Fetal and Infant Mortality Review (FIMR) Project of Miami-Dade County

2007 – 2011 COMMUNITY REPORT
Introduction to Fetal and Infant Mortality Review Project

The Fetal and Infant Mortality Review (FIMR) Project is a countywide effort to better understand the causes of fetal and infant mortality and morbidity and to develop strategies that improve systems of care for mothers and babies, locally and statewide.

FIMR began in 1990 as a collaborative effort between the American College of Obstetricians and Gynecologists (ACOG) and the Federal Maternal and Child Health Bureau (MCHB). Since it was first introduced in the late 1980s, FIMR has been a dynamic, community-oriented process. FIMR has enjoyed continued growth and refinement as more communities have used it. Today, there are over two hundred FIMR programs nationwide. While the basic methodology is the same in most programs, the specific recipe for actual operation is local. Funding sources vary from community to community. Different types of agencies sponsor the FIMR program including city and county health departments, local hospitals, regional perinatal centers and community based maternal and child health coalitions.

Florida adopted the FIMR model in 1992. The Healthy Start Coalition of Miami-Dade has been contracted by the State of Florida to implement FIMR locally. FIMR of Miami-Dade County is one of 11 FIMR projects statewide organized under Florida Statute 766.101 and funded by the State of Florida.

The Need for FIMR

In the FIMR process, we examine the tragedy of an infant death in order to achieve a better future for all children and families. Each case reviewed provides us with an opportunity to examine and work to rectify circumstances that increase the risk of infant death.

The Fetal and Infant Mortality Review process has valuable outcomes:
- For the family experiencing a fetal or infant loss - the interview process itself may help move them through the stages of grief and improve their ability to cope with the loss;
- For institutions and providers - fetal and infant mortality review findings lead to improved quality of services; both duplication and gaps in services can be avoided;
- For communities - the fetal and infant mortality review process empowers the community to create solutions and improve existing service systems and community resources for women, children and families.

FIMR Model

- Infant Death
- Data Gathering
- Case Review Team
- Community Action Group
- Interventions
- Improved Maternal and Child Health Outcomes

This process does not strive to assign blame or responsibility for any infant's death. Through FIMR, the community becomes the expert in the knowledge of the entire local service delivery systems and community resources for women, children and families. FIMR stresses community ownership and pride. Community members become the change agents and advocates for the health and well-being of local families.

Examining Infant Mortality

Infant mortality is a complex issue that impacts everyone, regardless of circumstances. That is why infant mortality has
always been viewed as a good overall indicator of a community’s quality of life, as well as the health status of its citizens.

There are several interconnecting factors that influence infant mortality. Each requires our attention as we work to improve the health of the women, children and families in our community. Certainly we need to consider the quality and accessibility of the local health care system. However, we must also consider general community resources, policies, social conditions and quality of life factors, each of which can also influence infant mortality.

There are many reasons professionals study fetal and infant deaths:

- Health care providers: to implement peer review process;
- Institutions: to monitor overall compliance with policies and procedures;
- Medical researchers: to develop insights into new medical treatments to prevent infant death;
- County and State health officers: to aggregate vital statistics to document and quantify causes of death.

**The Process:**

Adapted from: South Carolina FIMR

- **CASE REVIEW TEAM**
  - Reviews cases, identifies issues and reports to
- **COMMUNITY ACTION GROUP**
  - Asesses broader issues, translates issues into interventions and reports

Action Occurs: To the COMMUNITY

![Diagram](image)

**Create Solutions Where None Exist**

- Within provider groups and organizations.
- Between providers and organizations.
- Across the community.

FIMR complements all of these efforts but takes a different approach. It uses a unique, substantive blend of social, community and medical information not available through any of these other efforts. FIMR identifies strengths and areas for improvements in overall services systems and community resources for women, children and families. FIMR also provides direction towards the development of new policies to safeguard them.

Text adapted from materials provided by the National Fetal-Infant Mortality Review Program of The American College of Obstetricians and Gynecologists.

**Who is part of FIMR?**

Potential members come from the entire community and include individuals and agency representatives who:

- live in the community and use its resources;
- provide health and human services;
- set policy; and/or,
- rely on the community as a source for workers and a good place to do business.

FIMR is composed of two groups, the Case Review Team (CRT) and the Community Action Group (CAG). A multi-disciplinary team of professionals, the CRT uses unidentified/patient-blinded abstracted information from vital records (death and birth certificates), hospitals, clinics, physicians, police, Medical Examiner records and family/maternal interviews.

The CAG comprises of community leaders representing government, consumers, key institutions, health and human services organizations. The members of the CAG work collaboratively with the CRT to implement strategies that will improve fetal and infant outcomes within our community.

**What is FIMR?**

FIMR is:

- a strategy to close the gap in health disparities at the community level;
- a timely and valuable source of information about changing health care systems and how they affect real families trying to access them;
- a community coalition that promotes volunteerism, good citizenship and will translate into local accountability;
- a community coalition that can represent all ethnic and cultural views in the community;
- a strategy that improves communication among health and human service providers;
- a form of continuous quality improvement that allows communities to assess the performance of systems and the impact of changes in those systems;
- a voice for local families who have lost their baby;
- a tool that helps local health officials implement policies to safeguard families.
Infant Deaths

Infant mortality includes deaths to live born babies during their first year of life. Because of its association with a variety of factors such as maternal health, quality of care, access to health care, socioeconomic conditions and public health practices, the infant mortality rate is often considered the primary indicator of the health of a nation.

Infant mortality is divided into two periods, 1) neonatal mortality are deaths to infants less than 28 days old, and 2) post-neonatal mortality includes deaths to infants between 28 and 364 days old.

From 2006 to 2011, the infant mortality rate in Miami-Dade County has shown a decreasing trend. As of 2011, the infant mortality rate is 4.7 deaths per 1,000 live births.

The infant mortality rate for Blacks/African-Americans in Miami-Dade County (9.3 deaths) was three times as high as the rate for whites (3.1).

Although Miami-Dade County’s infant mortality rate is lower than the State rate, there is still much work to be done in reducing disparities among racial/ethnic groups.

Fetal Mortality/Stillbirths

According to the National Center for Health Statistics, fetal death or stillbirth is defined as “death prior to the complete expulsion or extraction from its mother of a product of human conception, irrespective of the duration of pregnancy and which is not an induced termination of pregnancy. The death is indicated by the fact that after such expulsion or extraction, the fetus does not breathe or show any other evidence of life... and must occur with at least 20 weeks gestation.”

Historically, Miami-Dade County has experienced a slightly higher fetal death rate than the state of Florida overall. In 2010, however, the County rate fell to 7.1 fetal deaths for every 1,000 live births, slightly below the State rate of 7.2. The gap widened in 2011, the County rate fell further to 7.0 and the State rate rose to 7.3.

Significant differences in rates between whites and Blacks/African-Americans continue to affect the County. In 2011, the fetal mortality rate for whites in Miami-Dade was 4.6 live births compared to 13.9 for Blacks and African-Americans.
Infant Deaths

Neonatal Mortality (<28 Days) Rates

Neonatal mortality includes deaths occurring to infants before they are 28 days old and is generally associated with events surrounding the prenatal period and labor/delivery. In 2011, the neonatal mortality rate in Miami-Dade County was 3.0 deaths per 1,000 live births.

In 2011 in Miami-Dade County, the neonatal mortality rate for whites was 2.0, and for Blacks and African-Americans the rate was 5.9. Statewide, a disparity was also seen in neonatal mortality rates, and the State rates for both races were higher than the County rates. Most of the infants (over 60%) who die in the neonatal period die within the first 24 hours of life. Prematurity and low birth weight were the primary causes of neonatal mortality.

Post-neonatal Mortality

Post-neonatal mortality includes deaths of infants from 28 days to 364 days of age. It has traditionally been associated with the condition or events that occur after delivery and is usually indicative of environmental factors impacting the birth.

In 2011, Miami-Dade County had a post-neonatal death rate of 1.7. The post-neonatal death rate in the County was slightly lower than that of the State, which was 2.1. Leading causes of post-neonatal death in the County include prematurity, congenital anomalies, and sleep-related deaths, including Sudden Infant Death Syndrome (SIDS) and Sudden Unexplained Infant Deaths (SUIDS).

A difference in the rate between whites and Black/African-Americans was notable, with the Black/African-American rate 3 times as high as the rates for whites, 3.4 compared to 1.1, respectively.

In the State, the top four leading causes of infant death (neonatal and post-neonatal combined) in 2011 were: 1) Perinatal Period Conditions (such as extreme low birth weight, bacterial sepsis, premature rupture of membranes, multiple pregnancy, chorioamnionitis, etc.) (53% of all infant deaths) 2) Congenital Malformations (18%) 3) Unintentional Injuries/Accidents (6%), and 4) SIDS (3%). Together, these causes accounted for 80.3% of all infant deaths in Florida.
Community Strengths

The purpose of FIMR is to improve maternal-infant health outcomes by identifying contributing causes of infant deaths. However, the FIMR Case Review Team (CRT) operates from a strength-based perspective, and identified several community strengths that help protect pregnant women from poor outcomes. These factors include positive aspects of mothers’ support network including involvement from father of baby and family support, the availability of grief support, quality medical care, patient education, positive aspects of health care provider services, and the availability of social support services.

Summary of Key Contributing Death Factors

The mothers’ medical/obstetrical history was a major contributing cause of death in cases reviewed from July 2007 – June 2012, with 84% of women who suffered a loss exhibiting some type of medical condition prior to pregnancy. Low socioeconomic status was another important risk factor for infant death. Other major contributing causes were diseases that the pregnant woman or her infant developed during her pregnancy. Parental knowledge and/or compliance with prenatal care, provider issues and service issues were also significant problems.

Maternal Obstetrical History

In exploring mothers’ medical history prior to pregnancy, we found that 42% of mothers had a pre-existing medical condition such as hypertension or diabetes. The growing obesity epidemic also had an impact on infant mortality in Miami-Dade County, with obesity being a major pre-existing condition affecting 33% of reviewed cases of infant or fetal death. Inadequate nutrition and a history of poor outcomes were also factors.

Provider Issues

Among factors related to provider issues identified that may have contributed to poor infant or fetal outcomes in Miami-Dade County, the most significant factor was a lack of Healthy Start Prenatal Risk Screenings. Other significant factors included poor provider-patient communication, a lack of appropriate referrals, poor follow-up and misdiagnosis.
Maternal Conditions During Pregnancy

The three major contributing factors to fetal and infant death related to maternal conditions during pregnancy were maternal infections, anemia and preterm labor. Additional factors included Sexually Transmitted Infections (STIs), placental abruption, pre-eclampsia and gestational diabetes. Causes in the “other” category were implicated in 26% of cases; these causes included inadequate or excessive weight gain and pregnancy-induced hypertension.

Prenatal Care

Lack of parental knowledge and compliance with prenatal care (PNC) were implicated in a significant portion of reviewed fetal and infant deaths. The most common contributing factor was late entry into prenatal care, which occurred in 37% of these cases. Other critical factors include the mother being unaware of the importance of monitoring fetal movements/when to seek emergency care and inconsistent prenatal care (missed visits).

Fetal/Infant Health Issues

In cases where fetal/infant health issues were contributing factors, prematurity was the single largest contributor, at 33% of cases. Other causes include infection, cord problems and pre-existing medical conditions. Miscellaneous/other causes (including factors such as intrauterine growth restriction and issues with the placenta) were implicated in 22% of cases.

Service Issues

Inappropriate utilization of services was a contributing factor in some cases reviewed by the Case Review Team. In 26% of cases, health resources were available but not accessed by the client. Miscellaneous health care quality issues and distrust of the medical system may have contributed to this problem.

Other Factors

Research has shown that women with limited economic resources have an elevated risk of poor pregnancy outcomes. This was the case in Miami-Dade County, with maternal poverty being a factor in 58% of reviewed deaths. Maternal age, also a prominent factor, was implicated in 35% of cases. Other risk factors include emotional stress, a history of ongoing stressful events in the woman’s life (life course risk factors), and lack of social support.
Recommendations from FIMR Case Review Team

- Improve assessments of families’ home and socioeconomic situations and make appropriate referrals based on these assessments. Continued education to prenatal care provider practices and pediatric practices about community resources would positively impact this current deficit.

- Administer Healthy Start Prenatal Risk Screen to all pregnant women on their first prenatal visit.

- A more thorough evaluation of the dietary habits and diet content of all pregnant women would improve many outcomes. Having a referral network or an evaluation system in place to provide this service would benefit all pregnant women.

- More intense follow up and evaluation of why a woman misses her prenatal appointments will assist providers in being able to offer the family with resources and/or information that may improve patient compliance with care.

- Case reviews indicated that many women did not understand important issues related to prenatal or infant care. Improved communication between provider and patient as well as more thorough evaluation of a patient’s understanding of these issues will likely improve patient outcomes.

- In most cases reviewed, documented patient education was lacking. Providing all pregnant women and/or new parents with education about the following topics would empower parents to improve their own outcomes: prevention of Sexually Transmitted Infections, risks of obesity, importance of compliance with plan of care, importance of early and consistent prenatal care, importance of proper nutrition, importance of utilizing services such as Healthy Start and WIC when applicable, “Kick Count” monitoring and when to seek emergency care, importance of breastfeeding, infant safe sleep, and infant CPR/first aid.

- Little documentation of breastfeeding education and breastfeeding support was seen in reviewed cases. Increasing the frequency of breastfeeding education during prenatal care, labor & delivery hospital stays, as well as during postpartum visits and pediatric visits would benefit mothers and babies. Since research clearly demonstrates that breastfeeding improves health outcomes for mother and babies – including shorter length of stay in Neonatal Intensive Care Unit (NICU) – it is recommended to provide breastfeeding support services to all postpartum women, including mothers with babies being treated in the NICU.

- A notable proportion of the women had sub-optimal health at the onset of pregnancy. These mothers would have benefited from preconception and interconception (between pregnancies) education about the importance of being healthy prior to pregnancy, family planning and appropriate birth spacing.

- Because many women do not return for their six week postpartum visit, providing birth control and family planning education in the immediate postpartum period is recommended.

- Adequate documentation of cause of death in the vital records, particularly in the fetal death certificates, continues to be a challenge faced by the Case Review Team (CRT). Many fetal death certificates list the cause of death as “fetal demise,” making it difficult for the CRT to assess whether the “cause of death” could have been prevented.

- More thorough documentation and notation in medical records would improve the quality of FIMR case reviews. Challenges related to missing documentation in medical records both from the prenatal care provider and the hospital makes the case abstraction process difficult and results in gaps in information that prevent the Case Review Team (CRT) from completing the case review in a comprehensive manner.
Actions that have come from FIMR Observations and Recommendations

In recent years, the observations and recommendations from our FIMR CRT and CAG have prompted action and change. Some great things that have happened as a result of the FIMR Project of Miami-Dade County include:

The creation and distribution of free educational brochures and tools that are made available in both English and Spanish to all health care providers, organizations and families in Miami-Dade County. Topics include:

- Healthy Start Prenatal Passport and “Kicks Count” monitoring tool
- Health Care Resources
- Stillbirth & Infant Death
- Early Pregnancy Loss
- Infant Safety
- Vaccinations
- Don’t Shake Babies
- Women’s Health Before and After Pregnancy
- Preeclampsia
- Signs of Preterm Labor
- Preventing Medical Errors
- Stress & Pregnancy
- Gestational Diabetes

Improved Bereavement Support Services

- In 2012, the Healthy Start Coalition of Miami-Dade (HSCMD) offered a National Share Pregnancy and Infant Loss Facilitator Training to the Miami-Dade community. Thirty-two professionals were trained to facilitate support groups and to provide individual perinatal bereavement support for parents who have experienced a pregnancy or infant loss.

- A Perinatal Loss: Strategies for Healthcare Professionals seminar conducted by National Share, Inc. trainers was offered to the community. Free Continuing Medical Education (CME) for physicians and Continuing Education Units (CEUs) for licensed nurses, social workers, counselors and therapists were offered to attendees.

- Over two hundred professionals in our community have participated in the “When a Baby Dies” Professional Development seminar. HSCMD offers this training every October in honor of National Pregnancy and Infant Loss Awareness Month and also makes this free training available to local hospitals and other community organizations throughout the year.

- HSCMD acknowledges pregnancy and infant losses within our community by mailing Bereavement Packages to families who have experienced such a loss. These packages include a sympathy card, March of Dimes bereavement booklet, and a listing of local and national resources for families who have suffered a pregnancy or infant loss.

Additional Actions Within Our Community:

In 2007, the Black Infant Health Practice Initiative (BIHPI), a statewide practice collaborative to address the issue of racial
disparity in infant deaths in Florida was enacted. Through this collaborative, medical and social factors contributing to the elevated rates of death among Black infants in local communities were explored. The FIMR CRT worked collaboratively with this effort and focused case reviews to examine contributing factors to this racial disparity. A local BIHPI Community Action Team (CAT) was organized and over 130 individuals and organizations worked to develop a series of community-based strategies, interventions and policies designed to address the disparity factors associated with infant deaths. These efforts have continued through the merged BIHPI CAT and FIMR CAG.

In 2010, the University of Miami Miller School of Medicine and the Healthy Start Coalition of Miami-Dade launched the Jasmine Project, a national Healthy Start Program focused on promoting healthy outcomes for Black infants, pregnant women, and new mothers. The mission is to improve the health and well-being of pregnant and postpartum women, their babies, and families by providing comprehensive health promotion and support services, and to enhance community awareness and decrease infant mortality. The Jasmine Project provides services to eligible families residing in the Miami-Dade County, Miami Gardens, Opa-Locka, and North Miami (zip codes 33054, 33055, 33167). These communities have suffered high infant mortality rates yet have had few local resources to address this problem.

A Community Voice: Taking it to the People training was offered to local community representatives. This program helps decrease African-American infant death by taking culturally relevant perinatal information directly to the people whom African-American women are most likely to trust and trains them to be lay health advisors. Once trained, lay health advisors have the knowledge to teach basic perinatal health information and the power to motivate and influence their family and friends. This approach embraces a life course perspective and potentially improves the overall health of both the men and women impacted by the program, which, along with a more informed community, can lead to earlier and more consistent prenatal care, increased father involvement, safer infant sleep and baby care practices, and ultimately decreased African-American infant death.

Every fetal and infant loss is a loss for the entire community we serve.
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This list reflects active FIMR Case Review Team members from July 1, 2011 through June 30, 2012.

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We dedicate this report to all the women and families that have suffered a fetal or infant loss and to those who have toiled for years to address the issues related to these deaths.

A special thank you to

Dade County Medical Association

Miami-Dade County Health Department
Office of Vital Statistics

The Fetal and Infant Mortality Review Project of Miami-Dade County is a collaborative effort with a goal to improve infant survival by understanding the occurrence of fetal/infant death in Miami-Dade County. Funding for the Fetal and Infant Mortality Review Project of Miami-Dade County is provided by the State of Florida Department of Health. The Florida Department of Health, the American College of Obstetricians and Gynecologists and the Federal Bureau of Maternal and Child Health provide guidance and support to our efforts.