2021-2026 Service Delivery Plan

Prenatal and Infant Healthcare
Coalition of Brevard County, Inc. dba
Healthy Start Coalition of Brevard County

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Healthy Start
COALITION OF BREVARD

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Acknowledgements

The Healthy Start Coalition of Brevard County Service Delivery Plan (SDP) is the result of a collaboration between many individuals and organizations without whom this immense undertaking could not have been achieved. The Coalition is grateful to all the participants of the community focus groups and Healthy Start participants who participated in the assessment. The Board of Directors and the Full Coalition guided the process by participating in the community needs assessment, reviewing the maternal and child health indicators and assessment data to develop priorities, strategies, and action steps. The Coalition deeply appreciates the Board for all their efforts and time making this endeavor possible.

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History and Background

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A. History and Background

The Prenatal & Infant Health Care Coalition of Brevard County, Inc. dba Healthy Start Coalition of Brevard County (Coalition) is a not-for-profit corporation registered with the State of Florida and the Internal Revenue Service.

The Coalition was chartered in October of 1992 and in January of 1993 was funded by the state of Florida to deliver the components of the 1991 Florida Healthy Start Initiative to the citizens of Brevard County. The Healthy Start Initiative is a strategic plan designed to **help women have healthier babies, reduce infant mortality, and improve the overall health and development of Florida's children.** In adopting this strategy, the mission of the Coalition became:

To promote a system of care which enables healthy growth and development for moms and babies.

Since the inception, the Coalition has grown to over 60 community members that represent consumers, private and public health care providers, industry, educational institutions, public and private social service agencies, and civic groups. In 1994, the Coalition developed a "vision" for Brevard County's maternal and child health services. In 1999, based on the prior years' experiences, the vision was revised. Since then, the Coalition has worked diligently to implement action steps, develop new ones, and made revisions as changes occurred in the community, state and nation that affect the families the Coalition serves.

Healthy Start System Components

The Healthy Start system has three main components: universal screening, care coordination and other support services, and community-based planning and system management. The goal of all three components is to improve access to prenatal care for pregnant women, provide care coordination and needed services for at-risk women, and ensure good health outcomes for mothers and their babies.

Universal Screening. Initial identification of risks is accomplished through standardized screening of the mother while pregnant and of the baby immediately after birth. Florida law mandates that physicians offer these screenings to all patients.

The standardized prenatal screening instrument for pregnant women includes a series of questions focusing on medical, environmental, and psychosocial factors that are known, based on documented research, to be associated with increased risk of adverse outcomes.

The infant screen is completed in conjunction with the birth certificate. The risk factors examined are similar to those on the prenatal screen and include age, race, health, marital status, and educational level of the mother; late or no prenatal care; low birthweight; tobacco, drug and alcohol use; and presence of congenital anomalies.

Care Coordination. Care coordination is the foundation for providing needed assessments and support services to pregnant women and infants. The process of care coordination includes development of an individual plan of care and assistance for linking participants with available services and resources. Specific services provided by Healthy Start may include the following:

- Breastfeeding Education and Support
- Parenting Education and Support
- Tobacco Free Education and Support
- Psychosocial Counseling
- Childbirth Education
- Women's Health Education and Support

Healthy Start provides a personal Care Coordinator to assist the mother with services throughout her prenatal care and after the birth of her baby.

Community-Based Planning and System Management. Healthy Start coalitions conduct needs assessments of the maternal and child health systems within their service area and prepare a plan for community action to improve maternal and child health outcomes. Coalitions are responsible for allocating funds, selecting providers to deliver specific services, and monitoring the performance of providers to ensure quality care and focus on improved outcomes.

Healthy Start System Redesign

The Florida Healthy Start Program promotes good health and developmental outcomes for all mothers, infants, and families in Florida. The services of the Healthy Start program may include risk assessment, nutrition counseling, care coordination, breastfeeding education and support, tobacco cessation counseling, assessment of service needs, interconceptional education and counseling, referrals and linkages, childbirth education, parenting education, psychosocial counseling, developmental screening, anticipatory guidance, accident prevention, substance abuse prevention education, and in-home visitation.

Around the state, program services vary according to specific community needs. Each Coalition conducts its own assessment and develops a service delivery plan every five years to meet the needs of diverse and varied populations and geographic areas. However, this flexibility creates difficulty in demonstrating the statewide impact of Healthy Start. In 2011, representatives from the Florida Department of Health (DOH) and the Florida Association of Healthy Start Coalitions (FAHSC) determined that a redesign of the program was warranted.

DOH and FAHSC began a process to redesign the provision of Healthy Start core service components. DOH entered a two-year contract with a consultant to direct the redesign of the Healthy Start program. The goal was to improve maternal and infant health outcomes for Florida residents by improving service delivery effectiveness through evidence-based or research-informed service delivery. The redesign process reviewed and evaluated the Florida Healthy Start program components to assess which components are research-informed and evidence-based. The process also proposed changes; developed a comprehensive plan for implementing

the redesign to assure program quality and fidelity; identified key effective program elements, processes, and quality indicators to be monitored during implementation and maintenance; and developed an evaluation that can be implemented in phases.

In 2013, the two-year contract with the consultant ended with DOH and FAHSC continuing the redesign journey with discussions and committee work to improve service delivery utilizing research-informed and evidence-based programs.

In 2019, the redesign was implemented. The redesign capitalized on its assets while shifting focus to creating links to the local systems of care through Connect (single point of entry) and strengthening women and family's empowerment in practices.

B. Planning Process

Since 2010, the planning process has broadened to establish effective affiliations, partnerships, and collaborations to address infant mortality within a broader community context. This provides the foundation for program development efforts that focus on promoting a system of care which enables healthy growth and development for moms and babies in Brevard.

The planning initiatives that identified and developed the action steps for this service delivery plan can be categorized into four areas:

1. Broad Community Planning Initiatives for Children

In the past eleven years Brevard County has had several major planning initiatives. As a part of these county-wide efforts, the Coalition actively participates, representing prenatal and infant health care on several boards and committees, a few are listed below:

Together In Partnership

In 1999, the Brevard County Board of County Commissioners drafted a resolution creating Juvenile Justice Comprehensive Strategy Planning Committee (JJSPC) modeled after the Office of Juvenile Justice and Delinquency Prevention (OJJDP) Guide for Implementing the Comprehensive Strategy for Serious, Violent, and Chronic Juvenile Offender and Communities that Care. The purpose of this planning committee was to create a research-based strategic plan that addressed prenatal to adulthood continuum of services that would reduce risk factors for residents within Brevard County. In February 2000, the JJCSPC adopted the name "Together in Partnership" (TIP).

TIP's membership accurately reflects the racial, cultural, socio-economic, and geographic diversity of Brevard. The Healthy Start Coalition has actively participated in this ongoing effort since 2002. TIP's areas of focus include:

- Family Strengthening (including Domestic Violence): The goal of Family Strengthening is that all families in Brevard County will have adequate access to education and preventative support services.

- Substance Abuse Prevention: The goal of Substance Abuse Prevention is community support to reduce/eliminate substance abuse to include supporting the Opioid Task Force (see below).

In 2015, TIP decided to have a bigger role in Healthy Start; combining each meeting with the Full Coalition meetings of Healthy Start. Strategies from the TIP plan were used in the formulation of this plan and have been incorporated into the action steps. Additionally, TIP utilizes strategies from the Coalition's Service Delivery Plan in the development and implementation of the TIP work plan.

Brevard Prevention Coalition - Opioid Task Force

The countywide Opioid Task Force was formalized in 2018 with a goal to improve the quality of life for youth and families in Brevard County with an emphasis on: working to reduce youth substance abuse, increase school-based prevention programs, host its own youth substance abuse awareness events, reduce substance abuse in families, etc.

In 2018, Healthy Start took an active role in the Opioid Task Force. Not only did staff serve on the task force, but staff has served as co-chair to the Healthcare Sub-Committee since its inception.

Community Health Partnership (CHP)

The CHP represents over 300 social service agencies in Brevard. The members bring together the most comprehensive group of social service, government, and education organizations in the area with the purpose of identifying, prioritizing, and working collaboratively to solve community needs and issues that impact health. Projects include improving access to dental care for the uninsured, expanding application site for the Florida Food Assistance Program (SNAP), and the Community Navigator Project. Healthy Start has been an active member of this group since 2013.

Child Abuse Death Review (CADR) Committee

The Florida Child Abuse Death Review Committee (CADR) was established in 1999, in Section 383.402, Florida Statutes. The committee was established within the Department of Health (DOH), and utilizes state and local multi-disciplinary committees to review the facts and circumstances of all child deaths reported as suspected abuse or neglect and accepted by the Florida Abuse Hotline Information System (FAHIS) within the Department of Children and Families (DCF). The major purpose of the committees is to recommend changes in law, rules, and policies at the state and local levels, as well as develop practice standards that support the safe and healthy development of children and reduce preventable deaths. Healthy Start also uses this information to identify areas of Healthy Start that can be performed more efficiently or effectively.

The mission of the committee is to perform a systematic review and analysis of child deaths, identify and implement prevention strategies to eliminate child abuse and neglect deaths. Healthy Start has been an active member since 2015.

2. Consumer Involvement

Surveys were conducted with Healthy Start consumer participants, teens and within adult focus groups. A survey was created by a master's level intern for an unbiased, statistically acceptable responses, and given to participants anonymously. The data gathered through the focus groups and surveys war as follows:

Participants listed a number of risk factors that they believed increases the likelihood of poor birth outcomes which included: Age of mom, Smoking, drug use, alcohol, Mental health (depression/anxiety), Home environment, Health problems of mom, Stress, Lack of good prenatal care, Health insurance or lack of good health insurance. There was a strong focus on substance use.
Teens who have been sexually active prior to pregnancy will remain so and birth control is the approach to reduce repeat pregnancy.
Non-parent teens were focused on abstinence and appeared to view peers who become pregnant or fathered a child as emotionally immature.
Education was cited by all groups as the way to increase the public and women's awareness of risk factors.
Physicians and hospitals play a large part in relating information, education, and services.
Groups believed that all infants and pregnant women should be screened for Healthy Start Services.
While some participants believed that services should be available to those who want or need it, more affluent participants felt uncomfortable utilizing the services offered by Healthy Start thinking they would be taking away from those who need it more.
Most participants stated that preconception/ interconceptional care is very important and would be useful for emphasizing the importance of personal maternal care before and between pregnancies.
There were mixed responses from the participants on using drugs or alcohol while pregnant. Some stated to not use drugs or alcohol while others shared that it was fine with OB approval.

3. Fetal Infant Mortality Review Process (FIMR) – Modified

The Coalition conducts a modified FIMR review semi-annually to evaluate the data trends by receiving de-identified copies of death certificates from the Department of Health – Vital Statistics office. If a trend is identified, the Coalition will further study the death certificates and evaluate the specific details and circumstances for indications of community-wide problems that may be developing.

For example, although statistically insignificant, the Coalition observed an increase in non-white infant deaths in 2006. Upon review, three cases were identified to have congenital anomalies in the same area of the county. The Coalition requested and reviewed birth certificates and after further analysis did not identify any potential linkages within the findings.

To date, no significant incidents have been observed nor have any trends been identified during the modified FIMR reviews.

4. Coalition Committee Analysis of Maternal and Child Health Data at the County and State Level to Identify Significant Health Issues, Review of Existing Action Steps, and the Impact on the System of Care.

The Needs Assessment/Service Delivery Plan committee was responsible for reviewing data, developing action steps, and evaluating how the steps impact local factors contributing to poor birth outcomes. The overview of that methodology is below.

Overview of Methodology

To update the service delivery plan, the Healthy Start Coalition selected a customized version of the Mobilizing for Action through Planning and Partnership (MAPP) model. MAPP is a strategic planning framework developed by the National Association of County and City Health Officials (NACCHO) in collaboration with the Centers for Disease Control and Prevention (CDC). There are six phases of the MAPP process:

- Phase 1: Organizing
- Phase 2: Visioning
- Phase 3: Assessments
- Phase 4: Strategic Issues
- Phase 5: Goals/Strategies
- Phase 6: Action Cycle

In *Phase 1* of the process to update the service delivery plan, the Coalition identified the core internal workgroup and organized and planned the needs assessment process. With the help of two master's Level Interns from George Washington University, the core internal workgroup met with the Coalition to guide the development of the MAPP process.

In *Phase 2*, the Coalition, and the service delivery plan committee (made up of Board Members, service providers, community members, and other organizations) reviewed the overall process and developed a shared vision for health in Brevard County.

The assessment process in *Phase 3* occurred over the course of the next several months. The service delivery plan committee met on a regular basis to organize and further develop the needs assessment. The assessment included a demographic profile of Brevard County, surveys, and FIMR findings. Service delivery plan committee members engaged in brainstorming sessions to identify trends, factors and events that influence the health and quality of life for mothers and babies. The most important maternal and infant health indicators as well as contributing risk factors were identified, collected, and analyzed. During this phase, an assessment of the community was conducted by:

- Reviewing maternal and child health data at the coalition, county, and state level to identify significant health problems
- Identifying availability and type of services provided by physicians and providers
- Identifying services available by other community programs available to pregnant women and infants
- Identifying resources that are available in Brevard as well as gaps that exist

This comprehensive assessment led to *Phase 4* and the identification and prioritization of the following critical issues for moms and babies in Brevard:
1. Decrease of pregnant women, interconceptional women and infants exposed to substances
2. Decline of pregnant women, interconceptional women and/or infants involved in domestic violence
3. Reduction of racial disparity issues facing pregnant women, interconceptional women and/or infants

In *Phase 5*, the Coalition staff and the service delivery plan committee evaluated the data, identified the strategic issues/priorities, and developed the goals and strategies.

The action cycle in *Phase 6* will change the planning into action as the service providers, community partners, and the Coalition work together over the next five years to improve the health outcomes for mothers and babies in Brevard County.

Review of Previous Plan and Accomplishments

Summary of the 2010-2015 Service Delivery Plan and Accomplishments

A. Overview

In 2010, the Coalition completed the Brevard County Service Delivery Plan for maternal and child health services. This plan built on the lessons learned and accomplishments of the plan completed in 2005. The 2010 plan focused on two priorities:

1. to reduce the racial disparities in low birth weight and very low birth weight rates

2. to reduce risk factors associated with poor birth outcomes for all women of childbearing age

To address these priorities, the Coalition took three approaches: directly funding services, partnering with community organizations to address system issues, and targeting interventions. Action steps were developed for each strategy and were carried out over the next several years. Outcome and performance measures were identified in the plan and monitored over the same period.

As local, state, or national changes occurred, action steps were revised, or new ones developed to help ensure that the primary goals of reducing the racial disparities in low birth weight and very low birth weight rates and reducing risk factors associated with poor birth outcomes for all women of childbearing age were achieved. Action steps fell into several broad categories:

1. establish a Birth Disparity Collaborative; develop recommendations and implement as funding allows
2. develop and implement a public awareness campaign focusing on the Black community to help reduce risk factors associated with LBW, fetal and infant mortality and general prenatal and postnatal education for the Black population
3. provide culturally sensitive, prevention based Interconception Education and Counseling that focuses on reducing factors associated with poor birth outcomes
4. work with existing substance abuse providers, provide referrals and followed up

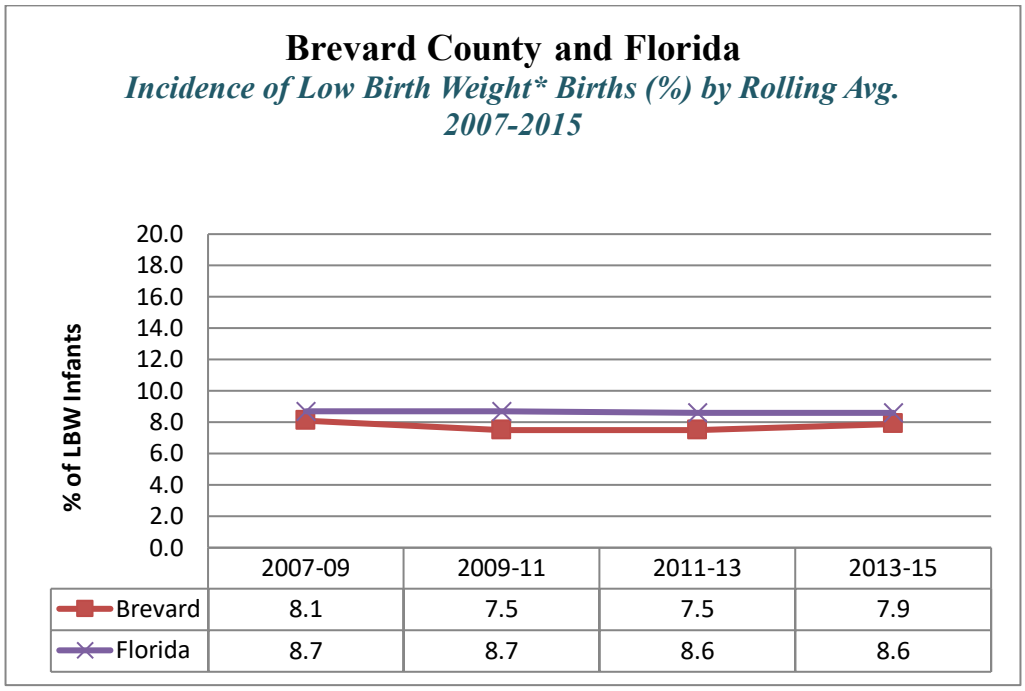
B. Summary and Outcomes

Low Birth Weight Infant Rate (LBW)

Low Birth Weight is defined as a birth weight less than 2,500 grams. From a public health and societal perspective, documentation and prevention of low birth weight is critical due to the significantly elevated risk for serious health problems for newborns associated with this condition. Moreover, low birth weight results in lasting disabilities, including increased risk for developmental disabilities, chronic lung disease, adult-onset diabetes, coronary heart disease, high blood pressure, intellectual, physical, and sensory disabilities, and psychological and emotional distress. These relationships reiterate the premium that must be placed on prevention of low birth weight, particularly in high-risk subgroups of women.

- The incidence of low birth weight in Brevard has been below the state rate for the last several years. Since 2015, the incidence of low birth weight has begun to increase slightly.

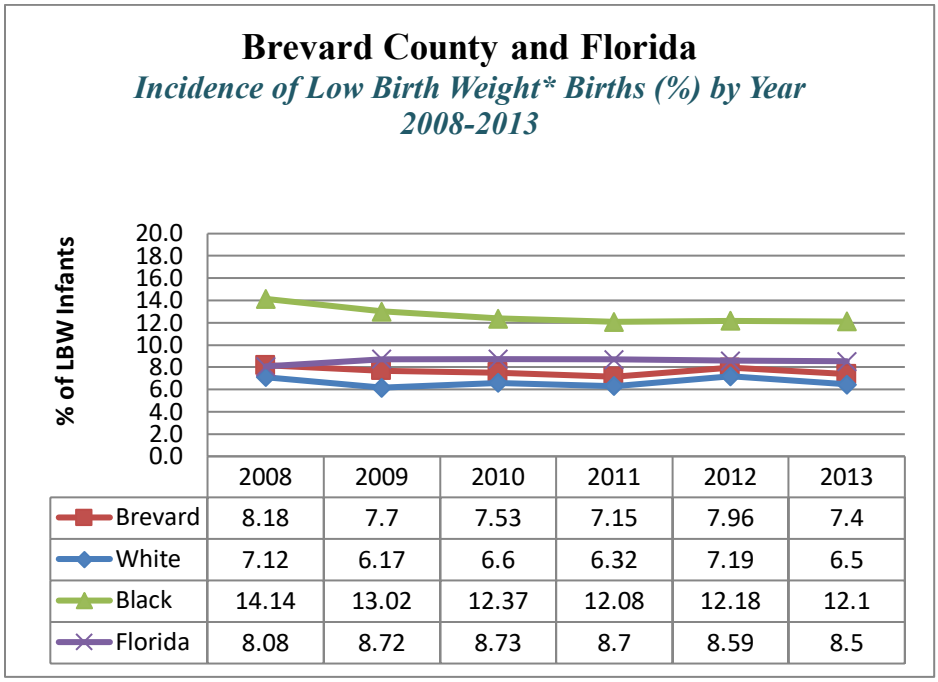
Figure 1. Incidence of Low Birth Weight based on 3-year rolling averages (2007-2015)



	2007-09	2009-11	2011-13	2013-15
Brevard	8.1	7.5	7.5	7.9
Florida	8.7	8.7	8.6	8.6

- The incidence of low birth weight in the Black community in Brevard has decreased from 2008 to 2013.

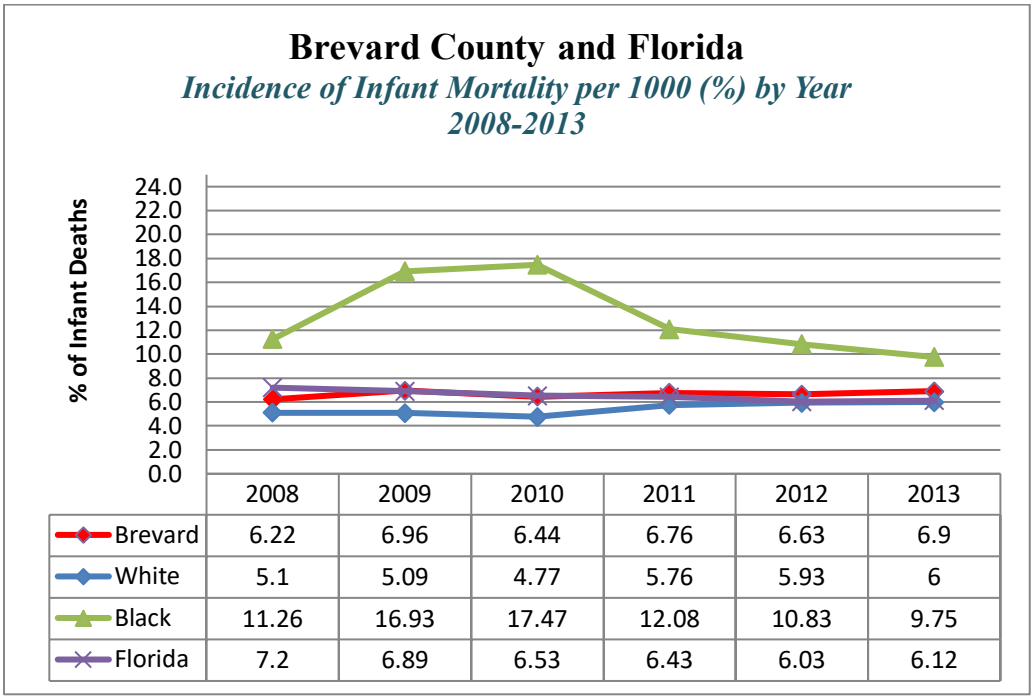
Figure 2. Incidence of Low Birth Weight by year and race (2008-2013)



	2008	2009	2010	2011	2012	2013
Brevard	8.18	7.7	7.53	7.15	7.96	7.4
White	7.12	6.17	6.6	6.32	7.19	6.5
Black	14.14	13.02	12.37	12.08	12.18	12.1
Florida	8.08	8.72	8.73	8.7	8.59	8.5

- The incidence of Infant Mortality in the Black community in Brevard has decreased from 2008 to 2013.

Figure 3. Incidence of Infant Mortality by year and race (2008-2013)



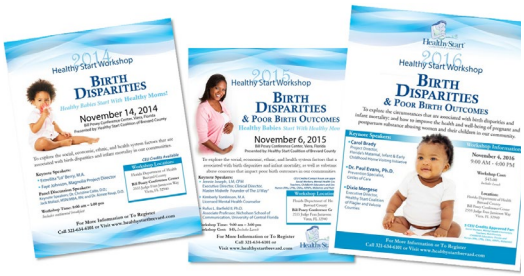
	2008	2009	2010	2011	2012	2013
Brevard	6.22	6.96	6.44	6.76	6.63	6.9
White	5.1	5.09	4.77	5.76	5.93	6
Black	11.26	16.93	17.47	12.08	10.83	9.75
Florida	7.2	6.89	6.53	6.43	6.03	6.12

The Coalition developed several strategies during the 2010 - 2015 Service Delivery Plan for impacting the low-birth-weight rate. These included:

1. *Increase Targeted Outreach and Education to Women of Black Race*
    a. Establish a Birth Disparity Collaborative comprised of community partners to explore options and best practices for the reduction of low-birth-weight infants, preterm birth, and infant mortality as it relates to racial disparity for Blacks in particular.
        i. While the collaborative was not successful, black leaders in the community identified that educating medical professionals and paraprofessionals on issues that will help reduce low birth weight would be the best solution. Therefore, the Coalition held multiple workshops during this timeframe. Some of the topics over the years included: substance abuse, inclusion, social and ethnic factors, health system factors, birth disparities, etc. The 2020 Workshop was postponed due to COVID.
2. *Increasing the health needs of Healthy Start and Brevard women of reproductive age to improve birth outcomes.*
    a. The ICC book that was used by the care coordinators was evaluated and used.
        i. The recommendations for dental care changed and were not approved by DOH in 2018. Therefore, the Coalition stopped using them.

b. The Coalition utilized social media to educate and market.
c. The Coalition used the local transit system to educate and market.

The Coalition continues to educate women of reproductive age on how to increase their chances for a positive birth outcome.



Sample Workshops

Remembering all the babies and children gone too soon. Healthy Start is here for you during this difficult time, we can provide free counseling services for moms that have experienced a loss. #NationalPregnancyandInfant LossRemembranceDay

Facebook Post - Samples

The back-sleep position carries the lowest risk of SIDS and is recommended for all babies, including preterm babies, until they are 1 year old. #SIDSAwarenessMonth #SafeSleep http://bit.ly/2AO7I9J

Transit system – Space Coast Area

Recap

The purpose of the recap is to provide a summary of what has occurred during the 2010-2015 Service Delivery Plan and what progress or successes the Coalition has achieved during that period. Achievements realized include:

1. Additional medical professional and paraprofessionals were trained on community-wide topics that will help reduce low birth weight
2. More women were given the increased knowledge of how to have a positive birth outcome
3. A decrease in low birth weight occurred in the black and other mothers during the 2010-2015 period. Unfortunately, like most of the state, Brevard is seeing a rise.

Accomplishments

below are just a few of the accomplishments the Coalition has had since the last service delivery plan

Nurse-Family Partnership (NFP) | The Coalition was one of four counties in the Treasure Coast Region selected for funding under the NFP Incentive Program in 2018, which established Brevard County Nurse-Family Partnership. NFP is an evidence-based home-visiting model for low income, first-time moms that is implemented using nurse home visitors.

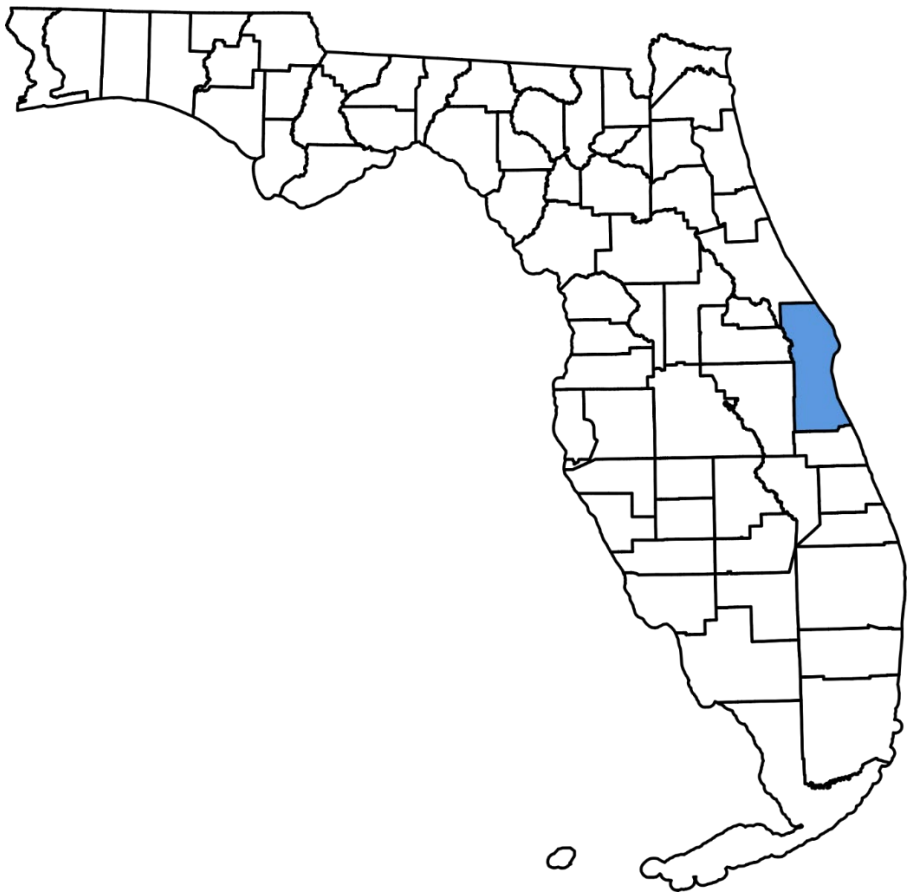
Coordinated Intake & Referral | The Coalition began meeting in 2017 with community partners to develop the Coordinated Intake & Referral process for Brevard County. The Coordinated Intake & Referral process was named Connect by the state and in-turn the community partners adopted Community Connect. In 2018, Community Connect was launched by the Coalition to help pregnant women, caregivers and families with young children by providing a one-stop entry point for needed services, such as education and support in childbirth, newborn care, parenting, child development, food and nutrition, mental health, and financial self-sufficiency.

Opioid Task Force | The Coalition became a founding member of the Opioid Task Force. The countywide Opioid Task Force was formalized in 2018 with a goal to improve the quality of life for youth and families in Brevard County with an emphasis on: working to reduce youth substance abuse, increase school-based prevention programs, host its own youth substance abuse awareness events, reduce substance abuse in families, etc. In 2018, the Coalition became the co-chair of the Healthcare Sub-Committee. The Healthcare Sub-Committee decided to focus on the healthcare professionals and providing them with needed resources.

Baby Box Project was designed by the Coalition in 2015 in response to a high rate of sleep-related deaths in one area of the county. The objective was to reduce Sudden Unexpected Infant Deaths (SUID) by not only educating each mother on the importance of safe sleep practices, but to also provide a safe sleep space for all new babies born at Parrish Medical Center. In 2016, the Baby Box Project was implemented. The Project was then expanded to the County Health Departments as well as with the Healthy Start Service Provider. Over 2,000 Baby Boxes were provided to families from 2016-2018. Funding for the Project was provided by the Coalition and Parrish Medical Center.

The Safe Sleep Initiative was organized by the Coalition in 2018 in response to the conclusion of the Baby Box Project. The Coalition placed cribs, posters and safe sleep information in county buildings, the county health department, the Early Learning Offices, etc. The items were/are meant to educate families on the importance of a safe sleep environment as well as demonstrate what one looks like.

Needs Assessment



Needs Assessment

Some of the health status indicators in this report are selected measures of quality maternal and child health outcomes and services. Below is a list of some of the indicators and their significance to maternal and child health excerpted from the October 1997 report on Maternal and Infant Health Status Indictors for Florida published by the Lawton and Rhea Chiles Center for Healthy Mothers and Babies:

Infant Mortality: This is the number of infants who have died before reaching their first birthday. Infant mortality is one of the key indicators of the health of a nation or state. If infants are dying, something is wrong in the system. There will always be deaths that result from conditions incompatible with life, but many more are preventable. Healthy Start seeks to reduce that latter number, especially those that result from detectable prenatal or neonatal problems.

Neonatal Mortality: This is the number of infants who have died between birth and their 28th day of life. Neonatal mortality is a reflection of problems in the newborn that are more directly linked to the pregnancy and birth, such as prematurity, low birth weight, and the presence of congenital anomalies. It also includes deaths from other causes.

Post-Neonatal Mortality: This is the number of infants who have died between their 27th day of life and first birthday. This number is a reflection of problems in the newborn such as sequelae of birth problems, newly acquired illnesses, Sudden Infant Death Syndrome (SIDS), and accidental deaths.

Low Birth Weight (LBW): Infants weighing less than 2500 grams (5 lbs. 8 oz.) have more immediate and long-term health problems than normal weight infants; they are generally small for their gestational age and are also more likely to be premature. Problems can range from minimal to extreme physical and mental handicaps. With the increased use of assisted reproductive technologies (fertility drugs, in vitro fertilization), there has been an increased incidence of multiple gestations, which have a much higher incidence of premature delivery of low-birth-weight infants.

Very Low Birth Weight (VLBW): Infants weighing less than 1500 grams (3 lbs. 5 oz.) have even more immediate and long-term health problems than low birth weight infants. Because these infants are usually hospitalized for prolonged periods of time, bonding with their parents is compromised. This sometimes leads to abandonment. These infants frequently rely on state funded programs for survival.

Preterm Delivery: These are infants born before 37 completed weeks gestation. In this time, all fetal organs are present but not fully mature and functional outside the mother's womb. Delivery during this time usually means an extended hospital stay for the infant, extensive procedures, separation from the parents, and a high incidence of long-term sequelae if the infant survives. It is very costly in dollars and lives are significantly impacted. Again, with the increased use of assisted reproductive technologies (fertility drugs, IVF) there has been an increased incidence of multiple gestations and a much higher incidence of preterm delivery.

Healthy Start Prenatal Screen: Total Screened: The number of mothers screened with the Healthy Start prenatal screen reflects compliance with state law to screen all mothers for risk of LBW and prematurity for the sake of prevention. Having these women screened means health care dollars can be used more efficiently up front during the pregnancy to prevent very expensive problems in terms of dollars and lives.

Healthy Start Prenatal Screen: Not Offered: This indictor reflects women who, for one reason or another, are slipping through the cracks by not having the Healthy Start prenatal screen offered. This is an area for potential improvement on the part of providers to make sure all women are screened. One unscreened mother who has a LBW infant can cost the state over $100,000.

Healthy Start Prenatal Screen: Refused: Reflects women who have not wanted to be screened. This can reflect inadequate or misinformation given to the woman or providers who are misinformed about the Healthy Start program itself. High-risk women who refuse participation in the program can be costly in terms of morbidity and mortality.

Healthy Start Prenatal Screen: High Risk Status: These are women who because of medical, obstetric or socio-demographic reasons are at high risk for having a LBW or premature infant. These are the women for whom the Healthy Start Program was designed. Each pregnancy with a good outcome for mother and infant represents cost savings to health care programs and to society, which has the potential to receive the benefits from the contributions of a healthy mother and infant.

Healthy Start Infant Screen: Refused: This indicator reflects women who have not wanted their infants to be screened for health risk. Refusal of the Healthy Start infant screen can reflect inadequate or misinformation given to the woman or providers who are misinformed about the Healthy Start program itself. High-risk infants whose parents elect not to participate in the program can be costly in terms of morbidity and mortality.

Healthy Start Infant Screen: High Risk Status: These infants who because of physical, mental, or social reasons are at high risk for having future health problems that can compromise their lives. These are the infants for whom Healthy Start was devised, to help them grow up strong and healthy so that they can become functional, contributing members of society.

WIC Certified: This is the number of women who were screened for nutritional risk during their pregnancy and found to need physical and/or financial assistance. Adequate nutrition is one of the simplest and least expensive ways to support a pregnancy, yet it is also one of the most important for adequate and healthy growth and development of the fetus and its brain.

Race of Mother: Black and nonwhite women have higher rates of maternal and infant morbidity and mortality when compared to white women. The black race can also be an indicator of poverty, which is reflected, as poor pregnancy outcomes.

Teen Deliveries: Since the adolescent body has not anatomically or physiologically matured, there is increased physical risk with teen pregnancy. Because of their psychological state of

development, teens are not adequately prepared to put the needs of the fetus/infant above their own. Because teens are often still in school or because they have not finished school, they are not self-supporting and must rely on parents or state assistance for resources to care for themselves and their children. Since children learn what they live, they are more likely to be in a repeating pattern of children having children.

Smoking Status: Smoking has now been shown to cause physical ailments in those who smoke or who inhale second-hand smoke. In addition, it has been shown to have deleterious effects on the fetus. Knowing the prevalence of the problem encourages the creation of more smoking cessation programs and public service announcements geared especially to pregnant women and new parents to avoid increasing the number of infants with problems resulting from tobacco use.

The Needs Assessment provides an analysis of maternal and child health data trends that have occurred between 2016 and 2018 in Brevard County, comparative counties (Polk, Seminole, Volusia) and in the state of Florida. The analysis will be used by the Coalition to create more effective care coordination systems for the at-risk pregnant/childbearing women and children under the age of three living in Brevard County.

List of Tables and Figures

Executive Summary of Results

The following tables outline brief summaries of the results of the general maternal and child health indicators as well as risky behaviors and pregnancy complications in childbearing women for Florida, Brevard County and comparative counties.

Summary of Results: Births and Birth Rates (Brevard 2016-2018)
The number of resident births has been consistent, at least 5,000 births per year.
The birth rate among non-white mothers (12.1 per 1,000 live births in 2018) has remained higher than among white mothers (8.5 per 1,000 live births in 2018).
Births among mothers aged 39-44 has increased by a rate of 2.9 per 1,000 live births within the 3-year period.
Non-whites have a higher rate of teen births than white mothers but overall, there has been a decrease in teen birth rates within the 3-year period.
Refer to Figures 1 and 2 and Tables 1 and 2 from General MCH Trends Report for more detailed information

Summary of Results: Prenatal Care and Screening (Brevard 2016-2018)
The rate of Healthy Start prenatal screening has decreased by 9% within the 3-year period however remained above average compared to the state.
For FY 2018, prenatal screening rates are slightly higher in Brevard County (78%) than the state level (72%).
Prenatal consent rates for FY 2018 in Brevard (84%) are lower compared to the state level (90%).
Prenatal screening for depression has increased to at least 14% in 2018 and there has been a 2% increase in mothers receiving mental health services in the 3 years.
Rates of prenatal care in the 1st trimester has slightly dropped to at least 76% in 2018.
Rates of trimester care have been lower in non-white mothers than white mothers across the 3-year span.
The number of mothers with 8 or more prenatal visits has steadily increased, reaching up to 74% in 2018.
Figures 1 and 2 and Table 1 from Healthy Start Care Coordination Report for more detailed information; Refer to Tables 3 and 4 and Figure 5 from General MCH Trends Report

Summary of Results: Births to Unmarried Mothers (Brevard 2016-2018)
Birth rates among unmarried white and non-white mothers have been consistent over the three years.
2017 experienced slightly higher births to unmarried non-white mothers (59.9%) compared to the other two years.
Refer to Figure 4 from General MCH Trends Report for more detailed information

Summary of Results: Births to Mothers with Less than High School (HS) Education (Brevard 2016-2018)
Births to mothers with a less than HS education has remained significantly lower than the state level across the 3 years, with a 2.5% decrease in 2018.
Refer to Figure 3 from General MCH Trends Report for more detailed information

Summary of Results: Low Birth Weight (LBW) (Brevard 2016-2018)
Within the 3-year period, reported cases of LBW have been consistently high among women who did not receive prenatal care.
There has been a 9% increase of low-birth-weight cases among women aged 40-44 within the 3 years.
Reported cases of LBW have been consistently higher among black mothers than any other race, increasing up to 14% in 2018.
Reported cases of LBW during 1st trimester care have steadily declined to 6% in 2018.
Refer to Figures 6-8 from General MCH Trends Report for more detailed information

Summary of Results: Very Low Birth Weight (VLBW) (Brevard 2016-2018)
Reported cases of VLBW are highest among women who did not receive prenatal care; the highest reported in 2017 (11.8%) compared to 2016 (8.6%) and 2018 (6.5%).
Cases of VLBW among white mothers were consistent across the three-year span, with slight increases of VLBW cases among non-white mothers.
Refer to Figure 9 and Table 5 from General MCH Trends Report for more detailed information

Summary of Results: Preterm Birth (Brevard 2016-2018)
Reported cases of preterm birth among black mothers was consistently higher than other races, steadily increasing up 15% in 2018.
Reported cases of preterm birth were highest among mothers who did not receive prenatal care; remaining at 31% in both 2017 and 2018.
There have been slight increases of preterm birth in 2nd trimester care.
Refer to Figures 10 and 11 from General MCH Trends Report for more detailed information

Summary of Results: Very Preterm Birth (Brevard 2016-2018)
In 2018, reported cases of very preterm births have been higher in black mothers (3.3%) than white (1.3%) and other non-white mothers (1.4%).
Reported cases of preterm birth were highest among mothers with no prenatal care; cases have since decreased from 14% in 2017 to 7% in 2018.
Refer to Tables 6 and 7 from General MCH Trends Report for more detailed information

Summary of Results: Postnatal Screening (Brevard 2016-2018)
Rates of infant screening have increased from 63% in 2016 to 88% in 2018 for Brevard.
For FY 2018, the rate of infant screening in Brevard (87%) is lower compared to the state level (96%).
Rates of infant consent to the Healthy Start Program have been consistently higher among black mothers (72% in 2018) than white (57% in 2018) and other non-white mothers (55% in 2018).
Mothers who have not received prenatal care and mothers who received 3rd trimester care reported the highest consent rates across the three years.
Rates of infant Healthy Start services has been on a steady increase since 2016; from 62.9% in 2016 to 87.52 in 2018.
Participation in infant Healthy Start services was highest in women who did not receive prenatal care but there has been decline (from 70% in 2016 to 55% in 2018).
In 2018, infants with a Healthy Start Score >4 are highest among blacks (42%) than whites (12%) and non-whites (20%).
Those infants with a Healthy Start Score >4 were highest among those mothers who didn't not receive prenatal care although there has been a slight decline (78% in 2016 to 65% in 2018).
Refer to Figured 3-6 and Tables 2 -4 from Healthy Start Care Coordination Report for more detailed information

Summary of Results: Fetal and Infant Mortality (2016-2018)
Cases of infant mortality in Brevard County had a slight increase to 6.4% in 2018 from 5.5% in 2016.
Within the 3-year period, the infant mortality rate (IMR) among non-whites has increased by 2.3 per 1,000 live births.
The IMR among white mothers has increased by 0.7 per 1,000 live births within the 3 years.

In 2018, the fetal death rate among non-white mothers (7.6 per 1,000 deliveries) was higher than the rate (6.5 per 1,000 deliveries) among white mothers.
There has been an increase of neonatal mortality rates among all mothers in Brevard, rising to 4.4% among white mothers and 8.5% in non-white mothers in 2018.
Post-neonatal mortality rates among all mothers increased between 2016 and 2017 but then declined in 2018.
Refer to Figures 12 and 13 and Tables 8-10 from General MCH Trends Report for more detailed information

Summary of Results: Domestic Violence
For almost 20 years, domestic violence rates in Brevard have remained high, consistently surpassing state levels.
Between 2016 and 2018, the domestic violence rate in Brevard was 721 per 100,000 compared to state rate of 514 per 100,000.
Compared to the Polk, Volusia and Seminole Counties, the 2018 domestic rate for Brevard was the second highest; Volusia is the highest with 846 per 100,000.
Refer to Figure 1 and Table 2 from Risky Behaviors Report for more detailed information

Summary of Results: Tobacco Use Among Pregnant Women
There has been a steady decline in tobacco use among pregnant women living in Brevard from 14.3% in 1999 to 9% in 2018.
Despite the decline, the 2018 Brevard rate (9%) is higher than the state level (4%).
Brevard County also has the highest rate of tobacco use compared to the Polk, Seminole, and Volusia counties.
Refer to Figure 2 and Table 3 from Risky Behaviors Report for more detailed information

Summary of Results: Alcohol Use Among Childbearing Women (Florida, 2015)
An average of 15.6% of mothers in Florida engaged in binge-drinking prior to pregnancy.
Non-Hispanic white mothers reported higher occurrences of pre-pregnancy binge-drinking (22.2%) than non-Hispanic black (8.7%) and Hispanic (10.2%) mothers in Florida.
Mothers aged 20-24 reported higher occurrences of pre-pregnancy binge-drinking (17.1%) than any other age cohort.
Mothers who had an education greater than high school and a household income between $15,000 to $44,000 had high occurrences of pre-pregnancy binge-drinking (17.5% and 18.2% respectively).
Mothers who did not have Medicaid and were unmarried also had high occurrences of pre-pregnancy binge-drinking (17.3% and 17% respectively).
An average 9% of mothers in Florida engaged in drinking in the last 3 months of pregnancy.
Non-Hispanic white mothers reported higher cases of drinking in the last 3 months of pregnancy (11.9%) than non-Hispanic black (6.4%) and Hispanic mothers (6.9%).
Women aged 35 and older engaged in drinking in the last 3 months of pregnancy more than women in the other age groups.
Women who had education greater than high school (11.5%), a household income level more than $44,000 (16.7%), do not have Medicaid (13.1%) and are married (10.1%) had the highest amount of reported cases among their respective cohorts.
Refer to Tables 4 and 5 from Risky Behaviors Report for more detailed information

Summary of Results: Neonatal Abstinence Syndrome
The neonatal abstinence syndrome (NAS) rate for the state was 68.6 per 10,000 between 2011 and 2013.
Since 2017, the NAS rate in Brevard County has increased to 144 per 10,000.
Between 2014 and 2017, the NAS rates for Brevard were the second highest compared to Volusia, Polk, and Seminole counties.
NAS hospital discharges have been increasing in Brevard County between 2014 and 2016.
Refer to Figure 3 and Table 6 from Risky Behaviors Report for more detailed information

Summary of Results: Sudden Infant Death/Sudden Infant Unexpected Death Syndrome (SIDS/SUIDS)
There were 69 neonatal and post-neonatal deaths associated with SIDS in Florida in 2018.
46% of the 2018 SIDS-related deaths were among whites, 43% were among blacks and 8% were among other races.
Since 2015, the SIDS-related deaths in Brevard County have decreased by 0.2 per 1,000 live births.
Brevard County also has the lowest SIDS-related death rate compared to the Polk, Seminole, and Volusia counties.
Overlay accounted for the highest behavioral risk to SIDS found especially among the white population compared to the other risks.
Refer to Figures 4 and 5 and Tables 7 and 8 from the Risky Behaviors Report for more detailed information

Summary of Results: Maternal Mental Health (Florida, 2015).
16% of new mothers in Florida were screened for prenatal depression.
There were higher depression screenings among white mothers (18.6%) compared to black mothers (16.9%) and Hispanic mothers (10.6%).
Women aged 19 years and younger had higher depression screenings than those from other age groups.
Women who had a household income less than $15,000 (20%), Medicaid recipients (17.3%) and unmarried mothers (17.2%) had higher depression screenings than those among their respective cohorts.
An average of 59% of mothers in Florida suffer from post-partum depression (PPD) symptoms after childbirth.
Prevalence of PPD is higher in non-Hispanic black mothers (61.4%) compared to non-Hispanic white mothers (58.9%) and Hispanic mothers (56.3%).
Mothers aged 19 or less (62.8%), receiving an annual income of less than $15,000 (59.7%) and had an unintended pregnancy (55.6%) experienced higher levels of PPD than those among their respective cohorts.
Obese mothers were more likely to report PPD symptoms (16.1%) than those were underweight, overweight or at normal weight.
Refer to Figures 6-8 and Tables 10 and 11 from Risky Behaviors Report for more information

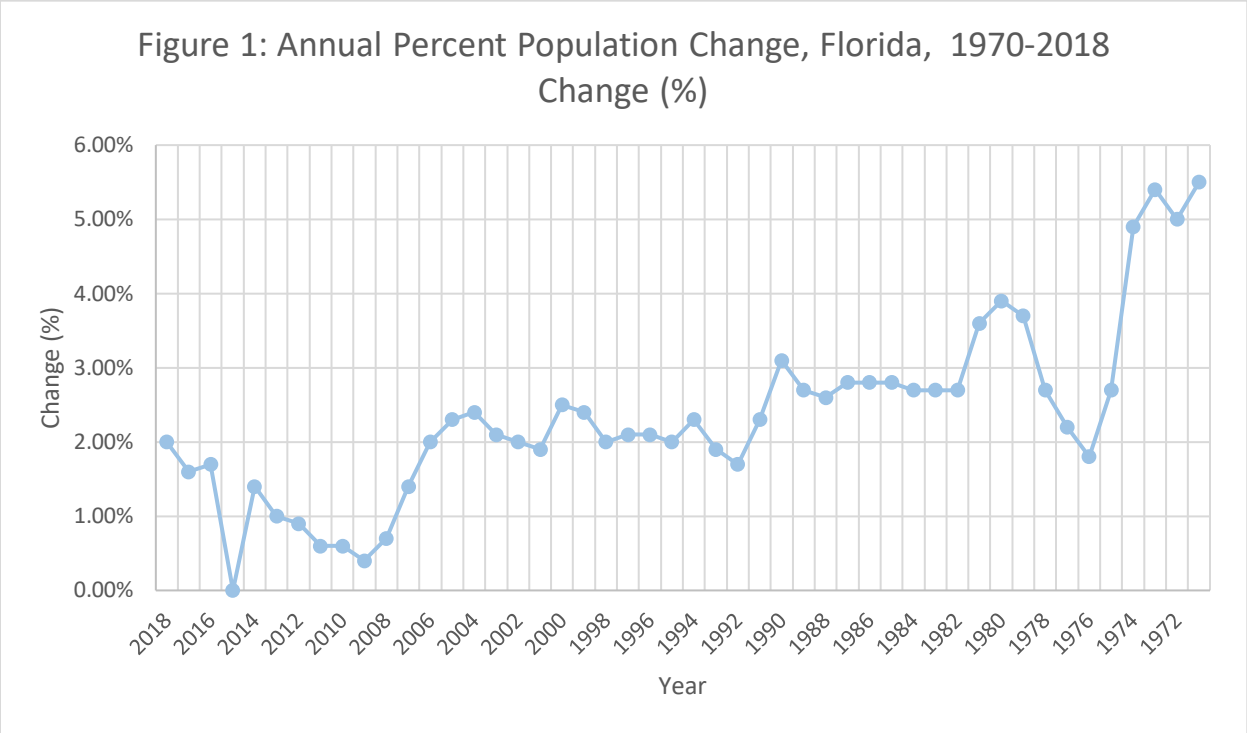
Summary of Results: Obesity in Pregnant Women
Births to women who are obese has proportionally risen from 2009 to 2018 in Brevard County and the state.
In 2018, births among obese women has been the highest since 2009 in Brevard County at 26.9%.
Brevard County had the third highest number of births among obese women compared to the Polk (33.7%), Volusia (27.9%) and Seminole (25.5%) counties.
Refer to Figures 1 and 2 from Pregnancy Complications Report for more detailed information

Summary of Results: Gestational Diabetes (Florida, 2015)
Obese mothers had a higher prevalence of gestational diabetes than other mothers with different BMI levels.
An average of 12% of new mothers in Florida had gestational diabetes during pregnancy.
Non-Hispanic black mothers had higher cases of gestational diabetes (13%) than other races.
Mothers who are aged 35 and older (18%) and have less than a high school education (15%) reported higher cases of gestational diabetes than those among their respective cohorts.
Refer to Figure 3 and Table 1 from Pregnancy Complications Report for more detailed information

Summary of Results: Hypertension/Preeclampsia (Florida, 2015)
Obese mothers and overweight mothers have a higher prevalence of hypertension than mothers with other BMI levels (24.3% and 15% respectively).
12.7% of new mothers in Florida experienced hypertension/preeclampsia/toxemia during pregnancy.
Non-Hispanic black mothers (20.5%), mothers aged 19 years and under (23.1%) and mothers with only a high school education (14.1%) have a higher prevalence of hypertension/preeclampsia/toxemia than those among their respective cohorts.
Refer to Figure 4 and Table 2 from Pregnancy Complications Report for more detailed information

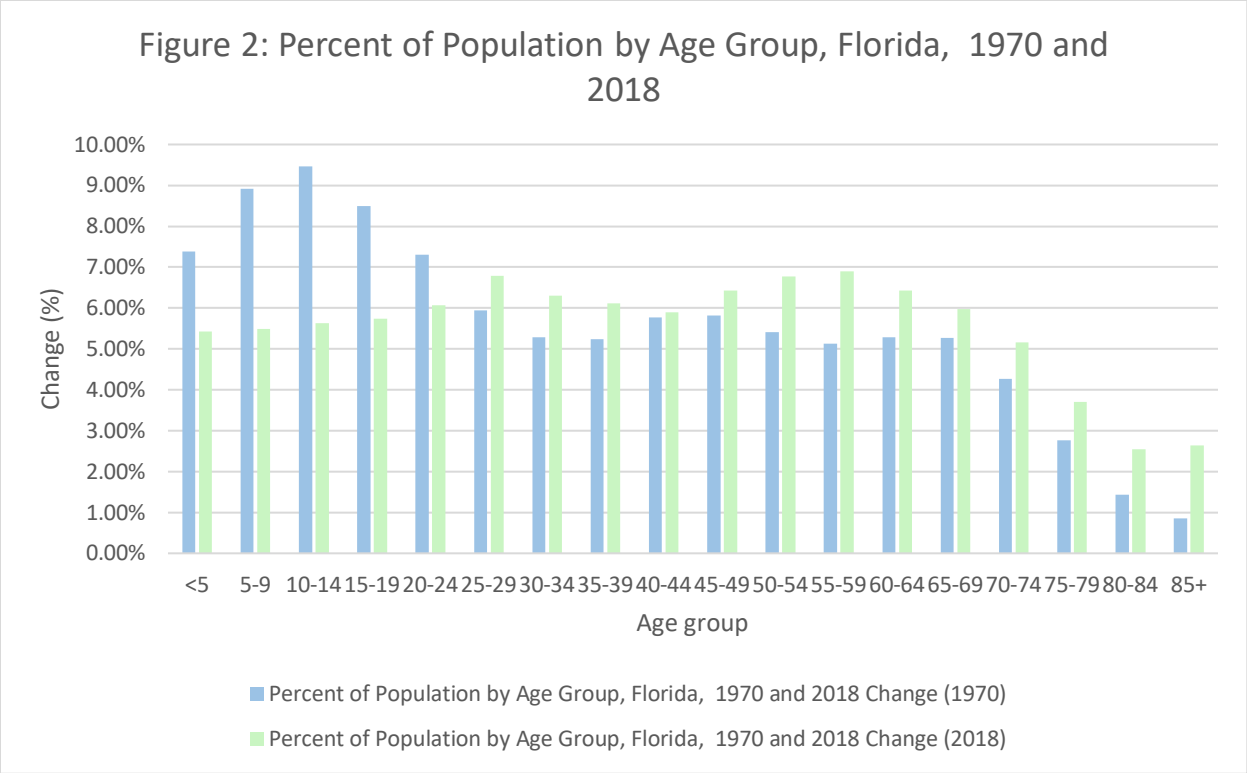
State of Florida Demographics

Population Size: According to the 2018 Population Atlas, the state of Florida comprised of over 20 million diverse residents with a population growth of 200% between 1970 and 2018. Although the growth slowed down between 2005 to 2010, by 2013 onwards there has been a growth increase by 12%. Figure 1 below shows the trends in population growth.

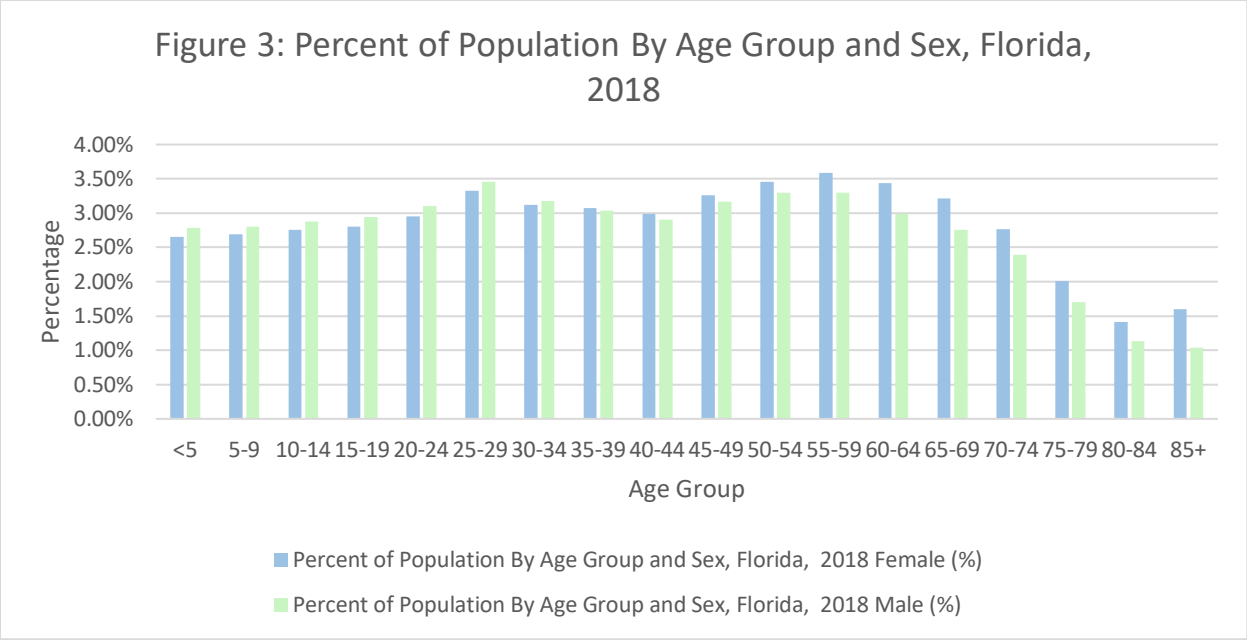


Source: Florida Legislature, Office of Economic and Demographic Research

Age: In the 1970s, there was more of a youthful population, where the two largest age cohorts were 10-14 (9.47%) and 15-19 (8.5%). However, trends show that in 2018, the two largest 5-year age groups in Florida are 25-29 (6.79%) and 55-59 (6.9%). Population trends by age and sex indicate that the largest age cohort for males is 25-29 (3.46%) and for females is 50-54 (3.46%). Figure 2 shows a comparison of population percent by age group between 1970 and 2018. Figure 3 shows population trends by age and sex.

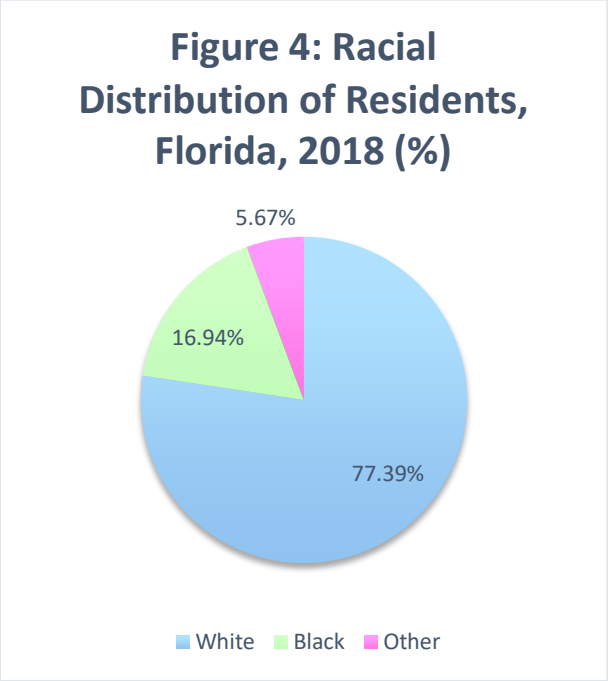


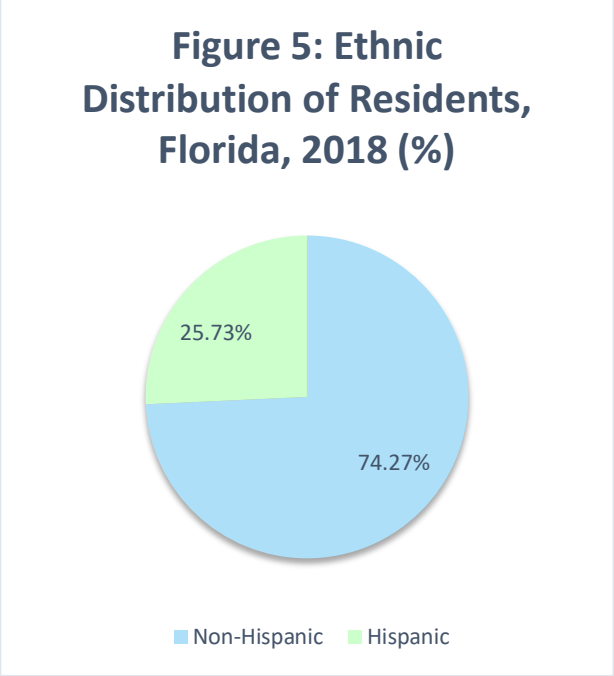
Source: Florida Legislature, Office of Economic and Demographic Research



Source: Florida Legislature, Office of Economic and Demographic Research

Race and Ethnicity: Racial distribution in Florida has had minimal change since the 1970s, where the white population accounted for at least 85%, the black population amounted to at least 15% while other races came up to less than 1%. In 2018, the white population is still the largest at an estimated 77.4% while the black population and other races had slight increases of 16.9% and 5.7% respectively. In terms of ethnic distribution, Florida has an ethnic makeup of 74% non-Hispanic and 26% Hispanic. From the 2018 population atlas, Hispanic is defined as those from Cuba, Mexico, Puerto Rica, South/Central America, and other Spanish origins. Figures 4 and 5 depict the racial distribution and the ethnic distribution of Florida, respectively.





Source: Florida Legislature, Office of Economic and Demographic Research

Economy: Gross Domestic Product (GDP) per capita is a calculation of a country's economic output per person[1]. In 2018, the GDP per capita for Florida was an estimated $43,000, which is a slightly lower figure than the national GDP per capita of at least $56,000. Total expenditure on health per capita in 2014 was at least $8,000 while the total expenditure on health as a percentage of GDP was an estimated 7% in 2013. These figures are depicted in Table 1 below.

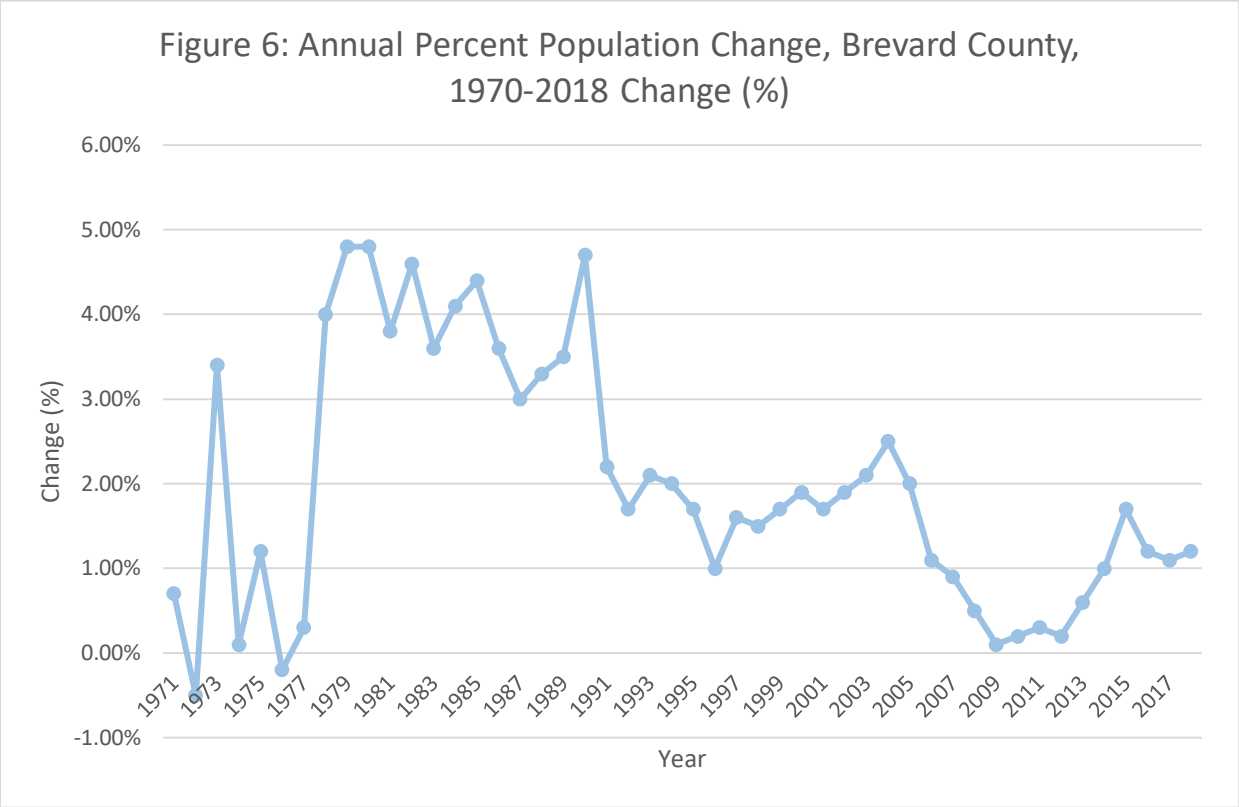
Table 1: GDP per Capita, Health Expenditure and Health Expenditure Percent of GDP of Florida

Year	GDP Per Capita	Health Expenditure Per Capita	Health Expenditure of GDP (%)	U.S. Comparison
2018	$43, 052	--	--	$56,749
2014	--	$8,076	--	--
2013	--	--	6.6	--

Sources: Henry J. Kaiser Family Foundation, Statista.com, The Florida Legislature Office of Economic and Demographic Research

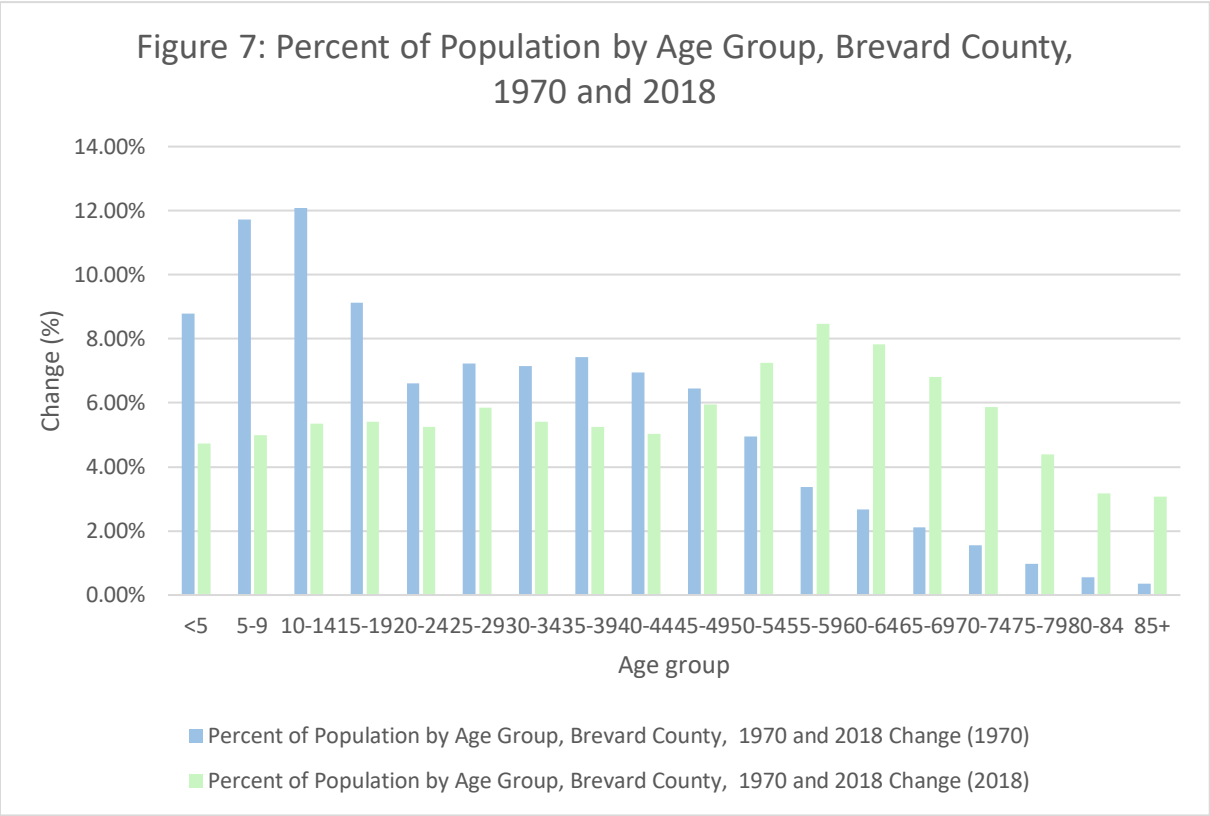
Brevard County Demographics

Population Size: According to the 2018 Population Atlas, Brevard County consists of over 584,000 residents. Population growth has fluctuated between the 1970s and 2018 but there was significant growth between 1979 and 1985 and 2010 and 2018 (9.8%). As of 2018, population growth is at 1.2%. Figure 6 below depicts these population growth trends.

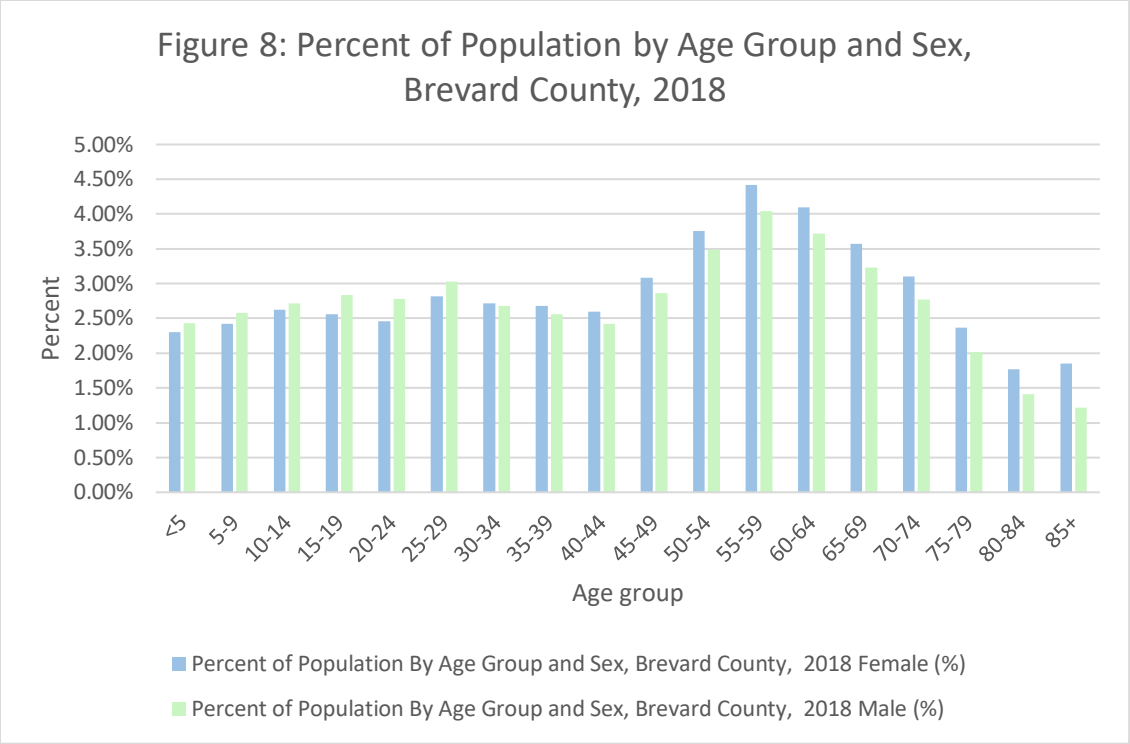


Source: Florida Legislature, Office of Economic and Demographic Research

Age: Like the state, Brevard County had a more youthful population in 1970 compared to 2018, with 5-9 (11.72%) and 10-14 (12.08%) as the two largest age cohorts. As it stands in 2018, the two largest age groups in Brevard County are 55-59 (8.47%) and 60-64 (7.82%). Population trends by sex and age report that the largest cohort for males (44.04%) and females (4.42%) is 55-59. Figure 7 depicts a comparison of age trends between 1970 and 2018. Figure 8 depicts population trends by age and sex.

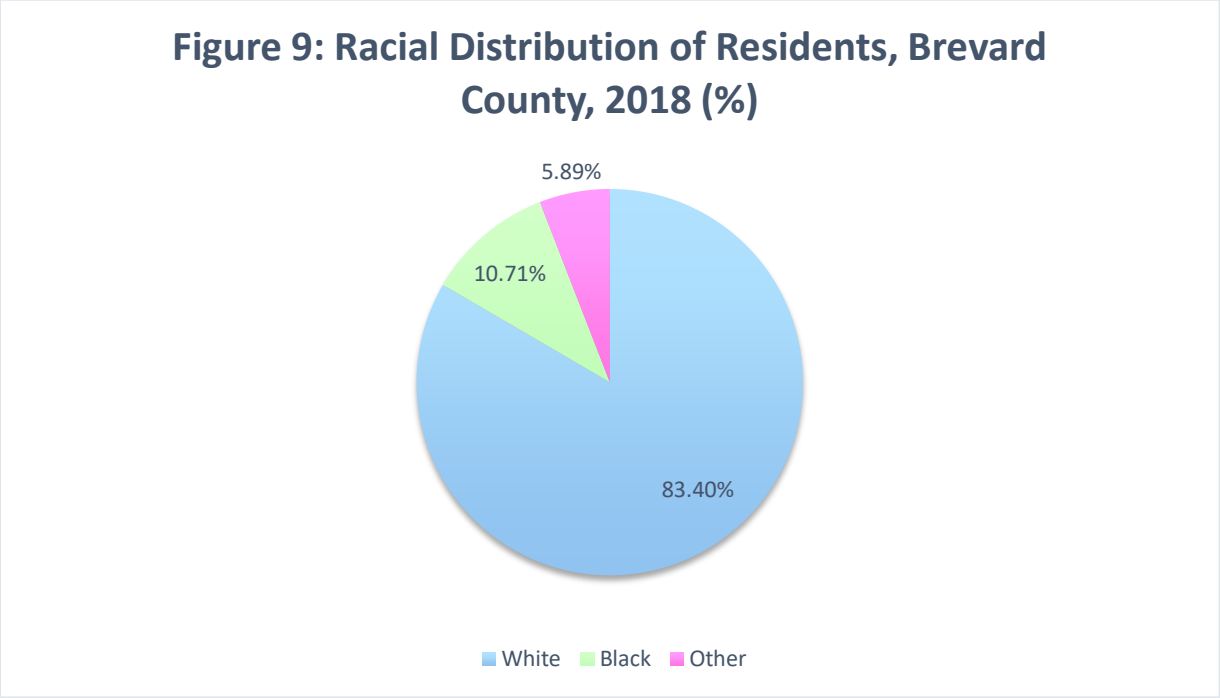


Source: Florida Legislature, Office of Economic and Demographic Research

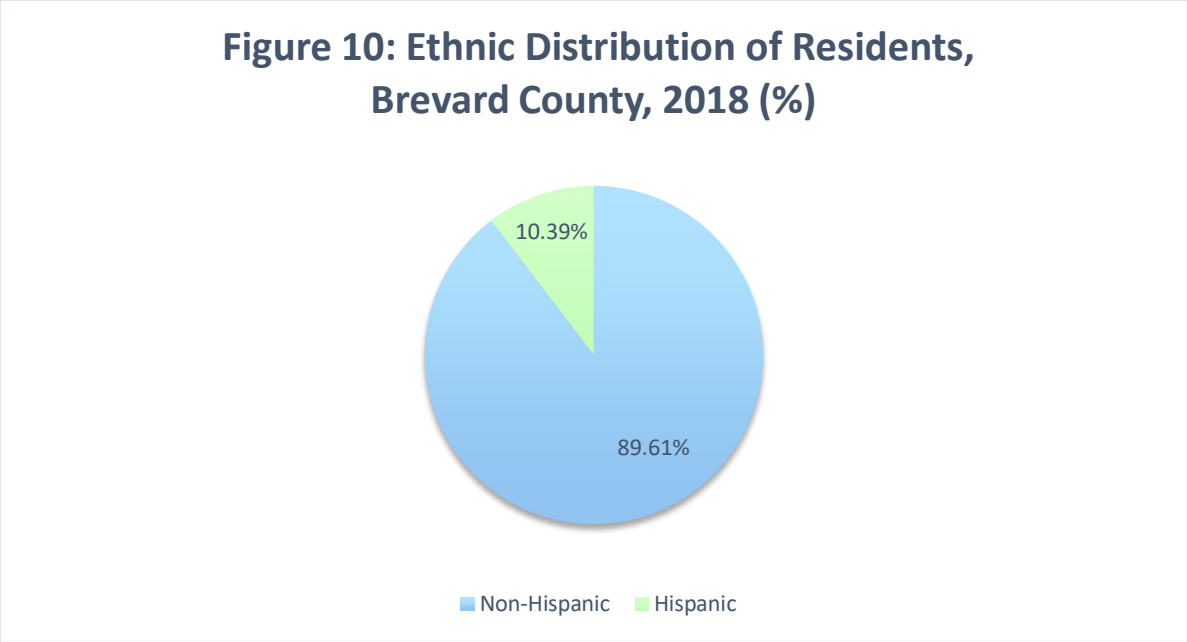


Source: Florida Legislature, Office of Economic and Demographic Research

Race and Ethnicity: Much like the state, racial distribution in Brevard County has had minimal change since the 1970s. In 1972, the white population was over 90%, while the black population was almost 9% and the population consisting of other races was less than 1%. In 2018, the white population has experienced a slight decrease at 83.4% and the black population had a marginal increase of 10.71%. However, the population of other races has experienced a significant increase of almost 6%. Figure 9 depicts the racial distribution across Brevard County for 2018. Brevard County's ethnic makeup for 2018 consists of at least 89% of non-Hispanics and 10.39% of Hispanics. The ethnic distribution for Brevard County is shown in Figure 10.



Source: Florida Legislature, Office of Economic and Demographic Research



Source: Florida Legislature, Office of Economic and Demographic Research

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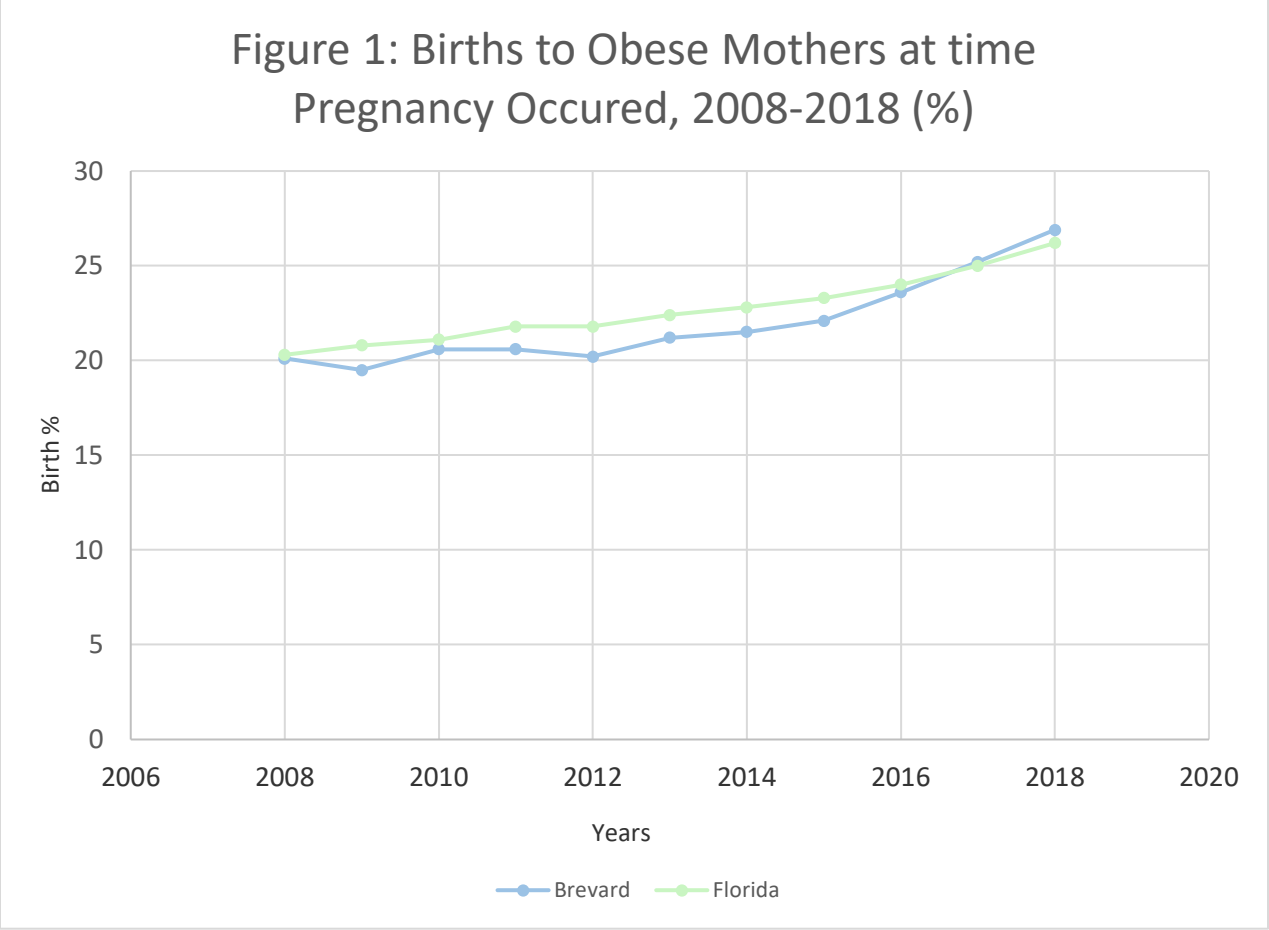
1. GDP Per Capita with its Formula and County Comparisons. thebalance.com. https://www.thebalance.com/gdp-per-capita-formula-u-s-compared-to-highest-and-lowest-3305848. Updated November 4, 2019. Accessed September 11, 2019.

Complications Impacting Pregnant Women in Florida

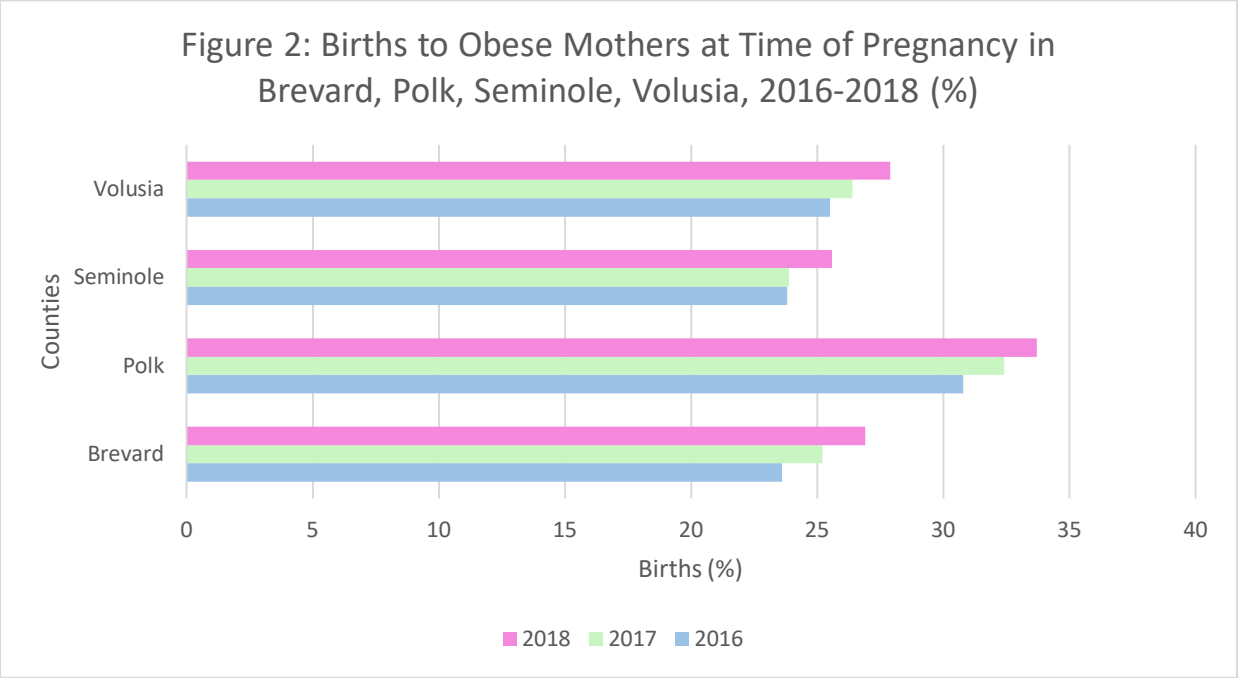
For this report, health complications that affect women at the time of and throughout pregnancy will be examined in Brevard County and where applicable, selected counties that have similar demographics as well as the state level. Three major pregnancy complications include obesity, gestational diabetes and hypertension/pre-eclampsia.

Obesity: In the past decade, there has been a steady increase in births to obese women in not only Brevard County but also at the state level. In 2018, Brevard County experienced the highest proportion at 26.9% and in 2009 experienced the lowest proportion of births to obese women (19.5%). These trends are depicted in Figure 1 below.



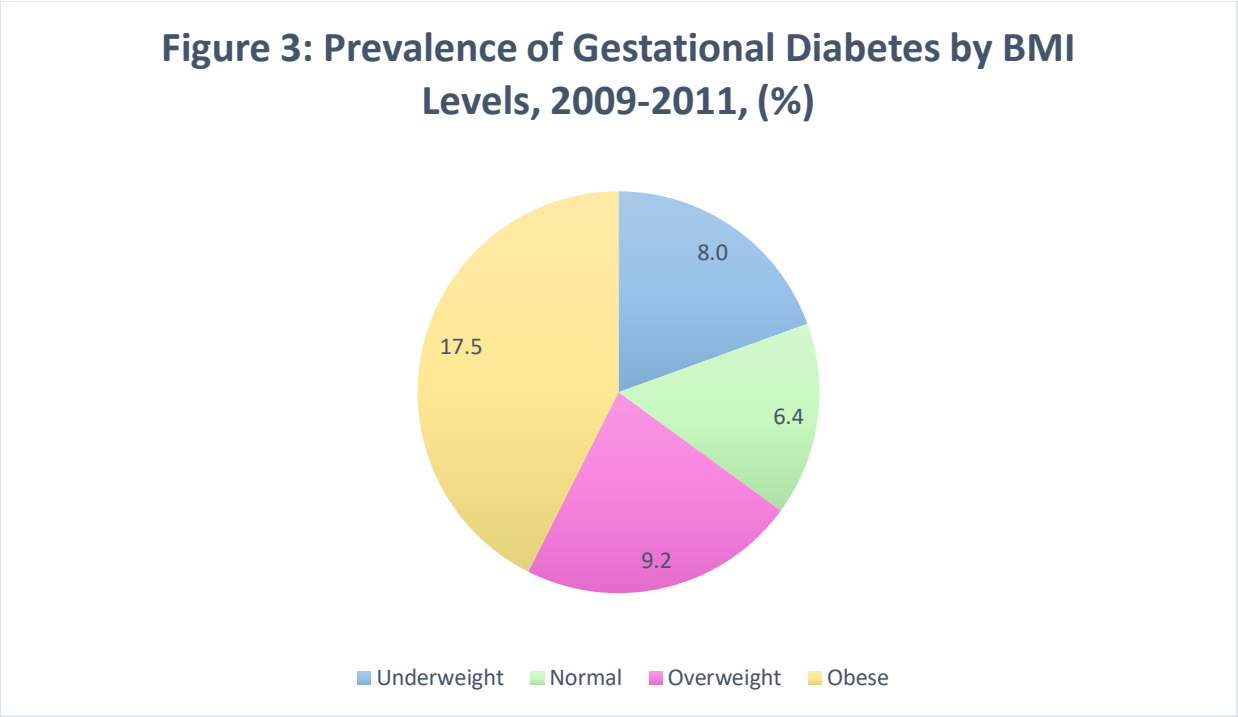
Source: Florida Department of Health, Bureau of Vital Statistics

Between 2016 and 2018, all four counties experienced steady increases to the proportion of births to obese women. Polk County had the highest proportion of births, particularly in 2018 (33.7%). Volusia County had the second highest proportion in 2018 (27.9%) followed by Brevard County (26.9%) and Seminole County (25.5%). The trends for these counties are depicted in Figure 2 below.



Source: Florida Department of Health, Bureau of Vital Statistics

Gestational Diabetes: Gestational diabetes refers to a type of diabetes that is seen in pregnant women who did not have diabetes before pregnancy.[1] Gestational diabetes can lead to a number of problems for the mother and child including high birth weight, low blood sugar, risky C-section procedures and high blood pressure[2]. In a 2009-2011 report by the Pregnancy Risk Assessment Monitoring System (PRAMS) on the trends of BMI on maternal health outcomes, obese mothers in Florida had a higher prevalence of gestational diabetes (17.5%) than mothers in other BMI categories. These results are depicted in Figure 3 below.



Source: Florida PRAMS, 2009-2011

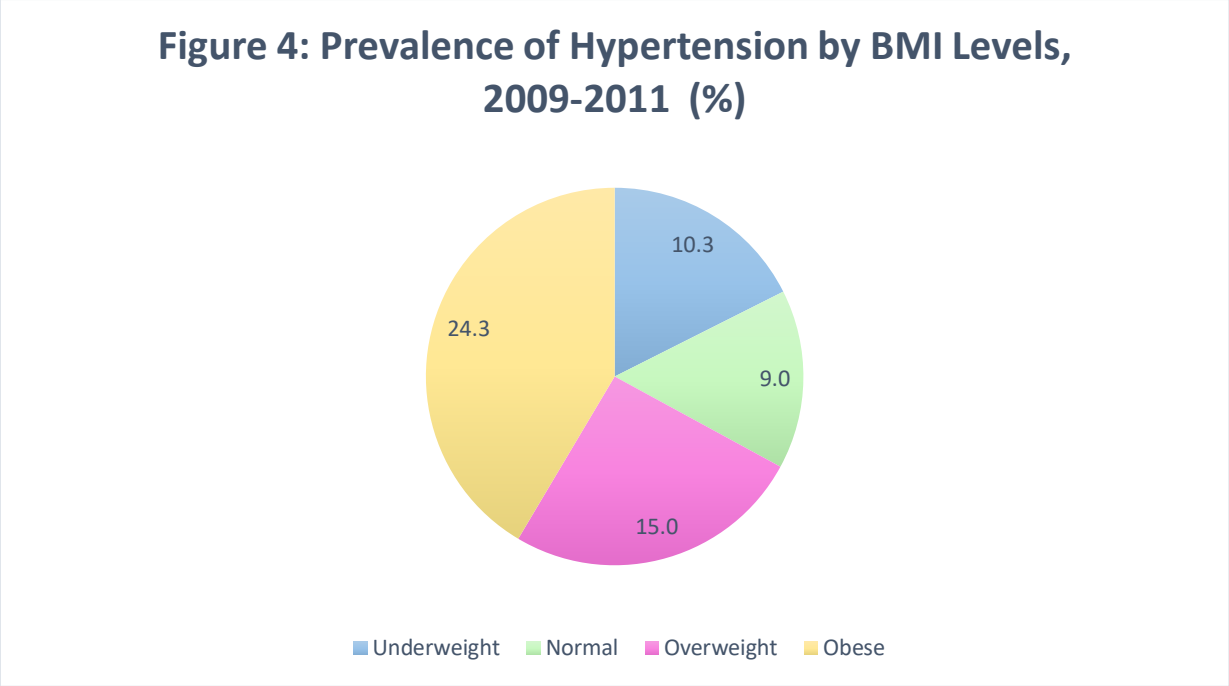
In 2015, another PRAMS survey revealed that an average of 12% of new mothers in Florida had gestational diabetes during pregnancy. Non-Hispanic black mothers had a slightly higher proportion of reported gestational diabetes (13%) during pregnancy than mothers from other races. Those mothers who were aged 35 and older experienced gestational diabetes more frequently (18%) than the other mothers in younger age groups. Additionally, those who have less than a high school education had higher reports of gestational diabetes (15%) than those with a high school education or greater. These results are depicted in Table 1 below.

Table 1: Demographic Distribution of Prevalence of Gestational Diabetes in Florida

Characteristics	***Gestational Diabetes during Pregnancy (%)***
Overall Average	***12.1***
Race/Ethnicity	
Non-Hispanic White	11.4
Non-Hispanic Black	13.0
Hispanic	12.3
Age	
19 & Under	3.9
20-24	12.6
25-34	10.7
35+	18.0
Education Level	
< High School	15.0
High School	11.8
>High School	11.7

Source: Florida PRAMS, 2015

Hypertension/Pre-eclampsia: Hypertension or high blood pressure is very common among pregnant women and, if not monitored well, can put the mother and child at risk for several complications such as pre-eclampsia, toxemia and preterm delivery[3]. In the 2009-2011 PRAMS report, it was noted that obese and overweight mothers had a significantly higher prevalence in hypertension (24.3% and 15% respectively) than mothers with other BMI levels. These results are shown in Figure 4 below.



Source: Florida PRAMS, 2009-2011

In the 2015 PRAMS survey, an average of approximately 13% of new mothers in Florida reported experiencing hypertension, preeclampsia, and toxemia during pregnancy. Non-Hispanic black mothers had a higher prevalence of hypertension/preeclampsia/toxemia (20.5%) than mothers from other races. Those mothers aged 35 and older had a higher prevalence of hypertension/preeclampsia/toxemia (17%) than mothers from other age groups. Lastly, those mothers who only have a high school education had a higher prevalence of hypertension/preeclampsia/toxemia (14.1%) than those with a less or greater high school education. These results are shown in Table 2 below.

Table 2: Demographic Distribution of Prevalence of Hypertension/Preeclampsia/Toxemia

Characteristics	***Hypertension/Preeclampsia/Toxemia during Pregnancy (%)***
Overall Average	***12.7***
Race/Ethnicity	
Non-Hispanic White	11.2
Non-Hispanic Black	20.5
Hispanic	11.0
Age	
19 & Under	23.1
20-24	9.9
25-34	11.5
35+	17.0
Education Level	
< High School	11.0
High School	14.1
>High School	12.3

Source: Florida PRAMS, 2015

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3. High blood pressure during pregnancy. cdc.gov. https://www.cdc.gov/bloodpressure/pregnancy.htm. Updated June 20, 2019. Accessed October 16, 2019.

General Maternal and Child Health (MCH) Trends in Brevard County

The following report will examine general maternal and child health trends between 2016 and 2018 in Brevard County. These trends will include births and birth rates, birth family characteristics (age, marital status, education level), initiation of prenatal care, incidence rates of low birth weight and preterm birth. Incidence rates of infant mortality and neonatal mortality as well as infant deaths and infant deaths as it relates to perinatal conditions will also be examined in this report.

Resident Births and Birth Rate per 1000: There have been no significant differences in the number of live births and birth rates between 2016 to 2018 in Brevard County. The number of live births remain at least 5,000 and a birth rate of approximately 9 per 1,000 of the total population has been consistent. There are similar trends among the birth counts and rates within the white and black/other populations. However, the birth rates for the black population are significantly higher than those from the white population. In 2016, the birth rate for the black/other race was as high as 12.4 per 1,000 total black population compared to a birth rate of 8.6 per 1,000 total white population. Table 1 depicts the birth count and rate within the 3-year period. Table 2 depicts the racial distribution of birth counts and rates within the 3-year period.

Table 1: Live Births and Birth Rate per 1000 of total population in Brevard County, 2016-2018

Year	Birth Count	Birth Rate
2016	5273	9.2
2017	5201	9
2018	5309	9.1

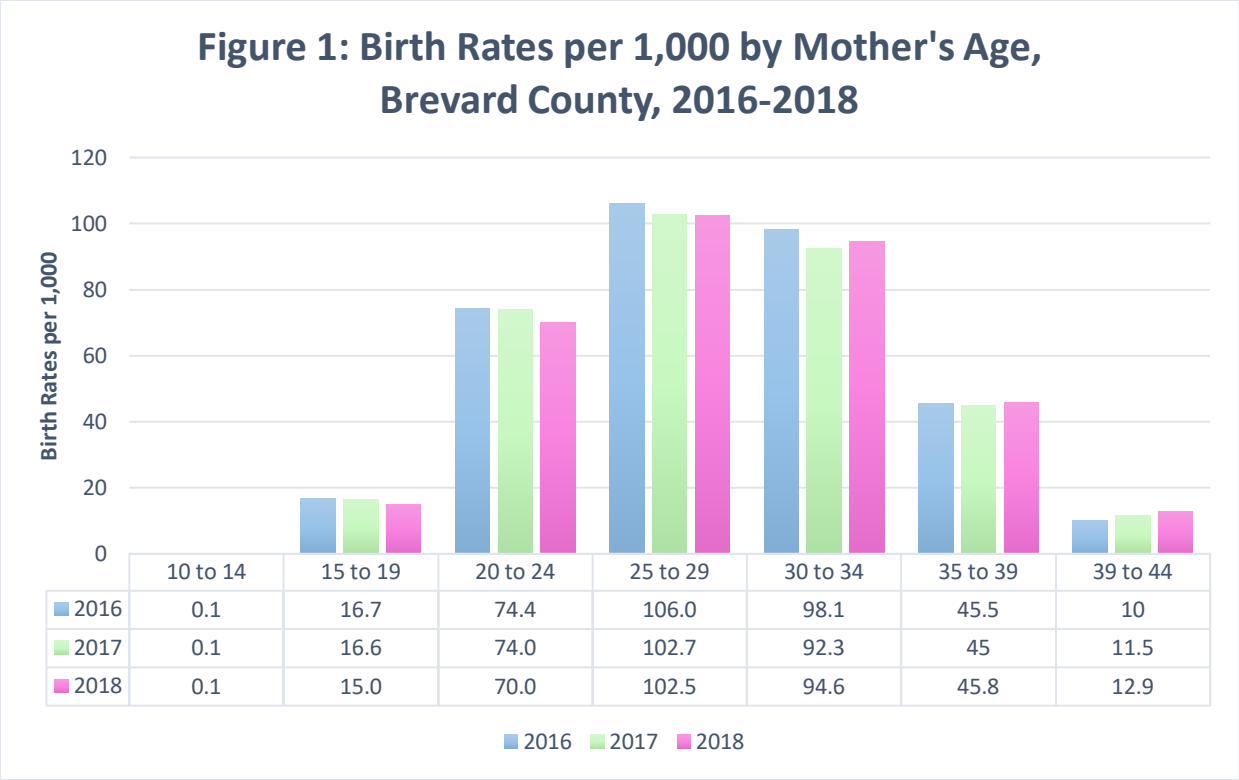
Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

Table 2: Racial Distribution of Live Births and Birth Rate per 1000 in Brevard County, 2016-2018

Year	White		Black and Other	
	Count	Rate (1,000 per white pop.)	Count	Rate (1,000 per black/other pop.)
2016	4119	8.6	1144	12.4
2017	4015	8.3	1172	12.4
2018	4127	8.5	1177	12.1

Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

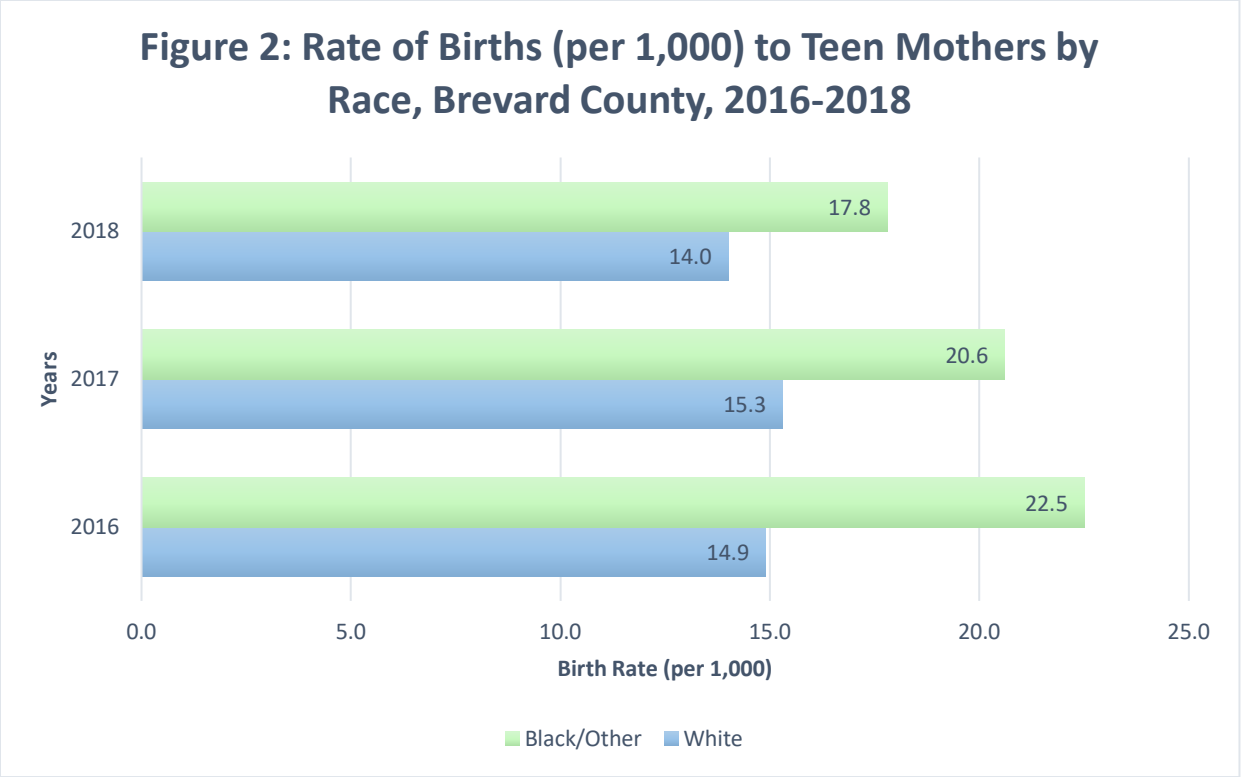
Births by Mother's Age: Mothers aged 25-29 appear to have the highest age-specific birth rates across the 3-year period. In 2016, mothers aged 25-29 reported a rate of 106 per 1,000 live births, slightly decreasing in 2017 (102.7 per 1,000) and 2018 (102.5 per 1,000). Mothers aged 30-34 appear to have the second highest age-specific birth rates across the 3-year period, from 98.1 per 1,000 in 2016; 92.3 per 1,000 in 2017 and 94.6 per 1,000 in 2018. Mothers aged 10-14 and 39-44 appear to have the lowest recorded birth rates. Mothers aged 10-14 have maintained a birth rate of only 0.1 per 1,000. The birth rate for mothers aged 39-44 has increased by a rate of 2.9 per 1,000 between 2016 and 2018. These numbers are depicted in Figure 1 below.



	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	39 to 44
2016	0.1	16.7	74.4	106.0	98.1	45.5	10
2017	0.1	16.6	74.0	102.7	92.3	45	11.5
2018	0.1	15.0	70.0	102.5	94.6	45.8	12.9

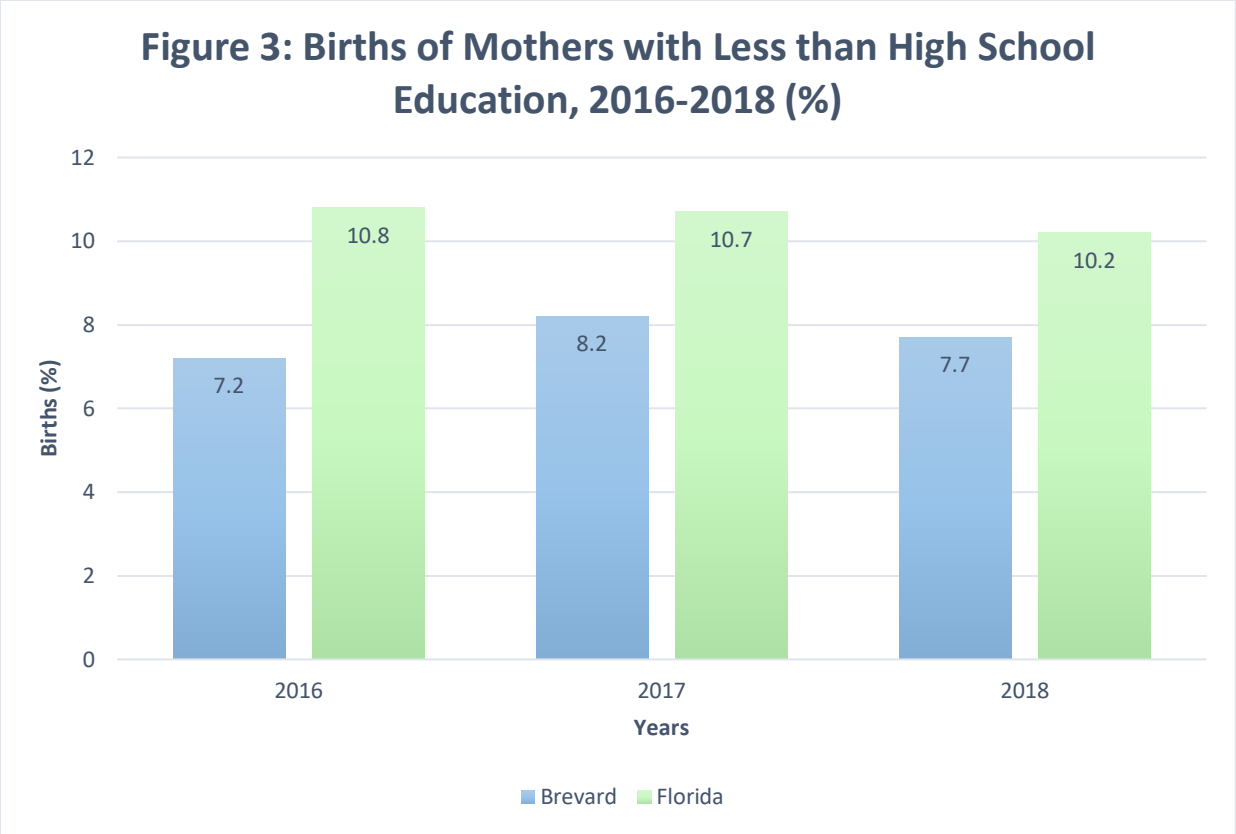
Source: Florida Department of Health, Division of Public Health Statistics and Performance Management
***Birth rates are age-specific**

Births to Teen Mothers by Race: Teen mothers are defined as those mothers aged 15-19 living in Brevard County. As shown in Figure 2 below, black teen mothers and teen mothers from other races have consistently higher birth rates than white teen mothers across the 3-year period. The birth rates among white teen mothers has experienced a slight decrease of 0.9 units between 2016 and 2018. There has also been a decrease of 4.7 units in birth rates among black mothers and mothers from other races between 2016 and 2018.



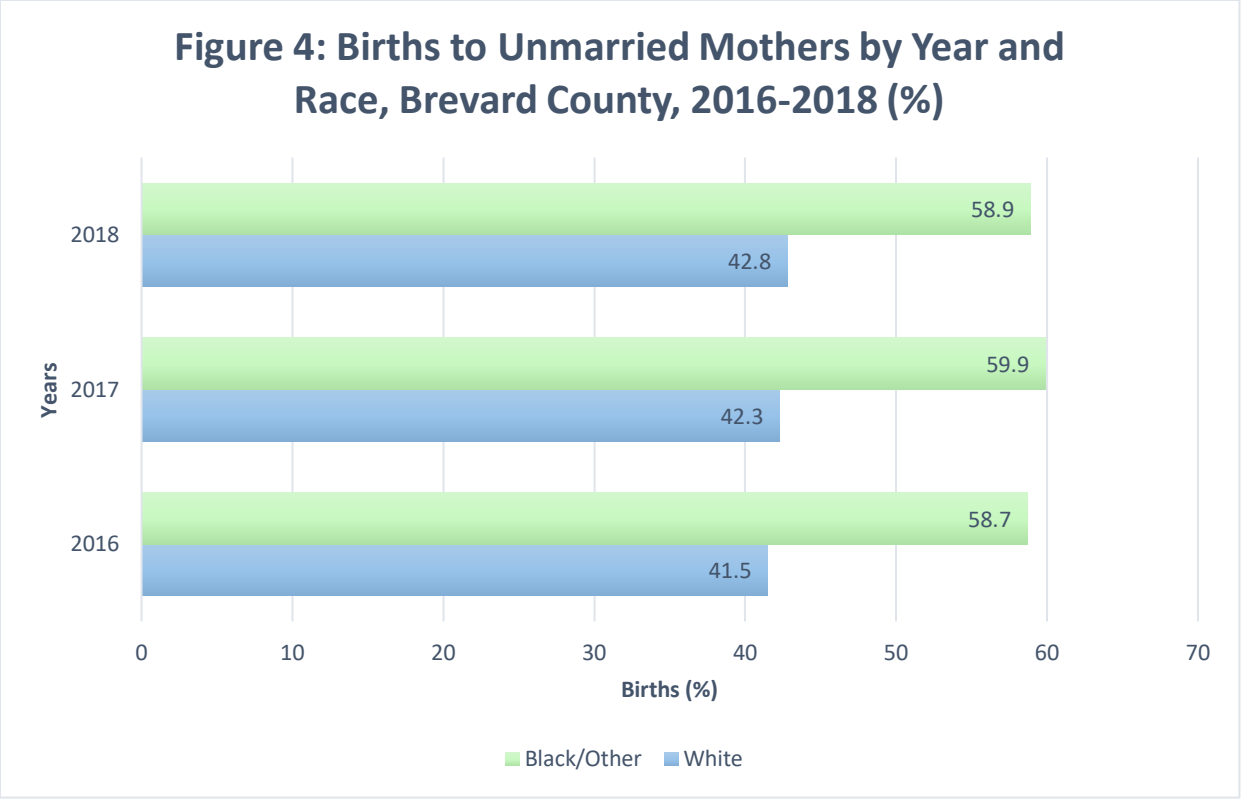
Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

Births of Mothers with Less than High School Education: This indicator is defined as mothers aged 19 and over who have less than a high school (HS) education. In Brevard County, the proportion of births of mothers with less than a HS education was the highest in 2017 (8.2%) compared to the other two years (7.2% in 2016 and 7.7% in 2018). Compared to the state level, the proportion of births across the 3-year period are significantly lower. In 2017, the proportion of births was 2.5% lower than the state level. The proportion of births of mothers with less than a HS education are depicted in Figure 3 below.



Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

Births to Unmarried Mothers by Year and Race: Unmarried black mothers and mothers from other races report a higher proportion of births than unmarried white mothers across the 3-year period. In 2017, the proportion of births appear to be higher at 59.9% compared to 42.3% of births to unmarried white mothers. The proportion of births to unmarried mothers in Brevard County are depicted in Figure 4 below.



Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

Prenatal Care

Initiation of Prenatal Care by Trimester: In Brevard County the percentage of mothers who initiated prenatal care in the first trimester decreased by 8.8% between 2016 and 2018, yet these reported prenatal care rates have remained higher than in the other trimesters during the 3-year period. The percentage of mothers who reported no prenatal care has also increased from 1.2% in 2016 to 3.4% in 2018. These numbers are shown in Table 3 below.

Table 3: Initiation of Prenatal Care by Trimester, Brevard County, 2016-2018 (%)

Trimester	2016	2017	2018
1st trimester	85.5	82.6	76.7
2nd trimester	11.3	12.8	16.0
3rd trimester	1.8	2.8	3.9
No prenatal care	1.2	1.8	3.4
Unknown prenatal status	4.6	8.6	6.2

Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

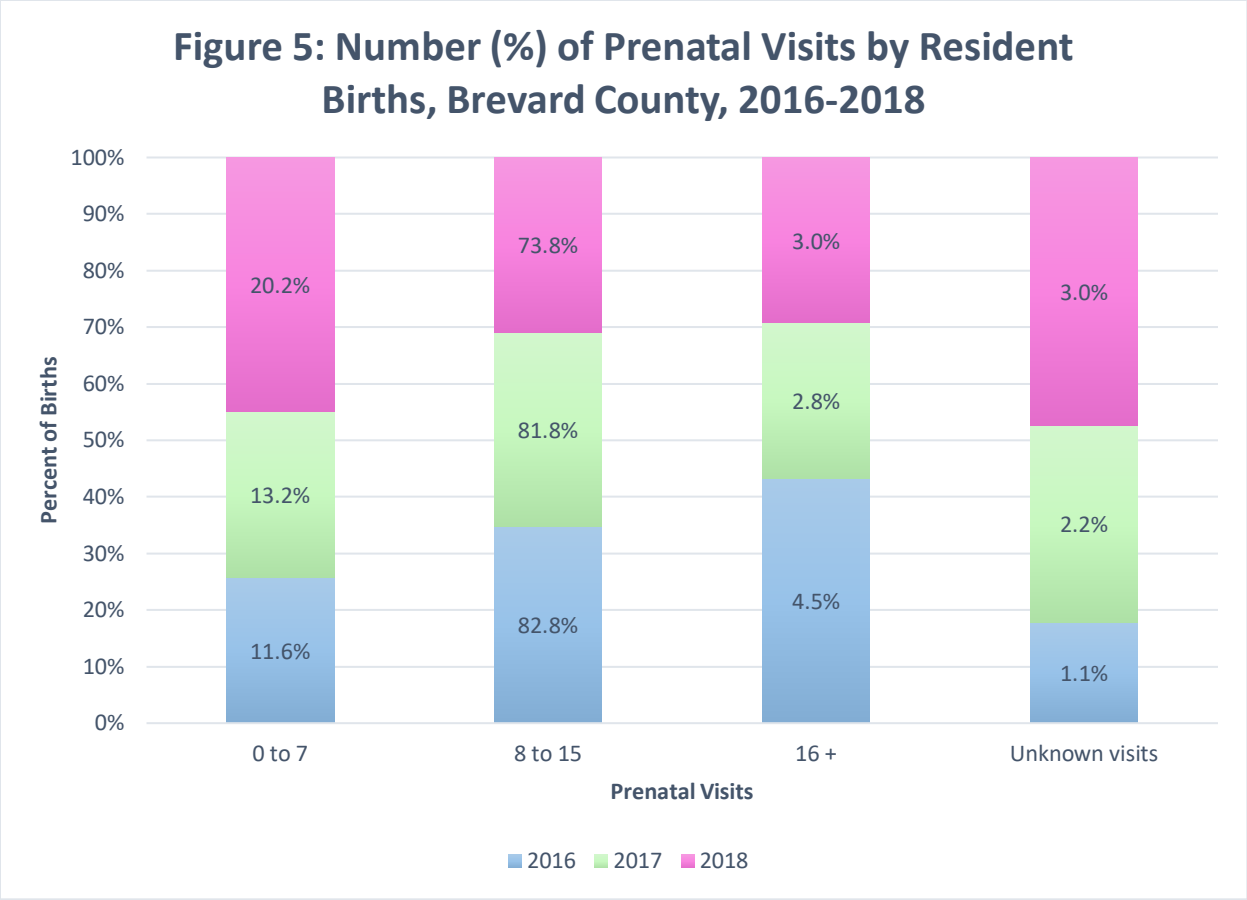
Initiation of Prenatal Care by Trimester and Race: Among white mothers in Brevard County, approximately 80% initiated prenatal care in the 1st trimester between 2016 and 2018. There was also at least a 10% decrease of initiation of prenatal care in the first trimester among black mothers and mothers of other races compared to white mothers. While the rate of no prenatal status remains low among all races, there is an observed 2% increase among white mothers and a 0.3% increase among black/other mothers within the 3-year period. These trends are depicted in Table 4 below.

Table 4: Initiation of Prenatal Care by Trimester and Race, Brevard County, 2016-2018 (%)

Initiation of Prenatal Care by Trimester (White Mothers) (%)			
Trimester	**2016**	**2017**	**2018**
1st trimester	84.9	83.2	82.7
2nd trimester	10.4	11.6	15.4
3rd trimester	1.7	2.6	3.6
No prenatal care	0.9	1.8	2.9
Unknown prenatal status	4.2	8.4	5.8
Initiation of Prenatal Care by Trimester (Black/Other Mothers) (%)			
Trimester	**2016**	**2017**	**2018**
1st trimester	78.2	77.9	76.6
2nd trimester	14.0	14.2	15.0
3rd trimester	2.2	3.7	4.7
No prenatal care	1.6	2.0	1.9
Unknown prenatal status	5.9	9.2	7.5

Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

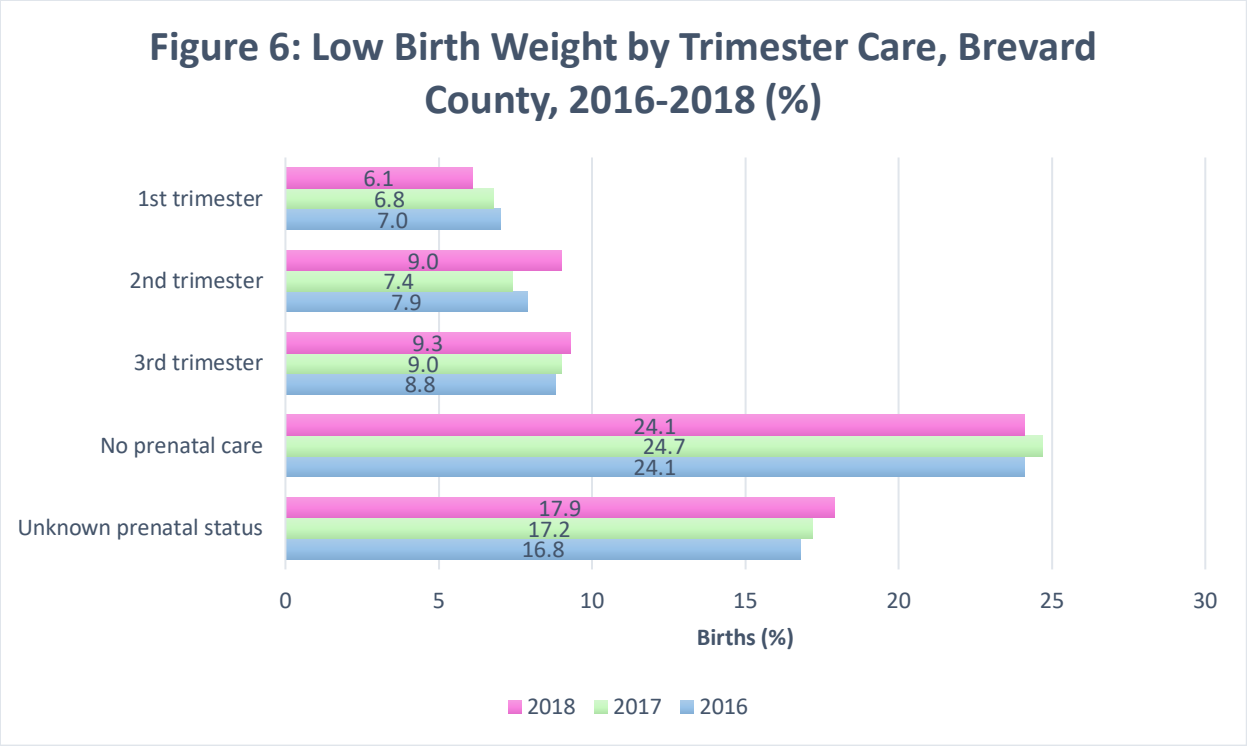
Number (%) of Prenatal Care Visits: The World Health Organization (WHO) has recently upgraded the amount of recommended prenatal visits to at least eight[1]. In Brevard County, the proportion of births to mothers who had 8-15 prenatal visits was approximately 83%, which has since decreased to 74%. However, the proportion of births to mothers who had at least 8 prenatal visits has been consistently high across the 3-year period. These trends are depicted in Figure 5 below.



Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

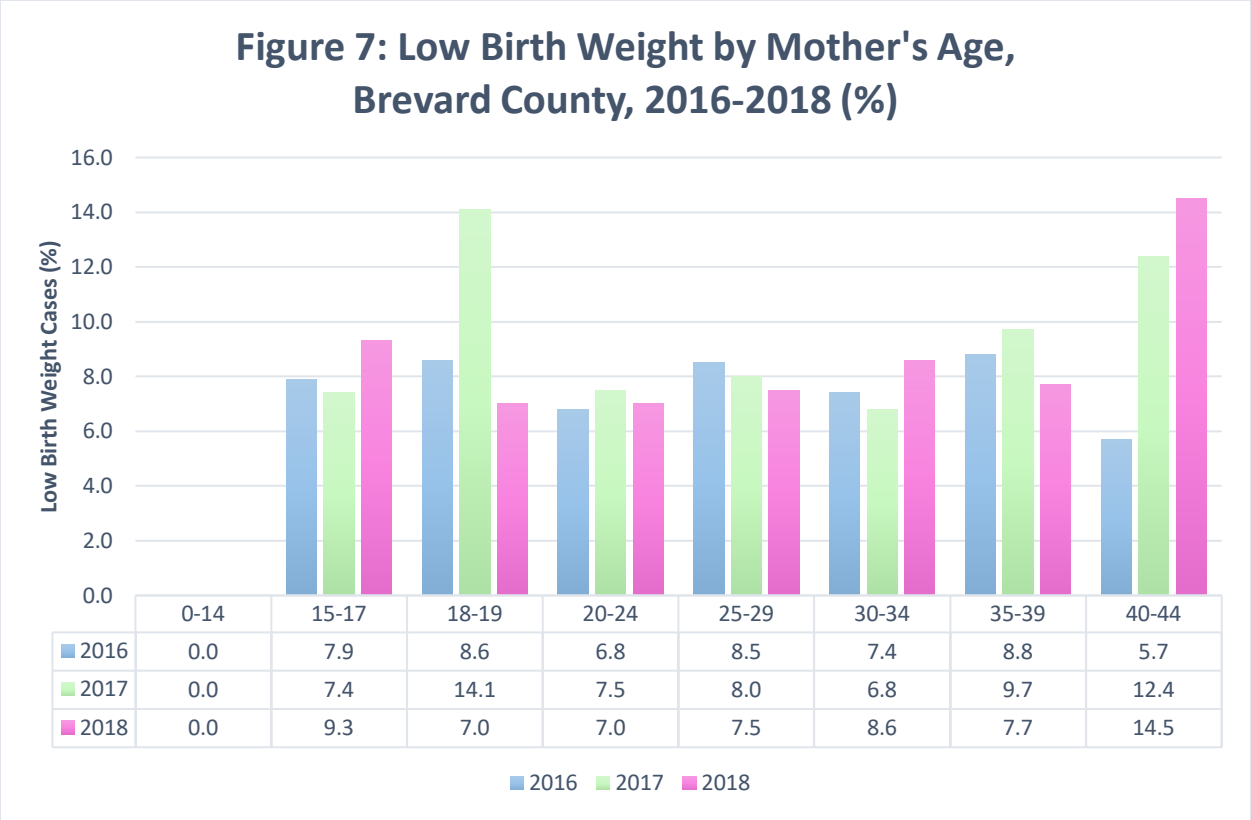
Low Birth Weight: Low birth weight (LBW) is defined as birth weight less than 2500 grams.

Low Birth Weight by Trimester Care: Between 2016 and 2018, reported cases of low birth weight were the highest among those mothers who did not receive prenatal care. Mothers who received prenatal care in the first trimester had the lowest reported cases, steadily declining to at least 6.1% by 2018. Reported cases of low birth weight by trimester care are shown in Figure 6 below.



Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

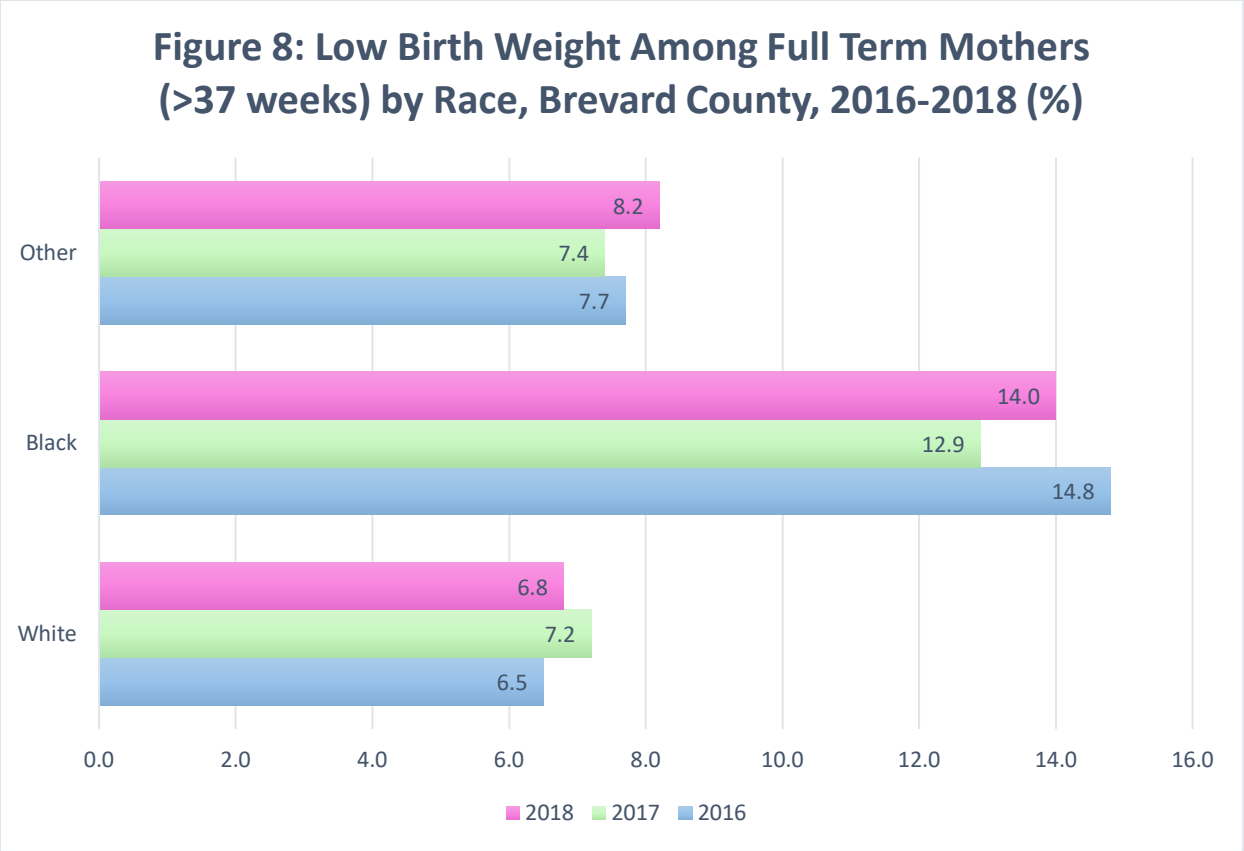
Low Birth Weight by Mother's Age: Within the 3-year period, reported cases of infants with low birth weight has declined for mothers between the ages 14-39. Among mothers aged 40-44, there has been a 9% increase of reported cases of low birth weight between 2016 and 2018. These trends are depicted in Figure 7 below.



	0-14	15-17	18-19	20-24	25-29	30-34	35-39	40-44
2016	0.0	7.9	8.6	6.8	8.5	7.4	8.8	5.7
2017	0.0	7.4	14.1	7.5	8.0	6.8	9.7	12.4
2018	0.0	9.3	7.0	7.0	7.5	8.6	7.7	14.5

Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

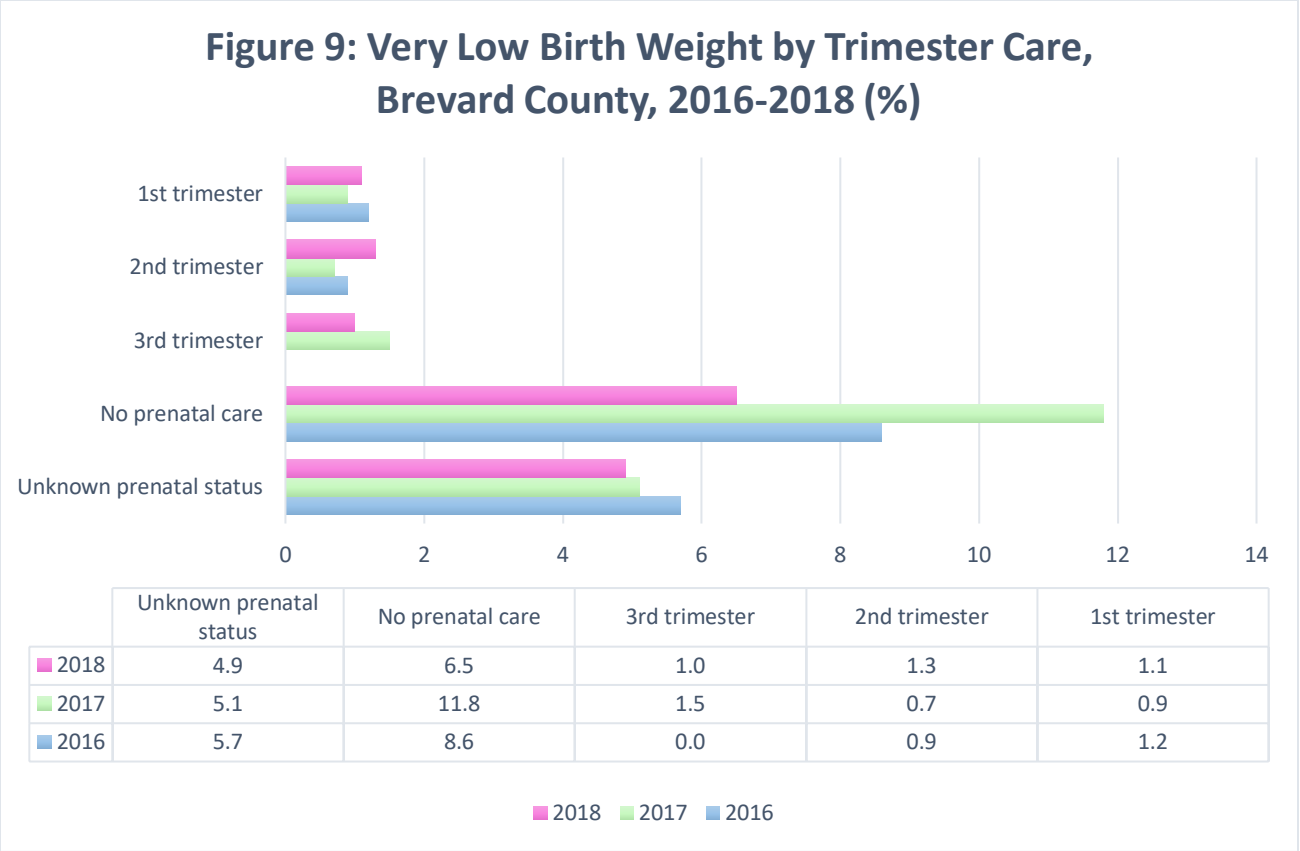
Low Birth Weight Among Full Term Mothers (> 37 weeks) by Race: Reported cases of low birth weight were highest among black mothers during the 3-year period. While there was a significant decline of at least 2% between 2016 and 2017 but in 2018, the number of reported cases increased to 14%. Reported cases of LBW slightly increased to 0.4% among white mothers from 2017 to 2018 while reported cases of LBW among mothers from others races steadily increased within the 3-year period. These numbers are shown in Figure 8 below.



Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

Very Low Birth Weight: Very low birth weight (VLBW) is defined as birth weight less than 1500 grams.

Very Low Birth Weight by Trimester Care: For Brevard County, reported cases of very low birth weight were highest among women who received no prenatal care, reaching as high as 11.8% in 2017. There have been slight increases of reported cases in 2018 during the first trimester care (1.1%) and the second trimester (1.3%) but overall, reported cases of VLBW have been on the decline. Reported cases of VLBW by trimester care are shown in Figure 9 below.



	Unknown prenatal status	No prenatal care	3rd trimester	2nd trimester	1st trimester
2018	4.9	6.5	1.0	1.3	1.1
2017	5.1	11.8	1.5	0.7	0.9
2016	5.7	8.6	0.0	0.9	1.2

Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

Very Low Birth Weight by Mother's Race: There has been a slight increase of reported cases of low birth weight among black mothers between 2017 (3%) and 2018 (3.8%). There has also been a slight decrease of reported cases among mothers from other races from 1.5% in 2017 to 0.8% in 2018. But overall, the number of reported cases of very low birth weight among white mothers, black mothers and mothers of other races have been consistent with the 3-year period. These numbers are depicted in Table 5 below.

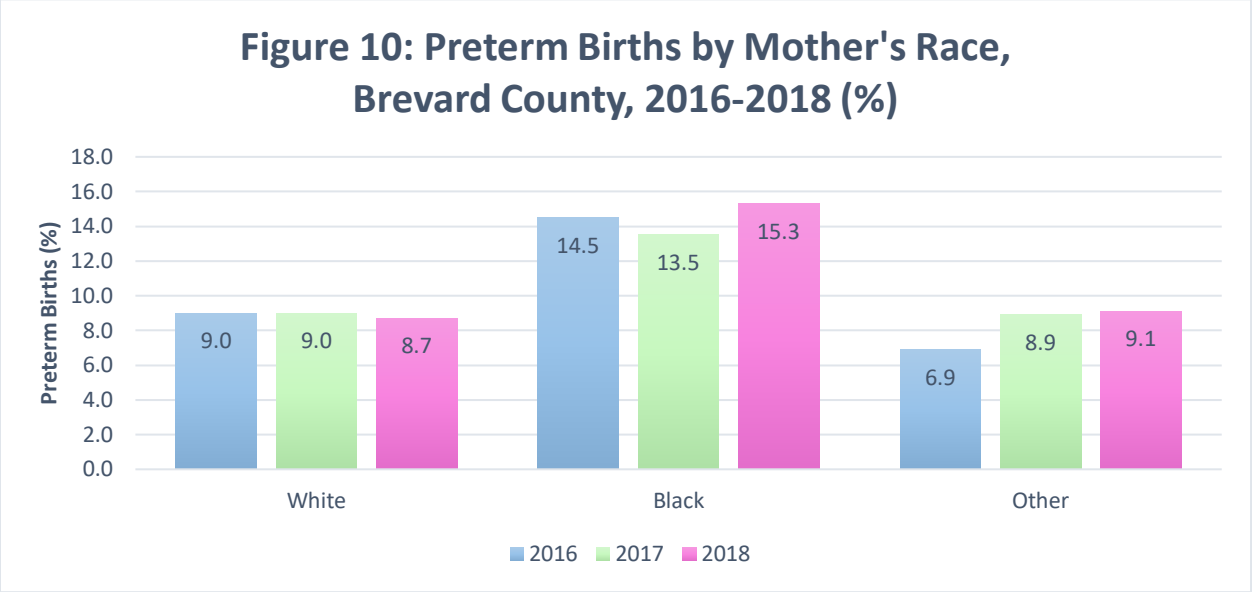
Table 5: Very Low Birth Weight by Mother's Race, Brevard County, 2016-2018 (%)

Race	2016	2017	2018
White	1.1	1.1	1.1
Black	3.5	3.0	3.8
Other	0.5	1.5	0.8

Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

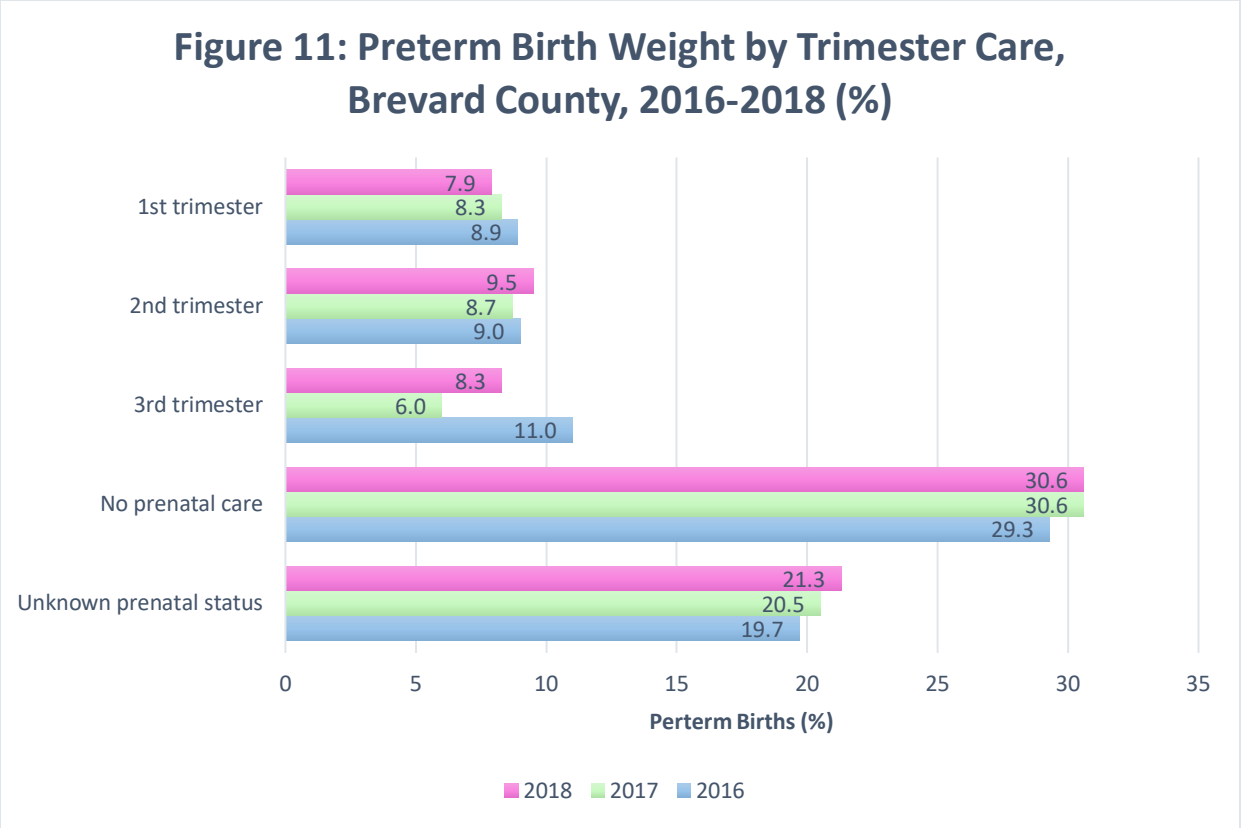
Preterm Birth: Preterm or premature birth occurs when a baby is born before 37 weeks of pregnancy has been completed.

Preterm Birth by Race: The highest number of reported cases of preterm births was among black mothers across the 3-year period, steadily increasing to at least 15% in 2018. Preterm births among mothers from other races also increased by 2.2% between 2016 and 2018. Preterm births among white mothers faced a slight decline from 9% in 2016 to 8.7% in 2018. Preterm birth trends are shown in Figure 10 below.



Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

Preterm Birth by Trimester Care: Reported cases of preterm birth were highest among women who received no prenatal care with a 1.3% increase between 2016 and 2018. There was a decline in preterm births among women with first trimester care (1%) and third trimester care (2.7%) within the 3-year period and a slight increase in preterm births among women with second trimester care (0.5%). These trends are depicted in the Figure 11 below.



Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

Very Preterm Birth: Very preterm birth occurs when a baby is born between 28 to 32 weeks of pregnancy.

Very Preterm Birth by Race: Between 2016 and 2018, reported cases of very preterm births were the highest in black mothers. In 2018, there were 3.3% of reported cases of very preterm births among black mothers compared to white mothers (1.3%) and mothers from other races (1.4%). These numbers are depicted in Table 6 below.

Table 6: Very Preterm Births by Mother's Race, Brevard County, 2016-2018 (%)

Race	2016	2017	2018
White	1.2	1.3	1.3
Black	3.3	2.5	3.3
Other	0.5	1.5	1.4

Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

Very Preterm Birth by Trimester Care: Reported cases of very preterm birth were the highest among women with no prenatal care, although there was a significant decline between 2017 (14.1%) and 2018 (7.1%). The reported cases of very preterm birth by trimester care are depicted in Table 7 below.

Table 7: Very Preterm Birth Weight by Trimester Care, Brevard County, 2016-2018 (%)

Trimester	2016	2017	2018
Unknown prenatal status	5.7	4.5	5.2
No prenatal care	8.6	14.1	7.1
3rd trimester	1.1	1.5	1.0
2nd trimester	0.9	0.7	1.5
1st trimester	1.3	1.0	1.2

Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

Fetal and Infant Mortality: Infant mortality is defined as the death of an infant under the age of one. Neonatal mortality is defined as the death of an infant during the first 28 days. Post-neonatal mortality is defined as the death of an infant between 28 days since birth up to one year. Fetal mortality is defined as the death of a fetus prior to birth.

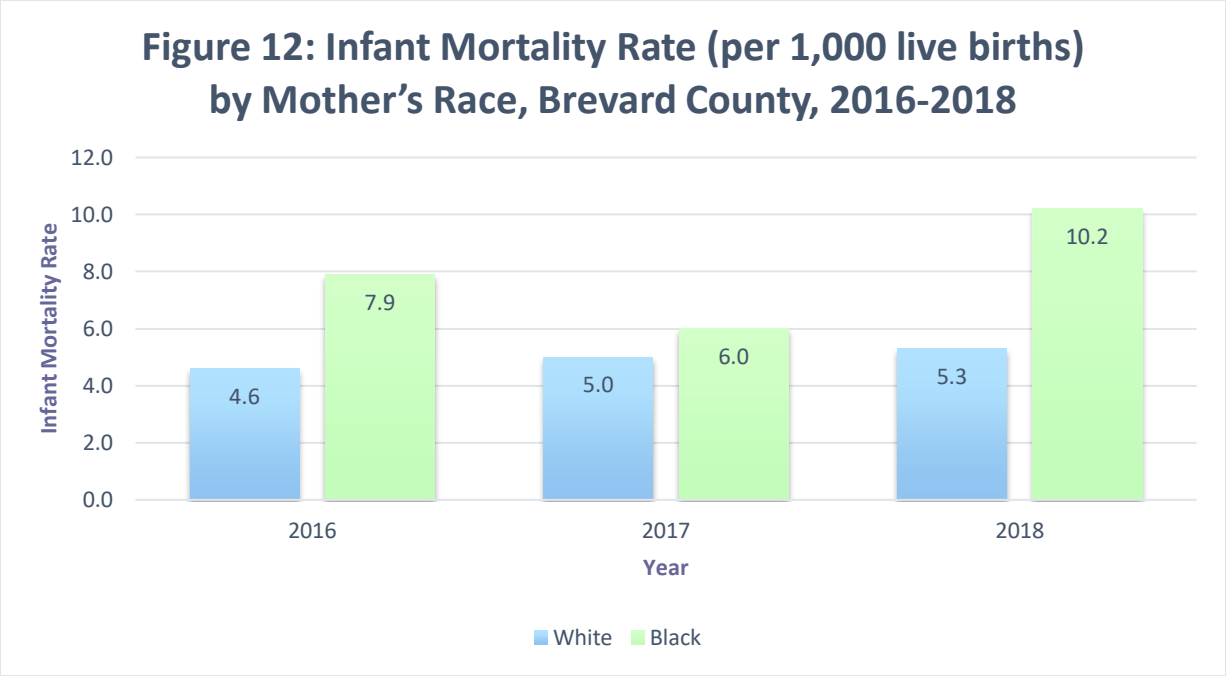
Infant Deaths in Brevard County by Year: The rate of Infant deaths in Brevard County had an increase of 0.9 per 1,000 live births since 2016. The count and rate of infant deaths in Brevard County are depicted in Table 8 below.

Table 8: Counts and Rates (per 1,000 live births) of Infant Deaths, Brevard County, 2016-2018.

Year	Count	Rate
2016	29	5.5
2017	27	5.2
2018	34	6.4

Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

Rates of Infant Mortality per 1,000 by Mother's Race: The infant mortality rate (IMR) among black mothers and mothers from other races has increased by 2.3 per 1,000 live births compared to infant mortality rates among white mothers (0.7 per 1,000 live births) within the 3-year period. The IMRs by race in Brevard County are depicted in Figure 12 below.



Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

Incidence Rates of Fetal Death per 1,000 by Mother's Race: In 2016 and 2018, the fetal death rates among black mothers and mothers from other races were higher than those among white mothers (increases of 1.7 per 1,000 deliveries and 1.1 per 1,000 deliveries respectively). In 2017, the fetal death rate among white mothers was at 7.9 per 1,000 deliveries, significantly higher compared to black mothers and mothers from other races (2.6 per 1,000 live deliveries). The fetal death rates among mothers living in Brevard County are shown in Table 9 below.

Table 9: Fetal Deaths (per 1,000 deliveries) by Mother's Race, Brevard County, 2016-2018

Year	White	Black/Other
2016	4.4	6.1
2017	7.9	2.6
2018	6.5	7.6

Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

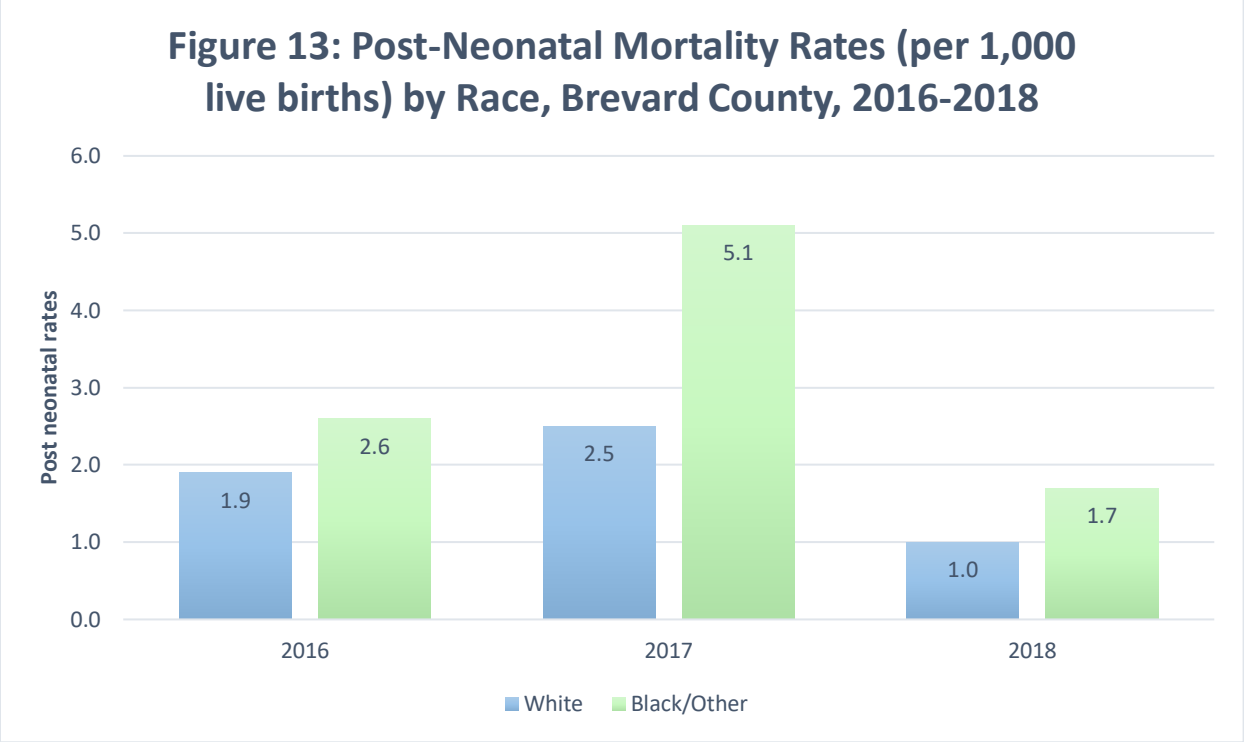
Rates of Neonatal Mortality per 1,000 by Mother's Race: Rates of neonatal mortality has increased among white mothers, black mothers, and mothers from other races since 2016. In 2018, neonatal mortality rates among black mothers and mothers from other races was at its highest (8.5 per 1,000 live births) within the 3-year period. Rates of neonatal mortality by mother's race in Brevard County are shown in Table 10 below.

Table 10: Neonatal Mortality Rates (per 1,000 live births) by Mother's Race, Brevard County, 2016-2018

Year	White	Black/Other
2016	2.7	5.2
2017	2.5	0.9
2018	4.4	8.5

Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

Rates of Post-Neonatal Mortality per 1,000 by Mother's Race: In 2017, post-neonatal mortality rates among black mothers and mothers from other races (5.1 per 1,000 live births) was significantly higher than post-neonatal mortality rates among white mothers (2.5 per 1,000 live births). However, in 2018, there has been a decline in post-neonatal mortality rates. These rates are depicted in Figure 13 below.



Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

Reference List

1. New Guidelines on Antenatal Care for a Positive Pregnancy Experience. who.int. https://www.who.int/reproductivehealth/news/antenatal-care/en/. Published November 7, 2016. Accessed November 6, 2019.

Risky Behaviors Impacting Maternal Health and Child Health in Florida and Brevard County

For this report, risky behaviors associated with maternal and child health will be examined among childbearing women aged 15-44 living in Brevard County. These risky behaviors include domestic violence, substance abuse and unsafe sleep methods for infants, leading to sudden infant death syndrome (SIDS). Focus will also be placed on mental illnesses and its association with maternal health. In order to grasp the full scope of the data, selected counties with similar demographics will be compared with Brevard County.

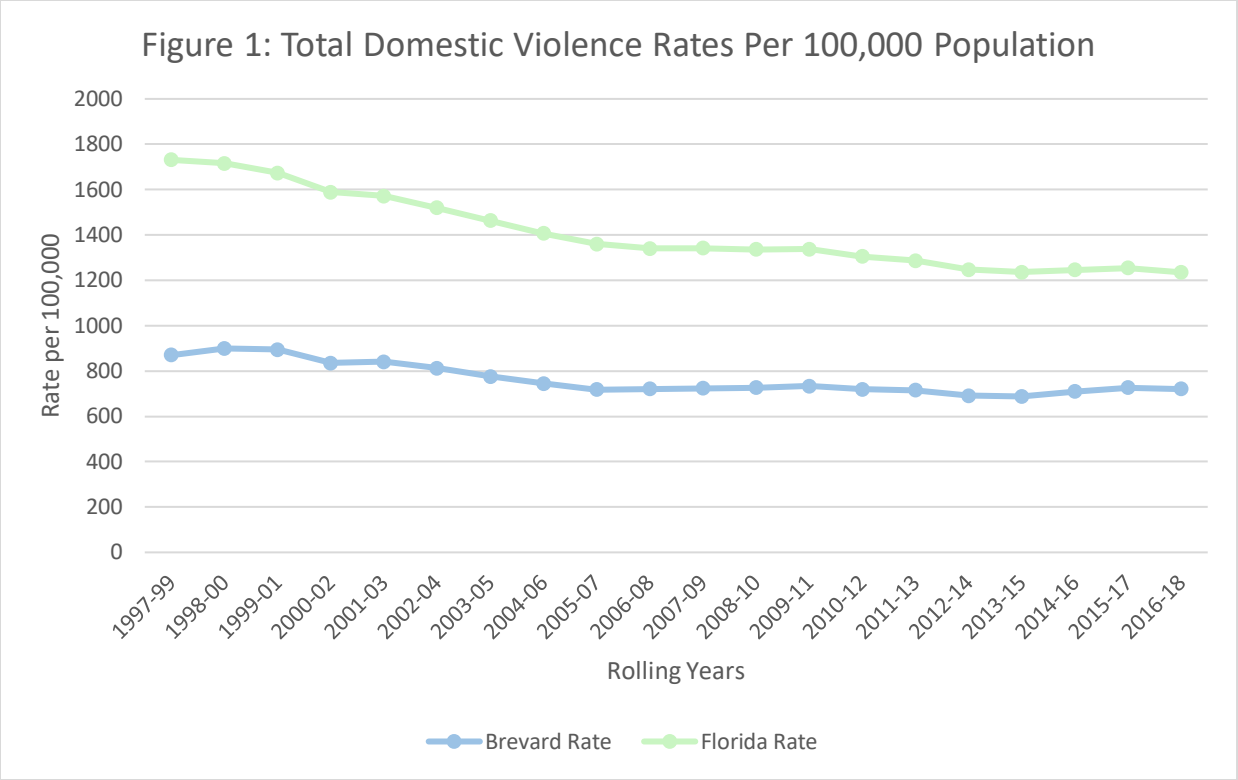
Population Size and Race: Between 2016 and 2018, the total number of women age 15-44 in Brevard County amounted to approximately 273,000; the state count is just over 11 million. In the Polk County, the 15-44 female population was over 368,000. In Seminole, the 15-44 female population was slightly higher than those residing in Brevard County at an estimated 278,000 while Volusia County had a lower 15-44 female population count of over 257,000. The white population has a majority count among all four counties. In Brevard, the black population has the second highest count of 15-44 female residents, estimated to at least 37,000. However, for the rest of the counties, the Hispanic population has the second largest count. These figures are depicted in Table 1 below.

Table 1: Population Size and Race Distribution for State and Counties

Indicators	State Count	Brevard Count	Polk Count	Seminole Count	Volusia Count
Female Population 15-44					
Total Females 15-44	11,322,002	273,802	368,011	278,103	257,899
White	8,210,268	216,661	278,329	213,104	201,360
Black	2,348,320	37,494	69,436	40,621	41,693
Other	763,414	19,647	20,246	24,378	14,846
Hispanic	3,314,185	36,322	95,856	67,866	44,403
Non-Hispanic	8,007,817	237,480	272,155	210,237	213,496

Source: Public Health Statistics and Performance Management

Domestic Violence: For more than a decade, domestic violence rates have been steadily increasing in Brevard County, surpassing the state levels. Domestic violence can impede on the maternal and mental health of pregnant women. From as far back as 1997 to 1999, domestic violence rates were as high as 871 per 100,000 compared to the state level of 860 per 100,000. Between 2016 and 2018, domestic violence rates in Brevard County remain as high as 721 per 100,000 compared to the state rate of 514 per 100,000. Figure 1 below depicts these trends.



Source: Florida Department of Health, Public Health Statistics and Performance Management

Brevard County has the second highest domestic violence rates compared to the other counties. Volusia County has the highest at 846 per 100,000 while Polk County has a rate of 705 per 100,000 and Seminole County has a rate of 562 per 100,000. This comparison is depicted in Table 2 below.

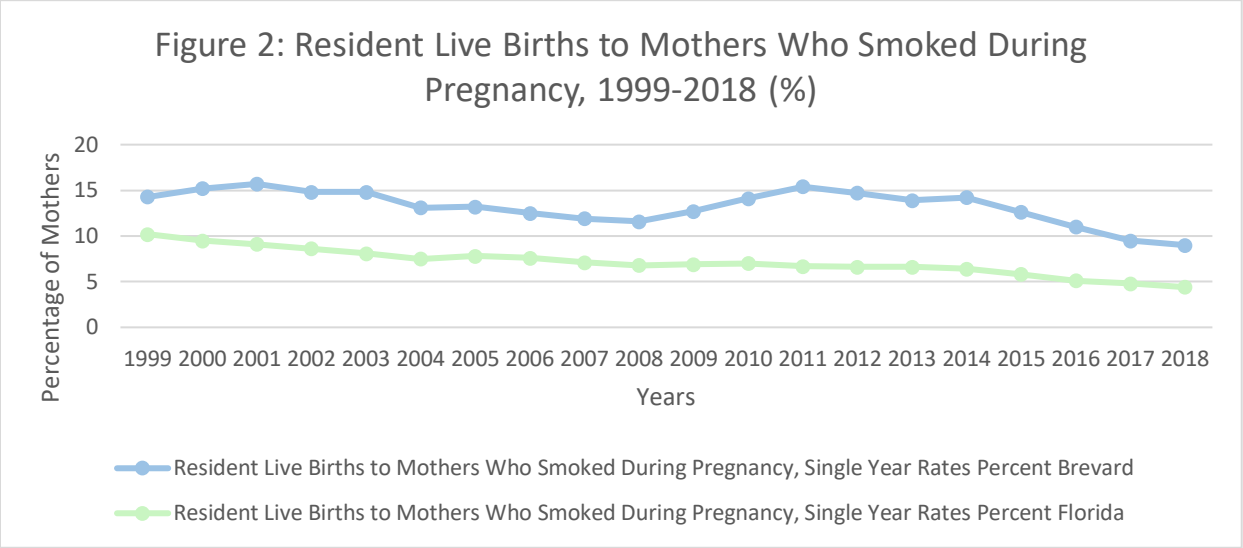
Table 2: Domestic Violence Rates in Brevard, Polk, Volusia and Seminole Counties, 2018

County	County Number	County Rate	County Quartile 1=most favorable4=least favorable
Brevard	12,481	720.8	4th Quartile
Volusia	13,337	845.7	4th Quartile
Polk	14,072	704.9	4th Quartile
Seminole	7,715	562.6	3rd Quartile

Source: Public Health Statistics and Performance Management

Substance Abuse

Tobacco Use: Tobacco use is measured by the number of live births by mothers that reported smoking during pregnancy. The proportion of live births by mothers who smoked has been on a steady decline in Brevard County, from 14.3% in 1999 to 9% in 2018. However, the proportion in Brevard County has consistently remained higher than the state level. While there were 9% of live births to mothers who smoked in Brevard County in 2018, the state level had a proportion of at least 4%. This almost 20-year trend is depicted in Figure 2 below.



Source: Florida Department of Health, Public Health Statistics and Performance Management

Brevard County has the highest proportion of live births from mothers who reported on smoking during the pregnancy (9%) compared to the other counties in 2018. Volusia County has the second highest at approximately 8%, while Seminole County experienced the lowest proportion (2.5%). This comparison among counties is depicted in Table 3 below.

Table 3: Live Births to Mothers Who Reported Smoking During Pregnancy in Brevard, Volusia, Polk and Seminole Counties, 2018 (%)

County	County Number	County Percent
Brevard	477	9
Volusia	405	8.3
Polk	474	6
Seminole	117	2.5

Source: Public Health Statistics and Performance Management

Alcohol Use: In Florida, the most recent reported data on alcohol use by childbearing women is limited to the state level. In a 2015 Pregnancy Risk Assessment Monitoring System (PRAMS) survey, an average 16% of mothers reported engaging in binge-drinking prior to pregnancy. The proportion of non-Hispanic white mothers reporting binge-drinking prior to pregnancy was higher (22.2%) than non-Hispanic black mothers (8.7%) and Hispanic mothers (10.2%). The proportion of mothers aged 25-34 reporting binge-drinking was higher (16.3%) than the other age cohorts. Additionally, those mothers who have more than a high school education (17.5%), had a household

income between 15,000 and 44,000 (18.2%), have no Medicaid (17.3%) and were not married (17%) also had the highest number of reported cases than each respective cohort. These figures are depicted in Table 4 below.

Table 4: Demographic Distribution of Reported Bing-Drinking Prior to Pregnancy

Characteristics	***Reports Binge-Drinking prior to Pregnancy (%)***
Overall Average	***15.6***
Race/Ethnicity	
Non-Hispanic White	22.2
Non-Hispanic Black	8.7
Hispanic	10.2
Age	
19 & Under	13.2
20-24	17.1
25-34	16.3
35+	12.3
Annual Income	
$15,000 or Less	13.5
$15,001-$44,000	18.2
44,000+	17.9
Marital Status	
Married	14.3
Unmarried	17.0
Education Level	
< High School	7.7
High School	14.5
>High School	17.5
Medicaid Recipient	
Yes	14.2
No	17.3

Source: Florida PRAMS, 2015

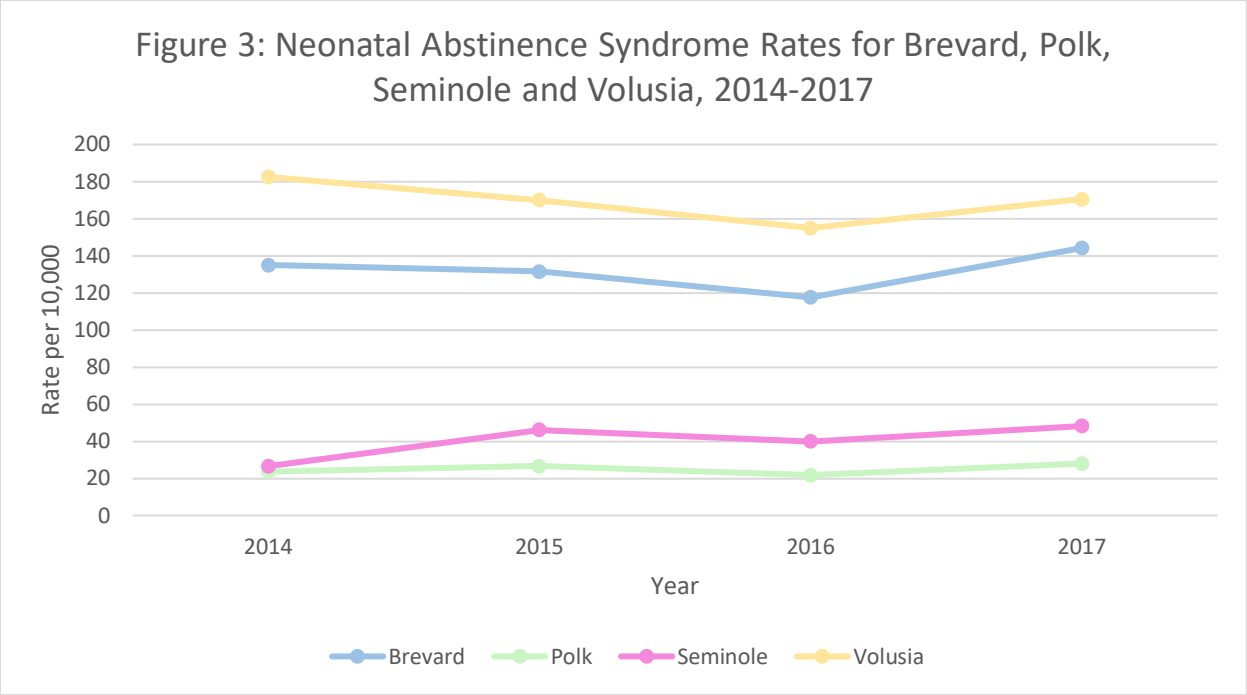
In the 2015 PRAMS survey, an average of 9% of mothers reported engaging in drinking in the last three months of pregnancy. The proportion of non-Hispanic white mothers reporting perinatal drinking was higher (11.9%) than the proportions of non-Hispanic black mothers (6.4%) and Hispanic mothers (6.9%). Those women aged 35 and older had the highest number of reported cases than other age cohorts. Those women who have more than a high school education (11.5%), have a household income higher than $44,000 (16.7%), do not have Medicaid (13.1%) and are married (10.1%) had the highest number of reported cases than each respective cohort. These figures are depicted in Table 5 below.

Table 5: Demographic Distribution of Reported Drinking in the Last Three Months of Pregnancy

Characteristics	***Reports Drinking During Pregnancy (%)***
Overall Average	***9.0***
Race/Ethnicity	
Non-Hispanic White	11.9
Non-Hispanic Black	6.4
Hispanic	6.9
Age	
19 & Under	4.1
20-24	6.7
25-34	9.5
35+	11.5
Annual Income	
$15,000 or Less	6.7
$15,001-$44,000	5.2
44,000+	16.7
Marital Status	
Married	10.1
Unmarried	7.6
Education Level	
< High School	5.7
High School	5.6
>High School	11.5
Medicaid Recipient	
Yes	5.6
No	13.1

Source: Florida PRAMS, 2015

Neonatal Abstinence Syndrome: According to the Florida Department of Health (FDOH), neonatal abstinence syndrome (NAS) refers to a condition in which neonates/newborns are exposed to opioid prescriptions or other illicit drugs during the prenatal period[1]. The neonatal abstinence rate of the state was 68.6 per 10,000 of the population between 2011 and 2013. Prior to 2017, NAS rates in Brevard County had been on a steady decline, from 135 per 10,000 in 2014 to 117 per 10,000 in 2016. However, in 2017, the NAS rate rose to 144 per 10,000, creating a rate difference of 27 per 10,000 of the population. Moreover, Volusia County has the highest NAS rates compared to the other counties between 2014 (183 per 10,000) and 2017 (170 per 10,000). Figure 3 below depicts the NAS rates for Brevard and the four other counties over the three-year period.



Source: Florida Department of Health, Surveillance of Neonatal Abstinence Syndrome in Florida

NAS hospital discharges in Brevard County have also been on a steady increase between 2014 and 2016, Holmes Regional Medical Center has seen 98 more discharges within the two-year period, rivaling hospitals in the Volusia, Seminole and Polk counties. NAS hospital discharges are depicted in Table 6 below.

Table 6: NAS Hospital Discharges in Brevard, Seminole, Polk and Volusia Counties, 2014-2016

AHCA Hospital Facility Number	Hospital Facility Name	Hospital Facility County	2014 NAS Discharges	2015 NAS Discharges	2016 NAS Discharges
100019	Holmes Regional Medical Center	Brevard	47	62	145
100028	Parrish Medical Center	Brevard	11	7	23
100092	Rockledge Regional Medical Center	Brevard	9	7	13
100177	Cape Canaveral Hospital	Brevard	14	16	42
100157	Lakeland Regional Medical Center	Polk	8	18	30
120010	Winter Haven Women's Hospital	Polk	7	5	15
100161	Central Florida Regional Hospital	Seminole	< 5	< 5	< 5
120004	Florida Hospital Altamonte	Seminole	< 5	7	15
100017	Halifax Health Medical Center	Volusia	61	71	90
100169	Florida Hospital Memorial Medical Center	Volusia	8	14	18

Source: Agency for Health Care Administration

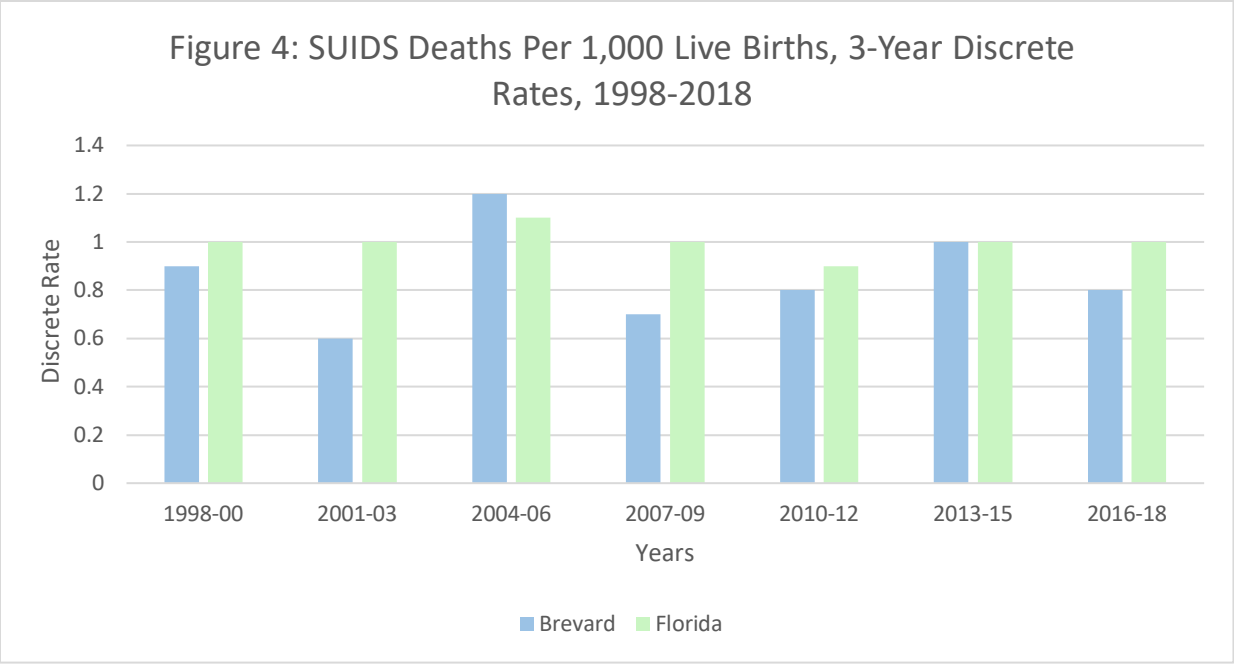
Sudden Infant Death Syndrome (SIDS): Sudden Infant Death Syndrome (SIDS) or Sudden Unexpected Infant Death Syndrome (SUIDS) is defined as the abrupt, unexplained death of an infant (aged less than 1 year) who was seemingly in good health.[2] In 2018, there were a total of 69 neonatal and post neo-natal deaths associated with SUIDS in Florida. Forty-six percent (46%) of those deaths are from the white population while forty-three percent (43%) are from the black population and eight percent (8%) fall under other races. Table 7 below depicts these numbers.

Table 7: Neonatal and Post Neo-natal Deaths from SIDS, 2018

Race	< 1 Day	1-27 Days	Post Neo-natal	Total	Percentage
White	0	4	28	32	46
Black	0	4	26	30	43
Other	0	0	6	6	8
Total	0	8	61	69	

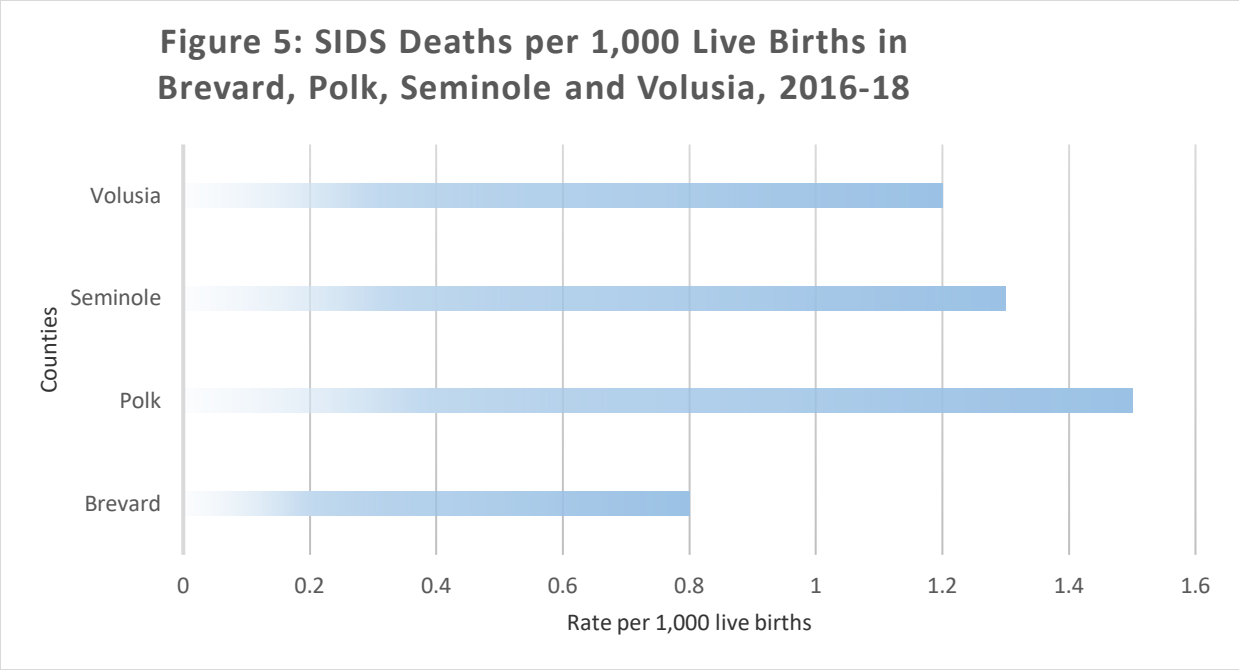
Source: Florida Vital Statistics Annual Report, 2018

Between 2004 and 2006, Brevard County experienced its highest SIDS rate (1.1 per 1,000 live births) compared to the state rate (1.2 per 1,000 live births). Brevard County also experienced its lowest SUIDS rates between 2001 and 2003 (0.6 per 1,000 live births) and between 2007 and 2009 (0.7 per 1,000 live births). Figure 4 below depicts the trend of SUIDS rates for Brevard and Florida in the past twenty years.



Source: Florida Department of Health, Public Health Statistics and Performance Management

Compared to the Polk, Volusia and Seminole counties, Brevard County had the lowest SIDS rate between 2016 and 2018 (0.8 per 1,000 live births). Polk County had the highest SIDS rate (1.5 per 1,000 live births) not only compared to the counties but also compared to the state rate (1 per 1,000 live births). Seminole County follows at a SUIDS rate of 1.3 per 1,000 live births. Figure 5 below depicts the SUIDS rates for the four counties.



Source: Florida Department of Health, Public Health Statistics and Performance Management

Between 2010 and 2018, there have been several cases in Brevard County where SIDS has been associated with asphyxia (mechanical asphyxia, compression asphyxia) and overlaying because of parents/relatives co-sleeping with the infant. Table 8 depicts the occurrence of SIDS-associated deaths in Brevard County across the years and Table 9 provides a racial distribution of these occurrences.

Table 8: Occurrence of SIDS-associated deaths in Brevard County, 2010-2018

Year	General SUIDS	Asphyxia	Overlay	Total
2010	1	0	1	**2**
2014	2	1	2	**5**
2015	0	1	0	**1**
2016	3	0	0	**3**
2017	0	2	5	**7**
2018	0	1	1	**2**

Source: Florida Department of Health, Bureau of Vital Statistics

Table 9: Racial Distribution of Occurrences of SIDS-Associated Deaths in Brevard County, 2010-2018

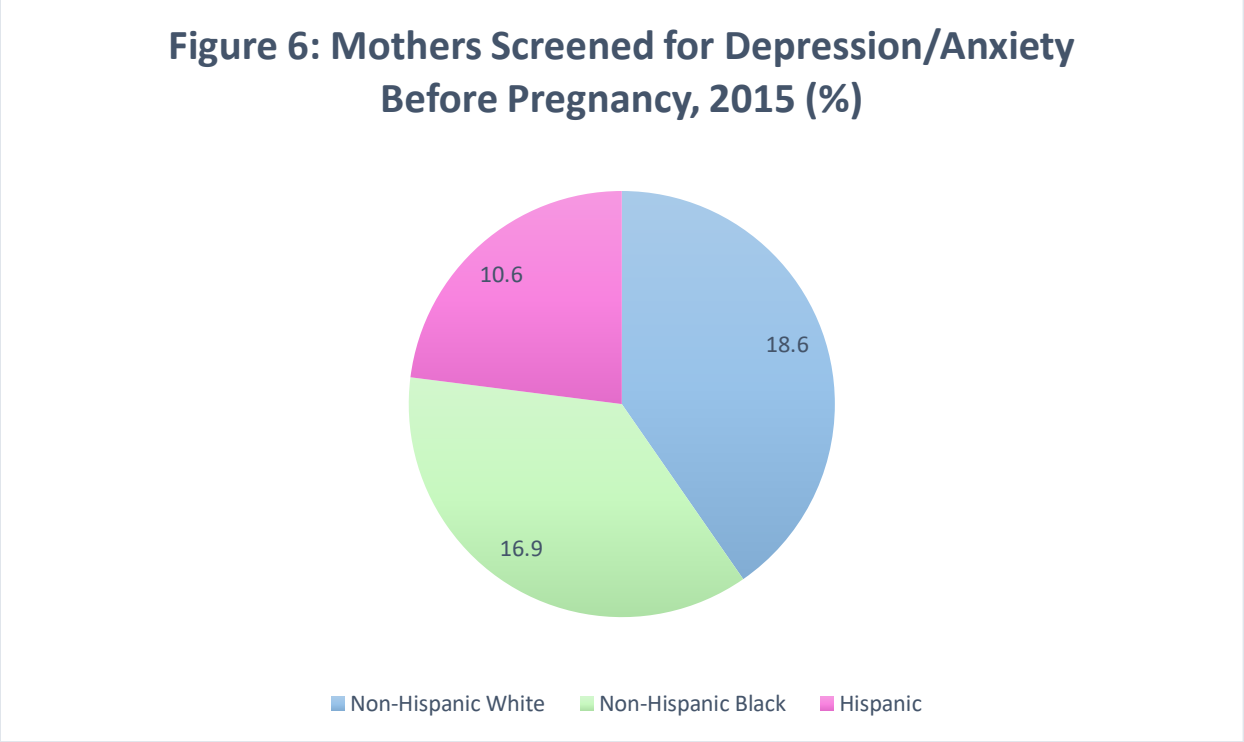
Race	General SUIDS	Asphyxia	Overlay	Total
White	2	4	6	**12**
Black	3	2	4	**9**
Other	0	0	2	**2**

Source: Florida Department of Health, Bureau of Vital Statistics

As shown in Table 8, reported cases of SIDS-associated deaths were the highest in 2014 and 2017 compared to other years within that period. From Table 9, it appears that overlaying was the most reported SIDS-associated death among the race populations in Brevard County.

Maternal Mental Health: Maternal mental health, also known as perinatal mental health, refers to the state of a woman's mental health before, during (prenatal) and after (postpartum) pregnancy. Mental health disorders mostly associated with perinatal health are depressive disorders and anxiety. There has been little research done in maternal mental health in Florida; thus, the following data is only limited to the state level in 2015 or prior years.

Prenatal Depression: Screening new mothers for depression and anxiety comes with the assumption that they are aware of the importance of mental wellbeing during the perinatal period. In the 2015 survey done by PRAMS, an average of 16% of new mothers living in Florida were screened for depression before pregnancy. The percentage of white mothers screened for depression was higher (18.6%) than black mothers (16.9%) and Hispanic mothers (10.6%). The racial distribution of reported depression screenings before pregnancy is depicted in Figure 6 below.



Source: Florida PRAMS, 2015

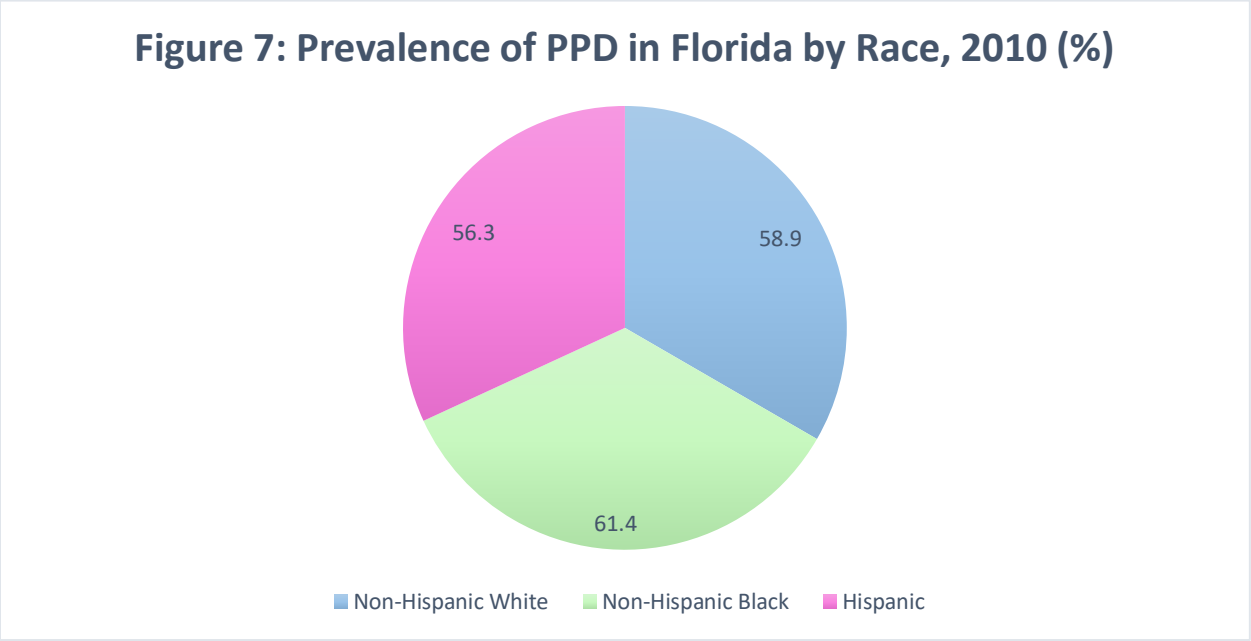
Results from the survey show that other key demographic characteristics are associated with depression/anxiety screenings. Women aged 19 years and younger had the highest proportion of depression/anxiety screenings (26.6%) than the other age groups. Women who had less than a high school education reported a greater proportion of depression/anxiety screenings (22%) than those with a high school education and higher. Women who had a household income that was $15,000 or less reported the highest proportion of depression/anxiety screenings (20%) than other income levels. Medicaid recipients also reported a higher proportion of depression/anxiety screenings (17.3%) than those mothers who are not covered by Medicaid (13.3%). From the results, it appears that unmarried mothers reported a greater proportion of depression/anxiety screenings (17.2%) than married mothers (14.1%). These results are shown in Table 10 below.

Table 10: Demographic Distribution of Depression/Anxiety Screenings

Characteristics	***Depression/Anxiety Screening (%)***
Age	
19 & Under	26.6
20-24	11.3
25-34	16.2
35+	15.6
Household Income	
$15,000 or Less	20.0
$15,001-$44,000	13.0
44,000+	14.7
Marital Status	
Married	14.1
Unmarried	17.2
Education Level	
< High School	22.0
High School	16.0
>High School	13.8
Medicaid Recipient	
Yes	17.3
No	13.3

Source: Florida PRAMS, 2015

Post-Partum Depression: PRAMS defines post-partum depression (PPD) within the parameters of always/often feeling down, depressed, or sad. In a 2010 PRAMS survey, an average of 59% of mothers living in Florida experienced post-partum depression (PPD) symptoms after childbirth. The prevalence of PPD appears to be higher in non-Hispanic black mothers (61.4%) than non-Hispanic white (58.9%) and Hispanic mothers (56.3%). The racial distribution of reported PPD cases is depicted in Figure 7 below.



Source: Florida PRAMS, 2010

Other maternal demographic characteristics analyzed in the survey appear to be associated with a high prevalence of PPD. Mothers aged 19 or less experienced a higher prevalence of PPD (62.8%) than other age groups. PPD prevalence was also slightly higher among mothers with an annual income at less than 15,000 per year (59.7%) than other reported annual incomes. PPD prevalence among mothers with unintended pregnancies (62.4%) was also higher compared to mothers with intended pregnancies (55.6%).

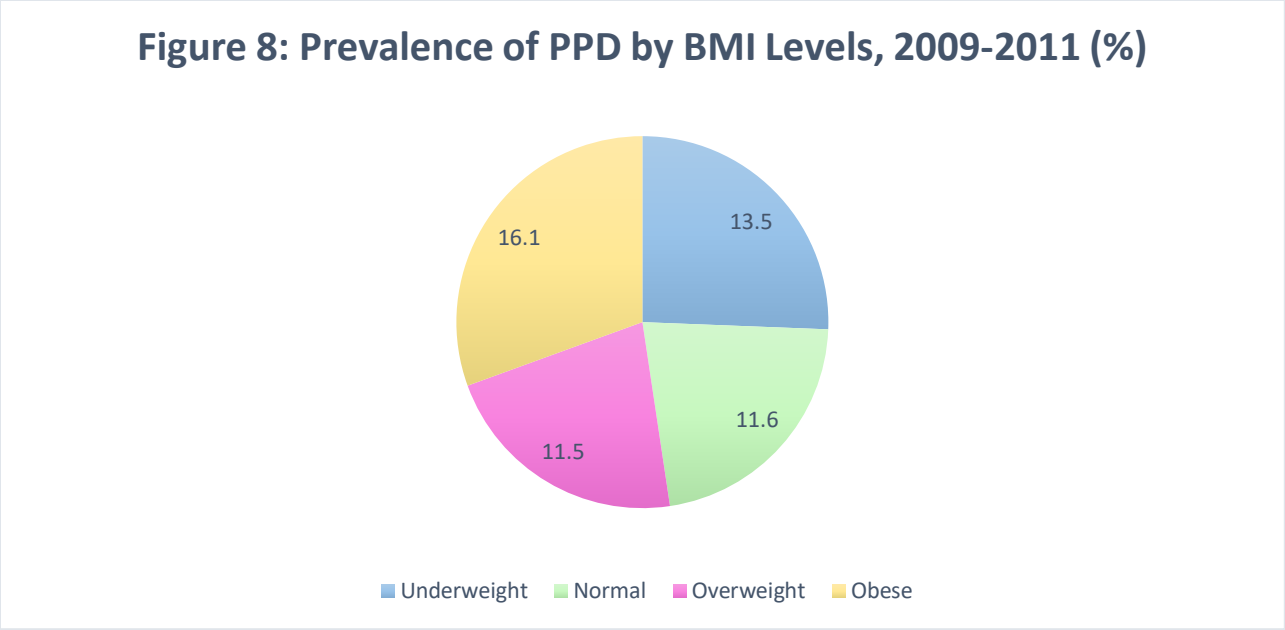
Unmarried mothers experienced PPD at a higher prevalence (58.2%) than those who were married (59.4%). Mothers who smoked within the last three months of pregnancy also experienced significantly higher PPD prevalence levels (71%) than their counterparts (57.5%). These figures are depicted in Table 8 below.

Table 11: Demographic Distribution of the Prevalence of PPD in Florida

Characteristics	***PPD Prevalence (%)***
Age	
19 & Under	62.8
20-24	57.5
25-34	57.7
35+	56.3
Annual Income	
Less than $15,000	59.7
$15,000-$34,999	57.1
$35,000+	57.9
Marital Status	
Married	58.2
Unmarried	59.4
Pregnancy Intent	
Unintended Pregnancy	55.6
Intended Pregnancy	62.4
Smoker (Within the last 3 months)	
Smoker	71
Non-smoker	57.5

Source: Florida PRAMS, 2010

Additionally, there appears to be an association between BMI (Body Mass Index) levels and post-partum depression. A PRAMS report on the 2009-2011 trends of BMI on maternal health related outcomes revealed that obese mothers were more likely to report often or always feeling down, depressed, or sad (16.1%) than those who were underweight (13.5%), overweight (11.5%) and normal weight (11.6%). These figures are depicted in Figure 8 below.



Source: Florida PRAMS, 2009-2011

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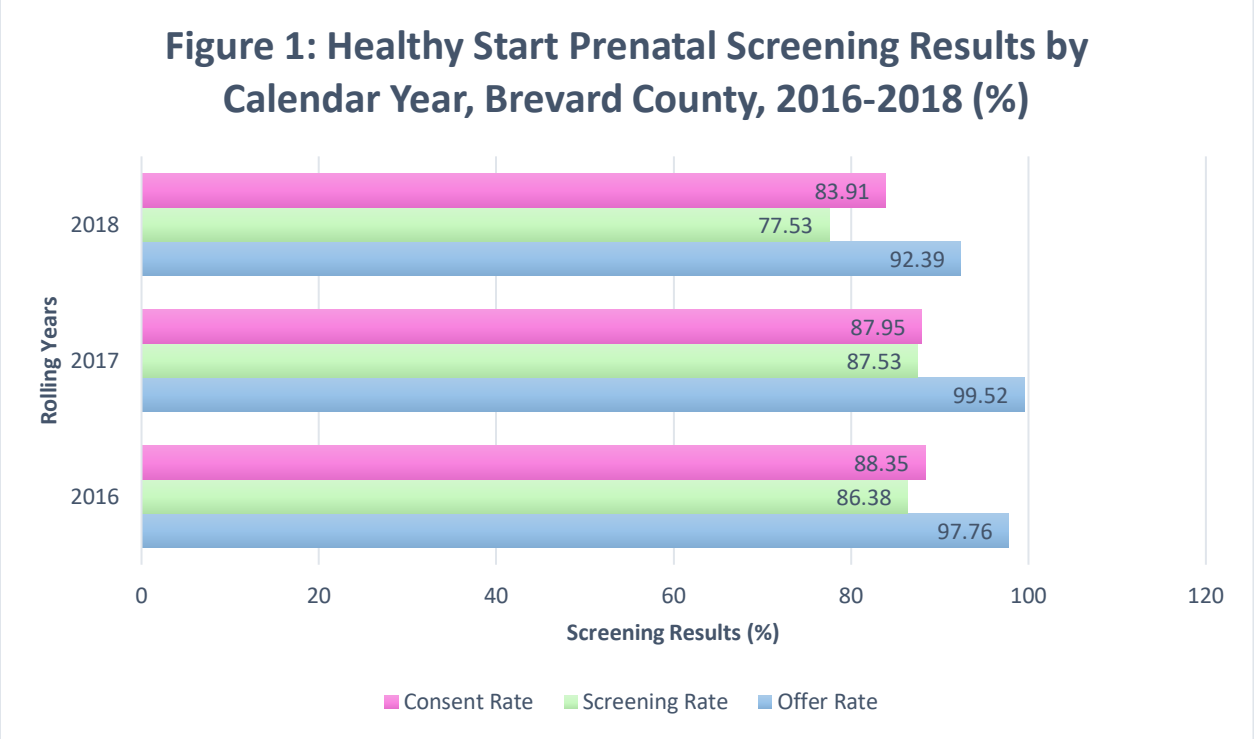
2. Sudden Unexpected Infant Death. floridahealth.gov. http://www.floridahealth.gov/programs-and-services/childrens-health/sudden-unexpected-infant-death/index.html. Updated January 22, 2019. Accessed September 30, 2019.

Healthy Start Care Coordination for Brevard County

This report will examine the activities involved in Healthy Start care coordination for mothers and infants living in Brevard County. These activities include prenatal and infant screening as well as participation in the Healthy Start infant programs and services. It is important to note that data between 2016 and 2018 is provisional and subject to change.

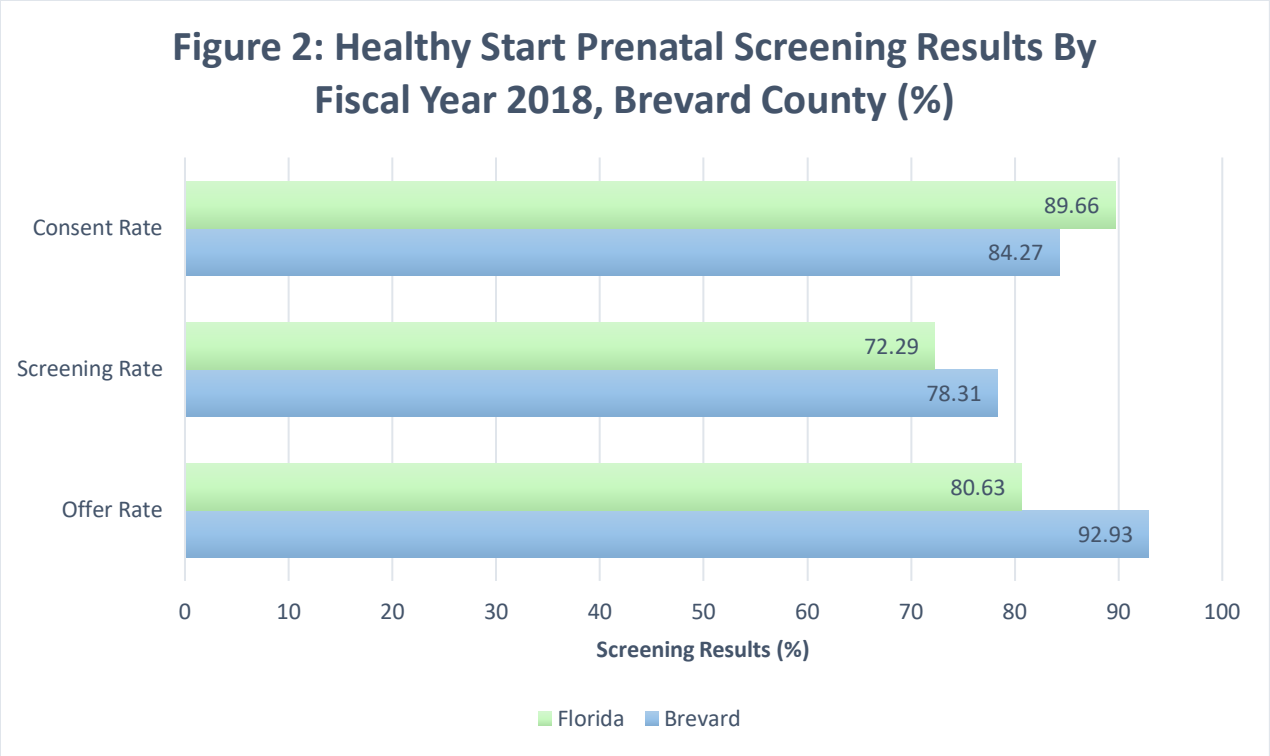
Healthy Start Screening

Healthy Start Prenatal Screening: Between 2016 and 2018, there have been slight decreases in Healthy Start prenatal screen offer rates (97.7% in 2016 to 92.4% in 2018) and consent rates (88.4% in 2016 to 84% in 2018) as well as a significant drop in screening rates (87% in 2016 to 78% in 2018). However, Healthy Start prenatal screening results for pregnant mothers have maintained an above average percent in the 3-year period. These numbers are depicted in Figure 1 below.



Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

Within Fiscal Year (FY) 2018 (July 1, 2018 to June 30, 2019), prenatal screen offer rates are higher at 93% in Brevard County compared to 81% at the state level. Screening rates (78%) are also higher than the state level (72%). However, consent rates in Brevard County are slightly lower (84%) than rates at the state level (90%). It is also important to note that consent rates for Brevard County and the state are higher than the screening rates; moreover, these have been the lowest screening rates since 2016. But for FY 2018, rates for screen offers; screening and consent have maintained an above average percent. These results are shown in Figure 2 below.



Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

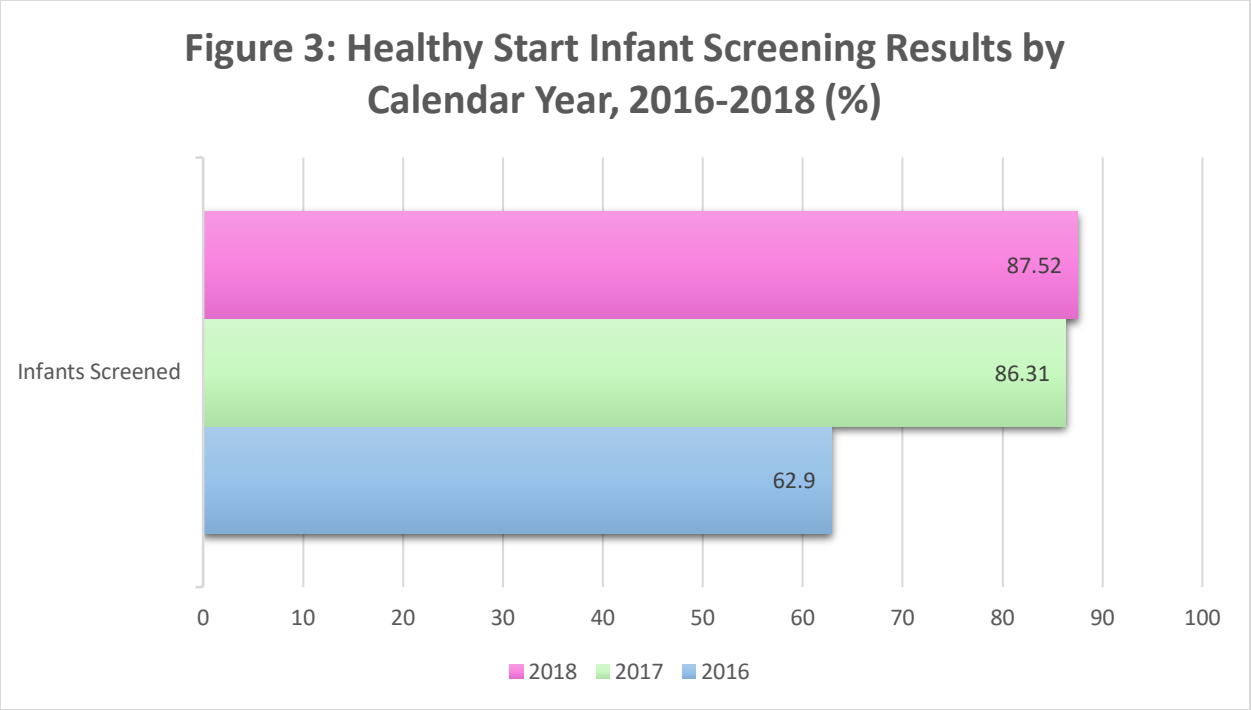
Prenatal Screening for Depression and Mental Health Service: The proportion of mothers screened for depression has slightly increased from 13.1% in 2016 to 14.7% in 2018. Likewise, the proportion of mothers receiving mental health (MH) services during prenatal care has had a 2.3% increase between 2016 and 2018. These numbers are depicted in Table 1 below.

Table 1: Healthy Start Prenatal Depression and MH Services Screening Results in Brevard County, 2016-2018 (%)

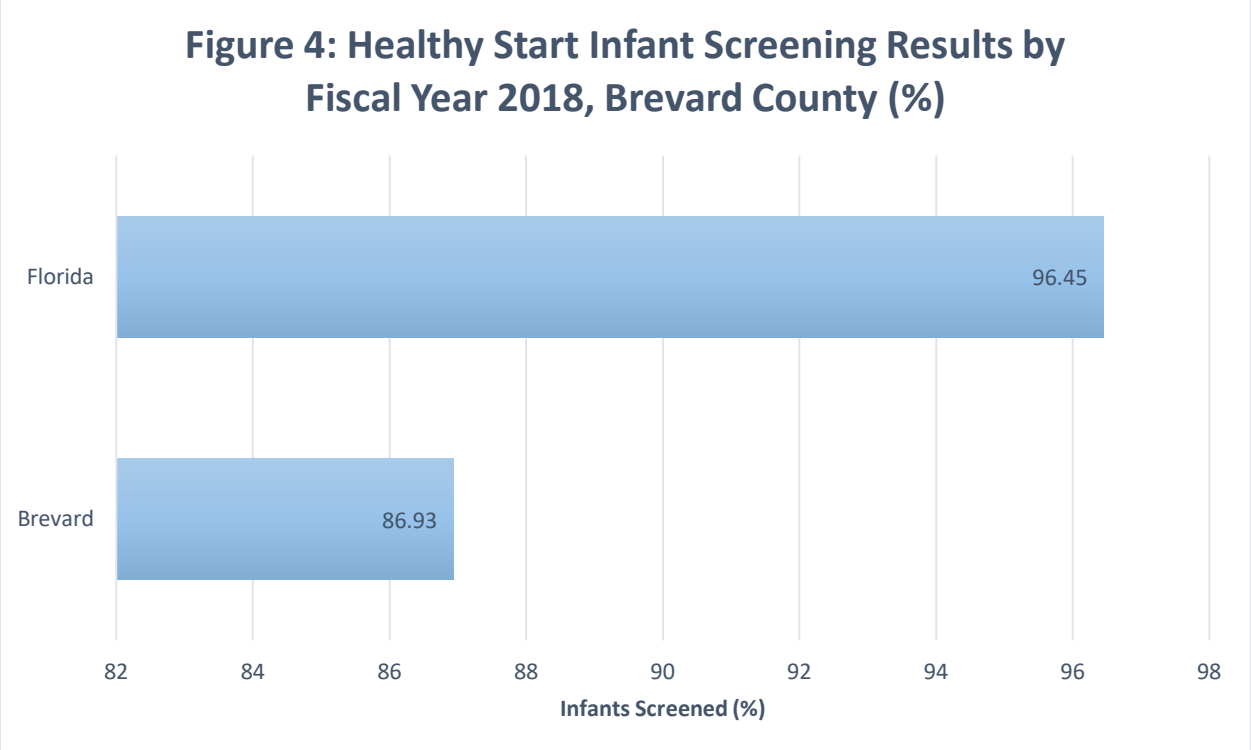
Screening Results	2016	2017	2018
Has Depression	13.1	14.8	14.7
Has Received MH Services	21.3	22.5	23.6

Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

Healthy Start Infant Screening: Rates of infant screening have steadily increased within the 3-year period, from 63% in 2016 to 88% in 2018. Within FY 2018, the rate of infants screened in Brevard County are significantly lower (86.93%) than those infants screened on the state level (96.45%). Figure 3 depict the 3-year rolling rates of infant screened in Brevard County and Figure 4 depicts the infants screened in FY 2018.



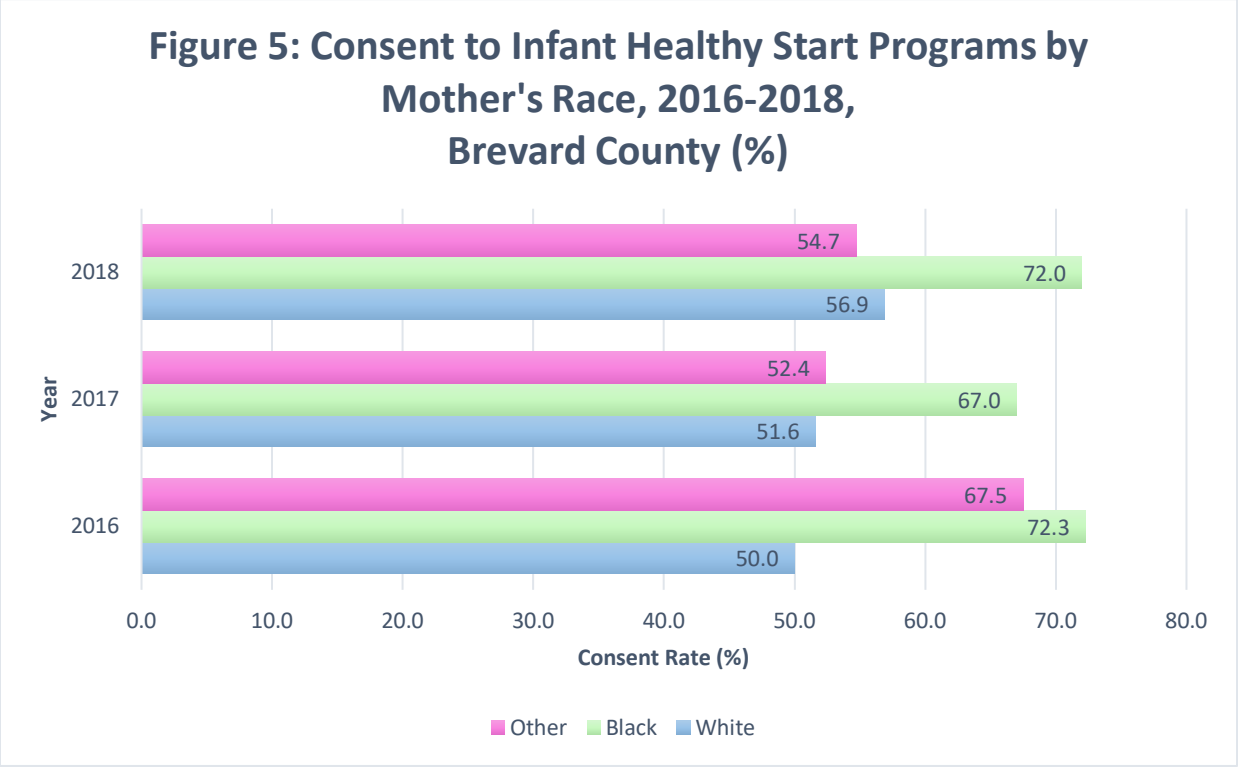
Source: Florida Department of Health, Division of Public Health Statistics and Performance Management



Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

Consent to Infant Healthy Start Programs: Consent is defined as mothers consenting to 'yes' for involvement in the infant Healthy Start programs. Rates of consent by race and trimester when prenatal care began will be examined.

Rates of Consent to Infant Healthy Start Programs by Race: Within the 3-year period (2016-2018), rates of consent from white mothers increased from 50% in 2016 to approximately 57% in 2018. Rates of consent from mothers of other races decreased from 67.5% in 2016 to 54.7% in 2018. Rates of consent from black mothers appear to be more mixed. There was a 5.3% decrease in rates of consent between 2016 and 2017 but in 2018, rates increased to 72%. However, consent rates for black mothers appear to be the highest across the 3-year period. The trend of consent rates by race is depicted in Figure 5 below.



Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

Rates of Infant Consent to Healthy Start Programs by Trimester in Which Prenatal Care Began (Trimester Care): In 2016, mothers who did not receive prenatal care reported the highest consent rates (87.5%) to the infant Healthy Start programs. In 2017, the highest consent rates were from mothers receiving prenatal care in their third trimester (78.9%) and those who did not receive prenatal care (68%). There are similar results in 2018, where mothers receiving prenatal care in the third trimester (78.9%) or no prenatal care (72.7%) had the highest rates of consent. Consent rates within the first trimester were the lowest across the 3-year period, particularly in 2017 (50.2%). The consent rates by trimester of prenatal care are depicted in Table 2 below.

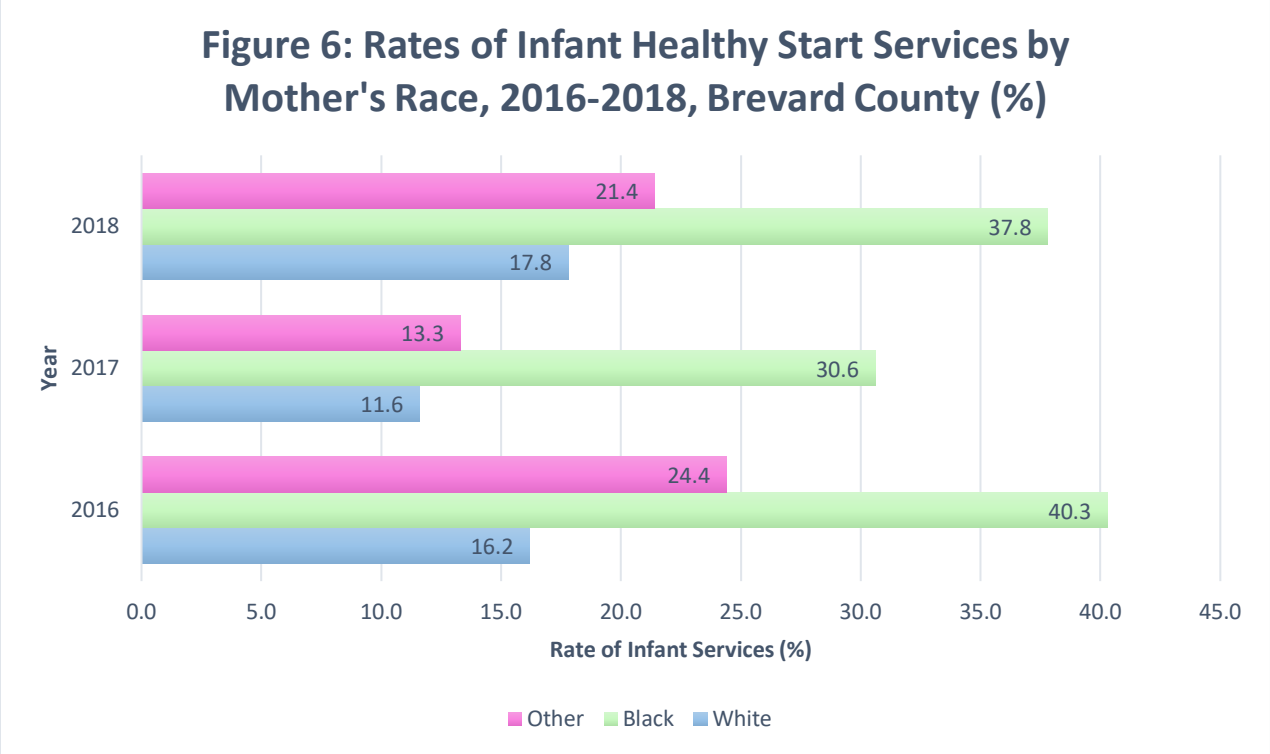
Table 2: Consent to Infant Healthy Start Programs by Trimester Care, 2016-2018, Brevard County (%)

Trimester	2016	2017	2018
1st trimester	52.0	50.1	54.4
2nd trimester	71.0	69.1	69.1
3rd trimester	76.0	78.9	78.9
No prenatal care	87.5	68.0	72.7
Unknown prenatal care status	74.7	67.2	76.7

Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

Infant Healthy Start Services: This indicator is defined as the rate of participation in infant Healthy Start services. Participation by mother's race and trimester care will be examined.

Rates of Infant Healthy Start Services by Mother's Race: Rates of infant Healthy Start services were the lowest in 2017 among white mothers (11.6%), black mothers (30.6%) and mothers from other races (13.3%). Additionally, black mothers had the highest rate of participation in Healthy Start Services across the 3-year period. These rates are depicted in Figure 6 below.



Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

Rates of Infant Healthy Start Services by Trimester Care: Between 2016 and 2018, participation in infant Healthy Start services was highest in mothers who did not receive prenatal care throughout the trimesters. Participation was particularly highest among those mothers in 2016 (70%). Participation in infant Healthy Start services was lowest in mothers with first trimester in the 3-year period, particularly in 2017 (12.1%). Participation rates are depicted in Table 3 below.

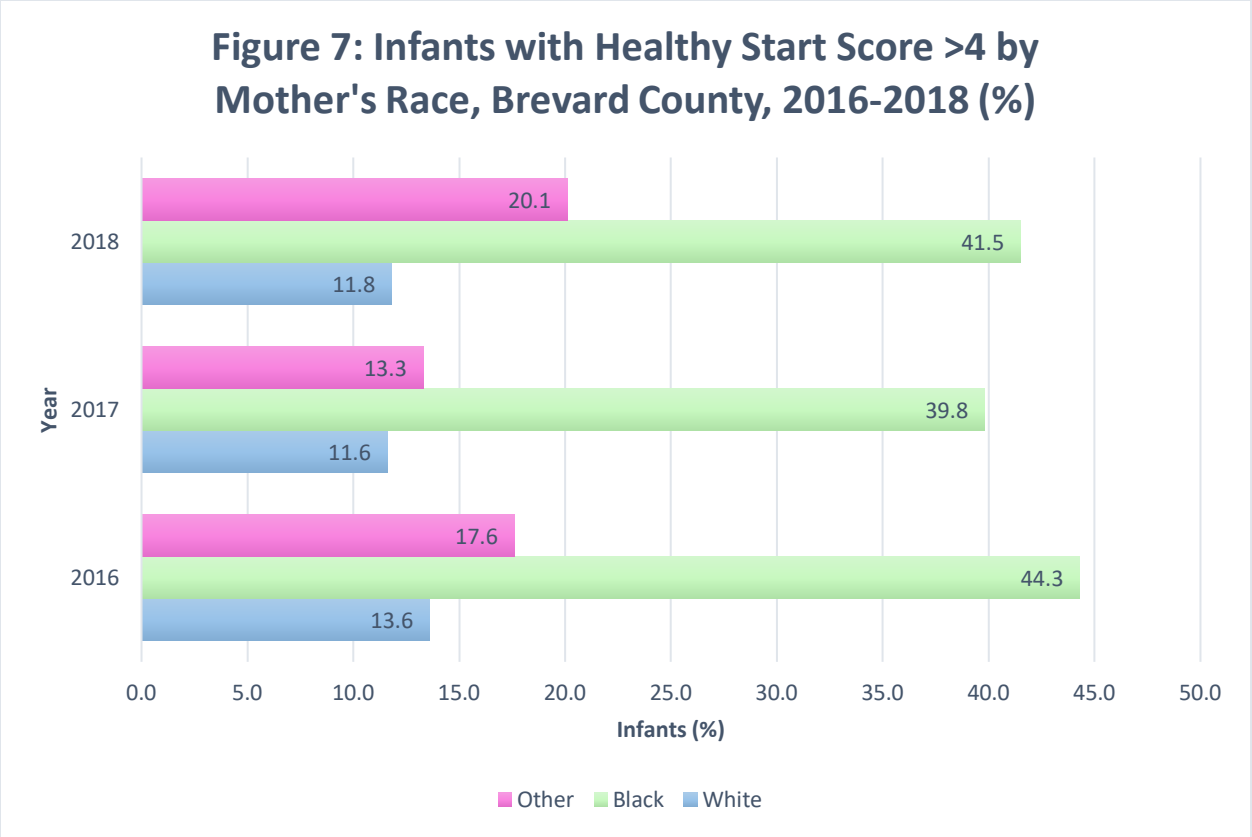
Table 3: Rates of Infant Healthy Start Services by Trimester Care, Brevard County, 2016-2018 (%)

Trimester	2016	2017	2018
1st trimester	18.7	12.1	18.1
2nd trimester	23.9	18.4	22.5
3rd trimester	31.7	25.4	27.6
No prenatal care	70.0	52.1	55.3
Unknown prenatal care status	33.3	22.8	31.3

Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

Infant Healthy Start Scores: This indicator is defined by the percentage of infants with Healthy Start scores greater than 4. Scores by mother's race and trimester care will be examined.

Percentage of Infants with Healthy Start Score >4 by Mother's Race: Throughout the 3-year period, the proportion of infants of black mothers with a Healthy Start score >4 appears to be higher than the proportion of infants of white mothers and mothers from races. This difference was particularly significant in 2016 where 44.3% of infants of black mothers scored >4 compared to 13.6% of infants of white mothers and 17.6% of infants of mothers from other races. These proportions are depicted in Figure 7 below.



Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

Percentage of Infants with Healthy Start Score >4 by Trimester Care: Between 2016 and 2018, infants of mothers who did not receive prenatal care had the highest proportions of receiving a Healthy Start score <4 (77.5% in 2016, 69% in 2017, 65.4% in 2018). The lowest proportion of infants receiving a Healthy Start score >4 where those whose mothers received prenatal care in the first trimester (16.7% in 2016, 12.6% in 2017, 12.9% in 2018). Moreover, during the span of three years there appears to be a steady decline to the percentage of infants receiving Healthy Start scores >4 in each trimester. These numbers are shown in Table 4 below.

Table 4: Infants with Healthy Start Score >4 by Trimester Care, Brevard County, 2016-2018 (%)

Trimester	2016	2017	2018
1st trimester	16.7	12.6	12.9
2nd trimester	22.7	20.7	19.2
3rd trimester	31.7	23.7	21.5
No prenatal care	77.5	69.0	65.4
Unknown prenatal care status	32.8	28.9	31.0

Source: Florida Department of Health, Division of Public Health Statistics and Performance Management

Data Inference on Risky Behaviors and Mental Disorders Impacting Maternal and Child Health

Domestic Violence: In Florida law, domestic violence is defined as any assault, battery, stalking, kidnapping, false imprisonment or any criminal offense that results in physical injury of one family/household member on another family/household member[1]. According to the National Coalition Against Domestic Violence (NCADV), 1 in 3 women in Florida are victims of domestic violence[2]. Domestic violence and more specifically, intimate partner violence (IPV), has severe effects on maternal and neonatal outcomes including insufficient prenatal care, poor nutrition, inadequate weight gain, depression, substance abuse as well as low birth weight and preterm birth in infants[3]. In Brevard County, there has been a consistent increase in domestic violence cases, reaching as high as 721 per 100,000 in 2018 compared to the state level of 514 per 100,000. Brevard County also has the second highest rates of domestic violence compared to the Polk, Seminole and Volusia counties. These recent findings have led the Planning Committee to focus on developing strategies to mitigate the risk of domestic violence, particularly intimate partner violence (IPV), on pregnant/childbearing women (aged 18-44).

Substance Abuse: For Florida and Brevard County, the prevalence of substance abuse includes tobacco use and alcohol use in pregnant/childbearing women as well as the occurrence of Neonatal Abstinence Syndrome (NAS) in infants.

Tobacco Use: Tobacco use during pregnancy can increase the risk of preterm birth, sudden infant death syndrome (SIDS), low birth weight and birth defects of the mouth and lip[4]. E-cigarettes that also contain nicotine are just as harmful, hindering the development of an infant's lungs and brain[4]. In 2018, 9% of live births are among mothers who smoke tobacco in Brevard, surpassing the state level (4%) and select counties. The recent increase in tobacco use could be attributed to the popularizing of e-cigarettes and vaping.

Alcohol Use: In 2015, 9% of new mothers living in Florida reported drinking during the last three months of their pregnancy. Alcohol use during pregnancy can increase the risk of SIDS and Fetal Alcohol Spectrum Disorders (FASD) which can cause mental retardation and birth defects.[5] In 2015, an average of 16% of new mothers living in Florida engaged in binge-drinking prior to pregnancy. According to the CDC, 18% of childbearing women in Florida engaged in binge-drinking in 2016.[5] Binge-drinking (excessive alcohol use) among childbearing women can lead to a disruption of the menstrual cycle and increase the risk of infertility and unintended pregnancies.[5]

Neonatal Abstinence Syndrome (NAS): Opioid drug use during pregnancy has become a national priority in recent years. The CDC reports that the number of pregnant women with opioid use and disorder between labor and delivery has quadrupled since 1999.[4] The NAS rate for Brevard has increased to 144 per 10,000 since 2017 and is the second highest rate compared to the Polk Seminole and Volusia counties. Opioid use in pregnant women can lead to maternal mortality and hinder neonatal development causing preterm birth, stillbirth and NAS[4]. During NAS, the newborn will experience withdrawal symptoms that include high-pitched crying, irritability, sleep-wake disturbances, feeding difficulties, etc[6]. NAS hospital discharges in Brevard has also increased between 2014 and 2016, particularly at Holmes Regional Medical Center that has seen 98 more discharges.

Based on these recent findings, the Planning Committee wishes to focus their efforts on reducing the prevalence of substance abuse among childbearing women, especially those from hard-to-reach vulnerable sub-groups in society (eg. incarcerated women).

Sudden Infant Death Syndrome (SIDS): Sudden infant death syndrome (SIDS) or sudden infant unexpected death syndrome (SUIDS) often occurs during sleep or around the infant's sleep area. [7] Although the Brevard County SIDS rate for 2018 (0.8 per 1,000 live births) was lower compared to the state (1 per 1,000 live births), efforts to further reduce these occurrences must remain critical. The cause of SIDS is generally unknown because parents/caregivers often do not see these deaths as they occur.[7] However, a common behavioral risk of SIDS is the use of improper sleep methods for the infant. In Brevard County, these improper sleeping methods have led to infant deaths by asphyxia or overlaying (accidental death by smothering) between 2010 and 2018. Based on these findings, the Planning Committee will continue to develop strategies designed to raise awareness and knowledge of SIDS and its behavioral risks among caregivers.

Maternal Mental Health Disorders: Maternal/Perinatal mental health disorders are usually associated with prenatal and post-partum depression. These disorders, along with toxic stress, can cause poor neural and behavioral pathways to develop within the fetus.[8] In 2015, an average 16% of new mothers were screened for prenatal depression while an average 59% of mothers were screened for post-partum depression in Florida. Prenatal and post-partum depression mostly affected black mothers, women aged 19 and younger, had less than a high school education, earn less than $15,000 annually and are overweight/obese. Therefore, the Planning Committee will be targeting these at-risk populations to significantly reduce the prevalence of pre/post-partum depression in Brevard County.

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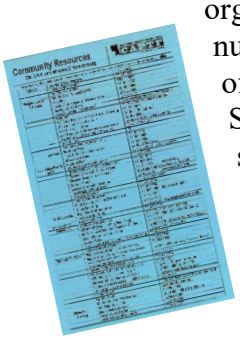
Overview of Community Services

(Below are just a few of the resources Brevard County has to offer)

Brevard County is fortunate to have a great number of resources available to meet many resident's health and human service needs. A Community Resource card designed by CAPTF (Child Abuse Prevention Task Force of Brevard County) is used by most of the health and human service organizations as a resource. The Community Resource card lists agencies and phone numbers by category. The Healthy Start Coalition provides the Florida Department of Health in Brevard County (DOH-Brevard), Lifetime Counseling Center-Healthy Start, as well as every OB office and birthing hospital with the 5x8 card stock card so it can be given to every pre- and post-natal woman in Brevard County (multiple times). The Coalition has also developed an electronic version that is e-mailed to Community Connect clients, regardless of whether they accepted services or not. In addition, 211-Brevard has a comprehensive directory of community services that can be accessed by phone or on-line (www.211brevard.org).


Community Resources

DOH-Brevard has clinics located in the central and southern areas of Brevard County providing comprehensive services for Medicaid eligible clients, underinsured and uninsured clients on a sliding fee scale. To better serve the community, DOH-Brevard has collaborated with the Coalition, delivery hospitals and local OBs to expand and improve the way in which they provide high quality, comprehensive maternity services to all pregnant women in Brevard County. Objectives include identifying and removing barriers to prenatal care, providing comprehensive, high quality ante partum care, improving high risk maternity care, and ensuring continuity of care, thereby lowering litigation risks to all providers, and improving maternal/infant outcomes. In addition, services also include family planning and perinatology services. Unfortunately, DOH-Brevard only accepts two of the seven Medicaid options offered in Brevard: Simply and Sunshine.

Brevard Health Alliance (BHA) is the Federally Qualified Health Center (FQHC) in Brevard County. BHA offers pediatrics and family medicine in northern, central, and southern areas of Brevard County, women's and behavioral health services, as well as a pharmacy in the south, and dental care in a mobile clinic.

Brevard County has a location in the northern, central and southern parts of the county providing women with free pregnancy tests, infant clothing, formula, and diapers, counseling, and support services, as well as classes on parenting, pregnancy and life skills. These service agencies are B.E.T.A. Crisis Pregnancy Center, Agape Pregnancy Center, and Pregnancy Resource Center.

Community Support Groups: Several community support groups exist within Brevard County, including the MOM's Club, Parent to Parent (for parents of a child with disabilities), Mothers of Preschoolers, and Mothers of Multiples, just to name a few.

Children with Special Health Care Needs: Medical Foster Care and the Early Steps provide the following services for eligible children birth to age 21: Nurse Care Coordination, Specialist Office Visits, and Primary Care Pediatricians through programs that include the evaluation and assessment of developmental delays for children from birth to age 3.

Child Find: This is a support service offered to the public-school system which identifies children over age 3 who may be at risk for developmental delays and/or other conditions.

Children with Autism: Florida Institute of Technology has skilled staff to assess, evaluate, and treat children age 2-8 with autism.

Car Seat Safety: The University of Florida Extension Center and the Titusville Fire Department offer a car seat safety class in the northern, central, and southern areas of Brevard County on a rotating basis. A car seat and installation are included at low cost.

Cribs for Kids: Cribs for Kids is offered by Brevard C.A.R.E.S. and its affiliates.

Childcare: The Early Learning Coalition offers childcare for children 6-weeks to school age, as well as subsidized childcare, to Brevard County children, based on space availability. Early Head Start services those children from birth to two years of age. In Brevard County this service is offered through Children's Home Society. Head Start is offered through the Brevard Public Schools and services children ages three to five. The Space Coast Early Intervention Center offers developmentally and physically challenged children ages 6-weeks to 3rd grade an opportunity to learn and play.

The number of high-risk pregnancies is increasing, many of which present multiple high-risk factors. Many of the OB practices in Brevard County will not see these high-risk clients. Brevard County is fortunate to have a full-time Maternal and Fetal Medicine (MFM) physician, Dr. Catherine Yeagly, who is in the southern end of the county. In addition, Nemours Children's Health System allows Dr. Armando Fuentes to come to Brevard County one day a week to serve the clients. His office is also in the southern end of the county. MFM specialists are expensive and most uninsured patients cannot afford the consultation fee and therefore do not attend.

Domestic Violence is on the rise in Brevard County. The following agencies offer counseling, support and/or shelter: Lifetime Counseling Center, Salvation Army (north, central), The Haven, Serene Harbor, and the Women's Center.

Brevard is the home of the Preeclampsia Foundation. The Preeclampsia Foundation mission is to improve the outcomes of hypertensive disorders of pregnancy by educating, supporting, and engaging the community, improving healthcare practices, and finding a cure for preeclampsia.

Help Me Grow ensures that all children have the best possible start in life by providing free developmental and behavioral screenings and connecting them to the resources they need.

Home Instruction for Parents of Preschool Youngsters (HIPPY): HIPPY offers peer home visitors an opportunity to deliver a curriculum to parents of children ages 2 -5 for 1 hour a week for 30 weeks. Parents can then use HIPPY resources and new skills to teach their children for 20 minutes each day.

Challenges

Like many other communities, Brevard County has seen many changes to the maternal and child health care system over the last several years. These changes have affected both the Coalition as well as the system of care for which it funds and provides oversight.

There has been a decrease in long-term established OB practices, reducing the number of practices, consequently, reduces patient access to care. As of January 2020, there were 13 OB practices (comprised of 19 OBs) compared to 20+ such practices ten years ago. In addition, there are no OB practices in Palm Bay (South County), which has the largest population of childbearing women.

Fewer OB practices are accepting all Medicaid Plans. One practice accepts no Medicaid Plans, Brevard Health Alliance (FQHC) accepts all Medicaid Plans while the others only accept two or three of the seven plans offered in Brevard County.

Use of Medicaid as the primary source of payment has increased over a ten-year period from 2,418 cases in 2009 to 2,636 in 2018, an increase from 47% of all deliveries in 2009 as compared to 50% in 2018. The percentage of expectant mothers having no prenatal care increased from 52 in 2009 to 170 in 2018, or 1% of all deliveries in 2009 as compared to 3% in 2018.
Data source: Department of Health Vital Statics CHARTS

Brevard County ranks among the top 11 counties in Florida with regards to the opioid epidemic. The Coalition, Together in Partnership, the Opioid Task Force and DOH-Brevard are working on initiatives to decrease and eventually lower/eliminate that ranking. The following organizations are just a few that offer day treatment, therapy and/or support groups: Aspire, Circles of Care, STEPS, Drug & Alcohol Substance Abuse Treatment Center.

The number of uninsured pediatric clients continues to increase, thereby resulting in a concentrated community effort to get more children enrolled in FL KidCare. The success of this initiative is evidenced by the increased number of enrollments. According to national data, between 2013 and 2015, the percentage of uninsured children in Florida dropped from 11.1 percent in 2013 to 6.9 percent in 2015 — the second largest percentage reduction in the nation.
Data Source: Flora Healthy Kids 2016 Annual Report

The County's mass transportation system is not effectively covering the length of 72.5 miles.
For example-one way only: if a pregnant woman was leaving on the county's mass transit system at the North Brevard Library-Titusville (northern part of the county) at 9:53AM, she would arrive at her high-risk doctor's office by approximately 12:14PM (2h 21m). The trip would include 4 different busses that stopped 132 times and she would need to walk two different times to either catch the next bus or arrive at her destination for a total of 13 minutes/.6 miles. The trip would cost $6/person in bus fare. If a pregnant woman has a car, the trip could take 56 minutes / 38.4 miles. The trip would cost approximately $4.13 in gas depending on the car.
Data Source: www.321transit.com; www.fueleconomy.gov

Access to dental services for pregnant women and pediatrics of underserved families is limited. DOH-Brevard and Brevard Health Alliance do provide services, but only to their patients and pediatric services are limited.

To help fill potential gaps in services, the Bonnie Schuster Memorial Fund provides special or emergency services for pregnant women and infants that are not currently available through Healthy Start or other social service agencies. Since its inception in October of 1999, this fund has paid for postpartum Doula services, prescriptions, specialized formula, preemie diapers, educational training, transportation out of domestic violence situations, and payment of utility bills for over 2,500 recipients through June 2018. The Bonnie Schuster Memorial Fund receives funding through local grants and donations. Participants only become eligible after all other avenues have been exhausted and then paying when no other option exists. Fund requests are limited to $200 per application and are restricted to 3 life-time requests per person.

Housing is an obstacle for many of the pregnant women/families. The housing and rental market has increased in price. An average 900sq/ft rental is $1,125. While there are housing authorities, emergency shelters, and a Homeless Coalition; many do not take pregnant women with accompanying children or there is a significant waiting list for placements. A few of the organizations that can render assistance in these circumstances are: Community of Hope, Family Promises of Brevard, Genesis House, and the Space Coast Center for Women & Children.

In July 2018, Coordinated Intake and Referral (CI&R) was implemented. Brevard County and began meeting and strategizing with stake holders in July 2017. Brevard County immediately decided that the Coalition would implement CI&R. Therefore, on July 1, 2018 CI&R was launched with little to no training, guidance, or expectation by the creators or CI&R. Due to the lack of preparedness, potential earnings began to drop.

In March 2019, a new Healthy Start system of care was introduced. While Healthy Start may have needed such a re-fresh, it took time to train Healthy Start staff and OB providers, as well as to transition previous clients. This change came at a cost of lost potential earnings.

Wraparound Services

Wraparound services are offered in addition to Healthy Start Core Services as funding allows.

Breastfeeding Education and Support: The following breastfeeding resources are available to women in Brevard: La Leche League, Women, Infants and Children (WIC), BETA of Titusville, Independent Lactation Consultants, Doula's, and Beyond Babies. Delivery hospitals and local churches also offer breastfeeding classes and consultation. Breastfeeding products and rentals are available to women in Brevard County by the following Sego' Home Medical Equipment, WIC (for WIC clients only), Acquaviva Pharmacy as well as through many of the area support groups and delivery hospitals.

Childbirth Education: Childbirth classes are provided through individual OB/GYN offices, Birth Naturally Brevard, local delivery hospitals and local organizations. The fees range from free to $300+. Doulas are also offered within the same groups/organizations.

Nutrition Counseling: Nutrition Counseling is offered through WIC for women and children enrolled in the WIC Program or a family can seek assistance from a private dietician.

Parenting Education is available through programs such as Healthy Start, Healthy Families and NFP (Nurse Family Partnership). In addition to these programs, Links of Hope, Love Inc., Eckerd Connects and Yellow Umbrella are available to provide parenting education services to the Spanish speaking population. Other resources for parents include several mother support groups throughout the county. Family strengthening programs are offered through Parent to Parent, Salvation Army, Parenting Skills-BCC, Pregnancy Resources, South Brevard Mothers of Multiples and local hospitals.

Psychosocial Counseling is offered to Healthy Start clients by referrals to Lifetime Counseling Center. The services are provided by a skilled professional counselor to an individual, family, or group for the purpose of improving well-being, alleviating distress, and enhancing coping skills. The goal is to reduce identified risk factors to achieve and thereby increase the opportunity for positive pregnancy outcomes and optimal infant/child health and development. Other resources for psychosocial counseling services include Brevard Behavior Consultants, Children's Advocacy Center, Children's Home Society, Circles of Care, Coastal Behavior Therapy, Family Learning Program (sexual abuse) and Remembering Through Sharing (Bereavement).

Smoking Cessation Services are offered to Healthy Start clients utilizing the SCRIPT curriculum. Outside of the Healthy Start program, access to services is limited, to the Quit-Line (1-877-U-CAN-NOW) and the Central Florida Area Health Education Center (services provided through the local hospitals). Additionally, local OB/GYN practitioners are encouraged to educate clients on the hazards of smoking during pregnancy, as well as the risks of exposure to second, and third hand smoke. The Coalition and Community Connect continue to identify ways to educate families on the risks associated with smoking.

Coalition Challenges

In September 2018, the Coalition was notified by the long time Healthy Start service provider, that in 30 days they were no longer going to provide services. Therefore, in October 2018, Healthy Start services were transitioned to a new provider with limited staff, limited training, etc.

As with many counties, a decrease in alternative funding opportunities and a drop in donations are forcing the Coalition to make difficult decisions, including, but not limited to, decreasing service provision. These constraints will result in the decreased ability to positively impact the incidence of low birth weight and infant mortality.

COVID-19 has brought some interesting challenges for the Coalition, program services, OB/birthing hospitals, and the community.

- The service provider has been conducting virtual visits and drive by 'drop offs' of education items and other necessities since March 2020.
- OB providers saw a drastic decrease in patients.
- The birthing hospitals limited people in labor and delivery and restricted visitors in general.
- Community members have been fearful of going to pre/post-natal appointments.

These challenges may result in the decreased ability to positively impact the incidence of low birth weight and infant mortality.

Consumer Input

Surveys were conducted with Healthy Start consumer participants, teens and within adult focus groups. A survey was created by a master's level intern for an unbiased, statistically acceptable responses, and given to participants anonymously. The data gathered through the focus groups and surveys war as follows:

Participants listed several risk factors that they believed increases the likelihood of poor birth outcomes which included: Age of mom, Smoking, drug use, alcohol, Mental health (depression/anxiety), Home environment, Health problems of mom, Stress, Lack of good prenatal care, Health insurance or lack of good health insurance. There was a strong focus on substance use.
Teens who have been sexually active prior to pregnancy will remain so and birth control is the approach to reduce repeat pregnancy. In our group, the type of birth control used is considered highly effective.
Non-parent teens were focused on abstinence and appeared to view peers who become pregnant or fathered a child as emotionally immature.
Education was cited by all groups as the way to increase the public and women's awareness of risk factors.
Physicians and hospitals play a large part in relating information, education, and services.
Groups believed that all infants and pregnant women should be screened for Healthy Start Services.
While some participants believed that services should be available to those who want or need it, more affluent participants felt uncomfortable utilizing the services offered by Healthy Start thinking they would be taking away from those who need it more.
Most participants stated that preconception/ interconceptional care is very important and would be useful for emphasizing the importance of personal maternal care before and between pregnancies.
There were mixed responses from the participants on using drugs or alcohol while pregnant. Some stated to not use drugs or alcohol while others shared that it was fine with OB approval.

NOTE: All the survey and focus group data is available at the Coalition Office.

Fetal Infant Mortality Review Process (FIMR) – Modified

The Coalition conducts a modified FIMR review semi-annually to evaluate the data trends by receiving de-identified copies of death certificates from the Department of Health – Vital Statistics office. If a trend is identified, the Coalition will further study the death certificates and evaluate the specific details and circumstances for indications of community-wide problems that may be developing.

For example, although statistically insignificant, the Coalition observed an increase in non-white infant deaths in 2006. Upon review, three cases were identified to have congenital anomalies in the same area of the county. The Coalition requested and reviewed birth certificates and after further analysis did not identify any potential linkages within the findings.

To date, no significant incidents have been observed nor have any trends been identified during the modified FIMR reviews.

Action Plan

Summary Sheet: Healthy Start System of Care

County: Brevard

SDPU Due Date: 06.30.21 **AAPU Due Date:** 06.31.22

County Priorities:

1. Reduce black infant mortality
2. Reduce the number of positive substance abuse / NAS infants born
3. Reduce the number of domestic violence cases

Check the "Y" column if Healthy Start money is being used. Check the "N" column if no Healthy Start money is being used.

Healthy Start System Components	Provider	Y	N	Begin and End Date of MOA or Contract
Outreach services for pregnant women	Lifetime Counseling Center	x		07/21 – 06/22
Outreach services for children	Lifetime Counseling Center	x		07/21 – 06/22
Process for assuring access to Medicaid (PEPW and ongoing)	FDOH-Brevard	x		07/21 – 06/22
Clinical prenatal care for all unfunded women	FDOH-Brevard	x		07/21 – 06/22
Funding to support the FDOH-Brevard Vital Statistics Healthy Start Screening Infrastructure	FDOH-Brevard Coalition	x x		07/21 – 06/22
Ongoing training for providers doing screens and referrals	Coalition	x		07/21 – 06/22
Initial contact after screening	Coalition FDOH-Brevard	x x		07/21 – 06/22 07/21 – 06/22
Assessment of service needs	Lifetime Counseling Center	x		07/21 – 06/22
Ongoing care coordination	Lifetime Counseling Center	x		07/21 – 06/22
Childbirth education	Birthing Hospitals, local birthing organizations		x	
Parenting support and education	Lifetime Counseling Center	x		07/21 – 06/22
Nutritional counseling	Lifetime Counseling Center W.I.C. – FDOH-Brevard	x	 x	07/21 – 06/22
Psychosocial counseling	Lifetime Counseling Center	x		07/21 – 06/22
Smoking cessation counseling	Lifetime Counseling Center	x		07/21 – 06/22
Breastfeeding education and support	Lifetime Counseling Center W.I.C. – FDOH-Brevard Birthing Hospitals	x	 x x	07/21 – 06/22
Interconceptional education and counseling	Lifetime Counseling Center	x		
Data entry into WFS	FDOH-Brevard	x		07/21 – 06/22

Nurse Family Partnership	FDOH-Brevard FDOH-Brevard	x	 x	07/21 – 06/22
Supplemental Services Provided: Labor and Postpartum Doula Services for at risk women and patients in crisis. Emergency services for patients, i.e., transportation, payment of prescriptions, specialty formulas not available through WIC, respite childcare, etc.	 Appropriate community providers Appropriate community provider		 x x	 negotiated rate negotiated rate

Process for Allocating Funds / Provider Contracts

The Coalition has a contract with Space Coast Health Foundation, Inc. dba Lifetime Counseling Center for Care Coordination Services. Additionally, the Coalition has three contracts with the Florida Department of Health-Brevard County for 1) Initial Contact Services, 2) Healthy Start Data Entry Services, and 3) Nurse Family Partnership. Each contract outlines specific tasks, reporting requirements, payment guidelines, and performance and outcome measures. Amendments to contracts are executed when necessary to reflect changes in legislative funding and/or the service delivery system. Annually, staff recommend funding allocations to the Finance Committee for review based on the Coalition's Base or Medicaid Allocations. Upon the Finance Committee's approval of funding allocations, the Coalition Board of Director's reviews, and votes on approval of the funding allocation prior to the Full Coalition vote. Once the Full Coalition has approved funding allocations, the budget is submitted to the Florida Department of Health.

Category A: Implementing the Healthy Start System of Care

Strategy 1

The Coalition will fiscally monitor contracted providers of the Healthy Start System of Care.

Action Step	Person(s) Responsible
Develop contracts and MOA's with Healthy Start Service providers	Contract Manager, Executive Director
Develop budget allocation - Format and frequency of reporting	Contract Manager, Executive Director, Bookkeeper
Allocate funding received from DOH to HS providers - Invoice DOH, calculate allocation, check requests, analyze allocations	Contract Manager, Bookkeeper
Conduct fiscal monitoring	Contract Manager, Bookkeeper
Provide technical assistance (as needed)	Contract Manager
Prepare and submit all required reports, AAPU, and SDPU	Contract Manager

Strategy 2

The Coalition will monitor contracted providers of Healthy Start of Care through on-site administrative monitoring, web-based program monitoring, and program monthly or quarterly reports.

Action Step	Person(s) Responsible
Develop and implement an external QA/QI plan	Contract Manager, QI/QA Committee
Collect and review HS providers QA/QI reports to ensure compliance with contractual goals and outcome/ performance measures	Contract Manager
Provide technical assistance to HS Providers (as needed)	Contract Manager
Update QA/QI tools for monitoring HS providers (as needed)	Contract Manager
Conduct annual program review of HS Providers to include the review of client surveys	Contract Manager
Analyze HS providers' service data and program reports within 45 days of conducting the monitoring	Contract Manager, QI/QA Committee
Develop and report on Performance Improvement Plans and/or Corrective Action Plans (as needed)	Contract Manager
Report to the Board and/or designated committee findings from the annual monitoring review	Contract Manager, Executive Director

*note: all on-site monitoring may be done virtually due to safety concerns

Category B Activities

Priority #1: Reduce black infant mortality

1. Contract requirement or identified community-wide/system issue

a. What is the requirement or system/community-wide problem or need identified to be addressed by a strategy?

In the service delivery area, as in Florida and the United States, health disparities and other socio-economic risks disproportionately impact the Black population. In Brevard County, the Black infant mortality rate is almost two times that of the White infant mortality rate. In 2018, the White infant mortality rate was 5.3 per 1,000 live births while the Black infant mortality rate was 9.8.

b. What health status indicator/coalition administrative activity is being addressed by this strategy?

Black infant mortality

c. What information, if any, was used to identify the issue/problem (i.e. HPA, FIMR, screening, client satisfaction, interviews, QI/QA)?

Florida Department of Health, Bureau of Vital Statistics
Florida Department of Health, Division of Public Health Statistics and Performance Management
Florida Department of Health, Health Problem Analysis
Florida PRAMS

2. Planning phase questions

a. What strategy has been selected to address this?

The strategy that has been selected to address this is to conduct research and planning activities to more effectively target resources aimed at reducing black infant mortality. This strategy is comprised of the following sub-strategies:

1. Support Culturally Competent Service Delivery
2. Continue to analyze the modified FIMR data
3. Implement activities in areas with high black infant mortality (targeted zip codes)
4. Through social media and distribution of educational information to pre/post-natal women as well as consumers, they will be educated on
    a. Health advocacy
    b. Health Equity
    c. Social determinants of health
    d. Risk factors associated with Black infant mortality

b. What information will you gather to demonstrate that you have implemented this strategy as intended (who, what, how many, how often, where, etc.)?

1. Support Culturally Competent Service Delivery

The Healthy Start Coalition will offer annual educational workshops to medical providers and community members on ways to impact black infant mortality and social determinants of health in Brevard.

2. Continue to analyze the modified FIMR data and recommend strategies to promote more positive outcomes for black infants

FIMR information will be reviewed annually by the Healthy Start Coalition Staff.

3. Implement activities in areas with high black infant mortality

Information gathered by the Community Relations Manager may include the number of black participants addressed and receiving information about black infant mortality and sleeping infant deaths that occurred among black babies in Brevard County, the number of churches/communities participating in events, etc.

4. Through social media and distribution of educational information to pre/post-natal women as well as consumers, they will be educated on
    a) Health advocacy
    b) Health Equity
    c) Social determinants of health
    d) Risk factors associated with Black infant mortality

Information gathered by the Community Relations Manager may include the number of educational opportunities Black participants had that informed them about black infant mortality, sleeping infant deaths that occurred among Black babies in Brevard, and the risk factors associated with the social determinants of health, etc.

c. Where/how will you get the information?

Information on this strategy will be obtained from FIMR data, Florida Charts, Coalition and Healthy Start staff, Healthy Start trainings, Florida's Vital Statistics, social media data sites

d. What do you expect will be the observed impact of the strategy on the system or community-wide problem/need?

- Increase in the number of targeted communities participating in prevention efforts to reduce black infant mortality
- Increase in the number of people exposed to black infant mortality issues/risks as well as social determinants of health
- Reduction in black infant mortality

e. What information will you gather to demonstrate this change on the system?

- Number of primarily Black communities receiving information on black infant mortality issues/risks as well as the social determinants of health
- Number of Black women of childbearing age who received information on black infant mortality issues/risks, social determinants of health and/or how they may affect Black infant mortality
- Number of medical professionals who received information on black infant mortality issues/risks, the social determinants of health and/or how they may affect Black infant mortality
- Black infant mortality rate

f. Where/how will you get the information?

- Distribution list of Black communities receiving information
- Social media data
- Healthy Start Coalition
- Florida Department of Health, Bureau of Vital Statistics

Priority #1: Reduce black infant mortality

Action Step 1A: Support Culturally Competent Service Delivery

Action Steps	Person Responsible	Start Date	End Date
Review the participant evaluations/ surveys from previous trainings/ workshops to identify topics	Community Relations Manager	07.21	06.22
Identify potential speakers	Community Relations Manager, Executive Director, Board	07.21	06.22
Contract with speakers	Community Relations Manager	07.21	06.22
Advertise the workshop	Community Relations Manager, Executive Director, Board	07.21	06.22
Seek sponsorship for the workshop	Community Relations Manager, Executive Director, Board	07.21	06.22
Present the workshop	Coalition Staff, Board	07.21	06.22
Evaluate the effectiveness of the workshop	Community Relations Manager	07.21	06.22
Provide Board/Full Coalition with the findings	Executive Director	07.21	06.22
If the workshop cannot be offered F2F, a virtual version will be explored.			

Action Step 1B: Continue to analyze fetal and infant deaths through the modified FIMR data

Action Steps	Person Responsible	Start Date	End Date
Continue the modified FIMR data review	Executive Director	07.21	06.22
Isolate data of black infant mortality and report the findings to the community/ board	Executive Director	07.21	06.22
Share findings with provider network, Healthy Start staff, and other stakeholders	Executive Director	07.21	06.22

Action Step 1C: Implement activities in areas with high black infant mortality

Action Steps	Person Responsible	Start Date	End Date
Identify target communities (adult and/or youth)	Community Relations Manager, CADR Committee, DCF, Executive Director	07.21	06.22
Contact communities and coordinate events/activities (i.e., virtual, F2F, bulletins in churches, ELC)	Community Relations Manager	07.21	06.22
Develop survey to identify knowledge base; use as needed	Community Relations Manager, Executive Director, Contract Manager	07.21	06.22
Conduct events/activities	Community Relations Manager	07.21	06.22
Develop post-survey to identify knowledge; use as needed	Community Relations Manager, Executive Director, Contract Manager	07.21	06.22
Evaluate the effectiveness of the events/activities	Community Relations Manager, Executive Director	07.21	06.22
Provide Board/Full Coalition with the findings	Executive Director	07.21	06.22

Action Step 1D: Through social media and distribution of educational information to pre/post-natal women as well as consumers, they will be educated on

a) Health Advocacy
b) Social determinants of health
c) Health Equity
d) Risk factors associated with Black infant mortality

Action Steps	Person Responsible	Start Date	End Date
Identify the various social media outlets for the target audience	Community Relations Manager, Committee	07.21	06.22
Find, create, etc. information to 'post' on social media; identify educational information to distribute	Community Relations Manager, Committee	07.21	06.22
'Post' information on social media; distribute educational information	Community Relations Manager	07.21	06.22
Gather data on target audience	Community Relations Manager	07.21	06.22
Evaluate the effectiveness	Community Relations Manager, Executive Director	07.21	06.22
Provide Board/Full Coalition with the findings	Executive Director	07.21	06.22

Priority #2: Reduce the number of positive substance abuse / NAS infants born in Brevard

1. Contract requirement or identified community-wide/system issue

a. What is the requirement or system/community-wide problem or need identified to be addressed by a strategy?

For Florida and Brevard County, the prevalence of substance abuse includes tobacco use and alcohol use in pregnant/childbearing women as well as the occurrence of Neonatal Abstinence Syndrome (NAS) in infants. Opioid drug use during pregnancy has become a national priority in recent years. The NAS rate for Brevard has increased to 144 per 10,000 since 2017.

b. What health status indicator/coalition administrative activity is being addressed by this strategy?

Infant mortality

c. What information, if any, was used to identify the issue/problem (i.e. HPA, FIMR, screening, client satisfaction, interviews, QI/QA)?

CDC
FIMR
Florida Department of Health, Bureau of Vital Statistics
Florida Department of Health, Division of Public Health Statistics and Performance Management

2. Planning phase questions

a. What strategy has been selected to address this?

The strategy that has been selected to address this is to conduct research and planning activities to reduce the number of substance abuse / NAS infants born in Brevard. The strategy is comprised of the following sub-strategies:

a. Continue to analyze the modified FIMR data
b. Through social media and distribution of educational information to pre/post-natal women as well as consumers, they will be educated on
    1. Health advocacy
    2. Health Equity
    3. Social determinants of health
    4. Risk factors associated with substance abuse / misuse during pre-pregnancy and pregnancy
c. Plan of Safe Care (POSC): expand the reach – offer it prenatally
d. Offer peer support in a prenatal setting (pending funding availability)

b. What information will you gather to demonstrate that you have implemented this strategy as intended (who, what, how many, how often, where etc.)?

- Continue to analyze the modified FIMR data annually to identify the number of substance abuse / NAS infants born in Brevard.
- Through social media, and distribution of educational information to pre/post-natal women as well as consumers, they will be educated on
    1. Health advocacy
    2. Health Equity
    3. Social determinants of health
    4. Risk factors associated with substance abuse / misuse during pre-pregnancy and pregnancy

Information gathered may include number of educational opportunities distributed that informed the target population about risk factors associated with substance abuse / misuse during pre-pregnancy and pregnancy, the number of social determinants of health and their effects on the target population, the number of target population that received information on the various risk factors, etc.

- Plan of Safe Care: expand the reach – offer it prenatally

Information gathered may include: the prenatal provider name, the training conducted for the office, the number of POSC filled out, etc.

- Offer peer support in a prenatal setting

Information gathered may include number of educational opportunities, the number of clients, the educational information provided, etc.

c. Where/how will you get the information?

Information on this strategy will be obtained from FIMR data, Florida Charts, Coalition and Healthy Start staff, Healthy Start trainings, Florida's Vital Statistics, social media data sites, peer support staff

d. What do you expect will be the observed impact of the strategy on the system or community-wide problem/need?

- Increase in the number of targeted population / people exposed to risk factors associated with substance abuse / misuse during pre-pregnancy and pregnancy as well as the social determinants of health
- Reduction in substance abuse / NAS infants born in Brevard

f. What information will you gather to demonstrate this change on the system?

- Number of prenatal plans of safe cares received by Connect
- Number of pre/post-natal women who received information on risk factors associated with substance abuse / misuse
- Number of women of childbearing age who received information on risk factors associated with substance abuse / misuse during pre-pregnancy and pregnancy as well as the social determinants of health and healthy equity/advocacy.
- Number of peer support clients and sessions
- Substance abuse / NAS rate

g. Where/how will you get the information?

- Social media data
- Florida Department of Health, Bureau of Vital Statistics
- Healthy Start Coalition Office
- Well Family System

Priority #2: Reduce the number of positive substance abuse / NAS infants born in Brevard

Action Step 2A: Continue to analyze the modified FIMR data

Action Steps	Person Responsible	Start Date	End Date
Continue the modified FIMR data review	Executive Director	07.21	06.22
Isolate data of substance abuse and report the finds to the community/ board	Executive Director	07.21	06.22
Share findings with provider network, Healthy Start staff, and other stakeholders	Executive Director	07.21	06.22

Action Step 2B: Through social media and distribution of educational information to pre/post-natal women as well as consumers, they will be educated on

1. Health advocacy
2. Health Equity
3. Social determinants of health
4. Risk factors associated with substance abuse / misuse during pre-pregnancy and pregnancy

Action Steps	Person Responsible	Start Date	End Date
Identify the various social media outlets for the target audience	Community Relations Manager, Committee	07.21	06.22
Find, create, etc. information to 'post' on social media; identify educational information to distribute	Community Relations Manager, Committee	07.21	06.22
'Post' information on social media; distribute educational information	Community Relations Manager	07.21	06.22
Gather data on target audience	Community Relations Manager	07.21	06.22
Evaluate the effectiveness	Community Relations Manager, Executive Director	07.21	06.22
Provide Board/Full Coalition with the findings	Executive Director	07.21	06.22

Action Step 2C: Plan of Safe Care (POSC): expand the reach – offer it prenatally

Action Steps	Person Responsible	Start Date	End Date
Identify a prenatal office willing and able to facilitate the POSC	Executive Director, DCF	07.21	06.22
Educate the office on how to facilitate the POSC	Executive Director, DCF, Prenatal office management	07.21	06.22
Implement the POSC in the prenatal office	Prenatal office	07.21	06.22
Provide resources to the families with a POSC	TBD	07.21	06.22
Gather data	Contract Manager, Executive Director	07.21	06.22
Evaluate the effectiveness	Contract Manager, HS Program Manager, Executive Director	07.21	06.22
Provide Board/Full Coalition with the findings	Executive Director	07.21	06.22
If successful, a second office may be added in FY 23-24.			

Action Step 2D: Offer peer support in a prenatal setting (pending funding availability)

Action Steps	Person Responsible	Start Date	End Date
Identify a potential funding partner	Executive Director, Central Florida CARES, opioid sub-committee	07.21	06.22
Identify the feasibility of offering peer support services	Executive Director, opioid sub-committee, TBA	07.21	06.22
Identify the prenatal office / CHD able to facilitate the peer support services	Executive Director, opioid sub-committee	07.21	06.22
Implement the peer support services in the prenatal office / CHD and provide resources	TBA	07.21	06.22
Gather data	TBA, Executive Director, opioid sub-committee	07.21	06.22
Evaluate the effectiveness	TBA, Executive Director	07.21	06.22
Provide Board/Full Coalition with the findings	Executive Director	07.21	06.22
If successful, a second office may be added in FY 23-24.			

Priority #3: Reduce the number of domestic violence cases in Brevard County

1. Contract requirement or identified community-wide/system issue

a. What is the requirement or system/community-wide problem or need identified to be addressed by a strategy?

For more than a decade, domestic violence rates have been higher in Brevard County, surpassing the state levels. Domestic violence can impede on the maternal and mental health of pregnant women. From as far back as 1997 to 1999, domestic violence rates were as high as 871 per 100,000 compared to the state level of 860 per 100,000. Between 2016 and 2018, domestic violence rates in Brevard County remain as high as 721 per 100,000 compared to the state rate of 514 per 100,000.

b. What health status indicator/coalition administrative activity is being addressed by this strategy?

Maternal / infant mortality

c. What information, if any, was used to identify the issue/problem (i.e., HPA, FIMR, screening, client satisfaction, interviews, QI/QA)?

Florida Department of Health, Bureau of Vital Statistics
Florida Department of Health, Division of Public Health Statistics and Performance Management
HPA
Well Family System

2. Planning phase questions

a. What strategy has been selected to address this?

Conduct research, planning, and engagement activities to reducing the number of incidences of domestic violence cases in Brevard County. This strategy is comprised of the following sub-strategies:

1. Through social media and direct contact, educate consumers on
    a. The types of DV
    b. The signs to look for
2. Partner/Offer specialized education/training to care coordinators and other home visitors on domestic violence
3. Distribute educational information to the community on domestic violence

b. What information will you gather to demonstrate that you have implemented this strategy as intended (who, what, how many, how often, where etc.)?

1. Through social media and direct contact, educate consumers on
a. the types of DV
b. the signs of DV

Information gathered may include number of educational opportunities that informed the community about DV.

2. Partner/Offer specialized education/training to care coordinators and other home visitors on domestic violence

Information gathered may include number of participants, the survey results, the location, the date, etc.

3. Distribute educational information to the community on domestic violence

Information gathered may include number of pieces distributed, the location(s), the date(s), etc.

c. Where/how will you get the information?

Information on this strategy will be obtained from WFS, Florida Charts, Coalition and Healthy Start staff, Healthy Start trainings, Florida's Vital Statistics, social media data sites

d. What do you expect will be the observed impact of the strategy on the system or community-wide problem/need?

- Increase in the number of community members exposed to education on DV
- Increase in the number of home visitors exposed to education on DV

e. What information will you gather to demonstrate this change on the system?
Number of community members who received information on DV

f. Where/how will you get the information?
Social media data
Florida Department of Health, Bureau of Vital Statistics
Well Family System
Healthy Start Coalition

Priority #3: Reducing the number of domestic violence cases in Brevard County

Actin Step 3A: Through social media and direct contact, educate consumers on

- The types of DV
- The signs to look for

Action Steps	Person Responsible	Start Date	End Date
Identify the various social media outlets	Community Relations Manager, Committee	07.21	06.22
Find, create, etc. information to 'post' on social media; find/identify information to distribute	Community Relations Manager, Committee	07.21	06.22
'Post' information on social media; distribute information	Community Relations Manager, Healthy Start Staff	07.21	06.22
Gather data	Community Relations Manager	07.21	06.22
Evaluate the effectiveness	Community Relations Manager, Executive Director	07.21	06.22
Provide Board/Full Coalition with the findings	Executive Director	07.21	06.22

Action Step 3B: Partner/Offer specialized education/training to home visitors on domestic violence; how victims can get education, become financially stable, etc.

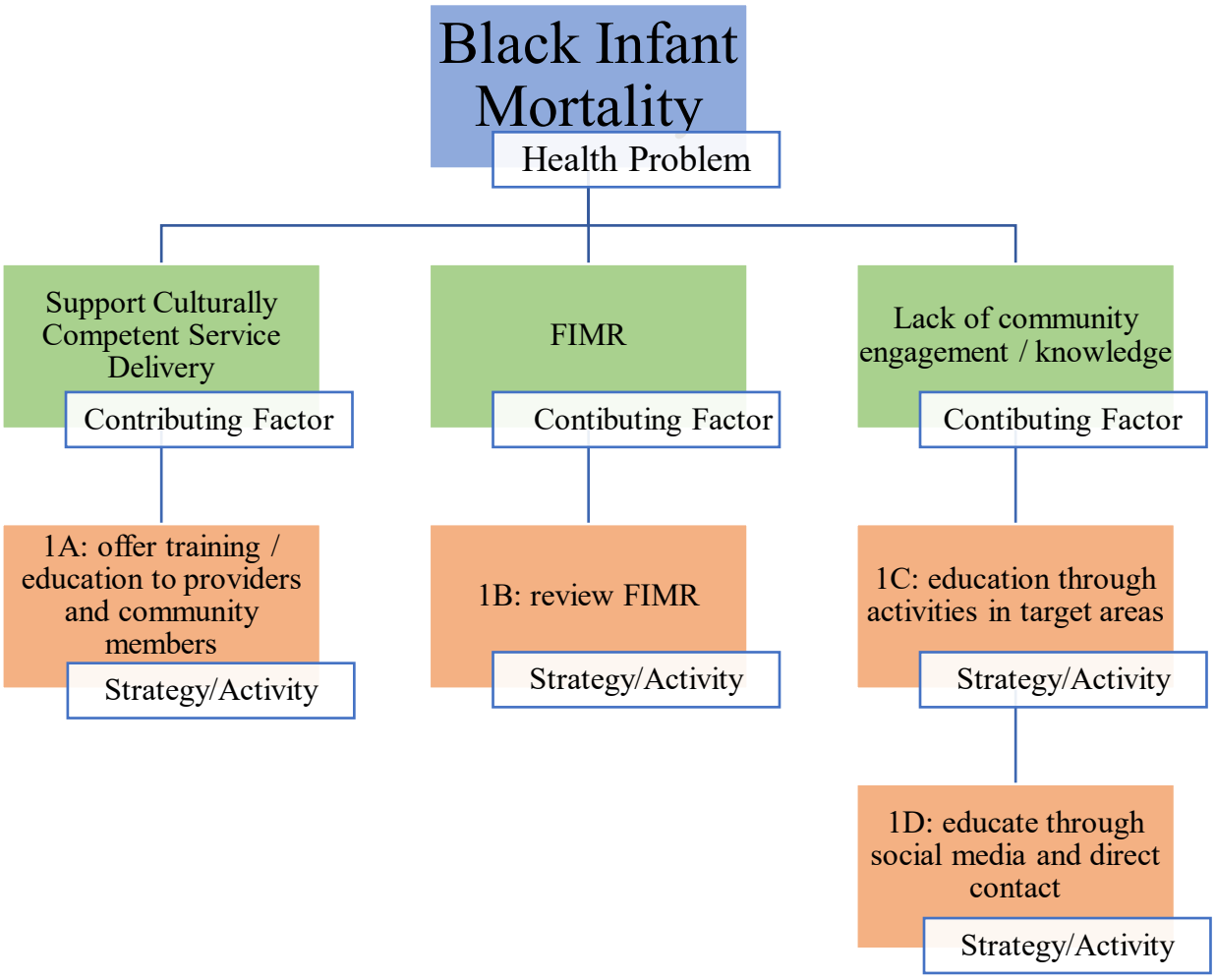
Action Steps	Person Responsible	Start Date	End Date
Review what the community has to offer on this topic for educational opportunities	Community Relations Manager, Community Partners	07.21	06.22
If educational opportunities are not available, continue …			
Identify potential speakers (Women's Center, Serene Harbor)	Community Relations Manager, Executive Director, Board	07.21	06.22
Contract with speakers	Community Relations Manager	07.21	06.22
Advertise the workshop	Community Relations Manager, Executive Director, Board	07.21	06.22
Seek sponsorship for the workshop	Community Relations Manager, Executive Director, Board	07.21	06.22
Present the workshop	Coalition Staff, Board	07.21	06.22
Evaluate the effectiveness of the workshop	Community Relations Manager	07.21	06.22
Provide Board/Full Coalition with the findings	Executive Director	07.21	06.22
If the workshop cannot be offered F2F, a virtual version will be explored.			

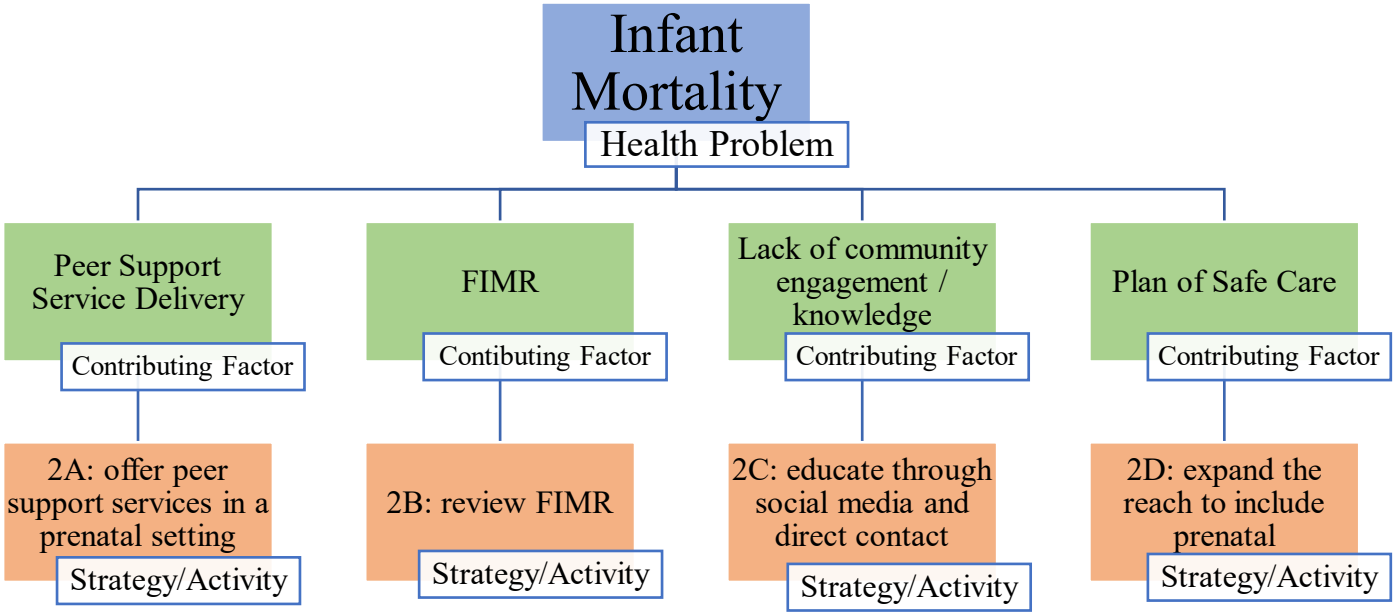
Action Step 3C: Distribute educational information to the community on domestic violence

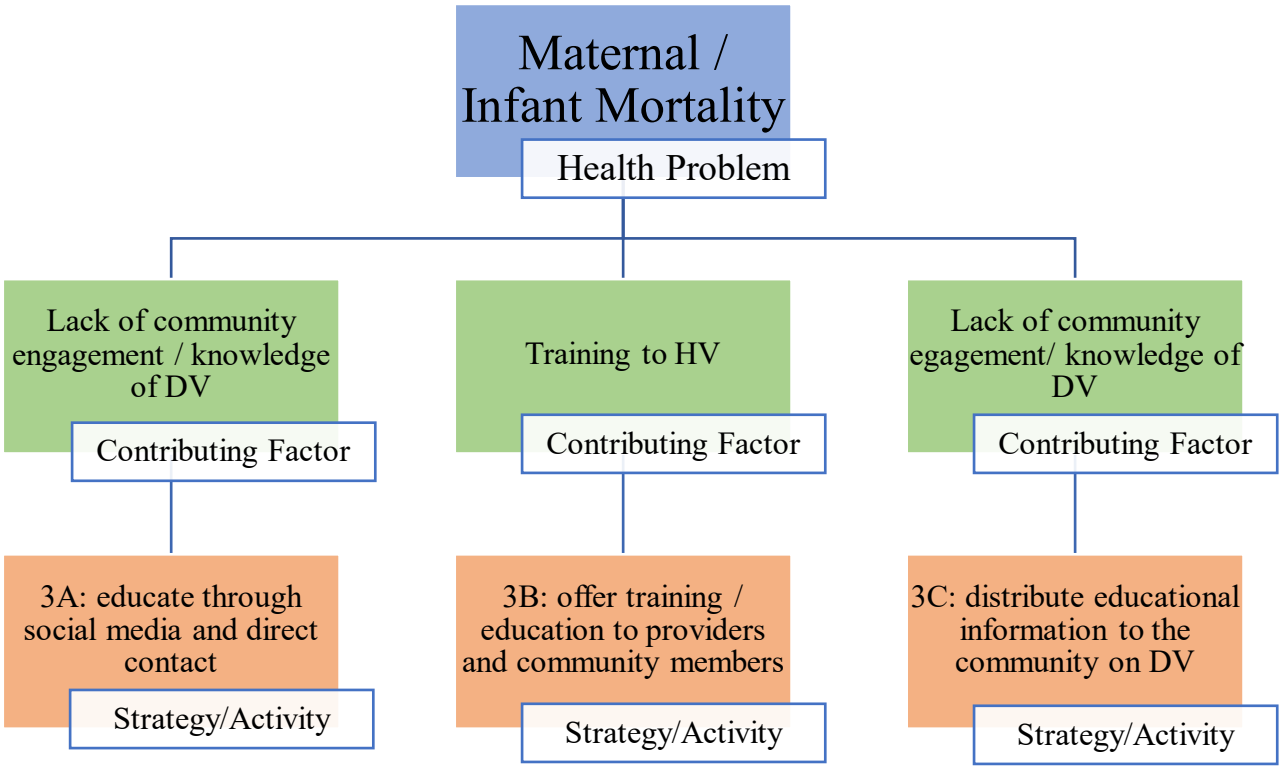
Action Steps	Person Responsible	Start Date	End Date
Review what the community has to offer on this topic for educational information / distribution	Community Relations Manager, Executive Director, Board, Community Partners	07.21	06.22
Identify information to be distributed	Community Relations Manager, Executive Director, DV Resources	07.21	06.22
Identify locations / outlets for the information to be distributed	Community Relations Manager, Executive Director	07.21	06.22
Distribute information	Community Relations Manager, Community Members	07.21	06.22
Evaluate the effectiveness of the educational information / distribution	Community Relations Manager	07.21	06.22
Provide Board/Full Coalition with the findings	Executive Director	07.21	06.22

Health Problem Analysis

Health Problem Analysis




Infant Mortality
Health Problem
Peer Support Service Delivery
Contributing Factor
2A: offer peer support services in a prenatal setting
Strategy/Activity
FIMR
Contibuting Factor
2B: review FIMR
Strategy/Activity
Lack of community engagement / knowledge
Contributing Factor
2C: educate through social media and direct contact
Strategy/Activity
Plan of Safe Care
Contributing Factor
2D: expand the reach to include prenatal
Strategy/Activity


Maternal / Infant Mortality
Health Problem
Lack of community engagement / knowledge of DV
Contributing Factor
3A: educate through social media and direct contact
Strategy/Activity
Training to HV
Contributing Factor
3B: offer training / education to providers and community members
Strategy/Activity
Lack of community egagement/ knowledge of DV
Contributing Factor
3C: distribute educational information to the community on DV
Strategy/Activity

Appendices

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Women's Focus Group Survey

Age: ____

Race: □ Am. Indian/Alaskan Native □ White
□ Asian □ Hispanic
□ Black
□ Pacific Islander

Please answer the following questions or statements by filling in one circle for each item.

	Yes	No	Not Sure
1. I have heard of Healthy Start before today.	○	○	○
2. I knew what the purpose of Healthy Start was before today.	○	○	○
3. I have been pregnant or given birth while living in this county in the last 5 years.	○	○	Not Applicable ○
4. If yes, I or my baby was screened for Healthy Start.	○	○	○
5. I or my baby received Healthy Start services.	○	○	Not Applicable ○

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Not Applicable
6. I felt the Healthy Start services I received were helpful. (If Applicable)	○	○	○	○	○	○
7. I would consent to a Healthy Start risk screening if I was pregnant or had just given birth.	○	○	○	○	○	○
If answer is Neutral, Disagree, or Strongly Disagree, what are the reasons you would not consent?						
8. I would agree to receive Healthy Start services if I or my infant were eligible.	○	○	○	○	○	○
If answer is Neutral, Disagree, or Strongly Disagree, what are the reasons you would not want to receive services?						
9. I would encourage a friend or family member to ask their doctor for a risk screen if pregnant.	○	○	○	○	○	○
10. Knowledge of lifestyle risk factors should be enough for women to alter their behavior during pregnancy.	○	○	○	○	○	○
11. I believe Healthy Start services are primarily for low-income women or infants.	○	○	○	○	○	○

Please use the back of this survey for additional comments or suggestions.
Thank you for your time. Your answers and comments will be kept confidential.

Focus Group Survey for Teenagers

Age: ____

Race: □ Am. Indian/Alaskan Native □ White
□ Asian □ Hispanic
□ Black
□ Pacific Islander

Please answer the following questions or statements by filling in one circle for each item.

	Yes	No	Not Sure
1. I have heard of Healthy Start before today.	○	○	○
2. I knew what the purpose of Healthy Start was before today.	○	○	○
3. I have had a baby or fathered a baby during my teenage years.	○	○	○
4. I or my baby received Healthy Start services.	○	○	Not Applicable ○

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Not Applicable
5. I felt the Healthy Start services I received were helpful. (If Applicable)	○	○	○	○	○	○
6. Teenagers are not ready to be parents.	○	○	○	○	○	○
7. Teenagers are aware that there are risks to the baby when having a baby when less than 18 years old.	○	○	○	○	○	○
8. Most teenagers don't want to have a baby until they are an adult.	○	○	○	○	○	○

	Yes	No	Not Sure
9. I am not having sex so I know I won't get pregnant or father a child.	○	○	○
10. I am using birth control to prevent pregnancy.	○	○	○
If answer to #10 is Yes, what method of birth control are you using? (Example: condoms, birth control pills, foams)			

Please use the back of this survey for additional comments or suggestions.
Thank you for your time. Your answers and comments will be kept confidential.

Quality Improvement Plan

FY 2020-2021

Prenatal and Infant Health Care Coalition
of Brevard County, Inc.
dba
Healthy Start Coalition of Brevard County

I. Overview of Program

Purpose

The purpose of the Quality Improvement Program at the Prenatal and Infant Health Care Coalition of Brevard County, Inc. dba Healthy Start Coalition of Brevard County (the Coalition) is to assess and improve the quality and appropriateness of care being provided to Healthy Start participants by contracted providers, and services provided directly by the Coalition. The program ensures that any area identified through the monitoring and evaluation process, or other contract related process, found not in compliance with established standards, is targeted for corrective action.

Goals

The goals of the Quality Improvement Program are as follows:

A. To ensure that the established levels of quality care are maintained and continuously improved by all providers through:

1) The monitoring and evaluation of the care, services, and processes provided to Healthy Start participants in order to identify areas for improvement and deficit trends;
2) The implementation of corrective actions when deficit trends and opportunities for improvement are identified; and
3) Monitoring and evaluating the resolution of the problem or opportunity for improvement to ensure the corrective action has been effective.

B. To ensure appropriate utilization of services, timeliness of service provision, and accessibility to services through:

1) Ongoing review of state and local reports to examine status of process indicators, performance measures, and outcomes;
2) Establish performance improvement projects when expected target goals are not being met; and
3) Re-evaluate processes implemented for continuous quality assurance.

C. To ensure Coalition operations are in compliance with state statutes, contract requirements, and internal quality standards through:

1) Self-monitoring of compliance on an annual basis with internal monitoring tool; board and staff
2) Accomplishment of goals and objectives in the Service Delivery Plan; and

D. To ensure the effectiveness of the Quality Improvement Program through:

1) The integration of information from all quality improvement activities;
2) The assessment of the monitoring and evaluation process to determine its effectiveness; and
3) Appropriate revisions to the program and/or service delivery plan as identified through the annual evaluation.

II. Organization

The Quality Improvement Program is designed to encourage participation by the Healthy Start staff, Coalition members and contracted providers to provide usable data to assess service performance in relation to the Service Delivery Plan for Brevard County, Healthy Start Standards and Guidelines, and the Coalition's adherence to contract requirements and state statutes. Other indicators of quality and appropriateness may be assessed based on the specific needs of Brevard County for future planning or special projects.

A. Quality Improvement Committee

Note: the QI Committee is currently not participating in the monitoring process because the record review is being done by computer at this time; if it moves back to a paper review, the following would occur

Responsibilities

The Quality Improvement Committee shall be responsible for ensuring the monitoring and evaluation of contracted services based on the most current Healthy Start Standards and Guidelines. The committee will also review quality improvement activities of the Coalition relative to internal standards and utilization of services for input into revision of the Quality Improvement Plan annually.

Membership

The membership of the Quality Improvement Committee will include Healthy Start Coalition staff, coalition members, or other qualified individuals in the community deemed to have requisite knowledge that would benefit the quality improvement program.

The Contract Manager will staff the committee. A diverse group of professionals will be recruited who have experience or background in nursing, social services, counseling, program management, contract management, and/or quality improvement. To avoid a conflict of interest, committee members will not be an employee, volunteer, board member, or otherwise professionally involved with a contracted provider. Committee members are advised to discuss any conflict of interest that may arise. A conflict of interest as well as a confidentiality document must be signed.

Meetings

The Quality Improvement Committee will meet at least annually. These meetings will address a review of monitoring tools and procedures for each contract year and an annual review of the Quality Improvement Plan with recommendations for revisions. The minutes will be sent to committee members within 30 business days after the date of the meeting. Minutes will be kept and maintained by the Coalition Staff. All committee meeting minutes will be forwarded to the Executive Director prior to them being sent to the Quality Improvement Committee.

B. Quality Improvement Chairperson

Responsibilities

The Quality Improvement Chairperson will assist in determining the agenda for each Quality Improvement Committee meeting. It is the Chairperson's responsibility to ensure items needing discussion and review are conducted at the meetings.

Reporting

The Quality Improvement Chairperson will not have any direct reporting responsibilities on a regular basis. As needed, quality improvement projects or other Quality Improvement activities may be reported to the full Coalition upon request of Coalition staff.

C. Contract Manager

Responsibilities

The Contract Manager will assist the Quality Improvement Chairperson and the Quality Improvement Committee in identifying, coordinating, and integrating quality improvement activities and in managing the Quality Improvement Program. In addition, the Contract Manager will participate in all monitoring's to the contracted providers (through the WFS and on-site) and will write the monitoring summaries. The Contract Manager ensures the deliverables in the contract are within established parameters and contracted providers maintain quality improvement activities and performance and outcome measure goals.

Reporting

The Contract Manager will report the outcome of monitoring, quality improvement projects, technical assistance, and other Quality Improvement activities directly to the Executive Director. Quality Improvement activities will also be shared with Healthy Start staff and contracted providers. The Contract Manager will report the status of contract compliance with service tasks, service units, reporting requirements, and fiscal expenditures to evaluate a contractors' performance to the Executive Director and is used in contract preparation, amendments, and future planning. The Contract Manager will report to funders as outlined in the contracts.

D. Executive Director

Responsibilities
The Executive Director receives reports from the Contract Manager and other Healthy Start Coalition staff on the contracted providers' performance on quality indicators and utilization of services. The Executive Director uses information from these reports for strategic planning, determining service needs, and funding allocation.

Reporting
The Executive Director shares quality improvement activities and reports with the Board of Directors. A year-end analysis to evaluate the performance of each contract in relationship to the impact on maternal and child health outcomes in Brevard County is completed by the Executive Director. Performance and outcome measure goal attainment is used to update the service delivery plan every five years. Additional data is collected on various demographics and health indicators in the county to assist the Coalition in service planning at least yearly to ensure a more timely response to community changes.

III. Quality Improvement Functions

A. Service Delivery Monitoring of Contracted Providers and Program Outcomes

Purpose
The purpose of service monitoring is to ensure important aspects of care are being provided as outlined in the most current edition of the Healthy Start Standards and Guidelines. Procedures and protocols are reviewed to ensure compliance with the contract, including adequate staffing, reporting, coding, quality improvement activities, and data entry. Documentation of service provision is reviewed to ensure risk appropriate services are being offered at the intensity indicated per the system of care established as well as the needs of the mothers and babies are being met. The effectiveness of programs and services in relation to established performance and outcome measures is evaluated as established in the provider's contract.

Activities
- Administrative Review of Contract Provisions
- Review of Provider's record review report for care coordination
- Evaluation of Performance and Outcome Measure goal attainment per provider
- Review of Community Relations Manager reports
- Satisfaction Survey results

Process
1. At the beginning of each contract year, a schedule of reporting deadlines and monitoring's will be completed by the Contract Manager. Each provider will be monitored at least quarterly during the contract year. The contract for each provider includes data reporting forms, monitoring tools and performance measure reports. No monitoring tool will be used that has not been negotiated with providers prior to the monitoring.

2. Prior to each administrative monitoring, the provider will receive written notification confirming the date, time, location, and staff that will participate in the monitoring.

3. Each administrative monitoring will include an entrance and exit conference; unless specified otherwise. The Contract Manager will lead these reviews. The purpose of the entrance review is to go over the purpose of the monitoring, schedule for the review, and answer any questions. The exit review will provide a brief synopsis of the findings. A written report summarizing the findings and identifying any corrective action requirements will be mailed to the provider within 60 working days of the monitoring visit. The monitoring report is to be completed by the Contract Manager and approved by the Executive Director. If a corrective action plan is required, the provider will be given 30 working days to submit the plan to the Coalition.

4. Every quarter, the record review reports from service providers will be reviewed by the Contract Manager to assess documentation quality and status of performance measure attainment. Special attention will be given to provider's adherence to any corrective action or quality improvement plans.

B. Client Care Monitoring of the MomCare Program (July 2018-December 2018)

Purpose

The MomCare program is operated by Coalition staff. The purpose of client care monitoring is to ensure that the program is meeting contract requirements in service provision, documentation standards, performance measure goal attainment, and participant satisfaction with the program aka the participants needs are being met.

Activities

- Quarterly Record Review of Service Tasks and Outcome Measure Achievement
- Quarterly Data Reports
- Annual Administrative and Service Provision Monitoring

Process

1. At the end of every quarter the Contract Manager will facilitate a record review from the WFS database. This automated sampling selects 30 records from the database that includes open and closed records and produces a summary report on the program's performance on contract performance measures and standards. If a non-compliance trend is identified, the Contract Manager will identify the issues. The MomCare Record Review Tool in the MomCare Policy and Procedures book will be used for the review. Outcome measure achievement will be obtained from the records reviewed and the WFS. A quarterly record review summary from the automated and manual review will be completed and this information will be integrated into the quarterly report completed by the Contract Manager. This report will be submitted to the Executive Director for submission to the Healthy Start MomCare Network, Inc. (Network). Any corrective action plans will be developed with the Maternity Care Advisor(s) with follow-up on implementation and results at the next review.

2. Monthly data reports pertaining to service delivery as outlined in the contract will be prepared using the Well Family System. This report will be reviewed by the Executive Director for submission to the Network by the Contract Manager. The Coalition will use this report to track referrals to MomCare, participation rates, and involvement in Healthy Start.

C. Client Care Monitoring of Coordinated Intake and Referral AKA Community Connect

Purpose

The Community Connect program is operated by Coalition staff and a subcontractor. The purpose of client care monitoring is to ensure that the program is meeting contract requirements in service provision, documentation standards, performance measure goal attainment, and participant satisfaction with the program aka the participants needs are being met.

Activities

- Quarterly Record Review of Service Tasks and Outcome Measure Achievement
- Quarterly Data Reports
- Annual Administrative and Service Provision Monitoring

Process

1. At the end of every quarter the Contract Manager will facilitate a record review from the WFS database.
2. Monthly data reports pertaining to service delivery will be conducted utilizing WFS.

D. Resource Utilization Review/Utilization Management

Purpose

The purpose of utilization management is to ensure that the Healthy Start Screening Infrastructure is working efficiently to maximize screening rates so pregnant women can access services and to ensure that there is effective utilization of services to impact birth outcomes. Services should be provided as designed which takes into account risk factors, leveling, and care coordination needs.

Activities

- Review of prenatal and postnatal screening rates from Department of Health-Brevard
- Community Relations Manager reports
- Review of the reports in Well Family System (WFS)
- Prenatal and Postnatal Screens to Care Coordination

Process

1. Each month, the Community Relations Manager will review prenatal and postnatal screening rates. Community Relations Manager reports will be used to assess individual health care provider screening rates and examine any inconsistencies with the WFS reports. The Community Relations Manager will target improvement plans with health

care providers demonstrating negative trends in screening rates. The number of prenatal and postnatal screens referred to care coordination will be tracked to establish referral trends and impact on care coordination resources.

E. Quality Management of Coalition Operations

Purpose

The purpose of quality management in the operations of the Coalition is to ensure maintenance of contract requirements, adherence to written policies and procedures, to monitor internal standards and to ensure the community/client's needs are being met.

Activities

- Monitoring of contract requirements and tasks required in statute

Process

1. Coalition staff has established general qualities and internal standards related to professionalism, working environment, knowledge base and accuracy of communication, and timeliness in responding to the community and providers.
2. Coalition staff will meet on at least twice per year to conduct a self-review.

IV. Program Evaluation

A. Assessment

1. Data collection is the foundation of quality improvement activities. The Coalition will collect data on processes and outcomes as well as utilization findings and participant satisfaction results to establish opportunities for improvement. Integration of information obtained will lead to an assessment of the quality improvement program.

2. Based on results, the Coalition may set priorities for quality improvement activities related to maternal and child health indicators that may be integrated into the service delivery plan and added to provider contracts.

B. Annual Review

1. The Contract Manager will review the Quality Improvement plan annually with the Executive Director for needed revisions, modifications, or enhancements. Final updates to the plan will be discussed in the annual Quality Improvement Committee meeting and/or with the rest of the Coalition staff.

Thank You

Healthy Start Coalition of Brevard County
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