

# MomsFirst

**Local Evaluation 2021**



**Justin M. Bibb, Mayor**

City of Cleveland

**Dr. David Margolius, Director**

**Lita Wills, Commissioner of Health Equity and Social Justice**

**Lisa M. Matthews, MomsFirst Project Director**

Cleveland Department of Public Health

Acknowledgment: **Center on Poverty and Community Development**  
**Jack, Joseph and Morton Mandel School of Applied Social Sciences, Case Western Reserve University**

# Table of Contents

---

<b>Description of MomsFirst</b>	5
MomsFirst Collaborations, Activities and Collective Impacts	7
<b>Root Causes, Social Determinants of Health, &amp; Health Equity Overview</b>	12
<b>Enrollment Analysis</b>	16
<b>2021 MomsFirst Cohort</b>	22
<b>Healthy Start Benchmarks and Performance Measures</b>	24
Improving Women’s Health	24
Improving Family Health and Wellness	25
Promoting Systems Change	27
<b>Birth Outcomes and Infant Mortality</b>	28
<b>Impacts</b>	33
<b>Recommendations</b>	34
<b>Technical Notes/References</b>	36
Data System	36
MomsFirst Goals and Data	36
Table and Figure Notes	36
<b>References</b>	38

# Tables and Figures

---

## Tables

<b>Table 1</b>	Regional Racial/Ethnic Demographics – Compared to MomsFirst Participants	17
<b>Table 2</b>	Profile of 2021 Births to MomsFirst Participants – Compared to Other Cleveland and Cuyahoga County Resident Births	18
<b>Table 3</b>	2021 Federal Benchmarks and Performance Measures – Improving Women’s Health	19
<b>Table 4</b>	2021 Federal Benchmarks and Performance Measures – Improving Family Health and Wellness	21
<b>Table 5</b>	2021 Federal Benchmarks and Performance Measures – Promoting Systems Change	22
<b>Table 6</b>	Infant Mortality Rate with Births and Deaths among MomsFirst Participants	27

## Figures

<b>Figure 1</b>	Healthy Start Approach	6
<b>Figure 2</b>	Social Determinants of Health Tree	12
<b>Figure 3</b>	Social Determinants of Health – and their Contribution to Infant Mortality	14
<b>Figure 4</b>	Ecological Model – Life Course Perspective	15
<b>Figure 5</b>	MomsFirst actual births compared to expected births	18
<b>Figure 6</b>	Mothers: Total encounters by quarter; average per client	19
<b>Figure 7</b>	Fathers: Total encounters by quarter; average per client	19
<b>Figure 8</b>	Total referrals; Average per client	20
<b>Figure 9</b>	Case closure type as a share of total closures	21
<b>Figure 10</b>	Low birth weight	29
<b>Figure 11</b>	Very Low birth weight	29
<b>Figure 12</b>	2020 Infant Mortality Rates by Race – US, Ohio, and Three Largest Counties in Ohio	30

<b>Figure 13</b>	2020 Birth and Infant Death (<12 months) Shares by Race – Ohio and Three Largest Counties	31
<b>Figure 14</b>	Racial Disparity in Infant Mortality, Cleveland 2001-2021	32

# Description of MomsFirst

---

MomsFirst is a home visiting program, providing outreach, case management, interconceptual care, and health education, designed to help mothers<sup>1</sup> 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 2021, MomsFirst worked to achieve the following objectives for participating women and families:

1. an infant mortality rate below the Healthy People 2030 goal of 5.0 infant deaths per 1,000 live births<sup>2</sup>;
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 29<sup>th</sup> 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, the Ohio Department of Medicaid, and the City of Cleveland General Fund.

---

<sup>1</sup> 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 2021, do identify as women. Therefore, the terms women and mother will be used throughout this report.

<sup>2</sup> <https://health.gov/healthypeople/objectives-and-data/browse-objectives/infants/reduce-rate-infant-deaths-mich-02>

**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 2021 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 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 two 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 2021, 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 2021, the focus of the committee's work included several facets: a community mural, a Call for Artists, and Masks Off dialogue sessions. Each facet centers on the themes in Paul Laurence Dunbar's poem titled "We Wear the Mask".
- By 2021, project administrators have established protocols for virtual/phone visits, new enrollments, and service delivery documentation. Many medical providers also made telemedicine visits a standard part of care. In February and March of 2021, focus groups regarding remote visits were held with providers of early childhood mental health services (including MomsFirst staff) by the Project's evaluation team at CWRU. Results showed that while limited internet connection hampered virtual visits with some families, the ability to provide the option for virtual visits will be beneficial going forward, to retain participant engagement.
- MomsFirst kicked off Moms Clubs in September 2020, holding 4 separate sessions per month (one per week). Participants were recruited and grouped by due date to participate in the

monthly educational/support sessions. The goal was to build peer-to-peer support among each cohort and more of a connection for new participants to the program and their CHW. Sessions ran through early July 2021 before being suspended due to low attendance.

- The MomsFirst Fatherhood Coordinator established a regular schedule of virtual sessions to increase father/partner participation. Titled Fatherhood Talk Tuesday and Fatherhood Talk Thursday, participants learned about the MomsFirst Fatherhood Program, received evidence-based education on a variety of topics, and shared resources. Eight to 12 men attended each session regularly. The Fatherhood Talk Thursday meeting evolved into a peer leadership form of engagement and learning. The participants have similar social situations and backgrounds. New fathers are supported by “veterans” in the group in an informal, but important way. New enrollees receive the MomsFirst Project Welcome to Fatherhood and Welcome to Fatherhood Child Development educational resource curriculum binders.
- To support MomsFirst participants that want to breastfeed, MomsFirst registered 20 pregnant participants for virtual lactation consultation from the Milk Mission which includes: a prenatal, post-delivery, and postnatal consult. Of the registered participants, 64% of them initiated breastfeeding. The Milk Mission Lactation Consultants were encouraged by the MomsFirst participants’ openness to learning more about the benefits of breastfeeding for them and their babies.
- 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.
- The COVID-19 pandemic and related restrictions were in place during much of the year, MomsFirst worked collaboratively with partners to increase available resources for families in



the program. This ensured that food, hygiene, and cleaning products were distributed to participants throughout the pandemic.

- MomsFirst maintained its relationship with Case Western Reserve University (CWRU) Center on 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.
- In 2021, MomsFirst continued its contract 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 levels.
- In December 2021, MomsFirst received a \$10,000 sponsorship from Cleveland Clinic to develop a proposal that aligns with their priorities to heal, hire and invest. Funds will be utilized in 2022 to purchase and assemble 160 breastfeeding kits consisting of items, such as nursing bras, nursing pads, nipple cream, etc. to increase both the initiation and duration rates of breastfeeding among MomsFirst participants (based on approximately 215 births, with a 75% breastfeeding initiation rate). The remaining funds will be utilized as a way to assist staff with retention.
- A bus and rail ad campaign, the ABCDs (Alone, Back, Crib, Don't Smoke) of Safe Sleep, was conducted by the Regional Transit Authority and ran through April of 2021.
- The Project began 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 were 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.

- All CHWs and Case Managers attended Implicit Bias training and Cook Ross Racial Bias Training. MomsFirst Admin, attended Cook Ross Racial Bias training and City of Cleveland EEO, Cultural Sensitivity, and Implicit Bias training.
- The Quality Improvement team prioritized 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 worked together to develop the small change to implement to improve this performance measure.

## 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 \$6.1 million in the past 15 years has allowed MomsFirst to expand its capacity and reach increasing numbers of high-risk mothers during the prenatal period.
- MomsFirst is actively involved in Cuyahoga County's Child Fatality Review (CFR) Committee, in which every death of youths aged 17 or younger is investigated to determine patterns, prevention, and community protective factors.
- 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.
- Through the Ohio Equity Institute/Cleveland Cuyahoga County Partnership, which serves as the MomsFirst Community Action Network (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 funded by the Ohio Department of Transportation and launched in April 2021. Baby on Board targets three zip codes (2 in the city of Cleveland), where poor birth outcomes are highest. The partnership aims to reduce infant mortality by improving bus stop amenities. It also enables MomsFirst CHWs to provide weekly bus passes to pregnant and parenting women, which can be used for any transportation needs. The CAN team also advocated for OB Triage at all emergency rooms in zip codes with higher incidences of preterm birth; sharing of medical records across the area's hospital systems, and training Emergency

Medical Services drivers to transport a pregnant woman to hospitals with Labor and Delivery wards.

- 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 created 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 provides monthly distribution of bulk diapers and wipes for MomsFirst participants.

## At the National Level

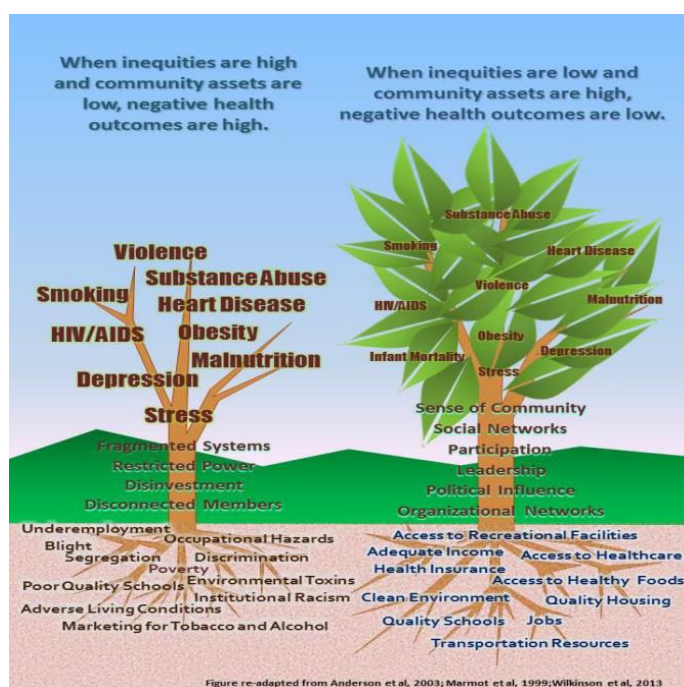
- MomsFirst has continued its leadership in maternal and child health activities at the national Healthy Start level. During this reporting period, the MomsFirst Project Director continued to hold monthly mentoring calls with the four other Healthy Start sites located in Ohio.
- In September 2021, the MFP Project Director began mentoring the Cobb and Douglas Department of Public Health in Marietta Georgia (near Atlanta), a new Healthy Start Project as of 2019. Mentoring was for six months and topics included Policy and Procedure Development, strategies for participant recruitment for the CAN, incorporating a fatherhood component, and program operations during the pandemic.

- MomsFirst adopted trauma-informed practices for staff, after completing the Maternal and Child Health Bureau's Trauma Informed Care Community of Practice training. The practices include integrity, empathy, communication, and support. These practices have been incorporated in all position descriptions for new staff and supervision procedures for existing staff. The Project created poster-size visual aids for each of our subcontractor's offices and individual handouts for each staff member. These infographics help to remind staff to be cognizant of potential traumas in a participant's life, and to avoid words or behaviors that may re-traumatize her.
- 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.”<sup>5-6</sup> SDOH, sometimes referred to as ‘root causes’ of health, prevent people from living to their fullest potential (see Figure 2). According to Healthy People 2030, the primary SDOH include economic stability, housing,



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

education, health care access, and social/community context, including civic participation, discrimination, incarceration, and social cohesion.<sup>7</sup> We explore each of these primary SDOH in turn and explain how they contribute to poor health outcomes.

- Individuals dealing with economic instability 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.<sup>7</sup>
- Living in inadequate, unstable, or poor-quality housing 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.<sup>7</sup>
- 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.<sup>7</sup>
- Poor health care access leads to fewer preventative services and more emergency visits for both adults and children.<sup>8</sup>

While Healthy People 2030 includes community context as an individual SDOH, racism and discrimination also interact with all of the other primary SDOHs to undermine the well-being of communities of color.<sup>7</sup> 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.<sup>7</sup> 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 affects the health of minority residents.<sup>9-10</sup> In June and July 2020, the City of Cleveland and Cuyahoga County both approved resolutions declaring racism as a public health crisis.<sup>11-12</sup> 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 ordinance established a Division of Health Equity and Social Justice within

the Cleveland Department of Public Health.<sup>3</sup> This division is controlled and administered by the Commissioner of Health Equity and Social Justice who was hired in July of 2021. Some of the duties of the commissioner include enforcing the rules of the ordinance, as well as examining and addressing health inequities across the city. In addition, the Commissioner will analyze and assess social determinants of health and health equity across communities and systems. The MomsFirst program moved to the Division of Health Equity and Social Justice in February 2022.

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 to acute and chronic stress.<sup>13</sup> 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<sup>13</sup>. The 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.<sup>14</sup> 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

---

<sup>3</sup> Ord. No. 843-2020. Passed 11-18-20, eff. 11-19-20



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

has better SDOHs (higher education, better housing, secure finances, access to high-quality healthcare).<sup>15-16</sup>

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 response.<sup>17</sup> 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.<sup>17-19</sup> 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.<sup>20</sup> 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.<sup>21</sup> 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

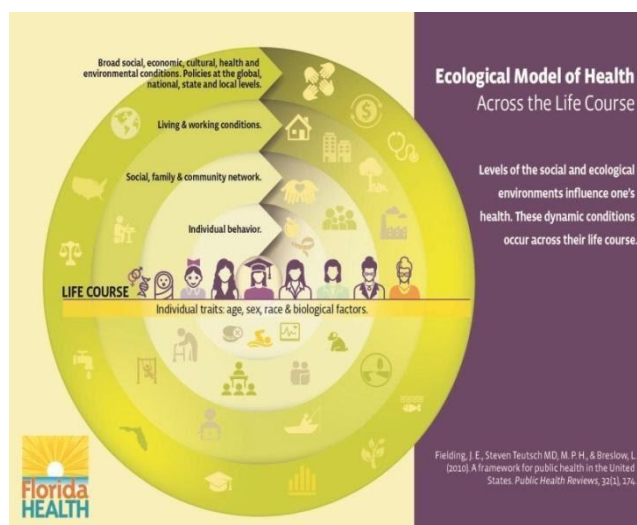
between Black and White babies.<sup>21</sup> To achieve health equity for our families in Cleveland, a holistic intervention that addresses multiple SDOH as well as racism and toxic stress is needed.

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).<sup>22</sup> 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. 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 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.<sup>24</sup>

**Figure 4. Ecological Model – Life Course Perspective**





# Enrollment Analysis

---

The US Census reports that births in the US have been steadily declining since 2008; with an acceleration in 2020 not entirely due to the pandemic.<sup>4</sup> This national decline has been particularly stark among core sub-populations for MomsFirst. Declines are greatest among Black and Hispanic populations, teens, and clients on Medicaid.<sup>5</sup> Generally, local patterns in declining births have tracked with national statistics. While overall births have tracked national movement the enrollment rate for MomsFirst has not, and it appears that MomsFirst has been serving an ever-shrinking slice of an ever-shrinking population. The past five years have seen a notable decline in births served by MomsFirst and a rapid shift in the service model to confront the pandemic. Understanding these problems and moving into developing strategies to address the issues is made complex by the need to disentangle longer-term declines and demographic shifts in the birth rate as well as account for the overlapping and accumulating effects of the pandemic.

To develop a solid footing MomsFirst, in partnership with a research team from Case Western Reserve University's Center on Poverty and Community Development focused on three approaches:

- A **framework** to identify potential influential events - internal and external to MomsFirst service provision - that provide a background context and guide initial data exploration.
- **Data summaries** from MomsFirst client management system and the Poverty Center's CHILD System to identify potential patterns.
- **Partner input** via a facilitated discussion of the framework and descriptive summaries with service providers and partner organizations to gain a broader, more integrated understanding of the issue.

---

<sup>4</sup> <https://www.census.gov/library/stories/2021/09/united-states-births-declined-during-the-pandemic.html>

<sup>5</sup> <https://www.prb.org/resources/why-is-the-u-s-birth-rate-declining/>

## Framework

The framework is a stepping-off point to define the conditions potentially impacting enrollments and service delivery. The focus is on internal and external factors. Internally, possible issues ranged from funding shifts (both reallocation of funds around the pandemic and longer-term shifts in funding in general); the impact of the pandemic on maintaining MomsFirst staffing levels as sick time, turnover, and difficulties in filling vacancies washed over MomsFirst; and the economy in general. The impact of the pandemic on the service model was substantial; from the move to virtual and text-based outreach, to the loss of traditional outreach spaces/opportunities in schools and at community events, to barriers helping clients access external resources with so many locations representing heightened COVID risk or outright closed. At the same time, the Fatherhood Initiative was in its infancy, finding a place with so many pieces shifting around it.

Externally the continued demographic shifts of the region accelerated while birth rates fell more rapidly than ever before. Particularly among sub-populations traditionally served by MomsFirst. Safety concerns either halted many external programs and services or forced clients to balance personal safety with a doctor's visit. Lockdowns left mothers isolated from many potential resources and activities at a time when access to resources to support physical, mental, and economic help was most needed. The larger world of work was also shocked, with many of the most at-risk positions being the very ones clients were most likely to hold, or lose, as the doors of so many businesses closed. Leaving clients and their families unemployed at a very uncertain time.

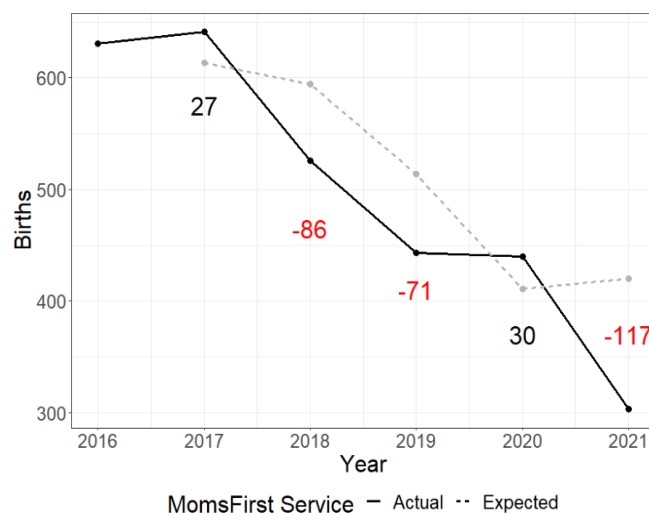
## Data Summaries

The initial exploration in late 2021 was focused on looking at how declines in enrollment compared to those of births. How is MomsFirst enrollment performing amid decline? Beyond enrollment, the focus was to identify changes in service provision over time. A third focus area, the Fatherhood Initiative program, was explored to see how that program was impacted across these issues.

When looking at total births and births by sub-populations it became clear that the decline is consistent across the board.

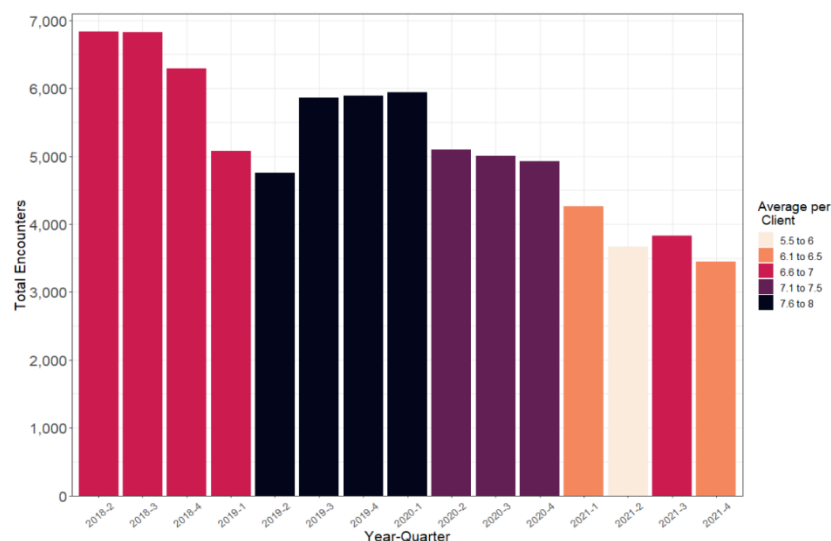
When looking at enrollments against births it becomes clear that MomsFirst enrollments have declined at a faster rate than the overall rate of decline. Figure 5 shows the actual annual count of MomsFirst births from 2016 to 2021 (in Black), against the expected decline (dashed line in gray). The expected decline takes the actual

**Figure 5. MomsFirst actual births compared to expected births**



birth rate for the prior year and projects it forward one year. Here you can see that MomsFirst exceeded the expectation by 27 births in 2017 and by 30 births in 2020; but fell below the expectation by 86 in 2018, 71 in 2019, and 117 in 2021. If the decline in MomsFirst births matched the decline across the city then there would have been substantially more MomsFirst births in 2018, 2019, and 2021. The net result is that enrollments have clearly lagged births and that declines in birth rates alone cannot account for declines in enrollment, pre- and post-pandemic.

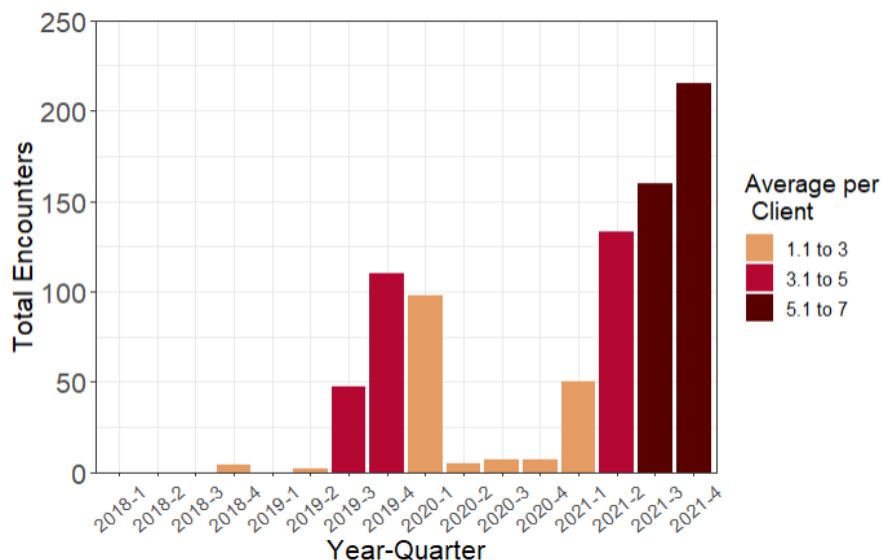
**Figure 6. Mothers: Total encounters by quarter; average per client**



Impacts on service provision were looked at using data on mother encounters, father encounters, referrals, and case closures by reason type. Encounters were measured by the total number for MomsFirst and the average number per client. For mothers, there was a

steady decline from early 2018, with a resurgence in total and average contacts from mid-2019 to early 2020, followed by a more precipitous drop-off on both lines.

**Figure 7. Fathers: Total encounters by quarter; average per**

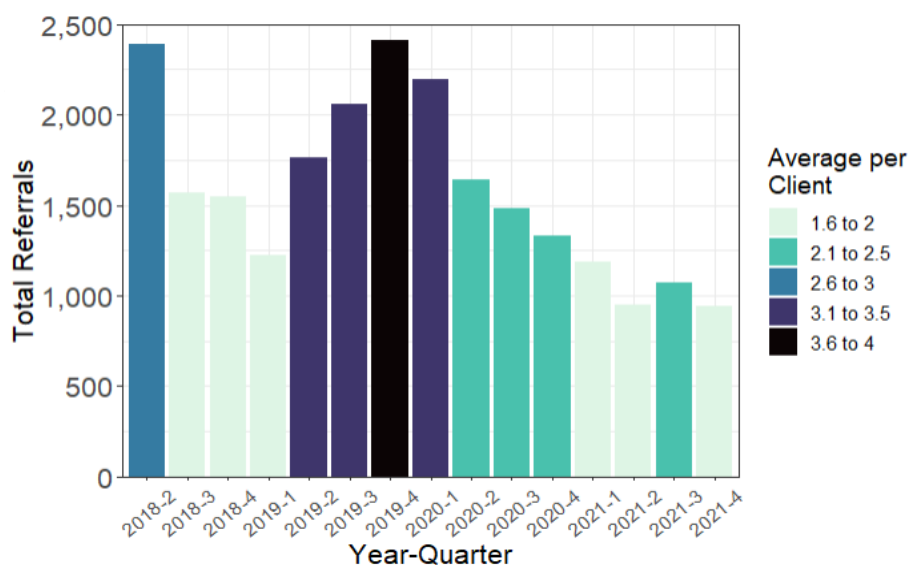


For fathers – a program that is much newer and much smaller -- encounters in total and on average increased substantially across the time period. Referrals followed much the same pattern as mother encounters, as might be expected, but with a much

starker spike from early 2019 to mid-2020.

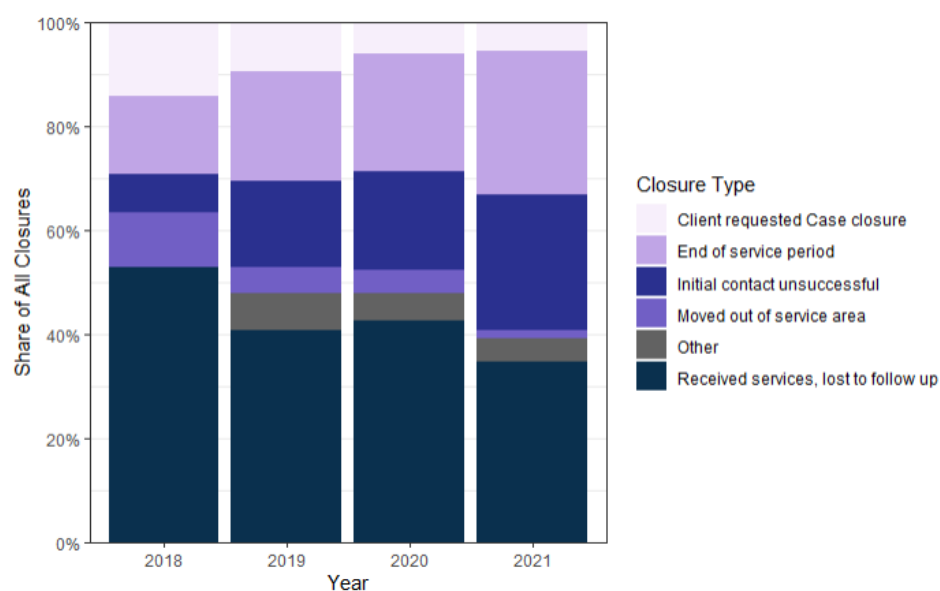
The data on case closures showed a drop in the clients who received services but were lost to follow-up, clients moving out of the service area, and clients requesting case closure; with the “lost to follow up” group being the largest of the three, with the greatest change. Closure data also showed a substantial

increase in both initial contact being unsuccessful and standard completion of cases. This hints at increased success in completing the client cycle once services are



provided, but decreased success in getting clients securely in that client cycle.

**Figure 9.** Case closure type as a share of total closures



## Partner input

These initial findings were used to facilitate a discussion with MomsFirst providers and related partners on May 12th, 2022. Partner inputs were varied, covering topics such as:

- Rethinking and improving MOUs to give workers better access to potential clients
- A renewed focus on outreach and relationship building within agency footprints that have changed in recent years
- Improved coordination between agencies working in the same or overlapping spaces
- Better understanding of how demographic changes are unfolding in different service areas, and what overlap is occurring between lateral and vertical organizations
- Improved branding communication to differentiate MomsFirst from similarly named programs in the region
- Better understanding of the reluctance or inability of potential clients to engage via traditional means or newer, more technical means; particularly in a post-pandemic space

Overall participants were excited to engage with the topics and bring their own questions to the table. There was substantial interest in understanding the large ecosystem of pre- and post-natal services within the City and County; all against the backdrop of recognizing that many of the slower changes were accelerated by the pandemic and adapting to that change is key for continuing to support healthy births and healthy children moving forward.

## 2021 MomsFirst Cohort

Table 1 presents counts of women served by MomsFirst by race/ethnicity since 2016 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.<sup>26</sup> Due to sampling concerns during the pandemic the U.S. Census has not released 1-year estimates for 2020.

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 74-81% 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	2016	2017	2018	2019	2020	2021
<b>Female Population</b>	645,999	197,884	1,709	1,627	1,423	1,102	1,061	868
<b>Race</b>								
Black	30%	50%	81%	81%	79%	80%	74%	80%
White	62%	40%	9%	9%	14%	14%	11%	12%
Other	8%	10%	10%	10%	7%	7%	15%	8%
<b>Ethnicity</b>								
Hispanic	6%	13%	7%	8%	10%	9%	9%	11%

In 2021, MomsFirst served 868 Cleveland women and their families. Of those participants, 53.9% were less than 25 years old. Of participants 18 years old and older, 67.7% had obtained a high school diploma, GED, or post-secondary education. At enrollment, over half of participants 18 years old and older were not working (58.8%) and had never been married (92.1%). Just under 54% % of women served (n=467) were pregnant in 2021. Of the pregnant women served, 15.6% were teens under age 20 (n=73). There were 401 served women who delivered their babies prior to 2021 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 2021 to unserved residents of the City of Cleveland and Cuyahoga County. As shown, approximately 17% of babies born to MomsFirst participants in 2021 had teenage mothers compared to 8% of babies in the City of Cleveland and 4% in Cuyahoga County. Just over 20% of MomsFirst participants (over age 18) who delivered in 2021 had not received a high school diploma compared to 18% 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 and healthy births were roughly equivalent between MomsFirst participants and unserved Cleveland women, although fewer MomsFirst participants reported smoking cigarettes during pregnancy.

**Table 2.** *Profile of 2021 Births to MomsFirst Participants Compared to Other Cleveland and Cuyahoga County Resident Births*

	<b>MomsFirst</b>	<b>Other Cleveland</b>	<b>Other Cuyahoga County</b>	<b>Total Cuyahoga County</b>
% teen births	17.2	7.9	4.2	4.5
% of mothers over age 18 without H.S. diploma	20.3	18.1	8.5	8.8
% mothers w/ adequate prenatal care (Kessner Index)	66.8	67.6	74.4	74.2
% healthy births	53.5	51.2	58.6	58.5
% used tobacco during pregnancy	5.7	8.3	4.8	4.8
% Medicaid paid delivery	94.9	70.6	44.1	45.4

\*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 a comprehensive assessment and case management, and supporting prevention through monitoring and community-wide education. In 2021 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 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 three of the five goals set for 2021 in the Benchmark areas related to improving women's health.

**Table 3. 2021 Federal Benchmarks and Performance Measures – Improving Women's Health**

	2021 Goal*	2021 Data
% of women participants with health insurance	90.0	98.0
% of women participant with a reproductive life plan	90.0	95.0
% of women participants who received a postpartum visit	76.0	66.0
% of women participants with a usual source of medical care	80.0	90.0
% of women participants who received a well-woman visit	67.0	66.0

\*Benchmark goals increase incrementally in each year of the 5-year grant. These goals represent expected progress in the third year of this grant cycle. Downloaded directly from Well Family System on 4/08/22.

## 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 2021 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.
- 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.

**Table 4. 2021 Federal Benchmarks and Performance Measures – Improving Family Health and Wellness**

	2021 Goal*	2021 Data
% of child participants place to sleep following safe sleep practices	80.0	89.0
% of child participants who were ever breastfed or fed breast milk	74.0	71.0
% of child participants who were breastfed or fed breast milk at 6 months	39.0	39.0
% of women participants who abstain from smoking cigarettes in their 3 <sup>rd</sup> trimester	86.0	89.0
% of women participants who conceive w/in 18 months of previous live birth	32.0	28.0
% of child participants who receive well child visits	85.0	96.0
% of women participants who received depression screening	91.0	97.0
% of women participants who screened positive for depression and received a referral to mental health services	100.0	89.0
% of women participants who received intimate partner violence screening	88.0	98.0
% 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	75.0
% of child participants aged 6-23 months who are read to 3+ times per week, on average	50.0	67.0

\*Benchmark goals increase incrementally in each year of the 5-year grant. These goals represent expected progress in the third year of this grant cycle. Downloaded directly from Well Family System on 4/08/22.

As shown in Table 4, MomsFirst was successful in achieving goals set for 2021 in nine of twelve Benchmark areas related to improving family health and wellness. As previously discussed, the pandemic greatly altered service delivery for the MomsFirst program, and those impacts still persist, resulting in fewer in-person interactions. Further, the pandemic contributed to barriers to healthcare 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.

### 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 2021 specifically, MomsFirst promoted systems change by:

- actively participating in the First Year Cleveland collaboration.
- using an analysis of American Community Survey data (correlating households without a vehicle with rates of infant mortality and preterm births, by zip code) in collaboration with the Social Determinants of Health Task Force and the Greater Cleveland Regional Transit Authority submit a proposal to provide transportation funding as a solution to issues that impact 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 Southeast 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 2021 in the areas related to promoting systems change, namely CAN implementation and collective impact work.

**Table 5.** 2021 Federal Benchmarks and Performance Measures – Promoting Systems Change

	2021 Goal	2021 Data
<b>Fully-implemented Community Action Network (CAN) as demonstrated by:</b>		
Regularly scheduled, quarterly meetings	Yes	Yes
Membership from three or more community sectors	Yes	Yes
12-month work plan	Yes	Yes
<b>Collective Impact components implemented by the CAN</b>		
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

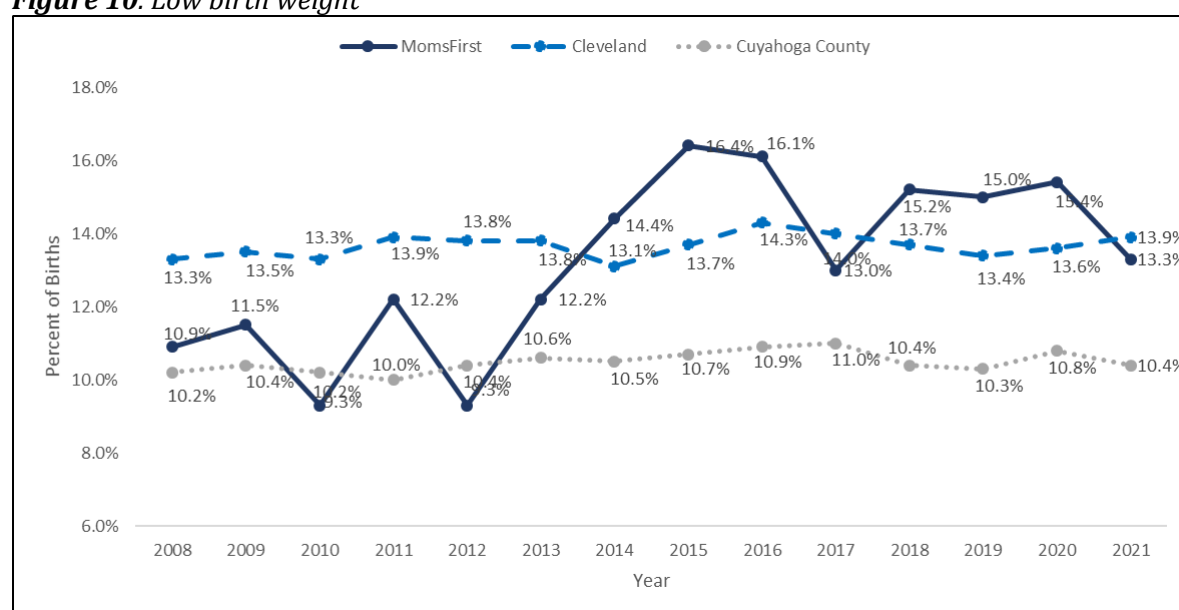
## Birth Outcomes and Infant Mortality

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

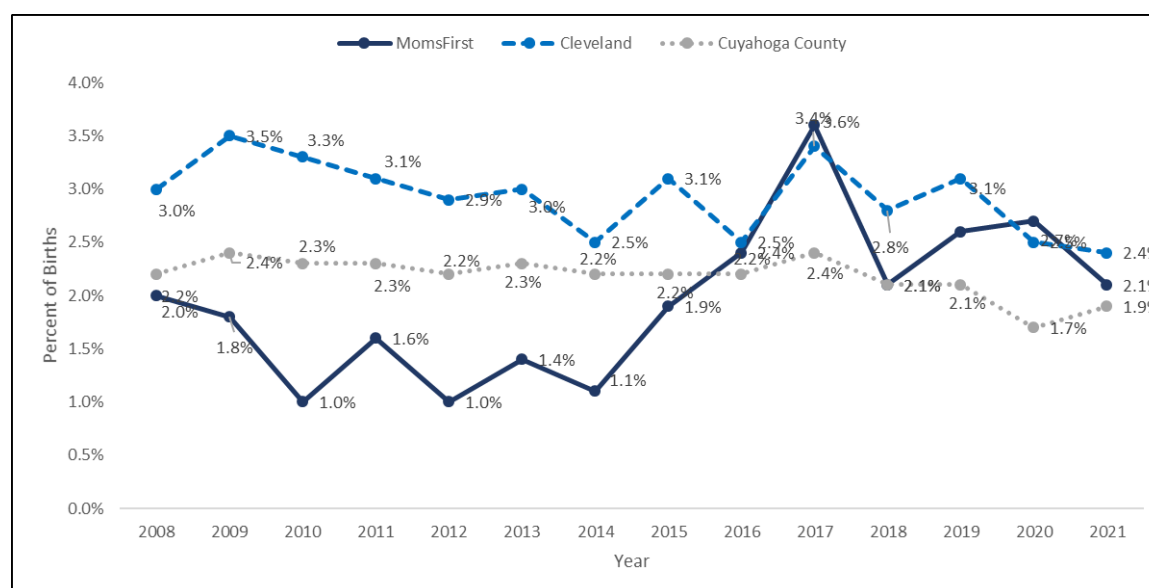
their families experience many of these inequities in the systems and environments in which they live, work, and grow. The impact of these inequities can be seen in birth outcomes.

Figures 10 and 11 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.<sup>28</sup> Unfortunately, MomsFirst did not meet the objective for low birth weight births (7.8%) in 2021, however, MomsFirst did have a decrease in the percentage of low birth weight births compared to previous years. Low birth weight births for MomsFirst participants remained relatively constant in 2018, 2019, and 2020 at approximately 15.0%, but in 2021 the percentage dropped to 13.3%. This rate was slightly lower than the rate for the City of Cleveland, although higher than the rate for Cuyahoga County as a whole.

**Figure 10. Low birth weight**



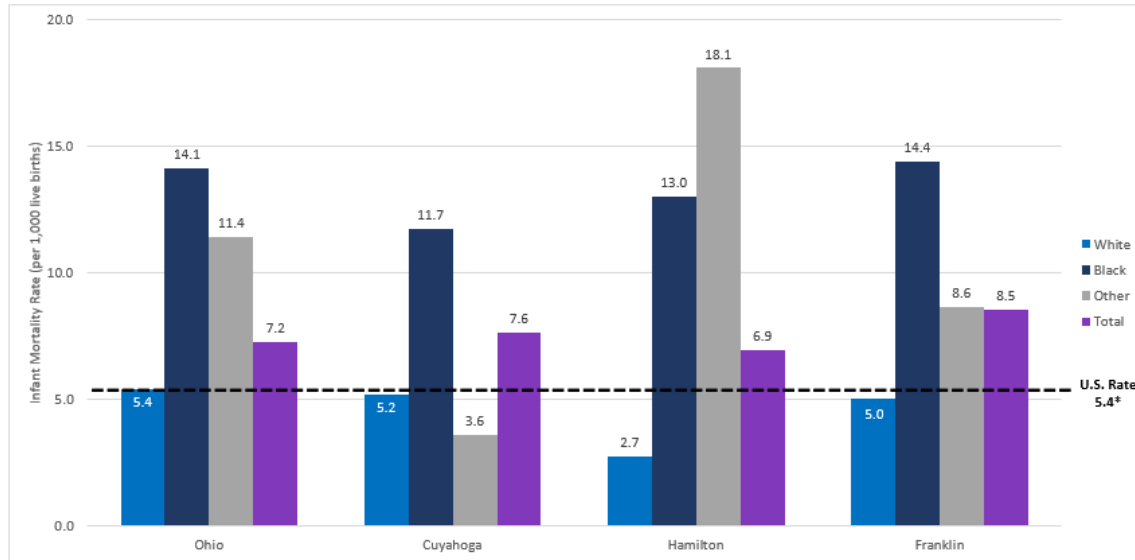
MomsFirst did not meet the objective for very low birth weight births (1.4%) in 2021, although MomsFirst did achieve a lower rate of very low birth weights than the City of Cleveland (see Figure 11).<sup>28</sup> The MomsFirst very low birth weight rate increased in 2019 to 2.6% and remained relatively stable in 2020, only increasing to 2.7%. In 2021, the rate for MomsFirst participants declined slightly to 2.1%, which is below the 2021 rate of 2.4% for the City of Cleveland as a whole.

**Figure 11. Very Low birth weight**

An infant mortality event is defined as a live born baby who dies before his or her first birthday. The 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 2030 goal for infant mortality is 5.0 and Ohio ranked 41<sup>st</sup> in the US with an IMR of 6.5 in 2020 (most current data available).<sup>27</sup>

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 12 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).<sup>28</sup> 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.

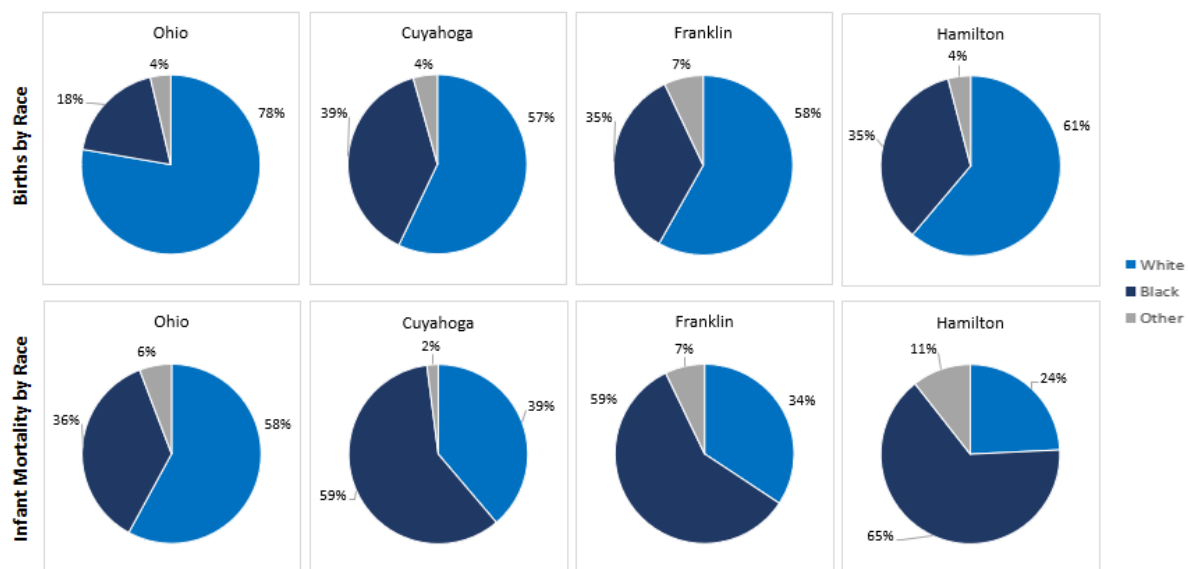
**Figure 12. 2020 Infant Mortality Rates by Race – Ohio and the three Largest Counties in Ohio**



\* Infant mortality for the U.S. is currently unavailable for 2021 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.<sup>28</sup> As shown in Figure 13 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.

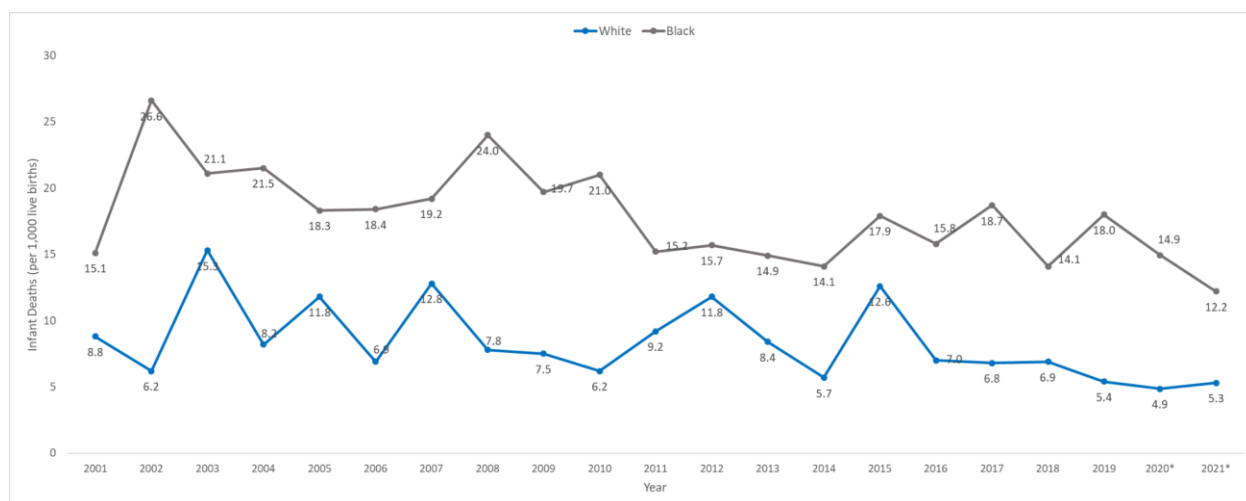
**Figure 13. 2020 Birth and Infant Death (<12 months) Shares by Race – Ohio and three Largest Counties**



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 14 presents infant mortality rates for Black and White babies living in the City of Cleveland from 2001 through 2021. 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 gray and blue lines has fluctuated over the last two decades, the gap has remained constant. In 2021, the infant mortality rate for Black babies in Cleveland was 12.2 deaths to 1,000 live births while the infant mortality rate for White babies was 5.3. Black babies died at more than double 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 2018-2021 infant mortality rate for Cleveland was 11.7 infant deaths per 1,000 live births. However, the 2018-2021 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 14. Racial Disparity in Infant Mortality, Cleveland 2001-2021**



\*2021 data is preliminary

In 2021, there was one infant death out of 279 MomsFirst births. That death was determined to be caused by accidental suffocation and strangulation in bed. The MomsFirst infant mortality rate in 2021



for all enrolled participants was 3.6, a sharp decline from recent trends that meets the Healthy People 2030 objective of 5.0 (see Table 6).

**Table 6. 2021 Infant Mortality Rate with Births and Deaths among MomsFirst Participants**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2010-2021
<b>IMR</b>	2.6	1.3	6.2	5.6	5.9	8.6	7.3	6.3	6.1	10.1	18.0	3.6	6.5
<b>Infant Deaths</b>	2	1	5	4	4	6	5	5	4	5	9	1	51
<b>Births</b>	761	772	803	712	675	695	689	789	653	493	501	279	7,822

Note. When working with relatively rare events, an increase or decrease of one case in the numerator can result in large fluctuations in the 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 2010-2021.

In 2016, MomsFirst began calculating its 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 before 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 CHWs were unable to provide in-person visits and instead switched to phone/virtual visits after March 2020. Thus, for 2021 longevity in the program is defined as at least one home or phone visit following birth. The infant mortality rate of 3.6 reported above is reflective of *all* women who received at least one MomsFirst home or phone visit. Some of these women (n=60), 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, the single infant death was to a participant who had at least one home or phone visit following the birth of their baby.

## Impacts

---

- In their 30th 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 1,600 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 6.5 infant deaths per 1,000 live births is lower than the infant mortality rates for Cleveland, Cuyahoga County, and Ohio.
- MomsFirst Community Health Workers had 14,170 encounters with participants or their families in 2021, including 1,880 home visits, 10,740 phone visits, 758 video visits, and 792 text messages.

## Recommendations

---

### Benchmarks

- Helping to educate on and promote adoption of the Pacify app to support efforts to increase the number of breastfeeding mothers, and to help support quality breastfeeding experiences. Lack of support from professionals, peers, and family members represents a substantial barrier. With new technologies comes new potential to provide comfortable, secure communication directly to participants and reach those who would not otherwise be reachable. The aim is to reduce fear, confusion, and access barriers through Pacify.
- The Project will expand community outreach and investment through an array of approaches/touchpoints, including: strategic placement of billboards and signage in high birth rate neighborhoods throughout the City; lead training for all CHWs and frontline staff, with information about testing, abatement, and related services; implementation of the Baby on

Board partnership with Greater Cleveland Regional Transit Authority providing transportation assistance countywide; internal consultation with case managers concerning declining enrollments; and ensuring that the materials (customized and updated pamphlets, flyers, business cards, etc.) and supports identified by those closest to the work are made available; and returning to hosting the annual staff development day – whose return is so necessary given the number of new employees.

- MomsFirst has developed a plan to focus on recognition using a strengths-based approach by selecting a measure for each month of the year in 2022 and the subcontractor's site that performs highest for that measure is rewarded. Possible measures include the highest percentage of participants who complete the MomsFirst program, the highest referral enrollment rate, various performance measures, etc. Rewards would support local and minority-owned businesses by providing gift baskets, lunch, and incentive items.

## Collaborations

- Along with all of Ohio's Healthy Start sites MomsFirst will continue to be a 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.
- Develop a model for 4<sup>th</sup> Trimester care to ensure a smooth hand-off from OB providers to well woman care (medical home) and address family planning, breastfeeding support, obesity, diabetes, postpartum depression, physical, social, and psychological challenges, fatigue, learning to care for the newborn and navigating preexisting health conditions that can be complicated by the pregnancy.
- Develop a protocol to formally incorporate the Cuyahoga County Board of Health's Newborn Home Visiting program into MomsFirst service delivery by strengthening the program intake and embedding it into MomsFirst services as a standard of care.

# 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 continued decrease in the number of women in the MomsFirst population compared to previous years (Table 1). Potential reasons for this decline include wider declines in birth rates, continued readjustments as a result of the COVID-19 pandemic, and potentially shifts in our local civic infrastructure; as discussed in the Enrollment Analysis section.

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 training on standard practices or changes in policy occurs at individual community agencies and 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 2021 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 was provided by the 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 331 live births in 2021, whose families 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, born outside of Ohio, or had missing or inaccurate identifying information such as the child's name or date of birth, making matching more difficult.

Table 2, Other Cleveland: Based on 3,947 Cleveland resident births in 2021, matched to CHILD and not included among the MomsFirst births column.

Table 2, Other Cuyahoga County: Based on 12,679 Cuyahoga County resident births in 2021, matched to CHILD and not included among the MomsFirst or Other Cleveland birth Columns.

Table 2, Cuyahoga County: Based on 13,010 total Cuyahoga County resident births in 2021, 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 1<sup>st</sup> 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 1<sup>st</sup> trimester, gestational age  $\geq 37$  weeks, and birth weight  $\geq 2500$  grams. Source: National Center for Health Statistics (1999).

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

## References

1. Ohio Equity Institute. (2020). <https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/infant-vitality/oei/OEI>
2. Stoddard, A., McNicholas, C., & Pieper, J.F. (2011). "Efficacy and Safety of Long-Acting Reversible Contraception". *Drugs* 71(8): 969-908.
3. <https://www.centeringhealthcare.org/what-we-do/centering-pregnancy>
4. Ohio Department of Health. (2019). Ohio Scorecard for Ohio: 01/01/2018 to 12/31/2018. Appendix A. <https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/infant-and-fetal-mortality/reports/ohio-quarterly-report-7-appendix-a>
5. Centers for Disease Control and Prevention. Social Determinants of Health. <http://www.cdc.gov/socialdeterminants/>
6. World Health Organization. Social Determinants of Health. [http://www.who.int/social\\_determinants/sdh\\_definition/en/](http://www.who.int/social_determinants/sdh_definition/en/)
7. Office of Disease Prevention and Health Promotion. Social Determinants of Health: Interventions and Resources. <https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-health/interventions-resources>
8. Taylor, T., & Salyakina, D. (2019). Health Care Access Barriers Bring Children to Emergency Rooms More Frequently: A Representative Survey. *Population health management*, 22(3), 262–271.
9. Zeltner, Brie. (2016). Segregation, inequality reflected in Ohio's poor county health rankings. *The Plain Dealer*. [https://www.cleveland.com/healthfit/2016/03/segregation\\_inequality\\_reflect.html](https://www.cleveland.com/healthfit/2016/03/segregation_inequality_reflect.html)
10. Kerr, D. (2011). *Derelict Paradise: Homelessness and Urban Development in Cleveland, Ohio*. Amherst: University of Massachusetts Press.
11. Racism as a public health crisis virtual meeting. Cleveland City Council. <https://clevelandcitycouncil.org/news-resources/current-news/2020/racism-as-a-public-health-crisis-virtual-meeting>. Published May 30, 2020. Accessed August 31, 2021.
12. Astolfi C. Cuyahoga County declares racism a public health crisis. *Cleveland.com*. <https://www.cleveland.com/news/2020/07/cuyahoga-county-declares-racism-a-public-health-crisis.html>. Published July 7, 2020.
13. Geronimus, A. T., Hicken, M., Keene, D., & Bound, J. (2006). "Weathering" and age patterns of allostatic load scores among Blacks and Whites in the United States. *American journal of public health*, 96(5), 826–833.
14. Riggan, K.A., Gilbert, A., & Allyse, M.A. (2020). Acknowledging and Addressing Allostatic Load in Pregnancy Care. *J. Racial and Ethnic Health Disparities*.
15. Jackson, F.M., Rowley, D.L., & Owens, T.C. (2012). Contextualized stress, global stress, and depression in well-educated, pregnant, African American women. *Women's Health Issues* 22(3): e329-e336.
16. Lu, M.C. & Halfon, N. (2003). Racial and Ethnic Disparities in Birth Outcomes: A Life-Course Perspective. *Maternal and Child Health* 7(1).
17. Kuzawa, C. W., & Sweet, E. (2009). Epigenetics and the embodiment of race: developmental origins of US racial disparities in cardiovascular health. *American journal of human biology: the official journal of the Human Biology Council*, 21(1), 2–15.
18. Goosby, B. J., & Heidbrink, C. (2013). Transgenerational Consequences of Racial Discrimination for African American Health. *Sociology compass*, 7(8), 630–643.
19. Thayer, Z.M. & Kuzawa, C.W. (2011). Biological memories of past environments: epigenetic pathways to health disparities. *Epigenetics*. 6(7):798-803.
20. Robert Wood Johnson Foundation. (2017). What is Health Equity? <https://www.rwjf.org/en/library/research/2017/05/what-is-health-equity.html>.

- Alexander, G.R. & Kotelchuck, M. (2001). Assessing the role and effectiveness of prenatal care: History, challenges, and directions for future research. *Public Health Reports*, 116(4): 306-316.
21. New York City Department of Health and Mental Hygiene. (2016). Severe Maternal Morbidity in New York City, 2008-2012. New York, NY. <https://www1.nyc.gov/assets/doh/downloads/pdf/data/maternal-morbidity-report-08-12.pdf>
22. Health Policy Institute of Ohio for the Ohio Legislative Service Commission (2017). A new approach to reduce infant mortality and achieve equity: Policy recommendations to improve housing, transportation, education, and employment. [https://www.lsc.ohio.gov/documents/reference/current/SDOIM\\_FinalCombined.pdf](https://www.lsc.ohio.gov/documents/reference/current/SDOIM_FinalCombined.pdf)
23. Shah, G.H., Shankar, P. Schwind, J.S., & Sittaramane, V. (2020). The detrimental impact of the COVID-19 crisis on health equity and social determinants of health. *Journal of Public Health Management and Practice*, 26(4), 317-319.
24. Egede, L. E., & Walker, R. J. (2020). Structural racism, social risk factors, and Covid-19—A dangerous convergence for Black Americans. *New England Journal of Medicine*, 383(12), e77.
25. Anthony, E., Salas Atwell, M., & Alexander, E. Virtual Focus Groups with Remote Service Delivery Home Visiting Providers: Summary Brief. April 2021. Center on Urban Poverty and Community Development. Case Western Reserve University. Cleveland, Ohio.
26. US Census Bureau. (2019). 2018 American Community Survey Single-Year Estimates. <https://www.census.gov/newsroom/press-kits/2019/acs-1year.html>
27. CDC National Center for Health Statistics. Infant Mortality Rates by State. [https://www.cdc.gov/nchs/pressroom/sosmap/infant\\_mortality\\_rates/infant\\_mortality.htm](https://www.cdc.gov/nchs/pressroom/sosmap/infant_mortality_rates/infant_mortality.htm)
28. Ohio Public Health Information Warehouse. <http://publicapps.odh.ohio.gov/EDW/DataCatalog>



### **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**

Cleveland Department of Public Health

75 Erieview Plaza

Cleveland, Ohio 44114-1839

(216) 664-4620

<http://www.momsfirst.org>

“This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number H49MC00082 Eliminating Disparities in Perinatal Health. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. government.”