Ohio Equity Institute
Infant Vitality Annual Report
Fiscal Year 21

Public Health
Prevent. Promote. Protect.

Butler County
General Health District

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Introduction

Every year in the United States, thousands of infants die from causes like low birth weight, preterm birth and sleep-related deaths. Infant mortality is the death of a live-born baby before his or her first birthday. Infant mortality is an important indicator of the overall health of a community. A way to measure infant death is Infant Mortality Rate (IMR), which is calculated as the number of babies who die each year before their first birthday per 1,000 live births. Infant mortality is often driven by racial disparities and socio-structural determinants of health (SDOH). SDOH are the conditions in the environment where people are born, live, work, worship and age that affect a wide range of health and the quality of life outcomes.

Infant mortality rate in the United States is higher than other first-world countries. In 2019, 20,921 infants died in the United States according to the Centers for Disease Control and Prevention (CDC, 2019). A baby born in the United States is three times more likely to die during his or her first birthday than a baby born in Japan (American Health rankings 2019).

Healthy People is a federal plan that decennial 10-year national objectives for improving the health of all Americans. The Healthy People 2020 (HP2020) plan set a goal of decreasing infant mortality rate to no more than 6.0 infant deaths per 1,000 live births. The United States consistently had infant mortality rates below the national rate of 6.0 for white babies. Ohio however, has not yet achieved the HP 2020 objective. Ohio ranks 40th for the worst infant mortality rates among all US states (CDC, 2019).

The goal of Healthy People 2030 (HP2030) is to reduce the rate of infant deaths to no more than 5.0 deaths per 1,000 live births. Healthy People 2030 focuses on preventing pregnancy complications and maternal deaths and helping women stay healthy before, during, and after pregnancy.

Butler County Demographics and Socio-Structural Determinants of Health

Of the 88 counties in Ohio, Butler County ranked the seventh most populated county with the population of 383,134. The largest racial and ethnic groups are Non-Hispanic white (84%), followed by Black or African American (9.2%) and Hispanic (5%) (American Community Survey, 2019).

Population by Race

- White 86%
- Black 9%
- Hispanic 5%
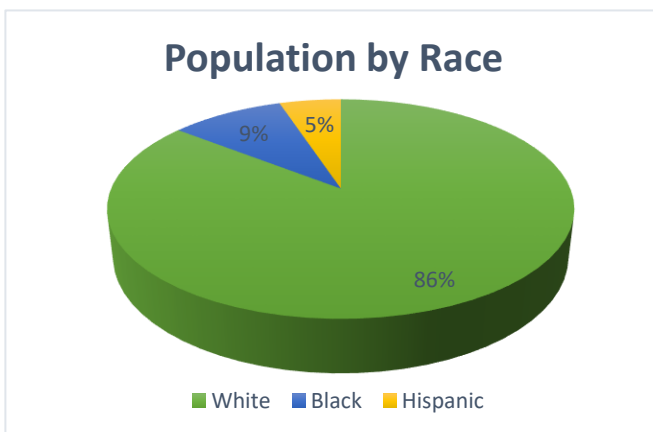
The median household income in 2019 was $66,117. However, 11.7% of Butler County families live in poverty. The largest demographic living in poverty are women of childbearing age between 18 to 44 years (27%). By race, 11.6% of Black residents live in poverty, even though; only 9.2% of Butler County residents are Black.

Poverty by Age & Gender

Poverty by Population & Race
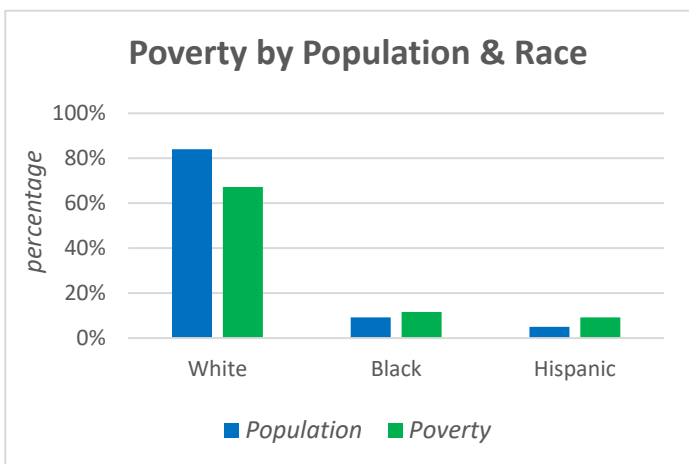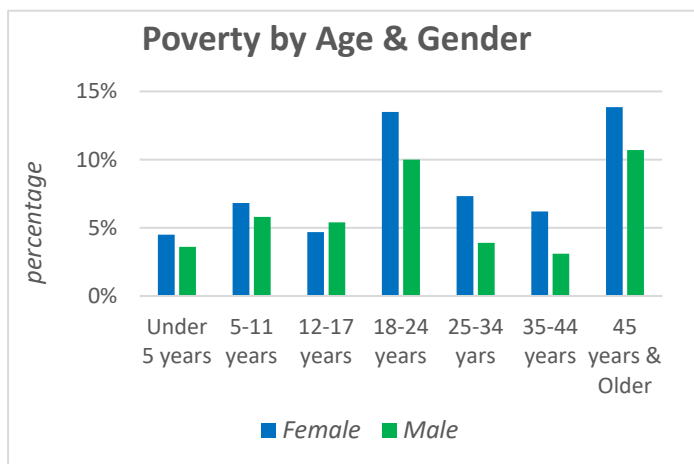
A study conducted by the National Natality Survey shows that women living below the federal poverty level are three times more likely to receive no prenatal care or late care than women whose income are equal or above the 250 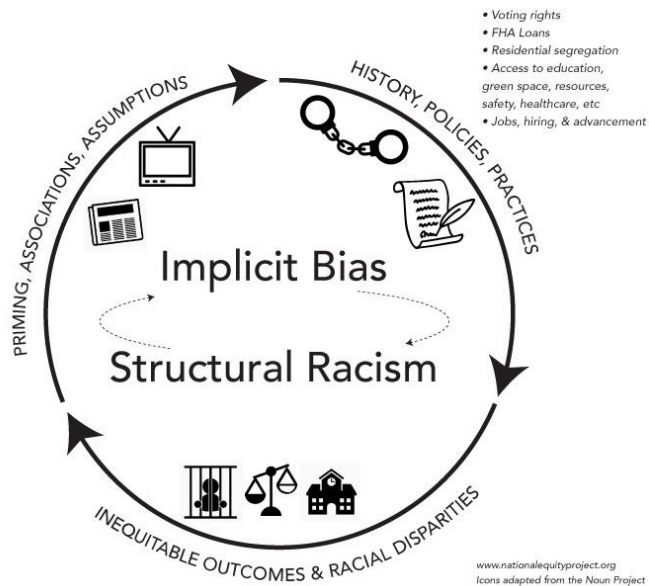percent poverty level. Lack of prenatal care is associated with low-birth weight, which is one of the leading attributes of infant mortality.

A person's health is linked to their socioeconomic status, which includes education, employment, housing instability, social support network, as well as access to healthcare. A survey conducted by the Butler County General Health District Maternal Child Health Program (MP) examined barriers women, between the ages of 18-44 years, face when receiving healthcare showed that cost or ability to pay for healthcare (35.3%) was the top leading barrier survey participants' face when receiving healthcare in the county. The second leading barrier was the inability to get off work (31.3%) to seek healthcare.

Barriers to Receiving Healthcare in Butler County
(n=99)
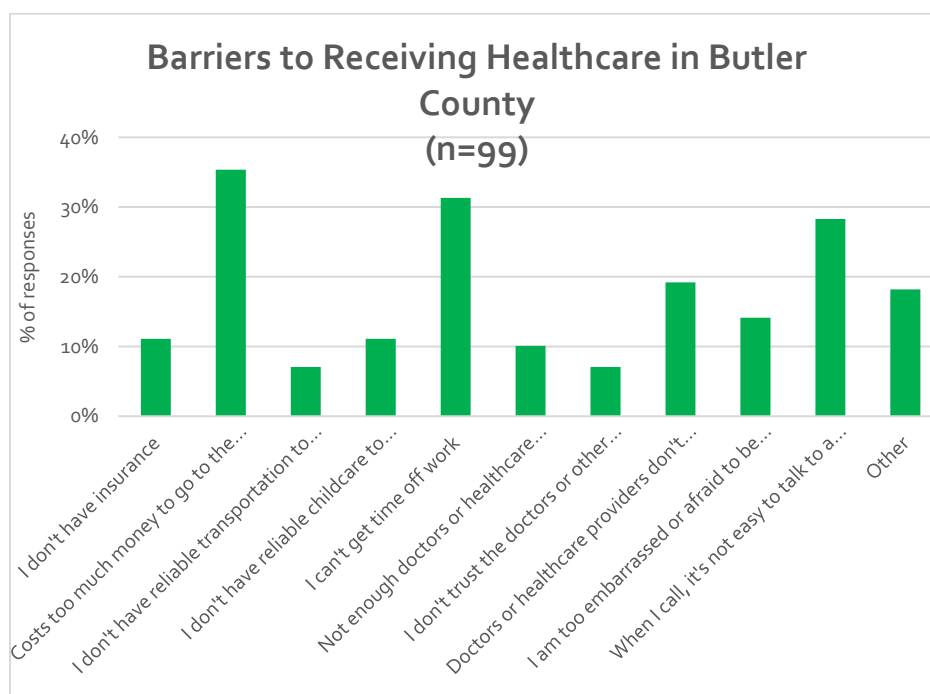
A person is less likely to seek healthcare if they are unable to pay the cost of services. Pregnant women who are unable to see a doctor and receive prenatal care have a higher chance of having a premature baby. A local hospital noted a sharp increase in the number of women giving birth with little to no prenatal care as compared to last year. The cost of healthcare, difficulty in getting time off work to get to prenatal care, and lack of transportation are common barriers for women. The OEI team, participating on Fetal Infant Mortality Review

and Child Fatal Review Boards, see a number of infants dying or women experiencing stillbirths who have not received prenatal care.

- Voting rights
- FHA Loans
- Residential segregation
- Access to education, green space, resources, safety, healthcare, etc
- Jobs, hiring, & advancement

www.nationalequityproject.org
Icons adapted from the Noun Project

Maternal and infant mortality rates are worse for people of color. Structural racism including access and quality of care in predominantly Black neighborhoods, implicit bias and stress-relating to discriminatory attitudes are contributing factors to the high negative maternal and infant health outcomes experienced by Black women.

African American women regardless of their educational and income status are more likely to experience a negative health outcome compared to a white woman with less than high school diploma.

In 2020, babies born to Black mothers (24%) with associate degrees and higher were 2.1 times more likely to have preterm babies than babies born to white women with less than a high school diploma (11%) in Butler County (Ohio Vital Statistics).

Infant Mortality Trends in Butler County

Butler County has seen a sharp decrease in infant mortality over the past decade. A decrease of 23.8% was seen between the years of 2012 and 2020.

Of 3,829 live-born babies in 2021, 32 infants died before their first birthday in Butler County. The overall infant mortality rate for all races was 8.4 deaths per 1,000 live births. Although, Butler County has seen a decrease in infant mortality, the rate of infant mortality is still higher than the state of Ohio and Healthy People 2030. Butler County and the state of Ohio have yet to achieve the Healthy People national goal.
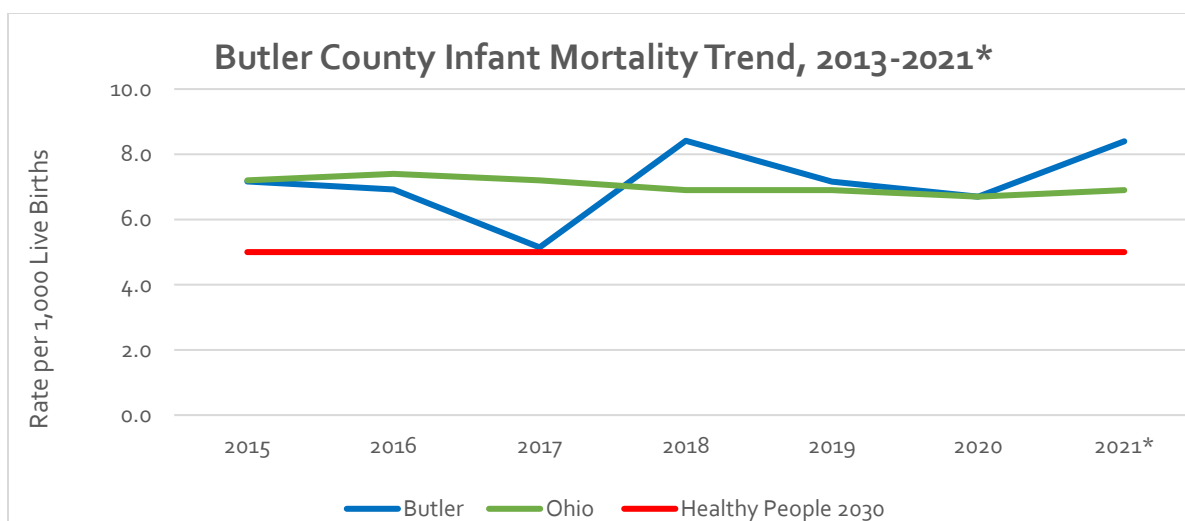
Source: 2015-2021 Ohio Department of Health, Ohio Public Health Information Secure Data Warehouse Data. 2021* data is provisional; ODH finalizes data by fall of the subsequent year.

Infant Mortality Public Health Surveillance

Public health surveillance is the ongoing collection, analysis and interpretation of data for monitoring and planning of public health practice. One way to monitor infant health in Butler County is to track the number of infant and fetal deaths per month. This type of surveillance allows for quick intervention and programmatic shifts when there is an increase in infant deaths. Fetal Infant Mortality Review (FIMR) is a community-based program that identifies local infant mortality issues through maternal interviews and the review of fetal and infant deaths and develops recommendations and initiatives to reduce infant deaths.

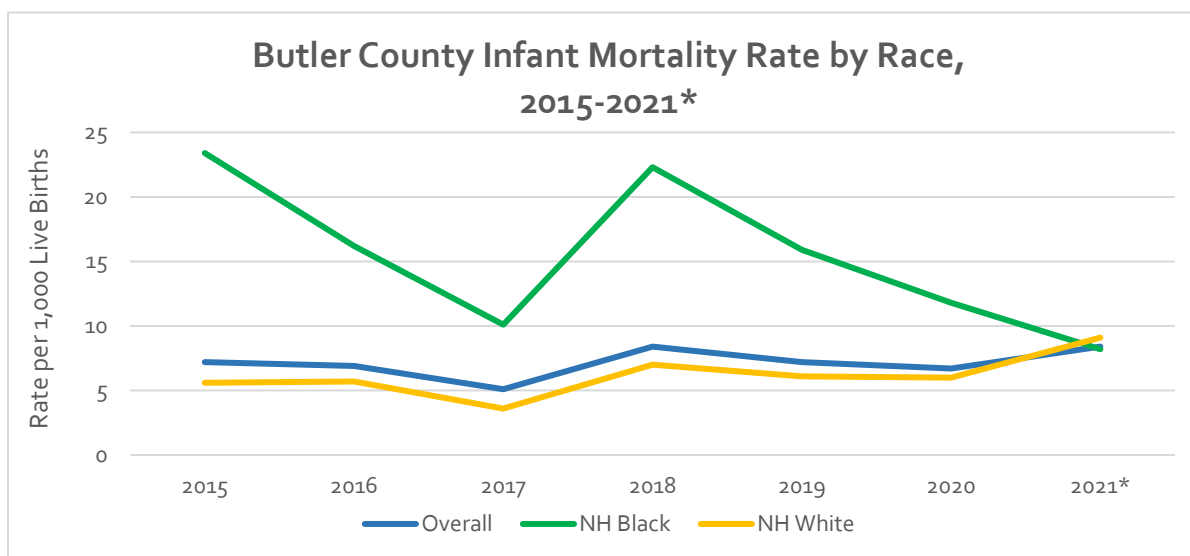|		2019-2020			2020-2021*		
		Infant Deaths	Live Births	IMR	Infant Deaths	Live Births	IMR
Quarter 1	October	2	370	5.4 per 1,000 live births	1	376	5.9 per 1,000 live births
	November	1	345		1	294	
	December	5	401		4	351	
Quarter 2	January	4	366	6.6 per 1,000 live births	3	318	8.2 per 1,000 live births
	February	2	330		2	319	
	March	1	363		3	341	
Quarter 3	April	5	375	6.9 per 1,000 live births	4	365	11.8 per 1,000 live births
	May	0	395		6	366	
	June	3	391		3	369	
Quarter 4	July	2	367	6.2 per 1,000 live births	1	358	6.4 per 1,000 live births
	August	2	393		4	379	
	September	3	375		2	351	

Source: 2015-2021 Ohio Department of Health, Ohio Public Health Information Secure Data Warehouse Data.2021* data is provisional; ODH finalizes data by fall of the subsequent year.

Racial Disparities in Infant Mortality

Over the years, data have shown that babies born to Black women are more likely to die before their first birthday than babies born to white mothers in Butler County. Between the period of 2015 to 2021, Black infants were at 2.5 times more likely to die than white infants.

In 2021, the infant mortality rate for non-Hispanic Black infants was 8.2 per 1,000 live births compared to 9.1 per 1,000 live births among non-Hispanic white infants. This year, there were fewer babies born in the county compared to the previous years, which attributed to the higher infant mortality rate, especially among non-Hispanic white infants.
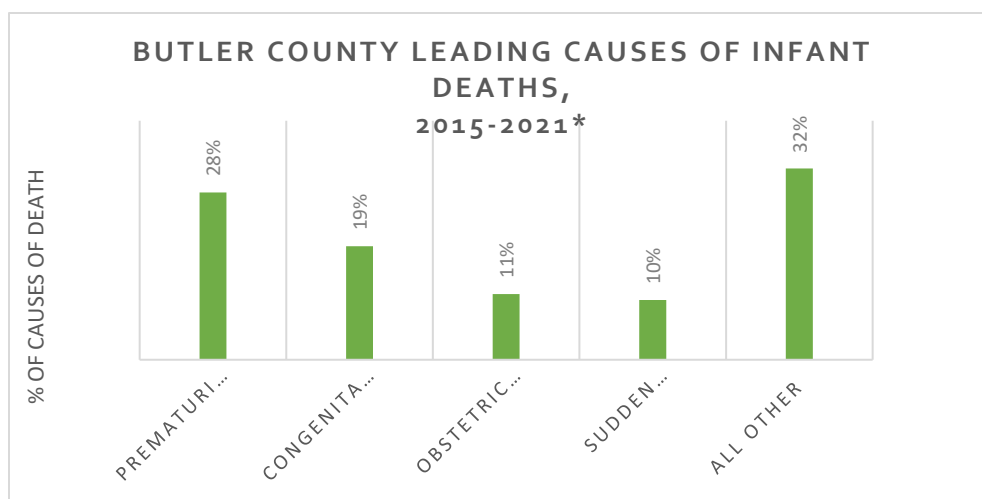
Overall, the infant mortality rate trends over the years show that Black infants in the county are consistently more than twice likely to die before their first birthday than white infants.

Butler County Infant Mortality Rate by Race, 2015-2021*

Rate per 1,000 Live Births

Legend: Overall — NH Black — NH White

Source: 2015-2021 Ohio Department of Health, Ohio Public Health Information Secure Data Warehouse Data.2021* data is provisional; ODH finalizes data by fall of the subsequent year.

Leading Causes of Infant Mortality

The four leading causes of infant deaths in Butler County between the periods of 2015-2021 were prematurity-related conditions, congenital anomalies, obstetric conditions and Sudden Unexpected Infant Death (SUID). The top four leading causes contributed to 68% of all infant deaths in 2015-2021. All other causes accounted for 32% of all the infant deaths. Other causes included perinatal infections, birth asphyxia, infections, and external causes, which includes assault and other intentional injuries.

BUTLER COUNTY LEADING CAUSES OF INFANT DEATHS, 2015-2021*

% OF CAUSES OF DEATH

PREMATURI…	CONGENITA…	OBSTETRIC…	SUDDEN…	ALL OTHER
28%	19%	11%	10%	32%

Source: 2015-2021 Ohio Department of Health, Ohio Public Health Information Secure Data Warehouse Data.2021* data is provisional; ODH finalizes data by fall of the subsequent year.

# Leading Causes of Infant Mortality Rate by Race

Babies born to non-Hispanic Black mothers in the Butler County had the highest infant mortality rate across the four leading causes of infant death compared to babies born to mothers of other races.

The biggest disparities are seen with prematurity-related and obstetric conditions. Non-Hispanic Black infants are at 3.5 times more likely to die from prematurity-related conditions than non-Hispanic white infants and over 3 times more likely to die compare to babies born to mothers of other racial background.

Obstetric conditions are health problems that are life threatening to pregnant mothers and their babies. These health conditions may arise anytime during pregnancy, labor and birth. Some examples include miscarriage, ectopic pregnancy, placental abruption, rupture of the uterus and amniotic fluid embolism. Babies born to Black mothers were over 3 times more likely to die from obstetric conditions than babies born to white mothers.

Sudden Unexpected Infant Death (SUID) is the death of a baby less than 1 year old in which the cause of death was not determined before investigation. SUID often occur during sleep or in the baby's sleep area (CDC, 2021). Black babies were at 2.8 times more likely to die from sleep related deaths than white babies.

Congenital anomalies, also commonly referred to as birth defects are health conditions or physical abnormalities. Most birth defects are caused by genetic or environmental factors; however, in most cases, the cause is unknown. Black infants were at 1.4 times more likely to die from birth defects than infants born to white mothers.
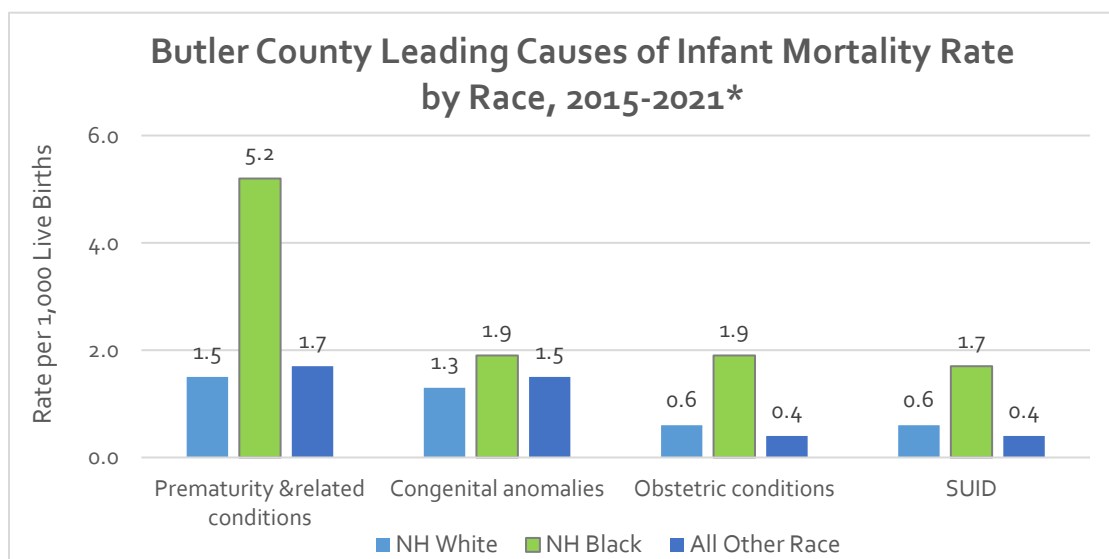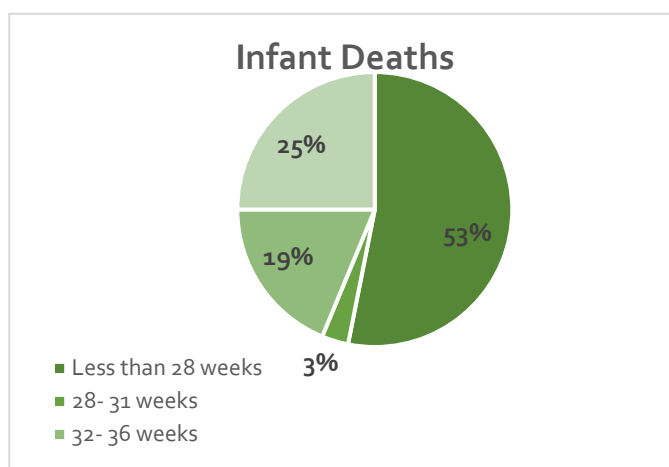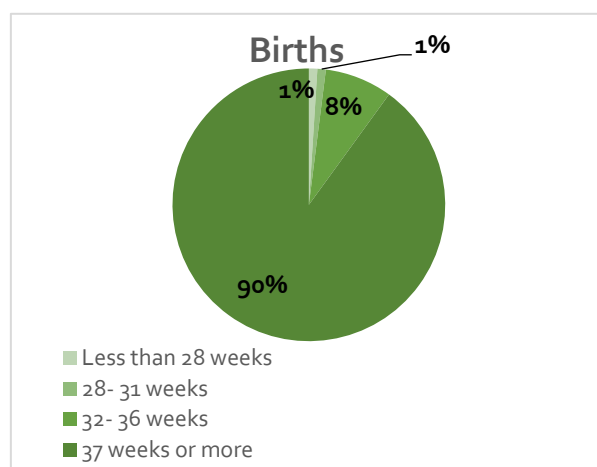

Source: 2015-2021 Ohio Department of Health, Ohio Public Health Information Secure Data Warehouse Data.2021* data is provisional; ODH finalizes data by fall of the subsequent year.

Prematurity

Prematurity was the leading cause of all infant deaths in Butler County in 2021. Prematurity or preterm birth is when a baby is born too early, before 37 weeks of gestation age. Babies born preterm have a higher rate of medical complications, long-term disabilities and death. Studies have shown that maternal stress during pregnancy, implicit biases and smoking can all contribute to preterm birth.

In 2021, about three fourths (75%) of infants who died in Butler County was born preterm. However, 10% of all infants born in 2021 were preterm. Black infants (13%) were more likely than white infants (10%) to be born before 37 weeks of gestation age.

Butler County Proportion of Infant Births & Deaths by Gestational Age, 2021*

Births

- Less than 28 weeks
- 28- 31 weeks
- 32- 36 weeks
- 37 weeks or more

1%
1%
8%
90%

Infant Deaths

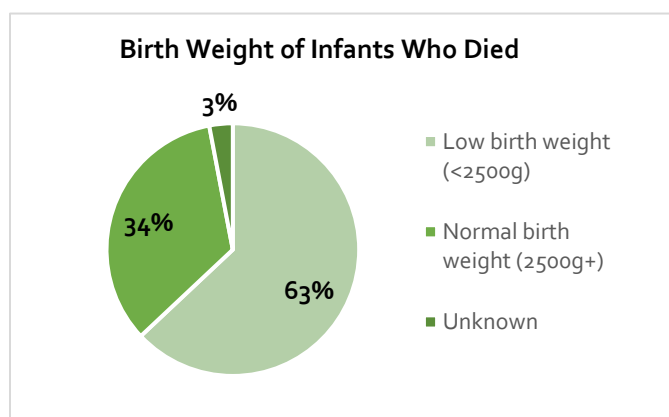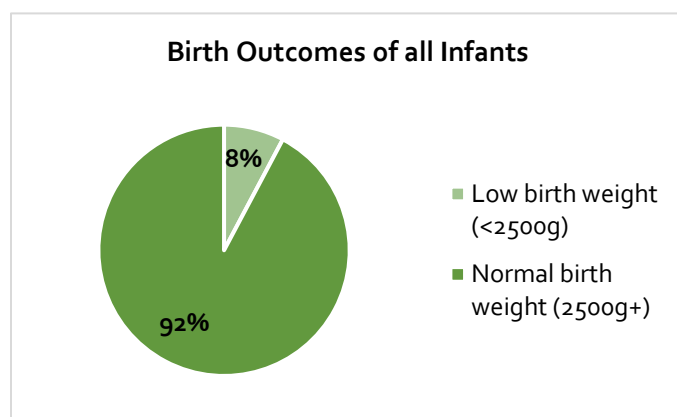- Less than 28 weeks
- 28- 31 weeks
- 32- 36 weeks

25%
19%
3%
53%

Source: 2015-2021 Ohio Department of Health, Ohio Public Health Information Secure Data Warehouse Data.2021* data is provisional; ODH finalizes data by fall of the subsequent year.

Low Birth Weight

Low birth weight (LBW) is defined as a baby born weighing less than 5 pounds, 8 ounces (2,500 grams). According to March of Dimes, there are two main factors for low birth weight, which are preterm birth and fetal growth restriction. Fetal growth restriction (FGR) is a condition in which an unborn baby is smaller than expected for the gestational age (Stanford Children's Health definition). Factors that causes fetal growth restriction include maternal high blood pressure, diabetes, obesity, cigarette smoking and alcohol or drug use.

In 2021, eight percent of all infants born had a low birth weight less than 2500 grams. However, about one-third (63%) of infants who died had low birthweight. Black infants (12%) were more likely than white infants (7%) to be born at a low birth weight.

Butler County Proportion of Infant Births & Deaths by Birth Weight, 2021*

Birth Outcomes of all Infants

- Low birth weight (<2500g)
- Normal birth weight (2500g+)

8%
92%

Birth Weight of Infants Who Died

- Low birth weight (<2500g)
- Normal birth weight (2500g+)
- Unknown

3%
34%
63%

Source: 2015-2021 Ohio Department of Health, Ohio Public Health Information Secure Data Warehouse Data.2021* data is provisional; ODH finalizes data by fall of the subsequent year.

Infant Mortality Rate by Maternal Health

Maternal health refers to a woman's health and well-being before, during, and after pregnancy. Pregnancy-related complications are closely linked to infant deaths. The following data reflect the maternal and infant health outcomes of Butler County in 2021.

Hypertension: Infants born to women with no history of hypertension were 19 times less likely to die than infants born to women with pre-pregnancy hypertension. Infants born to women with pre-pregnancy hypertension were 23 times more likely to die than infants born to women with gestation hypertension.

Previous Preterm Birth: Infants born to women who had a previous preterm birth had an alarming higher infant mortality rate (124.4) than infants born to women with no history of preterm birth (1.1).

Prenatal Care: Infants born to women with no prenatal care were more than 15 times likely to die than infants born to women with first trimester prenatal care, and at 11 times more likely than infants born to women with second trimester prenatal care.

Maternal Smoking Status: Infants born to women who smoked during pregnancy were 1.4 times more likely to die than infants born to non-smoker mothers.

Birth Spacing: Infants born to women with a birth interval less than 24 months were at 2.6 times more likely to die compare to infants born to women with birth interval of 24 months and more.

Breastfeeding Status: Infants born to women did not breastfeed were almost five times likely to die than infants born to women who breastfed.

Parity: Infants born to women with multiple births were at 2.3 times more likely to die before their first birthday than infants born to women with singleton births.
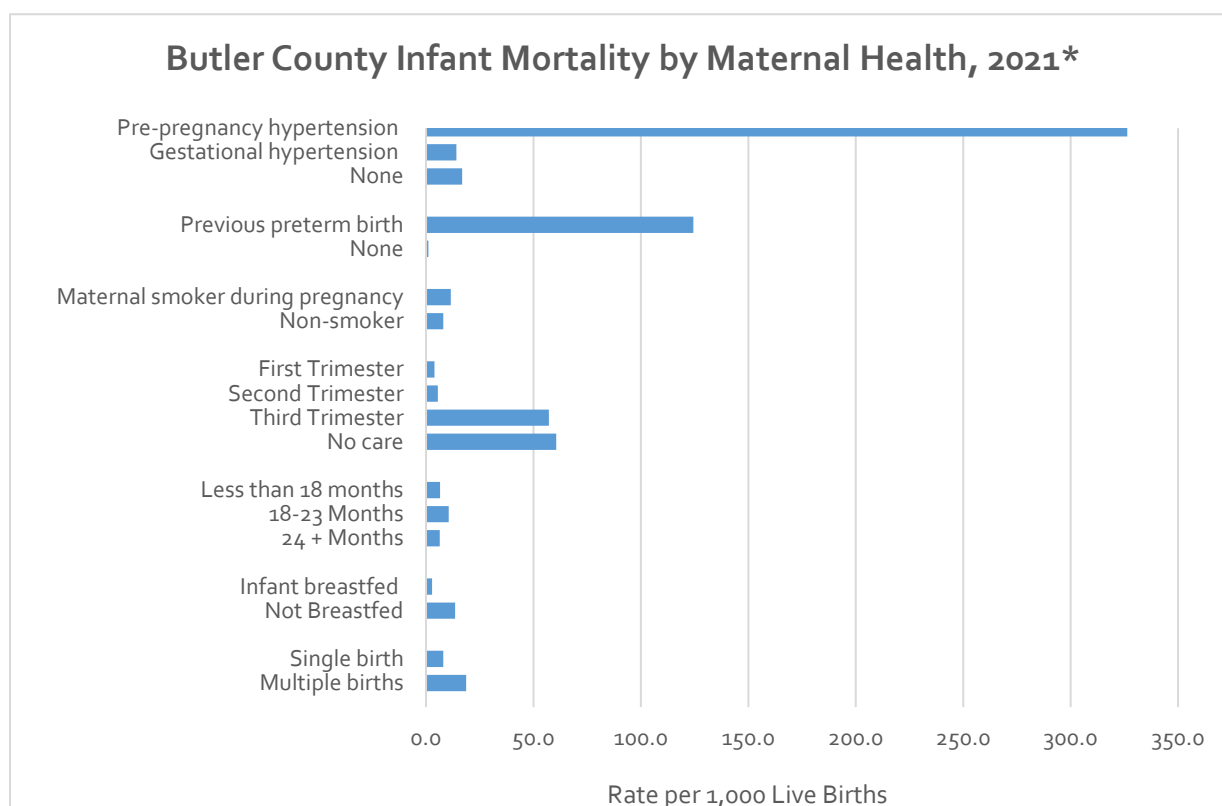
Source: 2015-2021 Ohio Department of Health, Ohio Public Health Information Secure Data Warehouse Data.2021* data is provisional; ODH finalizes data by fall of the subsequent year.

Infant Mortality Rate by Maternal Demographics

Infant mortality is associated with a range of biological factors such as race and age; social environmental factors such as education attainment and medical insurance; and physical factors. The following data reflect the maternal and infant health outcomes of Butler County in 2021.

Race: The infant mortality rate was higher for infants born to non-Hispanic Black mothers (8.2) than non-Hispanic white mothers (9.1).

Age: Infants born to women age 24 years and younger were more than 13 times likely to die before their first birthday than infants born to older women, age 35 years and over.

Education: Infants born to women with a high school diploma or less were at 4.8 times likely to die than infants born to women with bachelor's degrees or higher.

Insurance Payer Source: The infant mortality rate was higher among women who listed self-pay as their primary health insurance than infants born to women with Medicaid. A survey conducted by the Butler County General Health District (BCGHD) Maternal Child Health Program to examine barriers among childbearing women accessing health care, showed that 35.3% of survey participants listed that cost or ability to pay for healthcare as the top leading barrier when receiving healthcare in the county.
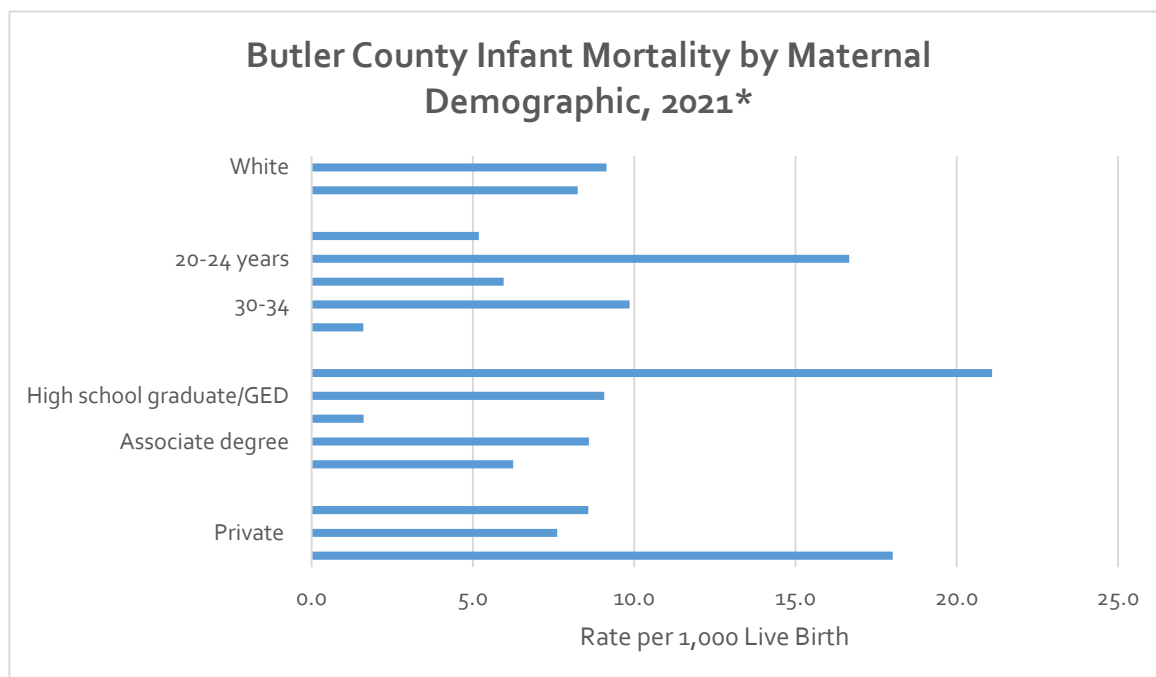
Butler County Infant Mortality by Maternal Demographic, 2021*

Source: 2015-2021 Ohio Department of Health, Ohio Public Health Information Secure Data Warehouse Data.2021* data is provisional; ODH finalizes data by fall of the subsequent year.

Ohio Equity Institute (OEI)

In 2019, 929 Ohio infants died before their first birthday. Similar to national trends, the mortality rate for Black infants in Ohio is nearly 3 times the rate of white infants (14.3 per 1,000 live births compared to 5.1). African American and Hispanic infant mortality rates have not changed significantly during the past 10 years (ODH Infant Mortality Report 2019).

To address the racial inequities in birth outcomes and prioritize the population most at risk for poor birth outcomes, the Ohio Equity Institute (OEI 2.0) was developed in October 2018. OEI is a partnership between the Ohio Department of Health and nine counties in the state with the highest racial disparities in infant mortality rate. In 2019, the nine OEI counties accounted for two-thirds (66%) of mothers who experienced an infant loss; a distinctive number of these mothers were African American (ODH Infant Mortality report, 2019).

OEI teams work to achieve equity in their local communities by connecting pregnant Black women to clinical and social services to improve access to care and resources needed for healthier pregnancies. OEI also continues to lead a local coalition changing practices that influence the socio-structural determinants of health related to poor birth outcomes.

Butler County OEI

Butler County OEI coordinates partnerships with local agencies for infant vitality efforts. Partnerships include a robust group of dedicated individuals and organizations that focus on policy changes regarding socio-structural determinants of health, health education, home visiting with Certified-Community Health Workers, tobacco cessation, breastfeeding support, safe sleep education, group-facilitated prenatal care and community engagement activities. Butler County OEI has close partnerships with Moms and Babies First, a home visiting program dedicated to Black moms in the community, Cribs for kids, an ODH funded program which provides safe sleep education and cribs to families and the Preconception and Inter-conception Health program, which focuses on women's overall health.

Per OEI programming, Butler County has a two-pronged strategy for serving women and infants in the community. The strategy includes downstream and upstream interventions. Upstream intervention is the focus on policy and practice changes that impact a large population. Downstream interventions focus on the individual and behavioral changes of unique individuals. The upstream strategy includes a community coalition whose mission is to reduce infant mortality rates and health inequities. The coalition, Leading Infant Vitality Equitably (LIVE), facilitates the development and adoption of policies affecting the socio-structural determinants of health related to preterm birth and low birth weight, the driving factors of infant death, in our county. The downstream intervention focuses on the Neighborhood Navigation (NN) services. The NN connects with pregnant women who are eligible for services and assesses their needs and gaps in support. The NN serves pregnant women by connecting them to resources, services, and needed items to improve outcomes for pregnancy and infants.

Neighborhood Navigation

Neighborhood Navigation is a downstream intervention that serves eligible pregnant women in Butler County. The Neighborhood Navigator (NN) identifies and connects pregnant women who have a risk factor for a poor birth outcome, such as having a previous miscarriage or preterm birth to clinical and social services. The NN completed a risk factor and needs assessment with and refers clients to organizations and programs that can fulfill immediate needs. The NN works as an advocate for equity, as well as understanding where a client is in her day-to-day life. Providing a listening ear and supportive interaction, clients leave the conversation with tools that will help them advocate for themselves.

During the assessment and the follow up process, the OEI team is able to gather data to further the success of our program by having a greater understanding of the ever-changing community we serve. Data gathered helps the Butler County NN provide a broad scope of referrals and resources that can support our moms and babies for healthy lives before and past their first birthdays. Neighborhood Navigation has become an open door resource for Butler County with referrals from large community organizations as well as small churches, friends and family members. Any person in need of resources can connect with the NN and receive a connection to a service that fits their need.

WE'VE HAD THE HONOR OF SERVING OVER **250** MOMS AND BABIES

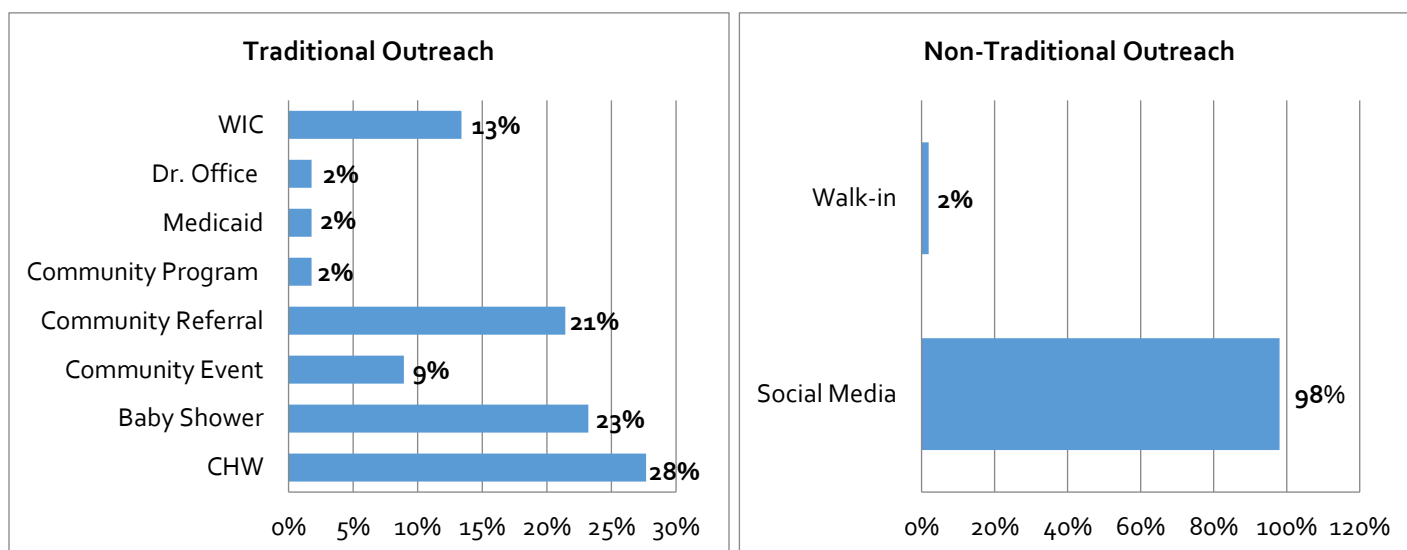Public Health
Butler County
General Health District

Avenues of Outreach

Butler County OEI used different strategies and avenues to connect with pregnant women who are underserved, lack services, or lack pregnancy support. A few avenues utilized include social media, participating in community events, passing out NN fliers to the community, and the updated BCGHD website to include a Neighborhood Navigation homepage.

A root cause analysis performed by the OEI Epidemiologist highlighted OEI's need to expand upon social media and have a greater online presence. NN created a marketing plan for social media alongside Kirchner Marketing. This extensive and detailed plan led to the creation of the NN webpage and alternate routes for women to connect with the Navigator. OEI worked closely with Kirchner Marketing to craft a landing page and social media posts to engage with the public and to target Black, pregnant women.

OEI also implemented a new avenue for pregnant women to connect with the Navigator. The NN webpage has an embedded link for women to complete an online survey if they would like to learn more about Navigation. The link allows participants, who may not be ready to call the Navigator, an alternative option. Participants complete the online survey and contact information is sent to the Navigator. The Navigator then reaches out to the survey participant. Kirchner Marketing also created social media posts to not only advertise for NN services but to provide support, education, and guidance to women in the county. Representation matters and marketing materials featured Black women and families to foster inclusivity and to connect with Black communities. Other non-traditional avenues of outreach were explored during FY21.

Traditional Outreach

WIC	13%
Dr. Office	2%
Medicaid	2%
Community Program	2%
Community Referral	21%
Community Event	9%
Baby Shower	23%
CHW	28%

Non-Traditional Outreach

Walk-in	2%
Social Media	98%

Neighborhood Navigation Evolution, Successes, and Challenges

Neighborhood Navigation evolves each year as the OEI team garners more partnerships and deepens the connection to community. A partnership between Cribs for Kids (CFK) and Navigation was expanded upon. The Navigator, trained in CFK's protocol, was able to provide safe sleep assessments and education to clients and connect them with a crib during communications. Safe Sleep Days were held in partnership with CFK and a survey was released to the community for event registration. Each participant registered was assessed for Navigation and CFK. OEI was able to serve over 22 women at the events and connected with 30 more women to be served outside of the event date.

OE21 saw an influx in the number of families needing housing support. The Navigator partnered with SELF, who received rental and housing support funding in light of COVID-19, to provide rental and utilities assistance to clients. The close connection with NN and SELF allowed for participants to receive assistance in filing paperwork and streamlined the process in which NN families received financial assistance.

A success of Navigation included more women served during FY21 than any other year in Butler County's OEI history. Also, the number of Black women served increased this year by 15%. The NN participated in Fetal Infant Mortality Reviews and collaborated with FIMR coordinator. It was noted that women losing infants or experiencing a stillbirth after 20 weeks gestation have often just emigrated from Africa. We worked alongside a partner with connection to the African population served in Butler County and were able to serve more women at-risk for an infant death, miscarriage, or stillbirth.

Navigation data was also shared more widely and with more partners than in previous years. This data sharing sparked a conversation with partners and resulted in partners sharing their programmatic and agency data with OEI. This data sharing gave the OEI team a better sense of the objectives and successes of each program, gaps in services, new ways to market Navigation, and how to strengthen partnerships in the county. In particular, the NN connected with the Preconception Health Advisory Team in Butler County and provided needed input, expertise, and experience to the team. NN and OEI data and the stories of women served are influencing a countywide women's health and wellness campaign led by the Preconception Health Advisory Team.

A pregnant woman in a toxic relationship came to us for help. She worried that she would lose her baby. After connecting with our team, she received a safe bed from Cribs For Kids-as well as other resources like mental health support groups. Now sober, she's enjoying caring for her new son AND earning an income.

- Neighborhood Navigation Team

A challenge NN faced during FY21 is lack of resources and services needed by women in the county.

Affordable childcare and employment with a living wage are struggles NN commonly sees. Resources for these barriers are limited and this knowledge is shared with the LIVE coalition. With the COVID-19 pandemic many families face even greater struggles and economic burdens. Resources for these struggles are not always easily accessible and families suffer for it.

Priority Area for Outreach

A study conducted by the Michigan State University showed that where a person lives could affect his or her health. The ability to make healthy choices depends on the conditions in the communities where one live, work and learn. Butler County has distinct health outcomes in different parts of the county. An analysis was conducted to identify the census tracts in the county with the highest rates of preterm birth and low birth weight for non-Hispanic Blacks between the years of 2015-2020. The top eight census tracts in Butler County for the non-Hispanic Black preterm and low birth weight combined were tracts 136, 140, 131, 110.02, 109.09, 111.23, 111.26 and 3.

Non-Hispanic Black Preterm & Low Birth Weight Rate by Census Tract, Butler County, 2015-2020
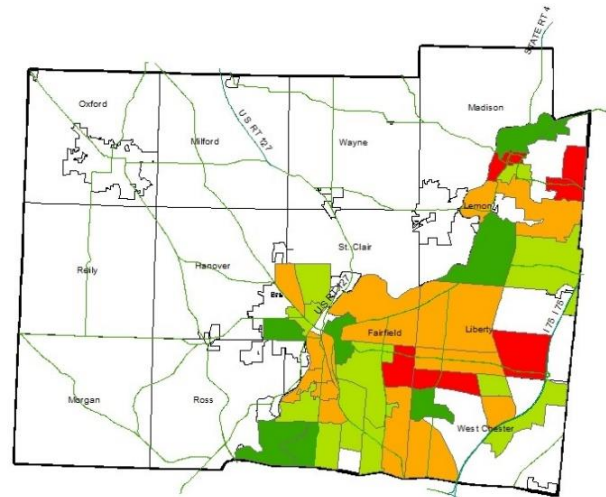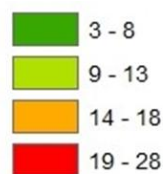
Neighborhood Navigation Outcomes

Butler County OEI team has served a total of 134 eligible women from October 2019 to December 2021. The OEI team served twice the number of women in 2021 compared to the previous year, meeting 93% of the grant goals. The FY21 grant was extended from October through December 2021. During this period, an additional 31 eligible women were served.

Monthly Number of Eligible Women Served in Butler County OEI, FY19 – FY 21
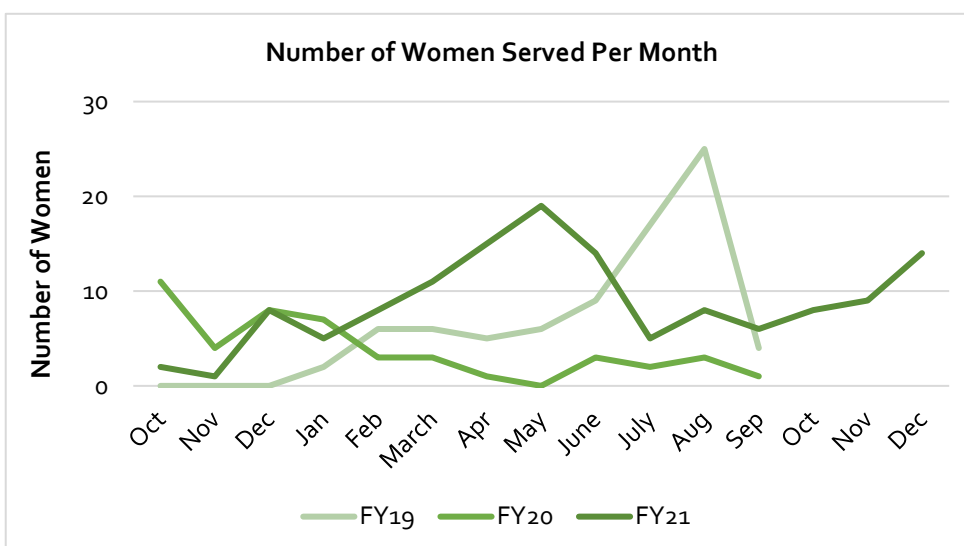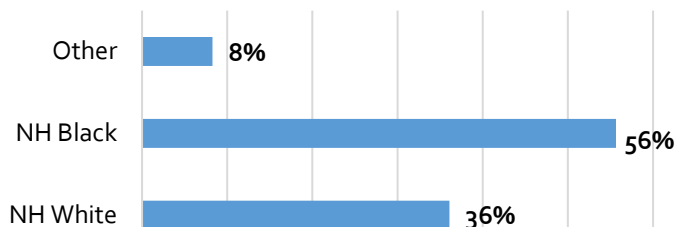

	Total Women Served	% of Goal Served
FY19 Requirement	80	77%
FY20 Requirement	46	46%
FY21 Requirement	133	93%

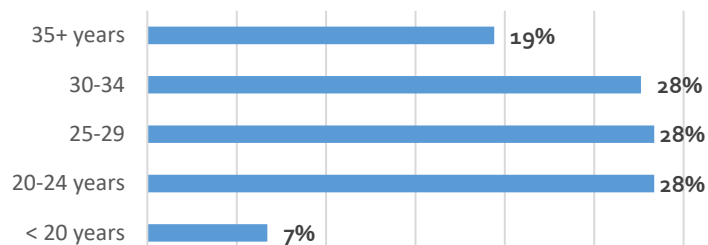# Demographics of Eligible Women Served

Sociodemographic factors including race, age, educational status, geographic area and health insurance type can affect health outcomes. The majority of the eligible women served in fiscal year (FY) 21, by Butler County OEI was non-Hispanic Black and/or African American (55%) and followed by non-Hispanic White (36%). The age range of those served included a wide gap of 16 – 51 years old with an average age of 29. The majority of the women served for OEI 2.0 were over the age of 25 years (71%).

Of all the women served, 59% reported completing High School or a GED diploma. Eighty six percent of the women served reported Medicaid as their primary payer source for delivery. Majority (54%) of the women served were in their third trimester of pregnancy. Ninety seven percent of the women served reporting having initiated prenatal care. Of the 115 women that were willing to give their address, 97% live in the priority areas.
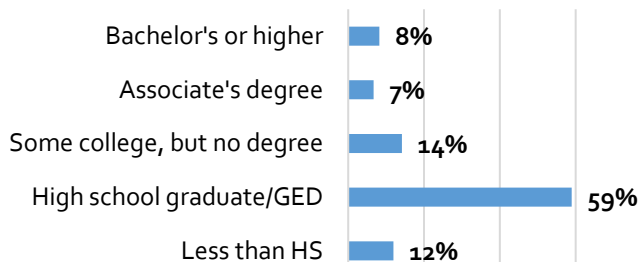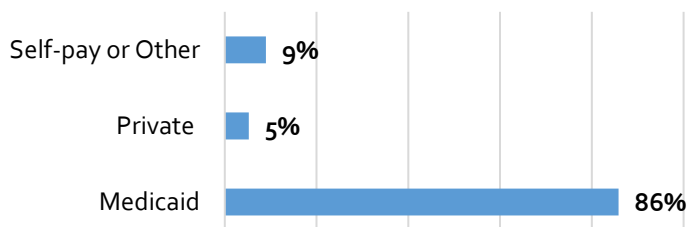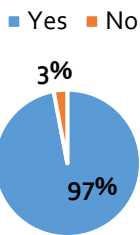
Eligible Women Served by Race

- Other: 8%
- NH Black: 56%
- NH White: 36%

Eligible Women Served by Age

- 35+ years: 19%
- 30-34: 28%
- 25-29: 28%
- 20-24 years: 28%
- < 20 years: 7%

Eligible Women Served by Education Status

- Bachelor's or higher: 8%
- Associate's degree: 7%
- Some college, but no degree: 14%
- High school graduate/GED: 59%
- Less than HS: 12%

Eligible Women Served by Insurance Coverage

- Self-pay or Other: 9%
- Private: 5%
- Medicaid: 86%

Access to Prenatal Care

- Yes / No
- 3%
- 97%

Eligible Women Served by Trimester of Pregnancy

- 3rd Trimester: 54%
- 2nd Trimester: 32%
- 1st Trimester: 13%
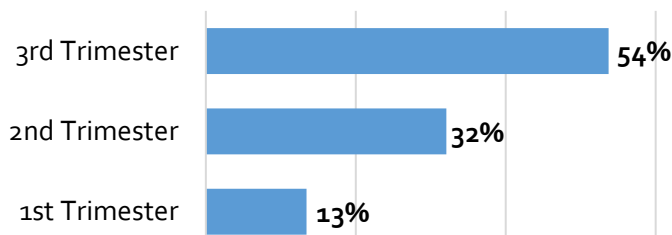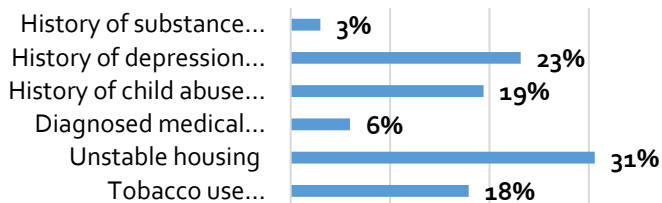
Served in Priority Areas

- 3%
- 97%
- Priority Area
- Not a Priority Area
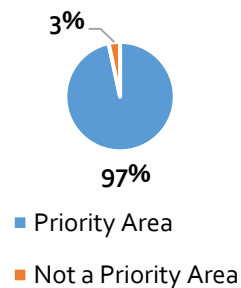
Risk Factors of Eligible Women Served

Risk factors are determinants associated with an increased risk of a disease. Risk factors can be genetic, lifestyle or a personal behavior. The leading risk factor among the women served was a history of unstable housing with 31%, followed by history of depression or other diagnosed mental health concern (23%).

Risk Factors for Eligible Women Served

Risk Factor	Percent
History of substance…	3%
History of depression…	23%
History of child abuse…	19%
Diagnosed medical…	6%
Unstable housing	31%
Tobacco use…	18%

It's also worth noting that 19% indicated a history of child abuse and/or neglect, otherwise known as adverse childhood experiences. Adverse childhood experiences (ACEs) are a prevalent class of acute or recurring stressors that have long-lasting health consequences (Mersky, 2019). Research confirms that high levels of childhood adversity are indeed associated with poor birth outcomes.
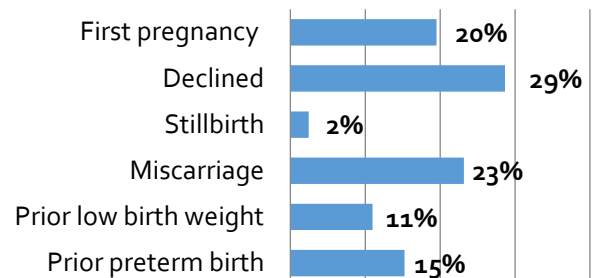
An individual's previous birth outcomes can signify important lifelong implications for the health, social, and economic outcomes in individuals (Odd, 2011). Of the women served, a majority (29%) declined to answer, potentially signifying a present stigma preventing one from feeling comfortable answering the question. Twenty-three percent indicate a previous miscarriage, 15% had a prior preterm birth, and 11% a prior low birth weight. Often, low birth weight and preterm birth are risk factors that are unfortunately experienced together.

Previous Birth Outcomes

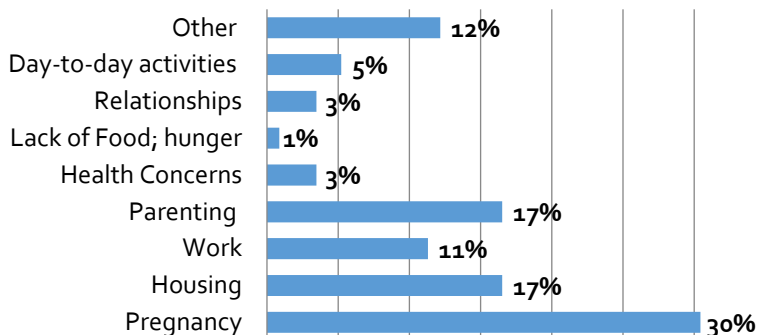| Outcome	Percent
First pregnancy	20%
Declined	29%
Stillbirth	2%
Miscarriage	23%
Prior low birth weight	11%
Prior preterm birth	15%

According to the March of Dimes and a growing body of research, maternal stress has been associated with poor birth outcomes, including preterm and low birth weight, and infant mortality (March of Dimes, 2015). When asked, "What causes you the most stress on an average day," 30% of the participants answered pregnancy, meaning their current pregnancy. Both housing and parenting tied for second highest at 17%, followed by other reason at 12%.

Participants had the opportunity to go into more detail about why they choose 'other' and list what else causes them stress. Money or finances was the top theme listed in 'other reasons', followed closely by the stress of finding or coordinating childcare.
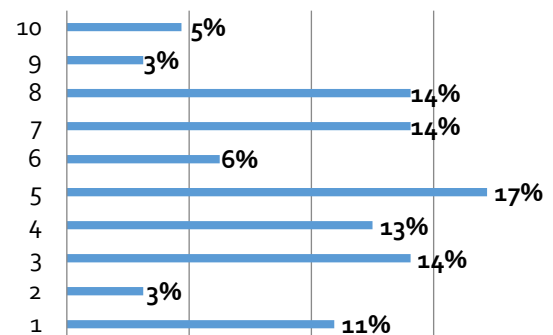
What Causes the Most Stress

Cause	Percent
Other	12%
Day-to-day activities	5%
Relationships	3%
Lack of Food; hunger	1%
Health Concerns	3%
Parenting	17%
Work	11%
Housing	17%
Pregnancy	30%

Average Day of Stress

	Percent
10	5%
9	3%
8	14%
7	14%
6	6%
5	17%
4	13%
3	14%
2	3%
1	11%

Needs & Referrals Identified of Eligible Women Served

Of the women that answered the questions, just over 280 total needs were identified. The leading need reported was safe sleep or not having a cribs, pack & play, and/or safe sleep education. Not far behind safe sleep, baby items such as car seats, diapers, and wipes, was the second highest need.

A majority of the women had needs and risk factors. Of the social-structural determinants of health (transportation, education, employment, and housing) listed as risk factors, 5% identified a history of unstable housing, followed by smoking and transportation, both at 4%.

Needs Identified	
Total number of needs identified	283
Total number of referrals offered	351
% of needs addressed by referral	124%
Total number of referrals utilized	246
% of referrals utilized	70%

Of the 134 women served in FY21, a total of 283 needs were identified. The Neighborhood Navigator went above and beyond to connect women to applicable referrals where needs were identified. Often additional referrals were given, regardless of the individual need, which resulted in 124% of needs being addressed.

Community Partners

Neighborhood Navigation has a network of community partners. Through outreach efforts, we have gained partnerships with organizations that frequently connect with pregnant women in the county. Partners both refer women to and receiving referrals from the Navigator.

Leading Infant Vitality Equitably

Leading Infant Vitality Equitably (LIVE) increased efforts to include community voice into policy and practice change efforts. A local survey, implemented by the Project Specialist of Maternal and Child Health, and a survey implemented by LIVE's Transportation Subcommittee are being used to collect the attitudes, opinions, knowledge, and needs of women in the county. LIVE was presented with data that found that women are delaying/skipping/cancelling health care appointments all too frequently in Butler County. Common reasons for lack of healthcare services were the cost of doctor visits, lack of transportation, difficulty in getting time off work, and mistrust and fear of being judged by doctors.

Navigation Referrals:

- Cribs for Kids: 79%
- Baby Pantry/Baby Items: 53%
- Moms and Babies First/Help Me Grow/Home Visiting: 50%
- Transportation/Housing Agencies: 21%
- WIC/Primary Health Solutions: 19%

The Implicit Bias Subcommittee continues to address racism within health care and direct service providers to reduce bias, improve patient-provider relationship, and create a culture of respect, inclusivity, and equity within health care systems. Enhancing Racial Awareness, a free training series offered to professionals in the community, was created by Avant Consulting and offered by the Partnership to Reduce Infant Mortality. A total of five, 1.5 hour trainings addressed topics such as identity, inclusive leadership, enhancing racial awareness, socio-structural determinants of health, Black history, and deconstructing professionalism. Over 55 trainees, from a spectrum of community organizations (e.g. Help Me Grow, Early Head Start, community non-profits,

TESTIMONIAL

"The Enhancing Racial Awareness Series has been enlightening, thought provoking, and soul shaking. I've enjoyed every minute of the series and look forward to these continuing in the future. The very candid and vulnerable conversations that took place in these meetings are vital in supporting the mission of awareness and will aid in mitigating biases in today's world. We all know the saying... "Knowledge is POWER", and this series has brought forth exactly that."

— Enhancing Racial Awareness Participant

and some hospital staff), were in attendance throughout the entire series that occurred from November through December 2021. Participants engaged in tough lessons breakout room discussions that challenged them to critically think about their own role in perpetrating racism in all its forms. Evaluations and feedback were overwhelmingly positive.

As we see transportation is a barrier for women getting to their prenatal appointments, LIVE continued its partnership with Butler County Regional Transit Authority (BCRTA). LIVE's Transportation Subcommittee created a resource pamphlet to educate pregnant women on options for transportation in the county and to provide resources for pregnant women. The Transportation Subcommittee also wrote an action plan for adding a bus stop to a local hospital in Butler County. This hospital, with a labor and delivery unit, is not located on a current bus route. The Subcommittee, working to increase access to prenatal care, partnered with BCRTA to advocate for the additional bus stop. The subcommittee met with BCRTA's Project Manager to present IM data, racial inequities in health, and how SDOH like transportation are impacting the lives of mothers and babies.

The subcommittee will lead the charge on gaining public approval for the additional bus stop and facilitating conversations between partners and hospitals to improve access to prenatal care. LIVE continues to promote public health and a health equity lens to partnering agencies to shifts paradigms in the way organizations think about how they impact the health of the public.

LIVE also strengthened their partnership with Butler County WIC. WIC has taken on a new initiative to address Urgent Maternal Warning Signs (UMWS) of their clients and of the women in the community. OEI shared UMWS, pregnancy-associated death, and maternal mortality data, and racial inequities with LIVE.

This data sparked LIVE's decision to support WIC's initiative, to strategize alongside WIC director, and to educated both pregnant and postpartum women and physicians on UMWS.

LIVE has begun conversations with local hospital about standard operating procedures for pregnant and post-partum women presenting in the emergency department with UMWS. LIVE is assessing treatment,

practices, and education in Butler County practices in regards to preventing pregnancy-associated deaths though the detection and treatment of UMWS.

Data Dissemination

OEI increased the number of data and reports shared with the community and partners during FY21. Data was presented to BCRTA, Preconception Health Advisory Team, LIVE coalition, and Partnership to Reduce Infant Mortality, CareSource, Mercy Fairfield Hospital, Fort Hamilton Hospital, Butler Metropolitan Housing Authority, YWCA, Atrium Medical Center, UC West Chester Hospital, Primary Health Solutions, Butler County Educational Service Center, American Heart Association, Sojourner, WIC, Help Me Grow, Centerpoint, Women Helping Women, etc.

Data Shared

- ✓ infant mortality
- ✓ SDOH and transportation
- ✓ preconception health
- ✓ urgent maternal warning signs
- ✓ maternal mortality
- ✓ pregnancy-associated deaths
- ✓ toxic stress and trauma
- ✓ implicit bias and racism

Plans for the Future

Community voices are crucial to improving socio-structural determinants of health. Decisions made for a community should not be decided without the community's input. YWCA Hamilton, in partnership with LIVE and PRIM, will host community listening sessions for women of color and families in Butler County. Community listening sessions will influence the work of LIVE and will guide policy and practice change action plans. Collaborating with YWCA Hamilton, an annual community infant vitality event will also be held. This community event will serve to empower and uplift women of the community as well as provide resources, education, and advocacy skills. The Navigator will play a central role in both listening sessions and community events. The Neighborhood Navigator will provide expertise and guide the planning committee. The NN will also invite women served to the event and connect women at the event to program resources. Root cause analyses have shown the OEI team that it is crucial for the NN to engage more personally and frequently with the community and community partners.

For the future of Navigation, there will be an increased effort in providing NN webinars to partners, meeting with partners bi-monthly, and assist in planning community events. OEI is getting out of the office and into the county, to serve, listen, empower, engage, educate, to learn from, and to support women.

Logic Model
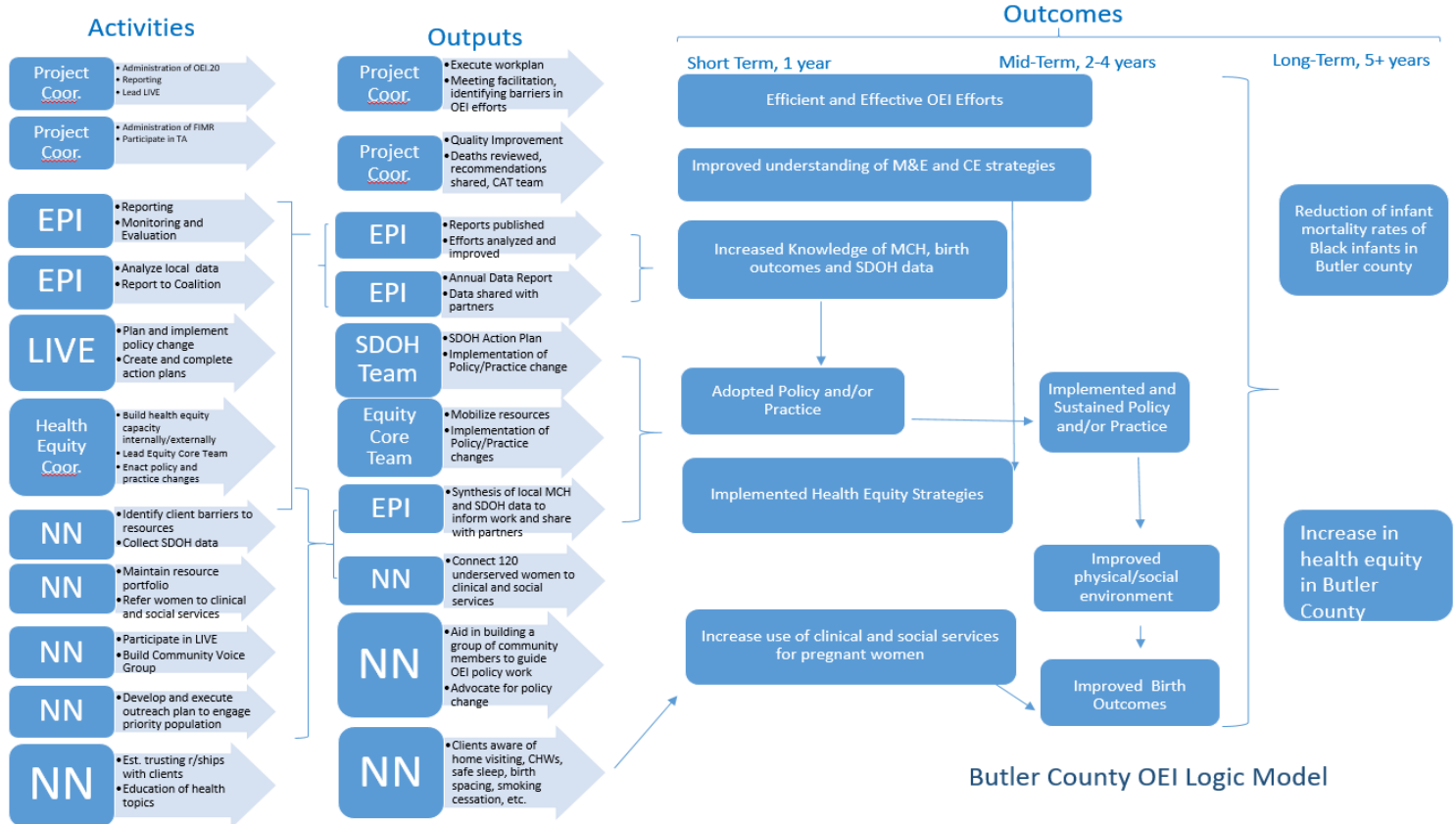
Butler County OEI Logic Model

Butler County Infographic

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