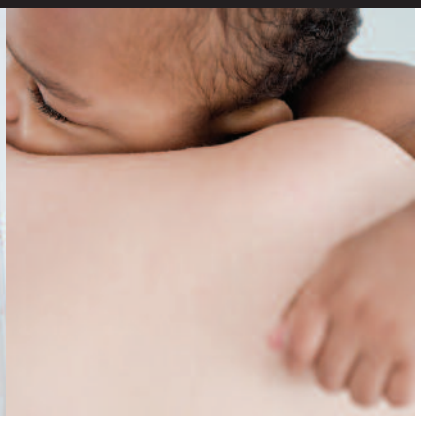
DELAWARE HEALTH AND SOCIAL SERVICES
Division of Public Health
Center for Family Health Research and Epidemiology

THE BIRTH OF CHANGE

HEALTHY MOTHERS. HEALTHY INFANTS.



Delaware Healthy Mother & Infant Consortium

Reducing Infant Mortality in Delaware

ANNUAL PROGRESS REPORT

MARCH 2010

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We're pleased to share the Fourth Annual Report of the Delaware Healthy Mother & Infant Consortium (DHMIC) with you. We continue to work with our partners across the state to reduce the infant mortality rate in Delaware and improve the health of both infants and women of childbearing age.

We've introduced a preconception/interconception program based on a new national model. Healthy Women Healthy Babies is a systemic initiative that targets the highest-risk women. This science-based approach helps women reach optimal health prior to pregnancy so they have a higher likelihood of delivering a healthy baby in the future. Our community partnerships with six health care organizations and other private practitioners have helped us widen the scope of these services, last year serving 9,118 women. Of the 2,264 women who took part in our prenatal program, 94 percent did not experience pregnancy complications.

We provided bilingual services to over 500 Spanish-speaking families, created adult and teen reproductive life plans and continued to conduct research to better understand the reasons behind the disparity in poor birth outcomes among African-American women.

Infant mortality is a measure of the health of a community. Our communities can be healthier and we're working at the individual, family, provider and systems levels to make that a reality.

Sincerely,

David A. Paul, MD
Chair
Delaware Healthy Mother & Infant Consortium

Jaki Gorum, DSW
Co-Chair
Delaware Healthy Mother & Infant Consortium

EXECUTIVE SUMMARY

SINCE 2005, the mission of the Delaware Healthy Mother & Infant Consortium has been to provide statewide leadership and coordination of efforts to prevent infant mortality and to improve the health of women of childbearing age and infants throughout Delaware.

Delaware's Infant Mortality Rate has dropped by 8 percent—from a rate of 9.2 per 1,000 births in 2001-2005 to 8.5 in 2003-2007. We are heartened by this success, but with a goal of reducing infant deaths to a rate of 4.5 per 1,000 births and eliminating the racial disparity, there is much more work to be done.

Our work is showing results, which are reflected throughout this report. Below, we review the goals and accomplishments of the following key programs:

FAMILY PRACTICE TEAM MODEL: This initiative helps pregnant women learn from other mothers, outreach workers, nurses, social workers and nutritionists how to best care for themselves and their infants up to two years postpartum. In FY09*, we streamlined services to target the highest-risk women. Over the course of the year, the program served 2,264 pregnant women, 94 percent of whom did not experience pregnancy complications.

PRECONCEPTION CARE: This program provides access to preconception care—including nutrition and contraception counseling, pregnancy planning and immunizations—to all women of childbearing age with a history of poor birth outcomes. In FY09, we expanded our services to include eight sites statewide and served 9,119 women.

PREMATURITY PREVENTION PROGRAM: This statewide initiative provides progesterone to women at risk of having a premature baby. In FY09, 30 mothers who delivered at Christiana Care avoided premature labor and delivery. Since prematurity and low birth weight are the leading causes of infant mortality, this translates into potential lives saved.

ACCESS TO CARE: This initiative is charged with improving access to care for populations disproportionately affected by infant mortality. In FY09, we provided bilingual services to more than 500 Spanish-speaking clients. We also provided access to key prevention services such as immunizations, folic acid and genetic counseling for those at risk of having a baby born with a birth defect.

STATEWIDE EDUCATION CAMPAIGN: This program develops and distributes resources for educating teens and adult women on subjects relating to infant mortality. In FY09, we developed Reproductive Life Plan toolkits to help teen and adult women set and follow personal goals that will help them achieve healthy pregnancies, when and if desired.

FETAL AND INFANT MORTALITY REVIEW: This program gathers information through reviews of medical and social records and interviews with mothers who have experienced an infant death. In FY09, we identified four key areas where we should be focusing our efforts—preexisting medical conditions, inadequate or delayed referrals for services, obesity and nutrition, and preterm labor.

PREGNANCY RISK ASSESSMENT MONITORING SYSTEM (PRAMS): This program uses a monitoring system to increase understanding of the risks faced by pregnant mothers. In FY09, we achieved an average unweighted response rate above 70 percent, allowing us to begin data analysis.

NEW—HEALTHY WOMEN HEALTHY BABIES: In the upcoming year we will implement a new science-based preconception/interconception and prenatal program to address the health of the mother from the day of her birth to the birth of her child. This multilevel approach involves the woman herself, her family, her health care provider and the community.

In keeping with our commitment to share insights and information about the latest information on maternal and infant health, we held our fourth Annual Summit in April 2009. Dr. Michael Lu, associate professor of obstetrics and gynecology and public health at UCLA, spoke about preconception and interconception care in his presentation, "Before, Between and Beyond Pregnancy: From Concept to Practice."

We are focused on maintaining our momentum to ensure that every baby in Delaware has a chance at a healthy life.

**FY09 = Fiscal Year 2009. Our fiscal year runs from July 1 through June 30.*

INFANT MORTALITY BACKGROUND

Infant Mortality—the record of the number of babies who die from the first day of birth up to 12 months of life—is an indicator of maternal health. In Delaware, mothers who are not getting preconception care and prenatal care, who have a chronic illness, or who do not wait long enough between pregnancies are having babies who are sick when they're born.

KEY FACTS ABOUT INFANT MORTALITY IN DELAWARE*:

- Delaware's Infant Mortality Rate (IMR) decreased for the second consecutive time period. From 2002–2006, it declined 3 percent, from 8.8 infant deaths per 1,000 live births to 8.5 in 2003-2007. The U.S. rate held steady at 6.8, and remained significantly lower than the Delaware rate.
- Prematurity and low birth weight accounted for 22.3 percent of infant deaths.
- Birth defects accounted for 12.5 percent of infant deaths.
- Maternal complications of pregnancy accounted for 8.7 percent of infant deaths.
- Prematurity/low birth weight and maternal complications of pregnancy were the top two most frequent causes of infant death for both African-American and Caucasian infants.
- Approximately 95 percent of all infant deaths occurred within the first six months of life, 71 percent of all infant deaths occurred within the first 28 days of life, and 39 percent occurred within 24 hours of birth.
- One percent of live births in 2002-2006 were less than 28 weeks of gestation at birth, but they accounted for 59 percent of all infant deaths. In total, 13.7 percent of all live births in 2002-2006 were preterm births (less than 37 weeks of gestation) and 77.7 percent of infant deaths were babies born preterm.

*2007 *Delaware Vital Statistics Annual Report*

PRIMARY PREVENTION

Actions taken to avoid a given health care problem such as immunizations, promotion of healthy behavior and counseling

PROGRAMS

PRECONCEPTION CARE

- Nutrition counseling
- Contraceptive counseling
- Pregnancy planning
- Reproductive medical care
- Oral health education
- Access to social work services
- Immunizations for women

ACCESS TO CARE

- Enrolling women in Medicaid
- Providing costly medicine to pregnant women
- Providing translation services

PREMATURITY PREVENTION PROGRAM

- Clinical intervention that provides progesterone to women at risk for having a premature baby

FAMILY PRACTICE TEAM MODEL

- Nutrition counseling
- Contraceptive counseling
- Pregnancy planning
- Reproductive medical care
- Oral health education
- Access to social work services
- Immunizations for women and infants up to two years
- Routine medical checkups for infants

EDUCATION

STATEWIDE CAMPAIGN TO TRAIN HEALTH CARE PROFESSIONALS ON:

- Domestic violence intervention
- Infant safe sleeping practices
- Substance abuse and smoking intervention
- Providing preconception health
- Promoting breastfeeding best practices
- Encouraging adequate birth spacing

RESEARCH & SURVEILLANCE

CENTER FOR FAMILY HEALTH RESEARCH & EPIDEMIOLOGY

- Conducts intensive research on the causes and contributions of risk factors for poor infant and maternal health

PREGNANCY RISK ASSESSMENT MONITORING SYSTEM

- Collects information from mothers on beliefs, behaviors and practices prior to, during and following pregnancy

REGISTRY FOR IMPROVED BIRTH OUTCOMES

- Analyzes multiple poor outcomes among mothers delivering in Delaware

POLICY

PERINATAL COLLABORATIVE

- A statewide collaboration to improve health outcomes for women and infants is in the early stages of development

STANDARDS OF CARE

- Establishes standards of care for preconception, prenatal and interconception care

HEALTH CARE CAPACITIES STUDIES

- Determines factors that affect obstetrician availability in rural areas

SECONDARY PREVENTION

(EARLY DETECTION/SCREENING)

Actions taken to identify people who have already developed a condition to prevent its spread or provide care and treatment

PROGRAMS

PRECONCEPTION CARE

Screenings for:

- Sexually Transmitted Diseases (STDs)
- HIV/AIDS
- Chronic alcohol, drug and tobacco use
- Pregnancy

FAMILY PRACTICE TEAM MODEL

Screenings for:

- Sexually Transmitted Diseases (STDs)
- HIV/AIDS
- Chronic alcohol, drug and tobacco use
- Pregnancy
- Infant developmental delay

TERTIARY PREVENTION

(TREATMENT & AFTER-CARE)

Actions taken to provide permanent health care to individuals with lifelong illnesses, conditions or injuries

PROGRAMS

PRECONCEPTION CARE

- Treatment for STDs*
- Chronic disease counseling
- Alcohol, drug and tobacco treatment programs
- Intensive nutrition counseling

**Tertiary Prevention for a woman can also be Primary Prevention for an infant.*

FAMILY PRACTICE TEAM MODEL

- Up to two years of care for women after they give birth
- Treatment for STDs
- Chronic disease counseling
- Intensive nutrition counseling
- Alcohol, drug and tobacco treatment programs

SURVEILLANCE

FETAL AND INFANT MORTALITY REVIEW

- Uses interviews with mothers who have experienced an infant or fetal death to make recommendations for changes in public health programs and interventions

BIRTH DEFECTS REGISTRY

- Data provides the foundation to help us understand what changes can be effective in reducing infant mortality

THE FUTURE: MOVING FORWARD WITH OUR VISION IN MIND

We have determined the next steps we will take in the coming year to continue to work toward reducing the Infant Mortality Rate in Delaware.

OUR PLANS INCLUDE:

- Enrolling more high-risk women in the Healthy Women Healthy Babies program.
- Promoting the Reproductive Life Plan—a single source of information and guidance for young women and teens.
- Maintaining existing media campaigns, including the Infant Safe Sleeping campaign.
- Continuing support and advocacy for the work of the DHMIC.
- Implementing findings from the Fetal Infant Mortality Review (FIMR) and the Child Death, Near Death and Stillbirth Commission (CDNDSC).
- Collaborating with our partners to implement the national "Cribs for Kids" program in Delaware.
- Initiating analysis of the Pregnancy Risk Assessment Monitoring System (PRAMS) data.
- Using PRAMS results to change current state programs to streamline services to high-risk women.
- Using PRAMS results to create a report of pregnancy risks for targeted intervention.
- Updating of the Registry for Improved Birth Outcomes as information becomes available.
- Continuing the study of risk facts for poor birth outcomes.
- Reviewing 2010 physician capacities studies to learn if there are changes in care coordination services.
- Initiating maternal mortality review through the CDNDSC.
- Initiating active surveillance of birth defects statewide.

PRECONCEPTION CARE MODEL/INTERCONCEPTION CARE MODEL: HEALTHY WOMEN HEALTHY BABIES

Our care model looks at a woman's preconception care, not as an interim need but from a life-course perspective. By working to help women achieve optimal physical and mental health and reduce social risks throughout the course of their lives, we have a greater chance of helping them avoid unhealthy pregnancies and preterm births.

The Healthy Women Healthy Babies model touches women's lives on many levels.

COMMUNITY
Programs to eliminate racial disparities and increase community support of women's health

PROVIDER
Education, trends monitoring, research reports, patient information

FAMILY
Genetic counseling, home visits, parenting help

WOMAN
Reproductive life planning and prematurity prevention

DATA PROVIDES THE FOUNDATION
Fetal Infant Mortality Review (FIMR); Pregnancy Risk Assessment Survey (PRAMS); Registry for Improved Birth Outcomes; Birth Defects Registry; and Center for Family Health Research and Epidemiology.

THIS APPROACH IS BASED ON RECOMMENDATIONS FROM THE CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC) THAT SUGGESTS WE:

- Encourage each woman to take responsibility for her life and to have a reproductive life plan.
- Increase awareness of the importance of preconception healthy behaviors and the services that can help women achieve them.
- Provide pre-pregnancy checkups and preventive health visits and services.
- Provide interventions for those who are at risk.
- Provide necessary services to women who are between pregnancies and have had a prior poor birth outcome.
- Provide health services for low-income women.
- Integrate this model of care and its recommendations into existing public health programs.
- Research the impact of this new initiative and monitor improvements.

RECOMMENDATION: FAMILY PRACTICE TEAM MODEL

Implement a comprehensive Family Practice Team Model so that pregnant women can learn from other mothers, outreach workers, nurses, social workers and nutritionists how to best care for themselves and their infants up to two years postpartum

FY09 GOALS

- Conduct a program evaluation of one of our Family Practice Team Model (Prenatal Care) Program's sites.
- Streamline services to target highest-risk women.
- Collect information on women's health history, previous pregnancy history and the services they received from the program.

FY09 ACCOMPLISHMENTS

- In partnership with the University of Delaware's Center for Applied Demography and Survey Research, we evaluated one of our FPTM site's (Westside Family Healthcare).
- We've streamlined services to target the highest-risk women.
- We've served 2,264 pregnant women in FY09.
- There was a slight decline in the number of pregnant women served from FY08, when we served 2,449. This decline may be partly due to two contractors having 10-month contracts rather than full-year contracts.
- We've served 750 pregnant African-American women, compared to 758 in FY08.
- We've served 1,082 pregnant Hispanic women in FY09, compared to 1,248 in FY08.

FAMILY PRACTICE TEAM MODEL: **WHAT DID WE LEARN?**

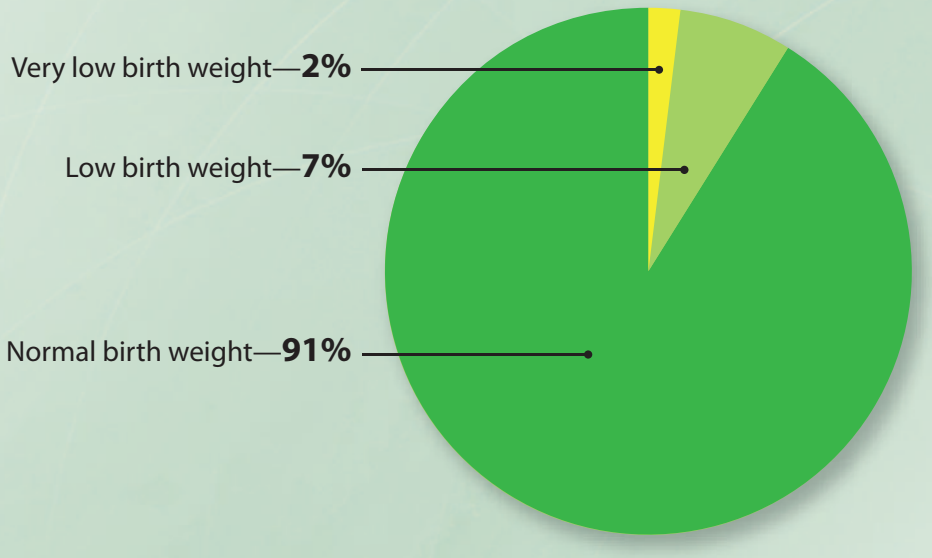
Out of 1,693 infant deliveries:

- 17 infant deaths occurred
- 7 fetal deaths occurred

Of the 1,693 infant deliveries for which data was available, 26 were very low birth weight, 124 were low birth weight, and 1,531 were normal birth weight infants.

Birth Weight of Infants Delivered by Mothers in Our Program

Source: Delaware Department of Health & Social Services, Division of Public Health, Center for Family Health Research & Epidemiology



DEFINITION OF TERMS

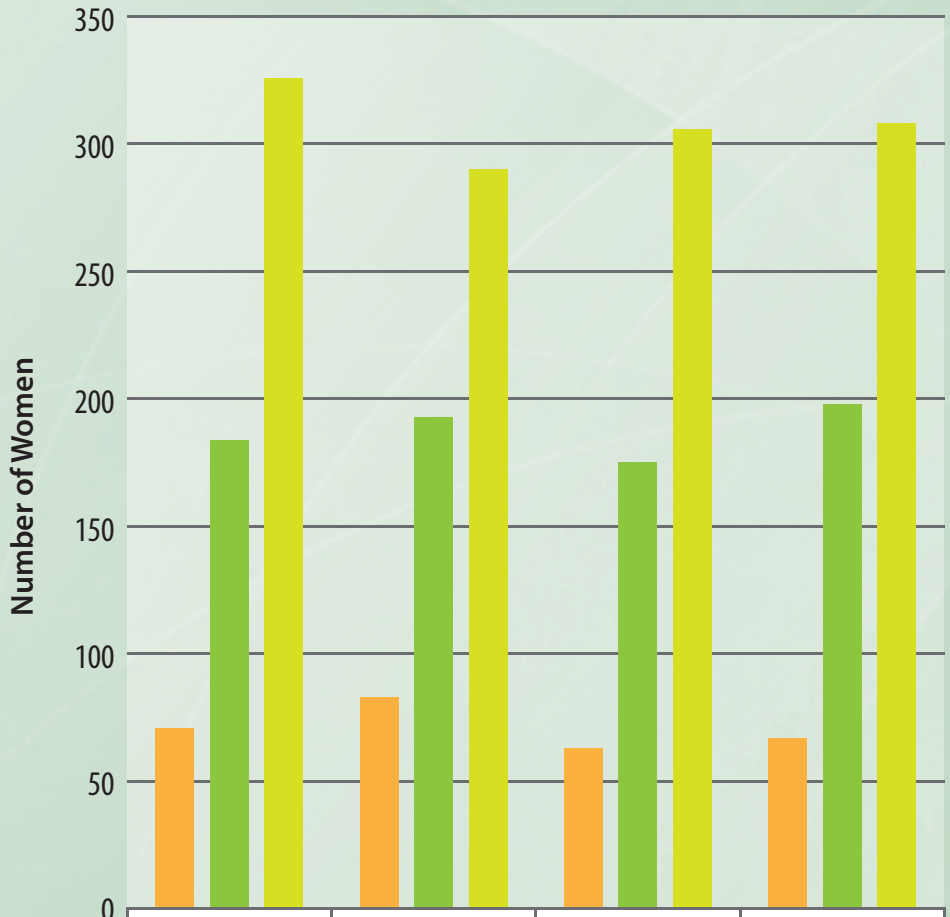
- **Low birth weight**—less than 2,500 grams (5 lbs, 9 oz)
- **Very low birth weight**—less than 1,500 grams (3 lbs, 5 oz)
- **Premature**—born before 37 weeks gestation.
- **Infant Death**—death that occurs within one year of birth
- **Poor Pregnancy Outcome**—Premature birth, low birth weight, still birth, fetal death or other adverse event

FAMILY PRACTICE TEAM MODEL: **WHO DO WE TARGET?**

- African-American women and other ethnic or minority populations
- The uninsured or underinsured
- Women who had previous poor birth outcomes
- Women coping with chronic diseases
- Women who live in high-risk geographic locations

Race of Pregnant Mothers in Our Program

Source: Delaware Department of Health & Social Services, Division of Public Health, Center for Family Health Research & Epidemiology



	July–September	October–December	January–March	April–June
Caucasian	71	83	63	67
African-American	184	193	175	198
Other*	326	290	306	308

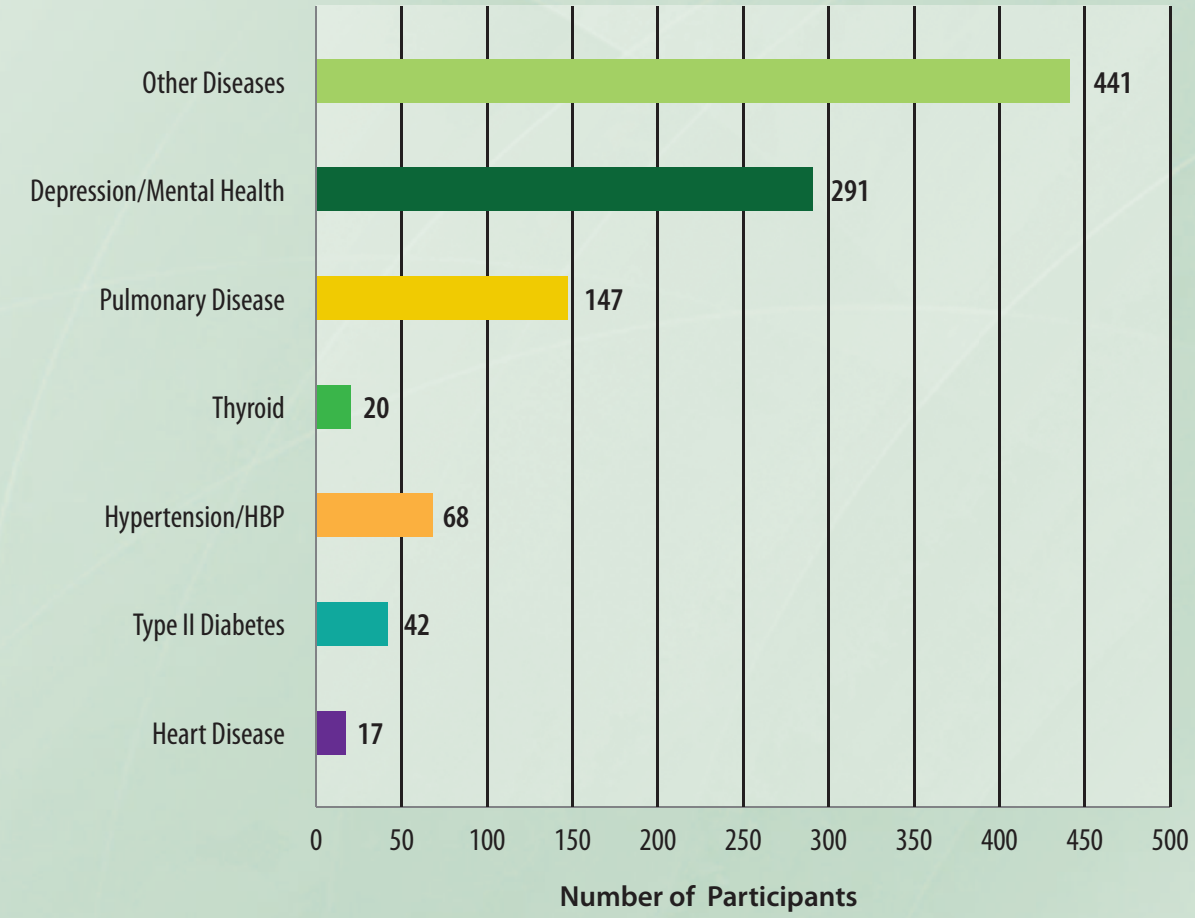
**Other is composed of mostly Hispanic women.*

WHAT CHRONIC HEALTH CONDITIONS ARE THESE WOMEN COPING WITH?

In FY09, 1,026 chronic disease conditions were reported.

Chronic Conditions Among Participants*

Source: Delaware Department of Health & Social Services, Division of Public Health, Center for Family Health Research & Epidemiology

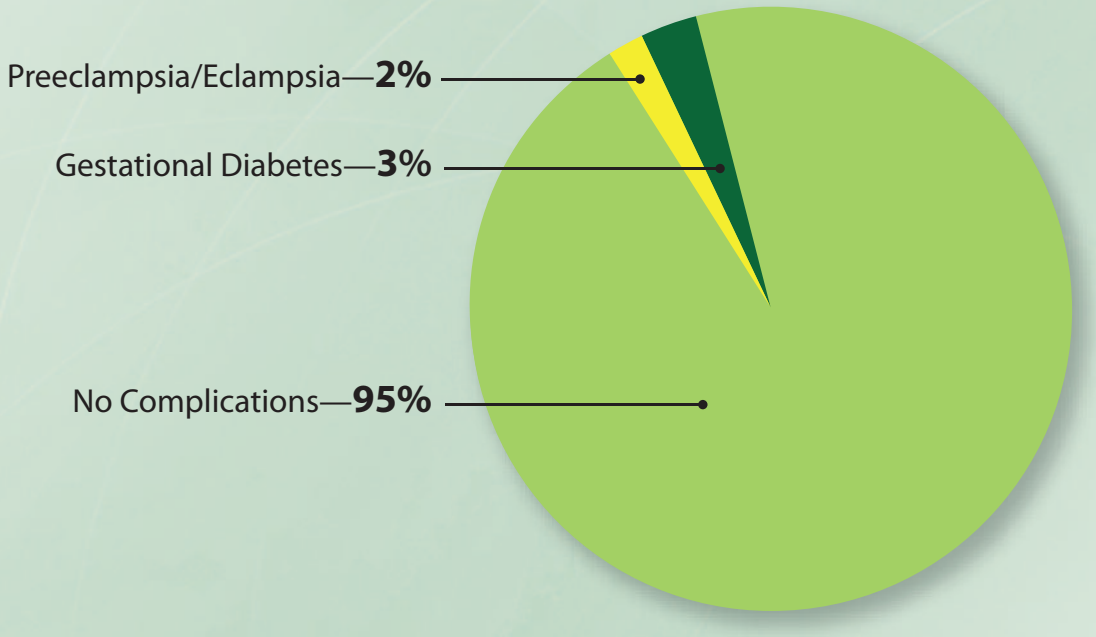


*Conditions are not mutually exclusive.

Of the 2,264 women who participated in our program, 95 percent did not experience pregnancy complications (preeclampsia, gestational diabetes). Only 5 percent of women experienced pregnancy complications that affected either their health or their infant's.

Complications during Pregnancy ***(counted as individual categories)***

Source: Delaware Department of Health & Social Services,
Division of Public Health, Center for Family Health Research & Epidemiology



FAMILY PRACTICE TEAM MODEL: **NEXT STEPS FOR FY10**

In FY10, the Family Practice Team Model and Preconception program will merge into one—Healthy Women Healthy Babies (HWHB). HWHB will focus on enhancing the health of women before, during and after pregnancy.

Refer to page 7 for a description of the HWHB program.

RECOMMENDATION: PRECONCEPTION CARE

Provide access to preconception care to high-risk women of childbearing age.

FY09 GOALS

- Expand services throughout sites.
- Streamline services to target highest-risk women.

FY09 ACCOMPLISHMENTS

- We've expanded our program throughout Delaware:

EXISTING CLINICS	
Christiana Care Healthy Beginnings	Westside Family Healthcare
Planned Parenthood of Delaware	Brandywine Women's Health Associates
Delmarva Rural Ministries	Children and Families First
La Red Health Center	St. Francis Hospital

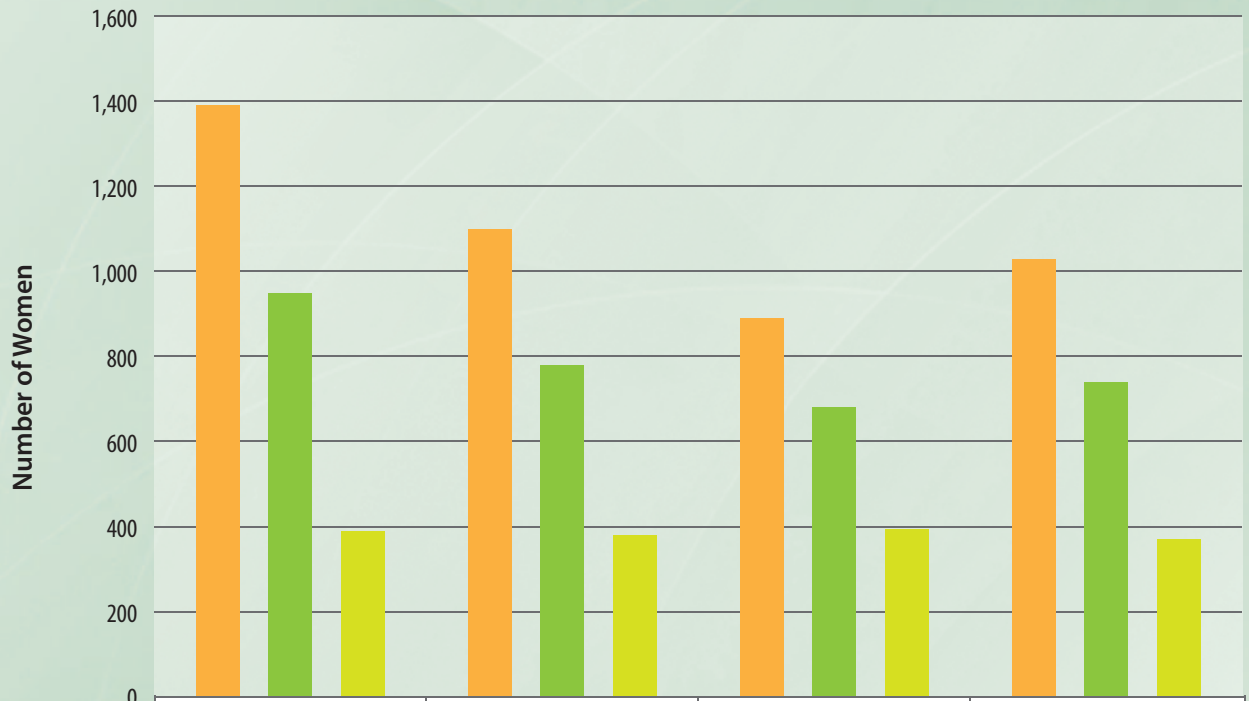
- We've served 9,118 women in FY09 compared to 14,839 in FY08. This is due to vacancies in key clinic positions.
- We've served 3,158 African-American women.
- We've served 1,043 Hispanic women.
- We've collected information on women's health history and previous pregnancy history.

PRECONCEPTION CARE: **WHO DO WE TARGET?**

- African-American women and other ethnic or minority populations
- The uninsured or underinsured
- Women who had previous poor birth outcomes
- Women coping with chronic diseases
- Women who live in high-risk geographic locations

Race and Ethnicity of Mothers in Preconception Program

Source: Delaware Department of Health & Social Services, Division of Public Health, Center for Family Health Research & Epidemiology



	July–September	October–December	January–March	April–June
Caucasian	1,392	1,108	890	1,030
African-American	950	783	680	745
Other	395	376	398	371

**Other is composed of mostly Hispanic women.*

PRECONCEPTION CARE: **NEXT STEPS FOR FY10**

- Implement new Healthy Women Healthy Babies (HWHB) program.
- Launch new preconception care social marketing campaign.
- Measure health behavior and outcome changes for women served through the HWHB program.

RECOMMENDATION: ACCESS TO CARE

Improve access to care for populations disproportionately impacted by infant mortality.

FY09 GOALS

- Continue to provide and monitor translator services to women in Delaware
- Continue to provide progesterone to women at risk for premature delivery in Delaware

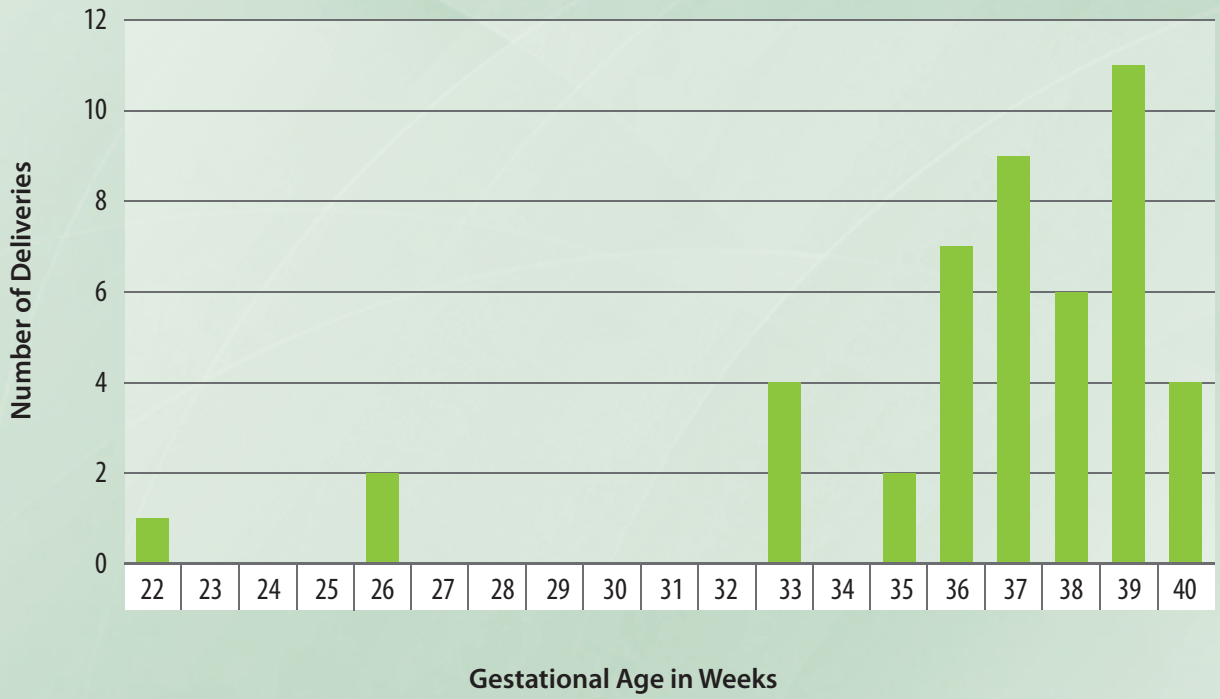
FY09 ACCOMPLISHMENTS

- We provided bilingual services to over 500 Spanish-speaking families and providers in FY09.
- Last year, 150 women received progesterone through Christiana Care Health System's Prematurity Prevention Program. Overall, 467 vials of progesterone were dispensed in FY09, which represents approximately 233 patients, a 55 percent increase from FY08.

WHAT WERE THE OUTCOMES OF CHRISTIANA CARE HEALTH SYSTEM'S PREMATURITY PREVENTION PROGRAM?

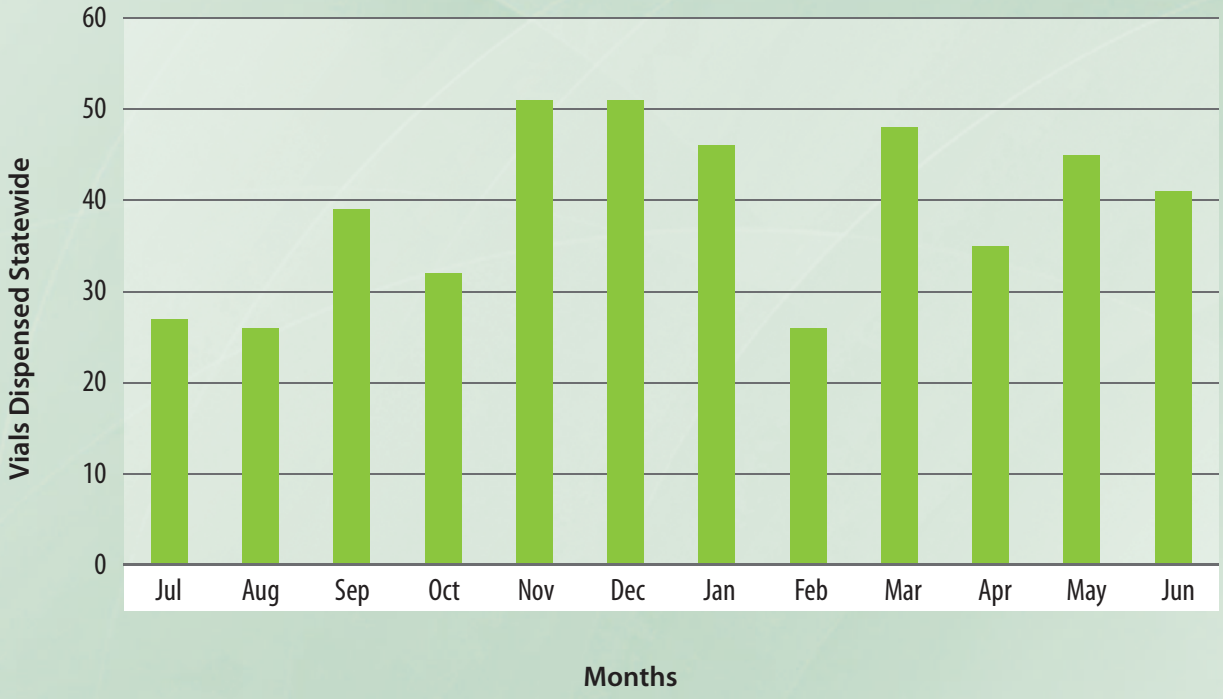
- In FY09, 30 progesterone patients who delivered babies at Christiana Care avoided premature labor and deliveries.

Gestational Age at Time of Delivery, 17-OHPC Patients, Christiana Care
FY09 (July 2008–June 2009)
Source: Christiana Care Health System's Prematurity Prevention Program



Vials 17-OHPC Dispensed Statewide FY09 (July 2008–June 2009)

Source: Christiana Care Health System's Prematurity Prevention Program



ACCESS TO CARE: **NEXT STEPS FOR FY10**

- Promote enrollment of high-risk women in Preconception Care and HWHB Programs.
- Continue promoting the Prematurity Prevention Program for women who have had previous poor birth outcomes.
- Provide access to folic acid for all preconception women.
- Provide access to genetic counseling for women and men at risk for birth defects.

RECOMMENDATION: STATEWIDE EDUCATION CAMPAIGN

Conduct a statewide education campaign on infant mortality targeted at high-risk populations.

FY09 GOALS

- Develop preconception educational resources
- Maintain existing campaigns

FY09 ACCOMPLISHMENTS

- We've developed preconception educational resources.
- We've maintained existing media campaigns.
- Commercials promoting preconception health aired on 12 channels from May 27, 2009, to June 28, 2009. Our commercials were aired 4,143 times by Comcast Cable during this period.
- We've created and distributed teen and adult Reproductive Life Plans.

WHAT IS A REPRODUCTIVE LIFE PLAN (RLP)?

- An RLP is one of the recommendations of the CDC to improve preconception health and health care in the United States.
- An RLP encourages men and women to ask themselves the following questions:
  - Do you want to have children?
  - How many children do you hope to have?
  - When would you like to have children?
  - How far apart in age do you want your children to be?
  - What do you plan to do until you are ready for pregnancy?

WE HAVE CREATED A BOOKLET THAT INCLUDES A REPRODUCTIVE LIFE PLAN AND INFORMATION ABOUT:

- Avoiding pregnancy if desired.
- Avoiding Sexually Transmitted Diseases.
- Getting pregnant when or if desired.
- Preparing for a healthy pregnancy when or if desired.
- Identifying unsafe relationships.
- Assessing personal health.
- Communicating with health care providers.

THIS LIFE PLAN HELPS PEOPLE PLAN THEIR FUTURE.

- Helps people think about life goals that may or may not include having children.
- Helps plan the spacing of pregnancies.
- Helps prevent unplanned pregnancies.
- Helps women understand the importance of folic acid intake.
- Helps determine family health history and genetic risk for birth defects.
- Helps reinforce the importance of healthy relationships and mental health.
- Provides resources for improving health.

WHY IS HAVING A LIFE PLAN (LP) IMPORTANT?

One of the best things a person can do to have a healthy baby is to achieve optimal health or life!

We know that women who wait less than two years between pregnancies are more likely to have unhealthy babies compared with those who wait two years or more between pregnancies.		An LP helps plan the spacing of pregnancies.
We know that half of all pregnancies are unplanned.		An LP will help prevent unplanned pregnancies by telling men and women how to avoid pregnancy until they are ready.
We know that women who do not get 400 micrograms of folic acid daily before pregnancy increase the risk that their baby will be born with a serious neural tube defect.		An LP will help women understand the importance of folic acid intake before and during early pregnancy.
We know that poor nutrition, sexually transmitted diseases, and chronic health conditions increase the risk that a woman's baby will be born unhealthy.		An LP will help women understand what they need to do to stay healthy such as having regular doctor and dentist checkups, eating healthy balanced meals, getting chronic health problems under control and making sure that immunizations are up-to-date.
We know that smoking, drinking and drug use before and during pregnancy increase the risk that a woman's baby will be born unhealthy.		An LP helps women understand what behaviors can be harmful. It also tells them how to get these habits under control before becoming pregnant.

STATEWIDE EDUCATION CAMPAIGN: **NEXT STEPS FOR FY10**

- Promote Life Plans
- Implement fetal kick count campaign
- Implement birth spacing awareness initiative
- Maintain infant safe sleeping campaign
- Partner with community leaders to identify best practices for reaching consumers

RECOMMENDATION: CULTURAL COMPETENCY

Create a cultural competency curriculum for providers

FY09 GOALS

- Pilot test at least one cultural competency training program.
- Establish standards for cultural competency training and education for providers.

FY09 ACCOMPLISHMENTS

- The Office of Minority Health (OMH) and Office of Rural Health held five cultural competency trainings in FY09.
- 150 health care providers attended the cultural competency trainings.
- OMH established standards for cultural competency training and education for providers.

WHAT IS CULTURAL COMPETENCY?

It is a set of cultural behaviors and attitudes included in the practice methods of a system, agency or its professionals, which allows them to work effectively in cross-cultural situations.

Source: Cultural Competency, Office of Minority Health & Human Services website, 2006.

CULTURAL COMPETENCY: **NEXT STEPS FOR FY10**

Conduct a series of focus groups to determine the best way to implement Culturally and Linguistically Appropriate Services (CLAS) standards in Delaware.

WHY IS CULTURAL COMPETENCY NEEDED?

- More and more health and human service providers must operate in cross-cultural contexts.
- Lack of awareness of cultural differences can make it difficult for both providers and patients to achieve the best, most appropriate care.
- Cultural differences affect health beliefs, practices and behavior on the part of both patient and provider, and also influence the expectations that patient and provider have of each other.
- The landmark study of the Institute of Medicine titled "Unequal Treatment" found that cultural differences are a significant factor in the racial and ethnic disparity reflected in health indicators including infant mortality.
- Cultural competency is needed to close disparities in health care.

WHAT WAS THE GOAL OF THE CULTURAL COMPETENCY TRAINING EDUCATION SERIES?

The goal of the educational series was to increase the cultural competency of health care professionals and organizations by raising awareness of cultural issues that impact the delivery of health services and providing strategies that improve health outcomes.

WHAT STANDARDS FOR CULTURAL COMPETENCY TRAINING AND EDUCATION WERE ESTABLISHED FOR PROVIDERS?

- Understand the central role of cultural competency in the provision of quality health care to diverse populations.
- Learn effective cultural communication strategies that enhance trust between patient and health care provider.
- Understand how cultural differences between patient and provider affect the patient-provider relationship.
- Learn practical methods to address cultural challenges faced when caring for diverse patients.

RECOMMENDATION: FETAL AND INFANT MORTALITY REVIEW (FIMR)

Conduct a comprehensive review of every fetal and infant death in Delaware

FY09 GOALS

- Maintain our Infant Safe-Sleeping Campaign.
- Provide Spanish translation of all FIMR materials and a Spanish-speaking interpreter for interviews.
- Continue to collect FIMR information and collaborate with the Center for Family Health Research & Epidemiology.
- Train the case review teams on the new "deliberation" process in the FIMR database.
- Continue support of Community Action Teams and bring issues and/or recommendations to those teams.
- Host the Second Annual training for bereavement professionals.

FY09 ACCOMPLISHMENTS

- We've distributed Infant Safe Sleeping Posters to all licensed daycare centers in the State of Delaware.
- We've continued Community Education on Infant Safe Sleeping Practices at several community events/trainings.
- We started our first Spanish-speaking interviews in November 2008.
- We conducted three maternal interviews with Spanish-speaking mothers via an interpreter from the Division of Public Health.
- We've maintained FIMR Case review Teams three times per month from September to May.
- We've trained our Case Review Teams on the new "deliberation" process in the FIMR database.
- We held our 4th Annual Statewide Bereavement Conference in September 2008—Melanie Chichester, R.N., was our guest speaker on the topic *Cross Cultural Response to Bereavement*.

WHAT WE KNOW FROM THE FETAL INFANT MORTALITY REVIEW

Our case review teams interview mothers who have experienced an infant death and review medical and social records. The information is used to assess, plan, improve and monitor services and resources that support and promote the health and well-being of women, infants and families. The top four issues identified in 2008-2009 were preexisting medical conditions; medical and social services and community resources that were available but not used; obesity and nutrition; and preterm labor. More specifically, 71 percent had a preexisting medical condition; 40 percent had inadequate or delayed referrals for home-based services; 26 percent were obese and 24 percent had inadequate nutrition or anemia in the first trimester; and 32 percent went into preterm labor.

WOMEN WHO EXPRESSED THEIR THOUGHTS TO US BELIEVE THERE IS VALUE IN SHARING THEIR EXPERIENCES THROUGH THE FIMR INTERVIEWS.

*"**It was nice to have someone ask me about my experience** since doctors do not do this. I hope (FIMR) can present some valuable information to workers in the medical field to improve care for women and babies. I thought (the interviewer) was very professional and was genuine with her empathy and concern for me and other mothers' well-being."*

*"**FIMR allowed me to talk** about events surrounding the death of my son rather than just the birth and days shortly after. I just hope that other mothers take advantage of your services and hopefully there will one day be an answer."*

*"**Even though our son is gone, his short life still counted.** Answering questions helps to validate our experience (with the pregnancy)."*

FETAL AND INFANT MORTALITY REVIEW: **NEXT STEPS FOR FY10**

- Collaborate with DPH to implement the national "Cribs for Kids" program in Delaware.
- Issue recommendations to DHMIC committees after approved at the December Commission Meeting.

RECOMMENDATION: PREGNANCY RISK ASSESSMENT MONITORING SYSTEM (PRAMS)

Created a monitoring system to increase understanding of the risks faced by pregnant mothers in Delaware.

FY09 GOALS

- Intensify efforts to increase response rates for interviews
- Achieve an average response rate of 70 percent, a benchmark established by the CDC to reduce response bias

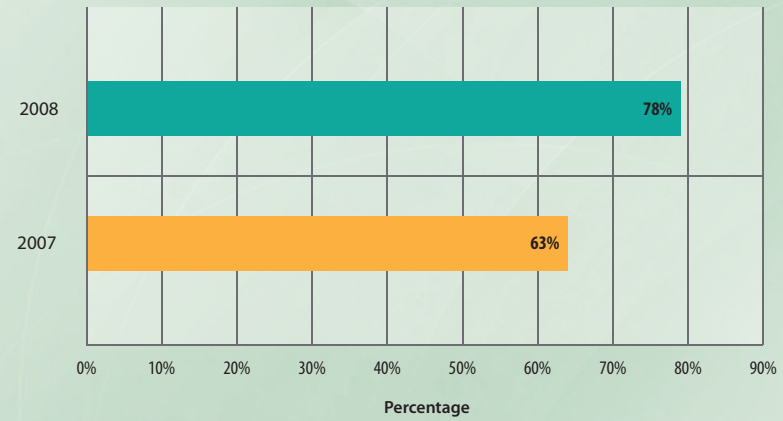
FY09 ACCOMPLISHMENTS

- We've surveyed 1,577 women between two and four months postpartum who gave birth in Delaware in 2008.
- We've increased our averaged unweighted response rate from 63 percent in 2007 to 78 percent in 2008.

IN CALENDAR YEAR 2008, WE INCREASED OUR AVERAGED UNWEIGHTED RESPONSE RATE BY 23 PERCENT.

Comparison of the Averaged Unweighted Response Rate for Calendar Years 2007 and 2008

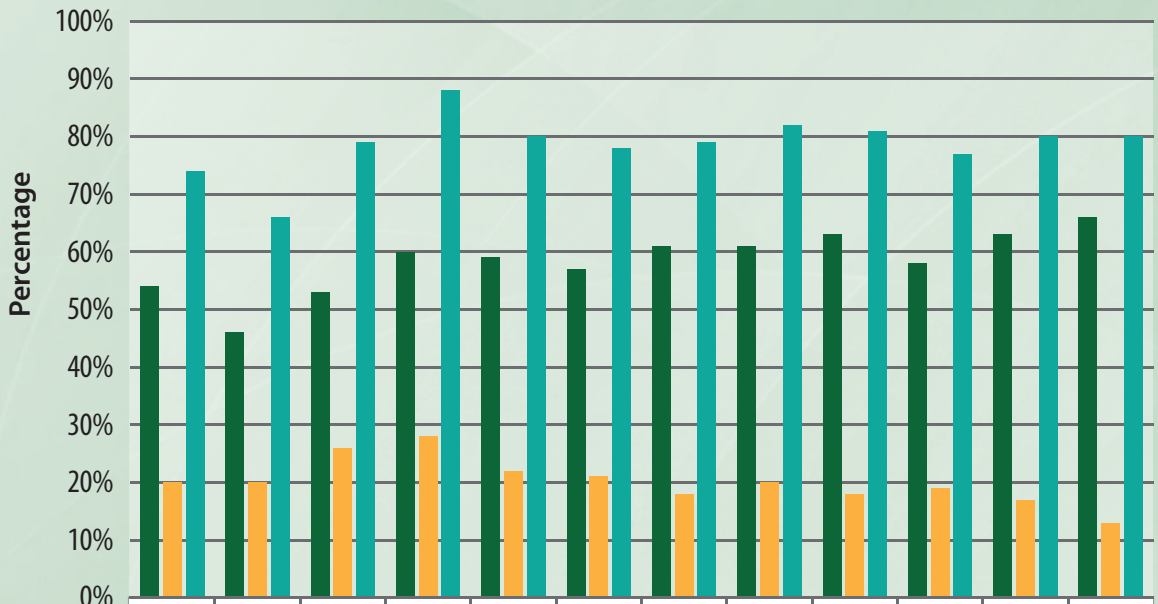
Source: Delaware Department of Health & Social Services, Division of Public Health, Center for Family Health Research & Epidemiology



SINCE WE ACHIEVED AN AVERAGE UNWEIGHTED RESPONSE RATE ABOVE 70 PERCENT FOR 2008, WE CAN NOW BEGIN ANALYZING PRAMS DATA!

PRAMS Unweighted Response Rate by Month, 2008

Source: Delaware Department of Health & Social Services, Division of Public Health, Center for Family Health Research & Epidemiology



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mail	54%	46%	52%	59%	59%	56%	61%	61%	63%	58%	54%	66%
Phone	20%	20%	26%	28%	22%	21%	18%	20%	18%	19%	20%	13%
Overall	74%	66%	77%	87%	80%	77%	79%	82%	81%	74%	77%	80%

Months

PRAMS: **NEXT STEPS FOR FY10**

- Begin analysis of PRAMS data.
- Use PRAMS results to change current state programs to streamline services to high-risk women.
- Use PRAMS results to create a report of pregnancy risks for targeted intervention.

RECOMMENDATION: REGISTRY FOR IMPROVED BIRTH OUTCOMES

The Registry is a list of all women who gave birth between 1989 and 2005 (the most recent data we have), and who had a poor birth outcome. The Registry was established in partnership with the Delaware Health Statistics Center and is maintained by the Center for Family Health Research & Epidemiology.

FY09 GOALS

- Update Registry as information becomes available.
- Continue to study risk factors.

REGISTRY FOR IMPROVED OUTCOMES: **NEXT STEPS FOR FY10**

- Update Registry as information becomes available.
- Continue to study risk factors for poor birth outcomes.

WHAT IS A POOR BIRTH OUTCOME?

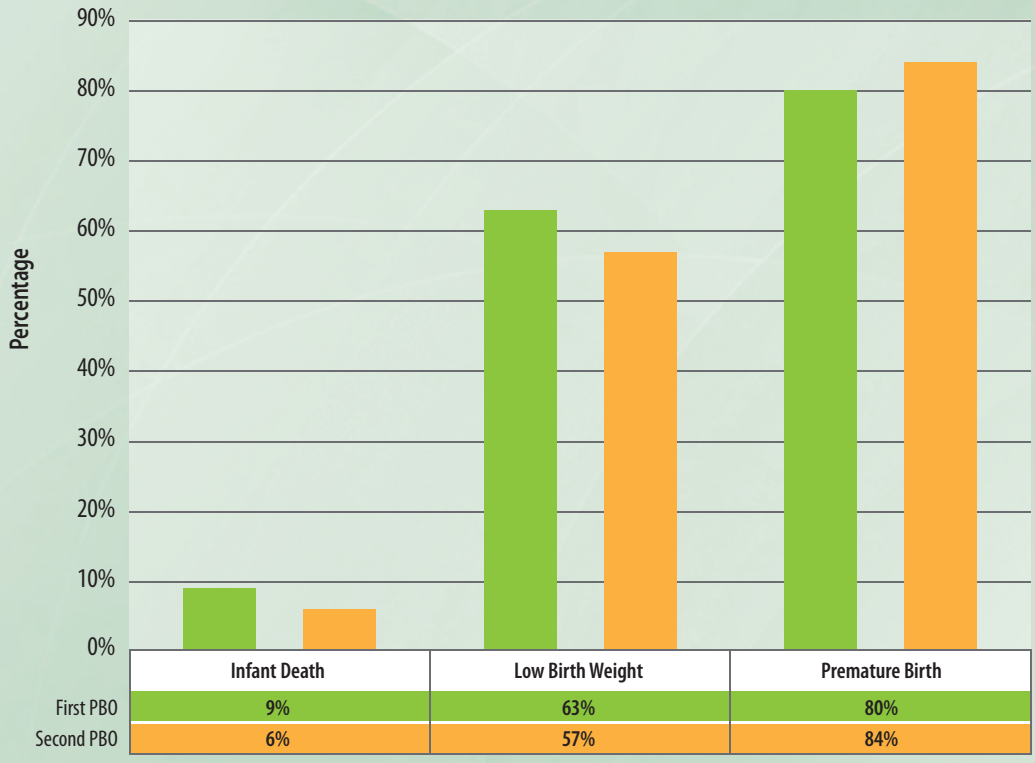
A birth that is either premature, low birth weight, stillborn, fetal death or infant death. Birth defects, which are poor birth outcomes, are tracked separately in the Birth Defects Registry.

WHAT DID WE LEARN FROM THE REGISTRY?

- Between 1989 and 2005, 22,531 women experienced at least one poor birth outcome (twins, triplets and multiples were removed from the analysis).
- Between 1989 and 2005, 2,528 women experienced a second poor birth outcome (twins, triplets and multiples were removed from the analysis).
- Of the 2,528 women who experienced a second poor birth outcome, 154 experienced an infant death, 1,440 delivered a low birth weight infant and 2,122 delivered a premature infant.

Percentage of First and Second Poor Birth Outcomes, by category*

Source: Delaware Department of Health & Social Services, Division of Public Health, Center for Family Health Research & Epidemiology



	Infant Death	Low Birth Weight	Premature Birth
First PBO	9%	63%	80%
Second PBO	6%	57%	84%

**Categories not mutually exclusive.*

RECOMMENDATION: CENTER FOR FAMILY HEALTH RESEARCH & EPIDEMIOLOGY

Create the Center for Family Health Research & Epidemiology (formerly called the Center for Excellence in Maternal & Child Health Epidemiology) within the Division of Public Health.

FY09 GOALS

- Continue to provide scientific guidance for all infant mortality elimination initiatives.
- Continue to partner with the University of Delaware's Health Services Policy Research Group to evaluate our intervention programs.
- Sustain the University of Delaware student internship program.
- Maintain full management of PRAMS project.
- Update Registry for Improved Birth Outcomes.
- Collaborate on the Maternal & Child Health Title V Needs Assessment.

FY09 ACCOMPLISHMENTS

- Submitted 35 fact sheets for the Maternal & Child Health Title V Needs Assessment.
- Collaborated with Christiana Care Health Systems to explore postpartum care utilization among FPTM clients who delivered infants between April 2007 and December 2007.
  —What did we learn? Of the 212 women who delivered infants between April 2007 and December 2007, 54 percent returned for their six-week postpartum visit.
- Mentored a graduate student intern from the University of Delaware.

CENTER FOR FAMILY HEALTH RESEARCH & EPIDEMIOLOGY: **NEXT STEPS FOR FY10**

- Analyze the classification of fetal death.
- Examine the impact of maternal complications on poor birth outcomes.
- Analyze the first year of PRAMS data.
- Conduct the Phase II Perinatal Periods of Risk (PPOR).

Evaluating the Impact of a Targeted Prenatal Care Intervention Using a Population Effectiveness Approach*

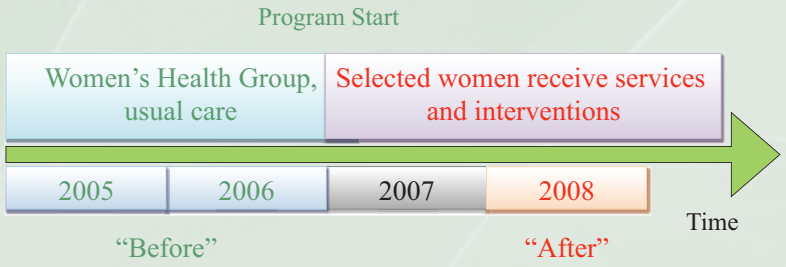
Dr. Deborah B. Ehrenthal, Department of Obstetrics and Gynecology, Christiana Care Health Services, Inc.,
Dr. Charlan D. Kroelinger, Centers for Disease Control and Prevention

*The findings in this poster are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention

Analytic Strategy

- Selected temporal groups: before and after introduction of the intervention.
- Utilized clinical data that were equivalent for the before and after groups.
- Identified confounders significantly associated with before and after time periods.
- Used logistic regression on outcome of interest, adjusting for characteristics that changed significantly across the time periods, calculating an adjusted odd ratio (aOR) with 95% Confidence Interval for change in preterm and very preterm deliveries "before" compared with "after" program implementation.

Evaluation Design: Pretest Post-test using electronic clinical records data



Results

- Age, parity, diabetes, and multiple gestation were the only demographic characteristics, pregnancy complications, or birth outcomes that significantly changed over time and may impact evaluation of program impact.
- The odds of preterm birth delivery decreased following implementation of the Healthy Beginnings program. The odds of preterm birth were 21 percent higher in 2005 and 2006 (before program implementation) compared with 2008 (following program implementation) adjusting for maternal age, parity, diabetes status, and multiple gestation. This decrease is marginally significant.
- The odds of a very preterm birth significantly decreased following implementation of the program. In other words, the odds of delivering a very preterm infant were 32 percent lower during 2008 when compared to 2005 and 2006 adjusting for maternal age, parity, diabetes status, and multiple gestation.

Conclusions

- Crude rates of preterm and very preterm deliveries did not significantly change in the practice over time. However, after adjusting for confounding factors, preterm deliveries marginally decreased, and very preterm deliveries significantly decreased from the first time period, prior to program implementation, to the second time period, following program implementation.
- Implementation of the Healthy Beginnings program may have marginally impacted preterm deliveries in the practice, and significantly impacted very preterm deliveries. This decrease is in contrast to overall hospital rates (CCHS) and national trends where preterm delivery rates are increasing over time.
- Using data from electronic medical records/data warehouses in hospitals and clinics allows for comparison of historical cohorts using this unique population effectiveness approach.
- Using electronic medical record data allows adjustment of competing risks, thus removing the impact of multiple confounding factors.

Public Health Implications

The population effectiveness approach is an alternative method of evaluating the impact of perinatal interventions when no comparison population is readily available. This methodology is advantageous to programs finishing the initial implementation phase, and programs where evaluation was not initially funded. Additionally, this methodology is focused on evaluating more programmatically-based interventions in state settings rather than research institutions or research centers.

DATA AND SCIENCE COMMITTEE

ACCOMPLISHMENTS FOR FY09

- Developed a research agenda focusing on antenatal steroid use, illness severity of preterm infants, and factors associated with fetal death.
- Continued an active review of research pertaining to maternal and child health and infant mortality in Delaware.
- Advocated for the continued provision of 17-OHPC to prenatal clients statewide.

GOALS FOR FY10

- Continue to assist and advise in the implementation of the Birth Defects Registry.
- Create a collaborative of birth hospitals to track the use of antenatal steroids.
- Analysis of FIMR and PRAMS data.
- Review of data concerning racial disparities in infant mortality rates.

EDUCATION AND PREVENTION COMMITTEE

ACCOMPLISHMENTS FOR FY09

- Worked closely with the vendor selected for the statewide education campaign to ensure targeted and consistent messages were developed to increase awareness about preconception health care among all Delawareans and particularly women of reproductive age.
- Promoted continued collaboration among health care providers and community agencies in Delaware around issues central to preconception health. The committee identified depression among women as a central issue for further awareness and education.
- Provided outreach to consumers throughout the state to increase their awareness of—and involvement with—preconception health framed in the context of a Life Plan.

GOALS FOR FY10

- Promote Life Plans
- Implement fetal kick count campaign
- Implement birth spacing awareness initiative
- Maintain infant safe sleeping campaign
- Partner with community leaders to identify best practices for reaching consumers

HEALTH DISPARITIES COMMITTEE

ACCOMPLISHMENTS FOR FY09

- Completed Patient Survey. The study surveyed females who accessed prenatal care at an urban health center to determine perceptions of barriers to early initiation of services. Further, participants' knowledge of Smart Start, a program designed to meet the needs of pregnant woman in the area, was assessed. A report on findings was released and accepted for publication in the *Journal of Prenatal and Perinatal Psychology and Health*.
- Successfully transformed the Health Disparities Committee organizational structure and cultivated future goals, objectives and activities as framed in the Infant Mortality Task Force Report recommendations.

GOALS FOR FY10

- Begin the work to develop DHMIC recommendations and an implementation plan regarding culturally and linguistically appropriate services in health care standards for Delaware's maternal and child health (MCH) population.
- Convene statewide community focus groups and stakeholder forums to identify the framework to be used in developing the Delaware standards based on existing state and community data reports and recommendations and applicable national resource information.
- Produce a summary report outlining priorities and cultural competence standards identified from focus groups and forums. The report will convey concrete actionable next steps in using the data collected and developing recommendations for standards.
- Begin work to develop/adapt a cultural competence curriculum appropriate for the maternal and child health population and for health care providers.

STANDARDS OF CARE COMMITTEE

ACCOMPLISHMENTS FOR FY09

- Distributed the revised Chapter 1, "Interhospital Coordination," of the Delaware Perinatal Standards of Care Guidelines to all appropriate Delaware hospitals.
- Revised the "Delaware Maternal Transport Form" and distributed the revised form to all appropriate Delaware hospitals.
- Completed review and revision of the "Preconception Counseling Guidelines" section of Chapter 2, "Prenatal Care," of the Delaware Perinatal Standards of Care Guidelines.

GOALS FOR FY10

- Complete review and revision of the "Nutrition Guidelines" section of Chapter 2, "Prenatal Care," of the Delaware Perinatal Standards of Care Guidelines.
- Proceed to revise Chapter 3, "Labor and Delivery," of the Delaware Perinatal Standards of Care Guidelines.
- Post updated chapters and sections of the Delaware Perinatal Standards of Care Guidelines to the Consortium's Healthy Women/Healthy Babies website.
- Post the updated "Delaware Maternal Transport Form" to the Consortium's Healthy Women/Healthy Babies website.

SYSTEMS OF CARE COMMITTEE

ACCOMPLISHMENTS FOR FY09

- Notified health care providers that women age 15 to 50 who are closed in Medicaid are automatically eligible for family planning services for up to 24 months after their Medicaid closing.
- Notified women deemed to be no longer eligible for full Medicaid that they automatically remain eligible for family planning services for up to 24 months.
- Recommended that Delaware apply for a Medicaid family planning waiver that increases the pool of eligible men and women and enhances program services.

GOALS FOR FY10

- Seek to understand the impact of maternal depression and mental health/behavioral health disorders on maternal and child health.
- Seek to identify the best practices for the treatment of mood disorders among women during and after pregnancy.

DELAWARE HEALTHY MOTHER & INFANT CONSORTIUM (DHMIC)

APPOINTED MEMBERS

Dr. David Paul, *Chair*
Dr. Jaki Gorum, *Co-Chair*
Dr. Cedric Barnes
Midge Barrett
The Honorable Patricia Blevins, *State Senator*
Tiffany Chalk
Dr. Garrett Colmorgen
Dr. Katherine Esterly
Rev. John Holden
Lolita Lopez
Pamela Maier, *Former State Representative*
Susan Noyes
Brian Olson
Rosa Rivera-Prado
Dr. Karyl Rattay, DPH Director
Dr. Agnes Richardson
Prue Sadowski
The Honorable Teresa L. Schooley, *State Representative*
Alvin Snyder
The Honorable Liane Sorenson, *State Senator*

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Dr. Rob Locke, *Co-Chair*
Dr. Michael Antunes
Dr. Louis Bartoshefsky
Dr. Garrett Colmorgen
Dr. Deborah Ehrenthal
Dr. Jay Greenspan
Dr. Matthew K. Hoffman
Anne Pedrick
The Honorable Teresa L. Schooley, *State Representative*
Dr. Philip Shlossman
Shari B. Thomassen
Jody Zisk

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Joan Kelley
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Megan O'Hara
Janet Ray
Stephanie Rogers
Michele Savin
Kris Smith
Dr. Gail Wade

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Jennifer Pulcinnella
Alice Ramey
Dr. Philip Shlossman
Dr. John Stefano
Kathy Stroh
Dr. Wendy Sturtz
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Norma Everett
Maria Harmer
Meaghan Jerman
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Ruth Kelly
Dr. Vicky Kelly
Emily Knearl
Jim Lafferty
Willa Langdon
Lolita Lopez
Beverly Turney
Janet Umble
Kristi Walters

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