



# Healthy Beginnings at Home Outreach Report

by Diana Kichler  
MPA Candidate at  
New York University  
Public Policy Intern  
Barbara Poppe &  
Associates

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## HBAH Outreach Report

by Diana Kichler, MPA Candidate at New York University, Public Policy Intern, Barbara Poppe & Associates

### Executive Summary

Healthy Beginnings at Home (HBAH) is a pilot program launched in 2018 in Columbus and Franklin County, Ohio to test the impact on maternal and infant health outcomes of expectant mothers by providing housing stabilization services integrated into usual healthcare services. The program's preliminary findings led to an interest in a replication in Columbus and beyond to further test the model and assist expectant mothers achieve better health outcomes. This report summarizes and outlines interviews with similar organizations in different cities to discuss possible HBAH program replication and expansion in their communities. The report organizes the interviews with Ohio-based organizations, organizations beyond Ohio, and organizations working on similar housing-related interventions. The findings show that expanding HBAH to other large cities in Ohio, including Cleveland, Akron and Cincinnati, is likely the best path forward for Phase Two of Healthy Beginnings at Home.

### Project Introduction

In Franklin County, Ohio, preterm birth/prematurity has been the leading cause of newborn illness and mortality since 2013. A strong base of literature demonstrated housing instability and homelessness increases the likelihood of preterm birth, infant mortality, and acute health conditions. Despite the importance of housing, a lack of affordable housing nationwide has made families – particularly those of color – vulnerable to homelessness and other forms of housing instability.

Healthy Beginnings at Home (HBAH) is a housing stabilization pilot program for pregnant women created in response to an RFP from the Ohio Housing Finance Agency. Led by CelebrateOne (an infant mortality prevention collaborative in Columbus, Ohio), in collaboration with CareSource (a managed care organization headquartered in Dayton, Ohio) and the local housing authority, Columbus Metropolitan Housing Authority and a housing stabilization provider, Homeless Families Foundation. HBAH was designed to test whether provision of housing could improve maternal and infant health outcomes for expectant Medicaid-eligible women. Launched in 2018 and slated to conclude in early 2021, the random assignment study of 100 pregnant women followed women who were Medicaid-eligible, homeless or experiencing extreme housing instability, and had factors that pose greater risk of infant mortality. Half of study participants were randomly assigned to receive community-based services (usual care), while the other 50 received community-based services, a rental subsidy and housing stabilization services (intervention). The HBAH intervention group services aligned with Family Critical Time Intervention (CTI), an evidence-based, time-limited case management model designed to help families experiencing homelessness re-establish themselves in stable housing along with needed emotional and practical support. Through collaborative partnerships and rental assistance, all housing intervention participants were housed despite either no, or limited income, poor credit and other housing barriers. Preliminary findings show differences between the birth outcomes for the intervention group and the usual care group. There were four fetal deaths in the usual care group and none in the housing intervention group. Additionally, 40 of 51 babies in the intervention group were born full-

term and at a healthy birth weight in comparison to 24 of 44 babies in the usual care group. Infants from the intervention group were more likely to be admitted to the Neonatal Intensive Care Unit (NICU). NICU admissions were significantly shorter for the intervention group than the control group - 8 days compared to 29 days.

Housing is inextricably linked to health. Therefore, future research, policy, and practice strategies that improve health and housing stability are needed to develop and amplify evidence-based strategies to effectively support pregnant women who are experiencing housing instability. We believe these efforts may improve maternal health and birth outcomes which may ultimately reduce infant mortality. If provision of housing improves maternal and birth outcomes for pregnant women who are housing unstable, then local, state, and federal policymakers could invest in HBAH models. To understand whether the preliminary findings of HBAH are replicable, the HBAH model needs to be tested in other communities and at a greater scale, while applying a racial equity lens to better understand and reverse disparities associated with race and ethnicity.

Before expanding HBAH, research was conducted to gain insight on the desire of other organizations to participate in future studies, as well as understand if similar work is being done elsewhere regarding housing pregnant women. This report outlines the findings of the interviews conducted with organizations located in Ohio and across the country. The organizations focus on infant mortality, infant health, and maternal health in various capacities, with a common thread of improved health outcomes for children and their families.

Many of the populations served by each organization are underserved, under-invested minority communities. This stems from inequitable policies that led to high infant and maternal mortality rates, relative to the low rates in surrounding affluent communities. Each organization intervenes by providing targeted services for their communities' affected populations. They work with Medicaid-eligible households to provide healthcare resources and assistance, to ensure healthy pregnancy outcomes and stable living pre- and post-partum for mothers.

While these organizations recognize housing as a social determinant of health, many lack the capacity to directly provide housing. Many of the organizations connect families to housing resources, with the hope that outside organizations can assist them with housing stability. They would like to do more but lack the financial or governmental support required to move families into reliable housing situations. Many organizations are interested in the HBAH model to pilot the program in their communities.

## Research Methodology

Diana Kichler, a policy intern with Barbara Poppe & Associates and graduate student at New York University conducted the research. Informal contacts of the HBAH replication planning team were used to identify programs addressing infant mortality and maternal mortality nationwide. Ms. Kichler reached out to interview each organization to establish what they do, how they operate, and if a housing-intervention strategy would be of interest to them. Interviews were conducted between August to December 2020 with 13 organizations, four operating in Ohio, and nine working across the United States. A complete list of interviewees is included at the end of the report.

## Ohio-Based Organizations

HBAH collaborative members identified similar organizations to CelebrateOne throughout Ohio, which were focused on serving their communities in Cleveland, Akron, and Cincinnati. Each organization, featured below, has brought services to pregnant women, mothers, children, and their families, to ensure that their communities have access to healthcare in an equitable, approachable manner. The services provided align with HBAH’s mission to improve maternal and infant health outcomes for low-income pregnant women and families by addressing healthcare as well as other social determinants of health, including housing. Each organization has approached equitable services in a different method. There are similarities between the organizations, outlined below, but one

commonality is that they’ve all worked with the managed care organization, CareSource, an integral partner in HBAH. Each organization has also worked with CelebrateOne in some capacity, highlighting the overlap in work, experience, and influence each organization brings to improving infant mortality in Ohio.

To understand the severity of infant mortality throughout Ohio, Table 1 highlights the difference in infant mortality rates statewide by race, and Table 2 breaks those numbers down by the counties represented in this report. The difference in rates by race is alarming, emphasizing the need to address solutions with a racial equity lens.

## Infant Mortality Rate by County

Comparing Black to All Races 2015-2018

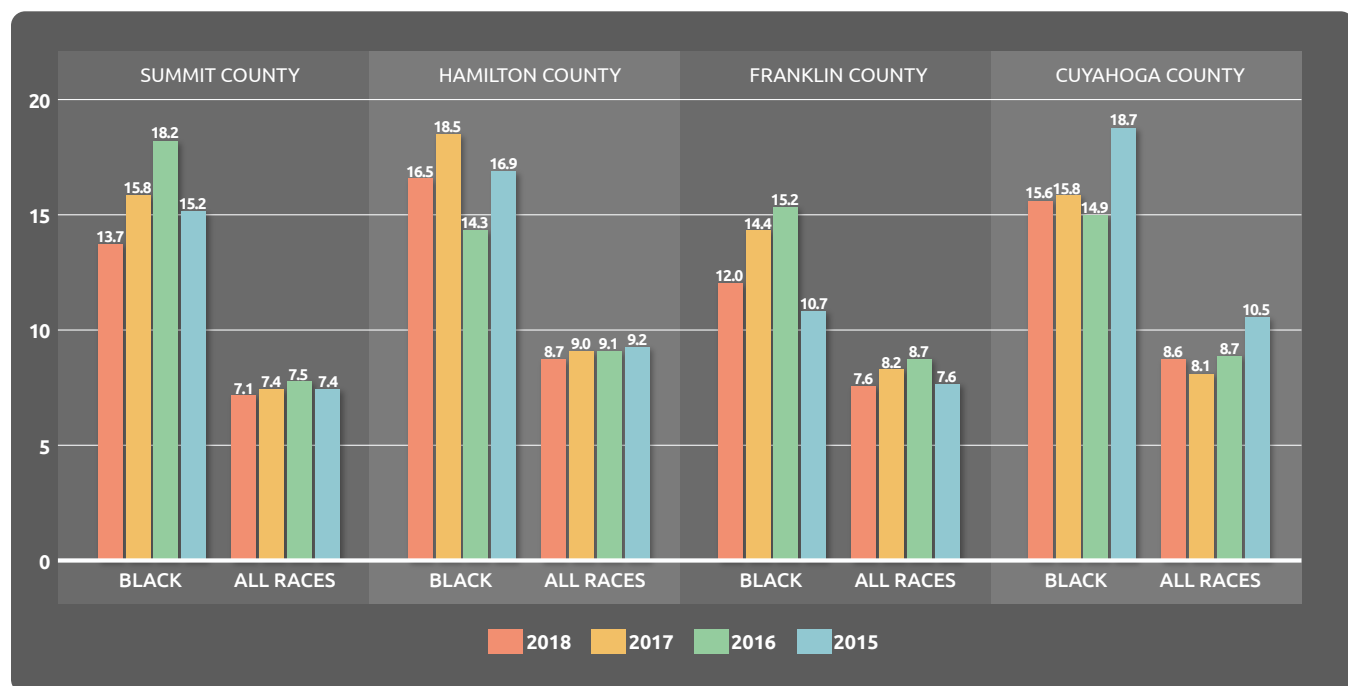


Table 1: Ohio Infant Mortality by Race (2016-2018)<sup>1</sup>

	2016		2017		2018	
	Infant Deaths	IMR*	Infant Deaths	IMR*	Infant Deaths	IMR*
All Races**	1,024	7.4	982	7.2	938	6.9
Black	369	15.2	384	15.6	339	13.9

\* Infant mortality rate per 1,000 live births. \*\* The total for all races includes infant deaths of unknown race.

**Table 2: Trends in Infant Mortality Rate (per 1,000 live births)<sup>2</sup>**  
by County and Race (2015-2018)

County (City)	Race	2015	2016	2017	2018
Cuyahoga (Cleveland)	All Races	10.5	8.7	8.1	8.6
	Black	18.7	14.9	15.8	15.6
Franklin (Columbus)	All Races	7.6	8.7	8.2	7.6
	Black	10.7	15.2	14.4	12.0
Hamilton (Cincinnati)	All Races	9.2	9.1	9.0	8.7
	Black	16.9	14.3	18.5	16.5
Summit (Akron)	All Races	7.4	7.5	7.4	7.1
	Black	15.2	18.2	15.8	13.7

1 Source: Ohio Department of Health, Bureau of Vital Statistics 2 Id.

### First Year Cleveland

First Year Cleveland (FYC), started in 2015, is a public/private collaborative with Case Western Reserve University, focused on reducing infant mortality rates in Cleveland. For more than five decades, Cuyahoga County has had one of the highest infant death rates in the country. In 2015, the county was the second worst of 88 counties in Ohio. Among 100 US cities with the highest number of preterm births, Cleveland’s premature birth rate was the worst. Between 2014-2015, FYC collected all records from hospitals, whose data informed the collaborative. The data showed significantly higher rates of infant mortality for Black families, while prenatal care and medical compliance were the same between Black and white families. The behaviors between races were also similar in drug abuse and teen pregnancy, so in 2017, FYC started looking at health provider behaviors instead of expectant family conduct. Focused on addressing the structural racism within the practice of healthcare, FYC developed a three-year strategic plan in 2017 to change the behaviors of system leaders with a bottom-up/top-down approach. They shared data and focus group research with hospital CEOs at the hospital systems in Cleveland (University Hospitals, Cleveland Clinic, Metro Health), and they agreed that mandatory racial biased training for all hospi-

tals and all employees affiliated with pregnant families was necessary for Cleveland. FYC is now looking beyond Cleveland to address systemic racism throughout the field of health, specifically incorporating March of Dimes training on racial biases in their practice. While FYC doesn’t work in direct service, their collective impact with 170 supporting organizations provides home visiting programs for 4,000 households. They also work closely with CelebrateOne and Cradle Cincinnati on state-wide public policy.

FYC recognizes racism as a public health crisis, with food, housing, and transportation insecurity as top social? determinants of health. While housing had not been a priority in the past, they see the necessity in providing housing stability for their communities. In 2018, together with the Ohio Equity Institute, FYC submitted a housing grant proposal to the Ohio Department of Health to look at housing as a priority for infant mortality risks. While they weren’t awarded the grant, they have made it a priority for their 2021-2023 strategic plan, along with public policy to create equity in the governance structure—hiring, policies and procedures—and has at least 50% of the groups represented moving forward.

**Finding:** First Year Cleveland is focusing future work on housing equity and is very interested in replicating HBAH in Cleveland. With a continued high rate of infant mortality among Black women, HBAH replication could help the community improve maternal and birth outcomes associated with infant mortality. Replication will require new resources to support the HBAH program, identification of an evaluation partner, and activating partnerships with nonprofit housing stabilization agencies and the housing authority.

### Full Term First Birthday Greater Akron

Full Term First Birthday Greater Akron (Akron) is a collective impact collaborative within the City of Akron advocating for policies, educating the community, and informing their citizens of programs that promote healthy full-term pregnancies and ensure every child celebrates a first birthday. A recent focus has been educating around structural racism and bringing racial equity to Akron, consistently attempting to educate hospitals around structural biases. They also organized focus groups on safe sleep to help Black women learn how to apply the practice. reframe the way to practice safe sleep.

Akron has created a housing stabilization fund with United Way, which helped 84 women/families in 2019, and the 2020 trajectory to help 100+ families. Their strategic plan policies focus on housing impacts which are structurally racist. They oversee the Ohio Instability Institute, which identified that 53% of women have some type of housing insecurity which has proven to be one of the biggest factors in the area. They are also in talks with hospitals regarding housing instability, since Akron has the highest rate of housing instability in a medium-sized city in Ohio. Akron is now looking to strategize how to obtain local funders in the community but struggle getting the Akron Metropolitan Housing Authority (AMHA) and the hospitals to work together.

The housing stabilization fund provides families with home visiting, navigators, doulas, and perinatal support specialists, working with individual health workers. If the workers identify housing needs, they refer families to United Way, who work with the family and landlords to pay rent and stabilize them in their unit for up to three months paid rent. With United Way, women experiencing evictions are the top priority, working with them to provide financial coaching to address financial empowerment, and safe housing, providing women with a security deposit to help them move to a new location. One continuous struggle in Akron is income discrimination against tenants, so they are also working with landlords to provide incentives to house pregnant women and their families and give a better understanding to landlords on housing stability.

**Finding:** Full Term First Birthday Greater Akron has established a strategic priority to address racial disparities and improve housing stability for pregnant women, and is working to build a strong relationship with the AMHA. Replicating HBAH in Akron requires additional financial resources and technical supports to enhance relationships with the Department of Health, engage Medicaid Managed Care Organizations, and undertake an evaluation to document the impact of improved housing stability on maternal and birth outcomes.

### Cradle Cincinnati

Cradle Cincinnati (CC) was founded in 2012 as a collaborative effort between parents, caregivers, healthcare professionals, and community members with a commitment to reduce infant mortality in their community. The Black infant mortality rate was three times greater than white infant mortality rates in Hamilton County, but is now the lowest it's been in recorded history. CC used data to identify specific census tracts and zip codes where that decline has been the greatest, due to CC's focused efforts in those areas. In the census tracts, CC placed teams of community

navigators, social workers, dieticians, and tobacco specialists to educate and work with families to improve health. When founded, there were six community health workers, and now are at 35, due to CC efforts.

The CC Learning Collaborative works with five hospitals, providing quality improvement science, data-sharing and an “all teach, all learn” model, to reduce preterm birth. The CC Policy team looks at health policies in housing, health, workforce, and transportation. The Community team has been repowering the community of black women in Hamilton County for the past three years, providing community representation and leadership. The community team makes decisions about where Medicaid funding to partner organizations are allocated, determining which agencies they feel comfortable with. Equity training has fundamentally changed how the team rallies around issues and policies.

When asking moms in the community what the biggest stressors are, housing is always top of the list, as Hamilton County has a significant affordable housing crisis that disproportionately impacts Black people. CC maintains non-traditional partnerships with job services, metro (public transit), Cincinnati Metropolitan Housing Authority (CMHA), and Continuum of Care, who identified that the waiting list to get into CMHA housing is three years, which fails to house pregnant women in a timely manner. The Continuum created a priority list for allocation of dedicated housing resources for homeless people, which prioritizes chronic homelessness, homeless veterans and disabled populations, and CC worked to get homeless pregnant women on the list. Now with a referral from CC, homeless pregnant women can get to the top of the list, and every woman referred qualifies for a voucher—100 people this year. This does not include housing unstable pregnant women. An unresolved issue is finding landlords throughout Cincinnati that accept

vouchers which participants received through CMHA. What CC struggles with currently is acquiring data to prove that the housing provided to the 100 families has changed birth and maternal health outcomes. Community health workers are in constant contact with the women but have a hard time documenting the efficacy of providing housing. To combat this issue, CC is working on a Health Policy Scholars program, in which Academic Pediatrics will study data for the next three years, intentionally correlating housing and pregnancy between the Continuum of Care participants.

**Finding:** Cradle Cincinnati is ready to expand its work on housing stability and appears ready for HBAH replication if funding would be available for rental assistance and housing stabilization services. Building off the current relationships with the CoC and the housing authority, as well as the research partners with the Healthy Scholars program, CC has the necessary foundation for HBAH replication.

## Every Child Succeeds

Every Child Succeeds (ECS) is a home visiting program that utilizes evidence-based services to help new parents create nurturing, healthy home environments throughout Southwest Ohio and Northern Kentucky. They seek to ensure children reach their full potential by partnering with parents to optimize their development prenatally and throughout the important first 1,000 days of life. ECS supports families from pregnancy through a child’s third birthday, with home visitors who remain involved with families, guiding them during critical development. ECS is based out of Cincinnati Children’s Hospital, where all operations, funding, and research are conducted, serving 1,800 families annually. ECS conducted a study in 2007-2008, which showed that their infant mortality rate was significantly lower than the State rate, and showed no difference based on race or ethnicity.



ECS has gathered data on housing stability and mobility when a family comes into the program, and recognizes the need for housing, along with the impacts on infant mortality. They provide their families with housing resources, referrals, and contacts, but don't have the ability to do more. They've discussed the possibility of buying a building since it is a huge issue for families, looking at models such as Healthy Moms and Babeis, a local group with a four-unit apartment building.

**Finding:** ESC is interested in partnering with CC and HBAH to expand their impact in Cincinnati. They would serve as a strong connection to the Cincinnati hospital system and community partner to CC.

### Statewide Summary

First Year Cleveland, Full Term First Birthday Greater Akron, Cradle Cincinnati, and Every Child Succeeds are all making strides in equitable access to services throughout Ohio. FYC, Akron, and CC are all focused on changing the way healthcare providers address services based on racial equity, looking at the impacts of the healthcare system itself. They are also exploring opportunities and creative solutions to provide stable housing to their populations. Another commonality is that each of the organizations has worked previously with CareSource, the managed care organization who provided Medicaid services to the HBAH households.

Looking ahead, if funding was provided to expand HBAH in Ohio, these three communities appear to have the connections and capacity to host pilots. The Columbus HBAH team can help these organizations engage the right partners, establish the operating policies and procedures, and participate in a cross-site evaluation to document outcomes. Additionally, HBAH Columbus can learn from these cities approaches to addressing racial equity head-on in differing capacities.

### Organizations Beyond Ohio

Outside the state of Ohio, there are similar organizations focused on providing healthcare for low-income families to combat infant and maternal morbidity, administering a variety of at-home services. Research was conducted asking the same interview questions to organizations in Oklahoma, Texas, Michigan, New York, Arizona and Delaware. These queries included an understanding of services provided, how housing correlates to their work, and the impact COVID-19 has had on the organization and the services provided.

### Healthy Women Healthy Futures Oklahoma

Healthy Women Healthy Futures Oklahoma (HWHF) is an evidence-based practice founded in 2008 that focuses on underserved populations with the highest birthrates and disparities in maternal and child health and works to help women become healthy before becoming pregnant to prevent infant mortality and maternal morbidity. They focus on reducing participants' risk factors, which diminish health, and improving their protective factors by improving their access to primary care and other health services, through health education, referral and care coordination. Additionally, HWHF trains and supervises community peer educators, including the Promotoras to connect with the Latinx population, and the Sia Mah Nu, to connect Burmese families to health promotion. Oklahoma only provides Medicaid coverage for documented pregnant women, so if undocumented, only the child is covered, not the mother. This has provided difficulties in working with the Burmese and Latinx populations served, limiting the amount of engagement, specifically during the pandemic.

**Finding:** HWHF acknowledges the stressors that accompany housing instability that affects birth outcomes, but at this point are only able to have care connectors refer families to housing resources. If resources and partnerships were available, HWHF would have a strong interest in expanding an HBAH program to Tulsa.

## Maternal Infant Health Action Committee Michigan

Maternal Infant Health Action Committee Michigan (MIHAC) is a unique program within the state/nation administering home visit services funded by state and federal grants, located within the Michigan Department of Health and Human Services. MIHAC's role as a state administrative office is to certify agencies and provide confidentiality to ensure they do not mismanage funding, and programs receive reimbursements through Medicaid health plans, of which there are 11 plans throughout the state, and 85 separate agencies to manage.

The agencies are 40% independent smaller agencies, five hospital health system affiliated programs, federally qualified health centers, and local or district health departments, creating challenges to delivering similar services across all agencies. MIHAC bills for specific services, while overhead funding comes from Medicaid reimbursement.

The home visits allow for nine visits for a pregnant mother, prior to delivery, and nine visits after birth for the infant, with the ability to request up to 18 additional visits, each limited to a 30-minute visit. Within that time frame, each consultant visit can cover a wide range of domain topics, including abuse and violence, food and nutrition, medical considerations, social health, substance misuse, tobacco, housing, and transportation. The consultant needs to evaluate which of the critical domains is most pressing to create a specific plan of care, while each home visit is required to have at least a nurse and social worker and can see outside specialists with referrals. This means if a mom identifies housing as a domain, this can be addressed by a referral, accessing local housing resources, creating a safety plan, and identifying local resources for utility assistance.

**Finding:** If resources and partnerships were available, Maternal Infant Health Action Committee Michigan has interest in HBAH replication but lacks an affiliation with a housing sponsor at this time.

## Healthy Women Houston and Improving Maternal Health Houston

Healthy Women Houston (HWH) and Improving Maternal Health Houston (IMHH) work to bring everyone to the table to discuss barriers in the pregnancy and early motherhood process in Harris County, the third largest county in the US, with a population of 6.5 million. They work with the largest Managed Care Organization provider in the state, Community Health Choice, who serves over 50% of the pregnant women in the region. With Community Health Choice, HWH provides an integrated system of care coordination with a variety of agencies to address a large range of issues that arise with pregnant and postpartum women for 40 enrolled participants. Housing and healthcare are noted barriers for pregnant women in Houston, so HWH and IMHH looked into all social determinants, identified housing, food, and behavioral practices as factors that impact overall health, consolidating information and outreach to address all factors at once, focused on maternal health. Using a pathways model, HWH's data in March 2020 highlighted that five of 17 pregnant and five of 15 postpartum women identify housing as a priority. They noted that with the pandemic, more women have identified housing as a top priority, and were working with homeless coalitions and other housing partners to try to provide housing vouchers, utility assistance, and other needs to address housing stability.

**Finding:** Healthy Women Houston believe that housing is a critical missing component and hope to expand their services with more funding and would be interested in exploring HBAH replication.

## The Arizona Maternal Mortality Review Program

The Arizona Maternal Mortality Review Program (AMMRP) has compiled data that shows high maternal mortality rates with Native American populations, as well as higher disparities in infant mortality with Native American and African American communities. AMMRP is currently working on a maternal health innovation grant that incorporates a tribal component to build relationships within that community, since data is not shared unless women are seeking care in a non-Indian Health Service healthcare facility. They are working on doula programming, trauma to health programming, building associations in the states of inter-tribal council and separately with the Navajo association, and continuing working on safe sleep education and infant mortality prevention work. The AMMRP hasn't formally done anything to assist with housing, but has a pulse on it, since they identify health equity factors, such as housing and food instability in their work. They are focused on other social determinants that are pertinent to maternal and infant health related to maternal mental health, substance usage, and neonatal exposure. AMMRP does a lot of convening, which is a top priority for the Governor, to campaign for infant mortality reduction and review of data. The biggest challenge is access to data, since the Department of Health is not housed in the same office as Medicaid, so there is limited communication and data sharing, without MOUs in place. This structure complicates any advanced work on housing, since the Medicaid offices focus more on housing and formerly incarcerated folks, creating heavily siloed programs.

**Finding:** Before considering implementing HBAH, Arizona Maternal Mortality Review Program wants to better understand housing instability in Arizona, and create stronger foundations with Medicaid and housing agencies.

## Organizations Considering Housing-Related Pilot Programs

There are several organizations looking further into the relationship between housing stability and maternal and infant health outcomes, with varying approaches to housing solutions. The research identified three programs in Delaware, New York City, and Minnesota that are in the early stages of program development.

In New York City, The Samuels Group has taken their experience working within the “right to shelter” framework to develop a program which gives housing permanence for pregnant women at-risk of homelessness. They have looked into several models, the first was to develop shelters for pregnant women only. They are now working on preventing women from entering a shelter, giving permanency to housing and services to women, with a health policy focus.

In Wilmington, Delaware, the State Department of Health is working with a hotel to shelter vulnerable families through the pandemic. This has been the first step in alternative housing solutions for homeless families in Delaware, which led to the interest in replicating the HBAH program in Delaware, using ESG-CV research methodologies, and partnering with Highmark (a managed care organization). Newcastle County has used CARES funding to purchase a hotel, and the hope is to use either one floor of the hotel or another location to begin a program replication for women and families. Delaware is currently in discussion with key stakeholders to progress with the model.

Minnesota Housing is working with the Office of Health Equity at the Minnesota Department of Health on a recently awarded grant from Pew Charitable Trusts' Health Impact Project to address disparities in infant and maternal health. This grant was also awarded to Washington D.C.

for similar efforts. Minnesota is in the initial planning stages, and looking at ways to bring together rent assistance, home visiting nurses and case management for pregnant women who are experiencing homelessness, focusing on American Indians and African Americans, which are the two communities in Minnesota with the largest disparities in homelessness and infant mortality. The main goal is to have no children born into homelessness and reducing infant mortality. They are also considering taking a research approach to their effort, advancing learnings from the HBAH efforts.

### Organizational Relationship to Housing

Throughout this project, it was noted that housing has been identified as a social determinant of health that is more prevalent and necessary during a pandemic. Vulnerable families have consistently recognized housing as a top priority when receiving infant and maternal health services. The HBAH model addresses this gap by providing housing stability through new resources that enable cooperation and collaboration between health and housing agencies, Medicaid managed care organizations, and landlords.

COVID-19 has exacerbated the negative impacts of housing instability. Eviction threats are increasing maternal stressors, negatively impacting maternal and infant health, emphasizing the outcomes of a healthy birth are directly correlated to housing, as well as other social health determinants. The opportunities for employment, childcare, and income stability have also decreased dramatically,

increasing the number of vulnerable families who will require these services. Pregnant women with COVID-19 have a higher risk of death and hospitalization, too.

This report documents that while organizations addressing infant mortality recognize housing as a severe need, they lack the capacity to provide it. Most organizations that were interviewed have a minimal working relationship with their housing authority or local housing associations that can work with the families in need. This is due to multiple factors, including a shortage of funding, limited relationships between healthcare providers and housing authorities/providers, and lack of staffing to support this cross-sector work. Generally, organizations included in this study are funded through grants, state funding, and donations, which only cover limited home visits and healthcare services. The costs to incorporate a housing component within their programs are significantly higher than these organizations can accommodate, especially as funding gets limited and needs are greater throughout the pandemic. HBAH was so successful due to its collaboration between CelebrateOne, CareSource, and the Columbus Metropolitan Housing Authority, who were funded by the State of Ohio to work together to provide housing opportunities for every family enrolled in the intervention arm of the pilot program. This collaborative approach could be replicated with most of the organizations included in this report if funding and technical assistance were provided to address housing stability as component within the array of services they currently provide.

1 Leifheit KM, Schwartz GL, Pollack CE, Edin KJ, Black MM, Jennings JM, Althoff KN. Severe Housing Insecurity during Pregnancy: Association with Adverse Birth and Infant Outcomes. *International Journal of Environmental Research and Public Health*. 2020; 17(22):8659. <https://doi.org/10.3390/ijerph17228659>



## Conclusion

There are many organizations across the country working to create better health outcomes for maternal and infant health. While this research interviewed a handful of organizations working to reduce infant and maternal mortality rates, most focused solely on healthcare solutions, not fully addressing housing needs. Infant and maternal mortality rates in Ohio have decreased modestly over the past few years but the gap between Black and other races remains extraordinarily wide. The programs interviewed for this project recognize a wide array of social determinants of health – safe and stable housing, food security, healthcare access, transportation access, and job stability – impact the health outcomes for pregnant and postpartum households.

The HBAH pilot program model could likely be replicated with all the organizations interviewed if there were new funding available within Ohio or from the Federal government. The HBAH model could be expanded to Cleveland, Akron, and Cincinnati, which have high rates of infant mortality for Black infants and where each organization has primed its healthcare and housing relationships and has a readiness for program replication. They all have a working relationship with CareSource and have worked with CelebrateOne in various capacities. A national initiative could also be undertaken if Federal funding were available for HBAH replication in sites that have developed health and housing collaborations.

## References

Interviews conducted for this research were led by Barbara Poppe & Associates policy intern Diana Kichler, who spoke with the following representatives:

- Bernadette Kerrigan, First Year Cleveland
- Tamiyka Rose, City of Akron
- Shaleeta Smith, Full Term First Birthday Greater Akron
- Michael Moroski, Cradle Cincinnati
- Margaret Clarke, Every Child Succeeds
- Su An Phipps, Healthy Women Healthy Futures Oklahoma
- Dan Thompson, Maternal Infant Health Action Committee Michigan
- Alicia Lee, Improving Maternal Health Houston
- LaToya Shields, Healthy Women Houston
- Clarke Erickson Baer, Maternal Mortality Review Program, Arizona Department of Health Services
- Judith Samuels, The Samuels Group
- Rita Landgraf, State of Health in Delaware
- John Patterson, Minnesota Housing



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