy Cleveland Initiative. The goals of the Healthy Neighborhoods committee are to develop messaging that illuminates social determinants and their impact on place and health and to develop and implement a formal approach for integrating health and equity into the neighborhood engagement process. In 2020, the focus of the committee's work was on developing a We Wear the Mask project which intends to bring to light issues related to racism and inequity.
- MomsFirst Community Health Workers actively engage community participants in community-based health education activities through small groups called Neighborhood Consortia (NCs). NCs are comprised of program participants, community participants and other interested members of the public who come together for educational activities regarding the prevention of infant deaths and related health and wellness topics.
- MomsFirst is an active partner in First Year Cleveland (FYC). FYC's mission is to mobilize the community through partnerships and a unified strategy to reduce the number of infant deaths in Greater Cleveland, particularly among African Americans. FYC addresses the racial disparities that contribute to their deaths by focusing on three priorities: reducing racial disparities/institutional racism, addressing extreme prematurity, and eliminating preventable infant sleep-related deaths.

    - The MomsFirst Project Director is part of First Year Cleveland's 2021-2023 Strategic Planning team. In conjunction with the Center for Achieving Equity, an equity assessment of FYC is being conducted. Components of the equity assessment were embedded within each of these activities. In the next phase of the work, these results on a broad array of issues will be further analyzed and will inform the examination of FYC's strategic focus areas, vision, and values.
    - As the COVID pandemic wore on, MomsFirst worked collaboratively with partners to increase available resources for families in the program. Rapid Response funding was obtained from First Year Cleveland in partnership with the Cleveland Food Bank. This ensured that food and other "care package" items were distributed to participants
- MomsFirst maintained its relationship with Case Western Reserve University (CWRU) Center on Urban Poverty and Community Development at the Jack, Joseph and Morton Mandel School of Applied Social Sciences. CWRU assists MomsFirst with external local evaluation activities, presenting findings, and utilizing data to improve program operations and outcomes. CWRU analyzes the effectiveness of MomsFirst in producing participant level outcomes for mothers and infants served by the program.
- MomsFirst applied and was funded to implement a federal Healthy Start Maternal Mortality reduction initiative which improves direct access to maternity care by providing evidence-based group prenatal care via MetroHealth Medical Center through CenteringPregnancy to incarcerated pregnant women in the Cuyahoga County jail. Additionally, the target population receives labor and post-partum support through the Perinatal Support Professionals of Birthing Beautiful Communities and the continued services of MomsFirst's Licensed Social Worker/Community Health Worker.
    - In late 2020 MomsFirst contracted with MetroHealth to provide CenteringPregnancy and Birthing Beautiful Communities to provide labor and delivery support and additional wrap-around health and holistic support to incarcerated women throughout the perinatal period to reduce maternal mortality.
- MomsFirst has long collaborated with the Healthy Fathering Collaborative of Greater Cleveland and the Cuyahoga County Fatherhood Initiative. Each has provided opportunities to engage and promote father/partner involvement at both the community and individual level.
- MomsFirst has worked with several partners from various sectors as a member of the Healthy Cleveland Initiative to research, conduct a focus group, write a script and ultimately produce a

short film titled Toxic: A Black Woman's Story. This documentary highlights the impact of racism on birth outcomes and is used as a teaching guide for medical professionals and the general public. In October 2019, the film was presented in a session at the National Healthy Start Association conference, generating lively discussion. Since that time, the film has been sold to agencies across Ohio, and in Michigan, Texas, New Jersey and Washington, DC. The proceeds are used to provide healing support resources for families in Cuyahoga County who have experienced pregnancy and infant loss. The film was also presented at five film festivals in 2020 (all virtual), including the Greater Cleveland Urban Film Festival, the Cleveland International Film Festival, the American Public Health Association Film Festival, the rePRO Film Festival (focusing on women filmmakers and women's issues) and was a semifinalist at New York City's Dumbo Film Festival.

At the Regional Level

- Since 2006, MomsFirst has collaborated with Invest In Children, a regional leader in early childhood services. Invest In Children is a countywide partnership of public and private agencies working together to increase the development and impact of early childhood services regionally. The financial support of Invest In Children of over $5.8 million in the past 14 years has allowed MomsFirst to expand capacity and reach increasing numbers of high-risk mothers during the prenatal period.
- MomsFirst continued its collaborative relationship with the Cleveland Regional Perinatal Network (CRPN), which works to ensure a coordinated system of perinatal care in northeastern Ohio. The CRPN has taken the lead in the Project's Perinatal Depression screening program by training MomsFirst case managers and community health workers and building awareness of perinatal depression among medical professionals locally and statewide. CRPN's role has now expanded to training direct service staff in addressing toxic stress, intimate partner violence, and substance abuse among participants.
- MomsFirst has also been an active member of the Cuyahoga County Perinatal Depression Task Force, which it helped to establish in 2005. The Cuyahoga County Perinatal Depression Task Force enables providers to raise issues and make recommendations for improvement in identifying perinatal depression and enhancing the current behavioral health referral and intake system.
- MomsFirst is also involved in Cuyahoga County's Child Fatality Review (CFR) Committee, in

which every death of a youth age 18 or younger is investigated to determine patterns, prevention and community protective factors. Both committees began incorporating Adverse Childhood Experiences (ACE) scores into their reviews in 2020 to allow for a more comprehensive review of families' experiences.

    - In this reporting period, a recent needs assessment, along with Fetal Infant Mortality Review (FIMR) patient interviews, pointed to a lack of OB triage/Labor and Delivery Services in areas with the highest African American IMRs. This L&D "desert" has led to unnecessary delays in emergency medical treatment and has contributed to infant mortality.

- MomsFirst partners with the Cuyahoga County Board of Health to assess local data, address Social Determinants of Health, develop policy recommendations and advocate for change.
- The MomsFirst Project Director co-chairs the Ohio Equity Institute/Cleveland Cuyahoga Partnership (OEI/CCP), as the Community Action Network (CAN) promoted both CenteringPregnancy and LARCs countywide.
- The Project is consistently represented at the quarterly Ohio Collaborative to Prevent Infant Mortality (OCPIM) meetings. OCPIM focuses on the reduction in disparities in IMR across the state.
- The Ohio Department of Health's Pregnancy-Associated Mortality Review Program was awarded the Health Resources Services Administration (HRSA) State Maternal Health Innovation (MHI) grant whose goal is the reduction of the increasing rates of preventable maternal mortality and severe maternal morbidity (SMM). The Ohio Council to Advance Maternal Health (OH-CAMH) was established as Ohio's Maternal Health Task Force to fulfill the requirements of the HRSA State MHI Program grant, and the MomsFirst Project Director serves on the task force. The OH-CAMH is creating a Strategic Plan to reduce the increasing rates of preventable maternal mortality and SMM.
- The MomsFirst Project Director meets regularly with the Ohio Departments of Medicaid and Health to explore options for home visiting expansion with Medicaid funding. MomsFirst also provides input to the annual Title V Maternal and Child Health Services Block Grant Program public comment survey.
- MomsFirst maintained an important partnership with one of the area's Medicaid Managed Care Organizations, Molina Healthcare. Molina provided weekly bus passes to remove transportation barriers to employment, as well as monthly distribution of bulk diaper packages.

At the National Level

- MomsFirst has continued its leadership in maternal and child health activities at the national Healthy Start level. During this reporting period, the MomsFirst Project Director continued to hold monthly mentoring calls with the four other Healthy Start sites located in Ohio.
- MomsFirst was one of fifteen Healthy Start projects selected to participate in the MCHB Trauma Informed Care Community of Practice (TIC CoP). The TIC CoP is designed to improve participant and staff engagement and retention, participant outcomes, and their experience with their care. Staff attended webinars and coaching sessions detailing the long term impacts of trauma, particularly Adverse Childhood Experiences (ACES). The Project launched two workgroups, engaging at least two CHWs, one Case Manager, one Center Director and one Administration staff person. The "Welcome to MomsFirst" workgroup sought to ensure trauma-informed care is incorporated into CHW and Case Manager job descriptions, and creates behavior-based and trauma-informed interview questions for subcontractors to use when hiring new staff. The "Supporting Each Other" workgroup sought to create guidance for weekly supervision between Case Managers and CHWs. All Case Managers were trained on Reflective Supervision and then all Case Managers and CHWs were trained on the supervision guidance created by the workgroup.
- Beginning in November 2019, at the request of a local partner, the Cleveland Kids' Book Bank, the project began promoting Ready4K, a nationwide family engagement curriculum delivered via text messages which promotes child development. Each week, parents and caregivers receive fun facts and easy tips on how to promote their children's development by building on existing family routines – like pointing out letters on the cereal box at breakfast or counting the number of steps as you walk to the car or bus. CHWs share information regarding Ready4K with parents during the baby enrollment visit and assist with ensuring interested participants are signed up.
- MomsFirst also collaborates with the Ohio Department of Health, on the national program, Count the Kicks, a stillbirth prevention public awareness campaign. Count the Kicks teaches a method for, and the importance of, tracking fetal movement during the third trimester of pregnancy.

Root Causes, Social Determinants of Health, & Health Equity Overview

Social determinants of health (SDOH) play a defining role in population health and infant mortality. According to the World Health Organization, SDOH are "the conditions in which people are born, grow, live, work, and age, including the health system. These circumstances are shaped by the distribution of money, power, and resources at global, national, and local levels. The SDOH are mostly responsible for health inequities – the unfair and avoidable differences in health status seen within and between countries." [5-6] SDOH, sometimes referred to as 'root causes' of health, prevent people from living to their fullest potential (see Figure 2). According to Healthy People 2020, the primary SDOH include economic stability, housing, education, health care access, and social/community context, including civic participation, discrimination, incarceration, and social cohesion.[7] We explore each of these primary SDOH in turn, and explain how they contribute to poor health outcomes.

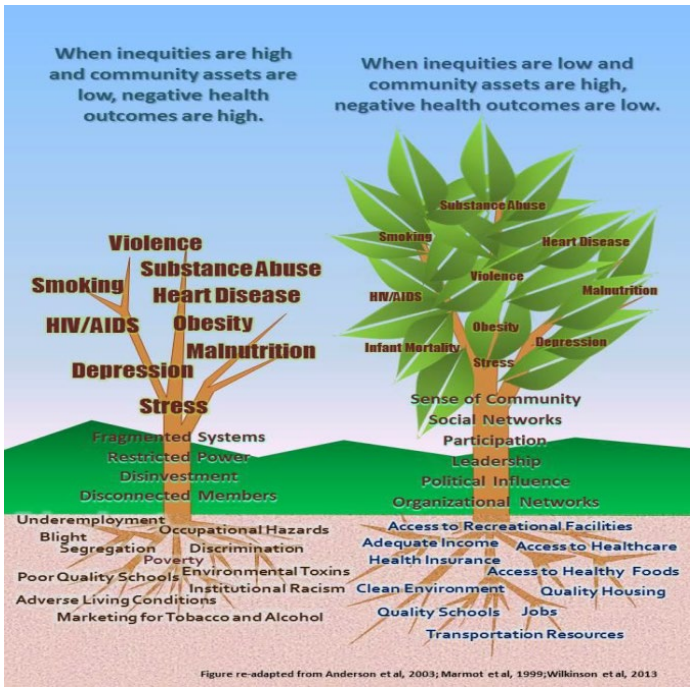


Figure 2. *Social Determinants of Health 'Tree'*

- Individuals dealing with <u>economic instability</u> are more vulnerable to adverse health events, more likely to suffer from chronic conditions, and less likely to be able to meet basic needs for themselves and their families, such as adequate food and nutrition, compared to those with stable economic standing. [7]
- Living in <u>inadequate, unstable or poor-quality housing</u> is associated with increased exposure to health hazards, such as lead, carbon monoxide, mold, and other allergens that negatively affect health or exacerbate existing chronic health conditions.[7]

- Individuals with low educational attainment often struggle to find employment opportunities that provide a living wage, thus compounding the negative repercussions of low education (i.e., less than a high school diploma). These individuals typically experience more difficulty accessing adequate health care due to lack of health insurance, inability to pay associated costs, and/or health literacy barriers.[7]
- Poor health care access leads to fewer preventative services and more emergency visits for both adults and children.[8]

While Healthy People 2020 includes community context as an individual SDOH, racism and discrimination also interact with all of the other primary SDOHs to undermine the wellbeing of communities of color.[7] Systemic racism has contributed to lower high school graduation and college attendance rates, lower median earnings, and disproportionately higher incarceration rates for Black and Brown individuals compared to White individuals.[7] In Cleveland, our history of discriminatory housing loans, racially restrictive community covenants, and deliberate policies at the city level has left a legacy of racial residential segregation, which persists today and negatively effects the health of minority residents.[9-10] In June and July 2020, the City of Cleveland and Cuyahoga County both approved resolutions declaring racism as a public health crisis.[11-12] These formal resolutions require the city and county to take concrete action, including establishing task forces and working committees, to address disparities in the SDOH.

The current reality of racism does not just influence the external opportunities available to people of color and the physical environments in which Black and Brown individuals live, work and play, it also has a severe biological impact. The 'weathering' hypothesis states that repeated experiences of racism and discrimination lead to poorer health outcomes for minority men and women due to increased exposure

Figure 3. *Social Determinants of Health and their Contribution to Infant Mortality*

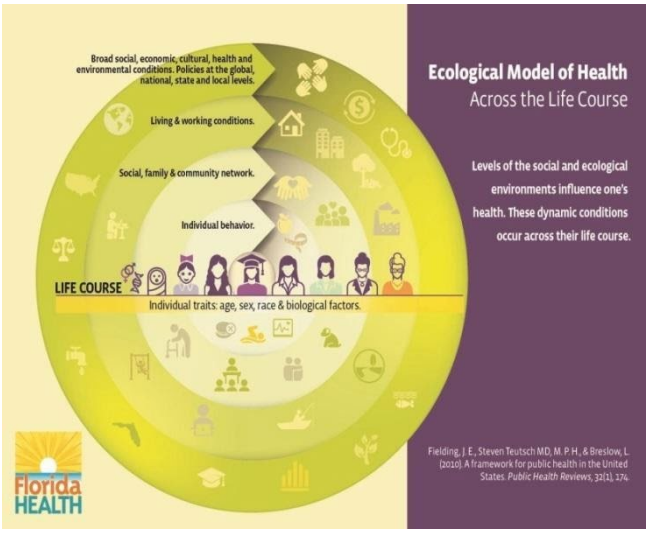
to acute and chronic stress.[13] Allostatic load, the measure of cumulative wear and tear on the body due to stress, is greatest for Black women, regardless of poverty status, when compared to both Black men and White women[13]. Higher allostatic load has been linked to higher odds of a woman developing preeclampsia and gestational diabetes as well as having a preterm or low birth weight baby.[14] Allostatic load explains why a Black woman with a college degree is more likely to experience a poor birth outcome compared to a White woman without a high school diploma, even though the Black woman has better SDOHs (higher education, better housing, secure finances, access to high quality healthcare). [15-16]

The biological effect of racism does not stop at the individual. Recent research in the field of epigenetics has shown that experiences of trauma, such as from slavery, racism, and discrimination, can be passed down across generations through changes in metabolism, physiology, and stress reponse.[17] This means that not only are Black women more likely to have preterm birth and low birth weight babies due to their elevated allostatic load, but their babies are at higher risk for developing poorer health outcomes. When those babies mature and become pregnant themselves as adults, they are even more likely to deliver preterm and low birth weight babies.[17-19] The cycle continues.

Racial inequity in infant mortality is the result of powerful, complex relationships that exist between white supremacy, SDOH, legislative policies, health, biology, and genetics (Figure 3). Health equity means that all individuals have a fair and just opportunity to be as healthy as possible.[20] For that to occur, obstacles to health have to be removed.

In the past, traditional interventions used prenatal care almost exclusively to increase healthy birth outcomes. [21] These intervention strategies improved earlier access to care; however, they did not achieve health equity as there was no significant decline in the racial disparity in infant mortality between Black and White babies.[21] To achieve health equity for our families in Cleveland, a holistic intervention that addresses multiple SDOH as well as racism and toxic stress is needed.

Figure 4. *Ecological Model – Life Course Perspective*



The life course perspective is essential for addressing health equity and SDOH. To eliminate racial disparities, the life course perspective focuses on more targeted interventions during sensitive development periods that mitigate risk factors and positively influence health (Figure 4).[22] Behaviors and living conditions during pregnancy represent only a snapshot of the influences on a family prior to conception. It is important to consider the social, economic, cultural, and environmental conditions that influence the way people live, grow, work, play, and age. As discussed previously, Black mothers have multiple risk factors that negatively affect their health outcomes due to stress from structural racism and inequitable living conditions. Therefore, directing resources to remediate SDOH and promoting policy changes to address inequitable conditions are needed to reduce the racial disparity in infant mortality.

Adding further complications to the goal of reducing racial disparities in SDOH, the COVID-19 pandemic has exacerbated these disparities. Black populations have been disproportionately impacted with higher hospitalizations and more deaths. Higher rates of infection and death are attributed, in part, to these deep-rooted social determinants leading to higher rates of chronic disease. [23] Furthermore, income instability, food insecurity, and housing instability, resulting from a history of structural racism has left people without the resources to take time off after exposure, to opt-out of in-person work, or to obtain necessary healthcare. These same structural factors and social determinants have resulted, as well, in a mistrust of healthcare institutions which can prevent people from getting the care that they need to be healthy. [24]

COVID-19 Impact on Service Delivery

In addition to the health and economic impacts of the pandemic on the population, the pandemic also altered the delivery of service. The MomsFirst program transitioned to remote service delivery in the Spring of 2020 and continues to offer much of the service remotely as of the writing of this report. Community Health Workers transitioned to conducting visits over the phone, either via phone call or video/virtual call. Additionally, resources such as diapers, Pack N' Plays, household items, bus passes and educational handouts were dropped off to each participant as needed. Virtual support groups called Moms Clubs, which utilized the Baby Basics curriculum, began in September 2020 to assist with building engagement between Community Health Workers and participants who had not ever met face-to-face.

To better understand how home visitors and their clients were experiencing both the pandemic and virtual service delivery, a focus group with MomsFirst home visitors was conducted in early 2021 by the Center on Urban Poverty and Community Development at Case Western Reserve University with the support of Invest in Children.[25]

The focus group was geared to better understand provider experiences, perceptions of the effectiveness of service, and successes and challenges of remote service delivery. Key themes emerged from this discussion that both highlight the unique challenges associated with service delivery in 2020 during a pandemic, as well as some innovations that resulted from the pandemic that could serve to improve service delivery moving forward.

MomsFirst home visitors reported the following:

- A combination of phone, text, and in-person material drop-offs proved most effective in terms of engaging and retaining MomsFirst participants. Texting, in particular, was often cited as a critical way to communicate with clients during this time. The brief in-person socially distanced visit also served to provide both clients and home visitors with much needed face-to-face contact that served to strengthen and build relationships.
- Maintaining this multi-modal service delivery approach could prove beneficial even after

in-person visits have resumed. Home visitors reported that the ability to use phone, text, and other platforms to connect with clients allowed for flexibility and continuity for families with challenging schedules and competing demands.

- It was also clear that clients had varying levels of access to and comfort with technology. As a result, home visitors suggested that an allowance for various platforms was important to ensuring that equal access to the service was provided despite barriers.
- Home visitors witnessed increases in stress, instability, and family illness among their clients resulting from the pandemic.
- Although persistence and flexibility are always valuable qualities for the home visitor in both engaging and retaining clients, this became even more critical during the pandemic when families were more stressed and challenged.
- Home visitors also reported that the virtual delivery of service made it more challenging to complete needed paperwork for the program, in particular the signing of documents became more challenging with fewer in-person visits.

The pandemic altered the delivery service in meaningful ways in 2020. Home visitors and those served by MomsFirst also faced unprecedented stress and uncertainty in this year. The following sections detailing the 2020 cohort and related benchmarks, performance, and outcomes, should be interpreted within this context.

2020 MomsFirst Cohort

Table 1 presents counts of women served by MomsFirst by race/ethnicity since 2015 compared to female population estimates for Cuyahoga County and the City of Cleveland. According to U.S. Census 2019 American Community Survey 1-Year estimates, approximately 30% of Cuyahoga County and 50% of Cleveland's female residents identify as Black.[26]

One way that MomsFirst addresses long-standing racial disparities in perinatal outcomes is through a concerted effort to enroll Black women living in Cleveland neighborhoods with consistently poor birth

outcomes. MomsFirst serves a majority Black population as shown in Table 1. Throughout the previous 5-year grant cycle and continuing into the current grant cycle, approximately 74-83% of MomsFirst participants have identified as Black.

Table 1. *Regional Racial/Ethnic Demographics Compared to MomsFirst Participants*

	Cuyahoga County	**City of Cleveland**	**MomsFirst**					
	U.S. Census 2019 ACS 1-Yr Estimates	U.S. Census 2019ACS 1-Yr Estimates	2015	2016	2017	2018	2019	2020
Female Population	645,999	197,884	1,823	1,709	1,627	1,423	1,102	1,061
Race								
Black	30%	50%	83%	81%	81%	79%	80%	74%
White	62%	40%	8%	9%	9%	14%	14%	11%
Other	8%	10%	8%	10%	10%	7%	7%	15%
Ethnicity								
Hispanic	6%	13%	7%	7%	8%	10%	9%	9%

In 2020, MomsFirst served 1,061 Cleveland women and their families. Of those participants, 41.7% were less than 25 years old. Of participants 18-years old and older, 64.2% had obtained a high school diploma, GED, or post-secondary education. At enrollment, over two-thirds of participants were not working (68.0%) and had never been married (92.3%). Just over 67% of women served (n=719) were pregnant in 2020. Of the pregnant women served, 12.7% were teens (under age 20). The remaining 347 women had delivered their babies prior to 2020 and were still engaged with the program.

MomsFirst actively recruits women who are dealing with life circumstances (i.e., poverty, teenage pregnancy, incarceration, housing instability, and homelessness) that increase their risk for a poor birth outcome. Table 2 compares MomsFirst participants who delivered in 2020 to unserved residents of the City of Cleveland and Cuyahoga County. As shown, approximately 14% of babies born to MomsFirst participants in 2020 had teenage mothers compared to 8% of babies in the City of Cleveland and 5% in Cuyahoga County. Just over 30% of MomsFirst participants (over age 18) who delivered in 2020 had not received a high school diploma compared to 21% of unserved Cleveland residents. Further, as illustrated by the percentage of deliveries paid for by Medicaid, MomsFirst serves proportionately more families living in poverty. The percentages of adequate prenatal care, healthy births, and women smoking

cigarettes during pregnancy were roughly equivalent between MomsFirst participants and unserved Cleveland woman.

Table 2. *Profile of 2020 Births to MomsFirst Participants Compared to Other Cleveland and Cuyahoga County Resident Births*

	MomsFirst	Other Cleveland	Other Cuyahoga County	Total Cuyahoga County
% teen births	14.4	8.2	4.5	4.8
% of mothers over age 18 without H.S. diploma	31.3	20.9	10.1	10.9
% mothers w/ adequate prenatal care (Kessner Index)	65.8	66.3	72.9	72.6
% healthy births	49.1	51.9	58.1	57.8
% used tobacco during pregnancy	11.5	9.9	5.9	6.1
% Medicaid paid delivery	94.6	72.8	46.9	48.6

*For additional data information, refer to the Technical Notes section at the end of the report. Note: Other Cleveland and Other Cuyahoga County columns do not include MomsFirst participants.

Healthy Start Benchmarks and Performance Measures

The Federal Healthy Start Program requires sites to monitor and report on progress related to Benchmarks utilizing standardized Healthy Start Screening Tools. The Benchmarks and Performance Measures are categorized into three of the four Healthy Start Approaches: 1) Improving Women's Health, 2) Improving family health and wellness, and 3) Promoting systems change.

1. Improving Women's Health

Improving women's health before, during, and after pregnancy is essential to improve perinatal outcomes and reduce infant mortality. In general, MomsFirst works to improve women's health by helping participants access health insurance, increasing participant health knowledge and awareness, providing ongoing staff training on topics relevant to women's health, conducting comprehensive assessment and case management, and supporting prevention through monitoring and community-wide education. In 2020 specifically, MomsFirst promoted women's health by:

- administering the Healthy Start data collection tools to explore the need for prenatal and preventative care, connection to a medical home and referrals to educational and employment services.
- distributing an insurance guide for Medicaid Managed Care Plans that details all of the services that are covered along with incentive programs for keeping medical appointments.
- partnering with Molina Healthcare for recruitment of pregnant women into MomsFirst.
- encouraging keeping medical appointments and utilizing telehealth when possible during the pandemic.
- training staff on Trauma-Informed practices and implementing Trauma-Informed supervision in order for staff to receive additional support and thus improving the support they provide to families.
- conducting Moms Club training for Community Health Workers to provide group support virtually during the pandemic.

As shown in Table 3, MomsFirst was successful in achieving four of the five goals set for 2020 in the Benchmark areas related to improving women's health.

Table 3. *2020 Federal Benchmarks and Performance Measures – Improving Women's Health*

	2020 Goal*	2020 Data
% of women participants with health insurance	90.0	98.0
% of women participant with a reproductive life plan	90.0	100.0
% of women participants who received a postpartum visit	76.0	69.0
% of women participants with a usual source of medical care	80.0	82.0
% of women participants who received a well-woman visit	67.0	76.0

*Benchmark goals increase incrementally in each year of the 5-year grant. These goals represent expected progress in the second year of this grant cycle. Downloaded directly from Well Family System on 5/10/21

2. Improving Family Health and Wellness

Improving family health and wellness encourages access to and delivery of high-quality health and social services to women, infants, and families as well as engaging both parents in the future of their child. In general, to support families' health and wellness, MomsFirst adopts a two-generation approach. Acknowledging the health of families are interrelated, MomsFirst supports the parental and community factors that promote family health and wellness, including system coordination and integration, health

promotion and prevention, and social support services that protect and advance parental and infant/child health and well-being. In 2020 specifically, MomsFirst worked to improve family health and wellness by:

- promoting patient/provider communication, including when to go to the hospital due to symptoms impacting pregnancy, as part of the CAN's Social Determinants of Health Task Force.
- adding a part-time Fatherhood Coordinator to the Fatherhood Program that was established in 2019.
- assessing the social-emotional development of participating children with developmentally appropriate and standardized screenings.
- launching virtual Fatherhood sessions each month for new and enrolled dads to receive education on various topics and provide peer-to-peer support. What we have seen is the slow but steady growth of these platforms making it our number one tool to network, share resources, educate, and socialize. One of the unexpected positive impacts witnessed is the networking between participants. Dads are exchanging numbers and bartering with each other to support one another with the skill sets that they possess. employing a CarePath and referral resources for intimate partner violence.
- partnering with the Cleveland Kids' Book Bank and the Literacy Co-op (Imagination Library) to provide new and used children's books to all participants.
- running a CommuterAds campaign on safe sleep practices in designated areas where sleep-related deaths have occurred.
- sharing COVID-19 information and providing masks, cleaning and hygiene items in addition to Food Bank deliveries to participants.

As shown in Table 4, MomsFirst was successful in achieving goals set for 2020 in seven of twelve Benchmark areas related to improving family health and wellness. As previously discussed, the pandemic greatly altered service delivery for the MomsFirst program, resulting in fewer in-person interactions. Further, the pandemic contributed to barriers to health care access, social isolation, and financial insecurity, in ways that could have contributed to the challenges in meeting family health and wellness benchmarks set prior to the pandemic

Table 4. *2019 Federal Benchmarks and Performance Measures – Improving Family Health and Wellness*

	2020 Goal*	2020 Data
% of child participants place to sleep following safe sleep practices	80.0	87.0
% of child participants who were ever breastfed or fed breast milk	74.0	72.0
% of child participants who were breastfed or fed breast milk at 6 months	39.0	26.0
% of women participants who abstain from smoking cigarettes in their 3rd trimester	86.0	87.0
% of women participants who conceive w/in 18 months of previous live birth	32.0	26.0
% of child participants who receive well child visits	85.0	88.0
% of women participants who received depression screening	91.0	90.0
% of women participants who screened positive for depression and received a referral to mental health services	100.0	67.0
% of women participants who received intimate partner violence screening	88.0	90.0
% of women participants who report father and/or partner involvement during pregnancy	78.0	79.0
% of women participants who report father and/or partner involvement with infant < 18 months of age	79.0	76.0
% of child participants aged 6-23 months who are read to 3+ times per week, on average	50.0	75.0

*Benchmark goals increase incrementally in each year of the 5-year grant. These goals represent expected progress in the second year of this grant cycle. Downloaded directly from Well Family System on 5/10/21.

3. Promoting Systems Change

Promoting systems change focuses on activities to maximize opportunities for community action to address social determinants of health, including systems coordination and integration among health and social services, other providers, and key leaders in the community and their states. As part of systems change efforts, MomsFirst provides regional and national leadership within the greater Healthy Start community and field of maternal and child health. In 2020 specifically, MomsFirst promoted systems change by:

- actively participating in the First Year Cleveland collaboration.
- using data from the American Community Survey on households without a vehicle correlated with zip codes with high rates of infant mortality and preterm births worked with the Social Determinants of Health Task Force to collaborate with RTA and submit a proposal to fund transportation issues impacting pregnant women and their families.

- contacted elected officials to advocate for the importance of assisting children and families as part of the federal response to the coronavirus health crisis, specifically that funds be allocated to support child care services, help low income families, and provide enhanced nutrition assistance and support services for those most at-risk during this challenging time. Additionally, the importance of providing education funding as part of the federal coronavirus relief response.
- co-chairing First Year Cleveland Action Team 5 to expand Labor and Delivery services in the South East quadrant of the County, specifically OB transport protocols and ER Triage protocols that can be put in place until new Labor and Delivery Services are available.
- participating in the County's Fetal Infant Mortality Review (FIMR) that began in 2014. This review board meets quarterly to identify local infant mortality issues through the review of infant and fetal deaths. It is a multi-disciplinary and multi-agency collaboration that develops recommendations for system and policy changes.
- participating in the State-wide Ohio Council to Advance Maternal Health launched in June 2020 that aims to develop and implement a statewide strategic plan to uplift patients and families through a lens of equity to create a better environment for maternal health in Ohio.

As shown in Table 5, MomsFirst was successful in achieving the specific goals set for 2020 in the areas related to promoting systems change, namely CAN implementation and collective impact work.

Table 5. *2020 Federal Benchmarks and Performance Measures – Promoting Systems Change*

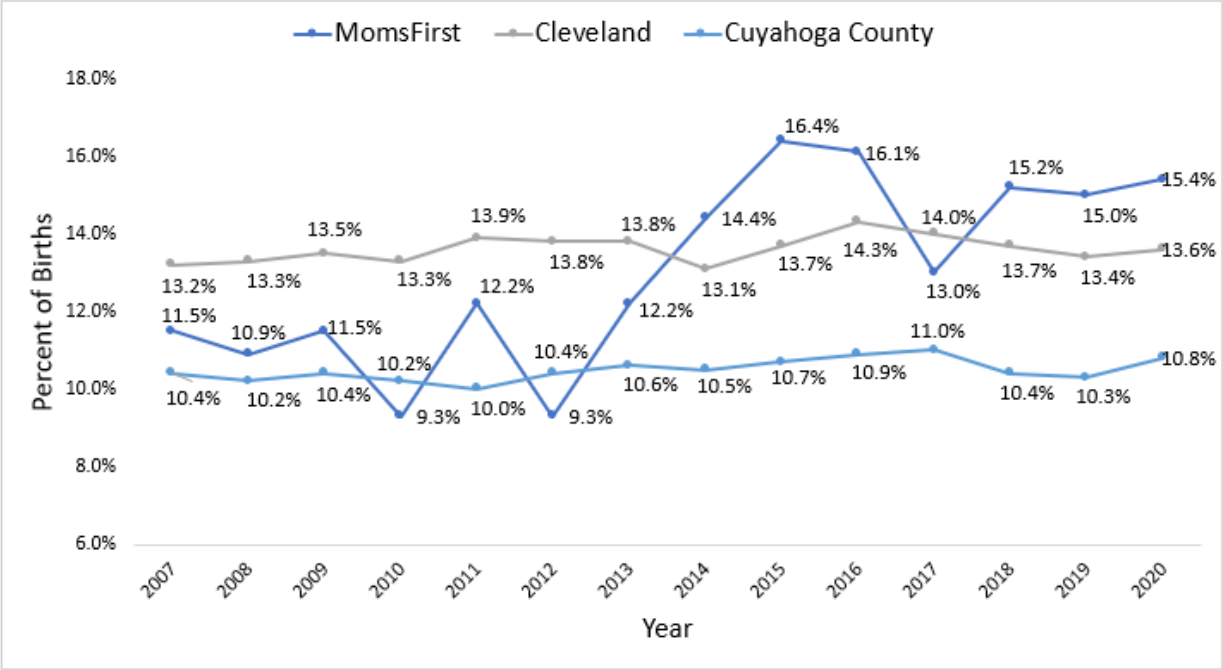
	2020 Goal	2020 Data
Fully-implemented Community Action Network (CAN) as demonstrated by:		
Regularly scheduled, quarterly meetings	Yes	Yes
Membership from three or more community sectors	Yes	Yes
12-month work plan	Yes	Yes
Collective Impact components implemented by the CAN		
Common agenda and shared vision for change	Yes	Yes
Shared measurement and common metrics	Yes	Yes
Participants engage in mutually reinforcing activities	Yes	Yes
Consistent and open communication across partners	Yes	Yes
Existence of backbone infrastructure	Yes	Yes

Birth Outcomes and Infant Mortality

The top five leading causes of infant mortality are preterm birth, low birth weight, birth defects, Sudden Unexplained Infant Death Syndrome (SUIDS), and accidents and injuries. Many of these causes are preventable and most are due to inequities in systems and environments. MomsFirst participants and their families experience many of these inequities in the systems and environments in which they live, work, and grow. The impact of these inequities can be seen in birth outcomes.

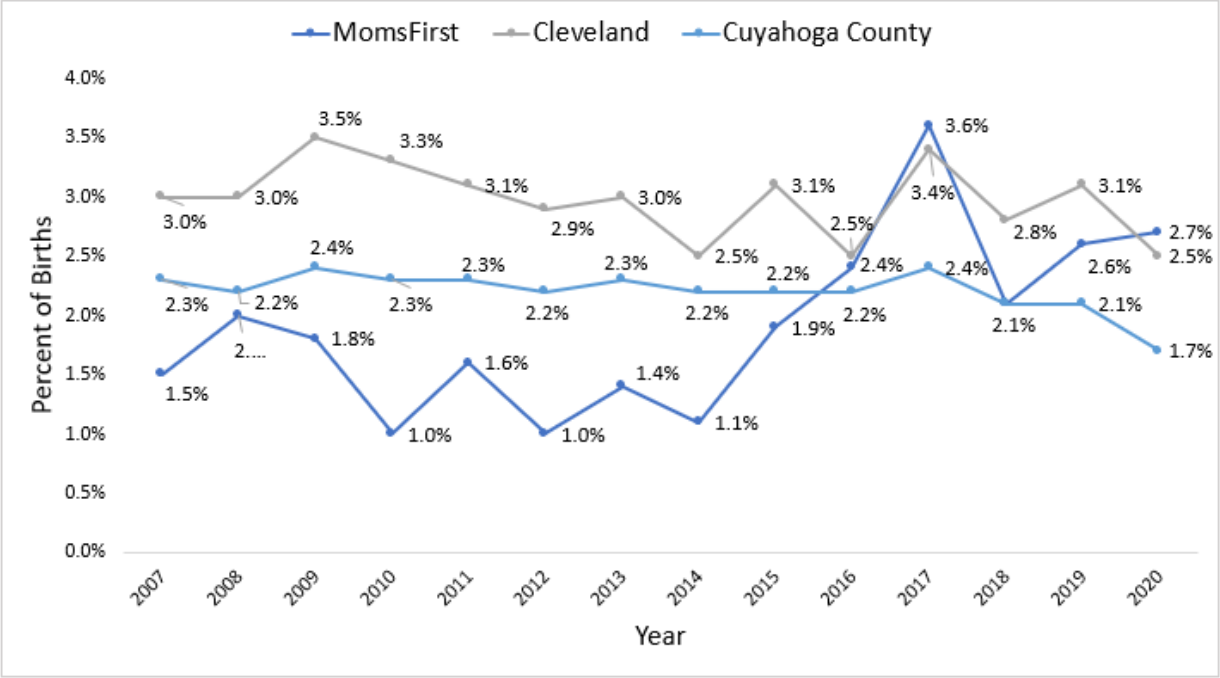
Figures 5 and 6 present the percent of low birth weight (<2,500 grams) and very low birth weight (<1,500 grams) births for MomsFirst participants compared to all City of Cleveland and Cuyahoga County births by year.[28] Unfortunately, MomsFirst did not meet the objective for low birth weight births (7.8%) in 2020 (see Figure 5). After a reduction in the percentage of low birth weight births in 2016 and 2017 after several years of increasing rates, low birth weight births for MomsFirst participants remained relatively constant in 2018, 2019, and 2020 at approximately 15.0%. The MomsFirst rate continues to be slightly higher than the rate for the City of Cleveland and Cuyahoga County as a whole.

Figure 5. *Low Birth Weight*



MomsFirst did not meet the objective for very low birth weight births (1.4%) in 2020 (see Figure 6).[28] After a sizable decline in the percentage of babies born at very low birth weight from 2017 to 2018, the MomsFirst very low birth weight rate increased in 2019 to 2.6% and remained relatively stable in 2020, only increasing to 2.7%. The City of Cleveland had a sizable decline in the very low birth weight rate between 2019 and 2020, which put the MomsFirst rate in 2020 slightly above the rate for the City of Cleveland as a whole.

Figure 6. *Very Low Birth Weight*

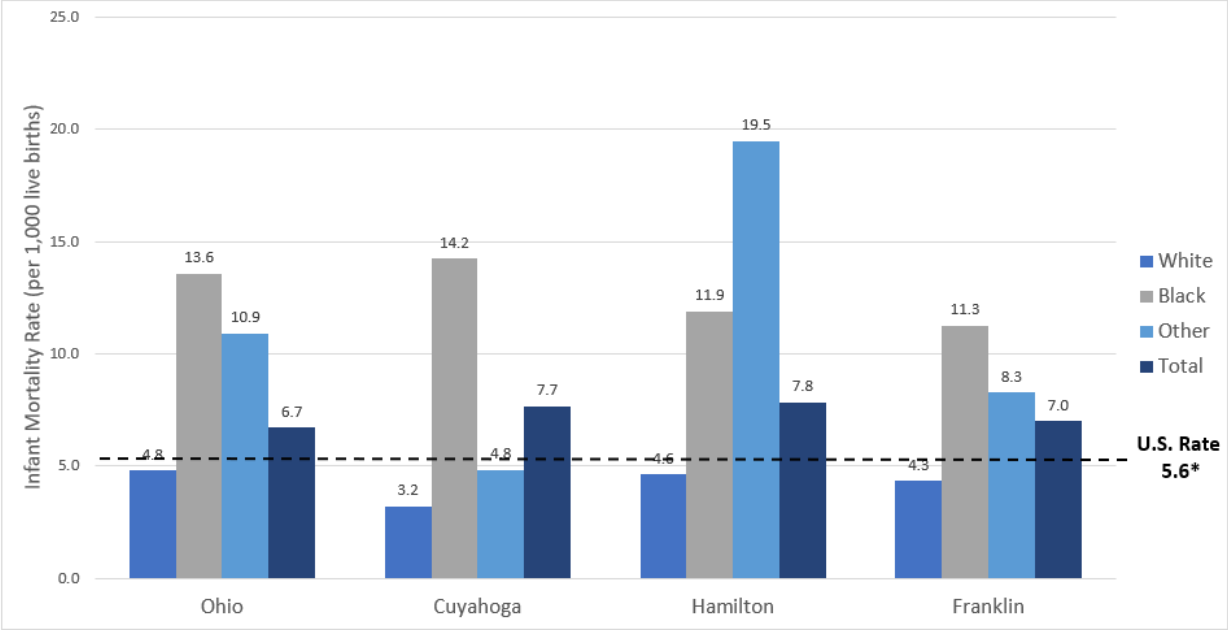


An infant mortality event is defined as a live born baby who dies before his or her first birthday. Infant mortality rate reflects how well a community takes care of the most vulnerable among them and is considered a sensitive index of community health. An infant mortality rate is calculated by dividing the number of infant deaths by the number of live births. This result is multiplied by 1,000 and represents the number of infant deaths per 1,000 live births. The Healthy People 2020 goal for infant mortality is 6.0 and Ohio ranked 42st in the US with an IMR of 7.0 in 2019 (most current data available).[27]

While infant mortality continues to be a tragedy facing the nation as a whole, Black families are disproportionately affected. As a country, we have been unsuccessful in reducing the large racial disparity in infant mortality rates between Black and White babies. Figure 7 below depicts the 2020

infant mortality rates for the State of Ohio and its three largest counties, Cuyahoga, Hamilton and Franklin, compared to the U.S. combined rate for 2019 (2020 data is currently unavailable at the national level).[28] At the state level and in Cuyahoga, Hamilton, and Franklin counties, the 2020 infant mortality rate for Black babies was between 2.6 and 4.5 times higher than the infant mortality rate for White babies. The racial disparity was greatest in Cuyahoga County, which had the highest mortality rate for Black babies and the lowest mortality rate for White babies.

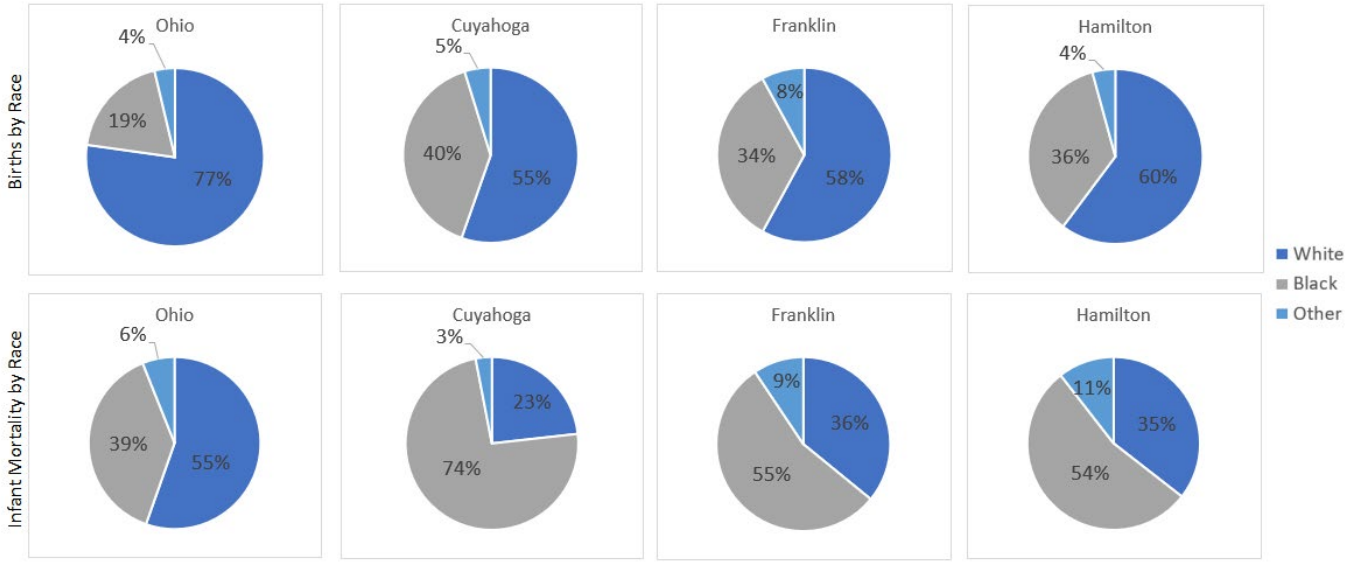
***Figure 7**. 2020 Infant Mortality Rates by Race – Ohio and the three Largest Counties in Ohio*



* Infant mortality for the U.S. is currently unavailable for 2020 and is not disaggregated by race for 2019.

In 2020, Black infants comprised 19.1% (23,941/125,671) of all births in the State of Ohio, yet 37.6% (325/843) of all infant deaths.[28] As shown in Figure 8 below, the situation was even worse in Cuyahoga County where Black babies comprised 73.7% (73/99) of all infant deaths yet only 39.8% (5,125/12,878) of all births. While Black babies are dying at an alarmingly higher rate than White babies in Ohio, Hamilton, and Franklin counties, Cuyahoga County has the most severe problem.

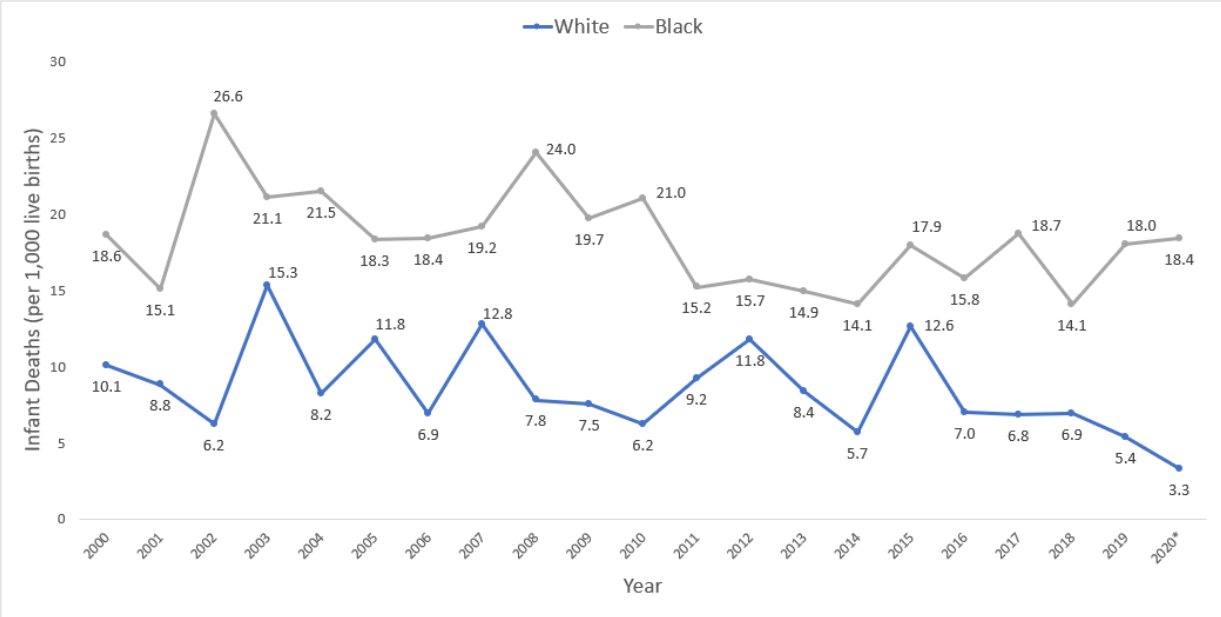
***Figure 8**. 2020 Birth and Infant Death (<12 months) Shares by Race – Ohio and three Largest Counties*



The City of Cleveland mirrors the county, state, and nation with a large racial disparity in infant mortality. To illustrate the long-standing nature of this racial disparity, Figure 10 presents infant mortality rates for Black and White babies living in the City of Cleveland from 2000 through 2020. The annual infant mortality rate for Black babies, represented in grey, compared to the infant mortality rate for White babies, represented in blue, highlights entrenched racial disparity. While the distance between the grey and blue lines has fluctuated over the last two decades, the gap has remained constant. In 2020, the infant mortality rate for Black babies in Cleveland was 18.4 deaths to 1,000 live births while the infant mortality rate for White babies was 3.3. Black babies died at over 6 times the rate of White babies in Cleveland.

Combining multiple years of data provides a more stable estimate of infant mortality, resistant to year-to-year fluctuations. The three-year 2018-2020 infant mortality rate for Cleveland was 11.7 infant deaths per 1,000 live births. However, the 2018-2020 infant mortality rate for Black babies in Cleveland was 16.4 deaths to 1,000 live births while the infant mortality rate for White babies in Cleveland during that same three-year period was 5.0. Black babies in Cleveland were over three times more likely to die before their first birthday than White babies during this timeframe.

Figure 9. *Racial Disparity in Infant Mortality, Cleveland 2000-2020*



In 2020, there were nine infant deaths (out of 501 births) among MomsFirst participants. Four of the infant deaths were caused by perinatal conditions that were determined to be of "natural" origins, one of which was attributed to extreme prematurity. The remaining five infant deaths were related to suffocation, three of which were attributed to unsafe sleeping conditions. The MomsFirst infant mortality rate in 2020 for all enrolled participants was 18.0, exceeding the Healthy People 2020 objective of 6.0 and representing another increase from previous years (see Table 6).

Table 6. 2020 *Infant Mortality Rate with Births and Deaths among MomsFirst Participants*

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2010-2020
IMR	2.6	1.3	6.2	5.6	5.9	8.6	7.3	6.3	6.1	10.1	18.0	6.6
Number of Infant Deaths	2	1	5	4	4	6	5	5	4	5	9	50
Births	761	772	803	712	675	695	689	789	653	493	501	7,543

Note. When working with relatively rare events, an increase or decrease of one case in the numerator can result in large fluctuations in rate. Thus, a more reliable estimate of the MomsFirst infant mortality rate is the combined rate of 6.6 per 1,000 live births for 2010-2020.

In 2016, MomsFirst began calculating their infant mortality rate in two different ways reflecting participants' varying levels of engagement in the program. As a voluntary program, some participants choose to disengage from MomsFirst prior to the birth of their baby for various personal reasons. Yet, we know that engagement in MomsFirst throughout the duration of one's pregnancy and into the postpartum period affects pregnancy and birth outcomes. Thus, the decision was made in 2016 to examine infant mortality rates based on participant longevity in the program. Typically, longevity in the program was defined as at least one home visit following birth, however, due to the pandemic, MomsFirst case workers were unable to provide in-person visits and instead switched phone visits after March 2020. Thus, for 2020 longevity in the program is defined as at least one home or phone visit following birth. The infant mortality rate of 12.0 reported above is reflective of *all* women who received at least one MomsFirst home or phone visit. Some of these women (n=75), despite every effort to keep them engaged, dropped out of MomsFirst, thus ending their participation in the program, before the birth of their baby. Typically, some of the MomsFirst infant deaths that occurred in a given year are losses to women who were no longer engaged in MomsFirst at the time of their deliveries. This year, all nine of the infant deaths were to participants who had at least one home or phone visit follow the birth of their baby.

It is important to note that six out of nine of the infant deaths occurred after the start of the COVID-19 pandemic. As discussed previously, the pandemic greatly altered service delivery for the MomsFirst program. The unusual virtual visit format or social distancing barriers could have prevented mothers and caseworks from engaging in the same level of substantive interactions that they enjoyed prior to the pandemic. It is also possible that the indirect effects of the pandemic, including reduced or delayed access to healthcare, social isolation, and economic insecurity, contributed to the higher rate of infant mortality observed in 2020, although more research is needed to test this hypothesis.

Impacts

- In their 29th year as a Federal Healthy Start site, MomsFirst provided home visiting, case management, education, screening and assessment, referral and care coordination, and support to over 1,000 Cleveland women and their families.
- Guided by the goal of eliminating racial disparities in infant mortality, proportionately fewer Black MomsFirst participants experienced the death of their baby before their first birthday compared to other pregnant women residing in Cleveland who were not served by MomsFirst. In fact, the 10-year combined infant mortality rate for MomsFirst of 6.6 infant deaths per 1,000 live births is lower than the infant mortality rates for Cleveland, Cuyahoga County, and Ohio.
- MomsFirst expanded their staff to include the addition of a part time Fatherhood Coordinator dedicated to actively recruiting, enrolling, and engaging fathers and fathers-to-be in prenatal care, childbirth events, infant care, and co-parenting.
- Prior to the onset of COVID in March 2020 the MomsFirst HealthMobile Initiative (aka "Mom Mobile") provided reproductive health services to 92 Cleveland residents including: 2 pregnancy tests; 26 STI tests; 25 HIV tests; and 920 condoms distributed.
- MomsFirst Community Health Workers had 21,317 encounters with participants or their families in 2020, including 2,765 home visits, 14,679 phone visits, and 610 video visits, and 738 text messages.

Recommendations

Benchmarks

- The Project will begin collecting data each month regarding the number of encounters per CHW; the number of open services/referrals; and performance measure data by CHW. Based on this data, each site will set its own targets. As recommended by the Project's federal Government Project Officer, quarterly all staff meetings will be held to review progress, audit trends, and updates on QI projects to help all staff see how each person's role contributes to the outcomes/impact of the project. An annual meeting with staff toward the close of each program year will be held to review performance measures and progress.

- All CHWs and Case Managers will attend Implicit Bias training. Additionally, Racial Equity training will be provided for all Case Managers.
- The Quality Improvement team will prioritize the Performance Measure regarding participants attending the postpartum appointment for targeted intervention and improvement. The Quality Improvement team, which consists of two Community Health Workers, two Case Managers, MomsFirst Assistant Administrator, MomsFirst Deputy Project Director and MomsFirst Epidemiologist will work together to develop the small change to implement to improve on this performance measure.

Collaborations

- Along with all of Ohio's Healthy Start sites MomsFirst will be part of the Ohio Commission on Infant Mortality. The Commission's goals are ending preventable maternal risks and deaths and ending preventable preterm birth and infant death, with the aim of reaching the Healthy People 2030 Goal of an IMR no higher than 5.0, with significant reductions in disparities.
- Through the CAN, the Project's Social Determinants of Health (SDOH) Task Force worked collaboratively with the local public transit system on a proposal, entitled Baby on Board which was submitted to the Ohio Department of Transportation, and fully funded at $400,000. This will support three strategies to provide bus passes and private transportation services to families in 3 targeted zip codes (2 of the zip codes are in the Project's target area, the city of Cleveland), and enhance infrastructure by adding covered shelters, lighting and benches at bus stops.

Technical Notes /References

Data System

MomsFirst programmatic data are self-reported by participants and therefore limited in ways similar to all self-reported data, namely biases and errors in recall, documentation by staff, and missingness (e.g., a participant declines to provide certain information; an item in an assessment was overlooked and therefore, not answered). MomsFirst has several quality assurance procedures in place to ensure the validity of the data. The contractual agreements with community agencies include the data collection protocols and mandated services for participants. Significant coordination continues to take place with the system vendor to address technical concerns as they emerge at both the user and system administrator level in addition to reporting options.

MomsFirst Goals and Data

The MomsFirst goals for each benchmark were set to challenge the Project, and to be realistically achievable, within the scope of the Project. Vital statistics, such as infant mortality and low birth weight, naturally fluctuate from one year to the next due to the size of the population being studied. Smaller groups are subject to much higher random error than larger groups. This is relevant to MomsFirst due to the relatively small number of births studied each year. The reliability of small group rates can be improved by combining several years of data which increases the stability of the reported estimate.

We also saw a slight decrease in the number of women in the MomsFirst population compared to 2019 (Table 1). The COVID-19 pandemic could be responsible for the reduction.

The relatively large amount of data MomsFirst gathers through Community Health Workers necessitates an active quality assurance process. Quality assurance is a dynamic process with large and small adjustments over the course of a calendar year. Changes in policy, practice, and personnel, are addressed through two functions of quality assurance: training and monitoring. New staff are trained on the perinatal health curriculum (Partners for a Healthy Baby, Florida State University), the referral process, data collection, and using the data system. Follow-up trainings on standard practices or changes in policy occur at individual community agencies and at the monthly Administrative Management Group meetings. For monitoring of actual performance, quality assurance reviews are conducted at each community partner agency 2-4 times per year based on audit performance. The reviews become an opportunity to provide technical assistance on standard practices.

Table and Figure Notes

Tables 2: Data housed in the Child Household Integrated Longitudinal Data (CHILD) System at the Center on Urban Poverty and Community Development, Jack, Joseph and Morton Mandel School of Applied Social Sciences, Case Western Reserve University (Poverty Center), were used to conduct a regional comparison of served women to other City of Cleveland and County residents. The tables use 2020 birth certificate data from MomsFirst participants, other women who resided in Cleveland at the time of their baby's birth but were not enrolled in the program, and residents of Cuyahoga County for comparison. Birth certificate data provided by Ohio Department of Health. This should not be considered an endorsement of this study or these conclusions by the Ohio Department of Health.
Table 2, MomsFirst: Based on 482 live births in 2020, whose family received at least one visit from MomsFirst, and who were included in the Child Household Integrated Longitudinal Data (CHILD) System. Those not matched to birth certificate data may have been non-Cuyahoga County residents at the time

of birth, or born outside of Ohio, or had missing or inaccurate identifying information such as child's name or date of birth, making matching more difficult.
Table 2, Other Cleveland: Based on 4,012 Cleveland resident births in 2020, matched to CHILD and not included among the MomsFirst births column.
Table 2, Other Cuyahoga County: Based on 12,583 Cuyahoga County resident births in 2020, matched to CHILD and not included among the MomsFirst or Other Cleveland birth Columns.
Table 2, Cuyahoga County: Based on 13,065 total Cuyahoga County resident births in 2020, matched to CHILD. Includes all other columns.
Table 2, Kessner Index: Adequate prenatal care is determined using the Kessner Index, which defines adequate prenatal care as beginning in the 1st trimester and the total number of additional visits must meet or exceed that which would be expected for the child's gestational age.
Table 2, Healthy Births: defined as 5 minute Apgar of 9 or 10, receipt of prenatal care in 1st trimester, gestational age >=37 weeks and birth weight >=2500 grams. Source: National Center for Health Statistics (1999).

Note: Infant mortality rates were calculated using matched birth and death certificates.

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Mission Statement

To implement an integrated, comprehensive, neighborhood-based, indigenous outreach program, which includes: case finding, care coordination, health education, and disease prevention by fostering personal empowerment of individuals and families.

Cleveland Department of Public Health

We are committed to improving the quality of life in the City of Cleveland
by promoting healthy behavior, protecting the environment, preventing disease,
and making the city a healthy place to live, work, and visit.

MomsFirst

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