

A MOTHER'S PLEA:

INDIAN RIVER COUNTY FETAL INFANT MORTALITY REVIEW (FIMR) REPORT 2020



Community Members,

The tragedy of losing a baby is one of the most traumatic experiences that a family can endure. As I ponder this project, tears stream down my face. Each year in Indian River County (IRC), babies lose their lives. Between 2014 and 2018, 36 families in our community suffered an infant death. Behind each one of these numbers is a mother that lives every day with the memory of her baby. Indian River County Healthy Start Coalition's (IRCHSC) top priority is to ensure that no family needlessly withstands this loss.

The purpose of this project is to determine the present and contributing factors of these infant deaths and link them to systemic change that results in the reduction of infant mortality.

Our continuous journey to stop these tragedies led IRCHSC to take on the challenge of a Fetal and Infant Mortality Review (FIMR) Project. The work began in January of 2019 and is culminated in this report.

This was a huge undertaking made possible by one generous funder: The Indian River County Hospital District, two agencies contracted to assist with the work: The Department of Health Indian River County and The Health Council of Southeast Florida, and over 33 community members who dedicated hours of their time over the years to help save the lives of babies in our community.

The purpose of this project is to determine the present and contributing factors of these infant deaths and link them to systemic change that results in the reduction of infant mortality.

The FIMR teams reviewed 18 infant deaths that occurred from 2014-2018. This included vital statistics, medical records (e.g., hospital and prenatal records), autopsy reports, social services, law enforcement case notes, and maternal interviews. The medical causation does not vary from the medical causations we typically see locally, statewide, and nationally:

- Congenital Anomaly
- Prematurity Low or Very Low Birth Weight
- Respiratory Distress
- Infection / Sepsis
- Suffocation (sleep-related)

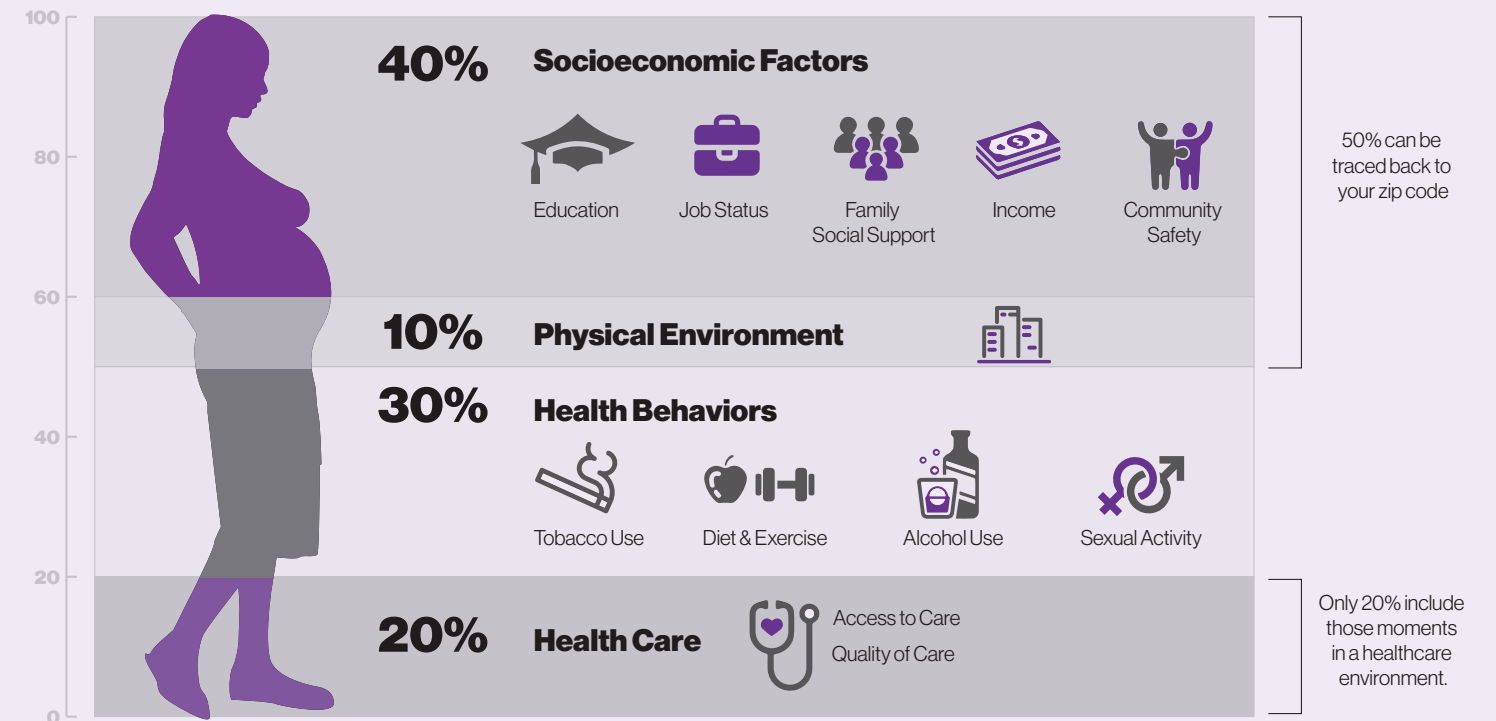
As the FIMR teams identified the present and contributing factors of each case, many struggled to pinpoint the moment, the thing, the systemic link that caused this baby to die. What we found was, in the cases that would have been preventable, the families were buried in disadvantages related to the Social Determinants of Health. Social Determinants of Health are the conditions in the environments where people are born, live, learn, work, play, worship, and age, affecting a wide range of health, functioning, and quality-of-life outcomes and risks (CDC, 2020).

Quotes from mothers who have experienced loss

“ This pregnancy was one of the happiest times of my life

I wanted to be pregnant sooner

I felt overwhelmed and very sad often. ”



Source: Institute for Clinical Systems Improvement, Going Beyond Clinical Walls: Solving Complex Problems (October 2014)

Key Findings:

Economic Stability, Education, and Stress Are Risk Factors.

- In 14 of the 18 cases reviewed, the mother was enrolled in Medicaid Services. These mothers and babies represent 78% of the cases reviewed, a rate of 18% higher than the county average for all births to mothers enrolled in Medicaid services. This confirms the research that these mothers who are recipients of Medicaid services are at higher risk for adverse birth outcomes.
- In 73% of the cases reviewed, the mother had a high school education or less.
- In 44% of the cases reviewed, mothers (8) reported multiple stress factors.

Preconception Health was identified as a factor in almost every case of an infant death reviewed.

- Fourteen (14) of the 18 mothers (78%) reported that the pregnancy was unplanned or mistimed. Only half of those 14 reported that they were using birth control and only four reported received preconception care prior to pregnancy. Three moms had endured a fetal or infant loss prior to this loss.

Race and Racism Impact Infant Mortality

- The racial disparities in health are reflected in the Indian River County infant mortality rate. Black women represented only 17% of our moms that gave birth during the FIMR period, yet accounted for 33% of the deaths – an infant mortality rate double the rate for white infants.

I am more steadfast that we need to continue to sustain and expand our current programming. These programs address the social determinants, provide education and awareness for pregnant and new mothers, and empower and educate our moms and babies who are most vulnerable.

Additionally, we will be adding a new initiative. Due to the vast need for preconception health identified within this FIMR Project, IRCHSC will be moving forward with a new initiative in 2021, a community-wide Preconception Health program.

These efforts to continually improve the maternal and child health system benefit all families throughout Indian River County.

This project was deeply touching to me. I remember each of these mothers, these families, and these babies. Exploring their lives during this process was my privilege. It further opened my eyes to the extreme hardship many mothers face when navigating the astounding cascade of barriers and inequities. I am proud to start this work, and I hope you will join me to ensure every baby gets a Healthy Start.

Andrea Berry, MNM

GOAL:

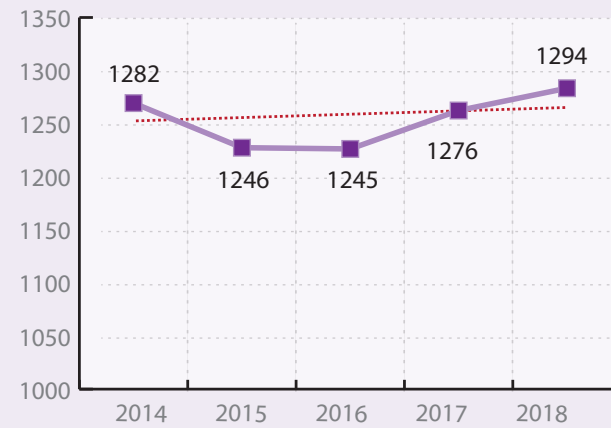
The goal of the FIMR project is to identify opportunities and promote systemic change that results in the reduction of fetal and infant mortality.

Objectives:

- Examine the significant health, safety, cultural, social, and economic system factors associated with fetal and infant mortality through a review of individual cases.
- Plan a series of interventions and policies that address these factors to improve the service systems and community resources.
- Participate in the implementation of community-based interventions.
- Assess the progress of interventions.
- Provide bereavement support information to parents and families who have experienced a pregnancy loss or death of an infant.

Indian River County: Births 2014-2018

Figure 1: Indian River County Total Annual Births 2014-2018



Source: FLHealthCHARTS, Florida Department of Health, Bureau of Vital Statistics, 2014-2018

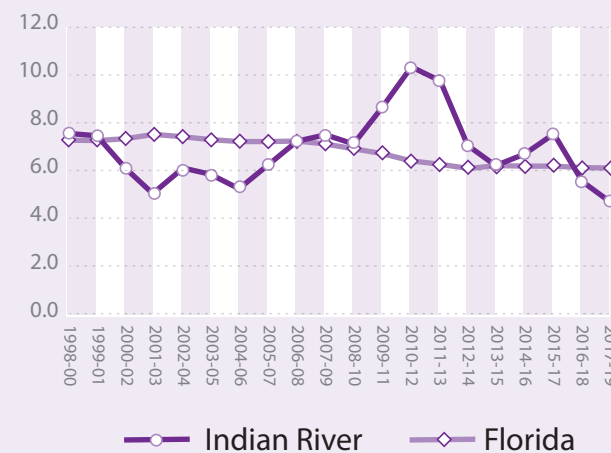
Births to Indian River County residents for FIMR period of 2014-2018, trend annually around 1,268; noted in the dotted trend line above in figure 1. From 2014 through 2018, there were a total of 6,343 births to Indian River County residents.

Indian River County Infant Mortality Data 2014-2018

Between 2014 and 2018, there were 36 infant deaths. This is an infant death rate of 5.7 per 1,000 in Indian River County. Both the Neonatal Death Rate of 3.8 per 1,000 and Postnatal Death Rate of 1.9 per 1,000 are slightly lower than that of the State of Florida.

Figure 2: Indian River County Infant Death Rate, three-year rolling rates

Infant Deaths Per 1,000 Live Births, 3-Year Rolling Rates



Source: FLHealthCHARTS, Florida Department of Health, Bureau of Vital Statistics, 2014-2018

Indian River County's infant mortality rate has been on a downward trend. Both fetal and infant deaths have declined below the state's average within the last three years. The 2018 infant mortality rate in the US is 5.7 per 1,000 births (National Vital Statistics Report, 2020). The rate in Florida is 6.0 per 1,000 births. However, some industrial nations report rates as low as 2.1 per 1,000 (Japan), with as many as 40 countries showing rates lower than the USA.

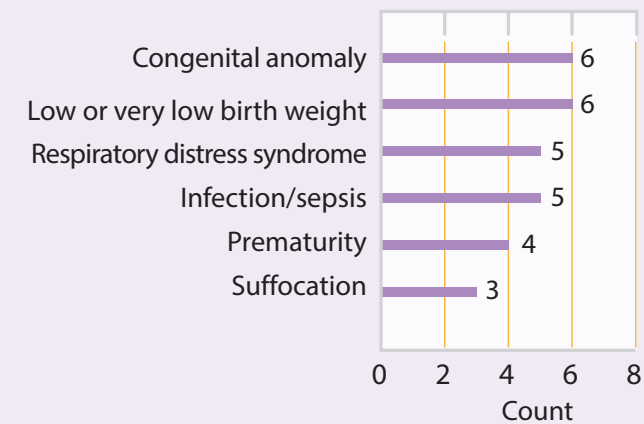
The top causations of infant deaths are typically:

- Congenital malformations or chromosome abnormalities
- Low birth weight (BW) or prematurity
- Sudden infant death syndrome (SIDS)
- Neonatal death due to maternal complications
- Unintentional injuries

This remains consistent with what was found in the Fetal and Infant Mortality Review (FIMR). The top contributing factors identified were a congenital anomaly and low or very low birth weight, which were each found in 33% of cases; respiratory distress syndrome and infection/sepsis, which were each found in 27.8% of cases; and prematurity, which was found in 22.2% of cases. These factors are consistent with local, state, and national trends.

Figure 3: Fetal and Infant Mortality Review Medical Contributing Factors of Infant Deaths

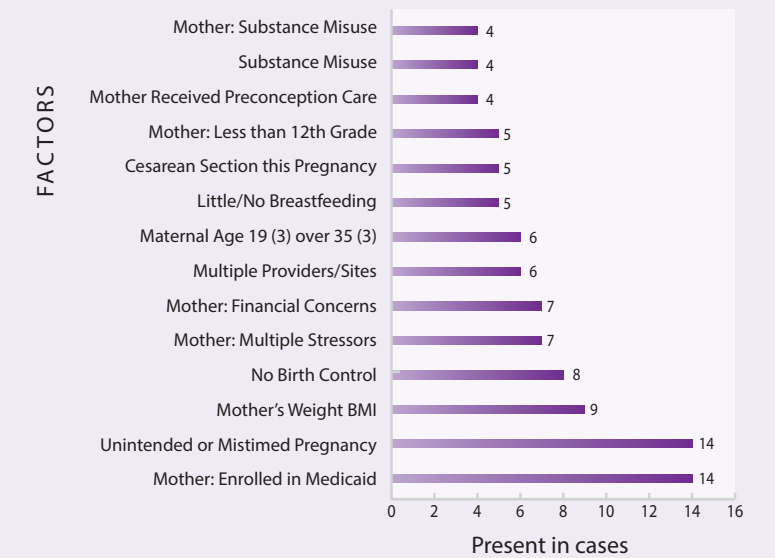
CONTRIBUTING FACTORS



Source: Indian River County Fetal and Infant Mortality Review (FIMR) Cases deliberated from November 2019-August 2020

Figure 4: Fetal and Infant Mortality Review Identified Factors

FIMR: TOP IDENTIFIED FACTORS



Source: Indian River County Fetal and Infant Mortality Review (FIMR) Cases deliberated from November 2019-August 2020

What is a Fetal and Infant Mortality Review (FIMR)?

FIMR is a national model that was first introduced in 1990 as a collaborative effort between the American College of Obstetricians and Gynecologists (ACOG) and the Federal Maternal and Child Health Bureau (MCHB). Florida adopted the FIMR model in 1992. Florida FIMR projects are organized under Florida Statutes 766.101. Confidentiality of all information is strictly maintained. All cases brought before the review team are de-identified of the patient, provider, and institutional information.

FIMR brings together key members of the community to examine information from individual cases of fetal and infant death to identify the factors that contributed to those deaths, determine if those factors represent system problems that require change, develop recommendations for change, assist in the implementation of change, and determine community effects. The goal of FIMR is to empower the community with information and improve systems. There are currently over 200 FIMR projects in the country.

INDIAN RIVER COUNTY FIMR PROCESS

THE FIMR MODEL



Source: FIMR Overview, Publication of the National Fetal and Infant Mortality Review Program, ACOG, 2014.

Planning:

An important first step in the implementation of a FIMR is the planning phase. This planning process takes approximately 6–8 months. Our FIMR planning team was primarily comprised of staff from IRCHSC and DOH-IRC.

The planning phase included the following objectives:

- Identify potential members of the Case Review Team (CRT) and the Community Action Team (CAT).
- Research the type of cases and the number of cases to be reviewed.
- Explore methods of identifying cases to be reviewed and methods of analysis.
- Contract with the DOH-IRC to provide nurse abstraction services to gather information from multiple sources, including medical records, social services agencies, law enforcement, and to interview women who have experienced a loss.
- Contract with Health Council Southeast Florida (HCSF) to assist IRCHSC staff in coordinating and directing the project. Produce de-identified case summaries; present case summaries to the CRT; document CRT deliberations, findings, and recommendations; and assist in the development of final report.
- Develop policies and procedures, goals, and objectives.

PRIORITY AREAS

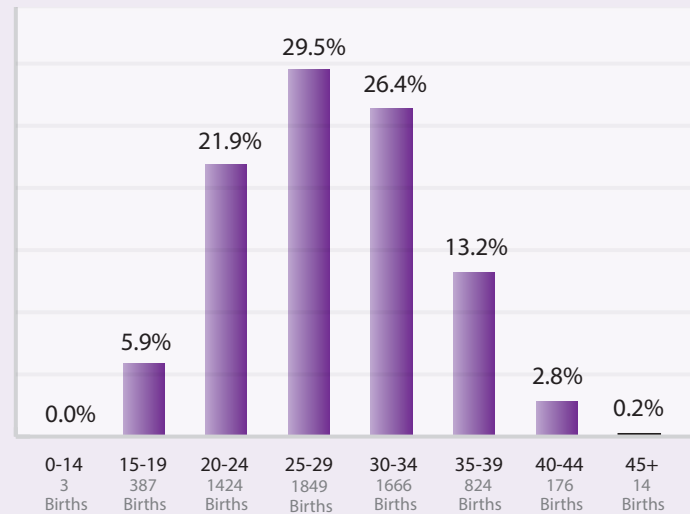
When reviewing the community data and the FIMR findings, it is central to point out the following areas of concern.

Maternal Age:

Teen Birth Rate: Indian River County, teen birth rate from 2014–2018 was 5.4 per 1000, which is above the state’s average and higher than our surrounding counties. Within the FIMR project, two of the 18 mothers were teens.

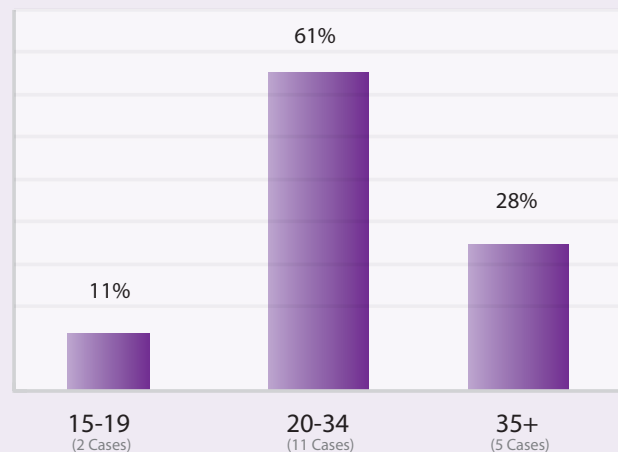
Advanced Maternal Age: Women over the age of 35 are typically at higher risk for poor birth outcomes. Mothers who were above the age of 35 made up 28% (5) of the infant deaths reviewed but represented only 16.2% of the births during the FIMR Project.

Figure 5: Indian River County 2014–2018 Births by Maternal Age at Birth



Source: FLHealthCHARTS, Florida Department of Health, Bureau of Vital Statistics, 2014–2018

Figure 6: Fetal and Infant Mortality Review 2014–2018 Cases Reviewed by Maternal Age at Birth



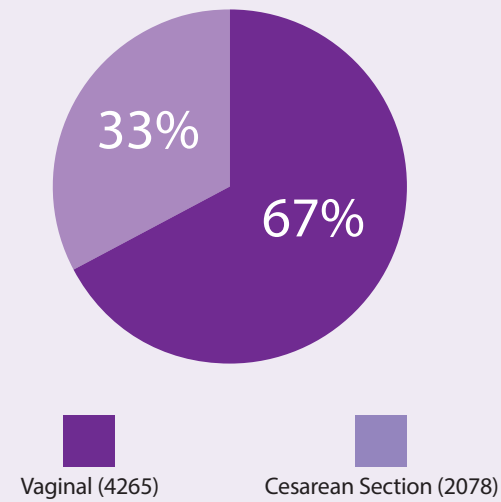
Source: Indian River County Fetal and Infant Mortality Review (FIMR) Cases deliberated from November 2019–August 2020

Type of Birth: Cesarean or Vaginal:

Cesareans are associated with impaired neonatal respiratory function, neonatal intensive care unit admission, and difficulty breastfeeding. For most low-risk pregnancies, cesarean birth increases the risk of hemorrhage, infection, uterine rupture, abnormal placentation, cardiac events, maternal psychological stress, longer hospital stays, increased pain, and increased maternal postpartum re-admissions (FPQC, 2019).

Indian River County’s cesarean section rate from 2014–2018 was 33%. In 2019 this rate increased to 36%, meeting the state’s average for the first time since 2011. The Fetal and Infant Mortality review findings notated the previous cesarean section in 22% (4) of the cases and cesarean section in current pregnancy in 38% (7) of cases.

Figure 7: Indian River County Births 2014–2018 by Type of Birth



Source: FLHealthCHARTS, Florida Department of Health, Bureau of Vital Statistics, 2014–2018

The next items are related to the Social Determinates of Health, and are more complex. These issues are more difficult to address but are the most powerful predictors of a healthy pregnancy.

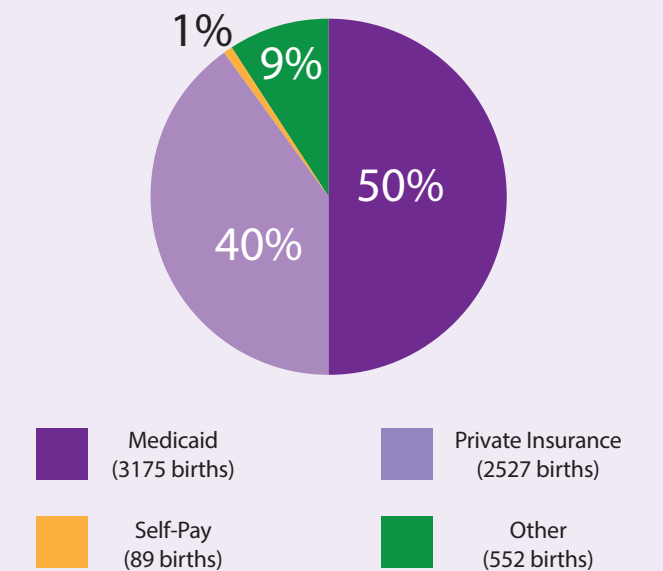
Wealth Disparities:

By the numbers, Indian River County is among the top ten wealthiest counties in the state of Florida. With an average income per capita of \$76,059, Indian River County exceeds the state average by more than \$25,000. However, among all counties in the United States, Indian River County had the 10th largest income gap between the bottom 99% and top 1%. The top 1% earn over \$2.9 million in average yearly income while the bottom 99% earn an average of \$43,373 -- the calculation for a *living* wage in Indian River County is \$64,219 (Massachusetts Institute of Technology, Living Wage, 2020). Living wage More to the point, 44% of households in Indian River County cannot afford the basic costs of living (United Way of Florida, 2020).

Half of all Indian River County families that gave birth from 2014–2018 were enrolled in Medicaid services. This means that they made less than \$28,888 based on data for a family of three; (Benefits.gov, 2020). Economic stability is a social determinant of health that can impact the overall health of a family. In Indian River County, medical funding sources are the following: Medicaid 50%, Private Insurance 40%, Other and Self-Pay 10%.

Access to insurance reflects overall access to quality health care. Of the FIMR cases reviewed, 78% (14) were enrolled in Medicaid services at some point in pregnancy or before infant death, while 22% (4) had private insurance. The overall birth data from 2014–2018 shows Medicaid as a payment source for 50% of all births; that is a difference of 28% and may indicate that mothers who are “Medicaid recipients are more likely to have more risk factors for adverse birth outcomes, compared with women with private insurance” (Anum, Retchin, and Strauss, 2010).

Figure 8: Indian River County 2014–2018 Births by Delivery Payment



Source: FLHealthCHARTS, Florida Department of Health, Bureau of Vital Statistics, 2014–2018

INDIAN RIVER COUNTY FIMR PROCESS

The planning team set a goal of 18-20 cases that occurred between 2014-2018 for the Indian River County FIMR. This goal is consistent with recommendations for small cities or counties with few infant deaths from the Fetal and Infant Mortality Review Manual 2nd edition (2008). FIMR usually includes a review of fetal and infant deaths; however, this planning team chose to focus exclusively on Infant Mortality.

Throughout the FIMR process, IRCHSC conferred with several leaders in the field of Maternal and Child Health, including William Sappenfield, MD, MPH, CPH of Florida Prenatal Quality Collaborative, Leisa Stanley, PhD of Hillsborough Healthy Start, and Ms. Carol Brady of Florida Association of Healthy Start Coalitions and Florida Perinatal Quality Collaborative.

Data Gathering:

IRCHSC contracted with the DOH-IRC to provide nurse abstraction services. Information was gathered from multiple available sources, including vital statistics, medical records (e.g., hospital and prenatal records), autopsy reports, social services and law enforcement case notes, and maternal interviews. Eighteen cases were abstracted, de-identified, and reviewed. These cases were selected as they were the most instructive and detailed cases available. Through the data gathering process, inconsistent, unclear, or missing data in records across different organizations and departments was noted in six cases.

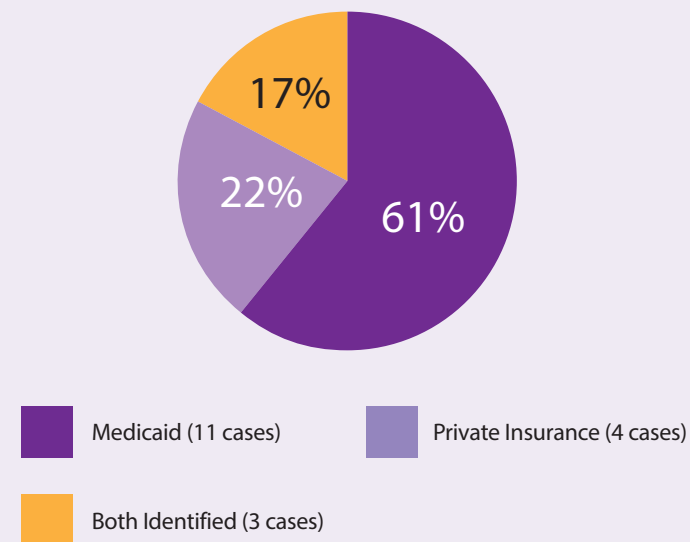
A Two-Tiered Process for Review and Action: Case Review Team and Community Action Team

Two multidisciplinary groups completed the FIMR process, including clinicians and non-clinicians. These professionals represent the local health department, social service agencies, family planning services providers, drug treatment centers, hospitals, and law enforcement agencies. IRCHSC ensured that physicians experienced with OB/GYN, pediatric, and neonatology care participated as members of the CRT.

Case Review Team (CRT):

The CRT carried a robust 31 members. The information derived from the CRT reviews was then used to identify fetal and infant death trends, as well as key factors in the deaths, and serves as a tool that helps the community implement changes to prevent future losses. The Indian River County CRT began meeting in November 2019 and continued through August 2020.

Figure 9: Fetal and Infant Mortality Review 2014-2018 Cases Reviewed by Medical Insurance



Source: Indian River County Fetal and Infant Mortality Review (FIMR) Cases deliberated from November 2019-August 2020

Education:

Higher educational attainment is associated with positive changes in birth outcomes (Gage, Fang, O'Neill, DiRiezo, 2013). The birth data from 2014-2018 shows that 50% of mothers had a high school diploma or less. Indian River County is above the state's average for mothers who are over 19 and do not have a high school degree for 2019 (10.7% vs. 9.7%). In 73% of the cases reviewed in the FIMR project, the mother had a high school degree or less.

Table 1: Indian River County 2014-2018 Births by Maternal Educational Attainment

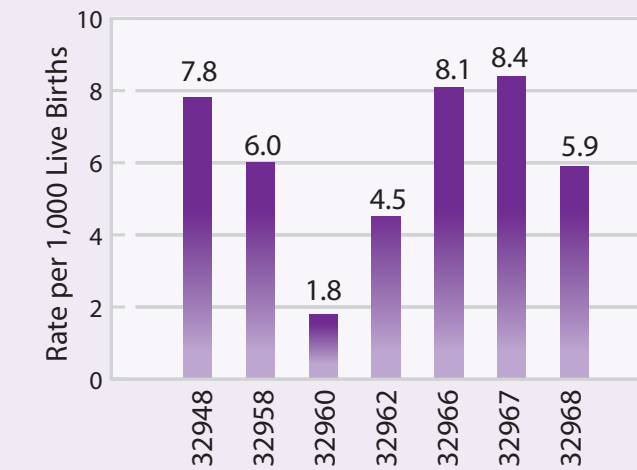
Indian River County Births 2014-2018		
Maternal Educational Attainment		
Less than High School	862	14%
HS Graduate or GED	3573	56%
College or Postgraduate	1881	30%
Unknown	27	0%
Total	6,343	100%

Source: FLHealthCHARTS, Florida Department of Health, Bureau of Vital Statistics, 2014-2018

Geographic Area:

Community and social support networks are Social Determinants of Health. In fact, one's neighborhood is one of the most insightful predictors of one's health outcomes than anything else, including health care. Identifying the geographic areas where infant mortality is most prevalent provides opportunities to understand more about residents living in those communities, challenges they face, and even issues they may have with access to services and supports.

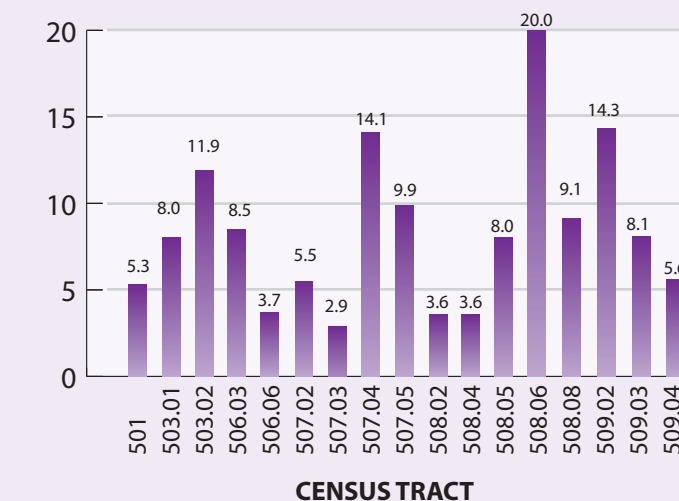
Figure 10: Indian River County 2014-2018 Infant Deaths per 1,000 Live Births by Residence ZIP Code



Source: FLHealthCHARTS, Florida Department of Health, Bureau of Vital Statistics, 2014-2018

Between 2014 and 2018, the areas with the highest infant death rates by ZIP Code in Indian River County were in ZIP Codes 32967, 32966, and 32968 (Vero Beach), ZIP Code 32948 (Fellsmere), and ZIP Code 32958 (Sebastian).

Figure 11: Indian River County 2014-2018 Infant Deaths per 1,000 Live Births, by Residence Census Tract

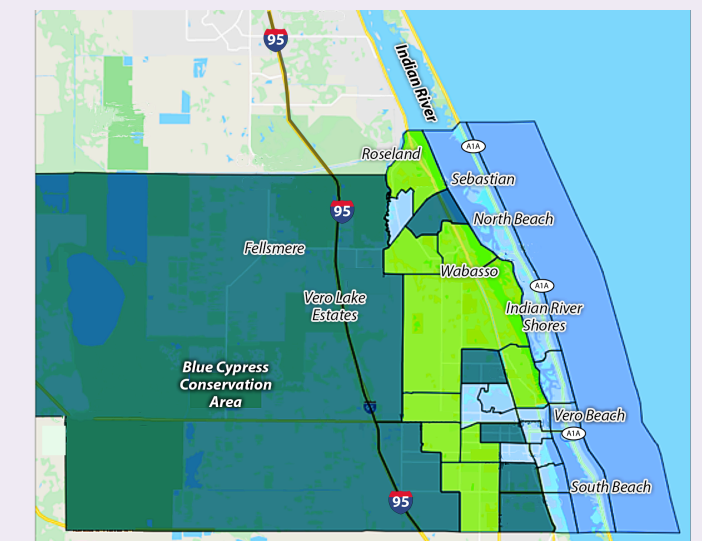


Source: FLHealthCHARTS, Florida Department of Health, Bureau of Vital Statistics, 2014-2018

Between 2014 and 2018, the areas with the highest infant death rates by census tract (CT) in Indian River were CT 503.02 (Gifford), CT 508.06 (Sebastian), and CTs 507.4 and 509.02 (unincorporated Indian River County).

Economic Sustainability is very remarkable in IRC. As it has been noted in this report, Indian River County has considerable disparities in wealth. These disparities in wealth can mirror the disparities in health. For example, in the census tract where Indian River County records one of the highest rate and number of infant deaths 503.02(Gifford), we also see the one of the lowest income per capita \$17,288 (censusreport.org), and the census tract with the lowest (505.01) has the highest per capita income \$117,286.

Figure 12: Indian River County 2014-2018 Infant Deaths per 1,000 Births, by Residence Census Tract



Counts for Infant Deaths in Indian River County, 2014-2018

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Source: FLHealthCHARTS, Florida Department of Health, Bureau of Vital Statistics, 2014-2018

Dividing the data into both zip code and census tracts provide a more profound understanding of the existing disparities within Indian River County. For example, one zip code within Indian River County may represent a wide variety of socioeconomic statuses and disparities related to the social determinants of health.

The role of the CRT is to:

- Review the infant case summaries including demographic, social, medical, and other data collected by the nurse abstractor and summarized by the project coordinator.
- Present relevant questions and participate in discussion.
- Identify factors present or contributing to each infant death through standardized forms addressing multiple maternal and fetal factors that may have contributed to poor outcomes.
- Provide specific recommendations for systems changes.

Community Action Team (CAT):

The CAT was comprised of 28 professionals, philanthropists, and community members. The CAT used the findings and recommendations of the CRT to develop a strategic approach, including specific actions steps that, once implemented, aims to decrease infant mortality and improve pregnancy outcomes. The CAT met during October 2020.

The role of the CAT is to:

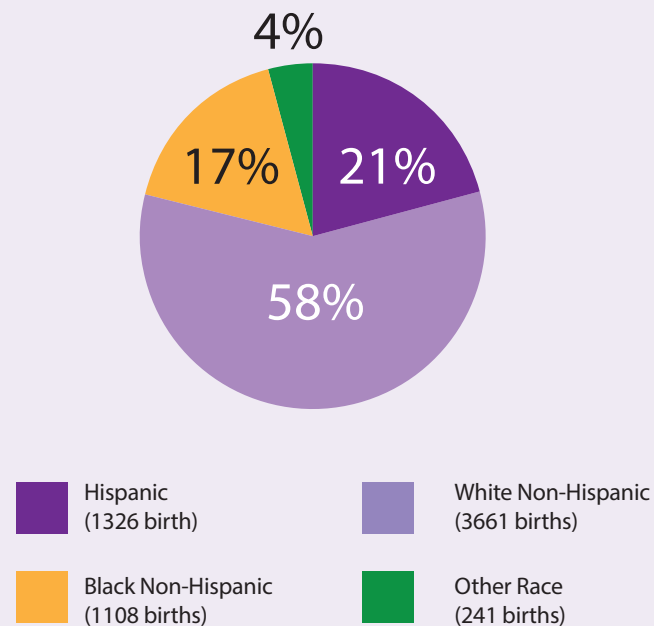
- Take the recommendations made by the CRT and develop new and creative solutions to improve services and resources for families.
- Enhance the credibility and visibility of issues related to women, infants, and families by informing the community about critical needs and effective interventions.
- Work with the community to implement interventions to improve services and resources available to families.
- Determine if the needs of the community are changing over time by continuous review of infant deaths, and program outcomes.
- Safeguard successful systems changes initiated by FIMR.

Race and Ethnicity:

The racial disparities in health are reflected in the Indian River County infant mortality rate. During the 5-year FIMR time frame, there were a total of 36 infant deaths. Fourteen (14) White Non-Hispanic infants, five (5) Hispanic infants, and 12 Black Non-Hispanic infants. Black women represented 17% of our moms who gave birth during 2014-2018, yet accounted for 33% of the deaths. Black Non-Hispanic infants had the highest infant mortality rate (9.9 per 1,000), which is double the rate for White Non-Hispanic infants (3.8 per 1,000)

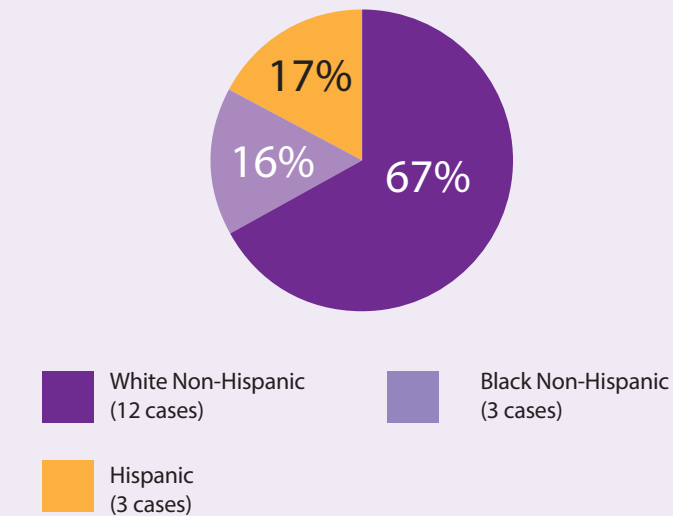
The data in Indian River County mirrors that seen nationwide. Black mothers and babies suffer a higher rate of morbidity and mortality. Nationally, the Centers for Disease Control and Prevention (2020) state that the risk for Black Non-Hispanic women is more than double that of White Non-Hispanic women. Research shows this may be due, in part, to conventional risk factors for infant mortality such as mother's socioeconomic status, her consumption of nutritious foods, and access to health care services, but in fact, the disparities are reflective of broader inequities. For example, Black mothers are more likely to be susceptible to "weathering" or the premature aging of one's body due to social stresses. Related, the exposure to discrimination and racialized stress throughout the lifespan can negatively impact birth outcomes.

Figure 13: Indian River County Births 2014-2018 by Race and Ethnicity



Source: FLHealthCHARTS, Florida Department of Health, Bureau of Vital Statistics, 2014-2018

Figure 14: Fetal and Infant Mortality Review 2014-2018 Cases Reviewed by Maternal Race and Ethnicity



Source: Indian River County Fetal and Infant Mortality Review (FIMR) Cases deliberated from November 2019-August 2020

It is typical for Race and Ethnicity to be recorded separately. This information has been combined to illustrate a fuller picture.

Table 2: Indian River County 2014-2018 Infant Mortality Rate by Race and Ethnicity

Indian River County 2014-2018 Infant Mortality Rate by Race and Ethnicity		
Race and Ethnicity	Number of Deaths	Infant Mortality Rate per 1,000 births
Hispanic	5	3.8
White Non-Hispanic	14	3.8
Black Non-Hispanic	12	9.9
Other	5	N/A
Total	36	5.7

Source: FLHealthCHARTS, Florida Department of Health, Bureau of Vital Statistics, 2014-2018

COMMUNITY ACTION TEAM

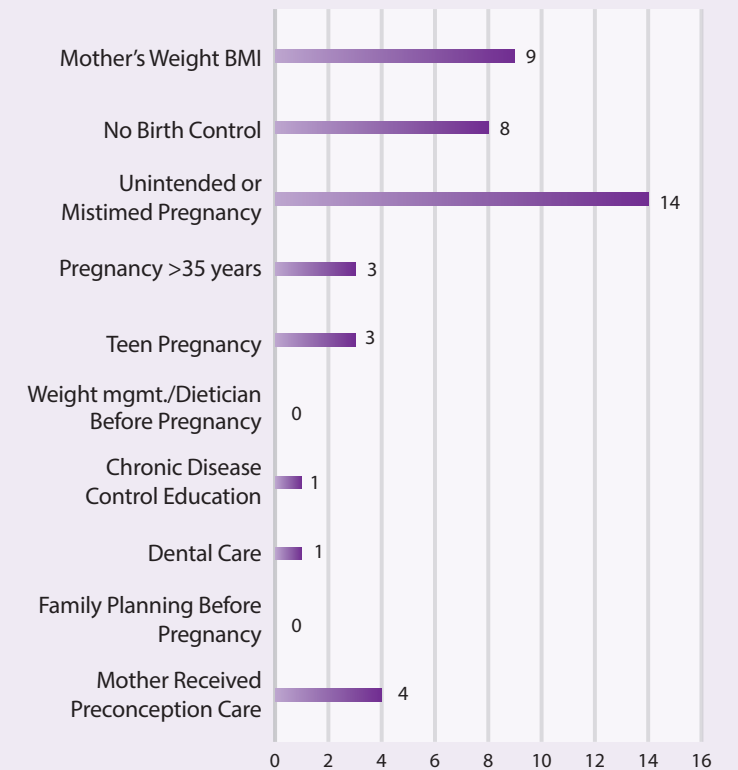
The information derived from the Case Review Team's review of cases was aggregated and provided to the Community Action Team (CAT). Using this information, the CAT then identified priorities and opportunities for positively impacting birth outcomes for babies born in Indian River County. The priorities, as identified by the CAT, are as follows:

1. **Preconception health.**
2. **Awareness and education on issues affecting newborns and new moms.**
3. **Enhanced care for women with high-risk pregnancies.**

The CAT met throughout October 2020, to determine possible strategies and activities for each priority area. The CAT excluded resources that are currently in place; however, the teams discussed enhancements to current programs or enhanced awareness of supports when appropriate.

Preconception Health

Strategy: Increase education and awareness of preconception health



Source: Indian River County Fetal and Infant Mortality Review (FIMR) Cases deliberated from November 2019-August 2020

Preconception Health has been identified as a strategy to improve these FIMR present factors and, therefore, birth outcomes.



The FIMR process IRCHSC and collaborating partners implemented throughout 2019-2020.

The Centers for Disease Control and Prevention states that Preconception Health Education can:

- Prevent unintended pregnancies. Nearly half of all pregnancies are unintended. Risks associated with unintended pregnancy include low birth weight, postpartum depression, delays in receiving prenatal care, and family stress.
- Prevent adolescent pregnancies. More than 400,000 teen girls age 15 to 19 give birth each year in the United States.
- Detect and treat health conditions that may be associated with unhealthy pregnancies or infants. Prenatal care can detect gestational diabetes or preeclampsia before it causes problems with the developing fetus, and taking prenatal vitamins before critical fetal development periods can prevent congenital disabilities of the brain and spinal cord.

Activities:

- Form a community task force (non-profits, parents/caregivers, schools, medical providers, etc.) to plan a comprehensive county-wide preconception health program.
- Implement action items and program initiatives identified by the community task force.

Awareness and Education on Issues Affecting Newborns and New Moms

Strategy: Develop a collaborative comprehensive, trusted, evidence-based source of information that addresses issues affecting families with children zero to three that can be shared community-wide using evidence-based public health strategies.



Source: Indian River County Fetal and Infant Mortality Review (FIMR) Cases deliberated from November 2019-August 2020

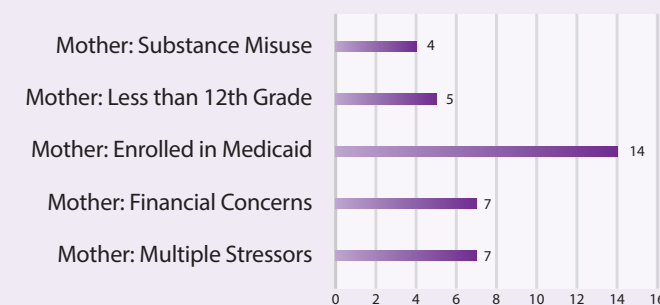
Awareness and education have been identified as a strategy to empower mothers and families to take control of their health.

Activities:

- Create task force/ focus groups comprised of maternal-child health, social services, health, and mental health agencies, and community members to identify emergent issues that impact families which children from zero to three (preconception health, prenatal care, resources in the community, postpartum support, breastfeeding, mental health support, safe care, and safe sleep).
- Use the input to create comprehensive materials and messages culminating in the 'Nobody Told Me That' Campaign, including stories and testimonials from women in the community. Messaging should include information for mothers, fathers, and other caregivers.
- Partner with trusted members of the community to distribute this information and advocate for behavioral changes that address the targeted modifiable risk factors (possibly using IRCHSC Community Doula program)
- Distribute revised messaging and materials to all task force members and other organizations (2-1-1, Visiting Nurse Association Mobile Clinic).
- Create more awareness for Healthy Start and Cleveland Clinic's Maternity Navigator/ Coordinated Intake and Referral program as a central intake and information point.

Enhance Care for Women with High-Risk Pregnancies

Strategy One: Increase supports for women with high-risk pregnancies and those who have been identified as having factors associated with poor birth outcomes using a risk screening tool.



Source: Indian River County Fetal and Infant Mortality Review (FIMR) Cases deliberated from November 2019-August 2020

The programs listed below focus on women with high-risk pregnancies. The programs are evidence-based and are shown to improve birth outcomes.

Activities:

- Sustain and expand effective programming currently being offered such as the Community Doula program, Nurse-Family Partnership, Parents as Teachers, Healthy Start, Healthy Families, and others.
- Engage community partners such as churches and community-based organizations (2-1-1 and mobile clinic) to disseminate information related to the newly added high-risk maternity services (CCIRH Maternal-Fetal Medicine).
- Create more awareness for Healthy Start and Cleveland Clinic's Maternity Navigator/ Coordinated Intake and Referral program as a central intake and information point.

Strategy Two: Enhance services for mothers who use substances

Activities:

- Continue the work of the MORE (Maternal Opioid Recovery Effort) Initiative group created to address the rise in substance-exposed newborns. Tasks may include identifying a provider for Medication-Assisted Treatment (MAT), conducting 5P screening on all pregnant women, providing naloxone kits to those at risk of overdose.



Recommendations for Ongoing or Future Initiatives:

In addition to the priorities set forth on pages 12 and 13, the Community Action Team identified the following opportunities for positively impacting birth outcomes for babies born in Indian River County. These initiatives are not addressed in the current plan but are valuable to ongoing improvements to the Maternal and Child Health system of care and will be considered again in 2021.

- Improved access to specialists such as Maternal-Fetal Medicine and neonatology for high-risk cases. *Cleveland Clinic has recently added a Maternal-Fetal Medicine physician. Lack of this level of care was identified as a weakness from 2014-2018. The action item listed is to ensure there is widespread knowledge about the new service.*
- Promote/normalize home visiting programs*
- Innovative postpartum services*
- Formal Bereavement/support services*
- Diverse prenatal care providers
- Training for prenatal providers (Trauma-Informed Care, Implicit Bias, Breastfeeding)

*The initiatives listed above are ongoing work led by Healthy Start

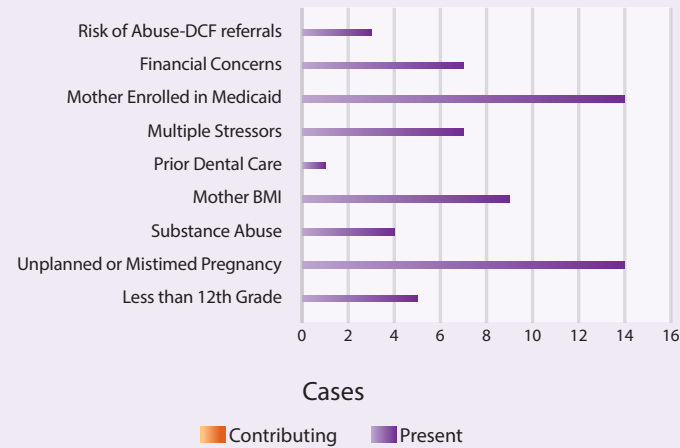
Conclusion:

Through the dedication, commitment, and compassionate stakeholders, Indian River County has made great strides toward enhancing the well-being of our community. IRCHSC has made steps in accomplishing our goal of FIMR, which was to identify opportunities and promote systemic change that result in the reduction of fetal and infant mortality. This journey will continue thanks to funding provided by the Indian River County Hospital District. IRCHSC anticipates developing measurable goals to ensure success in the plan created and will augment and expand the plan as needed to address opportunities to reduce further fetal and infant mortality.

Appendix:

Case Review Team Findings: Present and Contributing Factors of Infant Deaths Reviewed

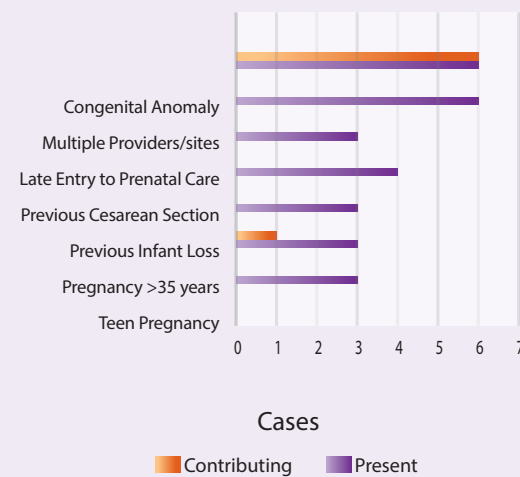
Figure 15: Fetal and Infant Mortality Review Social and Health Present and Contributing Factors of Infant Deaths



Source: Indian River County Fetal and Infant Mortality Review (FIMR) Cases deliberated from November 2019-August 2020

Top presenting factors in the cases reviewed were mothers enrolled in Medicaid, unplanned or mismatched pregnancy, and mother's body mass index.

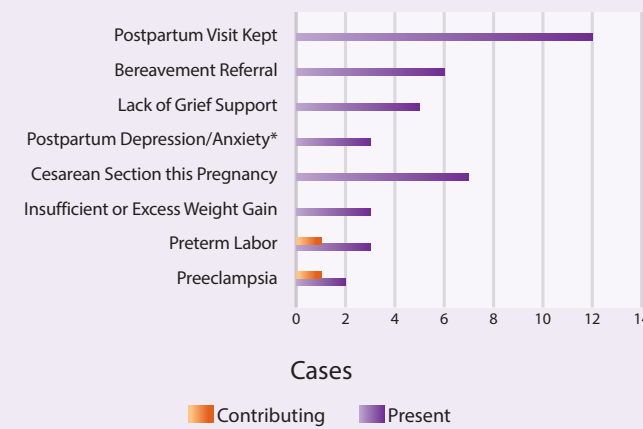
Figure 16: Fetal and Infant Mortality Review Pregnancy-Related Present and Contributing Factors of Infant Deaths



Source: Indian River County Fetal and Infant Mortality Review (FIMR) Cases deliberated from November 2019-August 2020

A congenital anomaly was the top contributing factor. Other top factors present were multiple health care providers/sites and previous cesarean section.

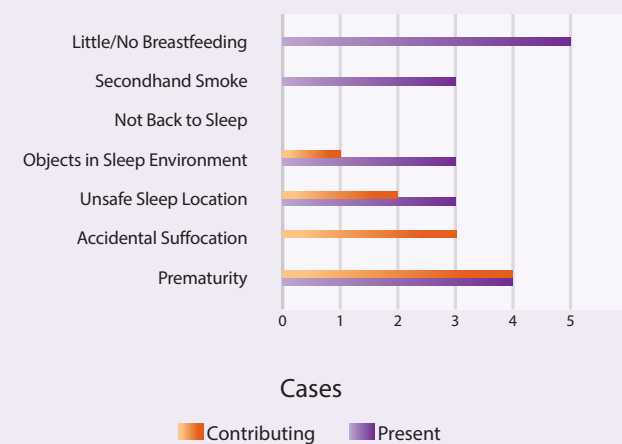
Figure 17: Fetal and Infant Mortality Review Birth and Postpartum Related Present and Contributing Factors of Infant Deaths



Source: Indian River County Fetal and Infant Mortality Review (FIMR) Cases deliberated from November 2019-August 2020

Top presenting factors related to birth and postpartum are missed postpartum visits, a cesarean section in this pregnancy, and lack of bereavement referral.

Figure 18: Fetal and Infant Mortality Review Infant Care Related Present and Contributing Factors of Infant Deaths



Source: Indian River County Fetal and Infant Mortality Review (FIMR) Cases deliberated from November 2019-August 2020

Little to no breastfeeding and second-hand smoke were the present top factors related to infant care. Premature birth was recorded as present and contributing.

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IRSHSC recognize that The FIMR process involves significant time and effort and greatly appreciate all participants' strong commitment to reducing fetal and infant mortality and improving birth outcomes.