Hamilton County Ohio Equity

Annual Report

2019

EVERY BABY MATTERS

OEI

OHIO INSTITUTE FOR EQUITY IN BIRTH OUTCOMES

Prepared by
Whitney Rémy, MPH - Epidemiologist

With contributions by
Ali Kathman, MPH - Program Coordinator
Brittani Schwab - Neighborhood Navigator
Danyelle Bush - Neighborhood Navigator
Jamaica Gilliam, CLC - Neighborhood Navigator

And the women and families of Hamilton County

Table of Contents

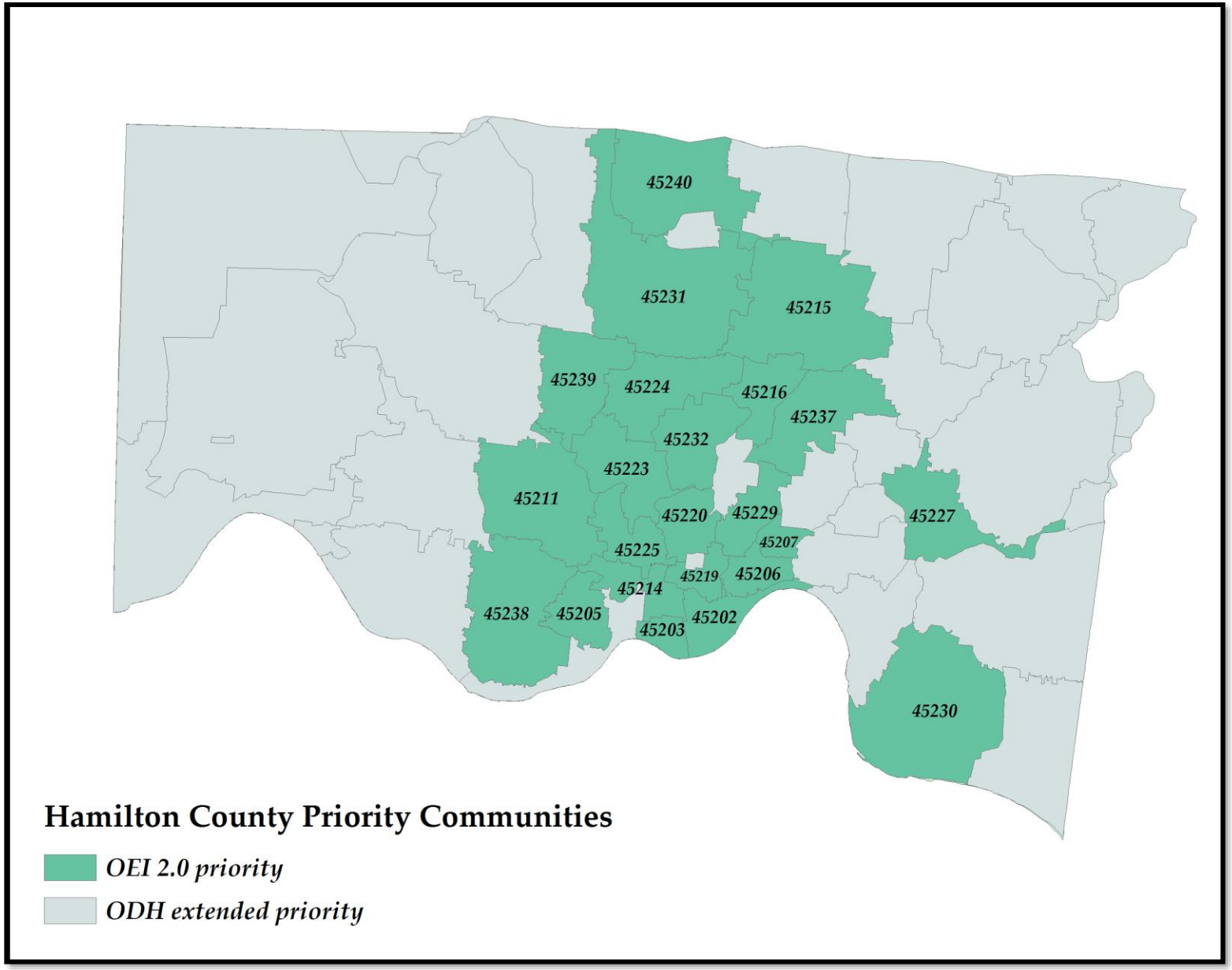
Introduction

About OEI 2.0

The Ohio Equity Institute (OEI) is a statewide program, managed by the Ohio Department of Health and implemented locally by Hamilton County Public Health (HCPH). Created in 2012, OEI uses population data to prioritize areas for outreach in nine urban Ohio counties with the highest infant mortality rates and largest racial/ethnic health disparities. OEI 2.0 launched on October 1, 2018 and implemented a revised structure to ensure that the program addresses the biggest drivers of infant mortality and directly serves the populations most vulnerable to poor birth outcomes like prematurity and low birthweight.

The grant employs downstream and upstream strategies. In the downstream approach, three Neighborhood Navigators work within 23 priority ZIP codes to identify eligible pregnant women and connect them to needed health and social services (**Figure 1**). The upstream component uses the data collected by the Neighborhood Navigators to facilitate the development, adoption, or improvement of policies and/or practices, which influence the social determinants of health (SDOH), related to preterm birth and low birthweight birth in Hamilton County. Together these two approaches aim to contribute to the reduction of preterm birth and low birthweight birth rates and ultimately infant mortality in Hamilton County.

Figure 1. Outreach Prioritization Map of OEI 2.0 in Hamilton County



Community Context

The following figures display the state of infant mortality and birth outcomes in Hamilton County from the years 2014 to 2018. It is important to disaggregate data by race/ethnicity to uncover any underlying disparities as shown in the figures below.

Figure 2. Infant Mortality Rate in Hamilton County by Race/Ethnicity, 2014-2018

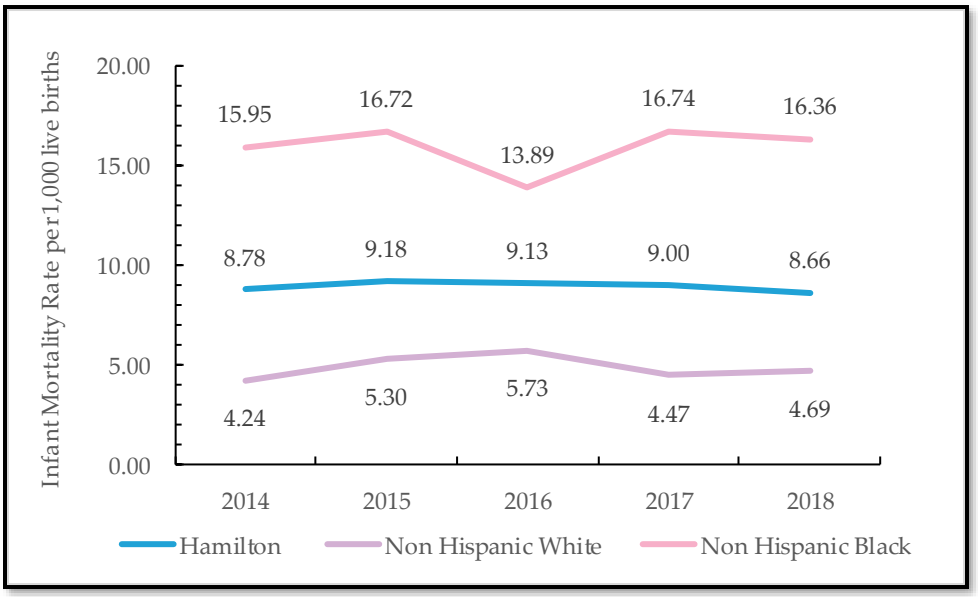


Figure 3. Preterm Birth Rate in Hamilton County by Race/Ethnicity, 2014-2018

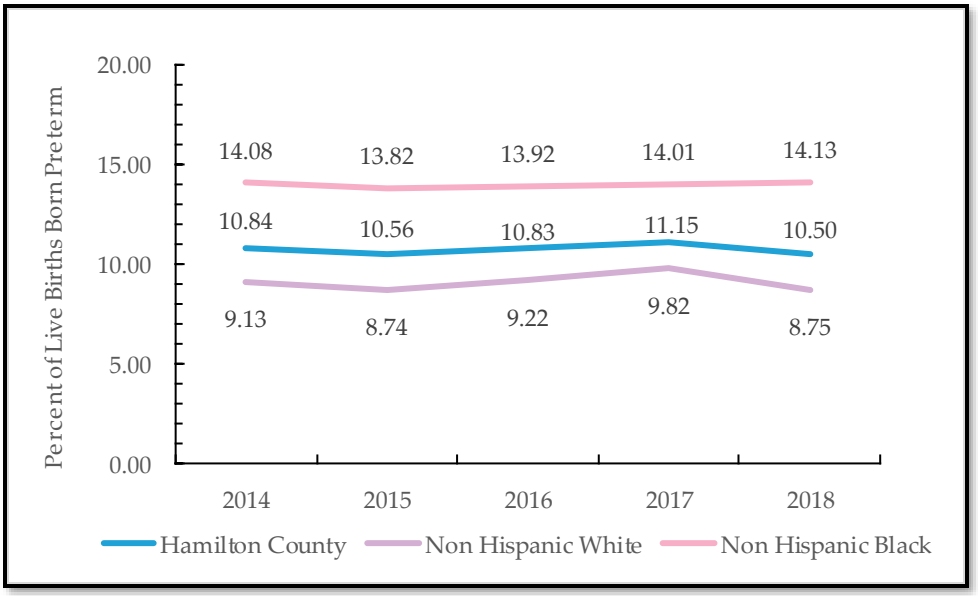
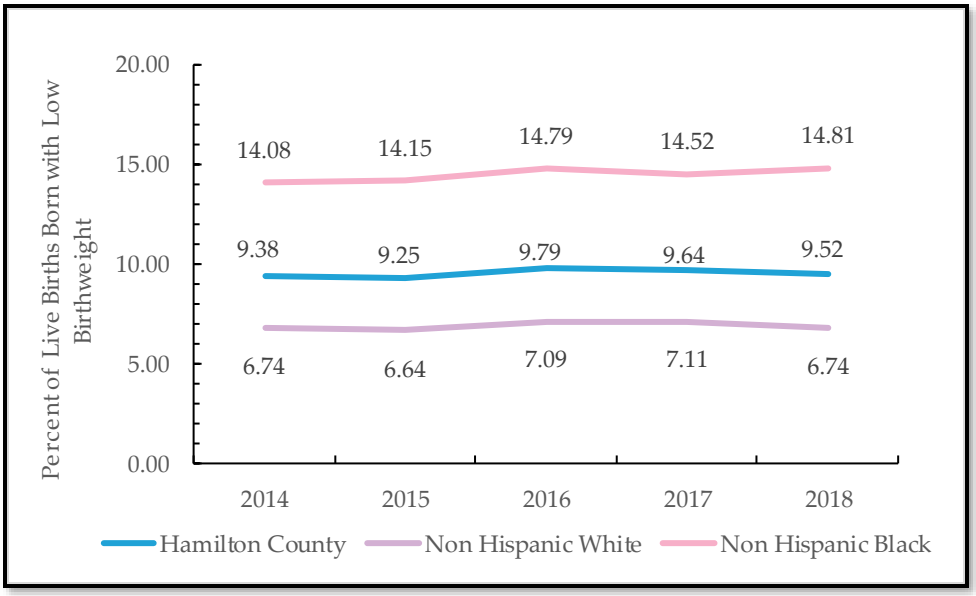


Figure 4. Low Birthweight Birth Rate in Hamilton County by Race/Ethnicity, 2014-2018



The figures demonstrate that the non-Hispanic black community bears the highest burden for infant mortality (**Figure 2**), preterm births (**Figure 3**), and low birthweight births (**Figure 4**) when compared to the non-Hispanic white community, which has the better outcomes than the county as a whole.

The following figures demonstrate the geographic distribution for infant mortality (**Figure 5**), preterm birth (**Figure 6**), and low birthweight birth (**Figure 7**) across the county by ZIP code. As shown by the maps on the following page, there are communities that have the highest rates of infant mortality and poor birth outcomes. These communities that experience these disparities align with the 23 priority communities (Figure 1). As these communities have, the highest rates of infant mortality and poor birth outcomes, it is important to ensure that these communities are the focus of the preventive efforts of OEI.

Figure 5. Infant Mortality in Hamilton County by ZIP code, 2014-2018

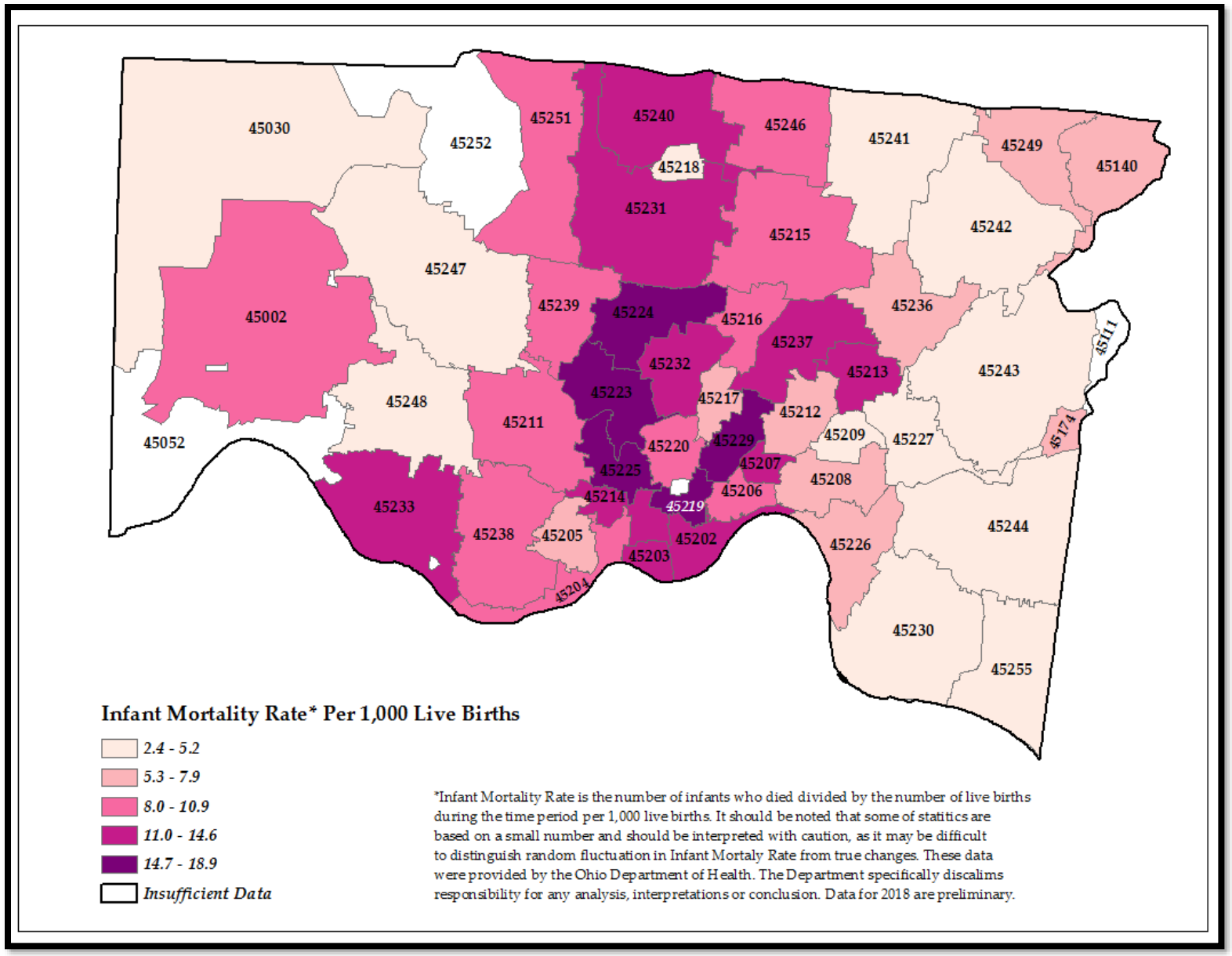


Figure 6. Preterm Births in Hamilton County by ZIP code, 2014-2018

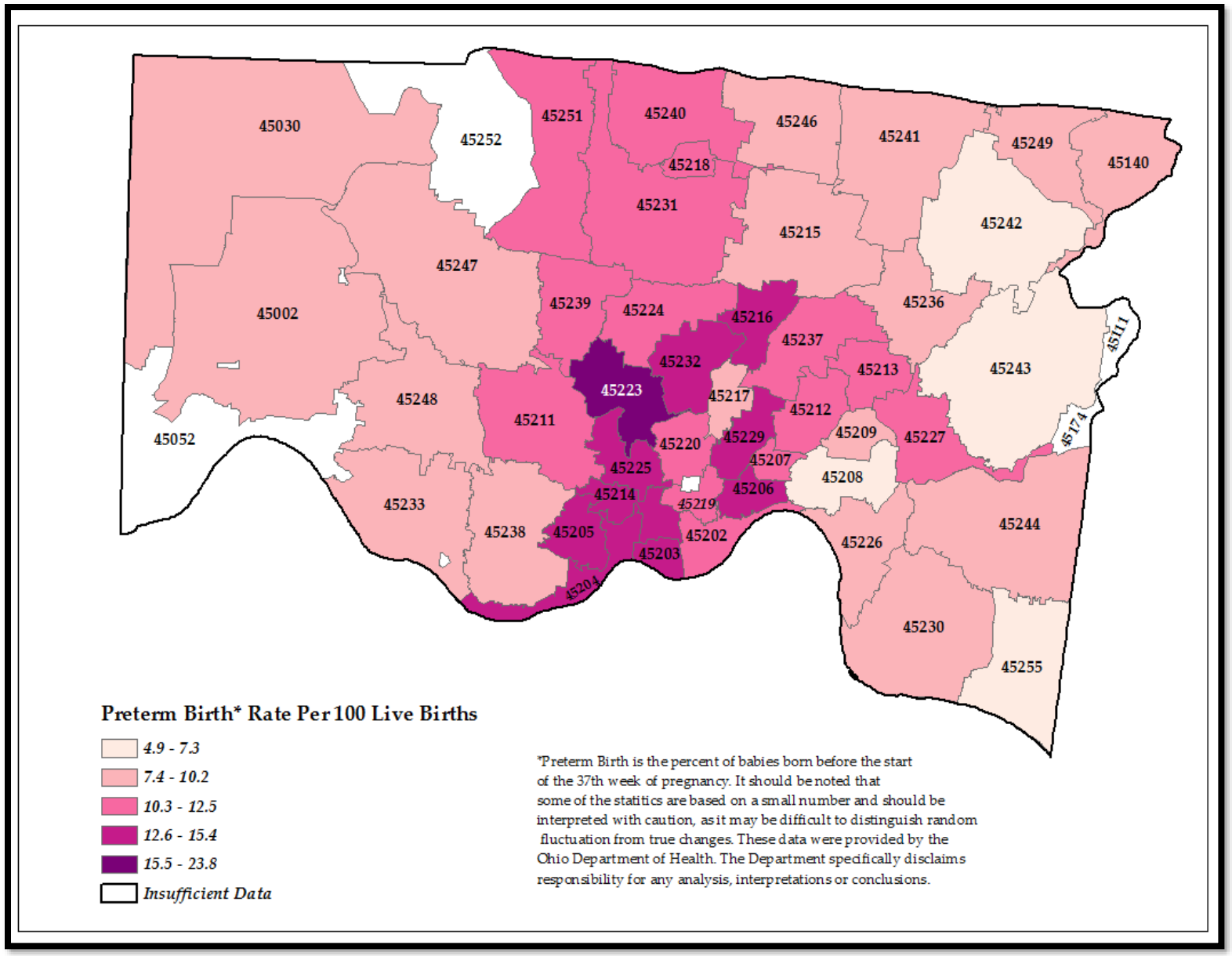
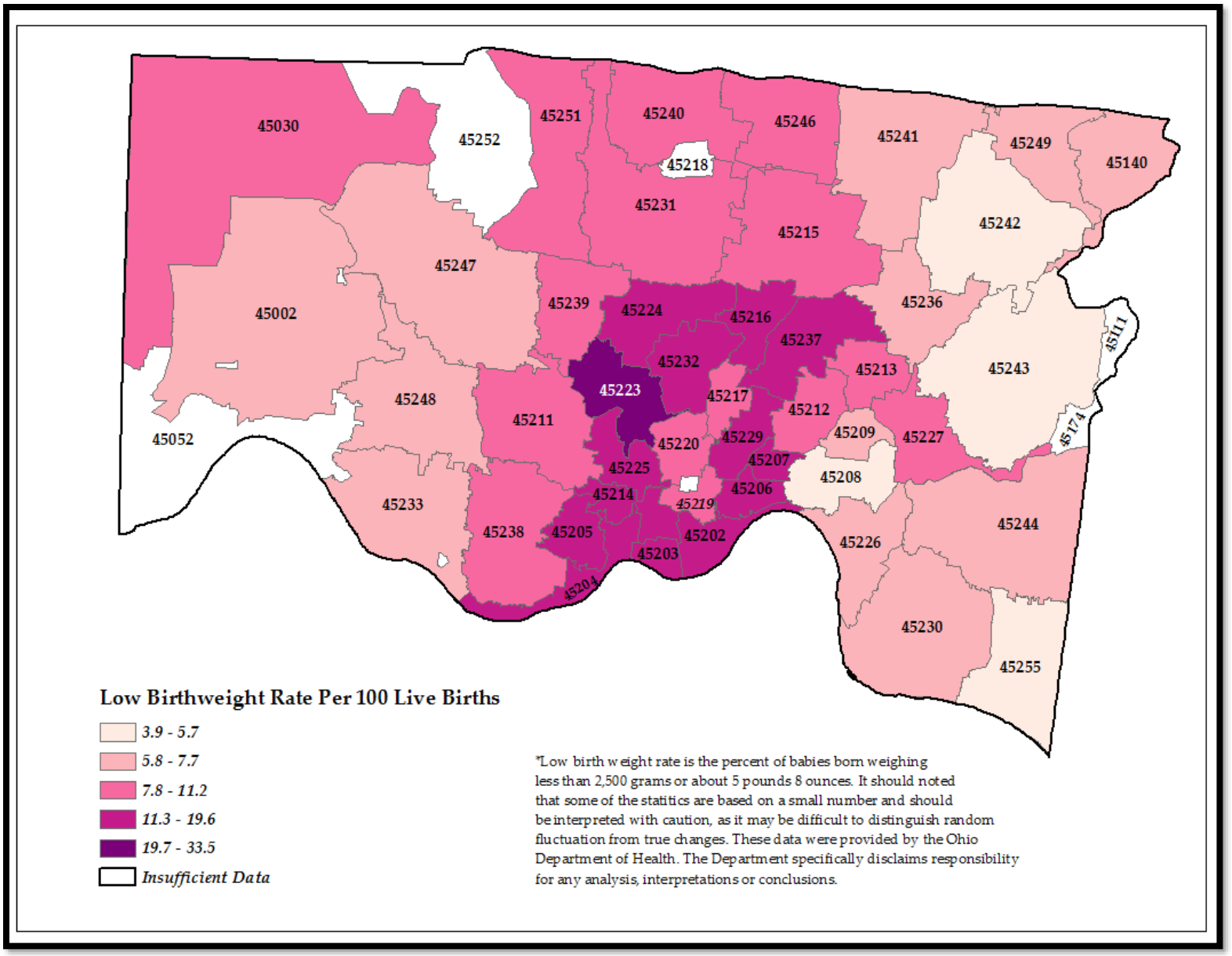


Figure 7. Low Birthweight Births in Hamilton County by ZIP code, 2014-2018



Poor birth outcomes of prematurity and low birthweight are known to contribute to the infant mortality burden. Efforts to reduce infant mortality also include efforts to address the number of preterm and low birthweight births. The figures below display how these birth outcomes relate directly to infant mortality; the majority (73 percent) of infant deaths in Hamilton County from 2014 to 2018 were infants who were born preterm or were born with a low birthweight (70 percent). When these measures are looked at more closely by defined categories, it is clear that many of the deaths associated with either birth outcome would have been extremely preterm or born with an extremely low birth weight. **Figure 8** shows that more than half of all deaths associated with prematurity were infants born extremely premature. While **Figure 9** shows that almost half of all deaths associated with low birthweight were infants born when an extremely low birth weight.

Figure 8. Infant Deaths by Gestational Age in Hamilton County, 2014-2018 (n=478)

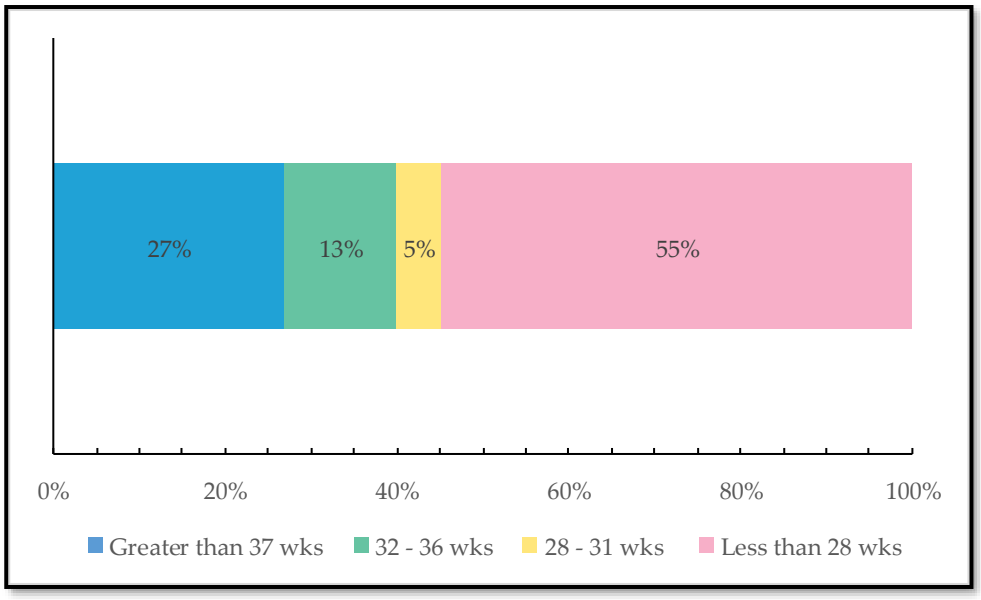
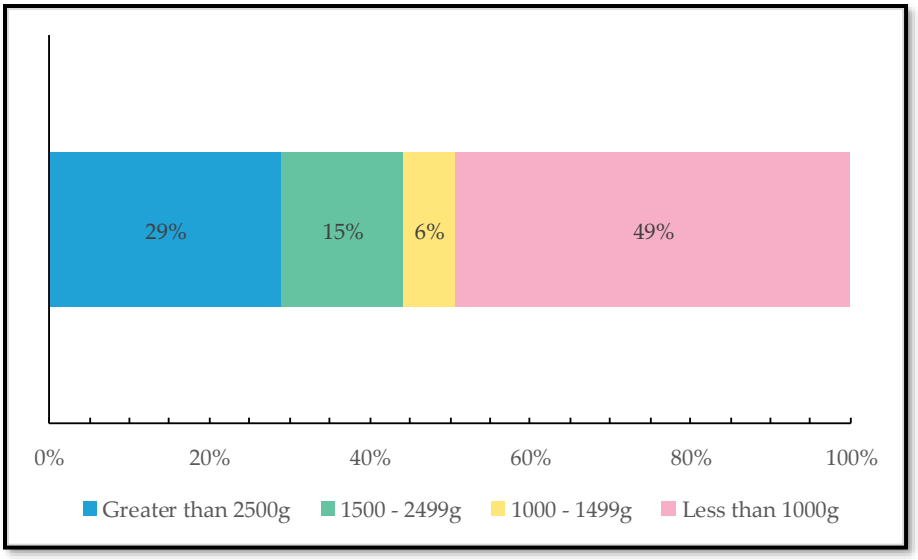


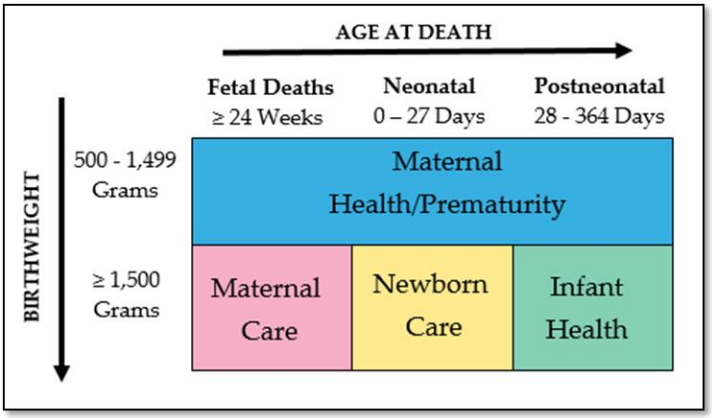
Figure 9. Infant Deaths by Birthweight in Hamilton County, 2014-2018 (n=478)



Perinatal Periods of Risk Data

The OEI Epidemiologist conducted a Perinatal Periods of Risk (PPOR) analysis for Hamilton County. The analysis uses vital records data (live births, fetal and infant deaths) from the years 2014 to 2018 to identify a specific causal pathway for poor birth outcomes contributing to infant mortality. The PPOR analysis is conducted in two phases. The first phase uses birthweight and age at death to identify the period of risk with the most excess deaths by calculated by determining the difference between deaths found in a population of interest and a reference group (**Figure 10**). The second phase explores the reasons for the excess deaths. It focuses on the causes and risk factors contributing to the feto-infant mortality.

Figure 10. PPOR Map



When the PPOR analysis was completed for Hamilton County for 2014 to 2018, the Maternal Health/Prematurity (MH/P) period was found to have the most excess deaths when compared to the reference group. Forty-five percent of all excess deaths in Hamilton County between 2014 and 2018 were due to risk factors associated with MH/P (**Figure 11**). The risk factors and prevention measures found in this period of risk related to preconception health, risk screening and management, and early prenatal care. The majority of those deaths were due to birthweight distribution or a high number of infants being born with very low birthweight (VLBW) in Hamilton County between 2014 and 2018 when compared to a reference group[1]. Eighty-eight percent of the deaths within the MH/P period of risk were due to a high rate of infants born weighing less than 1,500 grams (**Figure 12**). Eclampsia was the risk factor associated with the highest percent of excess VLBW births when comparing to a reference group (**Table 1**). When assessing the risk factors with the most impact on the number of VLBW births, C-section delivery was associated with highest proportion (37%) of all VLBW

Figure 11. Proportion of Excess Mortality, Hamilton County, 2014-2018

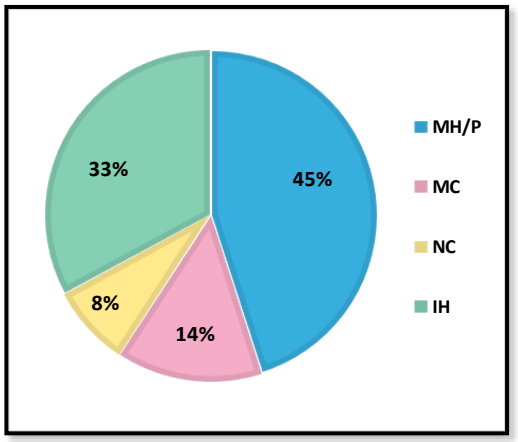
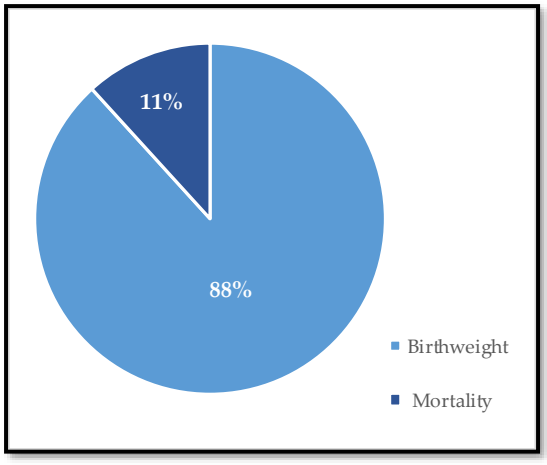


Figure 12. Causal Pathway for Maternal Health/Prematurity Excess Mortality Rates, Hamilton County, 2014-2018



[1] Reference group – non-Hispanic white women 20 years of age and older with 13 or more years of education who are residents of Ohio

births. However, the risk factor related to health behavior with the most impact (32%) on the number of VLBW births was having a less than optimal birth spacing (**Table 2**).

Table 1. Top Five Risk Factors for Excess VLBW Births, Hamilton County, 2014-2018

Rank	Hamilton County	Percent Excess
1	Eclampsia	3.9%
2	Plurality (Multiples Pregnancy)	3.1%
3	Diabetes (Pre-pregnancy)	2.8%
4	Hypertension (Pre-pregnancy)	2.3%
5	Previous Preterm Birth	1.8%

Table 2. RR[2] and PAR[3] for VLBW (<1,500 g) by Risk Factor, n=1,008, Hamilton County, 2014-2018

Risk Factors	PAR%	95% C.I.[4]	RR	95% C.I.	# of Births Impacted
C-Section Delivery	37.1%	(32.8, 41.6)	2.9	(2.5, 3.2)	374
Not Married	35.8%	(30.5, 41.6)	2.2	(1.9, 2.5)	361
Spacing < 18 months	32.3%	(26.1, 39.2)	1.8	(1.6, 2.1)	326
Premature Rupture of Membranes	31.7%	(28.6, 35.0)	6.8	(5.9, 7.6)	319
Medicaid	25.9%	(20.8, 31.7)	1.8	(1.6, 2.0)	261
Plurality (Multiples Pregnancy)	23.5%	(20.9, 26.5)	8.5	(7.4, 9.7)	237
Hypertension (Gestational)	13.8%	(11.2, 16.9)	2.6	(2.2, 2.9)	139
Hypertension (Pre-pregnancy)	9.5%	(7.6, 11.9)	3.5	(2.9, 4.2)	96
STI[5]/Hepatitis	5.3%	(3.2, 8.6)	1.4	(1.2, 1.7)	53
Eclampsia	2.5%	(1.6, 3.8)	6.2	(4.4, 8.7)	25
Diabetes (Pre-pregnancy)	2.1%	(1.2, 3.5)	2.8	(2.0, 3.9)	21
Mom Age (≥ 35 yrs.)	0.1%	(0.0, 100.0)	1.0	(0.8, 1.2)	1

The results of PPOR Phase I and Phase II suggest that future interventions to reduce the feto-infant mortality rate in Hamilton County should focus on reducing the number of VLBW births. There should be efforts to screen for the top five risk factors associated with VLBW, which are eclampsia, multiples pregnancy, pre-pregnancy diabetes, pre-pregnancy hypertension, and history of preterm birth (**Table 1**). Additionally, the provision of preventive measures to reduce the number of births with less than 18 months spacing could potentially reduce the overall number of VLBW births.

[2] Relative Risk
[3] Population Attributable Risk
[4] Confidence Interval
[5] Sexually Transmitted Infections

Neighborhood Navigation Services

Outreach Plan

The Neighborhood Navigator is the most important component of the downstream structure of OEI 2.0. The Neighborhood Navigator is responsible for identifying and connecting eligible women to clinical and social services. The Hamilton County OEI team includes three Neighborhood Navigators. The most successful strategies the Neighborhood Navigators use to find pregnant women include canvassing within the priority ZIP codes, promoting the OEI navigation line, tabling at community events, hosting pregnancy-related events, using social media, and referrals from partner agencies.

Canvassing Priority Community

Neighborhood Navigators canvas within the 23 priority ZIP codes. Hot cards, which are postcard-sized marketing materials that include the OEI navigation line, were disseminated to reach pregnant women where they live, work, shop, and socialize. Within stores, hot cards were strategically placed in aisles that contained items pregnant women may need (e.g., pregnancy tests, baby items, prenatal vitamins, etc.). The navigation line allows for women who find the hot cards to conveniently provide their contact information to connect them to a Neighborhood Navigator. When women call into the navigation line (and leave a voicemail with their preferred contact information), they will receive a return call from a Neighborhood Navigator within 24-48 hours to collect additional information about them to determine eligibility for the program. A woman is determined eligible for the program when a Navigator completes an eligibility screening with her. Based on a series of set criteria, if a woman is found to be eligible for the program an in-person intake session is then scheduled. A woman is

considered to be served through the OEI program when the Navigator has successfully completed the in-person intake, and three follow-up attempts have been made by the Navigator.

The goal through this process is to identify risk factors and needs, provide referrals, and follow up to determine whether referrals were accessed. If referrals were not accessed by the women served, Neighborhood Navigators would try to learn from the women why the referral was not accessed (i.e. referring agency didn't follow-up; contact information was wrong; follow-up from referral agency was not timely etc.).

Attending Community Events

Community events were an excellent way for the Neighborhood Navigators to connect with women in the community. This year, the Neighborhood Navigators attended a number of events including:

- Cincinnati Public Library Social Service Pilot Project
- Santa Maria Health Fair
- Mt. Healthy Health Fair
- Mercy Anderson Baby Fair
- Cincinnati Metropolitan Housing Authority Job Fair
- Contact Center Community Festival

An OEI table was set up allowing the Neighborhood Navigators to speak with women interested in learning more about the program. Screening for eligibility and an intake was completed during these encounters, when possible. These events were great opportunities to meet women who might need the services provided by OEI.

BUMP

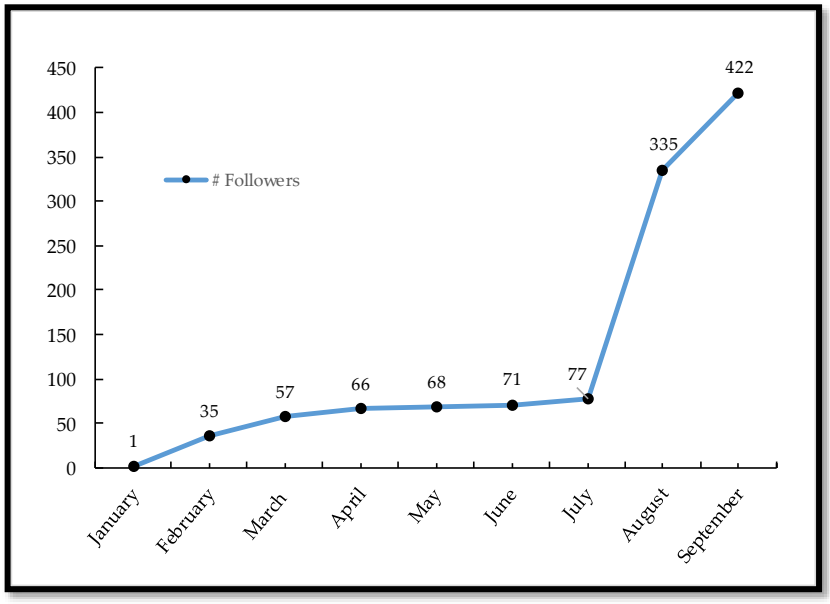
In addition to attending community events hosted by partner organizations, the HCPH OEI team also hosted a series of pregnancy-focused events. These events were held on a rotating schedule at various public library branches once a week. Weekly BUMP events were a great opportunity to create a comfortable space for pregnant women to talk to a

Neighborhood Navigator in-person about their pregnancy and childbirth-related needs. By having BUMP events weekly, the OEI program was established as a reliable source for community members. Over the course of the grant year a few names for the events were tested and ultimately the HCPH OEI Team chose BUMP – Bringing Up Women in Pregnancy as the final name.

Social Media

To promote BUMP events and enhance outreach efforts, a Facebook page was created for the Hamilton County OEI program. The page highlighted members of the team, services provided, events hosted by OEI, and the events Neighborhood Navigators would be attending. Social media was a successful way to reach the priority communities. The Facebook page also provided education on topics, such as safe sleep and breastfeeding, as well as showcase the work of the Neighborhood Navigators in the community. Women also used Facebook as a way to reach out for Neighborhood Navigation services. As the Hamilton County OEI team's presence and following on Facebook continues to grow, followers are sharing the page with their network of friends as well, expanding the reach of the program (**Figure 13**).

Figure 13. Trend of Engagement with OEI Facebook Page



Referrals

This year the HCPH OEI team worked to establish an efficient referral method with partner organizations. The two major referral partners were Healthcare Access Now (HCAN) and The Christ Hospital. HCAN, the HUB for most home visiting services in Hamilton County provided waitlist referrals. These referrals are primarily sourced from referrals automatically generated from managed care plans. The managed care plan has flagged these individuals as pregnant based on claim data. Another partnership was started with The Christ Hospital's prenatal services. They refer their clients who need additional of services to the Neighborhood Navigators to help them find the appropriate resources. This partnership is still new, but is very promising.

Recruitment Source Project

The HCPH OEI program used a separate REDCap project referred to as the Recruitment Source for the monitoring of daily outreach activities, such as contact attempts and scheduling screenings/intakes. The Recruitment Source primarily serves as a secure communication database for notifying Neighborhood Navigators of potential clients to contact for screening. The Project Coordinator used the Recruitment Source to monitor general program operations, add women found through referrals from partners or calls received through the navigation line, assign cases to a Neighborhood Navigator, and monitor progress from outreach to scheduling and completion of intake, and communicate with other members of the team concerning the status of the cases. The Epidemiologist used the Recruitment Source to monitor data entry and collection, aggregate data for reporting, and review data for evaluation. The Recruitment Source has been a great process improvement both in terms of keeping client health information secure and facilitating data reports for evaluating the success of various outreach methods.

OEI Program Data

Recruitment

The top two-outreach avenues for FY 19 were referrals from partner agencies and calls into the OEI navigation line (**Figure 14**). However, because the majority of women found via referrals were lost to contact, calls into the OEI navigation line were truly the most beneficial in identifying women eligible for OEI services. Of the women approached for OEI services, a large number were lost to contact during the recruitment process. However, almost half were successfully screened for eligibility for OEI services (**Figure 15**).

Of the women screened for OEI services, most were found to be eligible (**Figure 16**). This shows that outreach strategies used in the priority communities chosen were effective in ensuring the women screened for OEI services were likely to be eligible.

Figure 14. Avenue of Women of Approached for OEI Services

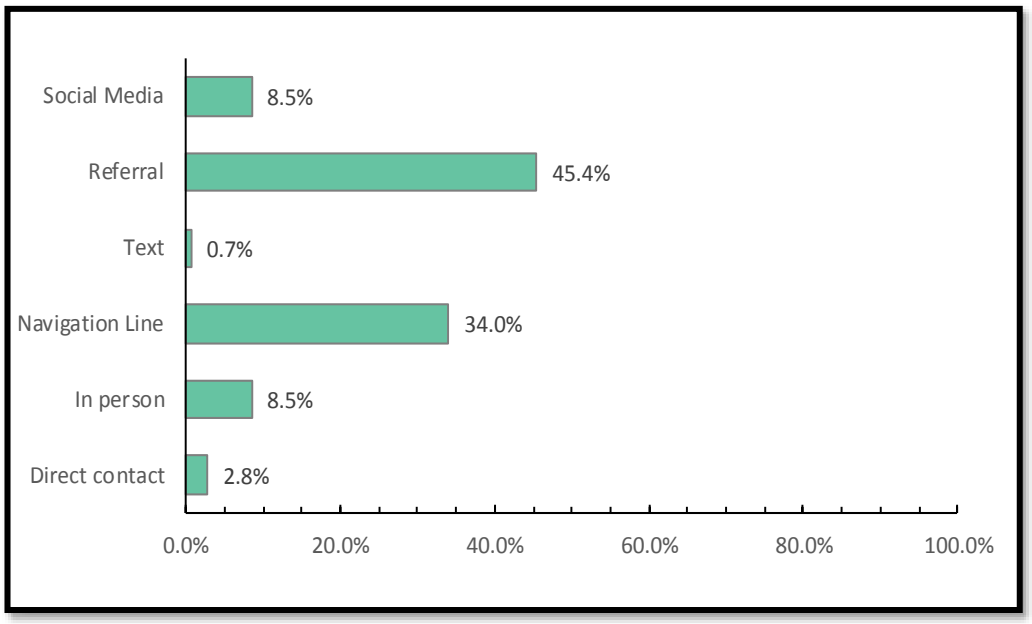


Figure 15. Status of Women Approached for OEI Services (n=280)

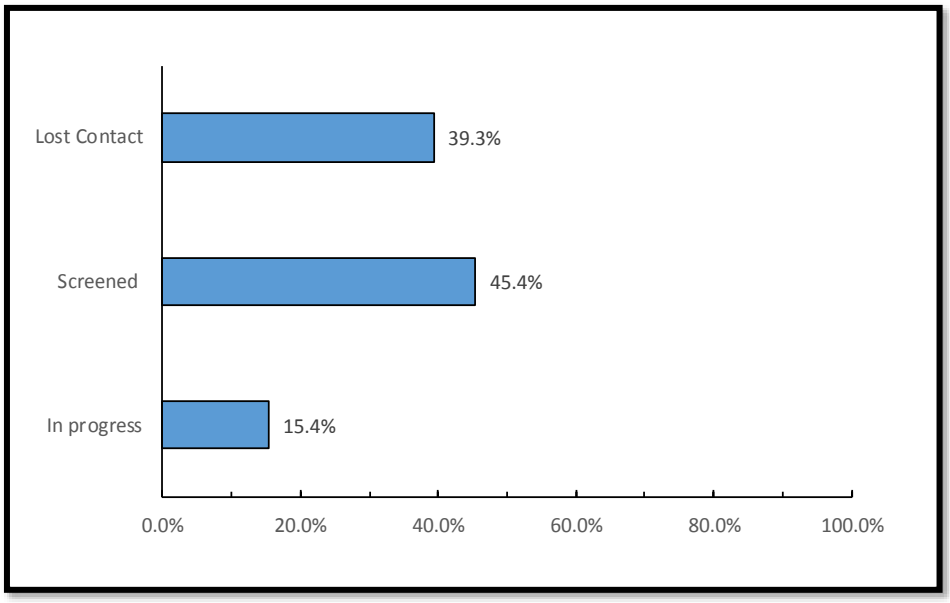


Figure 16. Eligibility Status of Women Screened for OEI Services (n=127)

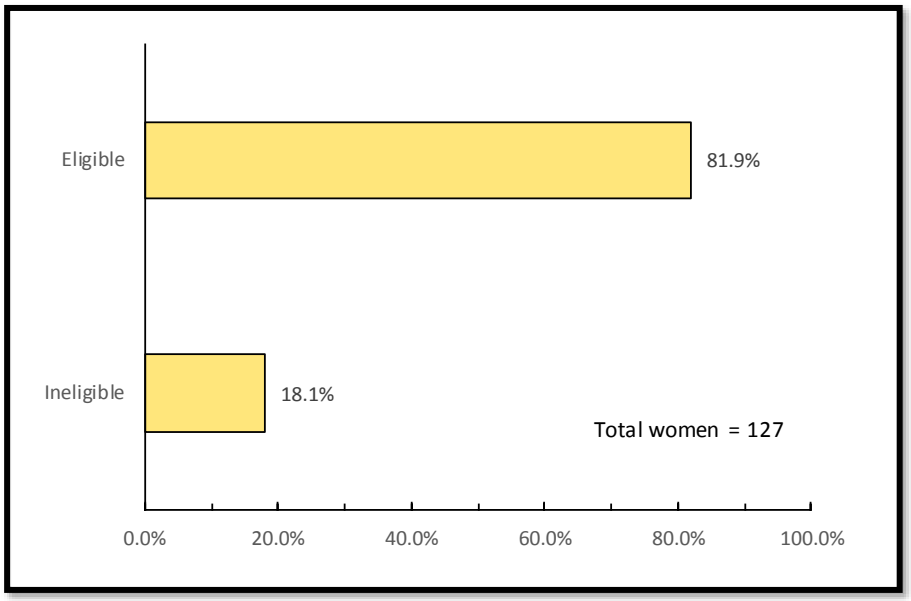
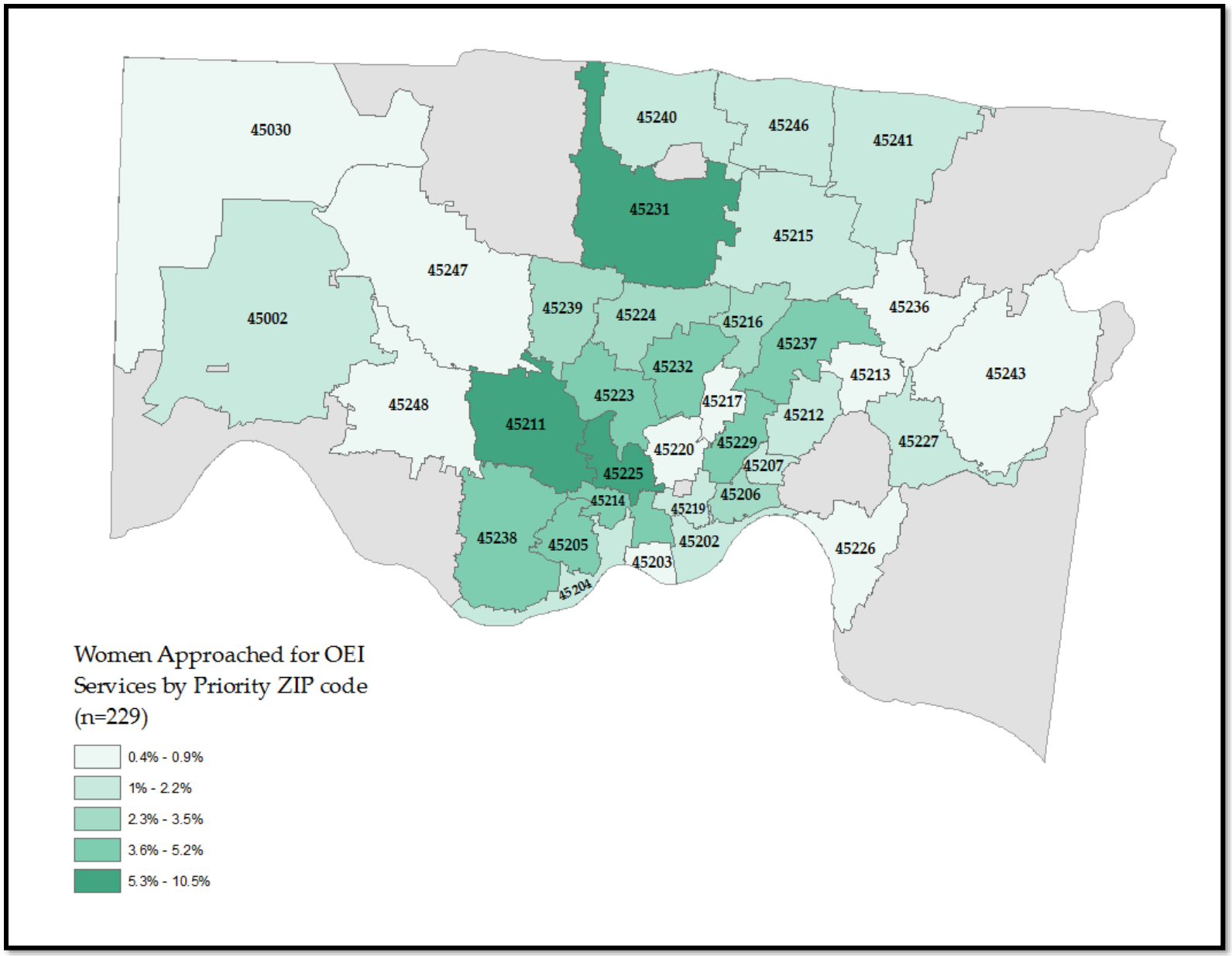


Figure 17 displays the distribution of women included in the Recruitment Source REDCap project. Note that this map closely resembles the identified priority ZIP codes (**Figure 1**).

Figure 17. Distribution of Women Included in Recruitment Source Database (n=229)



OEI Services

Using the Recruitment Source database, the OEI team was able to track outreach activities for 282 women in Hamilton County. Of those women, 127 women were screened and 104 were successfully identified as eligible for OEI services. During the grant year, Neighborhood Navigators were able to serve 94 women. A woman was considered "served" when an intake was completed with a Neighborhood Navigator, followed by (3) follow up attempts. For the women served, the majority (97%) of their needs were met with a referral. However, only 14.5% of those referrals were confirmed as accessed. It was difficult to determine if this was due to women not actually being able to access these resource or if it was due to difficulties with successfully completing a follow up. Only 37% of the women served could be contacted at each follow up attempt. While 11% of the women were completely lost to follow up after the initial intake, even with all follow up attempts made. The values for indicators used to monitor delivery of OEI services can be found in the table below (**Table 3**).

Table 3. Delivery of OEI Services

Indicators	
Number of women outreached	282
Number of women identified	104
Number of women screened	127
Number of women served	94
Number of needs identified	498
Number of referrals offered	476
Percent of needs met	97%
Percent of referrals utilized	15%
Percent of women able to successfully contact	37%
Percent of women lost to follow-up	11%

Characterizing the Priority Community

The characteristics of the women served by the Hamilton County OEI team follow the pattern of women most vulnerable to poor birth outcomes and health disparities. The outreach work of the Neighborhood Navigators did not target any particular group

beyond placed-based and community prioritization. These results are reflective of the population most likely to need and be eligible for the services provided by OEI. **Figures 18 – 21** display the demographics of the women served by the Hamilton County OEI team during the grant year.

Figure 18. Race of Women Eligible for OEI Services (n=94)

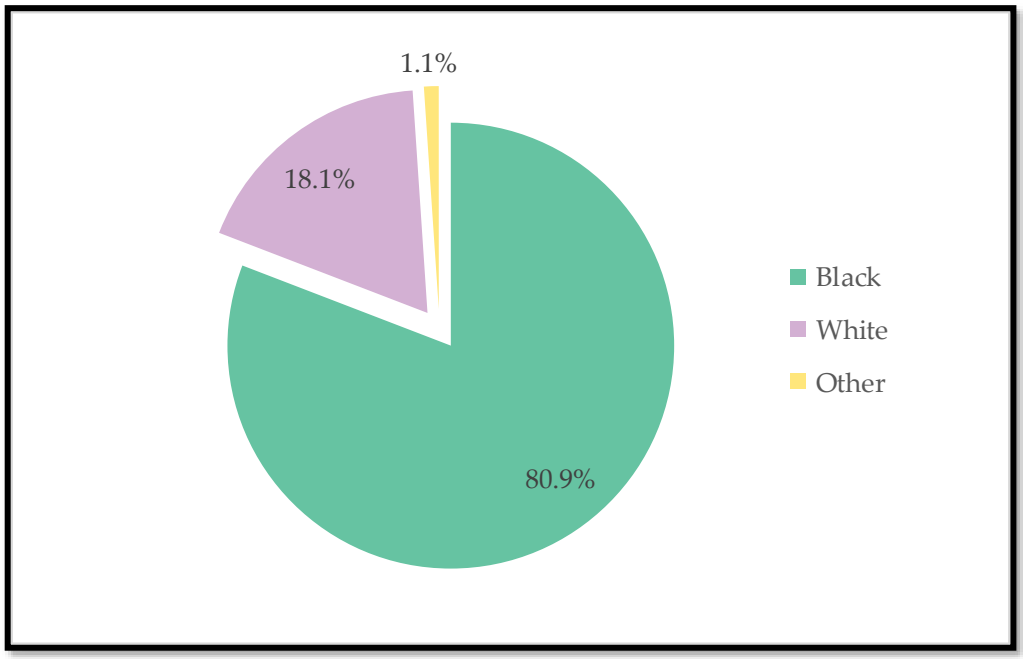


Figure 19. Age of Women Eligible for OEI Services (n=94)

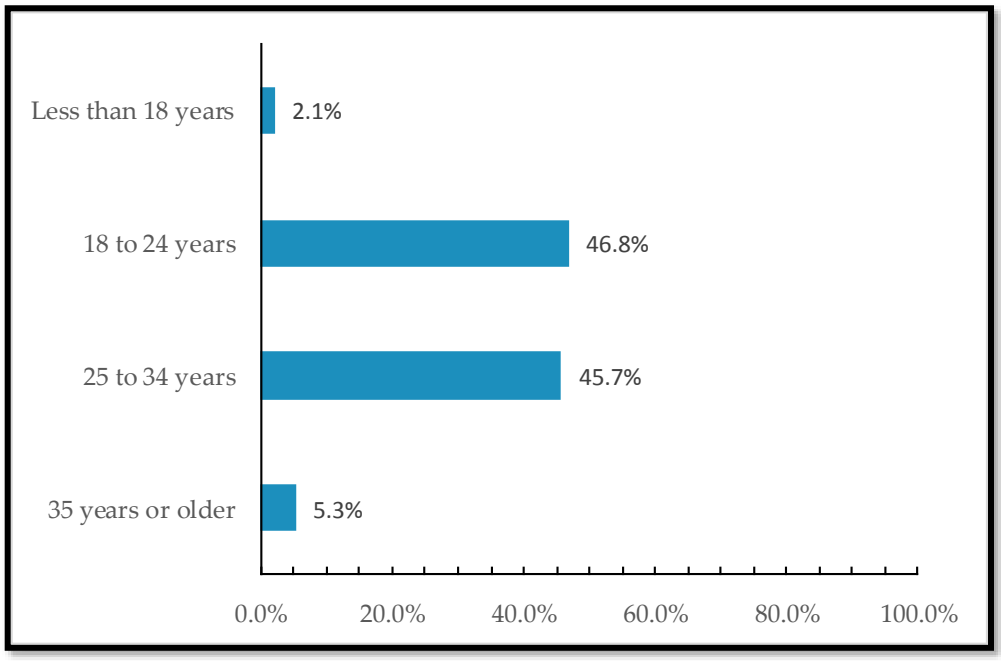


Figure 20. Education of Women Eligible for OEI Services (n=94)

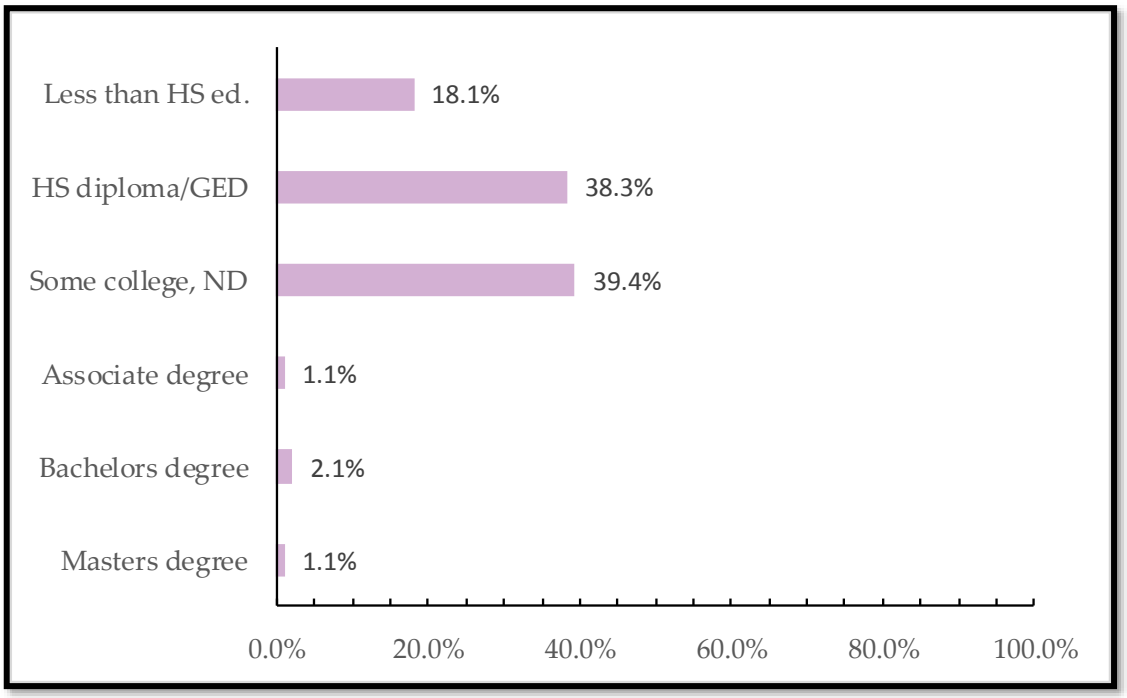
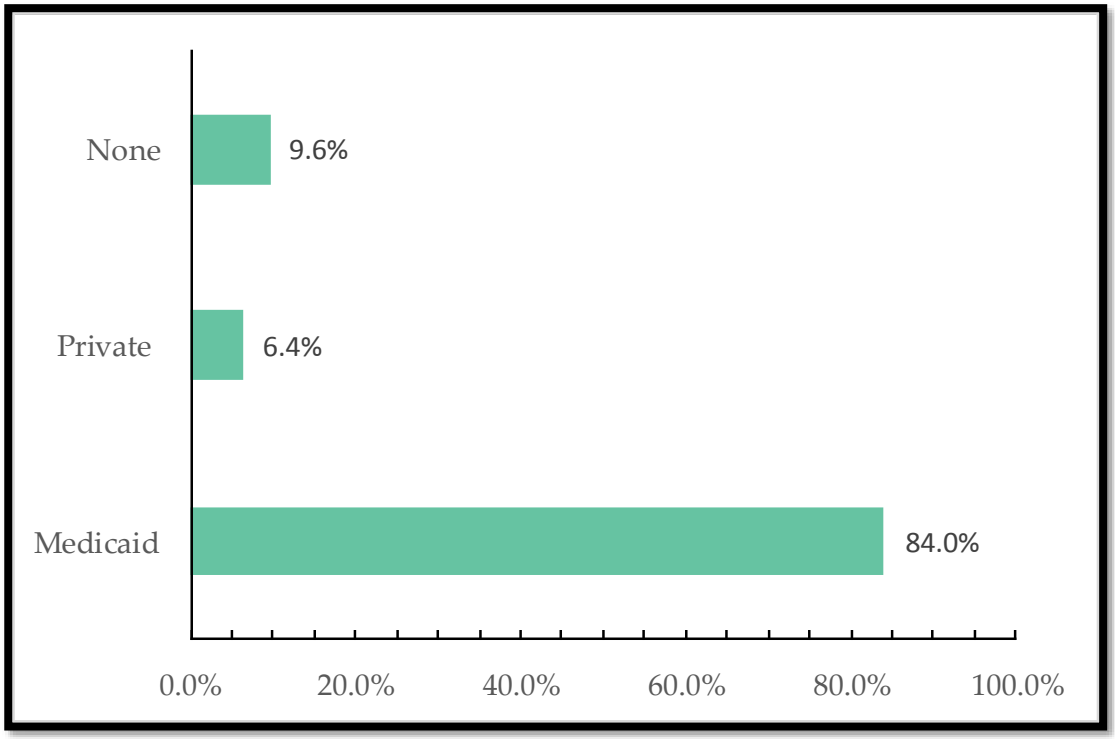


Figure 21. Insurance Status of Women Eligible for OEI Services (n=94)



To be eligible for OEI services, the women screened must be pregnant, not already served by a community health worker (CHW) or home visiting provider, earning an income 200% below the federal poverty level (FPL), and have at least one common risk factor associated with poor birth outcomes. Neighborhood Navigators found that there were many combinations of criteria leading to becoming eligible for OEI services. However, the risk factors most reported were mental health and history of medical condition (**Figure 22**).

One positive element determined from the screening data is that the majority (94%) of the women found eligible for OEI services reported they had access to prenatal care (**Figure 23**). However, it is important to note that this data does not allow for determining the adequacy of prenatal care received. For the women who had trouble accessing prenatal care, the barriers reported were transportation, arranging childcare for other children, conflicts with work schedule, having no insurance, difficulty finding a provider within reasonable proximity, and complications with relocating back into the state. The most commonly reported barrier was transportation (**Figure 24**).

Finally, of the women found ineligible for OEI services, there were only a few who did not have at least one of the risk factors while meeting the three initial required criteria. There was an initial concern that this would be a significant limiting factor, however it was found that most women have at least one risk factor. The majority (79%) of women were not eligible because they were either not pregnant, already served by a CHW or home visiting service, or lived within a household earning more than 200% below the FPL (**Figure 25**).

Figure 22. Common Risk Factors for Eligible Women

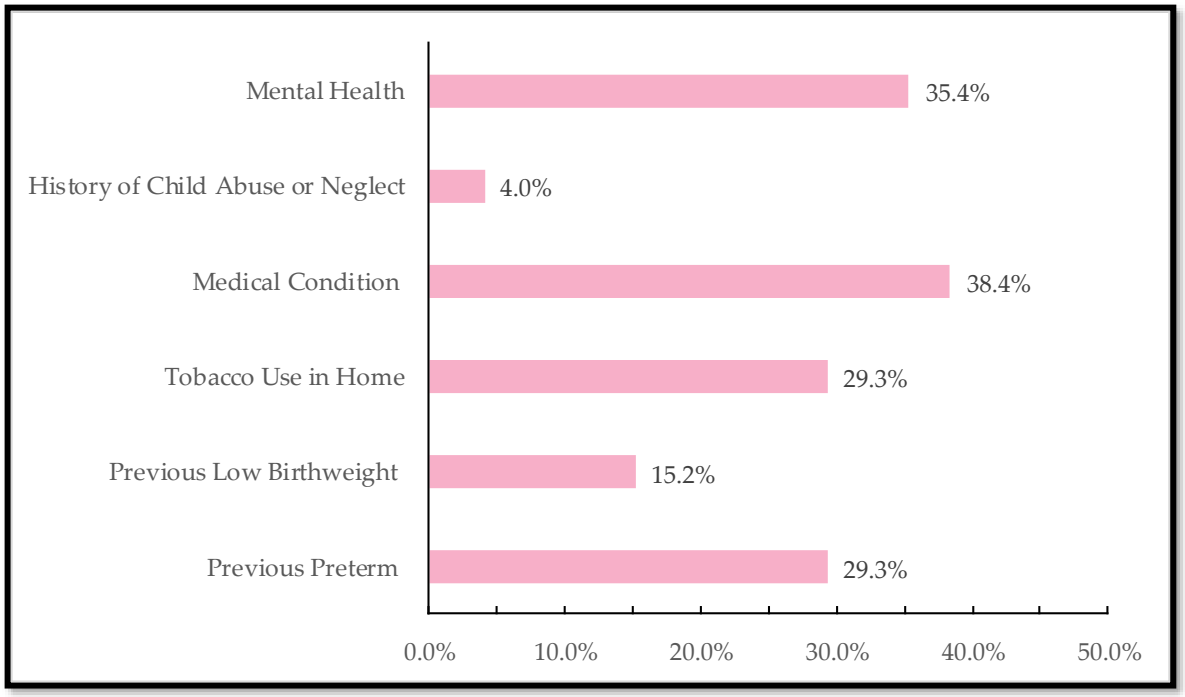


Figure 23. Access Prenatal Care

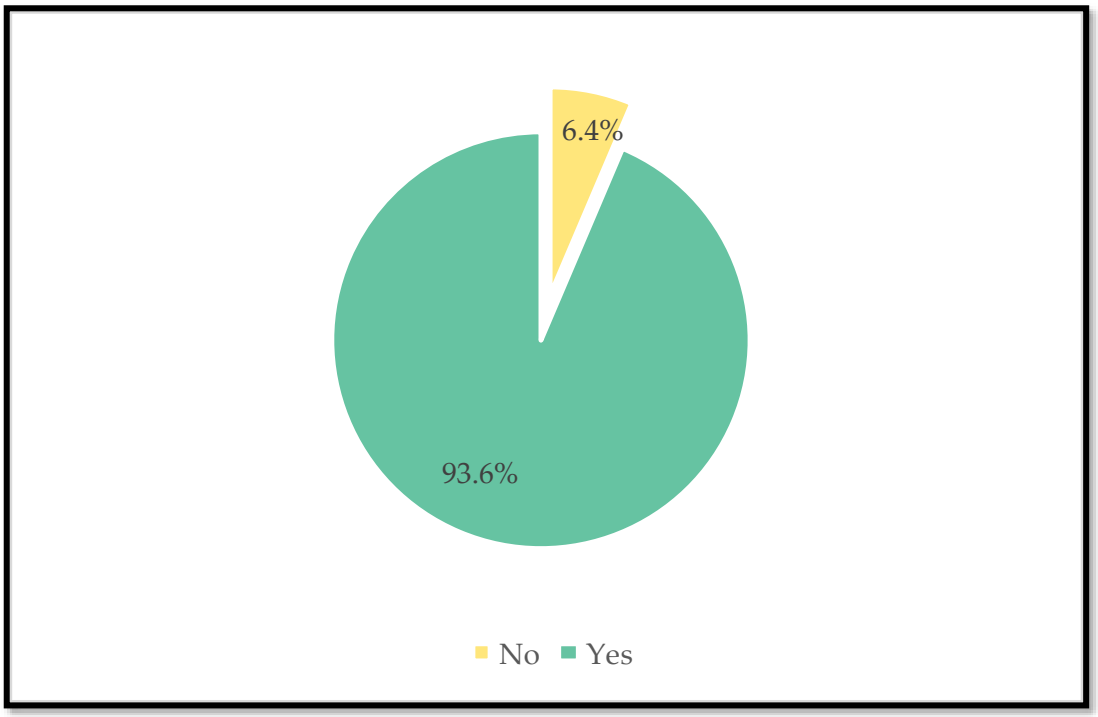
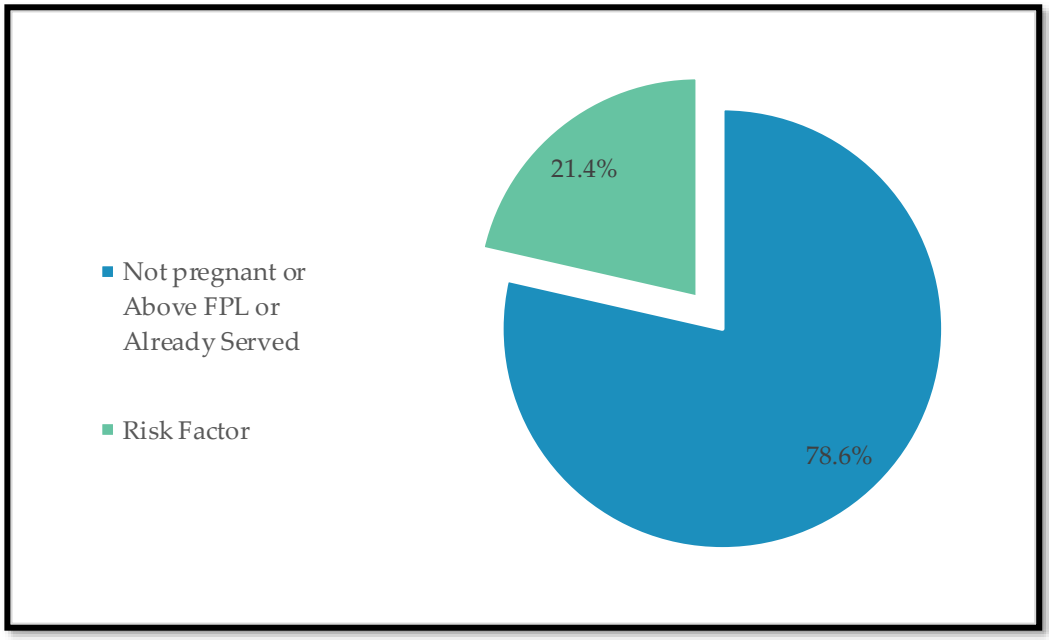


Figure 24. Commonly Reported Barriers to Accessing Prenatal Care

Figure 25. Common Reasons for Ineligibility



Highlight of Partner Organizations

Several partner organizations served as resources to women or facilitated outreach:

- **Cradle Cincinnati** is the lead agency for the Ohio Department of Medicaid (ODM) infant vitality project. Their community health workers (CHW) serve 20 priority ZIP codes. Cradle Cincinnati is also the collective impact organization for infant mortality in Hamilton County and leads the Policy Committee, which served as the Social Determinants of Health Team for this project.
- **Cincinnati Health Department**'s Home Health Program connects mothers and their babies with community health workers who provide education, care coordination, and home visitation.
- **Health Care Access Now**'s Pregnancy Care Coordination service enrolls women referred by Medicaid health plans, physicians, United Way 211 and self-referrals. Women are connected with a Community Care Coordinator (community health worker) for pre/post-natal support addressing their social and health care needs.
- **Every Child Succeeds** offers a home visitation program to help first-time parents create a nurturing, healthy environment for their children. Home visits take place from the time of pregnancy through the child's 3rd birthday.
- **Healthy Moms & Babes** is an outreach ministry whose mission is to increase infant survival as well as foster the health of women, children and families. They operate a van in the community that offers free pregnancy testing, health education, health screens, and referrals to home visiting or clinical services, assistance with insurance and social services.
- The many branches of **the Public Library of Cincinnati and Hamilton County** are places that local families gather and have allowed the Neighborhood Navigators to connect with potential women and host BUMP events.

Social Determinants of Health (SDOH) Policy & Practice Change

Creation of SDOH Team

The Hamilton County local SDOH team was formed out of a partnership with Cradle Cincinnati's Policy Committee. Cradle Cincinnati developed an infant health policy committee tasked with building upon the recent policy recommendations of the Health Policy Institute of Ohio (HPIO) in order to identify local priorities. The purpose of the team is to develop and promote new laws and policies at the local, state and federal level that will help improve birth outcomes and reduce infant deaths.

Structure of Team

In developing the Policy Committee, Cradle Cincinnati's Policy Manager reached out to infant vitality partners in the Greater Cincinnati who were in a position of influence within their organization and invited them to join the committee. The Policy Committee/SDOH team has representatives from over 15 healthcare and nonprofit agencies with a stake in infant mortality in the region (**Figure 27**). Other key stakeholders on the committee include a school board member, Ohio state legislator, a doula, and local mothers. The chair of the committee is Cincinnati City Councilmember Amy Murray.

Figure 27. Organizations Represented on Policy Committee

Angel Baby Network
Bethesda Ideas Investments Innovation (bi3)
Care Source
Community Learning Center
Cradle Cincinnati
Cradle Cincinnati Advisory Board
Every Child Succeeds
Hamilton County Public Health
Health Care Access Now
March of Dimes
Rosemary's Babies
Success by 6
The Health Collaborative
UC Health
United Way
University of Cincinnati

SDOH Focus Areas

The committee chose its primary focus areas of housing, income, and transportation based on the HPIO's SDOH Report. The initial priorities of the team were to advocate for Non-Emergency Medical Transportation funding in Medicaid, increasing the number of group prenatal care facilities in the county, and making the Earned Income Tax Credit refundable.

Policy/Practice Change

One of the most important social determinants of health is housing. Without housing, pregnant women incur more stress, which contributes to poor birth outcomes. Housing is most frequently identified as the biggest need within the population served by OEI 2.0. Improvements in housing policies need to focus on affordability, stability, quality, and access. HPIO found that access to rental assistance – like the subsidies provided by Cincinnati Metropolitan Housing Authority (CMHA) - had a positive impact on the health of moms and babies and birth outcomes. Resultantly, a policy of helping pregnant women with rental assistance can help in the fight to reduce infant mortality.

Because of this, for our policy/practice change, the Cradle Cincinnati Policy Committee/SDOH team was interested in getting CMHA to be able to prioritize pregnant women on their list of individuals waiting for housing. The Policy Committee/SDOH team was able to build on an existing partnership between CHMA and Strategies to End Homelessness (STEH) for STEH to set aside 50 of their housing choice vouchers specifically for pregnant women to ensure that pregnant women experiencing (or close to experiencing) homelessness have adequate housing throughout, and after, their pregnancy. After an initial letter to CMHA, and several meetings between parties, clear expectations were made and a statement of work between Strategies to End Homelessness and Cradle Cincinnati was approved.

The next steps in implementing this practice was for the Policy Committee to convene a team together to vet moms for the program and ensure these women were set up for success. Cradle and OEI were able to identify potential women who could benefit from this partnership. Partner organizations are committed to ensuring that the identified women stay in CMHA housing once they receive a voucher through this partnership. The Policy Committee/SDOH Team would like to be intentional about only recommending women who would receive the maximum benefit from the referral (early in pregnancy) and who are in a position to be successful once placed. Through this policy, Cradle Cincinnati will pay Strategies to End Homelessness for every referral made. This amount comes to $98/referral. It will be incumbent upon Cradle Cincinnati Connections and other partners including OEI to stay in contact with each mother to ensure that her referral is accepted.

A barrier that was quickly identified was the $30 background check fee in this process. The Policy Committee/SDOH Team was able to set up a process so that pregnant women do not have to pay for the background check. There is a form letter that, when signed by the Policy Committee manager and given to the Sheriff's Department, excuses the woman from the background check fee and sends the invoice back to Cradle Cincinnati. There is no cost to the women other than furnishing her own home. In this regard, there are opportunities for improvement. The CareSource Housing Director heard about the SDOH team's involvement with CMHA and is interested in expanding funding for furniture. The Policy Committee/SDOH Team is excited about the future of this partnership and will continue to build on the developed framework to support pregnant women in homeless shelters gain access to stable housing opportunities. This partnership could become a statewide or nationwide model.

Stories from the Field

Social Determinant of Health Assessment

The Social Determinant of Health (SDOH) assessment is an additional form the HCPH OEI team included in the screening process to gather qualitative data about the experiences of the women the Neighborhood Navigators encountered in the community. This tool was designed with the aim of starting a conversation with the women and to allow them to tell their stories.

The tool prompts asked women to:

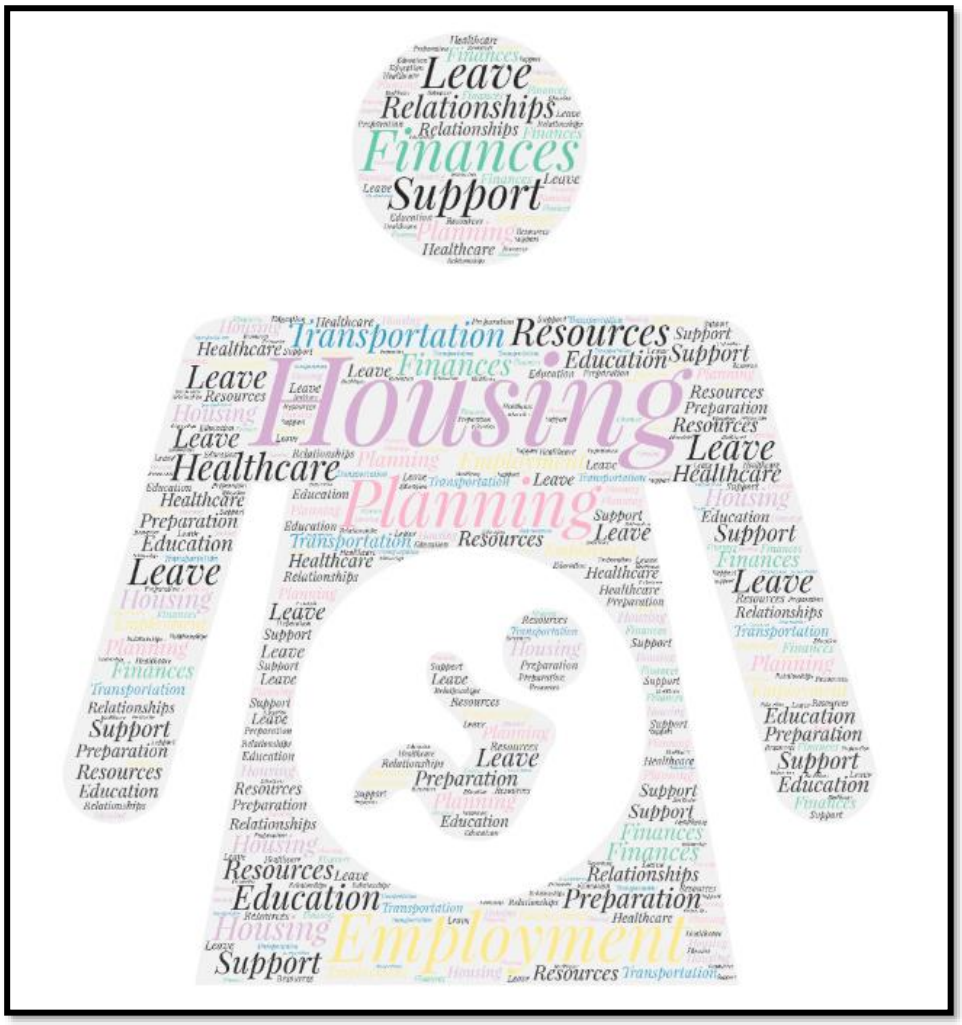
1. Share what they wished for in their current or past pregnancies that might have made the experience easier; and
2. Share what has been helpful in their current or past pregnancies.

Answers were received from almost all of the eligible women, but only a few from ineligible women. The HCPH OEI Team wanted to seek the input of ineligible women because we felt their perspective was also valuable as members of the community. The goal was to also account for various backgrounds of the women our Neighborhood Navigators would encounter.

The responses collected with this tool followed common themes. The word cloud below displays the keywords found within all of the responses (**Figure 28**). Very few of the responses were unique, especially for the first question. As for what women found to be helpful in their pregnancies, familiar answers like having a doula, having access to resources to prepare for arrival of baby, quality healthcare where the pregnancy women feel their needs are met, and support from family members were most common. All of

the keywords for responses given to the second question can also be found in the list of responses to the first question.

Figure 28. Reoccurring Challenges Pregnant Women in Hamilton County Experience



Field Observations

The Neighborhood Navigators are truly essential to the success of the HCPH OEI program. They were the ears and eyes of the program; they were crucial in assessing first-hand how women in Hamilton County were being served and what resources or support might have been needed to achieve better birth outcomes. The Neighborhood

Navigators documented observations they felt were important and reoccurring. The aim was to use this data to inform outreach processes, policy and practices design, and share with our partner organizations to help inform their processes.

In some cases, the Neighborhood Navigators were the first person to know that a woman was expecting. Some women felt more comfortable speaking to them even before officially announcing their pregnancy to those closest to them. It became apparent that the encounters with the women were more than an opportunity to screen her for services, but to provide support, education, and encouragement.

The Neighborhood Navigators shared that they felt the need for additional cultural competency training to help them better relate to women from different backgrounds. The Neighborhood Navigators were assigned to communities where they had personal ties to, making them a valuable asset for the OEI program. Approaching women in public places was difficult, and in many cases, did not produce the best result. Through reporting and documentation, it was clear that the Neighborhood Navigators were constantly considering ways to optimize interactions with the women they aimed to serve.

The Neighborhood Navigators also highlighted difficulties experienced when attempting to serve the priority communities. These insights challenged the HCPH OEI team to consider how the team designed and implemented processes. There were opportunities to debrief during monthly team meetings, as well as to reference the field observations that were documented in order to assess the Neighborhood Navigators'/ HCPH OEI program's effectiveness. There was also an opportunity to learn how well women were being served by established services. These insights will be shared with OEI partner organizations to help them increase their positive impact.

Limitations

There were challenges experience in the first year of OEI 2.0. The new structure of the program took some time to get up and running with a full team. It took three months (September–November 2018) to hire two Neighborhood Navigators. An additional two months was needed to finalize procedures and train new staff. Two Neighborhood Navigators began working in the field in February 2019. During that time, a third Neighborhood Navigator was hired. The HCPH OEI program began operating at full capacity in March 2019. Just as the program was catching its stride, the OEI Project Coordinator resigned in April 2019. The new Project Coordinator began in June 2019. In this respect, training and onboarding processes can be improved to ensure seamless transitions for any unanticipated changes in staffing.

Another barrier was the difficulty in finding eligible pregnant women and the frequency of loss to follow up. The population of unserved women was hard to find and keep engaged. The process of initiating the HCPH OEI program involved a lot of trial and error about which locations and strategies were most effective for meeting and approaching pregnant women. Even when women called the navigation line and requested services, often they became lost to follow up when the Neighborhood Navigators were unable to connect with them on the phone number provided. For this reason, it was extremely beneficial to identify more opportunities for women to be enrolled in person.

Additionally, due to the number of agencies in Hamilton County with similar goals of serving pregnant women, one of the challenges was making sure OEI was optimally aligned with other infant mortality initiatives to ensure services were not being

duplicated. It was difficult to establish new referral partnerships when streamlined processes were already in place with other agencies that serve pregnant women. We did receive waitlisted referrals because of the partnership with HCAN; however, these referrals were auto-generated by the managed care plans and clients often were not seeking or interested in support services. The majority of the referrals did not respond and ended up lost to follow-up.

These challenges presented several opportunities for process improvements to ensure the Neighborhood Navigators were best able to allocate their time to serving women and conducting follow-ups with eligible women. The HCPH OEI team will continue to build on lessons learned from this grant year to identify the most efficient and strategic outreach methods, improve internal processes, and address the identified social determinant of health needs of the priority population.

Next Steps

Toward the end of this grant year, the Hamilton County OEI team launched a text option to the navigation line. The text option provides an easier way for potential women to opt into services and reduce the barriers that making a phone call might present. The text service is operated through Qualtrics ResearchCore, a data platform that allows for secure collection of surveys. The text line will be operated in the same manner as the navigation line where clients can leave their name, contact number, and ZIP code to request a Neighborhood Navigator reach out to them. In the next grant year, the Hamilton County OEI team will pilot the use of Qualtrics to complete eligibility screening over text as a way to eliminate any barriers for women who have difficulty with scheduling a phone call. This will also free up the Neighborhood Navigators' time to focus on finding additional women for eligibility screening and managing open cases for eligible women.