

# project

Fetal & Infant Mortality Review Project

# IMPACT

2011-2012 Community Report

Project IMPACT is a fetal and infant mortality review (FIMR) project for Baker, Clay, Duval, Nassau and St. Johns counties. Its goal is to reduce infant mortality by gathering and reviewing detailed information to gain a better understanding of fetal and infant deaths in Northeast Florida. The project examines cases with the worst outcomes to identify gaps in maternal and infant services and to promote future improvements.

Project IMPACT, which started in 1995, is carried out by the Northeast Florida Healthy Start Coalition with funding from the Florida Department of Health.

Each month, fetal/infant death cases are selected for the project based on specific criteria. From 2009-2011, nearly 90 cases were reviewed through this process. Utilizing an approach developed by the American College of Obstetrics and Gynecology (ACOG), information is abstracted from birth, death, medical, hospital and autopsy records. Efforts are also made to interview the family. No information that identifies the family or medical providers is included on the abstraction form. Case summaries are developed and presented bimonthly to the Case Review Team (CRT). The CRT, a multidisciplinary group of community medical and social service professionals, examines each case to determine medical, social, financial and other issues that may have impacted the poor birth outcome. A Community Action Team (CAT) works to implement FIMR recommendations.

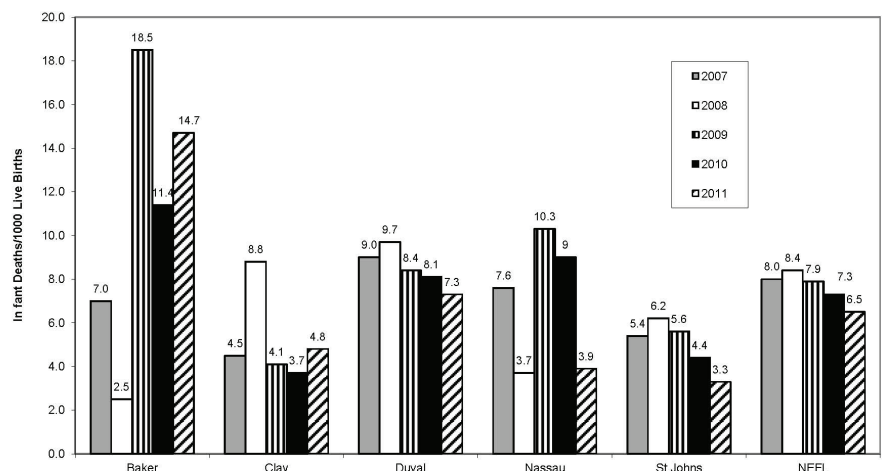


## Infant Death Rates Improve in 2011 but Disparity Widens

The overall infant mortality rate in Northeast Florida continued to improve in 2011 and, for the first time, is comparable to the statewide rate. The area's infant death rate was 6.5 deaths per 1,000 live births in 2011 compared to 7.2 deaths per 1,000 in 2010. The state's infant mortality rate was 6.4 deaths per 1,000 in 2011. A decrease in sleep-related deaths contributed to the lower rate. However, most of the improvement is attributable to decreases in white infant mortality. The infant death rate for whites in the region was nearly 40% lower in 2011 compared to 2010, while rates for nonwhites increased 18 percent. Rates also increased for nonwhites statewide. The increase in nonwhite infant mortality in the five-county area comes after two years of improvement.

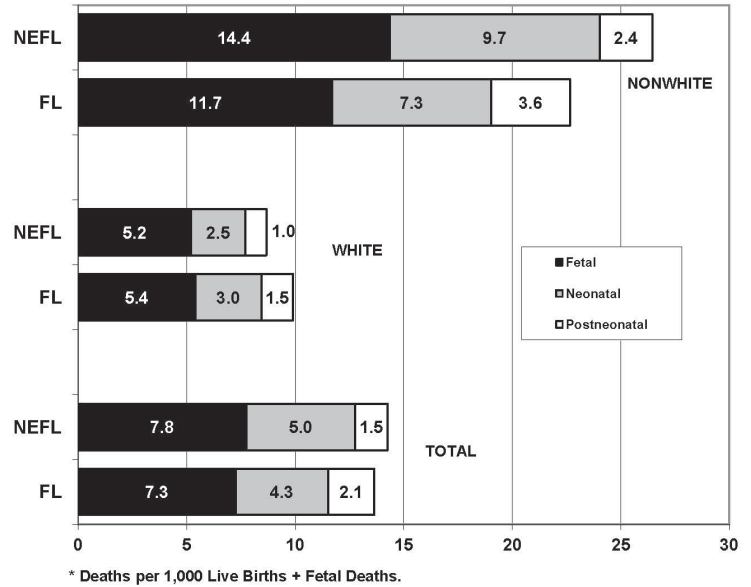
Infant mortality rates in 2011 ranged from 14.7 deaths per 1,000 in Baker County to 3.3 deaths per 1,000 in St. Johns County. Baker and Duval counties continue to have the highest rates in the five-county area.

Infant Mortality By County  
Northeast Florida  
2007-2011



Source: Florida Department of Health, Office of Vital Statistics, 2007-11.

2011 Fetal-Infant Death Rate  
Northeast Florida & Florida\*



## INFANT LOSSES

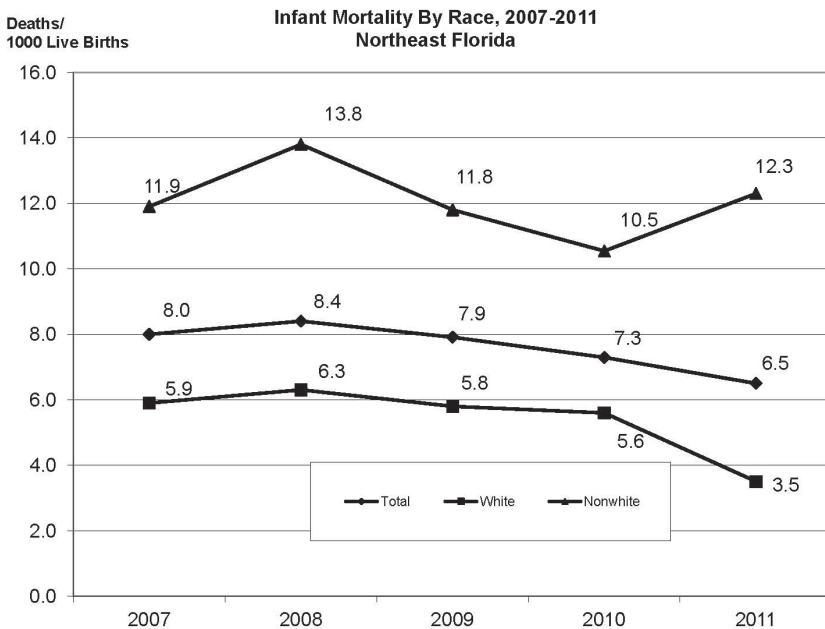
In 2011, there was a total of 250 infant losses in Northeast Florida. This includes 136 fetal deaths or stillbirths (54%) and 114 infant deaths (46%).

The five-county area had a fetal-infant mortality rate of 14.2 per 1,000 live births and fetal deaths in 2011, compared to the state rate of 13.6 per 1,000. Fetal-infant mortality rates for whites were below the state rate, while rates for nonwhites were higher.

Infant mortality includes deaths to live born babies during their first year of life. In 2011, the five-county area had an infant mortality rate of 6.5 deaths per 1,000 live births. The infant mortality rate for nonwhites (12.3 deaths per 1,000) widened to 3.5 times the rate for whites (3.5 deaths per 1,000). A significant increase in nonwhite deaths during the first month of life contributed to this gap.

Northeast Florida had rates comparable to the state in 2011 (6.4 deaths per 1,000 live births). Statewide, the infant mortality rate for whites was 4.6 per 1,000 live births; for nonwhites it was 11.1 per 1,000.

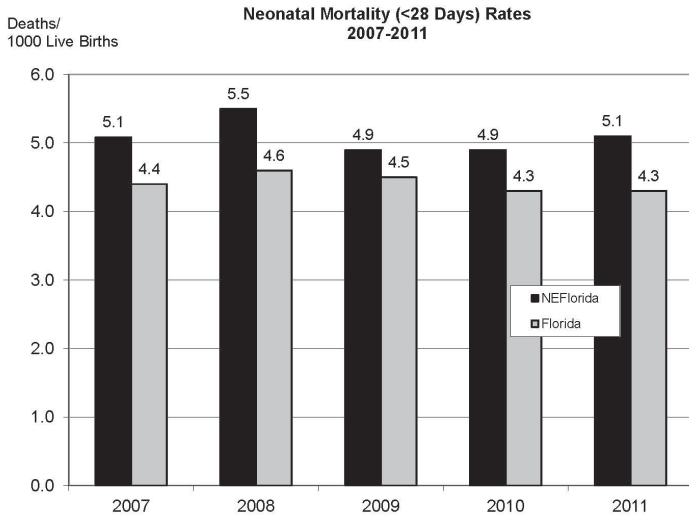
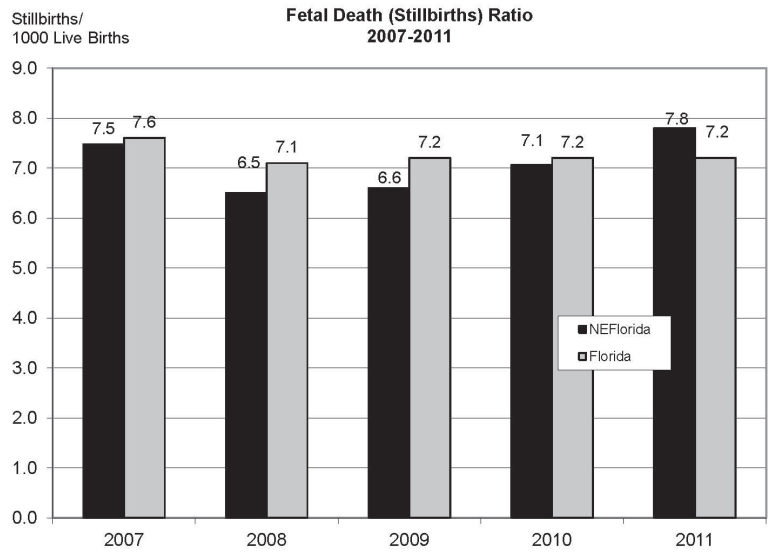
Infant mortality includes two components: neonatal mortality (deaths to infants less than 28 days old) and postneonatal mortality (deaths to infants between 28 and 364 days old).



# FETAL MORTALITY

Fetal mortality, or stillbirths, includes deaths which occur before birth following at least 20 weeks gestation. In 2011, the five-county area had a ratio of 7.8 fetal deaths for every 1,000 live births, above the state rate (7.2 deaths per 1,000 live births).

The fetal mortality ratio for whites in the region was 5.2/1,000 live births compared to 5.5/1,000 statewide. For nonwhites it was 14.6/1,000, compared to 11.9/1,000 statewide.



# NEONATAL MORTALITY

Neonatal mortality includes deaths occurring to infants before they are 28 days old. In 2011, the neonatal mortality rate in Northeast Florida was 5.1 deaths per 1,000 live births, an increase over 2010 rates. The neonatal mortality rate for whites was 2.5 deaths per 1,000; for nonwhites the rate was 9.8 per 1,000. Statewide, the neonatal mortality rate in 2011 was 4.3/1,000 (3.0/1,000 for whites and 7.4/1,000 for nonwhites).

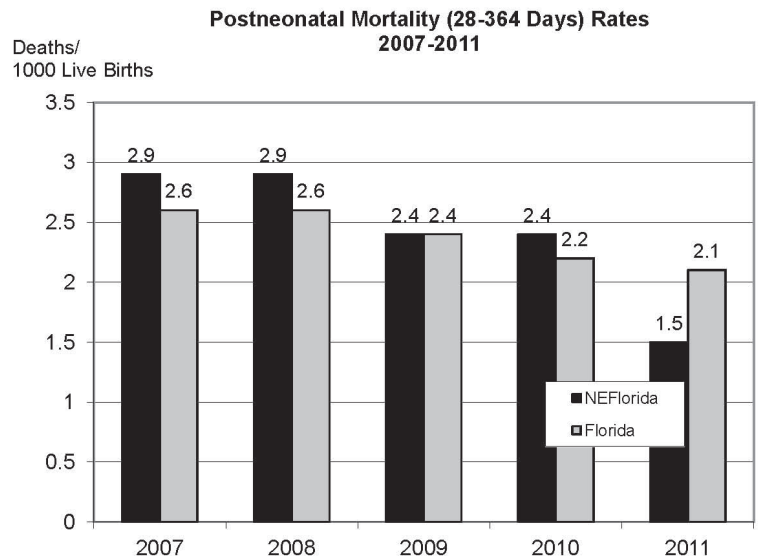
More than 40 percent of infants who die in the neonatal period die within the first 24 hours of life. Prematurity or low birthweight is the primary cause of neonatal mortality.



# POSTNEONATAL MORTALITY

Postneonatal mortality includes deaths of infants from 28 days to 364 days of age. In 2011, the five-county area had a postneonatal death rate of 1.5 per 1,000 live births (<1.0/1,000 white and 2.5/1,000 nonwhite). The state postneonatal death rate in 2011 was 2.1 deaths per 1,000 live births (1.5/1,000 white and 3.7/1,000 nonwhite).

The region's low postneonatal death rate reflects a 30 percent drop in sleep-related deaths in 2011.





## COALITION PROJECTS FEATURED AT NFIMR MEETING

Three Coalition projects were highlighted in the poster session of the National Fetal and Infant Mortality Review (NFIMR) meeting held recently in Washington DC. Activities of the Northeast Florida Community Action Team (CAT) around the life course, the Camellia Project and the 39 Weeks consumer education and awareness campaign were featured at the 7th national conference.



## MAKE A DIFFERENCE! LEADERSHIP ACADEMY GRADUATES CLASS II



The Coalition's Make a Difference! Leadership Academy graduated its second class of 13 students this fall. The Academy aims to train community leaders to understand the community's impact on its residents and how to mobilize for needed change. Increasingly, social determinants are identified as contributing factors in FIMR reviews. The 12-week curriculum covers leadership and personal leadership styles; community values; ethics; teamwork; effective meetings and public speaking; conflict resolution; problem solving; delegation; community diversity and community action planning. In addition to the in-class training, the students participated in field trips around the city, including trips to city hall, school board meetings and the Kingsley Plantation.



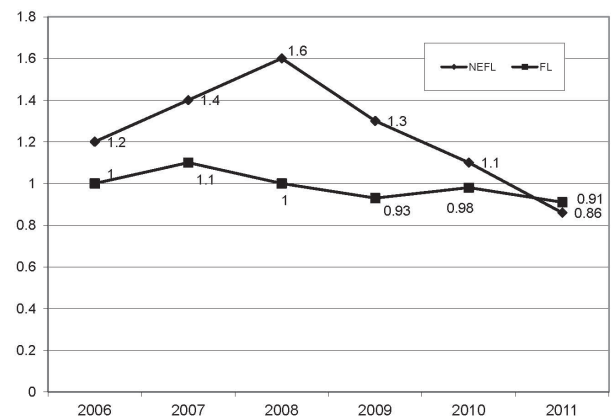
Each graduate or team of graduates identified one community problem to address and shared their strategy to accomplish it. Presentation topics included beautification of old, established communities; addressing vandalism and improving community safety; reducing poverty in Health Zone 1; addressing childhood obesity through nutrition and exercise; breaking the silence of bullying in school; improving the resident association community shelter; establishing a community watch program; voting reinforcement; and engaging fathers in the lives of their children and their children's schools.

The Make A Difference! Leadership Academy is part of the grassroots "Make a Noise! Make a Difference! Prevent Infant Mortality" initiative, funded by the Chartrand Foundation, donations and sponsorships from Rounds at the Grounds.

## SLEEP-RELATED DEATHS CONTINUE TO DECREASE IN REGION

Sudden Unexplained Infant Deaths (SUIDs), including SIDS and other sleep-related deaths, decreased in Northeast Florida to <1 per 1,000 live births in 2011, marking another year of notable improvement. Sleep-related deaths accounted for 12 percent of all infant deaths and 54 percent of deaths after the first month of life. SUIDs is the leading preventable cause of infant mortality. There were 15 SUIDs deaths in Northeast Florida, including two in Baker, one in Clay and 12 in Duval counties.

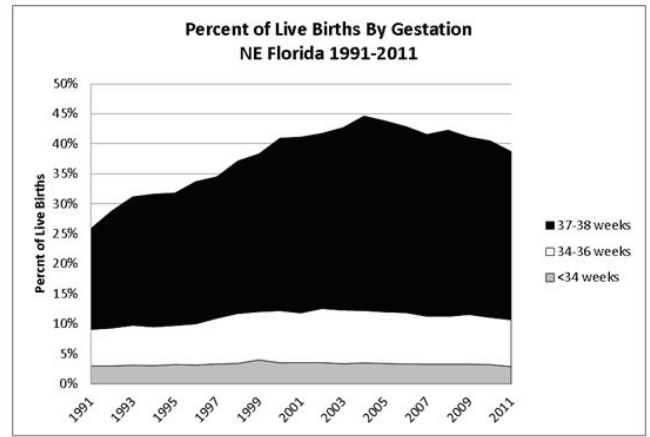
SUIDS Death Rate  
Northeast Florida & Florida  
2006-2011



# CAMPAIGN SEEKS TO REDUCE EARLY ELECTIVE DELIVERIES

Hospitals throughout the state and region have joined in efforts to curb non-medically indicated deliveries before 39 weeks gestation. Early elective deliveries have increased significantly in the past 10 years and are associated with increased NICU admissions, breathing and feeding problems, increased risk of infection and increased rates of C-sections and late preterm births.

The Florida Association of Healthy Start Coalitions (FAHSC), under the leadership of the Northeast Florida Healthy Start Coalition, is implementing a statewide consumer education campaign in partnership with the March of Dimes ([www.39weeksfl.org](http://www.39weeksfl.org)). The campaign, called “Healthy Babies are Worth the Wait,” highlights the importance of the last weeks of pregnancy. The USF Chiles Center is leading education efforts for health care providers through Grand Rounds and online resources. The Florida Perinatal Quality Collaborative (<http://health.usf.edu/publichealth/chiles/fpqc/index.htm>) and Florida Hospital Association’s Hospital Engagement Network are working with hospitals to implement policies and track outcomes.



Reducing early elective deliveries is a priority of the March of Dimes and one of five key strategies adopted by the federal Maternal and Child Health Bureau for reducing infant mortality and improving child health.

## ST. JOHNS, BAKER AND NASSAU COUNTIES WORK TO REDUCE COMMUNITY INFANT MORTALITY RATES

The St. Johns Infant Mortality Task Force has developed information sheets for the OB/GYNs in the county. The first sheet addressed the purpose of the Task Force and the issue of infant mortality: what the main causes are in the county, the zip codes with the highest rates and what providers can do. Subsequent information sheets have addressed the priorities of the Task Force and contributing factors to infant deaths and poor birth outcomes: smoking, safe sleep, birth intervals and pre-pregnancy BMIs. These sheets focus largely on steps obstetricians can take to impact these factors.

The St. Johns Task Force also developed a display to be put up around the county to educate families on “What to Expect When You’re



Expecting... In St. Johns County.” It has been up in Flagler Hospital. The display includes health information for before pregnancy, during pregnancy and after the baby is born. Information on local resources and programs is also included.

The Baker County Infant Mortality Task Force developed a comprehensive action plan after reviewing the birth outcomes and infant mortality data for 2011. Priority areas include teen pregnancy, safe sleep/SIDS, family planning, breastfeeding, grief counseling and father involvement. In July 2012, fatherhood classes began at the Baker County Jail using the InsideOut Dad curriculum, an evidence-based program for incarcerated fathers. The Task Force is also planning a safe sleep lunch and learn for OBs, pediatricians and other interested participants to be held in November 2012.

A Nassau County Infant Mortality Task Force was created as part of an extensive public health planning process in the county. The Task Force held its first meeting in July 2012. The Task Force completed a data review and will be looking at birth and death records to identify common trends and determine priorities.





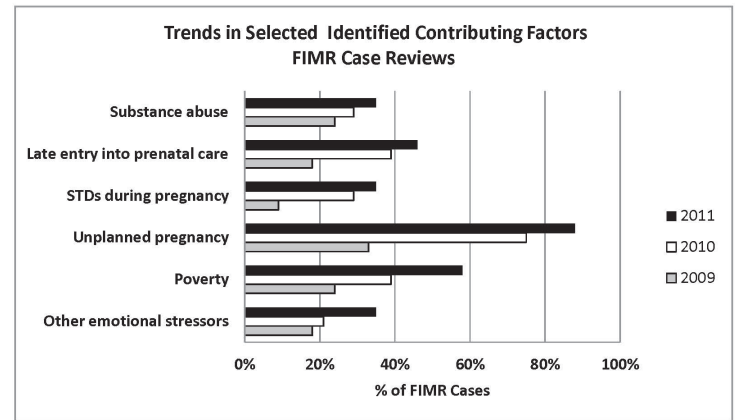
# MATERNAL HEALTH REMAINS KEY FACTOR IN FETAL, INFANT DEATHS

The mother's health prior to and during pregnancy was the most frequent contributing factor identified in the 87 fetal and infant death cases reviewed over the last three years. In addition to cumulative results, several factors were identified with increasing frequency during this period, including: stressors during pregnancy, poverty, STDs during pregnancy, late entry into prenatal care, unplanned pregnancy and substance abuse.

**Most Frequently Identified Factors  
FIMR Case Reviews**

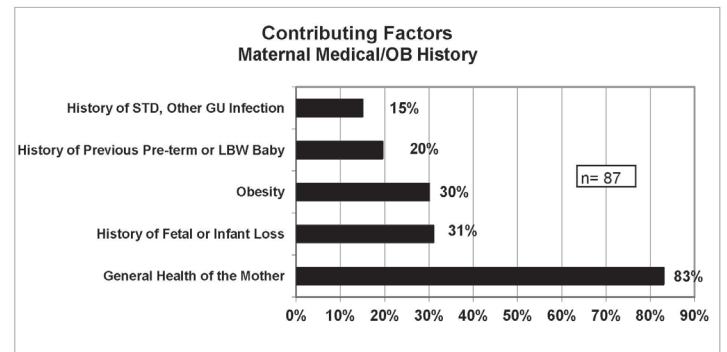
Contributing Factor	% of Cases
General Health, Medical History of Mom	84%
Family Planning Issues	67%
Late or No Prenatal Care	53%
Preterm Labor	52%
Prematurity	51%
Maternal Infections other than STD's	48%
Life Course Issues	41%
Poverty	39%
Fetal, Infant Infection	33%
History of Fetal, Infant Loss	31%
Obesity	30%
Substance Abuse	29%

Source: January 2009-December, 2011 FIMR Case Reviews (n=87). Multiple factors may be present in individual cases.



## MATERNAL MEDICAL HISTORY

General health of the mother was identified as a contributing factor in more than 80 percent of the cases reviewed in 2009-2011. Pre-pregnancy conditions such as diabetes, hypertension, poor nutrition, obesity and related conditions were identified in more than half (56 percent) of the cases reviewed. A history of a previous poor outcome was present in nearly one-third of the cases. Obesity was identified as a contributing factor in 30 percent of the cases reviewed; inadequate nutrition, including first trimester anemia, was cited in more than one-fifth of the fetal and infant death cases examined. In 20 percent of the FIMR cases, a history of sexually transmitted or other infections was present.

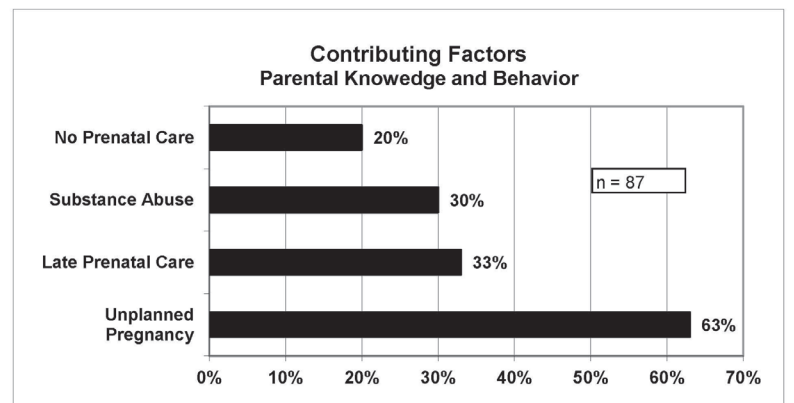


## MATERNAL MEDICAL CONDITIONS DURING PREGNANCY

Maternal medical conditions during pregnancy were cited in 93 percent of the cases examined during 2009-2011. Included are: maternal infections other than STDs (48%) and preterm labor (52%). In more than 25 percent of FIMR cases, there was premature rupture of the membranes (PROM) or placental abruption. Anemia was diagnosed after the first trimester in 25 percent of the cases reviewed. Over the last three years, the percentage of FIMR cases with a STD increased from 9% to 35%.

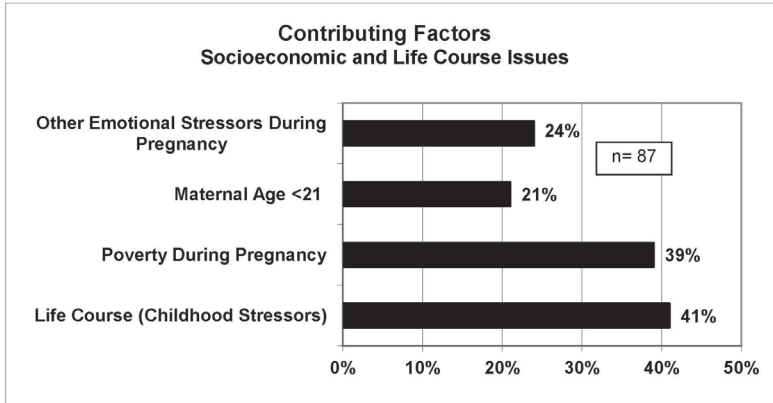
## KNOWLEDGE & BEHAVIOR

Family planning issues were identified in more than two-thirds of the cases examined by the FIMR case review team in 2009-2011. The proportion of cases with a family planning issue increased from 36% to 92% during this period. Substance use, including alcohol, tobacco and drugs, was present in 30 percent of the cases. Over the last three years the proportion of cases with substance abuse issues increased from 24% to 38%. Late entry into prenatal care was cited in a third of the cases while 20 percent of mothers received no prenatal care prior to delivery. The frequency of late entry into care increased from 18% to 46% between 2009 and 2011.



## SOCIOECONOMIC & LIFE COURSE ISSUES

In four out of 10 cases reviewed, the mother experienced life course stressors. These include a history of abuse, poverty, lack of support during her childhood or early life. In nearly 40% of the cases reviewed, the mother lived in poverty during her pregnancy. Over the three-year period, the proportion of cases where poverty was identified as a contributing factor more than doubled. In 20 percent of cases maternal age was a factor (< 21 years old).



## PROVIDER & SERVICE ISSUES

Screening for Healthy Start was not evident in more than 40 percent of the cases examined in 2009-2011. The proportion of cases without a Healthy Start screen decreased during this period, however, from 55% to 15%. Services issues were identified in 16% of the cases reviewed over the last three years; patients voiced fear of or dissatisfaction with services in 11% of cases examined.



## FETAL/INFANT MEDICAL ISSUES

Prematurity was a contributing factor in more than half of all FIMR cases in 2009-2011. In 33 percent of the cases, the infant experienced an infection.



## DISPARITIES IN CONTRIBUTING FACTORS

Black mothers who have experienced a fetal or infant loss are more likely than their white counterparts to have life course issues like poverty, childhood trauma and other emotional stressors based on FIMR case reviews. There is also a marked disparity in the frequency of contributing factors by race.

# Project **IMPACT** Community Action Recommendations

1. Continue to focus on preventing sleep-related deaths. Of the 114 infant deaths in Northeast Florida in 2011, 15 were sleep related. This represents 13% of all deaths and 58% of deaths after the first month of life. Focus on safe sleep surface and bedsharing. Develop additional Cribs for Kids programs in region and take advantage of cash-matching program. Develop regional Safe Sleep Campaign in collaboration with The Players Center for Child Health at Wolfson Children's Hospital.
2. Focus on safe sex, STD prevention and family planning. Implement jail education program; take advantage of having a captive audience. Within the FIMR cases, STDs during pregnancy increased from 9% in 2009 to 35% in 2011. Contraception in the immediate postpartum period is a priority for action. In the FIMR reviewed cases, only one-third of the mothers received a Depo shot or prescription for contraceptives prior to hospital discharge. More than two-thirds (67%) of the FIMR cases involved family planning issues including unplanned pregnancies and inadequate birth spacing. Duval County ranks 5th in the state based on 2012 data in STD rates.
3. Continue to focus on dangers of smoking during pregnancy. In 2011, 13% of the mothers in the death cohort self-reported some type of substance abuse; 83% of these were tobacco users. The Community Action Team is implementing an anti-smoking campaign in the target area (Health Zone I) based on prior recommendations. Healthy Start and Healthy Families programs in St. Johns County are also piloting SCRIPT, an evidence-based smoking cessation program for pregnant women. Based on pilot results, this program should be considered for replication throughout the region.

CHARTS, Florida Vital Statistics, 2011 Florida Department of Health; Project *Impact* Summaries of Case Review Team Deliberations, January 2009-December 2011.

## Case Review Team

Alice Poe, CNM, PhD  
Jeannie Bowles  
Beverly Legree, RN  
Carol Brady, MA  
Carol Synkewecz, MPH  
Kathryn Huddleston, MD  
Margaret Dyer, MD

Sartaj Kadiwala, MD  
Elaine Mathews, RN  
Gary Sammet  
Heather Huffman MS, RD, LD/N, IBCBC  
Hilary Morgan, CNM  
Joy Burgess, RN, MSN  
Kym Dunton, RN, BA, IBCLC

Loreli Rogers, MACP  
Marsha Davis  
Melodie Dove  
Sherry Buchman, RN  
Steve Williams, Chaplain  
Sue Murphy, MSW  
Laurie Lee, RN, Coordinator

## Community Action Team

Sharon Banks  
Marsha Davis  
Karen Smithson  
Donna Robinson  
Faye Johnson

Trina Reed  
Shelby Salter  
Starletha Cherry  
Estelle Keese  
Tracy Nwokoh

Shawanna Walker  
Fatima Johnson  
Denise Thomas  
Nina Odom  
Tonichia Gaye



**NORTHEAST FLORIDA HEALTHY START COALITION**  
644 Cesery Boulevard, Suite 210 Jacksonville, FL 32211 (904) 723-5422  
[www.nefhealthystart.org](http://www.nefhealthystart.org)

