

PROJECT *INFORM*

Infant-Neonatal-Fetal-Outcomes-Relating-to-Mortality

2011 Community Report

Fetal and Infant Mortality Review Project

Project INFORM is a publication provided by the Healthy Start Coalition of Flagler and Volusia Counties, Inc. It is designed to summarize fetal and infant mortality data in our two county service area in an effort to update our community stakeholders and collaboratively work toward positive change in our maternal and child system of health care.



The data in this report is gathered and reviewed by our local Fetal and Infant Mortality Review (FIMR), whose goal is to improve maternal and infant health outcomes through Case Review Team (CRT) evaluation and recommendations and Community Action Group (CAG) activities.

The FIMR approach was developed by the American College of Obstetrics and Gynecology (ACOG) and includes an abstraction of information from birth, death, medical, hospital, autopsy and social service records. Whenever possible, family interviews are also conducted. All information is “de-identified” to ensure that the focus is on systemic strengths, challenges, and recommendations and not on individual providers. Confidentiality is a key component to the process and is strictly maintained in accordance with Florida Statutes 766.101.

The CRT is a multidisciplinary team of professionals who volunteer their time and expertise to this process. These members are representative of the public and private sector and include physicians, nurses, midwives, medical examiners, public health officials, law enforcement, academic institutions, clinical staff from various health and human services fields, and hospital administration. We present this document with gratitude for these professionals, the families who share their stories with us, and in memory of the many babies who do not live to celebrate their first birthday.

It is our sincere hope that the information in this report helps to bring awareness to the importance of health care access, parent and provider education, and the link between fetal and infant mortality and the overall health of our community.

Data Limitations

There are two major sources from which data are provided in this report. Data related to overall births, fetal mortality and infant mortality/morbidity are from the Florida Department of Health, Office of Vital Statistics. Included are data sets by year and in rolling averages from 2005 to 2009. FIMR data are from BASINET (Baby Abstracting System and Information Network) and include a compilation of data from 2008 to 2010. For this reason, FIMR data do not have epidemiological significance and are presented as an overview of the cases reviewed and what the process revealed about those specific cases.

What: The total number of births in Florida and the Healthy Start service delivery area.

How is it changing? Total births have decreased in Florida and the service area from 2007—2009.

Source: Florida Department of Health, Office of Vital Statistics

Total Births					
	2005	2006	2007	2008	2009
Florida	226,219	237,166	239,120	231,417	221,246
Flagler County	689	942	988	899	869
Volusia County	5,093	5,263	5,417	5,257	5,099

Fetal Mortality

is defined as the still birth of a baby more than 20 gestational weeks, born without signs of breath or heartbeat.

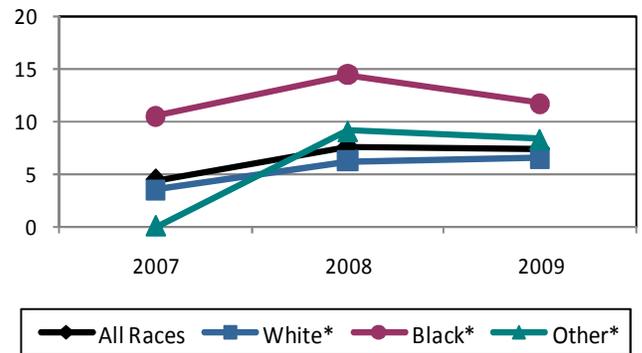
Fetal Mortality serves as an indicator for factors surrounding birth but not limited to health of the mother, premature birth, prenatal care and the quality of health services delivered to the mother. The following data is important because it tells us about health care needs before women become pregnant.

Fetal Mortality Rate per 1,000 Births by Race

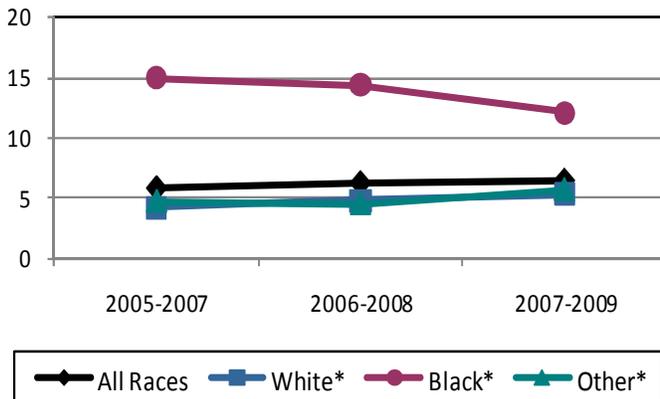
What: The rate of fetal mortality per 1,000 live births in the Flagler and Volusia Healthy Start service delivery area.

How is it changing? The rate has increased over the reporting period for all babies of all races.

Source: Florida Department of Health, Office of Vital Statistics



Fetal Mortality Rate – Three-Year Rolling Averages



What: The three-year rolling average rate of fetal mortality per 1,000 live births in the Flagler and Volusia Healthy Start service delivery area.

How is it changing? The rate has increased over the reporting period for All Races, White babies and babies of Other races. The rate has decreased for Black babies.

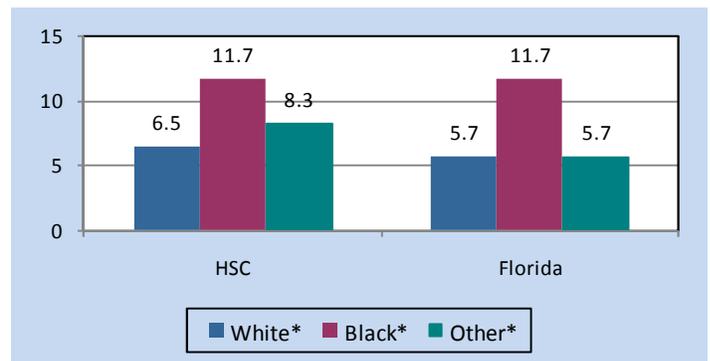
Source: Florida Department of Health, Office of Vital Statistics

2009 Fetal Mortality by Race

What: The rate of fetal mortality per 1,000 live births in the Flagler and Volusia Healthy Start service delivery area and Florida statewide in 2009.

How is it changing? The rate for White babies and babies of Other races was higher in the Volusia & Flagler Healthy Start service delivery area than in Florida statewide. The rate for Black babies was the same as statewide.

Source: Florida Department of Health, Office of Vital Statistics



*Race is reported regardless of ethnicity. Race data does not include persons whose race is unknown. "Other Races" is defined as American Indian, Chinese, Japanese, Hawaiian, Filipino, Korean, Other races, Vietnamese, Asian Indian, Asian Other, Guam, Samoan, Other Pacific Islander, More than one race.

Infant Mortality is defined as death during the first year of life.

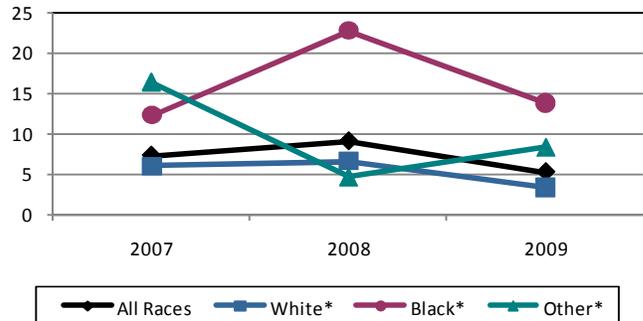
Infant Mortality serves as an indicator for factors surrounding the first day of life to one year of age but not limited to contributing factors related to low birth weight, health services delivered to the infant, health of the mother and sleep related environment.

Infant Mortality Rate per 1,000 Births by Race

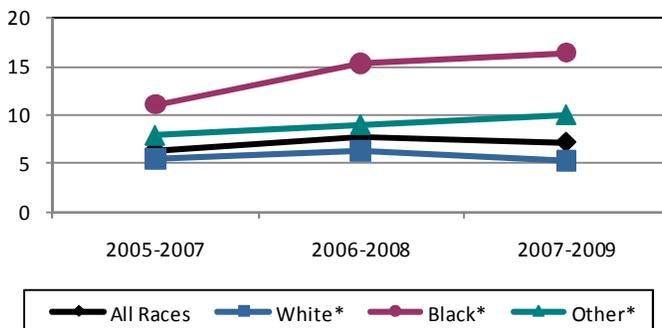
What: The rate of infant mortality per 1,000 live births in the Flagler and Volusia Healthy Start service delivery area.

How is it changing? The rate has decreased over the reporting period for All Races, White babies and babies of Other races. The rate has increased over the reporting period for Black babies.

Source: Florida Department of Health, Office of Vital Statistics



Infant Mortality Rate – Three-Year Rolling Averages



What: The three-year rolling average rate of infant mortality per 1,000 live births in the Flagler and Volusia Healthy Start service delivery area.

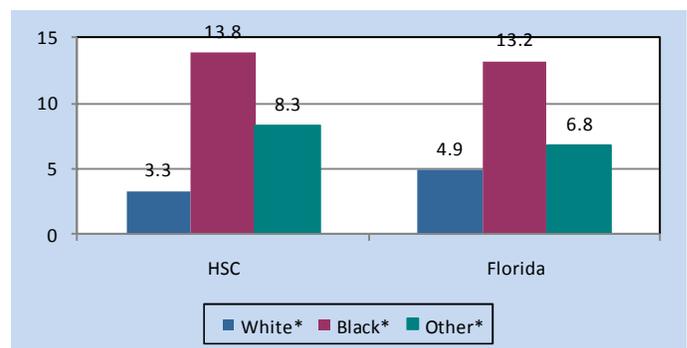
How is it changing? The rate has decreased over the reporting period for All Races and White babies. The rate has increased over the reporting period for Black babies and babies of Other races.
Source: Florida Department of Health, Office of Vital Statistics

2009 Infant Mortality by Race

What: The rate of infant mortality per 1,000 live births in the Flagler and Volusia Healthy Start service delivery area and Florida statewide in 2009.

How is it changing? The rate for White babies was lower in the Volusia & Flagler Healthy Start service delivery area than in Florida statewide. The rate for Black babies and babies of Other races was higher locally than statewide.

Source: Florida Department of Health, Office of Vital Statistics



Neonatal Mortality is defined as death occurring to a live born infant before they are 28 days of age.

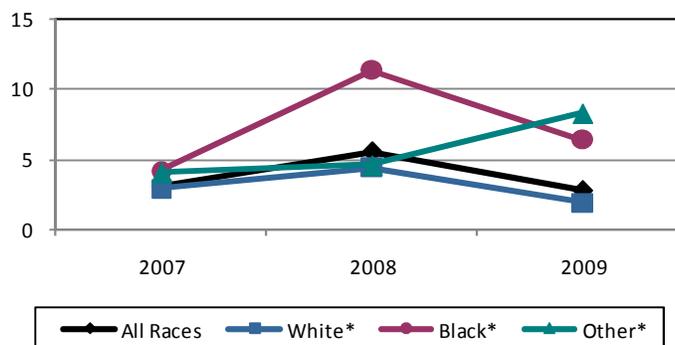
Neonatal Mortality serves as an indicator for factors surrounding birth to 28 days of age but not limited to contributing factors related to low birth weight, health services delivered to the infant, health of the baby and mother.

Neonatal Mortality Rate per 1,000 Births by Race

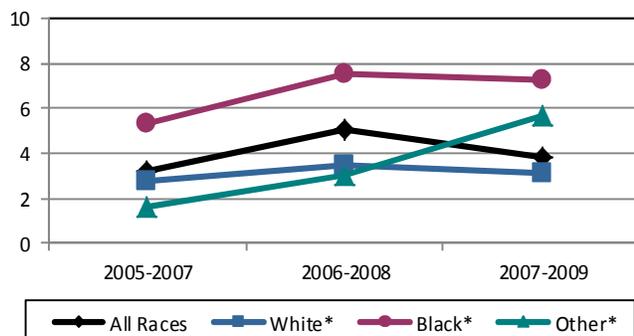
What: The rate of neonatal mortality per 1,000 live births in the Flagler and Volusia Healthy Start service delivery area.

How is it changing? The rate has decreased over the reporting period for All Races and White babies. The rate has increased over the reporting period for Black babies and babies of Other races.

Source: Florida Department of Health, Office of Vital Statistics



Neonatal Mortality Rate – Three-Year Rolling Averages



What: The three-year rolling average rate of neonatal mortality per 1,000 live births in the Flagler and Volusia Healthy Start service delivery area.

How is it changing? The rate has increased over the reporting period for all babies of all races.

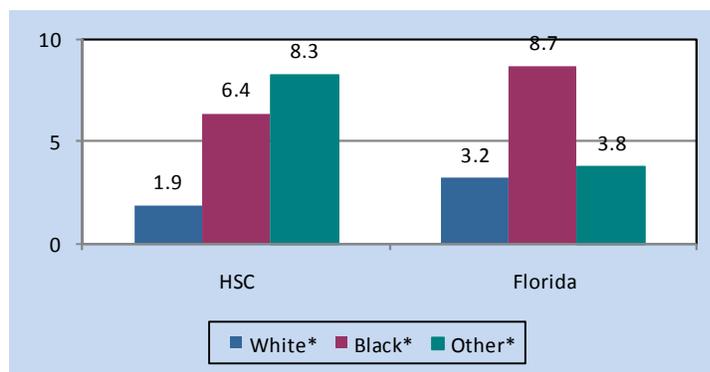
Source: Florida Department of Health, Office of Vital Statistics

2009 Neonatal Mortality by Race

What: The rate of neonatal mortality per 1,000 live births in the Flagler and Volusia Healthy Start service delivery area and Florida statewide in 2009.

How is it changing? The rate for White babies and Black babies was lower in the Volusia & Flagler Healthy Start service delivery area than in Florida statewide. The rate for babies of Other races was higher locally than statewide.

Source: Florida Department of Health, Office of Vital Statistics



Post Neonatal Mortality is defined as death occurring between 28 days and 364 days of age.

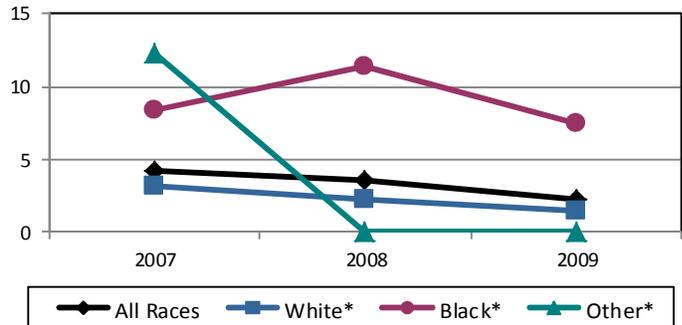
Post Neonatal Mortality serves as an indicator for factors surrounding 28 days of life to one year of age but not limited to contributing factors related to low birth weight, health services delivered to the infant, health of the mother and sleep related environment.

Post Neonatal Mortality Rate per 1,000 Births by Race

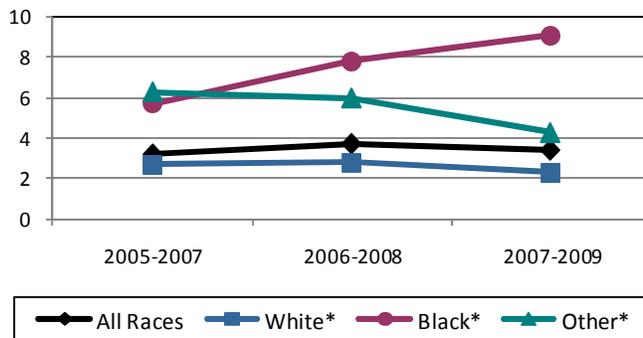
What: The rate of post neonatal mortality per 1,000 live births in the Flagler and Volusia Healthy Start service delivery area.

How is it changing? The rate has decreased over the reporting period for all babies of all races.

Source: Florida Department of Health, Office of Vital Statistics



Post Neonatal Mortality Rate – Three-Year Rolling Averages



What: The three-year rolling average rate of post neonatal mortality per 1,000 live births in the Flagler and Volusia Healthy Start service delivery area.

How is it changing? The rate has increased over the reporting period for All Races and Black babies. The rate has decreased for White babies and babies of Other races.

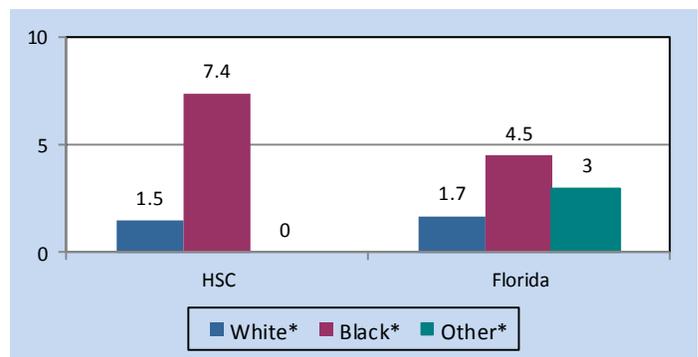
Source: Florida Department of Health, Office of Vital Statistics

2009 Post Neonatal Mortality by Race

What: The rate of post neonatal mortality per 1,000 live births in the Flagler and Volusia Healthy Start service delivery area and Florida statewide in 2009.

How is it changing? The rate for White babies and babies of Other races was lower in the Volusia & Flagler Healthy Start service delivery area than in Florida statewide. The rate for Black babies was higher locally than statewide.

Source: Florida Department of Health, Office of Vital Statistics



Low Birth Weight is defined as newborn birth weight less than 2,500 grams (5lbs., 8oz).

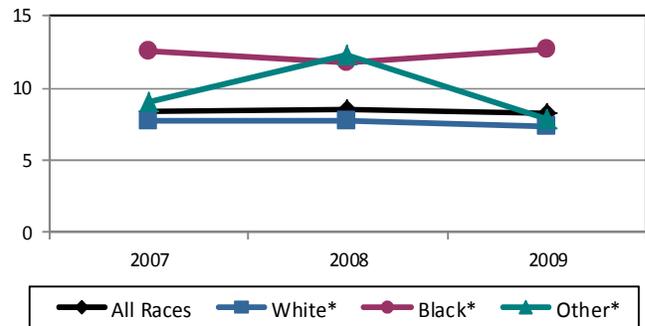
The proportion of babies with a low birth weight is an indicator of a multifaceted public-health problem that includes long-term maternal malnutrition, ill health, hard work and poor health care in pregnancy. It is also a predictor of newborn health and survival.

Low Birth Weight Percentage per 1,000 Births by Race

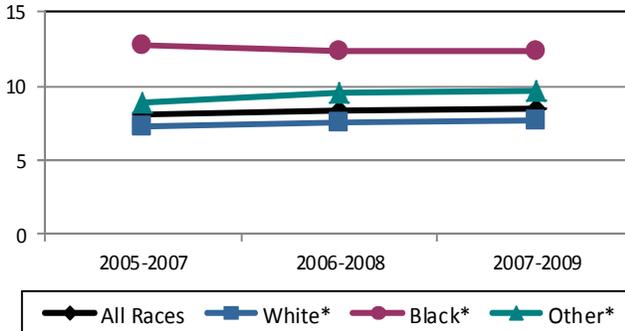
What: The percentage of low-birth weight births in the Flagler and Volusia Healthy Start service delivery area.

How is it changing? The percentage has decreased over the reporting period for All Races, White babies and babies of Other races. The percentage has increased slightly for Black babies.

Source: Florida Department of Health, Office of Vital Statistics



Low Birth Weight Percentage – Three-Year Rolling Averages



What: The three-year rolling average percentage of low-birth weight births in the Flagler and Volusia Healthy Start service delivery area.

How is it changing? The percentage has increased over the reporting period for All Races, White babies and babies of Other races. The percentage has decreased for Black babies.

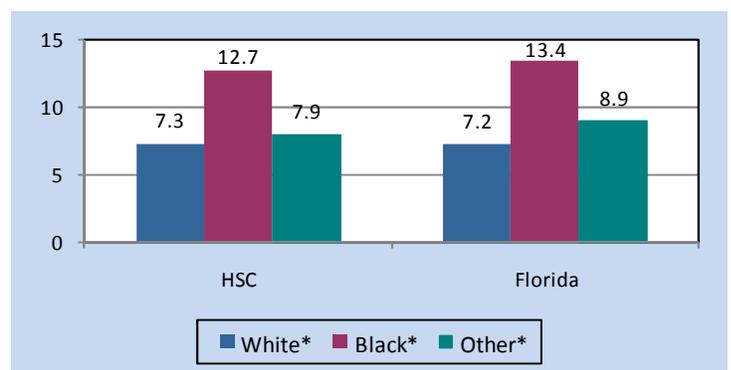
Source: Florida Department of Health, Office of Vital Statistics

2009 Low Birth Weight Percentage by Race

What: The percentage of low-birth weight births in the Flagler and Volusia Healthy Start service delivery area and Florida statewide in 2009.

How is it changing? The percentage for White babies was slightly higher in the Volusia & Flagler Healthy Start service delivery area than in Florida statewide. The percentage for Black babies and babies of Other races was lower locally than statewide.

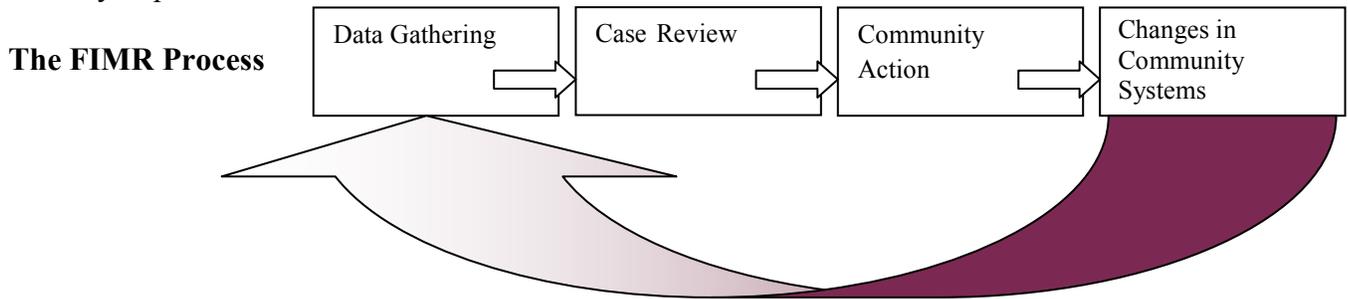
Source: Florida Department of Health, Office of Vital Statistics



Fetal Infant Mortality Review (FIMR) Data Source: BASINET

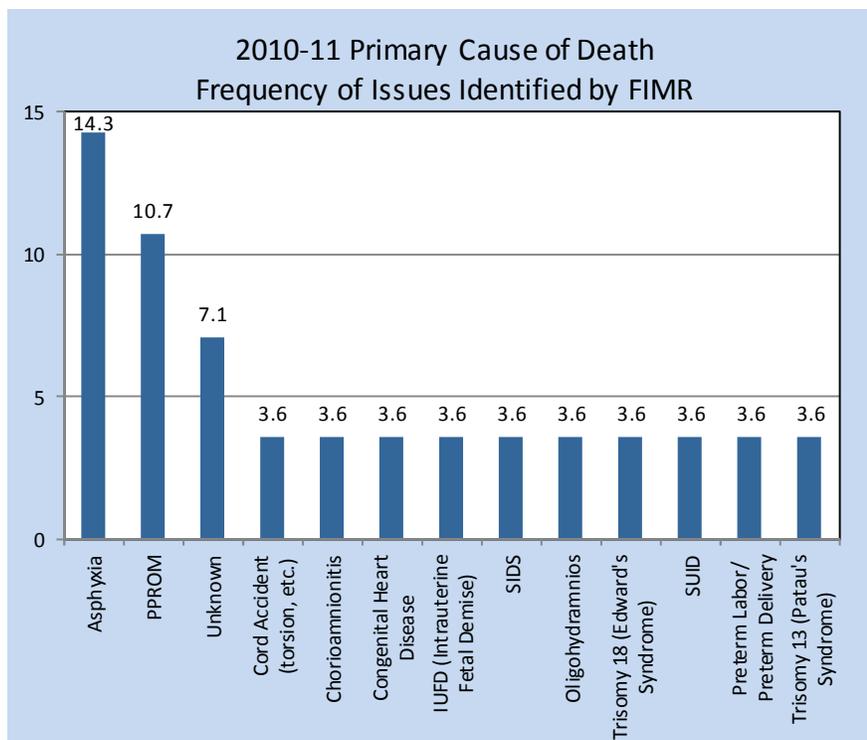
What is the Fetal Infant Mortality Review (FIMR)?

Because the death of an infant is viewed as a sentinel event that is a measure of a community's overall social and economic well-being, several states and many communities have implemented the Fetal and Infant Mortality Review process. Volusia and Flagler Counties have been implementing FIMR for the last fifteen years. This process is used to determine the community-level factors associated with individual cases of fetal and infant death. FIMR goes beyond biomedical causes to place infant mortality in the larger context of systems factors, with the ultimate goals of improving community resources and health service delivery systems for women, infants and families. In essence, we ask, "Could we have done something differently to prevent this death or loss?"



BASINET serves as a data system that provides a snapshot of selected infant and fetal deaths to include data collection related to contributing factors, family strengths and recommendations to improve the system of care.

Primary Cause of Death - Frequency of Issues Identified by FIMR



What: The percentage of primary causes of death by frequency of issues identified by FIMR in Flagler and Volusia Counties.

How is it categorized? Of the issues identified as the primary cause of death, the highest percentage is Asphyxia. The second most identified cause was PPROM (Preterm Premature Rupture of Membranes) and the third was unknown. The remaining and lowest issues identified were all of an equal percentage.

Source: BASINET Aggregate Data Florida Association of Healthy Start Coalitions – Flagler & Volusia Project

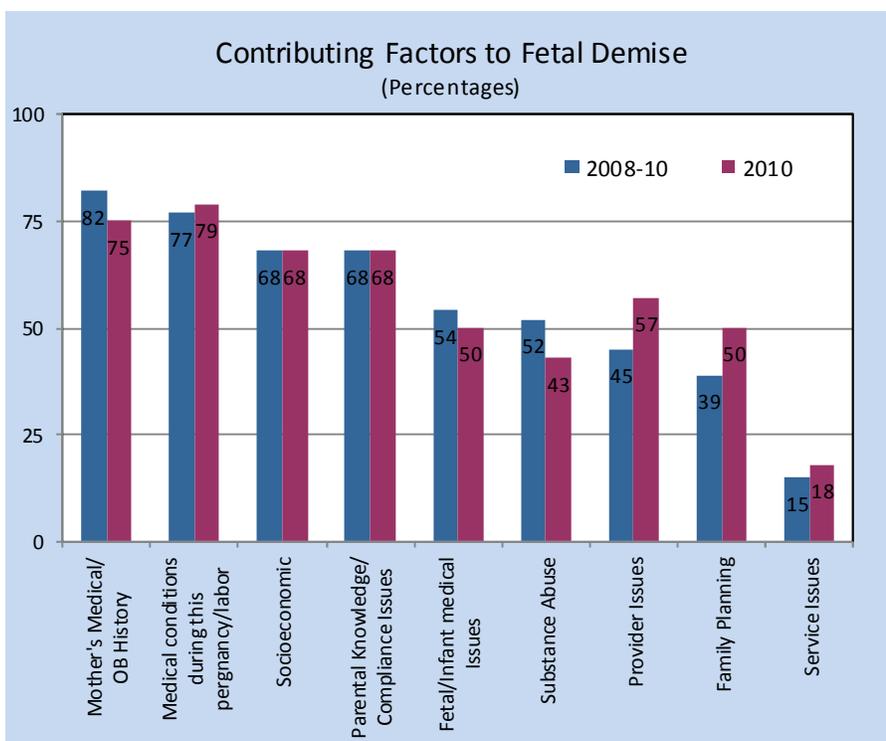
FIMR (continued) Data Source: BASINET

2008-2010 Sleep Related Deaths

In 2008-2010, 55.6% of the deaths reviewed by FIMR were sleep related.

Sleep Related Condition	Highest Percentage(s) of Each Condition
Site of Death	93.3 % - infant's home
Sleeping Situation	80.0% - with others
Sleeping Location	53.3% - an adult bed
	20.0% - a couch or chair
Sleeping Position When Found	46.7% - abdomen
	26.7% - back
Usual Sleeping Position	33.3% - no information
	26.7% - back
Bedding at Time of Death	46.7% - soft bedding
Items in Bed at Time of Death	86.7% - unsafe items in the sleeping area
Feeding Type	80.0% - bottle
Symptoms Within 2 Weeks of Death	46.7% - symptoms present
Second Hand Smoke	40.0% - present
Other Hazards	46.7% - other hazards present

Factors Contributing to Fetal Demise



What: The percentage of identified contributing factors to fetal demise in the Flagler and Volusia Healthy Start service delivery area in 2010 and from 2008 through 2010.

How is it categorized?

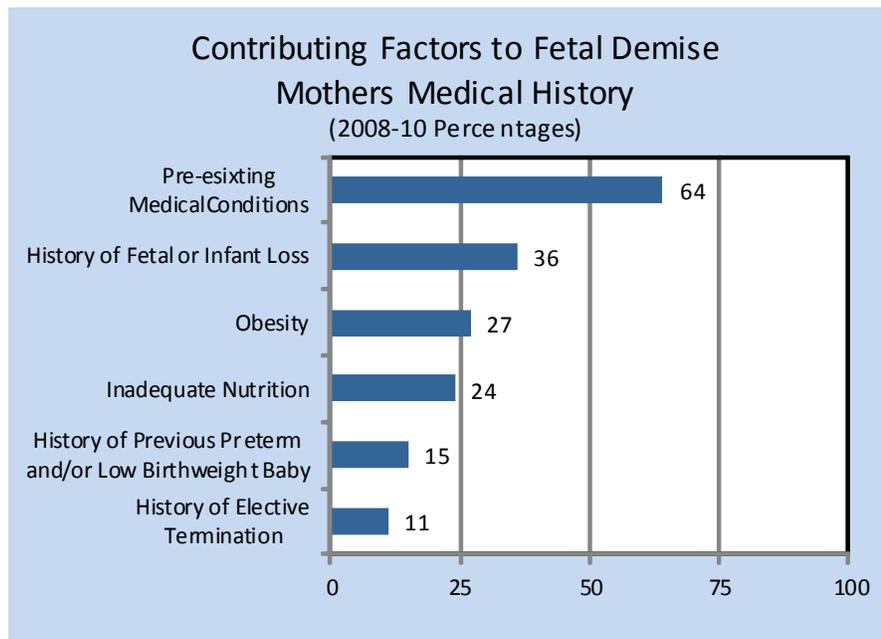
Of the factors identified as contributing to fetal demise from 2008 through 2010, the highest percentage was Mother's Medical History. The second through eighth ranked factors are listed in diminishing order.

Source: BASINET Aggregate Data Florida Association of Healthy Start Coalitions – Flagler & Volusia Project

FIMR (continued) Data Source: BASINET

Top Four Factors Contributing to Fetal Demise

1. Mother's Medical History



What: The top six issues, by percentage, identified as contributing factors to fetal demise attributed to a mother's medical history in the Flagler and Volusia Healthy Start service delivery area.

How is it categorized? Of the mother's medical history factors identified as contributing to fetal demise from 2008-2010, the highest percentage was attributed to pre-existing medical conditions (asthma, hypertension, diabetes, mental health disorders, etc.) decreasing to the sixth highest percentage for history of elective termination.

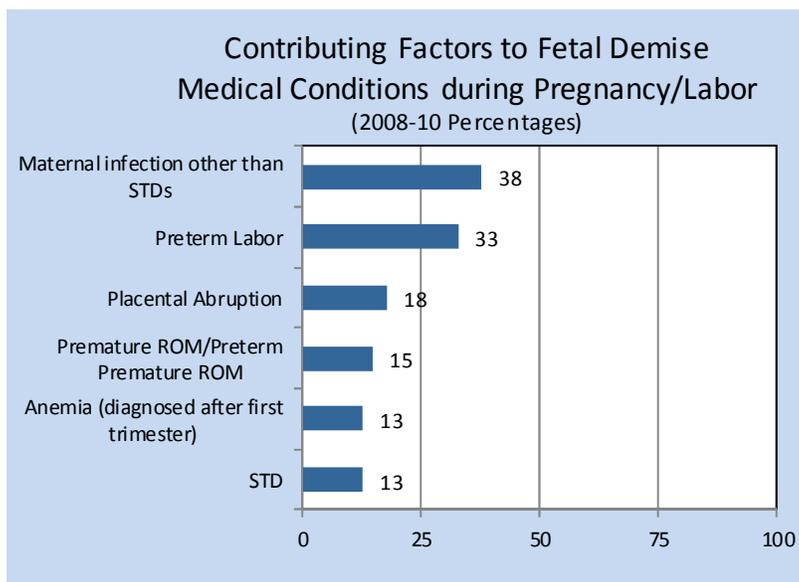
Source: BASINET Aggregate Data Florida Association of Healthy Start Coalitions – Flagler & Volusia Project

2. Medical Conditions during this Pregnancy/Labor

What: The top six issues, by percentage, identified as contributing factors to fetal demise attributed to medical conditions during the pregnancy and/or labor in the Flagler and Volusia Healthy Start service delivery area.

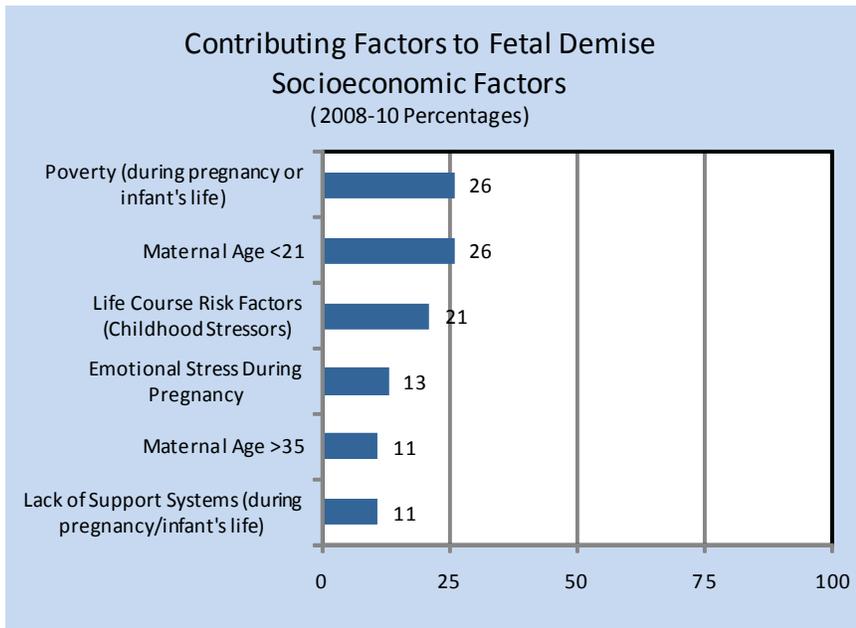
How is it categorized? Of the medical conditions during this pregnancy/labor identified as contributing to fetal demise from 2008-2010, the highest percentage was attributed to maternal infection other than STDs decreasing to the two percentages tied for fifth highest for anemia diagnosed after the first trimester and STD.

Source: BASINET Aggregate Data Florida Association of Healthy Start Coalitions – Flagler & Volusia Project



FIMR (continued) Data Source: BASINET

3. Socioeconomic Factors

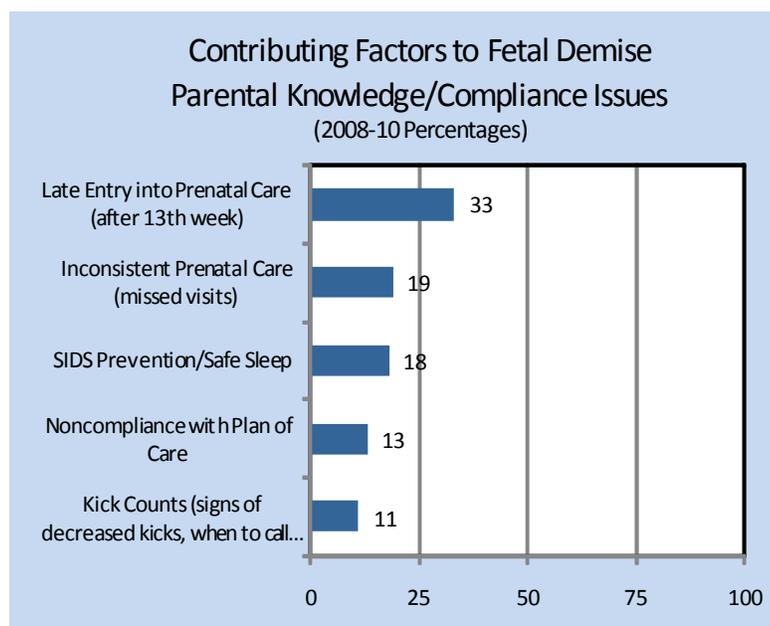


What: The top six issues, by percentage, identified as contributing factors to fetal demise attributed to socioeconomic factors in the Flagler and Volusia Healthy Start service delivery area.

How is it categorized? Of socioeconomic factors identified as contributing to fetal demise from 2008-2010, the highest percentage was attributed to poverty during the pregnancy or infant's life decreasing to the two percentages tied for fifth highest for maternal age over 35 and lack of support systems during the pregnancy or infant's life.

Source: BASINET Aggregate Data Florida Association of Healthy Start Coalitions – Flagler & Volusia Project

4. Parental Knowledge/Compliance Issues



What: The top six issues, by percentage, identified as contributing factors to fetal demise attributed to parental knowledge and/or compliance issues in the Flagler and Volusia Healthy Start service delivery area.

How is it categorized? Of parental knowledge/compliance issue factors identified as contributing to fetal demise from 2008-2010, the highest percentage was attributed to late entry into prenatal care (defined as after the 13th week) decreasing to the fifth highest for kick counts (defined as signs of decreased movement or when to call the doctor).

Source: BASINET Aggregate Data Florida Association of Healthy Start Coalitions – Flagler & Volusia Project

Community Action Recommendations

The following recommendations have resulted from the activities of the FIMR CRT and the Healthy Start Coalition. These recommendations have been incorporated into a five year Service Delivery Plan in an effort to improve outcomes in Volusia and Flagler Counties.



Preconception and Interconception Health

- Improve community education about the importance of health care access and positive health related behaviors for women of reproductive age. This includes family planning/baby spacing, smoking cessation, discontinuing consumption of alcohol or other drugs, achieving optimal weight, and obtaining and maintaining a permanent medical home.
- Educate the community about the prevalence of obesity and the importance of incorporating this general health focus into all aspects of care. Healthy Start services for the baby should also focus on helping the mom lose her weight postpartum.

Prenatal Care Access

- Educate Medicaid eligible women about the importance of prenatal services and the most effective ways to navigate through the health care system.
- Support of EASY ACCESS centers where women can receive immediate and low or no cost prenatal health services.
- Develop public/private partnerships among all sectors of the health community to ensure the most cost-effective, quality services available to low income or uninsured pregnant women.

Breastfeeding

- Increase the number of women who successfully breastfeed their babies for a minimum of 90 days.
- Ensure all direct service providers have training in breastfeeding support and that all patients receive information about the benefits of breastfeeding and where to obtain support.

Pediatric Access

- Ensure newborns are linked to pediatric services BEFORE they leave the hospital.
- Follow up with very high risk families within 72 hours of discharge from the hospital whenever possible.

Abuse of Alcohol and Other Drugs

- Provide responsive drug and alcohol treatment intervention services to providers and patients who are affected.
- Coordinate with residential, outpatient and detoxification services on behalf of pregnant and post partum women who may endanger their children as a result of their alcohol or drug use.
- Coordinate with prenatal health practitioners to encourage effective screening methods for early identification and intervention for pregnant women who may be using alcohol or other drugs.

Safe Sleep

- Improved provider, community and patient awareness about safe sleep and prevention of sleep-related death.
- Increased distribution of safe sleep environments to those who do not have a crib or safe place for their infant to sleep.

Follow-Up After Loss

- Develop a provider “Grief Toolkit” to assist practitioners in supporting patients who have experienced an infant or fetal loss.
- Educate providers and patients in clinic and hospital settings about the availability of Healthy Start services for psychosocial support, linkage to genetic counseling, and interconception education and support.

Collaboration

- Determine mechanisms for more effective collaboration between medical, hospital, social services and the patient to support better pregnancy outcomes.

Health Disparities

- Engage stakeholders in the faith community and health care professionals to increase awareness of the significant disparities in maternal and child health affecting people of color.

Project **INFORM**

Community Initiatives

Beds for Babies

The Healthy Start Coalition provides urgently needed safe sleeping environments for infants in the service delivery area through a project called Beds for Babies. Safe cribs and well-fitting crib mattresses, or “Pack-n-Plays,” are critical in the prevention of serious injury and may assist in reducing infant deaths. The Coalition provides these safe sleeping areas for infants and families identified by direct service workers and community partners to be in immediate need. Families receive information and instruction on how to prevent sleep related death.

Child Watch

The Child Watch Program was created by the Children’s Defense Fund (CDF), a national organization whose mission is to leave no child behind, and is conducted nationwide to raise awareness of the various issues concerning the welfare of children. The program brings together elected officials, business professionals, media representatives, teachers, principals, spiritual leaders and other community anchors to convey the importance of investing in children. Those that participate in the annual program spend a day touring local child care centers, clinics, neonatal intensive care wards, and other related locations to witness firsthand the state of their community’s children and to learn what solutions can be implemented to help future generations of children.

Grief Toolkit

The Grief Toolkit was developed in collaboration with the Healthy Start Coalition Marketing Committee, Florida State University School of Medicine, the FIMR CRT, and the Florida Department of Health. This toolkit is distributed to maternal child health outlets in our service delivery area in order to provide practical information to patients who have experienced a fetal or infant loss. It includes information about miscarriage, interconceptional health, bereavement, and resources for support. It is available on our website at www.healthystartfv.org.

Lifesong

Lifesong is a developing collaborative between the Healthy Start Coalition, members of the faith community, civic groups, and local artists and dancers. Its purpose is to engage the community in addressing health disparities.

Case Review Team and Acknowledgements

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