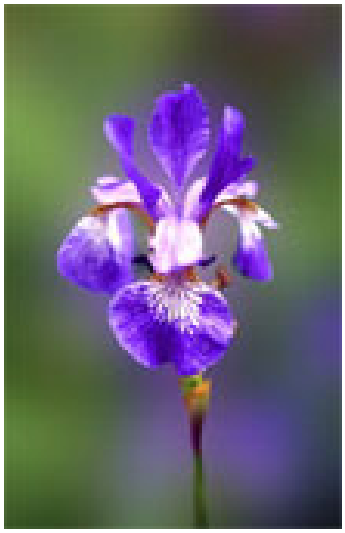
Fetal and Infant Mortality Review of Davidson County



Partnering to Give Nashville's Infants a Chance to Bloom

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The Community Action Team members for implementing strategic actions in the community to improve the lives of our babies.

Lastly, a salute to **the staff of the FIMR Program** who consistently work above and beyond for the babies of Davidson County.

Executive Summary

This report summarizes the findings, recommendations, and activities of the Davidson County Fetal and Infant Mortality Review (FIMR) program from September 1, 2009 through March 16, 2011. During this period, the FIMR team reviewed 74 fetal and infant deaths among Davidson County residents.

These cases were presented to the multi-disciplinary Case Review Team (CRT). Following in-depth discussions of issues identified through case reviews, recommendations were developed around twelve areas of need: post-loss care, mental health, preconception and interconception care, substance abuse, medical and social systems, the FIMR process, prenatal care, family planning, domestic abuse, infant safety, environmental issues, and advocacy, policy, and law.

The findings and recommendations presented here provide an opportunity for individuals, community members, health and social service providers, and policy makers to work together to improve systems of care for women and infants in Davidson County.

Introduction

What is Fetal Infant Mortality Review (FIMR)?

The Fetal and Infant Mortality Review (FIMR) program is designed to change the laws, policies, practices, and systems in Davidson County that impact women, children and families in order to prevent fetal and infant deaths. A fetal death, or stillborn, is defined as a fetus that dies before being born, and an infant death is defined as the death of a child prior to his or her first birthday.

How does FIMR operate?

The FIMR process includes four steps:

Information is collected by a public health nurse from all available sources. These sources can include medical records, medical examiner's information, and social service notes. Whenever possible, a trained health professional conducts home interviews to supplement routine medical record data with a personal perspective, and provides referrals to resources for parents whose infant has died. Data are then stripped of all identifiers, summarized, and provided to a Case Review Team.

Due to the high numbers of fetal and infant deaths in Davidson County, and the intensive review process of FIMR, deaths which meet the following criteria are included for review: a) fetal deaths that weigh at least 500 grams (1 pound, 1 ounce), or are at least 24 weeks gestation, b) infant deaths that are at least 20 weeks gestation and weigh less than 1500 grams (3 pounds, 3 ounces), and c) infants whose cause of death is SUID (Sudden Unexpected Infant Death), SIDS (Sudden Infant Death Syndrome), or undetermined and have no police involvement.

The Case Review Team (CRT) includes health, social service, and other experts from community organizations such as hospitals, social services, public health, and county government. The CRT reviews each case to identify factors that increase the occurrence of poor birth outcomes. The team then makes recommendations to the Community Action Team (CAT).

The Community Action Team (CAT) includes a diverse group of community leaders who take the recommendations from the CRT, prioritize them and identify people and organizations

within the community that can assist in getting the changes implemented. The CAT works to build partnerships and create work plans designed to implement the recommendations of the CRT.

Evaluation provides a constant stream of feedback. Through analysis of the feedback, the FIMR process can implement improvements, and determine whether or not the recommendations which are implemented produce the desired outcome.

Davidson County FIMR Activities

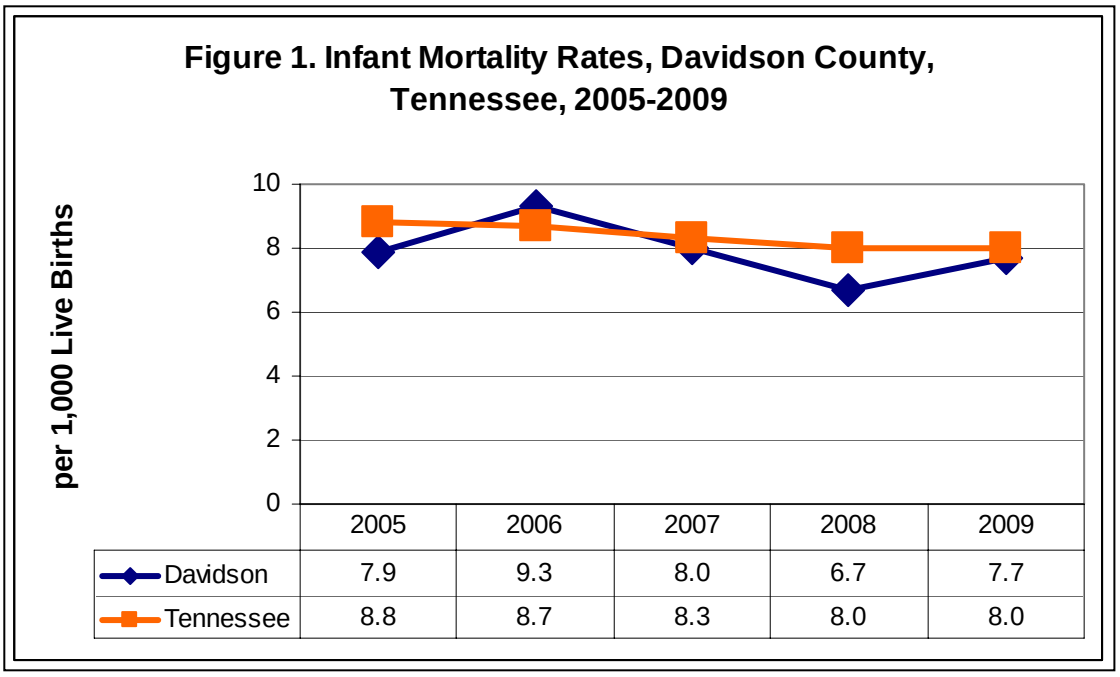
The Metro Public Health Department (MPHD) is the lead agency of the FIMR process. This report summarizes and presents the findings and activities of this program since its inception in September 2009, and includes all reviewed cases through March of 2010.

The Data – or Why We Do This

Fetal and Infant Mortality in Davidson County

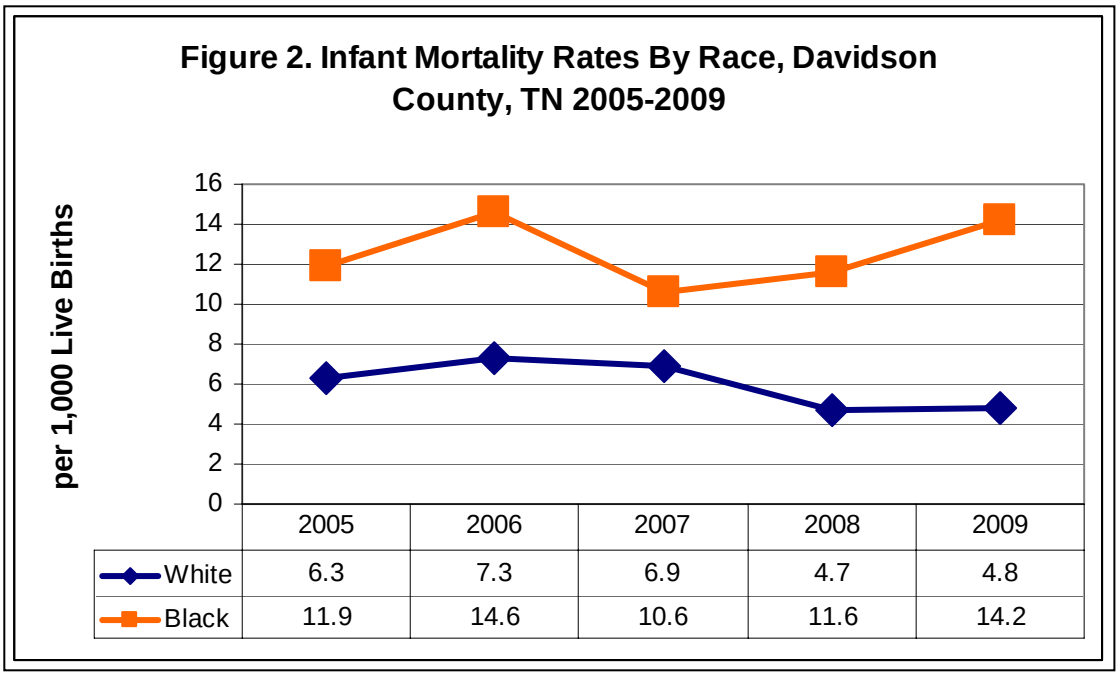
Infant mortality has long been viewed as a sentinel event that is a measure of a community's health and its overall social and economic well-being. An infant death is defined as the death of a child before his or her first birthday.

The Davidson County infant mortality rate is comparable to that for the State of Tennessee. Infant mortality rates for 2005 to 2009 are illustrated in Figure 1. In 2009, the rate in Davidson County was slightly lower than the State rate of 8.0. (US rates for 2009 were unavailable for comparison at the time this report was written).



Healthy People 2020 is a national effort that sets goals for a wide assortment of health indicators. The goal for infant mortality is set at 6.0 deaths per 1,000 live births (Objective MICH-1.3). The 2009 rate is 28.3% higher than the goal.

The burden of infant mortality is not distributed evenly across the population of the county. Black infants born in Davidson County are 3.1 times more likely to die before reaching the first birthday than white infants (see Figure 2), and the gap appears to be widening. Data for Hispanics were examined, but due to small numbers of events for the time period under investigation, the data were excluded from this report.

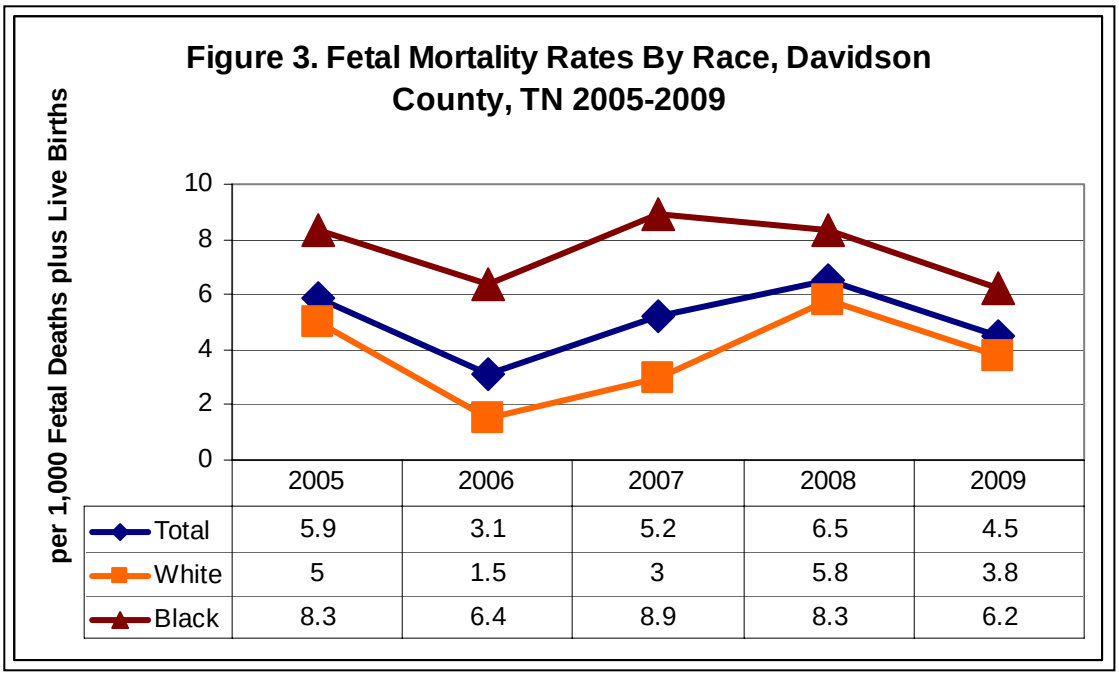


An important facet of FIMR is that it examines fetal deaths in addition to infant deaths. This allows for the review of factors that impact a woman throughout her pregnancy and beyond, and expands the focus of the program.

Fetal mortality, commonly referred to as stillborns, is defined as the expulsion of a product of conception that does not show evidence of life. In Tennessee, fetal deaths greater than 500 grams (1 pound, 1 ounce) are reported. If the birth weight is unknown, then the fetal death must be at least 22 weeks gestation.

As of July 1, 2010, the State of Tennessee changed the reporting requirements for fetal deaths to greater than 350 grams (12.3 ounces), and in the absence of weight, 20 weeks gestation (House Bill 3286). This will affect the fetal mortality rates we report starting in 2010. For this report, fetal mortality uses the previous definition.

Disparities also exist for fetal mortality; black fetuses are 1.6 times more likely to die than white fetuses. The Healthy People 2020 goal for fetal mortality is 5.6 fetal deaths per 1,000 live births plus fetal deaths (Objective MICH-1). Nashville has met the goal overall, but the black rate is 11% higher than the objective.



In Davidson County, black mothers tend to be younger, have higher numbers of prior births, and receive limited prenatal healthcare compared to their white counterparts (see Table 1). They are also more likely to have a low birth weight (<2500 grams, 5 pounds 5 ounces), very low birth weight (<1500 grams, 3 pounds 3 ounces), or preterm (<37 weeks gestation) infant than white mothers. This illustrates the complex network of factors that serve to perpetuate racial disparities in pregnancy outcomes.

In 2009, Davidson County failed to meet the Healthy People 2020 goals for percent of mothers who didn't smoke during pregnancy (Goal: 98.6%, 2009: 89.5%), and the percent of mothers who enter prenatal care in the first three months of pregnancy (Goal: 77.9%, 2009: 55.7).

Table 1. Selected Perinatal Indicators for Davidson County, TN 2009 and Associated Healthy People 2020 Goals

Indicator	*Total*	*White*	*Black*	*HP2020*
Number of Births	9774	6056	3032	N/A
Maternal Socio-demographics				
% mothers <20 yrs.	9.1	6.6	14.4	N/A
% mothers with <12 years education	24.5	24.0	23.5	N/A
% mothers who are unmarried	46.0	33.8	73.6	N/A
% mothers with 4+ births	10.4	7.7	16.2	N/A
% mothers who refrained from smoking during pregnancy	89.5	88.9	89.0	98.6
Prenatal Care Utilization				
% with 1st trimester prenatal care	55.7	58.5	52.0	77.9
% with 3rd trimester or no prenatal care	6.5	5.8	7.7	N/A
Live Birth outcomes				
% births with multiple gestation	3.4	3.3	3.8	N/A
% preterm births (<37 weeks)	8.2	7.1	10.6	11.4
% low birth weight (<2500 grams)	9.1	7.3	12.6	7.8
% very low birth weight (<1500 grams)	1.6	1.1	2.6	1.4
Mortality Rates				
Infant mortality Rate per 1,000 Live Births	7.7	4.8	14.2	6.0
Neonatal (up to 28 days)	5.3	3.6	8.9	4.1
Postneonatal (28 days to 1 year)	2.4	1.2	5.3	2.0
Fetal Mortality Rate per 1,000 Live Births plus Fetal Deaths	4.5	3.8	6.2	5.6

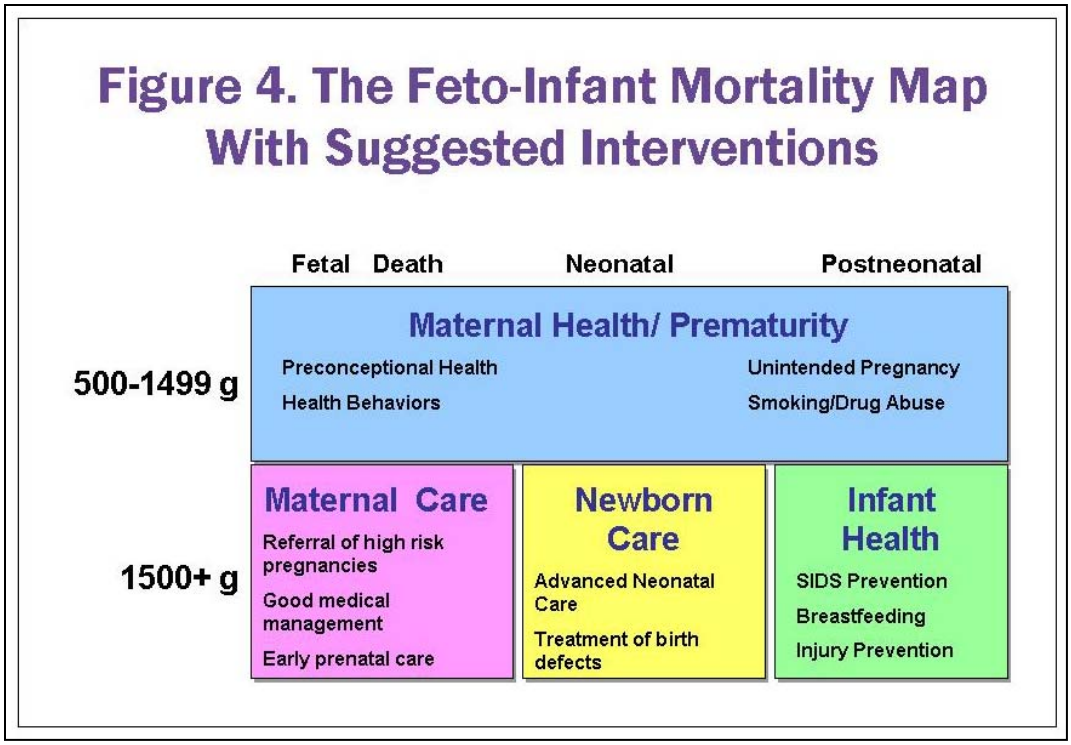
N/A No Healthy People 2020 Objective available.

Perinatal Periods of Risk Analysis

Davidson County became a member of the Perinatal Periods of Risk (PPOR) Practice Collaborative in November 2000 to enhance existing efforts to reduce infant mortality. The PPOR approach was developed by Dr. Brian McCarthy and others from the World Health Organization Perinatal Collaborative Center at the Centers for Disease Control.

PPOR is a simple population-based approach that examines the distribution of fetal and infant deaths by birth weight and age at death to identify gaps between population groups and specify areas for possible interventions. The approach is designed to expand traditional infant mortality analyses, and allow a community to understand the factors that contribute to its fetal and infant mortality.

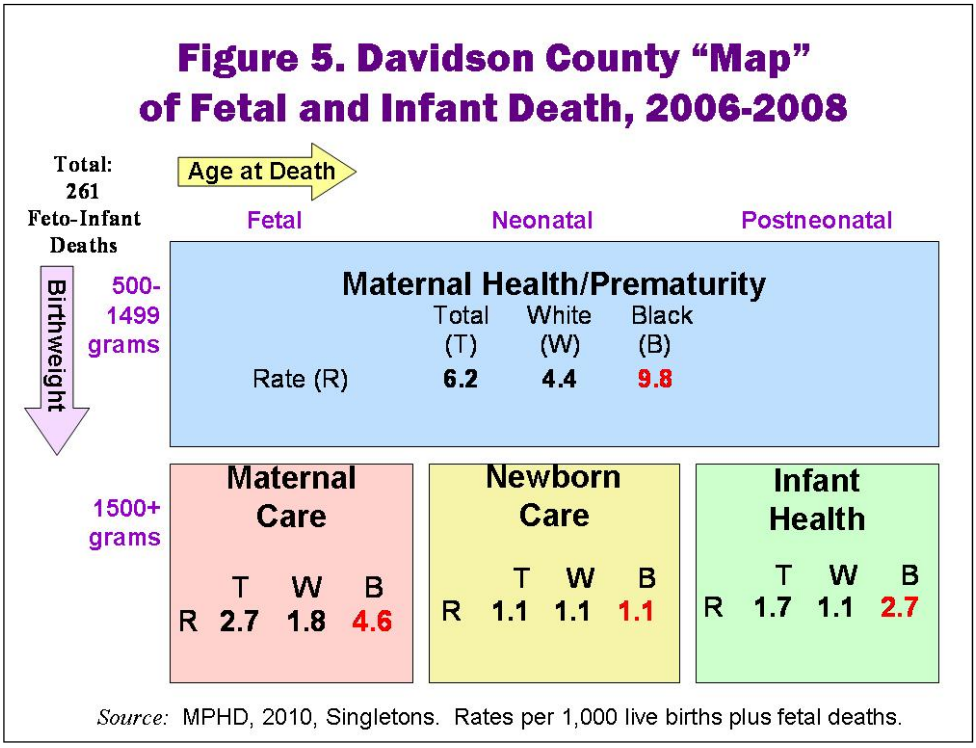
Grouping fetal and infant deaths by birth weight and age at death, produces the matrix, called the Feto-Infant Mortality Map, seen in Figure 4. Age at death is grouped into fetal, neonatal, and postneonatal deaths. Birth weight is categorized as 500 to 1499 grams (1 pound,1 ounce to 3 pounds, 3 ounces; very low birth weight; VLBW), and 1500 grams and greater (3 pounds and 3 ounces; higher birth weight; HBW).



The sections are grouped into categories which are designed to suggest preventative actions. The maternal health and prematurity category, for example, suggests a community should focus on issues such as preconception health, unintended pregnancy, smoking and other substance abuse. Issues related to maternal care may need a preventative focus on early and continuous prenatal care, referral of high-risk pregnancies, and good medical management of underlying conditions. For newborn care, the focus may be on advanced neonatal care and the treatment of birth defects. Lastly, to address infant health issues, communities may need to focus on Sudden Infant Death Syndrome (SIDS) prevention activities such as sleep position education, or injury prevention.

In Davidson County, analysis was conducted on 261 fetal and infant deaths occurring during the years 2006 through 2008. Following PPOR protocol, fetal deaths 500 grams (1 pound 1 ounces) and more, and at least 24 weeks gestation were included, as were infant deaths weighing at least 500 grams. Figure 5 illustrates the group-specific fetal-infant mortality rates per 1,000 live births plus fetal deaths overall and for whites and blacks.

The total fetal-infant mortality rate for blacks was 18.2 compared to 8.4 for whites, a greater than two-fold difference. A disparity between whites and blacks ranging from 2 to 2.5 exists in each category of the map with the exception of Newborn Care. The largest contributor to mortality was maternal health and prematurity representing very low birth weight infants. The



second highest category was maternal care, representing higher birth weight fetal deaths.

Data From FIMR Reviews

Since its inception in 2009 through March 16th, 2010, the Davidson County FIMR team has reviewed 74 fetal and infant deaths. The team recognizes that without several more staff members, it is impossible to conduct the intensive FIMR review of all fetal and infant deaths in Davidson County. For this reason, the team uses the PPOR model to determine which cases are reviewed; this technique ensures that the most prominent areas of fetal and infant mortality are evaluated. The Davidson County FIMR team reviews resident fetal and infant deaths that meet the following criteria:

- Fetal deaths that weigh 500 grams (1 pound and 1 ounce) and more, or are 24 weeks and greater gestation (Maternal Health and Prematurity, Maternal Care).
- Infant deaths that are 20 weeks and greater gestation and weigh less than 1500 grams (3 pounds 3 ounces) (Maternal Health and Prematurity)
- Infants whose cause of death is SUID (Sudden Unexpected Infant Death), SIDS (Sudden Infant Death Syndrome), or Undetermined and have no police involvement (Infant Health).

Table 2. Summary of Selected Indicators for Reviewed Cases, Davidson County, TN

Indicator	Cases (n=74)	% of total
Maternal Demographic Characteristics		
Age <20 years	12	16.2
Education <12 years	14	18.9
Not married	49	66.2
White race	19	25.7
Black race	41	55.4
Pregnancy Outcomes		
Birth weight <2500 grams	51	68.9
Birth weight <1500 grams	44	59.5
Preterm (<37 weeks gestation)	50	67.6
Singleton	63	85.1
Any congenital anomaly	15	20.3
Family Planning		
Planned pregnancy	12	16.2
First pregnancy	60	81.1
Pregnancy interval <12 months	10	13.5
Prenatal Care		
Early prenatal care (1st trimester)	35	47.3
Late Entry	19	25.7
Missed appointments	9	12.2
Maternal Health Characteristics		
Obese pregravid BMI	37	50.0
Pre-existing medical conditions	67	90.5
History of previous preterm or LBW infant	18	24.3
History of previous fetal or infant loss	21	28.4
Maternal infection (other than STD)	26	35.1
Substance Abuse		
Any substance abuse	25	33.8
Tobacco	17	23.0
Marijuana	11	14.9
Alcohol	7	9.5
Other	10	13.5
Maternal Social Characteristics		
Presence of life course risk factors	15	20.3
Poverty	22	29.7
Emotional stressors during pregnancy	29	39.2

Data on selected characteristics of the 74 deaths reviewed thus far can be found in Table 2. Notably, half of the mothers reviewed were obese, 90.5% had a pre-existing medical condition, and 33.8% abused some type of substance. Nearly 40% of the mothers in the cohort experienced some type of emotional stressor during pregnancy (loss of job, natural disaster, divorce, etc.), while 20% had the presence of at least one life course risk factor during childhood (abuse, poverty, lack of support, etc.).

The CRT takes into account both the statistics as presented above as well as the stories of the mothers who have suffered a loss. During the course of the review, the CRT has identified many areas of need that should be addressed in order to improve pregnancy outcomes and prevent future losses. The remainder of this report will detail those areas of need and the subsequent recommendations. Where appropriate, information will be provided on the projects developed by the CAT to implement the recommendations.

Areas of Need

Post-Loss Care

Case Findings:

Women suffering a loss have numerous health and psychosocial problems.

Many women do not understand the factors contributing to their loss, and find the process of gaining answers to be confusing, frustrating, and expensive.

Many women try to conceive shortly after a pregnancy loss, putting themselves and their pregnancy at risk.

Recommendations:

Expand the availability of home visiting programs to include the postpartum period after a fetal or infant loss. Discuss mental health needs, family planning, and referrals to other services. Ideally, all women in the county who have lost an infant should receive at least one home visit. (FIMR Project 2, see page 30)

Explore the possibility of expanding the Central Referral Program at Metro Health Department. (FIMR Project 3, see page 30)

Create and provide a brochure for area hospitals that provides comprehensive bereavement information and also includes burial information. (FIMR Project 4, see page 31)

Establish a protocol to work with Birthing Hospitals that prevents mothers from being lost to contact after a fetal or infant loss. Identify Bereavement Programs at the birthing hospitals for better communication and collaboration. (FIMR Project 5, see page 31)

Assess if current bereavement services are equipped to serve people with special needs.

Determine how parents are provided the results of an autopsy on their child when Mother is not under the regular care of a physician. Does the Medical Examiner's office have an individual trained to interface with grieving parents while explaining the results of an autopsy? Evidence indicates it is difficult for parents to get the results.

When a mother is brought in to deliver a loss (stillborn, TOP), a nurse should be assigned to that mother to stay with that patient throughout the process. The nurse can help alleviate the trauma and help the patients begin the bereavement process. This is particularly important if Cytotec is going to be administered.

Ensure that grief services provide support to the entire family (i.e. siblings), in addition to the parents.

Investigate autopsy practices at area hospitals and associated costs to patients. Explore ways to reduce costs to the family.

Improve communication with patients regarding autopsies – i.e. what to expect from an autopsy, when to expect the results, who to call to get the results, resources to help a patient understand the results.

Mental Health

Case Findings:

Pregnant women in Davidson County are often 'stressed out' and are either unaware of or unable to access help.

There is little communication between obstetric providers and mental health providers.

Recommendations:

Provide literature and training for obstetric and clinic providers on identifying stress in pregnant women and following up with mental health referrals.

Evaluate availability of mental health services in the county and protocols for screening for postpartum depression. Include assessment of the campaign 'It's OK to Ask For Help'. (FIMR Project 8, see page 33)

Develop a line of communication between mental health providers and obstetrics in cases where the mother has extensive mental health issues.

Assess and ensure culturally appropriate mental health services are available.

Preconception and Interconception Care

Case Findings:

Many women do not receive routine medical care prior to and after pregnancy.

Many women do not understand the benefits, or cannot afford routine medical care.

Many women are not managing their chronic conditions, and are not aware of the effects of the chronic condition on pregnancy.

Many women are overweight or obese before they get pregnant.

Recommendations:

Create and implement public health messaging that draws attention to preconception and interconception health. The earlier the messaging begins the better.

Determine if there is a State or National benchmark for obesity in pregnant women. The home interviewer has stated that moms do not see themselves as fat but pregnant, and that they are supposed to look as they do. Nurses and hospitals are good about asking moms for their pre-pregnancy weights.

Assess current healthy weight initiatives in Davidson County to determine if they are meeting the needs of preconception women. If not, find partners and create a broad-based initiative.

Find ways to encourage women who are demonstrating self-advocacy about their lives to develop a reproductive life plan. Explain that taking charge of their reproductive life is just as important as taking control of the other areas of their life.

Find ways to encourage post-partum women to seek regular medical care, especially when they experienced diabetes or hypertension during pregnancy. Risks of developing those diseases after pregnancy need to be adequately communicated.

Include discussions with patients about the added benefits of using condoms for disease prevention.

Incorporate self-esteem and empowerment curriculums into nutritional health programs aimed at youth.

Substance Abuse

Case Findings:

A number of women have substance abuse problems in Davidson County.

Women who abuse substances tend to lead chaotic lives and feel powerless to effect change.

Recommendations:

Assess the current practices of screening for substance abuse, the availability of cessation services in the community, and whether or not appropriate referrals are being made.

Ensure smoking cessation programs offered to pregnant women encompass the entire household.

Pair with Smoke Free Nashville and labor and delivery centers in hospitals to create and provide a pledge to new parents that they will provide smoke free homes for their infants.

Provide in-services for day care staff to which parents are also invited that discuss the dangers of second and third hand smoke exposure for infants.

Medical and Social Systems

Case Findings:

There are many gaps in the services provided to pregnant women, and women can sometimes get 'lost' in the system.

There are many opportunities for improvement with regards to the lines of communication between service providers.

There may be ways of consolidating efforts in order to prevent duplication of services.

Recommendations:

Work with area regional centers and high risk hospitals, first responders and EMS to identify and/or establish guidelines and protocols regarding how non-birthing hospitals stabilize and transfer pregnant women in emergency situations. (FIMR Project 1, see page 29)

Reach out to clinics serving non-English speaking populations to ensure a continuum of care and adequate interpretation services.

Create linkages in services between clinics and other community partners to access information and prevent possible gaps in the service of patients. (FIMR Project 7, see page 32)

Assess current staff sensitivity training practices and curriculum among agencies that provide social services. A need to avoid "talking down" to people petitioning for assistance has been identified.

Assess availability of services provided to incarcerated women (substance abuse, mental health, reproductive health, family planning, etc) and to women who are just released from jail.

Assess the food services provided to incarcerated women; determine policies for adjustment of nutrient intake for women with specific medical conditions including diabetes and pregnancy.

Develop a set of standard maternity protocols to be followed at discharge even if mother has been transferred to another floor after a loss to improve the accuracy and quality of medical records.

Explore the possibility of developing a mechanism for connecting homeless persons to medical homes and home visiting services even if those services have to be offered on-site at the clinics.

Home visiting programs want prenatal clients; improve referral services to get more women into home visiting programs during the prenatal period.

Ensure cultural sensitivity when offering genetic testing to a mother, taking into account that in some countries it is an accepted practice for the mother to be related to her spouse.

Create a decision-tree for foreign-born women who enter TennCare to ensure she is referred to appropriate services in order to combat the difficulty these women have to adjusting to life in a new country while pregnant.

Make inroads into the Muslim community to see how best to help improve the care members of this growing segment of our population receive.

Encourage MCO's to administer patient satisfaction surveys and drop providers from the roster that consistently receive poor reports.

FIMR Process

Case Findings:

Partnering with agencies not yet involved in the process may improve the functioning of the FIMR program.

Recommendations:

Engage the faith-based community in developing public health messaging and include them in the FIMR process.

Enlist participation of Schools in the FIMR process (Include high schools and colleges).

Work with nursing schools to introduce FIMR into the curriculum.

Prenatal Care

Case Findings:

Many women in Davidson County do not understand the benefits of prenatal care, or what prenatal care entails.

A number of women do not access prenatal care, or enter late in pregnancy.

Many women are concerned do not want to be perceived as being a bother to their provider. As a result, they will not inform the doctor of all health issues, ask questions, or voice concerns.

A number of women do not know what a pregnancy complication would feel like, or what to do if they experience a complication.

Some women use Emergency Departments to receive regular care.

Recommendations:

Develop a Diary for pregnant women that would include information from prenatal care visits and information about the preferred delivery hospital. There are existing diaries available. Give diaries to providers to give to their patients and possibly use as an incentive. (FIMR Project 6, see page 31)

Support or create a broad-based educational campaign regarding the signs and symptoms of preterm labor and when it is necessary to call the MD.

Create public service announcements that inform women about what a healthy pregnancy is like, and educate about common abnormalities and when to seek immediate care.

Find ways to discourage the use of the ER for primary care, and emphasize that ER visits are not the same thing as prenatal care visits.

Start a mass public campaign that promotes keeping track of fetal movement during pregnancy and what to do if movement decreases.

Create and distribute messaging that reinforces the notion that mothers should report any changes in their health while pregnant to their provider as soon as possible (febrile illness, vomiting, falls, etc). Find ways to conquer the idea that reporting illness to the provider is somehow “bothering” the physician. Perhaps sell the idea that healthcare is a service that the patient pays for, and as such the patient is entitled to demand quality (i.e. getting questions answered, responsiveness, etc.).

Partner with and find ways to saturate the community with the Text 4 Baby program.

Design and implement a public awareness campaign designed to sell the value of prenatal care from the patient's perspective (what happens in prenatal care visits, why it is important, what is the benefit to the patient – more than prenatal care helps you have a healthy baby). Would also be helpful to make modifications to the campaign and use it to target different cultures. Draw parallel to successful preconception use of folic acid campaign.
Encourage birthing centers to offer pregnancy classes that detail what pregnant women can expect, and what do when things go wrong. See if MCOs would fund such classes as part of improving pregnancy outcomes initiatives.

Institute a pregnancy hotline (211). Alternatively, assist MCOs in promoting already created pregnancy lines.

Create a pilot program that offers group/centering prenatal care in conjunction with the WIC program.

March of Dimes has a series of PSAs that could be used in waiting rooms of WIC and OB offices. Make use of the resource.

Create an intervention for women who are exposed to violence during pregnancy in order to improve outcomes.

Family Planning

Case Findings:

Many women do not understand what a reproductive life plan is or the benefits to creating one.

Many women decline contraceptive services before discharge from the hospital.

Recommendations:

Identify barriers to contraception use and identify education programs in the community regarding contraception use and its importance in the pre- and interconception periods.

Seek to provide standardization on the reproductive health curriculum provided to

students in a resource class. Currently there is no standard curriculum, and there is a lot of variability in the information that is provided.

Determine what sort of follow-up is available for women who decline family planning services and contraception at discharge from the hospital, or who deliver at an institution that is prohibited from discussing contraception.

Overcome resistance of providers to prescribe long-term contraception to women with multiple partners in situations where pregnancy presents a greater risk to the mother than the potential of removing an infected device.

Create and promote the use of long-term contraception as a legitimate form of birth control, especially for women with extensive social and mental health issues.

Include reproductive health plan information in packets given at post-partum and for bereavement. Involve the MCO's in distributing and promoting the information as a work around for hospitals that are prohibited from discussing family planning with their patients.

Include family planning and reproductive health plans in the services provided in the jail system. Offer long-term contraception at discharge.

Find creative ways to incorporate reproductive health plans with STD prevention work, and include males.

Domestic Abuse

Case Findings:

In Davidson County, there are inconsistencies in practice with regards to screening for domestic abuse.

There are some instances of the screening tool being administered in an area that is not private.

Recommendations:

Evaluate screening procedures for domestic abuse and the availability of domestic abuse services in the community.

Infant Safety

Case Findings:

Many parents and caregivers in Davidson County put infants to sleep in improper sleeping environments.

Many parents in Davidson County co-sleep with their infants.

Recommendations:

Find creative ways to address the generational gap in Back to Sleep education, and education on the dangers of co-sleeping and unsafe sleeping environments.

A great deal of oversight and education, including safe sleep, is provided to foster parents. If the child is placed with a family member (unless the baby is born drug positive), there is no oversight. Review DCS standards and policies with respect to relative caregivers and find creative ways to fill the system gap.

Provide training to CPS workers regarding well baby safety, e.g. how to properly install a car seat and safe sleep practices.

Explore the possibility of follow-up for relative caregivers through the HMOs.

In addition to hospitals and birthing centers providing packets of information to new parents, also provide packets to Grandparents. Make sure the packets include Safe Sleep education materials.

Stress that not everyone under every circumstance is a candidate for co-sleeping; emphasize that any kind of impairment while co-sleeping is extremely dangerous for the infant.

Environmental Issues

Case Findings:

A number of women deal with environmental issues in their homes.

Recommendations:

Establish a relationship with the Housing Authority and evaluate the policies and procedures with regards to environmental concerns, especially when pregnant women are involved.

Advocacy, Policy, and Law

Case Findings:

Many women face difficulties with their employment, or work environment while pregnant.

In Davidson County, some business cultures are not supportive of pregnant women in the workplace.

Many women are unaware of their rights as patients.

Recommendations:

Create a campaign designed to educate the public regarding patient's rights, i.e., have a right to ask questions, have a right to participate in the design of care plans, etc.

Find ways of promoting business cultures that are supportive of pregnant women in the workplace, i.e. promoting flexibility in work schedules and duties.

Investigate loopholes in the current law that prevents businesses from firing pregnant women because of their pregnancy. Discover how businesses are getting around the law and modify current laws to fill the gaps.

Review current laws and policies designed to protect pregnant women in the workplace to see if they can be improved. Look at laws and policies in other localities that are considered to be "pregnancy and family friendly" and use them as models.

Strategies to Implement Recommendations

The goal of the CAT is to improve systems of care by transforming recommendations into action. In order to facilitate the work of the team, the CAT has divided into smaller workgroups, and each workgroup selects a recommendation to implement. When one recommendation is complete, the workgroup selects another.

Thus far, the CAT has taken on eight projects, several of which have already been completed. This section will briefly describe the projects and indicate the recommendation it was designed to address.

FIMR Project 1

Project Name:	**Obstetrical and Neonatal Transfer Guidelines**
Recommendation:	Work with area regional centers and high risk hospitals, first responders and EMS to identify and/or establish guidelines and protocols regarding how non-birthing hospitals stabilize and transfer pregnant women in emergency situations.
Status:	**Completed**
Summary:	It has been verified that all non-delivery hospitals in Davidson County have protocols in place for transferring pregnant women in emergency situations. Additionally, all non-delivery hospitals have provided the Nashville Fire Department (NFD) with a written letter advising that they cannot manage a pregnant patient so that Emergency Medical Service (EMS) personnel will not transport a patient with a pregnancy-related problem to those hospitals. The work of this subgroup has ensured that any woman with emergency complications of pregnancy will be transported to a hospital with appropriate facilities.

FIMR Project 2

Project Name: **Availability of Home Visiting to a Postpartum client after a Fetal or Infant Loss**

Recommendation: Expand the availability of home visiting programs during the postpartum period after a fetal or infant death. Discuss mental health needs and referrals.

Status: **In progress**

Summary: The first goal of this project is to ensure that insurance companies and bereavement programs at hospitals send a referral for home visiting services to Metro Central Referral each time they receive notification of a fetal or infant death.

The second goal of this project is to establish a protocol for home visits to families who experienced a loss. The objectives of the home visit should be to: a) assess families coping with a loss b) assess the mental health status of the family members and offer options for counseling, c) provide information on available resources, d) identify the reproductive life plan of the family and encourage the mother to keep postpartum visits, and e) promote the FIMR follow-up visit.

FIMR Project 3

Project name: **Central Referral**

Recommendation: Explore the possibility of expanding the Central Referral Program at Metro Health Department.

Status: **Currently on HOLD**

Summary: Metro Central Referral currently serves as a referral hub. Providers make one referral for a patient and the staff at Central Referral reviews the case and connects the patient with the programs that best fit the patient's needs. An expansion of these services is currently on hold until a full review of the HIPAA regulations can be conducted.

FIMR Projects 4 & 5

Project Name: **Bereavement and Communication After a Fetal or Infant Loss.**

Recommendations: Project 4 Provide a brochure for area hospitals that includes comprehensive bereavement service information and information on burial services.

Project 5 Establish a protocol to work with birthing hospitals to prevent mothers from being lost to contact after a fetal or infant loss.

Project Members: Pamela Taylor

Status: **Completed**

Summary: After establishing partnerships with the delivery hospitals in Davidson County, informational brochures were given for distribution. Additionally, a resource guide was compiled by a MPHD summer extern in 2010 with the collaboration with the hospitals.

To improve case finding for FIMR and to avoid high rates of loss to follow-up, a confidential phone line was established for the notification of fetal or infant deaths. The intent is for FIMR to receive early notification of a fetal or infant death to increase the opportunity for a maternal interview. The process for the contact initiation is, first, a sympathy card and then, at a later date, a letter inviting the client to participate in a time to share her story.

FIMR Project 6

Project Name: **Prenatal Diary**

Recommendation: Develop a diary for pregnant women that would include information from prenatal care visits and information about the preferred delivery hospital. There are existing diaries available. Give diaries to providers to give to their patients and possibly use as an incentive.

Status: **In progress**

Summary: At present, the prenatal diary design is nearly completed. After the diary is completed and has been approved, the final product will be presented to the TennCare Maternity Collaborative and other managed care organizations to cultivate acceptance and promote use of the prenatal diary. The diary will be distributed to all providers and clinics that service pregnant patients, as well as distributed through TennCare to all pregnant clients.

FIMR Project 7

Project Name: **Linkages**

Recommendation: Create linkages in service between clinics and other community partners to access information and prevent possible gaps in service of patients.

Project Status: **In progress**

Summary: This project is designed to cultivate networking and partnerships between the different medical and social systems that service pregnant

women. The intent of the workgroup is to conduct two focus groups. The first will gather information from mothers currently enrolled in programs to determine where gaps or overlaps might exist. The second focus group will involve providers and seek to determine what services or linkages would help them better service their clients.

FIMR Project 8

Project Name: **Mental Health**

Recommendation: Evaluate availability of mental health services in the county and protocols for screening for postpartum depression. Include assessment of the campaign 'It's OK to Ask for Help'.

Project Status: **In progress**

Summary: The committee working on this project has several goals. The first is to assess the mental health services available in Davidson County that are designed to address the needs of families who have suffered a fetal or infant loss. The group also plans on identifying community norms and expectations associated with grief and postpartum depression, as well as barriers that might prevent people from seeking care. The possibility of implementing a gatekeeper model to change community norms and expectations that prevent patients from seeking care is being explored.

Conclusions

Fetal and infant mortality are important indicators of the health status and well being of a community, and Davidson County continues to experience high rates of infant and fetal death along with considerable disparity between groups. The case finding of the Fetal and Infant Mortality Review program provide valuable insight into individual experiences with systems of care, and factors that contribute to fetal and infant mortality. These findings and the recommendations resulting from them can inform community-based efforts, provider practice, systems reform, and policy development.

The Community Action Team has taken the first steps towards transforming the recommendations into action through the pursuit of our first eight projects. The concentrated effort of these individuals, communities, and organizations will improve the delivery of services and systems of care for women, infants, and families in Davidson County.

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