A significant reduction in the rate of infant death is within our reach.”

– Susan McLoughlin, Executive Director
Mother & Child Health Coalition
Children are our future, and that is why Mother & Child Health Coalition believes every child deserves a healthy start. It is the best gift a community can give its children and itself.

Mother & Child Health Coalition works together with community partners and families to promote wellness and advocate for excellence in health care through community planning, education, advocacy and collaboration. Access to health care for all, particularly the most vulnerable mothers, children and families, continues to be a primary focus of the Coalition.

The Kansas City Fetal Infant Mortality Review program engages in collective efforts to improve the health and well-being of mothers and babies, and is a vital part of the Coalition’s Kansas City Healthy Start program and its efforts to reduce infant mortality in the Kansas and Missouri communities.

A significant reduction in the rate of infant deaths is within our reach. I hope that as you read through this report, you will begin to think about how you, too, can help with community efforts. For more information about how you can get involved, visit our Website at www.mchc.net.

Susan McLoughlin, MSN, RN, CPNP
Executive Director
Mother & Child Health Coalition
Fetal and Infant Mortality Review Program: An Overview

Introduction

The National Fetal and Infant Mortality Review (NFIMR) Program aims to further the understanding of fetal and infant mortality in the United States by systematically developing strategies at the local level to address infant mortality. At its core, FIMR is an action-oriented, community-based program that collects data from a wide variety of sources in order to holistically assess local systems of delivery and community resources. NFIMR was founded in 1990, as a partnership between the American Congress of Obstetricians and Gynecologists (ACOG) and the federal Maternal and Child Health Bureau (MCHB). Today, NFIMR serves as a resource center for more than 220 FIMR programs in 40 states.

Mother & Child Health Coalition (MCHC) believes every child deserves a healthy start, and to that end, we are committed to ensuring the health and welfare of infants in our community. MCHC works with local partners to promote wellness and advocate for health care excellence which benefits mothers and children. One of the critical ways MCHC carries out this commitment to every child, is the Fetal Infant Mortality Review (FIMR) program, which was implemented in Kansas City, Missouri in 2005. Infant mortality is a sensitive indicator of the health of a community. FIMR uses mortality data as an entry point into a larger conversation about health care disparities in our community.
In Kansas City, Missouri, when an infant dies at less than one year of age, or there is a fetal death of greater than 20 weeks gestation, in one of ten designated ZIP codes, the Missouri Bureau of Vital Statistics forwards the birth and death certificate to the FIMR coordinator. The FIMR ZIP codes include 64109, 64110, 64123, 64124, 64127, 64128, 64130, 64131, 64132, and 64134, all of which have been identified as ZIP codes with the highest infant mortality. (Figure 1)

The first step of the FIMR process is the case review. The FIMR program coordinator abstracts pertinent data, reviewing birth/death certificates, prenatal records, inpatient records and autopsy reports. The coordinator attempts to contact the mother for an interview, to hear her story and to obtain her perspective on her navigation experiences through the healthcare system. The interview usually takes place at the mother’s home, and the questions aim to assess the services and resources that the mother received or wished to receive. Questions asked of the mother include:

- Did you enter prenatal care when you wanted to?
- What happened that kept you from seeking prenatal care?
- Did you have the financial and emotional support you needed during this pregnancy?
- What would have made things better for you?
The home interview is the hallmark of the FIMR process, and it complements the quantitative data for a complete picture. Many mothers appreciate the chance to talk about their loss, and their perspective on the service system infrastructure in the community is invaluable. When the program coordinator has assembled the case details, it is presented de-identified to the Case Review Team (CRT), which consists of doctors, nurses, nurse midwives, educators, health insurance representatives, social workers, case managers, and lactation consultants. If the facts of the case suggest some weakness or gap in the delivery system or community resources, such as barriers to care or an unacceptable level of health literacy, a recommendation is made to the Community Action Team (CAT), which then designs interventions and works within the community to implement them. For FIMR, the CAT is the Women’s, Infants’ and Children’s Health Committee, which is a part of the Kansas City Health Commission.

At its best, the FIMR process is one of community empowerment, designing local solutions in and for the community it serves. Consistent monitoring of the fetal and infant deaths in our ZIP codes ensures that FIMR has an up-to-date picture of the integrated health care delivery system for some of the most at-risk mothers in our community. With an accurate picture of where the gaps in the system are, not just from data review, but from speaking with mothers, FIMR can be sure that the programs it recommends and implements are addressing the situation in our community as thoroughly and thoughtfully as possible.

“I hope that by doing this interview, it helps others.”
-A FIMR mother
About this Report

The purpose of this report is to highlight the profiles of some of the highest-risk women who have experienced a fetal or infant loss in our community. While the FIMR data does suggest some consistency with trends identified in the broader literature, the small size of our sample set (n=125) means that generally speaking, any trends observed here are not statistically significant. Rather, this report aims to provide a demographic sketch of the fetal and infant deaths occurring in high-risk neighborhoods in Kansas City, Missouri (KCMO), as well as the mother’s view of her pregnancy, the care she received and the death of her baby.

Initially, FIMR only considered deaths in ZIP codes 64110, 64127, 64128, 64130, and 64132. In 2009, five more ZIP codes were added; however, infant and fetal deaths from the added ZIP codes 64109, 64123, 64124, 64131, and 64134 were not retroactively reviewed. The data presented in this report comes from 125 deaths (74 infant and 51 fetal) that occurred between 2004 and 2010.

FIMR data from 10 ZIP codes is always shown with KCMO live birth data. This provides a reference for the FIMR population as compared to the city population. Imbedded throughout this report are many references to Healthy People 2020 (HP2020) Objectives.* The Healthy People 2020 provides science-based, 10-year national objectives for improving the health of all Americans. For three decades, Healthy People has established benchmarks and monitored progress over time of markers which impact the health and well being of infants and adults.

*US Department of Health and Human Services.
FIMR Mothers: A Demographic Sketch

Racial Disparity

In 21st century American history, race can serve as a marker encoding other demographic factors, such as income, nutritional status, level of education, access to care, substance abuse, and health risks, all of which are associated with adverse birth outcomes.\(^1,2\)

The disparities in birth outcomes and infant mortality between Non-Hispanic black women and Non-Hispanic white women are well-documented. Black infants are more than twice as likely as white infants to die before their first birthdays, and black women have higher rates of complications during their pregnancies than their white peers.\(^2\) Even with increasing levels of access to care and gains in reducing fetal and infant mortality and morbidity on the whole, the disparity in outcomes persists.\(^3\) Research suggests that in order to eliminate the disparity, more attention needs to be paid to optimizing the health of at-risk women throughout their child-bearing years.\(^4,5\) Pilot programs that provide this kind of comprehensive care have been successful.\(^3,6\)

<table>
<thead>
<tr>
<th>Race</th>
<th>FIMR ZIP Codes n=125 deaths</th>
<th>KCMO n=7744 live births</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Hispanic White</td>
<td>8.0%</td>
<td>42.8%</td>
</tr>
<tr>
<td>Non-Hispanic Black</td>
<td>83.2%</td>
<td>37.3%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>8.0%</td>
<td>14.1%</td>
</tr>
<tr>
<td>Asian</td>
<td>0.8%</td>
<td>4.8%</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;20 years</td>
<td>17.6%</td>
<td>11.4%</td>
</tr>
<tr>
<td>20-34 years</td>
<td>72.0%</td>
<td>77.2%</td>
</tr>
<tr>
<td>&gt;35 years</td>
<td>10.4%</td>
<td>11.4%</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;12 years education</td>
<td>35.2%</td>
<td>19.9%</td>
</tr>
<tr>
<td>High School Diploma</td>
<td>32.0%</td>
<td>30.7%</td>
</tr>
<tr>
<td>&gt;12 years education</td>
<td>24.0%</td>
<td>49.4%</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unmarried</td>
<td>88.0%</td>
<td>51.4%</td>
</tr>
<tr>
<td>Married</td>
<td>12.0%</td>
<td>48.6%</td>
</tr>
<tr>
<td>Gravidity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>22.4%</td>
<td>Not reported</td>
</tr>
<tr>
<td>2-4</td>
<td>50.4%</td>
<td></td>
</tr>
<tr>
<td>&gt;4</td>
<td>27.2%</td>
<td></td>
</tr>
<tr>
<td>Medicaid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>85.6%</td>
<td></td>
<td>51.4%</td>
</tr>
<tr>
<td>Previous Preterm Birth or Fetal Loss</td>
<td>25.6%</td>
<td>1.9% (preterm birth only)</td>
</tr>
<tr>
<td>Little or No Prenatal Care</td>
<td>30.4%</td>
<td>4.1%</td>
</tr>
</tbody>
</table>

KCMO Data from KCMO Health Department 2011 Community Health Assessment (CHA)
The stress of low socioeconomic status, of finding employment, of experiencing racism, all add to other health factors that put women at risk for adverse birth outcomes.\textsuperscript{2,7}

One of the most prominent theories for explaining the persistent disparity is the weathering hypothesis, which suggests that stress over the course of black women’s lives prematurely ages their reproductive systems, putting them at higher risk for adverse birth outcomes over the course of their child-bearing years.\textsuperscript{2,8} Significantly, the racial disparities observed in health outcomes are not due to inherent physiological differences between black and white women.

\begin{table}[h]
\centering
\caption{Median Income in FIMR ZIP Codes (2010)}
\begin{tabular}{|c|c|}
\hline
Median Income & ZIP Codes \\
\hline
$<$30,000 & 64109 \\
& 64124 \\
& 64127 \\
& 64128 \\
& 64130 \\
$30,000$-$45,000$ & 64110 \\
& 64123 \\
& 64132 \\
$>$45,000 & 64131 \\
& 64134 \\
\hline
\end{tabular}
\end{table}

Data from: www.city-data.com/zipmaps/Kansas-City-Missouri.html
Co-Incidence of 11 Risk Factors in FIMR Cases

FIMR Mothers and Prenatal Care

Prenatal care is vitally important in reducing fetal and infant mortality and morbidity. A key Healthy People 2020 Objective is that 77.6% of women will receive early and adequate prenatal care.¹ An astonishing number of FIMR mothers (30.4%) received care that was considered inadequate by the standards set by the American Congress of Obstetricians and Gynecologists (ACOG). Included in this number are 16 women (12.8%) who received no prenatal care. Strikingly, a 2010 study showed that even when black women do receive prenatal care, they often receive less comprehensive care.²

In most FIMR cases, there was more than one factor putting the mother at risk for an adverse birth outcome. Considering 11 risk factors: smoking, drug use, and alcohol use, short interconception interval (<18 months), a Body Mass Index (BMI) category of overweight or obesity, maternal infection, previous preterm birth or fetal loss, hypertension, incompetent cervix, asthma and diabetes. (Figure 3)

60% of FIMR mothers had three to eight of these risk factors. Given that many of these conditions are manageable, if not preventable, their high prevalence and co-incidence in the FIMR case demographics suggests substandard levels of general health which translate into high-risk pregnancies with adverse birth outcomes.

Most FIMR mothers had a combination of risk factors. All of the diabetic mothers were overweight or obese, as were all of the mothers with hypertension.
**Overweight or Obese:**
- Increases risk of gestational diabetes, preeclampsia, neural tube defects, fetal distress, very low birth weight, preterm delivery and an increased risk for operative delivery and stillbirth.¹
- 72 FIMR mothers (57.6%) were overweight or obese, compared to 47.5% of the mothers giving birth in KCMO. (Figure 4)

**Maternal Infection:**
- 54 of the mothers (43.3%) had at least one infection: bacterial vaginosis (BV), chlamydia, trichomoniasis, urinary tract infection, herpes, hepatitis B virus, syphilis, Human Immunodeficiency Virus (HIV), or Human Papillomavirus (HPV).
- Maternal infection puts the pregnancy at risk for preterm delivery, placental complications, and low birth weight.

**Previous Preterm Birth:**
- 17 of the mothers (13.6%) had a previous preterm delivery. A premature delivery puts the mother at a greater risk for having another premature birth.

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¹FIMR ZIP Codes

**Prevalence of Health Risks in FIMR ZIP Codes Compared to KCMO**

![Prevalence chart](image)

*Figure 4. KCMO data from KCMO Health Department 2011 CHA; *Asthma in pregnancy is not reported in KCMO data.*
**Hypertension:**
- Chronic hypertension was reported in 13 FIMR mothers (10.4%); pregnancy-induced hypertension occurred in 14 (11.2%).
- Both chronic and pregnancy-induced hypertension put the pregnancy at risk for complications including preeclampsia, eclampsia, small for gestational age, low birth weight, preterm delivery and stillbirth.

**Incompetent Cervix:**
- 10 FIMR mothers (8%) had cervical incompetence.
- Cervical incompetence can put the pregnancy at risk for preterm labor or miscarriage.
- It is estimated that up to 25% of second trimester miscarriages are caused by cervical incompetence.
- One study found the risk of cervical incompetence for black women to be more than twice what it was for white women.2

**Diabetes:**
- 10 FIMR mothers (8%) had diabetes (1 case of which was gestational).
- Diabetes has been associated with miscarriage, congenital malformations, intrauterine growth restriction (IUGR), preeclampsia, C-section delivery, perinatal mortality, and stillbirth.
- The effects on the fetus can be mitigated with careful diabetic control and diligent prenatal care.

**Asthma:**
- 24 FIMR mothers (19.2%) had a history of asthma (not necessarily during pregnancy). In Missouri, 9.2% of the population has a history of asthma.
- Maternal asthma has been associated with preeclampsia, pregnancy induced hypertension, chorioamnionitis, small for gestational age, preterm birth, low birth weight, C-section, and post-partum hemorrhage.3,4
Although the majority of FIMR mothers do not smoke, use alcohol or use drugs, the prevalence of smoking, alcohol and drug use in FIMR mothers is three times greater than in the KCMO live birth population. (Figure 5)

**Smoking:**
- 50 (40%) of FIMR mothers self-reported smoking during their pregnancy.
- Maternal smoking has been associated with increased risk of ectopic pregnancy, preterm labor, premature rupture of membranes, low birth weight (LBW) and very low birth weight (VLBW), chorioamnionitis, placental abruption, placenta previa, developmental problems, stillbirth and SIDS.
**Alcohol:**
- Drinking during pregnancy puts the baby at risk for Fetal Alcohol Syndrome, marked by facial abnormalities, developmental problems, and growth retardation.
- Alcohol usage was self-reported, so the number of FIMR mothers who drank is probably slightly higher than the data indicates. 10 FIMR mothers (8%) reported alcohol use during pregnancy.

**Drugs:**
- 31 FIMR mothers (24.8%) used marijuana, cocaine, and barbiturates.
- Data reflects a combination of self-report and urine drug screen results.
- Use of illegal drugs during pregnancy can increase the risk of LBW and can cause growth restriction and subsequent developmental and behavioral problems.
- Drug use is a reliable indicator of other stressors and risk factors that may result in adverse birth outcomes, including abruption of the placenta and stillbirth.\(^{17}\)

**HP 2020 Objectives for Substance Abuse During Pregnancy:**
*Smoking: 98.6% abstinence*
*Alcohol: 98.3% abstinence*
*Illegal Drugs: 100% abstinence*

**In 125 FIMR mothers:**
- 57 mothers used at least one substance.
- 27 mothers used more than one substance.
- Of all the FIMR mothers who only used drugs, the drug of choice was marijuana.
- FIMR mothers using alcohol always reported using in combination with another substance. (Table 3)

<table>
<thead>
<tr>
<th>Substance</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking, Alcohol, and Drugs</td>
<td>7</td>
<td>5.6%</td>
</tr>
<tr>
<td>Smoking and Alcohol</td>
<td>1</td>
<td>0.8%</td>
</tr>
<tr>
<td>Smoking and Drugs</td>
<td>17</td>
<td>13.6%</td>
</tr>
<tr>
<td>Alcohol and Drugs</td>
<td>2</td>
<td>1.6%</td>
</tr>
<tr>
<td>Alcohol Only</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Drugs Only</td>
<td>5</td>
<td>4.0%</td>
</tr>
<tr>
<td>Smoking Only</td>
<td>25</td>
<td>20.0%</td>
</tr>
</tbody>
</table>
Fetal and Infant Mortality: an Overview

- The infant (or fetal) mortality rate is defined as the number of infant (or fetal) deaths in a given time period divided by the number of live births in that time period, multiplied by 1,000.

- The HP 2020 Objective for infant mortality is 6 deaths per 1,000 live births.

- The HP 2020 Objective for fetal mortality is 5.6 deaths per 1,000 live births.

- Infant mortality in FIMR ZIP codes was consistently higher than in KCMO as a whole. (Figure 6) Racial disparity in infant mortality in the FIMR ZIP codes is consistent in that most FIMR mothers are black and live with a median income of <$30,000.

- 52% of the births in the 125 FIMR cases were male; 48% were female.

Figure 6. Data from KCMO Health Department CHA (2003-2011)
- Figure 7 traces the black-white disparity in KCMO as a whole, though this data can be assumed to roughly parallel the disparity that exists in fetal mortality between FIMR ZIP codes and the rest of the city, as FIMR’s population is 83.2% black. (Figure 8)
Infant Mortality: Causes of Infant Death

Complications of Prematurity:
- 54 (73%) of the live born infants in FIMR cases were preterm; in 38 cases (51.3%), prematurity was the cause of death.
- Many factors put women at risk for preterm delivery including smoking, alcohol or drug use, a high BMI, infection, diabetes, hypertension, asthma and previous preterm birth.

- Being born preterm puts the infant at risk for subsequent developmental problems (see LBW and VLBW below).

- HP 2020 Objective: reduce preterm births to 11.4% of live births.

Unsafe Sleep:
- Deaths due to unsafe sleep are preventable. Unsafe sleep practices include putting the baby to sleep in a position other than on her/his back, sharing sleeping space with siblings, pillows, bedding and toys in the crib, bumper pads in the crib and sleeping on an adult bed.
- Of the 13 FIMR deaths caused by SIDS/unsafe sleep, 10 deaths were unsafe sleep and 3 deaths were SIDS deaths.

- HP 2020 Objective: 75.9% of infants will be put to sleep alone, on their backs and in a crib, thus decreasing SIDS mortality to 0.5 deaths per 1,000 live births.
Chromosomal Defects and Congenital Abnormalities:
- Chromosomal defects were the cause of death in 6 (8.1%) FIMR cases; 5 deaths (6.8%) were attributed to congenital anomalies.

Low Birth Weight and Very Low Birth Weight (LBW and VLBW):
- LBW infants weigh less than 2500 Gm (5lb 8oz) at birth.
- VLBW infants weigh less than 1500 Gm (3lb 5oz) at birth.
- LBW and VLBW infants can have long-term developmental problems. Cognitive deficits in language learning and attention span, especially, have been associated with LBW and VLBW.1

- HP 2020 Objectives: Reduce LBW to 7.8% of live births and VLBW to 1.4% of live births.

The risk of stillbirth is increased for mothers who are:
- Advanced Maternal Age (>35 years)
- Diabetic
- No previous birth
- Drug users
- Hypertensive
- Overweight or obese
- Smokers
Recommendations

- **Increase access to prenatal care**
  A high proportion of FIMR mothers had little or no prenatal care. The number of FIMR mothers who had early and adequate prenatal care trailed national averages and is well below the HP 2020 Objective of 77.6%. Barriers to care should be identified and removed wherever possible.

- **Increase access to preconception and interconception care**
  The high prevalence of health risks in FIMR moms suggests that these women don’t have the care they need even before they get pregnant. Research suggests that while access to prenatal care can improve perinatal outcomes, it only eases fetal and infant mortality to a point. Ensuring that the women of child-bearing age in our community, especially in high-risk areas, are in good health before they get pregnant will help continue to reduce fetal and infant mortality.

- **Provide assistance for smokers and substance abusers**
  The adverse effects of cigarette smoking on gestation are well-documented, but smoking rates remain very high among FIMR mothers. Resources for smoking cessation and substance abuse should be made available to mothers.

- **Make asthma a priority in women’s reproductive health initiatives**
  Nearly 20% of FIMR mothers had a history of asthma, which is known to complicate pregnancy. The KCMO Health Department doesn’t currently track the prevalence of maternal asthma. Further study of the prevalence of this health problem is warranted, and education and resources for pregnant women with asthma should be a priority for healthcare providers and advocates.
Make safe sleep education a priority
Unsafe sleep causes too many deaths in our community and is preventable with safe sleep education.

Add 64132 to the Kansas City Healthy Start ZIP Code service area
From 2005-2009, ZIP code 64132 had the highest average infant mortality rate of all FIMR ZIP codes, suggesting there is a need for services similar to those provided by Kansas City Healthy Start in this area.

Improve bereavement support
FIMR mothers often said that they didn’t feel they received adequate bereavement support.

Encourage and work with officials in Wyandotte County, Kansas, to initiate a FIMR program
Data from Kansas City, Missouri, as well as in the national literature, indicates that fetal and infant mortality trends look quite different for Hispanics, when compared to Non-Hispanic blacks and whites. While Kansas City, Missouri’s FIMR population is largely black, the interventions designed and implemented may not be culturally appropriate for the Kansas City, Kansas FIMR population. Furthermore, infant mortality rates are high across the state line in Wyandotte County, Kansas and a FIMR program there would be invaluable.
Accomplishments of FIMR to Date

✧ **Created a bereavement card** to contact mothers experiencing a loss. The mother is encouraged to share her story about her pregnancy and her baby. This card is sent to the home, and is also a part of the bereavement pack information given to the mother postpartum. The earlier the contact with the mother, the more likely she will be willing to share her story. There have been 14 interviews with mothers who have suffered a fetal or infant loss.

✧ **Formed the Safe Sleep Task Force**
The task force mission is to educate infant caregivers about safe sleep practices. The target audience for education is child care providers and relatives caring for the newborn. The task force is a collaborative effort of MCHC, SIDS Resources, Inc. and the Missouri Department of Social Services—State Technical Assistance Team.

✧ **Conducted a survey** to determine availability and cost of pregnancy tests in the greater KCMO area. Prepared a comprehensive list of where pregnancy testing by a health care provider is available, and if there is a cost. The list is published in the Mother & Child Health Coalition Community Resource Guide (which is provided free to agencies and the public). The Community Action Team **crafted a public service announcement**, “10 Tips for A Healthy Pregnancy” which aired on Kansas City Public Television.

✧ **Surveyed area hospitals** with obstetrical services (17 hospitals in the greater Kansas City area) to assess protocols and practices with regard to several questions:
  - Thermometer distribution and newborn fever education for mothers after delivery
  - Protocols for lab work ordered on mothers with a stillborn baby
  - Initiation of social work involvement with mothers who deliver with limited or no prenatal care.
Streamlined the process by which FIMR initiates case review
Previously, only about 50% of deaths that occurred in the original five ZIP codes were reviewed. The process has changed and FIMR is working directly with the Missouri Bureau of Vital Statistics for access to birth and death records. FIMR now reviews a higher percentage of the deaths that occur in the ten FIMR ZIP codes.

Reviewed 125 cases of fetal and infant deaths to date
FIMR expanded the geographical area to review fetal and infant deaths in 10 ZIP codes in KCMO. Health trends identified and recommendations based on data analysis from the 125 cases led to recommendations forwarded to the Community Action Team for implementation. Four health trends emerged: late or no prenatal care; addiction to tobacco, alcohol or drugs; obesity and a high rate of asthma. Access to prenatal care was the initial issue for the Community Action Team (CAT).

Helped to establish a Wyandotte County Kansas FIMR program through collaboration with the Kansas Blue Ribbon Panel on Infant Mortality.
Activities of MCHC in Support of FIMR Recommendations and Initiatives

- The Executive Director of MCHC and the KC Healthy Start Project Director are serving ex-officio on the Missouri Task Force on Prematurity and Infant Mortality. The Executive Director also serves on the Kansas Blue Ribbon Panel for Infant Mortality. Both states are furthering the cause of infant and fetal health in the legislative arena.

- Kansas City Healthy Start partnered with the National Office of Minority Health, Kansas Department of Health & Environment Office of Health Equity and hosted 50 college students at a two day training where they learned key concepts on health disparities, infant mortality, African American health status and its impact on infant mortality, preconception health, and sexually transmitted infections.

- Kansas City Healthy Start offers free monthly childbirth classes, with mothers in FIMR and KCHS ZIP codes having priority access.

- MCHC now sponsors text4baby, a free nationwide service providing three tips per week for pregnant women via text message to their cell phones.

- The Safe Haven for Newborns community awareness campaign is a critical child abuse prevention strategy. MCHC sponsors the Safe Haven Education Committee, which is charged with increasing public knowledge of the Safe Haven law, and exploring various methods of outreach to the community.

- The MCHC Pregnancy, Infant, and Child Health Committee identifies strategies and approaches to reduce health risks for overweight pregnant women. The MCHC Breastfeeding Committee promotes and advocates breastfeeding as the healthiest choice in infant feeding.
Future Goals and Direction of FIMR

- **Expand and implement the recommendations of the Safe Sleep Task Force**
  Safe Sleep Task Force, a cooperative effort of MCHC, SIDS Resources, Inc. and Missouri Department of Social Services—State Technical Assistance Team, is distributing educational materials to all greater Kansas City pediatricians for inclusion in their newborn packs given to mothers. The Task Force also plans to partner with the faith based community, teaching safe sleep practices to the members of area churches. Working with volunteers to increase the scope and presence of this task force will be a FIMR priority in the coming year.

- **Interview more mothers**
  The interview is a critical part of the FIMR framework, and FIMR is constantly striving to increase the interview rate. Previously long waits between a death and when FIMR received the death record meant that many mothers were unable to be contacted, as they had moved or changed phone numbers in the intervening period. Working with the Bureau of Vital Statistics has shortened the window between the death and the beginning of the case review process, which translates into a greater chance that the mother’s contact information will be current when the case review begins.

- **Expand FIMR review to include all ZIP codes in KCMO**
  Expansion will give us a more complete picture of fetal and infant mortality in Kansas City and would expand the size of the data set considerably, allowing for more sophisticated statistical analysis.

- **Work with more students, interns and volunteers**
  FIMR would like to expand the use of students and interns for data review, information dissemination, and community outreach. This follows the MCHC strategic plan.
Acknowledgements

FIMR works in collaboration with Jinwen Cai, MD, MS, public health statistician at the Kansas City, Missouri Health Department. Ongoing collaboration with Dr. Cai provides analysis pertinent to collected data for fetal and infant deaths occurring among residents in the FIMR ZIP codes in Kansas City, Missouri. Thank you, Dr. Cai.

The Bureau of Vital Statistics, at the Missouri Department of Health and Senior Services, provides birth and death certificates for the FIMR program. Their in-kind support is deeply appreciated.

Caroline C. Hodge, Fetal Infant Mortality Review Intern, prepared this report for distribution to health care workers and policy makers in Kansas City. Her in-depth research for this project is greatly appreciated. Ms. Hodge continues her education at the University of Oxford, where she is a candidate for a graduate degree in Medical Anthropology. We wish her the best.

Mary Jean Brown, MS, RNC, FIMR Coordinator, wishes to express her gratitude to the members of the Case Review Team and the Community Action Team for sharing their expertise and their commitment to helping improve pregnancy outcomes and lowering the incidence of infant mortality.

Mary Jean Brown can be reached at mjbrown@mchc.net
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5 Cheng D and Patel P. Optimizing Women’s Health in a Title X Family Planning Program, Baltimore County, Maryland, 2001-2004. Preventing Chronic Disease 2011; 8: A126.


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