

PERINATAL HEALTH PLAN FOR CONNECTICUT 2005-2009

Connecticut Department of Public Health
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EXECUTIVE SUMMARY

The Maternal and Child Health (MCH) Services Title V Block Grant to states has operated as a Federal-state partnership for 60 years. On the Federal level, the MCH Block Grant is administered by the Maternal and Child Health Bureau (MCHB), Health Resources and Services Administration (HRSA), US Department of Health and Human Services (DHHS). As part of meeting its responsibility under this relationship, the Connecticut Department of Public Health (DPH) is designated by the Federal government to assume responsibility as state lead for with primary responsibility for promoting and improving the health of our state's mothers and children.

Through its Family Health Division, DPH provides leadership and works in partnership with communities, public-private partners and families to strengthen the maternal and child health (MCH) infrastructure. The MCH population includes pregnant women, infants, children, adolescents and their families, including women of reproductive age, fathers, and children with special health care needs.

The purpose of the Perinatal Health Advisory Committee was to develop a comprehensive, statewide plan to address perinatal health services in Connecticut, so that the DPH could more appropriately target its MCH funding and programs toward identified needs.

Central Area Health Education Center, Inc. (AHEC) was selected through a Request for Proposal process to facilitate and document the Perinatal Health Advisory Committee planning process. In preparation for this proposal, Central AHEC researched approaches used by other states to develop their statewide perinatal health care action plan and selected the plan created by the Minnesota Department of Public Health for 2004 for replication. The Minnesota Model includes the following processes:

1. Presentation of Documents Reviewed (literature review)
2. Determine Core Areas (primary areas of focus)
3. Presentation of Current Activities and Gaps in Services
4. Determine Action Steps
5. Develop final Action Plan

The Perinatal Advisory Committee membership included experts in the maternal and child health field, including healthcare professionals, community advocates, and representatives from state agencies. They were given the decision-making responsibility to evaluate current state and Federal perinatal literature and select the primary areas of focus for Connecticut that had the potential to significantly impact healthy births and health outcomes. Of primary importance to the Perinatal Advisory Committee were the issues of reducing infant and fetal mortality, reducing

unintended pregnancies for all women, reducing poor birth outcomes, especially

“Access to care is being threatened by dramatic increases in the cost of medical liability insurance. Especially hard hit are women's health services, where OB/GYNs face some of the nation's highest liability costs. In communities across America, physicians have been forced to close their practices or retire early due to the spiraling costs of liability insurance. We need to find common sense solutions that allow doctors and hospitals to treat their patients without fear of excessive litigation or the pressure of overwhelming insurance premiums. Access to care should be in the hands of doctors and hospitals, not courts and insurers. Our patients deserve nothing less.” - Rick Pollack, Executive Vice President of the American Hospital Association, February 23, 2004.

with regard to racial and ethnic disparities, and expanding the role of the father in perinatal health care. There was also significant discussion regarding cultural competency with regard to program development, staff capacity, and provider awareness.

Connecticut must address maternal and child health care in a context that is complicated by contradictions in the health care workforce. Connecticut ranks 4th among all 50 states in the number of physicians per capita and the supply of all health professionals in Connecticut is significantly higher per 100,000 population than the U.S. as a whole (with the exceptions of licensed practical nurses and certified nurse assistants). Furthermore, Connecticut

has more physicians accepting Medicaid than most other states and has more National Health Service Corps sites per capita than most other states¹.

At the same time, however, Connecticut has pockets of medically underserved areas, health profession shortage areas, and medically underserved populations. Furthermore, the state has been identified by the American Hospital Association as one of a handful of states in crisis regarding the rapid rise in medical liability premiums, particularly in obstetrics that is affecting access to care². It is within this context that strategies and solutions toward improving pregnancy and birth outcomes must occur.

¹ <http://www.ncsl.org/programs/health/forum/workforceprofiles/connecticut.pdf>

² American Hospital Association, www.aha.org/aha/index.jsp

Perinatal Health Plan Goals

- Goal 1:** Reduce perinatal health disparities, particularly preterm/low birth weight births and infant and fetal mortality between and among racial and ethnic groups.
- Goal 2:** Improve access to a continuum of health care services for underserved and/or un-served women of child bearing age.
- Goal 3:** Enhance and encourage male involvement in the continuum of women's health care from preconceptional, prenatal through postnatal periods.
- Goal 4:** Reduce pregnancies and poor birth outcomes among adolescents.
- Goal 5:** Reduce unintended pregnancies for all women.
- Goal 6:** Reduce recognized birth-related risk factors for children with special health care needs.
- Goal 7:** Improve the state's system capacity to collect high quality maternal child health data and disseminate in a timely manner.
- Goal 8:** Improve access to mental health, substance abuse treatment and dental health services which can improve the overall health for pregnant and postpartum women.
- Goal 9:** Improve inter-provider communication strategies regarding perinatal health care delivery.

Statewide Perinatal Health Advisory Committee Members

- **Elizabeth Beaudin**, Connecticut Hospital Association
- **Marijane Carey**, Executive Director, Connecticut Women's Consortium
- **Jann Dalton**, Director Program Services, March of Dimes, Connecticut Chapter
- **Doug Edwards**, Program Director, Real Dads Forever
- **James Egan, MD**, Chairman, Department of Obstetrics and Gynecology, University of Connecticut Health Center
- **Delores Greenlee**, Coordinator, New Haven Healthy Start, Community Foundation for Greater New Haven
- **Pam Hansen**, Maternal and Child Health Division, City of New Haven Health Department
- **Brian Karsif, MD**, East Shore District Health Department
- **Susan Lane**, Director of Planning and Grants, Planned Parenthood of CT, Inc.
- **Valerie Leal**, Women's Services Administrator, Department of Mental Health and Addiction Services
- **Susan McGuire**, Program Manager, Connecticut Primary Care Association
- **Victoria Niman, MD**, Medical Director, CT Department of Children and Families
- **Natasha Pierre**, Association Legislative Analyst, Permanent Status on the Commission of Women
- **Marilyn Sanders, MD**, University of Connecticut Health Center, Department of Neonatal-Perinatal Medicine
- **Hilary Silver**, Lead Planning Analyst, HUSKY Unit, CT Department of Social Services
- **Neil Stein, M.D**, Private Practice in West Hartford
- **Barbara Walsh**, Director, WIC, CT Department of Public Health
- **Jillian Wood**, Director, American Academy of Pediatrics
Central Area Health Education Center, Inc.
- **Dr. Kay Johnson-Keys**, Consultant
- **Brenda DelGado**, Executive Director
- **Erica Uhlmann**, Program Supervisor
- **Jessica Richard**, Program Coordinator, Eastern AHEC
- **Catherine Russell**, Director, Eastern AHEC
Department of Public Health
- **Martha Okafor**, Director, Family Health Division
- **Lisa Davis**, Supervising Nurse Consultant, Women, Men, Aging and Community Health Unit
- **Tony Mascia**, Nurse Consultant, Women, Men, Aging and Community Health Unit

Perinatal Health Plan for Connecticut 2005-2009

I. *Introduction*

The Maternal Child Health Bureau (MCHB) of the U.S. Department of Health and Human Services has primary responsibility for promoting and improving the health of our nation's women, children and families. The MCHB administers a broad range of programs, of which the largest of which is Title V, the Maternal and Child Health Services Block Grant. Through the Maternal Child Health (MCH) Block Grant, the Bureau provides funds to every state and territory to support a statewide maternal-child health program. Every five years states are required to submit their five-year maternal and child health strategic plan. The State of Connecticut Department of Public Health, Division of Family Health (DPH) contracted with Central Area Health Education Center, Inc. (AHEC) to facilitate the dialogue and development of the perinatal health for Connecticut.

Perinatal health includes those factors affecting mother and infant before, during and after pregnancy:

***Before:* Mother's nutritional status, folic acid intake, smoking and medical conditions;**

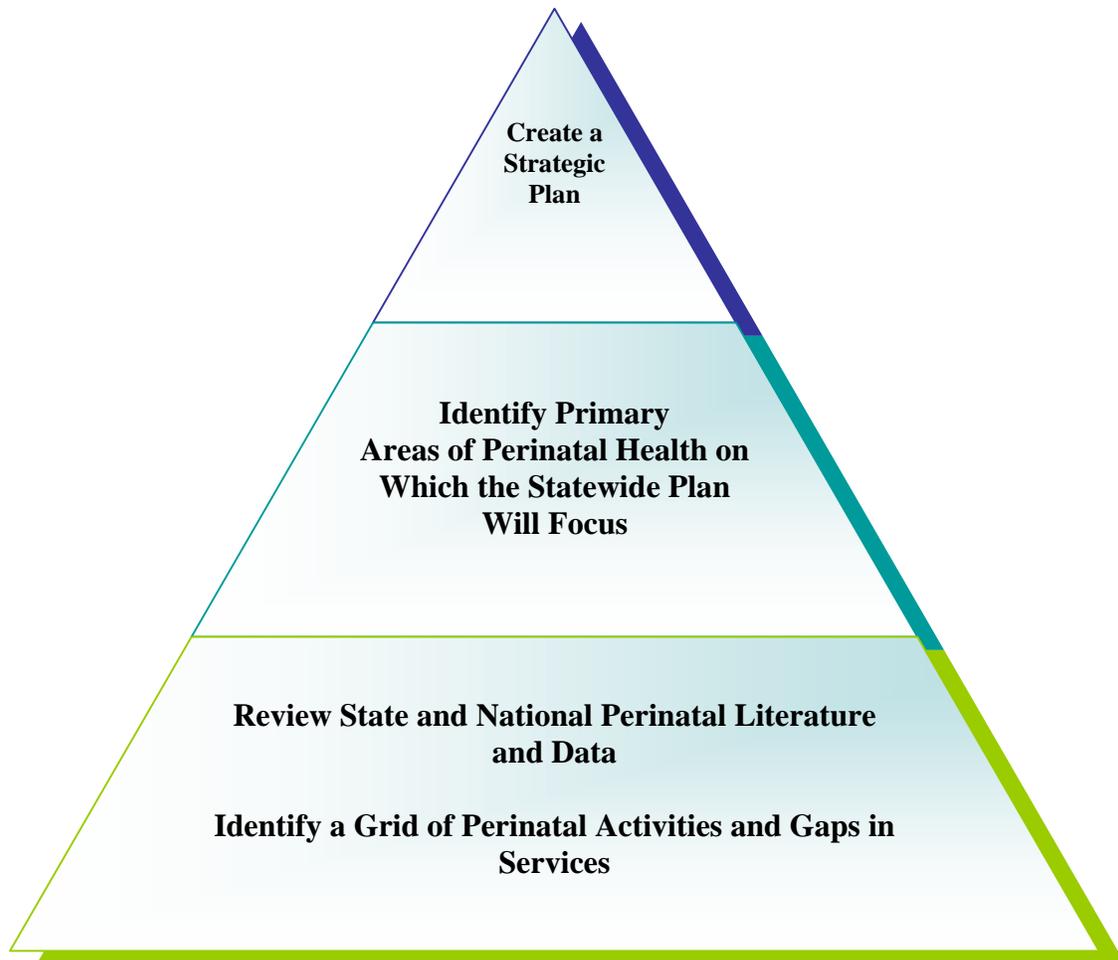
***During:* Maternal weight gain, nutritional status, smoking, alcohol and or drug use, pregnancy-induced conditions;**

***After:* Birth weight, gestational age, and breastfeeding, fetal and infant death.**

Thus the definition of perinatal health used in this project is the **...comprehensive and integrative continuum of health care from the preconceptional period through the prenatal and postnatal periods. Care should be sensitive to ethnic and cultural diversity with an emphasis on the family and father involvement.**

In order to develop the perinatal health portion of the strategic plan, DPH invited a selected group of experts in the field, including healthcare professionals, community advocates, and representatives from state agencies, to sit on a Statewide Perinatal Health Advisory Committee. Eighteen people agreed to participate on the committee and attend biweekly meetings on August 19, September 9, September 23, October 7, October 21, and November 4, 2004. Throughout this short timeframe,

committee members were asked to help develop a resource inventory/gap analysis of existing and needed services as well as review perinatal health literature and data in Connecticut and on a national level. Information gathered in the resource inventory/gap analysis as well as the literature review would then be used by the committee to help define priority areas for the Perinatal Health Strategic Plan. The committee process and activities were based on the Minnesota Department of Public Health's model which was used to develop their state Perinatal Health Plan.



The purpose of the statewide Perinatal Health Advisory Committee was to develop a comprehensive, statewide plan to address perinatal health services in Connecticut to assist DPH in making decisions regarding the allocation of MCH services.

The project goals were to:

- Create a statewide perinatal committee consisting of those with expertise to address perinatal issues.
- Identify a grid of perinatal activities and gaps in services.
- Review state and national perinatal literature and data.
- Identify primary areas of perinatal health in which the statewide plan will focus.
- Create a strategic plan.

The goals of the Statewide Perinatal Advisory Committee were to:

- Review the federal Healthy People 2010 Objectives as they relate to maternal and child health, the MCHB's Title V Block Grant Performance Measures, and the Family Health Division's strategic plan.
- Review existing “best practices” as it relates to addressing perinatal health on a state level.
- Review existing state perinatal programs and data that address perinatal health.
- Assess statewide assets and gaps in perinatal health and develop a priority-based action plan.
- Review assessment tools to evaluate the implementation and outcomes of the perinatal health plan.

Planning Process

The Department of Public Health convened two earlier statewide forums to discuss practices and strategies regarding MCH, identify challenges in providing effective MCH services, and to identify priority MCH issues. The Maternal and Child Health Forum, convened in partnership with the Community Foundation of Greater New Haven and the March of Dimes, was held on December 19, 2002. On May 7 and 8, 2003, the “Healthy, Wealthy & Wise/Faces of Women’s Health” symposium was convened by the Department of Public Health and Social Services in collaboration with the U.S. Department of Health and Human Services, Region I.

The priority areas identified through these forums for both years were the same and are as follows:

- Examine data sources, their validity, and timeliness.
- Utilize evidence to drive intervention efforts.
- Structure a MCH leadership consortium.
- Explore need to identify issues and to plan on a regional level.
- Address needs of uninsured and underinsured women of child-bearing age.
- Focus on maternal depression as a major issue in women’s health.

- Decrease MCH disparities that exist in health care by ethnicity and race.
- Develop policies and interventions that utilize a longitudinal (across the life span) perspective of maternal child health care as it relates to women's health.

In the context of previous forums held regarding perinatal health in the state, Central AHEC facilitated the current project meetings using the Minnesota Model as a guide. The August 19th advisory committee meeting was designed to explain and describe in detail the purpose of the committee and its roles and commitment to the perinatal health strategic plan for the state. A presentation was given regarding the overall project and then the committee divided into smaller groups and began looking at key perinatal issues, describing programs and activities that are currently in Connecticut and identifying gaps in service delivery. The initial review included the following topics selected from the Minnesota Model:

- ◇ Infant mortality
- ◇ Teen pregnancy and planning
- ◇ Family planning
- ◇ Genetics
- ◇ Sexually transmitted infections and HIV/AIDS
- ◇ Birth defects and surveillance
- ◇ Cultural competency
- ◇ Pregnancy and birth outcomes

Evaluations were collected at the end of the meeting. For the most part, committee members understood the purpose and their responsibilities. There remained some confusion regarding the next steps in the process for individual committee members. Follow-up contact with the committee included the assignment of particular topics from those listed above to individuals with the corresponding expertise, with everyone asked to complete an analysis of gaps in service.

The September 9th meeting involved a review of the information included in the Activity/Gap Grid as well as presentations from several of the committee members with an expertise in some of the important issues related to perinatal health. In addition, Dr. Marilyn Sanders presented her research regarding oral health and depression among pregnant and post-partum women, and Mr. Douglas Edwards presented his fatherhood initiative in Manchester, *Real Dads Forever*.

These presentations, including information from previous DPH-sponsored forums and from committee members' expertise in the field, set the stage for a (6 hour) planning meeting scheduled for September 23rd. The Department of Public Health presented information from programs that involve maternal and child health, giving the advisory committee more information for planning decisions. It was discovered that much of the information requested by the advisory committee was

not immediately available, and that a thorough service capacity assessment needed to be conducted and should be included in the strategic plan.

On October 7th, Dr. Kay Johnson-Keys, CAHEC consultant, facilitated the advisory committee work on the following:

- Review of the Federal Healthy People 2010 Objectives as they relate to maternal and child health, the MCHB's Title V Block Grant Performance Measures, and the Family Health Division's strategic plan.
- Review of existing "best practices" as they relate to addressing perinatal health on a state level.
- Review of state perinatal programs and data that address perinatal health.
- Assessment of statewide assets and gaps in perinatal health and develop a priority-based action plan.
- Review of assessment tools to evaluate the implementation and outcomes of the perinatal health plan.

The review of goals and objectives of the MCH Block Grant, Healthy People 2010 and from other statewide meetings on perinatal health was accepted by the advisory committee as needing to guide the development of the current strategic plan. There was discussion regarding the multiple definitions of best practice as they focus on either clinical practices and standards or effective interventions and strategies at the direct service level. The literature search and advisory committee was unable to locate significant information regarding best practices impacting outcomes nor in identifying assessment tools to evaluate outcomes.

The October 21st meeting resulted in the identification, description and agreement of 13 Perinatal Health Plan goals. Committee members divided the goals according to their expertise and interest and worked outside the meeting process to develop corresponding outcomes and strategies. The final November 4th meeting resulted in the identification of the nine final goals and review and acceptance of the draft Perinatal Health Plan of Connecticut 2005-2009.

II. *Maternal and Child Health Literature Review and Related Connecticut Statistics*

Perinatal Health Indicators

Of the 30 or so commonly recognized perinatal health indicators, generic groupings include birth to teen mothers, pregnancy and birth outcomes, and infant and fetal mortality. Following is a brief overview of these indicators comparing Connecticut to national averages.

The total population of the state has increased at a rate of 3.6% since 1990, though the proportion of minorities in the population has been increasing at a greater rate. The Hispanic, Asian, and Black population has increased approximately 50%, 68% and 13% respectively while the white population decreased 4% during the same time. The birth rate in Connecticut between 1997 and 2001 has mostly declined to 12.5 per 1,000 and the national birth rate is 14.5 per 1,000.

Connecticut's rate of births to teenage women declined overall from 33.3% in 1999 to 29.4% in 2001. The national rate declined as well by 8% though the national average remains much higher than Connecticut's (45.8 compared to 29.4%).³ However, racial disparities in the rate of teen birth remain noticeable in comparison to births of white, non-Hispanic teen women. Hispanic and Black non-Hispanic teens have the highest birth rates in the state of 18.3% and 15% respectively. It is important to understand that sexual activity among urban and non-urban adolescents seems to be comparable, regardless of race or ethnicity. It is the rate of pregnancy and births that is higher in the urban communities of the state, as much as two to three times higher than the national average.⁴ Furthermore, up to 75% of pregnancies among women less than 20 years old are unintended (Sanders 2003). In a local study of Latina adolescent women who were pregnant, they all reported that their pregnancy was "accidental" and that if they thought they would have become pregnant, they would have "delayed sexual activity" (Santalices, Singer: Hispanic Health Council 2003).

Racial disparities in perinatal health indicators remain distressing in Connecticut as well. Low birth weight, very low birth weight and pre-term births are particularly worrisome for babies born to Black non-Hispanic mothers.⁵ The impact of low birth weight on infant mortality occurs primarily during the first 28 days of life (the neonatal period). Low birth weight infants are about 40 times more

³ Data for this section was taken from 2001 DPH Registration Report (provisional Data) and National Center for Health Statistics (CDC).

⁴ Susan Lane, Perinatal Health Plan Advisory Committee member.

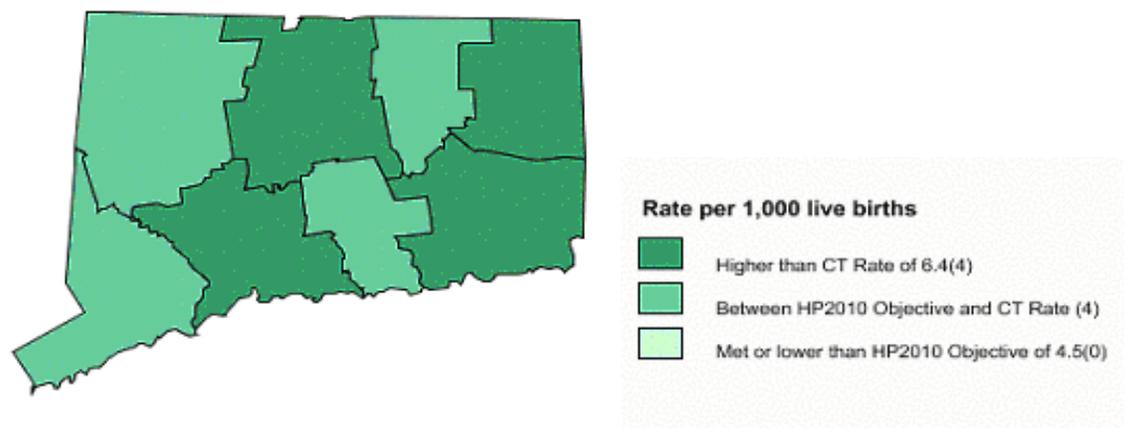
⁵ Low birth weight is defined as under 2500 grams and very low birth weight is less than 1500 grams or 3 lbs. 3oz. Pre-term birth is defined as less than 37 weeks gestation.

likely than normal weight infants to die. For very low birth weight infants, the risk of death is 200 times higher than among normal-weight newborns.

In regards to prenatal care, Hispanic women have alarming rates of late or no prenatal care. Black non-Hispanic women trail closely behind. For example, 21.2% of Hispanic mothers receive late or no prenatal care, followed by Black non-Hispanic mothers (17.7%) and women of unknown ethnic/racial background have a rate of 15.6%. White and Black non-Hispanic mothers are more likely to smoke and use alcohol during pregnancy than Hispanic or other women of non-Hispanic origin. Prenatal care in the first trimester continues to be a national and state priority.

The national rate of infant and fetal deaths is 7 per 1,000 live births. In Connecticut the 2001 infant mortality rate was 6.1 per 1,000 live births; the fetal mortality rate was 4.7/1,000. Black non-Hispanic babies were two and a-half times more likely to die within their first year of life in 2001 than White non-Hispanic babies and they are twice as likely to have insufficient prenatal care and twice as likely to be born with low birth weight. Thus while Connecticut's infant death rate fell from 12 to 6 deaths per 1,000 live births, the infant mortality rates for Blacks, non-Hispanic was 16.5 in 2001 and substantially exceeded the rates of the white population in all years from 1981 to 2001 (DPH MCH Block Grant application 2003).

Figure 1: Infant Mortality Rates: Connecticut, 1998-2001 Average



Source: www.marchofdimes.com/peristats

Maternal Mortality

The definitions of maternal mortality have changed over the past several years. Data collection has not been uniform making annual comparisons of the data suspect, though the number of maternal deaths appears to be small. (Drs. Eagan & Karsif, Advisory Members). In addition the number of maternal mortality cases is underrepresented due to challenges in case ascertainment. Rates are not representative of *true* increases/decreases – they are influenced by differences in

case ascertainment practices year to year, and quality and availability of data. In 2001, the rate in Connecticut was 60.9 (n = 26) per 100,000 live births. Please see Figure 2 below for further data on maternal mortality.

Figure 2: Maternal Mortality in Connecticut 1992 - 2001

Year	Number of Cases	Rate per 100,000 live births
1992	5	10.5
1993	6	12.9
1994	26	56.8
1995	15	33.8
1996	15	33.7
1997	11	25.6
1998	20	45.7
1999	9	20.8
2000	13	30.2
2001	26	60.9

Source: CT Department of Public Health, CT Perinatal Indicators

Connecticut's maternal and child health priorities as related to the perinatal time frame have included the following:

- Reduce racial health disparities
- Reduce teen pregnancy
- Improve access to and quality of care for mothers and children
- Improve data capacity related to maternal and child health issues.

In addition to the indicators cited above, newborns screened for hearing and genetic conditions and breastfeeding are among Title V MCH national performance indicators during the perinatal period. In support of this effort, Public Act No. 02-113, "An Act Requiring the Screening of Newborns for Metabolic Diseases," went into effect on June 7, 2002. The number of neonatal tests available is increasing at a rapid rate and follow-up of the screening tests is becoming expensive and time consuming for physicians even while the implementation of testing for genetic and metabolic diseases has been implemented at a slower rate than planned. Connecticut currently screens for 29 metabolic disorders and plans to expand this number to 43 in the near future.

The estimated rate of breastfeeding in Connecticut has improved from 68.7% to 69.3%, just shy of the state's goal (69.5%). Generally, the rate of women in Connecticut breastfeeding while in the hospital is 73.2% and at 6 months the rate is 28.3% (Mother's Survey 2002). Nationally the rate of breastfeeding at six months is 36.8%. There has been an increase in the number of women receiving assistance through the federal Women's, Infants and Children's Program (WIC) who breastfeed. WIC mothers in the hospital breastfeed at a rate of 61.3% (there are

some women for whom breastfeeding is contraindicated); and at six months the rate is 14.7%. Thus, the rate of initiation of breastfeeding among all women has improved (as indicated by hospital rates) but declines rapidly by six months.

As reflected in national data, racial and ethnic disparities in breastfeeding rates and duration also exist in Connecticut. According to the Department of Health and Human Services, “Blueprint for Action on Breastfeeding,”⁶ breastfeeding must be supported by family, community, workplace, health care sector, and society in order to help increase the initiation and duration rates among racial and ethnic groups. The reasons why so few African American mothers breastfeed may be attributed to the following: attitudes towards breastfeeding are not positive, the decision to breastfeed is influenced by family members and significant others (a mother is more likely to breastfeed if family and/or significant other supports her), and it has been difficult to receive culturally-appropriate education and information on breastfeeding.

The State’s Title V Program is particularly concerned about the health needs of vulnerable women and children, many of whom face barriers to care which are not addressed by the state’s managed care system. These populations include the:

- Uninsured
- Single mothers transitioning from welfare to work
- Homeless
- Incarcerated
- Adolescents who are concerned with confidentiality (parent involvement in their health care)
- Immigrant and undocumented populations
- Infants who experience delays in newborn eligibility determinations
- Providers who are not prepared to deal with the multiple social and economic problems facing many of their patients. (This is especially true in areas where hospital based clinics have closed and patients are referred to private practitioners.)

Many indicators of maternal and child health within Connecticut compare favorably with the United States as a whole, however, there are high risk groups which experience a greater share of the burden of adverse pregnancy and birth outcomes. The federal and state maternal child health performance measures for the Title V Block Grant are in Section V.

⁶ Department of Health and Human Services, Office on Women’s Health, *Blueprint for Action on Breastfeeding*, Washington, DC, 2000.

Newborn Health Screening Program sponsored by DPH assures that all infants receive a hearing screening, early diagnosis and intervention services.

Genetics as it Relates to Perinatal Health

Newborn screening is used for early identification of certain genetic, metabolic or infectious conditions that infants may have for which treatment is available. Approximately 4 million newborns are screened each year and 3,000 babies are diagnosed with severe disorders (Genetics and Public Policy Center 2002). Newborn screening can provide early detection and treatment which may help prevent mental retardation, severe illness, or death. All 50 states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands maintain their own mandatory newborn screening programs. States screen anywhere from 4-29 disorders, with most state programs testing for 4-10 disorders.

One of the most common newborn screenings performed is for hearing. There are 35 genes responsible for 41 forms of hereditary deafness. Severe to profound deafness affects 1 in 700 children at birth (Petit 2003). Genetic factors are believed to cause about 50% of cases of congenital hearing loss (March of Dimes 2001). Thirty-seven states currently offer newborn hearing screening and many others are considering it. The American Academy of Pediatric guidelines suggest that newborn screening be performed before 1 month, diagnostic testing should be performed by three months of age and intervention should be undertaken by six months (Clinical Genetics Meeting 2003).

There are four main categories of tests related to reproductive genetics, including newborn screening, which was previously discussed. Carrier screening is used to determine whether an individual carries one copy of an altered gene for a particular recessive disease. Children born to two carriers of a gene mutation have a 25% risk of inheriting two altered genes, one from each parent, therefore being infected with the recessive disease. Tay-Sachs disease, Sickle Cell Anemia and Cystic Fibrosis are examples of disease for which carrier screening is used (Genetics and Public Policy Center 2004).

Pre-implantation Genetic Diagnosis (PGD) is used following in vitro fertilization to diagnose a genetic disease or condition in an embryo. This type of testing has been used to test for dozens of inherited diseases, to select embryos that will be a matched tissue donor for an ailing sibling, and to select embryos based on sex. PGD raises a number of scientific, ethical and policy concerns as a result of issues related to its safety, moral acceptability and cost. (Genetics and Public Policy Center 2004).

Prenatal testing is used to diagnose a genetic disease or condition in a developing fetus. Two of the most common invasive prenatal tests include amniocentesis and chronic villus sampling. Ultrasound and maternal serum screening are the most common non-invasive tests (Genetics and Public Policy Center 2002).

Indications for Genetic Screening

- Chromosomal Abnormalities

Although women 35 or older have a higher risk of chromosomal abnormalities such as Down Syndrome, at least 50% of Down Syndrome pregnancies occur in women under 35. Therefore, a policy of offering routine screening using blood tests and ultrasound has developed over the past 20 years. The use of blood tests and ultrasounds in either the first or second trimester, or combining results from testing in the first and second trimester improves the detection rate and lowers the false positive rate when compared to using a maternal age cut-off alone. These blood tests and ultrasounds provide the mother with the best estimates of the likelihood that her fetus has a chromosomal abnormality. This is the best information available to enable her to make an informed decision regarding whether to have an invasive test (i.e. amniocenteses or chorionvillusbiopsi) which carries a small risk of miscarriage, in order to definitely know if her fetus has Downs Syndrome or other abnormalities.⁷

- Racial or ethnic associations to specific diseases

Some diseases have been found to be more prevalent amongst specific racial and ethnic groups. African Americans should be screened for Sickle Cell Disease, as one in 10 may be a carrier (American Society for Reproductive Medicine 1998). Thalassemia is a disease experienced in higher rates among people of Mediterranean or Asian decent. It is recommended that persons with this background be screened for the disease. Approximately 3% of the world's population carries the Thalessemia gene (American Society for Reproductive Medicine 1998). Caucasians have a higher carrier risk for cystic fibrosis, with approximately 1 in 29 being a carrier of the disease (American College of Obstetricians and Gynecologists and American College of Medical Genetics 2001).

A physician practicing in obstetrics and gynecology is currently required to screen the following patients before conception or during prenatal care:

- Individuals with a history of cystic fibrosis
- Reproductive partners of individuals who have cystic fibrosis

⁷ James Egan, M.D., Advisory Committee member.

- Couples where one or both partners of European Caucasian or Ashkenazi Jewish descent (American College of Obstetricians and Gynecologists and American College of Medical Genetics 2001).

Ashkenazi Jews are also at increased risk for a variety of other genetic disorders. An estimated 1 in 10 Ashkenazi Jews is a carrier for Gaucher Disease, one in 100 is a carrier of Bloom Syndrome, one in 40 a carrier of Canavan Disease, and one in 31 for Tay-Sachs Disease. Although all of these diseases can occur among any nationality or ethnic group, they are most common in Ashkenazi Jews (Barranger et al 2002).

The First and Second Trimester Evaluation of Risk (FASTER) trial is an \$11 million project funded by a grant from the National Institute of Health's National Institute of Child Health and Human Development (Chachas 2002). It is being conducted at 15 medical centers nationwide with 33,557 women participating in the trial (Dolan 2004). The goal of the study is to compare first and second trimester approaches to screening for chromosomal abnormalities using a range of biochemical and sonographic tests.

At the Annual Clinical Genetics Meeting in 2003, 108 cases of cystic hygroma were identified in the trial and outcome data from the cases were presented. Karyotypes, the test in which blood or skin samples are checked for the number and type of chromosomes, were performed on 89 of the 108 cases. Thirty-seven cases were defined as *euploids*, meaning they had the normal number of chromosomes and 49 cases were found to be *aneuploids*, meaning they had an irregular number of chromosomes. Of the aneuploids fetuses, 14 were found to have Down Syndrome, 14 had Turner Syndrome, and 21 had other genetic defects. Among the euploid fetuses, 15 were found to have major structural malformations, including cardiac anomalies and skeletal dysplasias. In terms of pregnancy outcomes, 64 pregnancies were terminated and 44 were continued. Of the 44 pregnancies that were continued, 14 resulted in spontaneous abortion and 17 resulted in pregnancies with normal birth outcomes (Welsh et al 2003).

Preconception Health Care

Preconception health care, which emphasizes the need to view women's health as a continuum, has been promoted as one strategy to assure the health of the mother prior to becoming pregnant (Strobino et al 1999). In 1989, the US Public Health Service Expert Panel on the Content of Prenatal Care, as part of its report, stated that one of the most important prenatal visits was the one that occurred *before* conception (United States Public Health Service Expert Panel on the Content of Prenatal Care 1989). Preconception care encompasses the identification and management of both chronic (e.g. diabetes) and acute (e.g. reproductive tract

infections) medical conditions that may negatively affect prenatal health and pregnancy outcomes. Preconception care also focuses on health education and promotion, nutritional counseling, and identification and referral to care of women with unhealthy behaviors such as smoking or substance abuse problems. These services are focused on mitigating or preventing insults to fetal development, in some cases often before a woman realizes she is pregnant (Culpepper 1990). There is no reliable data on the extent to which women receive preconception care, but it is believed to be infrequent and most likely obtained by women with chronic diseases or by healthy, health conscious women (Strobino et al 1999).

Appropriate preconception health care improves pregnancy outcomes (Burndage 2002). Many women have their first visit for prenatal care at eight weeks of pregnancy or later, yet the period of time before the first prenatal visit carries the most risk to fetal development. Preconception assessment could be offered to women who request pregnancy testing and family planning advice issues could be addressed during physical examinations and at follow-up visits for patients with chronic diseases (Burndage 2002). This recommendation is consistent with Planned Parenthood's experience in Connecticut, whereby women seek health care episodically, and family planning issues need as well to be addressed during medical visits for other reasons (Susan Lane, Advisory Member).

Interventions that are part of preconception care can be grouped into three broad categories. The first are for those that address conditions that may require time to achieve before conception, such as optimizing weight and avoiding alcohol and cigarettes. Next are interventions which cannot be undertaken during pregnancy, including vaccinations and detoxification from narcotic dependence. The third category includes interventions undertaken only because a pregnancy is planned, such as carefully managing diabetes in women who have the condition prior to pregnancy (Bernstein 2002). Unfortunately, many of the women who are most in need of preconception health care (those who smoke, use illicit drugs, etc) are those who are least likely to access it.

- Folic Acid Intake

Taking folic acid before conception reduces the incidence of neural tube defects (NTD), including Spina Bifida and Anencephaly. Prenatal vitamins should include at least 400 mcg of folic acid and 30 mg of elemental iron for patients at average risk. Studies have shown that women who have already had a pregnancy affected by NTD can reduce their risk of having another affected baby by about 70% by taking a higher dose of folic acid (March of Dimes 2004).

- Environmental Toxins

Laboratory Services

DPH laboratory tests specimens for childhood lead, safe drinking water and newborn metabolic screening for local health departments, physicians, public utilities and hospitals.

The embryo or fetus is more susceptible to environmental toxins than adults and

chemical exposures or drug exposures cause 3% to 6% of anomalies. The timing of the exposure determines the type and severity of anomaly.

Typically, exposure to a toxin for 15 to 56 days can cause a structural anomaly and, after 56 days of exposure, a functional impairment.

- Hypertension

Most patients with chronic hypertension can expect an uncomplicated pregnancy but will require enhanced monitoring for the risks of preeclampsia, renal insufficiency, and fetal growth retardation. Medications should be reviewed throughout the pregnancy.

- Epilepsy

Children of mothers with epilepsy have a four to eight percent risk of congenital anomalies. This may be caused by fetal exposure to anticonvulsant medication or may be related to an increased genetic risk. Preconception counseling should include optimizing seizure control, prescribing folic acid supplement and offering referral to a genetic counselor.

- Thromboembolism

Women who have a personal or family history of venous Thromboembolism should be offered testing before pregnancy. Women with a history of deep venous thrombosis (DVT) have a 7% to 12% risk of recurrence during pregnancy. Heparin is indicated for prophylaxis and should be started as early in pregnancy as possible (American College of Obstetricians and Gynecologists 2000).

- Illegal Drug Use

Women using illegal drugs such as cocaine, marijuana or heroin need help to stop their use before pregnancy. Cocaine is associated with miscarriage, prematurity, growth retardation, and congenital defects. Marijuana can cause prematurity and jitteriness in the neonate. Use of heroin may lead to intra uterine growth restriction, hyperactivity, and severe neonatal withdrawal syndrome (Cefalo & Moos 1995). There is evidence suggesting that cocaine and tobacco use may cause spontaneous abortion but the data to demonstrate a casual link has been limited (Ness et al 1999). Women who continue drug use in early pregnancy have up to six times the normal risk of having a low birth weight baby (March of Dimes 2004).

- Diabetes Mellitus

Women whose diabetes is poorly controlled (defined as glycosylated hemoglobin levels higher than 8.4) have a 32% rate of spontaneous abortion and a sevenfold increased risk of severe fetal anomalies compared with women who have good control (Moos 1995). Women with poorly controlled diabetes are also at increased risk of miscarriage or stillbirth compared to non-diabetic women (March

of Dimes 2004). Intensive diabetic management starting before conception should decrease the risk of spontaneous abortions and congenital anomalies and lessen the complications of pregnancy (Cafalo & Moos 1995).

- Exercise and Nutrition

Both obesity and being underweight increase pregnancy risks and birth outcomes. Obesity increases the risks of hypertension, preeclampsia, diabetes, and delivering a large infant. Women who are obese should diet before conception and then switch to a maintenance diet of 1,800 calories per day when trying to conceive. Women of average height who weigh less than 120 pounds are at risk of amenorrhea, infertility, having a low-birth weight infant, preterm delivery and anemia. Low birth weight and pre-maturity are more related to dietary inadequacy at conception than to weight gain during pregnancy. The diets of women with low-birth-weight infants are often deficient in milk, whole grains, vegetables and fruits. Vegetarians who consume eggs or dairy products usually have no nutritional deficiency but strict vegans may have deficiencies in amino acids, zinc, calcium, iron and vitamins D and B12. Caffeine in amounts up to 300 mg (2 cups of coffee or 6 cups of tea or soda) per day is considered safe. Higher amounts of caffeine may be associated with increased rates of spontaneous abortion and low birth weight (Klebanoff et al 1999).

Access to and Sufficiency of Prenatal Care

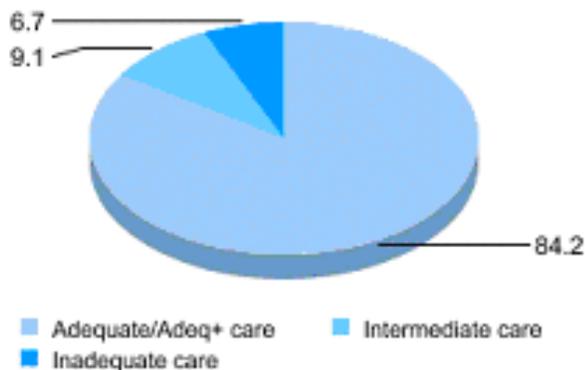
Access to prenatal care is an essential component of any effort to improve birth outcomes. According to the US Department of Health and Human Services, risk assessment at the first prenatal visit can identify as many as 80% of women at high risk of having a low birth weight infant (Lia-Hoagberg et al 1990). Insufficient use of prenatal care has been associated with increased risk for low-birth weight infants, premature births, neonatal mortality, and maternal mortality (Wilcox et al 1994). Connecticut figures for 1998 show that mothers who received fewer visits than those considered necessary for prenatal care had seven times more premature deliveries and 3 times more low birth weight deliveries than mothers who received an adequate number of visits (Connecticut Department of Public Health 2002).

In the 1980s strict eligibility requirements and a lengthy or difficult application process were recognized as barriers to Medicaid enrollment for women seeking prenatal care (Braveman et al 2003). To combat these barriers and increase the proportion of women receiving adequate prenatal care, Congress authorized the Medicaid expansion program in the mid-1980s. This allowed states to expand Medicaid eligibility criteria to include formerly ineligible pregnant women (Centers for Disease Control 2000).

- Definitions and Measurements of Prenatal Care

There are two indices which are used to measure the adequacy⁸ of prenatal care – The Modified Kessner Index and the Adequacy of Prenatal Care Utilization Index (APNCU). The Kessner Index assigns three levels of care – adequate, intermediate, and inadequate. It follows the American College of Obstetrician and Gynecologists (ACOG) recommendations for the number of prenatal clinical visits only through 36 weeks of gestation. The APNCU, however, takes into account the full ACOG recommendations for the number of prenatal clinical visits (Connecticut Department of Public Health 2002). It also contains an additional category, adequate plus, which describes women who receive more than the recommended number of visits.

Figure 3: Distribution of prenatal care adequacy categories, Connecticut, 2002



Source: <http://www.marchofdimes.com/peristats>

- Characteristics of Women Receiving Inadequate Prenatal Care

Inadequate care is defined as pregnancy-related care beginning in the fifth month or later or less than 50% of the appropriate number of visits for the infant's gestational age (March of Dimes 2004). There appears to be a correlation between age and inadequate prenatal care. In the United States between the years of 2000 and 2002, women under the age of 20 had the highest rates of inadequate care (22%). Women between the ages of 20-29 had almost half the rates of those under 20 (12.4%) and women between the ages of 30-39 less than a third (7.3%). For women

⁸ Although “adequacy” of care is a qualitative term (i.e. competency of care), it is a quantitative measurement of the number of prenatal care visits.

age 40 and over, the proportion receiving inadequate care does increase slightly to 9.5% (March of Dimes 2004).

Race and ethnicity are also related to adequacy of care. Nearly 24% of Native American women receive inadequate prenatal care, compared with 18.7% of African-American women, 17.6% of Hispanic women, 10.7% of Asian women, and 10.2% for white non-Hispanic women (March of Dimes 2004).

Women who are physically abused are also likely to delay entry to prenatal care. A study of women receiving prenatal care in an urban clinic found that women who were physically abused by their partners were more likely to delay entry into prenatal care until the third trimester than non-abused women (McFarlane et al 1992). The Georgia Council on Maternal and Infant Health has recommended that physical violence be considered a risk factor for late entry into prenatal care (Georgia Department of Human Resources).

In California, low income women who had the following characteristics were one and a-half to two times more likely to lack early prenatal care (Braveman et al 2003):

- ◆ Unintended pregnancy
- ◆ A belief that their receipt of prenatal care was not “very important” to those close to them
- ◆ Low educational attainment

In a Colorado study from 1989 through 1997, the most frequent reasons cited for delaying prenatal care were:

- ◆ Not knowing that they were pregnant
- ◆ Lack of money or insurance coverage
- ◆ Inability to get an earlier appointment.

Factors associated with early care included: first time mothers, women with fewer children and women with supportive family and friends who encouraged entry into care. The study also cited that “although language is associated with many barriers to health care, having a usual source of care and economic well-being are of primary importance for the Hispanic American population (Office of Women’s Health and the California Department of Health Services).”

Consumer-Cited Barriers

- Lack of Awareness

A woman's not knowing she is pregnant is a significant barrier to early prenatal coverage and care. Lack of awareness about the pregnancy has been found to be the most common reason for delayed care among non-Hispanic blacks, non-Hispanic whites, women under the age of 20 and women with private insurance (Centers for Disease Control 2000). Data from California in 1999 showed that among low income women who had public or private health care coverage, 23% of those who did not have first trimester prenatal care lacked early awareness of pregnancy (Braveman et al 2003).

Lack of awareness about where to go for prenatal services is also a frequently cited reason for delayed care. This was found to be the third most important factor mentioned by women and among key informants in a study conducted in Houston (Scientific Technologies Corporation, 2003). Many women stated that they only knew where to go for prenatal care because a family member or friend told them. Key informants suggested referral programs, using outreach workers and the WIC program as sources for increasing awareness of services.

- Unintended Pregnancy

According to studies of pregnant women seeking care in a Detroit health clinic, and women participating in the National Survey of Family Growth, *intendedness* of pregnancy impacts the timing of initiation of prenatal care (Husley et al 2000 and Husley 2001). Nationwide, pregnancy risk assessment monitoring system (PRAMS) data has found that between 34% and 52% of pregnancies are unintended (Beck et al 1999). Data from the Houston study corroborates these research findings – 73% of women who indicated they wanted to be pregnant sought first trimester prenatal care compared to only 42.3% of women who reported not wanting to be pregnant (Scientific Technologies Corporation 2003). A study conducted at the Population Research Institute at Pennsylvania State University found that a majority of Puerto Rican women cited psychological uncertainty about the pregnancy itself as the most significant barrier to early prenatal care (Landale et al 1999). Unwanted pregnancies, the desire to keep the pregnancy secret and lack of awareness about the pregnancy were noted as important factors in Puerto Rican women's lack of prenatal care.

Unintended pregnancies lend themselves to higher rates of maternal depression, and adverse outcomes for the mother and infant (Sanders 2004). It is also suggested that 25% of pregnancies to adolescent women are *intended* (since 75% are unintended). Health care providers speculate that a variety of social, emotional and cultural factors influence the degree of intentionality in adolescent pregnancies.

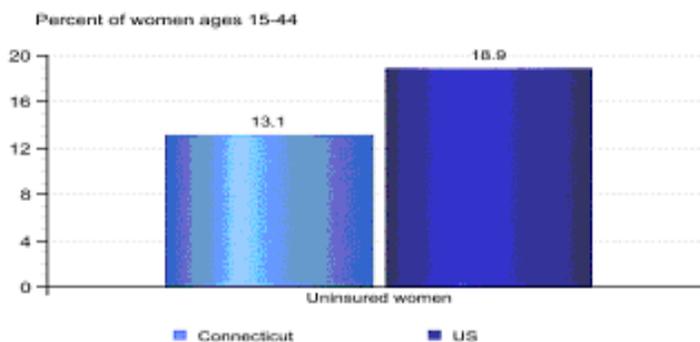
- Lack of Money/Insurance

The Institute of Medicine's (IOM) publication *Prenatal Care: Reaching Mothers, Reaching Infants* examined the barriers to prenatal care for women by comparing the findings of seventeen studies. Studies were divided into two groups:

those that used a self-administered checklist and those that used open-ended questions. Financial barriers, particularly inadequate or nonexistent insurance and limited personal funds, were the most important barriers cited by women who received insufficient care (Institute of Medicine 1988).

Since the IOM (1988) publication was written, there has been a substantial effort to increase the number of pregnant women covered under Medicaid. However, studies conducted to measure the impact of this significant policy change have been subject to numerous limitations, including states' reluctance to pursue randomized experiments as well as difficulty obtaining necessary data (Epstein and Newhouse 1998). Findings from a Centers for Disease Control report on entry into prenatal care from 1989-1997 found lack of money or insurance to be a significant barrier to prenatal care. It was the second most cited barrier, with 41% of Hispanics, 36% of non-Hispanic whites and 36% of women aged 20-24 years naming this as the reason for delayed or no prenatal care. The authors noted that "although Medicaid expansion has contributed substantially to improving access to early prenatal care by removing financial barriers for women, a substantial proportion of pregnant women still did not receive prenatal care during the first trimester. More than half of women with delayed or no prenatal care would have liked to obtain earlier care." (Centers for Disease Control 2000).

Figure 4: Uninsured women: Connecticut and US, 2000-2002 Average



Source: <http://www.marchofdimes.com/peristats>

Other studies corroborate women's motivation to receive early prenatal care and indicate that the time involved in becoming approved for Medicaid was the barrier to early care. In California, 12 % of women who were eligible to receive Medicaid in 1999 tried to enroll early but did not actually enroll until after the first trimester (Braveman et al 2003). Women at health centers in Houston also stated that waiting to get approved by Medicaid was a barrier to early prenatal care (Scientific Technologies Corporation 2003). It is also important to note that many women who are uninsured prior to pregnancy do not have a primary care provider or a usual source of care, which are also significant barriers to early prenatal care.

- Transportation

Lack of access to transportation is a barrier for both rural and inner city women who do not own a car. A survey conducted in Houston's City Health Centers in 1999-2000 revealed that 16.5% of respondents cited transportation as a barrier to prenatal care. Since then, changes were made to clinic locations to make them more convenient to public transportation. In a subsequent survey in 2003, only 7.2% of respondents cited transportation as a barrier (Houston Department of Health and Human Services, unpublished data and Scientific Technologies Corporation 2003).

- Perceptions of Importance of Prenatal Care

A study of middle and upper class pregnant women in Olmstead County, Minnesota found that perceptions about the importance of prenatal care may play a significant role in the timing of care. A perception of prenatal care as being less than very important was associated with increasing maternal age and having had more than one pregnancy. The potential interrelatedness of these two variables makes it difficult to determine the degree to which they each contributed to perception. It may be that older women who have had previous pregnancies feel they need less medical attention during pregnancy because they learned a great deal during their prior experience (Roberts 1998). This finding was also substantiated in a review of both open-ended and checklist studies conducted on the barriers to prenatal care. Attaching a low value to prenatal care was found to be the second highest barrier in open-ended studies and the third highest in checklist studies (Institute of Medicine 1988).

- Inability to get an appointment

A study assessing the barriers to prenatal care in Houston found that the majority (50.4%) of respondents stated that the reason for delayed care was an inability to get an appointment (Scientific Technologies Corporation 2003). This reason was the third most common stated in an analysis conducted by the Centers for Disease Control which examined birth certificate data as well as Pregnancy Risk Assessment Monitoring System (PRAMS) data (Centers for Disease Control 2000).

Provider-Cited Barriers

A 1987 survey by the American College of Obstetricians and Gynecologists asked 2,400 members to review and rate a list of 11 potential reasons for late registration in prenatal care. The top five reasons cited were:

- Cannot pay for prenatal care/do not have insurance or Medicaid (53%)
- Don't think prenatal care is necessary (42%)
- Difficulties with transportation (37%)
- Inadequate child care (25%)
- Fear of doctors, medical examinations, clinics, hospitals (23%)
(American College of Obstetrics and Gynecologists 1988)

Cultural Competency

Issues such as cost of bilingual staff, translation services, and multi-language materials and limited access to language interpretation services were cited by advisory committee members and throughout the literature as limiting access to perinatal health care. Other cultural competence issues also include the lack of awareness/engagement of the community in program design and the need for health care provider training regarding cultural issues that impact health and acceptance of health care recommendations.

Responses of key informants in Houston health centers were similar. Key informants were asked to rate barriers in three categories: financial, structural, and personal. The majority (57.7%, 45 of 78) responded that they think financial barriers are the most significant of the three categories. Within each category, the top reasons cited were: patients do not have insurance coverage (financial), patients have difficulty getting an appointment earlier in their pregnancy (structural), and patients do not know the importance of early prenatal care (personal) (Scientific Technologies Corporation 2003).

Women's Health During Pregnancy and its Impact on Birth Outcomes

- Smoking

Maternal smoking increases the risk of miscarriage, preterm delivery, low birth weight, perinatal mortality, and attention-deficit disorder in children. Smoking nearly doubles a woman's risk of having a low birth weight baby. In 2001, 11.9% of babies born to smokers in the United States were of low birth weight compared with 7.3% of babies to non-smokers (March of Dimes 2004). If the mother smokes less than one pack of cigarettes per day, the risk of a low-birth-weight infant increases by 50%; with more than one pack per day, the risk increases by 130%. If the mother stops smoking by 16 weeks of pregnancy, the risk to the fetus is similar to that of a nonsmoker (Zahniser & Gunter 2001 and Cnattingius *et al* 1999).

Smoking also increases the risk of preterm delivery by at least 20 percent (March of Dimes 2004). Recent studies also suggest that smoking may increase the risk of birth defects. One study found that women who smoked in the early months of pregnancy were 34% more likely than non-smoking mothers to have a baby with a club foot (March of Dimes 2004).

- Drug Use

Nearly 50 percent of American women ages 15-44 have used illicit drugs at least once in their lifetime (Substance Abuse and Mental Health Services Administration 1997). The peak age for use among women coincides with the peak childbearing years, which is of concern due to the risks to the fetus (Strobino *et al*

1999). More than 5% of pregnant women are estimated to use illicit substances sometime during their pregnancy (National Institute on Drug Abuse 1996). Women who use drugs during their pregnancies are more likely to be depressed, have fewer social supports, less stable living arrangements, and are more likely to drink alcohol and smoke as well (Lindenberg et al 1991 and Robins & Mills 1993).

- Alcohol Use

Alcohol can cause mental retardation, malformation, growth retardation, miscarriage and behavioral disorders in infants. The effects are dose related: Nineteen percent of infants are affected when their mother consumer more than 4 drinks per day, while 11% are affected with two to four drinks per day. Patients should be treated for alcoholism through interventional counseling. Connecticut, as in most states, has a severe shortage of treatment beds available for pregnant women.

***Drug & Alcohol Treatment
For pregnancy and post-partum women in Connecticut***

- ♦ There are only 95 specialty beds in eight residential programs in the major cities of the state (though pregnant women are given priority)
- ♦ There are 142 outpatient specialty slots for women who are pregnant and/or are parenting children 5 years of age and younger.
- ♦ There are 150 specialty slots for Methadone Maintenance

(Box continued on next page)

Challenges

- ♦ Case management services to support women returning to the community with their newborn and other children are very limited.
- ♦ Infant-parent separation while infant is detoxing in the hospital occurs during the crucial bonding period.
- ♦ Insurance restrictions limit treatment (2x/year allowed by state administered general assistance).

- Oral Health

A growing body of research supports an association between periodontal disease and poor birth outcomes related to low birth weight (Krol et al 2003). The National Institute of Health reports that “as many as 18% of the 250,000 premature low weight infants born in the United States each year may be attributable to infectious oral disease” (National Institute of Health). Sanders and Lee (2003) cited that there is a direct link between maternal oral bacteria (strep mutans) and early

childhood caries; and that bacteria reduction strategies such as xylitol chewing gum in pregnancy is a viable prevention method of childhood caries. Data also suggest that there are increased preterm and low birth weights in babies of women with diseases of gums and supporting structure (Sanders 2003).

HUSKY promises comprehensive dental benefits for Connecticut's low-income children. Yet coverage does not ensure access to care. Unfortunately, problems in the HUSKY program prohibit widespread participation by dentists.

Source: Connecticut Health Foundation, www.cthealth.org

More research is needed to demonstrate a definitive link between treating periodontal disease in pregnancy and a reduction in low birth weight. The Connecticut Health Foundation is trying to provide increased access to dentists through contractual arrangements between federally qualified health centers and private dentists who can provide care at the centers and in their own offices for those insured under HUSKY.

- Bacterial Vaginosis

Bacterial vaginosis is the most common vaginal infection among women of childbearing age (Centers for Disease Control 2004). The prevalence of bacterial vaginosis among pregnant women ranges from 12% to 50% depending on the population (Hay et al 1994 and Govender et al, 1996). There is still uncertainty about whether bacterial vaginosis is an actual cause of preterm delivery and whether treating it during pregnancy can reduce a woman's chances of delivering a premature baby (Bernstein 2000). Guise and associates conducted a meta-analysis in 2000 to sort through the conflicting results of past studies on bacterial vaginosis. They found there was no benefit to screening and treating women at average risk for bacterial vaginosis as a means of preventing poor birth outcomes. For women of high risk, the findings were inconclusive. The differences in outcomes among the various studies may be attributable to variations in the preterm delivery rate in the populations studied as well as difference in the way bacterial vaginosis was treated (Bernstein 2000).

- Preeclampsia

Preeclampsia is a major and potentially serious disorder of pregnancy. This hypertensive disease affects approximately seven percent of first pregnancies and 13% of all pregnancies. Preeclampsia contributes significantly to premature deliveries in the United States and, in its severest form, is a leading cause of maternal morbidity and mortality (National Institute of Child Health and Human Development 2004).

- Gestational Diabetes

Gestational diabetes is one of the most common health problems for pregnant women, affecting about 5 percent or 200,000 pregnancies each year (National Institute of Child Health and Human Development 2003). If properly managed and treated, women with gestational diabetes will most likely give birth to healthy babies. However, there are several conditions which can occur as a result of gestational diabetes, including macrosomia, (the baby's body is larger than normal), hypoglycemia, jaundice, Respiratory Distress Syndrome (RDS); and low calcium and magnesium levels. Gestational diabetes does not cause diabetes in infants, but babies born to women with gestational diabetes are at higher risk of developing type two diabetes (National Institute of Child Health and Human Development 2003).

Pregnancy and Depression

While there has been much research and media coverage of postpartum depression over the years, very little attention has been paid to depression during pregnancy until recently. Common myths about women being "protected" from depression during pregnancy continue to pervade both the medical profession as well as society at large. There are, however, studies which show that depression during pregnancy is even more common than postpartum depression (Evans et al 2000). Depressed mothers are less likely to engage in preventive health behaviors, more likely to smoke, and more likely to have negative interactions with infants. Children of depressed mothers are more likely to exhibit behaviors consistent with insecure attachments, be at higher risk for preschool behavior problems, impaired cognitive development and their own mental health conditions.

- Prevalence of Depression

There is a wide variation in reports of the number of women affected by depression during pregnancy, with figures ranging from two percent to 51%, depending on the reporting method used (Bennett et al 2004). The reasons for such variations may include the assessment methods used as well as the fact that estimates have been determined at different stages of pregnancy. However, women of young children are at particularly high risk (18-24% have significant symptoms) and as high as half of adolescent mothers are depressed during pregnancy (Sanders 2003). Post-partum depression is seen in 10-20 % of all new mothers.

Risk factors include: prior history of mood disorders, history of postpartum depression, family history of psychiatric illness, limited psychosocial support, marital instability, recent bereavement (Misri 2001), diminished partner support, unemployment, poor social adjustment, adverse life events, unplanned pregnancy, and adolescence (O'Hara *et al*, 1996)

- Depression and Poor Birth Outcomes

Although there are theories about why depression during pregnancy is associated with poor birth outcomes, more research needs to be conducted to

validate them. Several studies have found that depression during pregnancy can lead to low and very low birth weight, preterm delivery, and small fetal size for gestational age (Kelly et al 2002 and Steer et al 1992). These outcomes are strongly associated with infant morbidity and mortality. Depression during pregnancy is also highly associated with postpartum depression. One-third of women who experience depression throughout pregnancy remained depressed following the birth of their child (Gotlib et al 1989 and O'Hara, 1986). Research has shown that depression during pregnancy which extends to the postpartum period has a negative impact on the emotional, cognitive and developmental growth of young infants (Murray et al 1997). It has also been adversely associated with infant temperament and mother-infant attachment (Murray, 1992 and Stein *et al*, 1991).

Screening for depression during pregnancy is recommended for several reasons: providers have good access to most patients, there is opportunity for repeat evaluations, and it improves the overall detection of depression (Yonkers, 2004). There are several screening instruments available for depression, including the Edinburgh Postnatal Depression Scale (EPDS), the PRIME MD depression module, the Beck Depression Inventory (BDI) and the Inventory of Depressive Symptomatology (IDS). The first three have been validated for use in obstetric populations.

Men's Health Impacting Pregnancy Outcomes

In the 1990s, many women's health programs began to acknowledge that family planning must be viewed in the broader context of reproductive health. As part of this broader view, programs started to focus on the role of men as it relates to women's access to and use of reproductive health services. For instance, the Program of Action of the 1994 Cairo International Conference on Population and Development includes a statement on "Male Responsibilities and Participation":⁹

"Special efforts should be made to emphasize men's shared responsibility and promote their active involvement in responsible parenthood, sexual and reproductive behavior, including family planning; prenatal, maternal and child health; prevention of STDs, including HIV; prevention of unwanted and high-risk pregnancies; shared control and contribution to family income, children's education, health and nutrition; and recognition and promotion of the equal value of children of both sexes."

There are two primary concerns expressed by health care professionals with regard to an increased role for men in reproductive health. First, involving men in family planning education and services might potentially decrease a woman's control over reproductive health issues. Secondly, programs designed to increase men's responsibility in reproductive health may compete for funding with programs for women (de Schutter, 1999).

However, men do play a vital role in the reproductive health of women by using and supporting the use of contraceptives and in encouraging women to have adequate prenatal care. It is also imperative that men play an active role in preventing the spread of sexually transmitted infections, including HIV/AIDS.

- Men's role in birth outcomes

Researchers at the Utah Center for Reproductive Medicine at the University of Utah have found that defective sperm can contribute to faulty conception which can then cause miscarriage. Another study conducted among 208 male college students found that 25% did not know that toxic chemicals can alter sperm chromosomes and only 54% were aware that miscarriages have been associated with a father's hazardous exposures. The same study found that almost half of the men questioned did not know that cigarettes can lower a man's sperm count (Frazier 2004). Cigarette smoking can also cause cell changes capable of altering DNA, which can result in genetic breaks in the sperm linked to miscarriage (Carrell et al 2003).

⁹ www.iisd.ca/linkages/Cairo/program/p04000.html

- Barriers to men's involvement in reproductive health

There is a lack of information about men's perspectives that could be used to help design appropriate programs for men and reproductive health care. It may also be difficult to engage men in reproductive health because they have been excluded for so long and because they are generally hesitant in seeking preventative health care. Finally, the limited variety of contraceptive methods for men may limit the perception of their role in reproductive health.

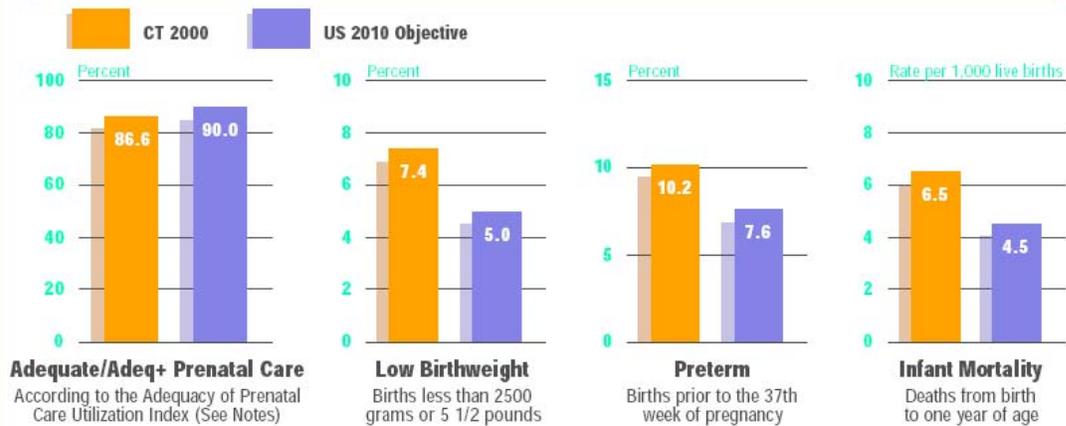


Perinatal Profiles: Statistics for Monitoring State Maternal and Infant Health

In an Average Week in Connecticut

827 babies are born
63 babies are born to teen mothers (ages 15-19)
46 babies are born to mothers who receive inadequate prenatal care
62 babies are born low birthweight
84 babies are born preterm
5 babies die before their first birthday

Connecticut in 2000 and US Year 2010 Objectives



Births

2000	Number	Rate
All Races/Ethnicities	43,026	61.2 ¹
White, non-Hispanic	28,785	53.6 ¹
Black, non-Hispanic	4,946	69.2 ¹
Hispanic	6,472	90.6 ¹
Teens 15-17	1,077	16.9 ²
Teens 18-19	2,200	56.3 ³

¹Per 1,000 women ages 15-44 in specified group

²Per 1,000 women ages 15-17

³Per 1,000 women ages 18-19

Health Indicators

2000	Number	Rate
Adequate/Adeq+ Prenatal Care	34,846	86.6%
Early Prenatal Care ⁴	37,180	89.4%
Preterm	4,392	10.2%
Low Birthweight	3,199	7.4%
Very Low Birthweight ⁵	691	1.6%
Infant Mortality ⁶	280	6.5

⁴Live births to women receiving 1st trimester pregnancy-related care

⁵Live births less than 1500 grams or 3 1/3 pounds

⁶Per 1,000 live births

Conclusion

The State of Connecticut Department of Public Health, Division of Family Health contracted with the Central Area Health Education Center Inc. to facilitate dialogue about and development of the perinatal health strategic plan for the Maternal Child Health Title V Block Grant. The literature review explored genetic and newborn screening, preconceptional health, adequacy and access to perinatal care, consumer cited barriers to perinatal care, pregnancy and depression, and women's and men's health impacting pregnancy and birth outcomes. Issues germane to perinatal health such as racial disparities, teenage pregnancy and infant mortality were also explored in the literature review.

III. *Perinatal Health Activities in Connecticut*

The following section highlights programs funded by the Department of Public Health that were discussed by the Perinatal Advisory Committee when reviewing the perinatal activities and gaps in services across the state. Much of the information presented was provided directly by DPH staff in the Family Health Division. While DPH is a major funder and provider of maternal and child health services in the state, there are several other state agencies that have programs and services in place to serve women and children. Summary information on these agency programs is provided including eligibility criteria, target population, funding and geographic location. This information was provided by state agency program staff and, in some cases, is limited.

The current budget for the Title V Block Grant totals \$12,509,431. This includes the federal allocation of \$5,081,795, unobligated balance of \$407,636 and state funds of \$7,101,000. Other Federal funds include \$100,000 from SSDI, \$333,000 from abstinence education and \$953,058 from the Centers for Disease Control.

The federal allocation of \$5,081,795 is broken down as follows¹⁰:

- Preventive and primary care for children \$1,664,693 (32.76%)
- Children with special health care needs \$1,804,295 (35.51%)
- Title V administrative costs \$168,202 (3.31%)

Title V Block Grant Partnership Programs

Partnership Programs of the state's Title V Block Grant include the following:¹¹

Breastfeeding Initiative	Data collection goal to collect breastfeeding initiation rates upon hospital discharge and breastfeeding duration rates.
Comadrona Program	DPH contracts with Hispanic Health Council in Hartford to provide culturally appropriate intensive case management services to pregnant Latina and African American women and their children.
CT Community	Statewide collaboration between DSS and DPH focused on reducing infant mortality and morbidity

¹⁰ Figures are from DPH's Title V MCH Block Grant FFY 2003 Annual Report and FFY 2005 Application, which does not list the breakdown of budgetary expenses by program component.

¹¹ State and Federal performance measures are reported collectively and not by program component.

Healthcare Initiative/Healthy Start	and low birth weights as well as improving healthcare coverage and access for children and eligible pregnant women.
Family Planning	DPH contracts with Planned Parenthood of Connecticut, which provides comprehensive health services in 16 locations across the state. Major focuses include decreasing the birth rate to teenaged women (15-17), preventing unintended pregnancy, and increasing access to primary reproductive health care.
Fetal and Infant Mortality Review	Six high risk communities are currently funded to examine confidential and de-identified cases of infant and fetal deaths. The purpose of these reviews is to understand how local social, economic, public health, educational, environmental and safety issues relate to the tragedy of infant loss in order to improve community resources and service delivery.
Healthy Choices for Women and Children	Provides intensive case management services to low income pregnant and post-partum women where they or their partners abuse substances or are at risk for abusing substances, in the city of Waterbury and surrounding communities.
Maternal and Child Health Information and Referral Services	DPH contracts with the United Way of Connecticut to administer the toll-free hotline that provides information and referrals on maternal and child health services.
Pregnancy Related Mortality Surveillance (PRMS)	OB/GYN consultant conducts maternal mortality reviews and based on findings provides education to medical providers to prevent future maternal deaths.
Right from the Start (RFTS)	Provides intensive case management services to pregnant and/or parenting teens at four sites throughout the state.
State Systems Development Initiative	Federally funded initiative designed to assist states with infrastructure development for MCH data needed to report on the Title V block grant. Connecticut pregnancy risk assessment tracking system (PRATS) was an activity conducted during previous funding cycles and the data currently being analyzed will provide information on pregnancy risk factors and birth outcomes.
Mortality and Morbidity Review Support Program	Federally-funded initiative, a DPH-convened interdisciplinary state case team to review maternal deaths. This program is no longer funded.
Pregnancy Exposure Information Services (PEIS)	Statewide toll-free number for pregnant women and healthcare providers concerned with the potential teratogenic effects of drugs, maternal illness and occupational exposure.

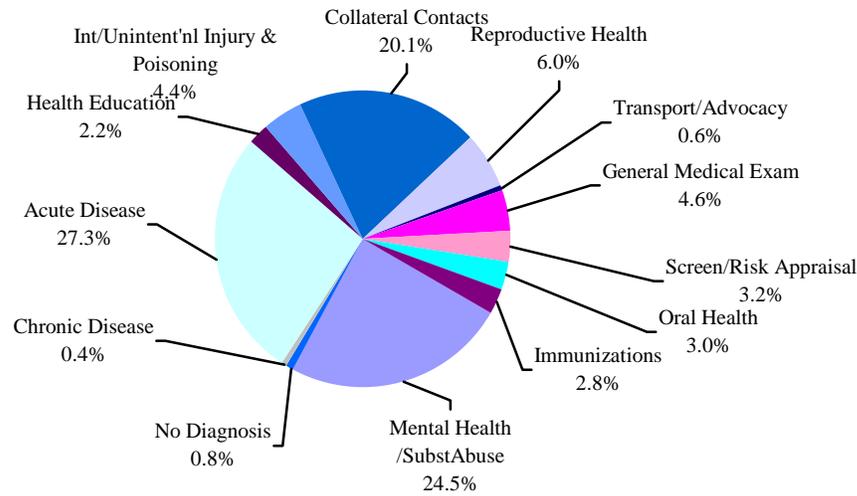
Universal Newborn Screening	Testing, tracking and treatment for all newborns for metabolic and hearing disorders.
Sudden Infant Death Syndrome (SIDS)	This program is no longer funded. Previous SIDS program activities which included evaluation and counseling for families experiencing sudden infant death, are being incorporated as part of the developing statewide bereavement services. Bereavement services will address the needs of all families experiencing the death of an infant up to age one.

School Based Health Centers (SBHC)

The goals of school based health centers are to provide comprehensive primary physical and mental health services to enrolled students; and to increase the capacity of the school and community to provide health education and promote the physical, mental and developmental health of all students in the school so that they are able to learn. There are 61 SBHC in the state located in the cities and urban areas of the state:

- ◆ SBHC have various levels of reproductive services:
 - Referrals only
 - Pregnancy testing
 - Family planning
 - Pelvic exams
 - Prescriptions for birth control only to dispensing supplies
 - STD testing
- ◆ Service levels are based on funding and what school boards will allow.
- ◆ Rural communities and small towns do not have access to school-based health centers.
- ◆ Family planning services represent a very small portion of health care services provided.

SBHC Visits by Reasons 2002-2003
 Source: Connecticut Department of Public Health



Community Health Centers

Community Health Centers throughout the state provide comprehensive medical care for infants and children, adolescents and adults, including prenatal and perinatal health care services. All centers are located in Health Professional Shortage Areas and/or Medically Underserved Areas. Primary centers are located in Bridgeport, Willimantic, Hartford, East Hartford, Middletown, New Haven, Norwalk and Waterbury, and satellite clinics are scattered throughout the state. Each center has an outreach worker who helps facilitate patients to enroll into HUSKY. All but one of the community health centers in Connecticut are members of the Connecticut Primary Care Association, which works closely with the Department of Public Health on initiatives that promote, inform, and develop community-based systems of care for vulnerable populations in the state.

Community Health Centers: Breakdown of Total Served

Total Served: 174,380 Women: 103,760 Men: 70,620

White:	55,691	African American:	39,380
Hispanic:	72,426	Other:	6,883

Barriers to care and gaps in services discussed by committee members include the following:

- ◆ *Lack of health care coverage for undocumented pregnant women and other noninsured groups during the perinatal period.* While community health centers serve all patients, regardless of insurance status or ability to pay, more funding for Medicaid outreach and perinatal education outreach is needed to target uninsured, undocumented, or homeless pregnant women of the importance of perinatal care and the services provided by community health centers.
- ◆ *Limited capacity to provide comprehensive case management services to women beyond post partum period.* Increase capacity of health centers and other MCH providers to provide intensive case management and follow up services for at-risk postpartum women and children.

Eight community health centers participate in the Health Disparities Collaborative which is a national initiative to improve healthcare to the chronically ill. The model of care is patient-centered with a team of interdisciplinary providers, data tracking of disease management and collaboration with community resources and organizations.

- ◆ *More institutional emphasis for MCH providers to follow national guidelines for maternal and child health.* Some providers may not follow guidelines for perinatal care.
- ◆ *There is a need for quality state and local data banks for tracking maternal and child health in Connecticut.* There is no standard data collection for surveillance and quality assurance for perinatal care across Connecticut.

Four community health centers have Federally-funded “Healthcare for the Homeless Programs” that provide health care at various homeless shelters and on the streets.

Right From The Start

This DPH-funded program provides comprehensive, integrated, community-based services to pregnant and/or parenting teenagers up to age 20 through an intensive case management model. Curricula materials are in English and Spanish. Right

From The Start is offered at four sites in Connecticut: Hartford (through the Village for Children and Families, Inc.), Hartford (through Wheeler Clinic), New Haven (through Student Parenting and Family services, c/o Wilbur Cross High School); and Norwich (through the City of Norwich).

Right From The Start programs are required to provide services that are comprehensive, culturally appropriate, and family friendly. Services include: intensive case management, outreach and case finding, public awareness, breastfeeding promotion, and integration of the Smoke-Free Families smoking cessation intervention model. Strengths of this program include home visiting, peer support groups, and dedicated staff knowledgeable of their community's resources.

Fetal and Infant Mortality Review Program

The Fetal and Infant Mortality Review (FIMR) Program is funded by DPH. Fetal and infant death affects approximately 500 Connecticut families each year. Loss during pregnancy and infancy encompasses many circumstances: early miscarriage, fetal death, stillbirth, Sudden Infant Death Syndrome, birth defects and chronic disease. FIMR programs are located in Hartford, Manchester, New Britain, Middletown, Willimantic and a Greater New Haven regional project that includes New Haven, East Haven, West Haven, Branford and North Branford.

FIMR identifies factors that contribute to fetal and infant death through an examination of vital records, patient chart reviews and interviews with families experiencing the loss. The FIMR project represents a much needed effort to further the knowledge of health care professionals and other providers who offer care and services for women and their families. FIMR also encourages communication and promotes community linkages between faith and other community based services, medical and mental health providers, and promotes greater access to health and support services. The information obtained from FIMR reviews is used to advocate for policies and programs that enhance the ability of local, regional and state systems to reduce racial and ethnic disparities and improve the health of women before, during and after pregnancy.

Limited grief and bereavement services for families with loss of a member and limited financial support for burial services are two major gaps in services.

There is a host of problems and challenges identified by advisory committee members confronting infant and fetal mortality in the state including:

- ◆ Lack of a uniform approach towards implementing community programs aimed at preventing fetal and infant deaths.
- ◆ No statewide uniform educational plan for consumers, police, clinicians (e.g. Shaken Baby Syndrome, Sudden Infant Death Syndrome).
- ◆ Birth and death certificates are often incomplete.
- ◆ Inadequate tracking of low birth weight and very low birth weight births.
- ◆ Disjointed approach towards regionalizing fetal and infant mortality surveillance.
- ◆ Insufficient child death review process.
- ◆ Data collected from state and local fetal/infant death files are inconsistent.
- ◆ Need to improve ascertainment of cases of maternal deaths.
- ◆ Improve quality of vital records data through provider & hospital education and enforcement of state regulations.

Best Practice: Perinatal Periods of Risk (PPOR)

PPOR is designed to enable a community to achieve a better understanding of infant and fetal mortality and its causes by examining the specific period in which the death occurred. By analyzing the prevalence of a variety of risk factors within each period of death, PPOR can facilitate better identification of groups that are at risk for adverse pregnancy outcomes as well as providing a clearer picture of the prevalence and significance of the social and medical risk factors that contribute to these events. In so doing, the community becomes better prepared to more specifically direct programs, policy and resources aimed at affecting change in that population. The Perinatal Periods of Risk Model is a research tool devised and coordinated by CityMatCH. It is funded and supported by the Centers for Disease Control and Prevention, the Health Resources Services Administration (HRSA) and the March of Dimes

The New Haven Health Department has continued to participate in the PPOR National Best Practice Collaborative. Recently the department has developed a

simple method to monitor and investigate perinatal mortality, identify gaps in the continuum of women's health services, target resources for prevention activities, and mobilize the community into action. During 2002 the Health Department established relationships with the Connecticut Department of Public Health to obtain computerized files for all live births, infant deaths and fetal deaths occurring to New Haven residents. The ability to obtain and work with birth and death files within a year of occurrence has enabled the city to draw conclusions from the analysis and make recommendations for action in real time.

Recommendations from the Connecticut Department of Public Health to promote institutionalizing the Perinatal Periods of Risk (PPOR) model for DPH state-funded FIMR programs:

- Conduct a workshop for FIMR programs to provide baseline education on PPOR and its complementary function with the FIMR process to the DPH funded FIMR programs, their CAT and CRT members, and share lessons from the New Haven Health Department's implementation of this process.
- Provide consultant services to FIMR programs to engage in the "readiness model" to determine feasibility of initiating PPOR and provide technical assistance for implementing the PPOR process in their communities.
- Create a computer pathway to link the vital records data files to the files in a CT FIMR access program with common identifiers.

Special Supplemental Nutrition Program for Women Infants and Children (WIC)

The WIC Program is for nutritionally at-risk pregnant, postpartum, and breastfeeding women, infants, and children up to 5 years of age. It provides specific supplemental foods for good health and nutrition during critical times of growth and development, and nutrition education and counseling. This Federal program is housed throughout the state in Bridgeport, Bristol, Danbury, Putnam, Rockville, East Hartford, Hartford, Fair Haven, New Haven, Meriden, Middletown, Naugatuck Valley, Norwalk, Stamford, Norwich, Torrington, Waterbury, and Windham.

Recommendations discussed by the Advisory Committee to bridge gaps in services include the following:

- Women need to be enrolled early and continuously throughout their pregnancy. Currently fewer than one-half of pregnant women enrolled in the WIC program did so during their first trimester.
- Breastfeeding support for low-income women is needed as demonstrated by the wide racial disparities in breastfeeding rates.
- Lack of norms in the state with regard to breastfeeding practices.
- New mothers should be discharged from the hospital with breast pumps and a lactation follow-up.

WIC: Breakdown of Total Served**Women: 13,487 Infants: 16,354 Children: 31,828****Family Planning: Planned Parenthood of Connecticut**

This organization provides reproductive health care for men and women across the state serving over 27,000 patients a year through 18 health centers. Planned Parenthood also offers family planning programs at Fair Haven Community Health Center, Hill Health Center, Women's Health Services, Hartford Hospital (Women's Health Center), Rockville Hospital, UConn/New Britain General Hospital.

Medicaid Family Planning waivers in California and other states have greatly increased access and reduced unintended pregnancy (See Guttmacher Report for March 2004 and study commissioned by the CMS)

The approach Planned Parenthood uses to prevent teen pregnancy is known as "social contraception." Prevention programs focus on after-school activities and other opportunities, develop skills on learning how to say "no" to sexual advances/relationships and self-esteem building; and provide access to contraceptives for those young women who decide to have a sexual relationship.

Gaps in services include:

- ◆ Provision of high quality translation services to an increasingly large number of non-English speaking patients.
- ◆ Increased number of undocumented individuals who are uninsured and not eligible for public assistance.
- ◆ High cost of new highly effective contraceptive methods that puts them out-of-reach for low income clients.

To reach the goal of decreasing the rate and number of teen pregnancies, especially unintended pregnancies, best practices include:

1. Provide comprehensive sexual health education including abstinence education beginning in the 6th grade.
2. Expand scope of services of school based health centers to permit practitioners to provide hormonal contraception on site.
3. Provide a variety of supports for teens after and during school hours aimed at facilitating high school graduation with clear post-graduation plans. Provide access to job training in all high schools, not just vocational-technical schools.
4. Enhance health care services for indigent teenage men including sexual health education and services, extending to discussion of the impact of the father on a pregnancy as well as on the life of a child.
5. For those pregnancies which are intended, facilitate adequate educational, and social service supports during and after pregnancy.

The Institute of Medicine report "Best of Intentions" shows that effective teen pregnancy prevention programs feature both abstinence AND information about condoms and birth control and where to obtain services. Also, studies show that comprehensive sex education does not encourage sexual activity.

Other State Agency Programs

The following is a summary of other state agency programs that serve women, children, and families. As previously mentioned, this information is limited, but provides an overview of other state-supported initiatives and services.

Department of Education

The Department of Education supports the **Young Parents Program** which provides day care services for children of students who are enrolled in a program of study leading to graduation from high school. These services are proposed by local and regional boards of education and regional education service centers. Total funding of \$259,000 supports 17 Young Parent Programs. Challenges include helping young parents remain in school while juggling multiple responsibilities and securing safe and affordable housing are major problems for teenage parents.

Abstinence-Only Programs in Bridgeport Middle Schools

In the most positive outcome of those evaluation findings reviewed, about one-half of the youth (51%) reported that the course changed their views on sexual behavior and that they would be less likely to have sex following the nine session course. However, 26% of youth who were over the age of 13 indicated that they had already engaged in sexual intercourse and 56% of these sexually active youth indicated that they did not use birth control the last time they had sex. *For more information see the Connecticut Association for Human Services evaluation report for the Bridgeport Abstinence-Only Program 2003-2004.*

Best Practice: The Polly McCabe Center, New Haven

The importance of school-based programs aimed at keeping young mothers in school is demonstrated by the **Polly McCabe Program** in New Haven. The program opened in 1966, serves 100 young women with education on prenatal development, labor and delivery, family planning, and infant care. Young women who attend the program for more than seven weeks are more likely to report avoidance of sexual activity in the subsequent 18 to 24 months. Followup studies show that among the children of mothers who attended Polly McCabe for at least seven weeks postnatal, only four percent were not ready for kindergarten, compared to 30% of the children whose mothers did not stay as long in the program. There was also a significant impact of the McCabe intervention on behavior outcomes for boys. Only 16% of the boys whose mothers stayed in the program were rated as having serious maladjustment problems at 6 years of age, compared to 48% of boys whose mothers had attended less than seven weeks at McCabe¹².

Department of Social Services

The Department of Social Services supports the **Fatherhood Initiative** for young fathers ages 17 to 30 years old. There are three pilot sites located in Norwich, Bridgeport, and Cheshire supported by approximately \$200,000 in state funding.

Madonna Place in Norwich provides support services to fathers who are separated or divorced with children less than 5 years of age. Support services include navigating the legal system for visitation rights and custody issues, as well as parenting skills.

Career Resources in Bridgeport works with fathers under the age of 23 by providing employment training to enhance the fathers' ability to financially support their children.

Families in Crisis in Cheshire works with fathers 18-21 years old who are incarcerated at the Manson Youth Institution with remaining sentence of less

¹² Research by Victoria Seitz, Ph.D. Department of Psychology, Yale University

than nine months by providing their children (along with a legal guardian) with transportation for visitation.

Real Dads Forever is a support group based in Manchester that receives funding from the Department of Social Services. Real Dads Forever has the goal of strengthening dads to enhance their ongoing emotional, spiritual, and physical relationships with their children. Its programs include:

- Real Dads Forever: A custom designed fatherhood development program from 5 to 20 sessions
- Make it Happen: the elements of a successful fatherhood
- Get off the Train: breaking familial and cultural cycles to change family direction
- Distinctions: a mom and dad workshop investigating parenting styles.
- Workplace Sensibilities: exploring workplace opportunities to become more father-friendly
- A Dad's 10,000 Touches: a school based workshop exploring the unique input a dad provides in his child's academic life.

The Department of Social Services also funds a **Teen Pregnancy Prevention Program** for students in grades 6th through 12th which is based on the nationally recognized Carrera Model. Thirteen cities in the state have a program and share the \$2,000,000 award allotment. There are seven program components offered at various levels depending on the program site.

Each site services 10 to 50 teenagers in the following towns:
 Bridgeport, East Haven,
 Killingly, New Britain, New
 London, New Haven, Norwalk,
 Norwich, Hartford, Stamford,
 Waterbury, West Haven,
 Willimantic

- Homework Help
- Family Life & Sex Education
- Job Skills
- Self Expression through the Arts
- Mental Health
- Sports and Recreation
- Life Skills

“Breaking the Cycle” Teen Pregnancy Campaign

Breaking the cycle is a citywide campaign in Hartford focused on reducing teen pregnancy. It is a partnership between the City of Hartford, the Hartford Action Plan on Infant Health, and the Hartford Public Schools. The target population includes adolescents in the Hartford area and adults who either work or volunteer with youth. Program components include: *“Let’s Talk,”* a new parent/child sexuality communication program; *Adult Advisors Academy*, a nationally recognized teen prevention program providing youth with the skills needed to delay parenthood until they are emotionally and financially ready; and *Postponing Sexual Involvement*, a national curriculum to help youth ages 10-12 understand and manage their emerging sexual feelings as well as resist social and peer pressure to engage in sex.

For more information, visit www.teenpregnancyhartford.org.

Best Practice: The Carrera Program Model

The Carrera Model is a holistic, long term approach to teenage pregnancy prevention. The program focuses on empowering youth, helping them develop a desire for a productive future, and assisting youth in improving their sexual literacy and understanding of the consequences of sexual activity. This is accomplished by focusing on academic success, meaningful employment, access to health care services, and interaction with adult role models. The program sees children as “at promise” rather than as “at risk.” The model includes five activities and two services as key program components. Dr. Carrera sees the sum of these activities as having a “contraceptive” effect:

The Carrera Program is characterized by the following:

- using a “parallel family systems” approach; staff treating children as if they were their own and viewing each young person as pure potential;
- using a holistic approach to young people which includes multiple services and which meets comprehensive interests and needs;
- continuous and long term contact with teens, characterized by individual planning and tracking 12 months a year through high school;
- services for young people, their parents, and adults in the community;
- use of a non-punitive, gentle, generous and forgiving approach, and
- reduction of program fragmentation by providing services under one roof in the participant's community.

A three-year random assignment evaluation of The Children's Aid Society's program at 12 sites in seven urban areas not only showed that the teen girls in the program were much less likely to get pregnant or give birth, but that they were

three times more likely than girls in the control group to have used highly effective contraception at most recent intercourse. The program was tested among 941 largely poor teens, aged 13 to 15 when first enrolled, in disadvantaged neighborhoods in seven urban areas of the United States.

Besides statistically significant reductions in pregnancy and births and improved contraceptive use among female teens in the program, these young women also had significantly better outcomes in: greater sexuality and reproductive knowledge, better health care usage, greater computer use, better preparation for and participation in employment, and making more college visits.¹³

The Department of Social Services also helps to support the state **Healthy Start** program, which has approximately \$1.26 million a year of funding. Healthy Start is a statewide network of services for low income pregnant and interconceptional women and their children who have a household income at or below 185% of the Federal Poverty Level and who are at risk of poor birth and health outcomes. Connecticut Healthy Start services include: community outreach, HUSKY application assistance, and care coordination/case management services for pregnant and interconceptional women and their children ages 0-2 years.

Connecticut Healthy Start Consortium Comprehensive Case Management Services

Contracts:

Bridgeport
Hartford
New Haven
Norwich
Waterbury

Subcontracts:

Bristol
Middletown
New London
Norwalk
Putnam
Stamford
Torrington
Willimantic

Services:

- Case finding
- Assessment/Screening/Advocacy/ Referral and follow-up
- Care coordination/Case Management
- Health Education
- Home visiting support services
- Services are competent to language, culture and diversity

Best Practice: New Haven Healthy Start

New Haven Healthy Start is a community-driven approach to reducing infant mortality and includes outreach, health education and awareness, and care coordination of services for pregnant women and their children up to the age of two. The goal of New Haven Healthy Start is to empower and build neighborhood support for families by developing a partnership with service providers to increase access to, and utilization of, health services and by establishing a forum where

¹³ For more information call Ellen Lubell, Director of Public Relations, 212-949-4938

consumers are active participants. The program works to empower the community by building on the best of cultures and traditions.

New Haven Healthy Start Consortium: Consumer representation on the consortium allows consumers to have a voice in determining what and how services are provided. Stimulated dialogue helps to enhance and strengthen the maternal and child health delivery system in New Haven.

Care Coordination: Utilizing Care Coordinators, Outreach Workers and Health Advocates, a seamless continuum of care for women in need of perinatal and interconceptional care services is provided. This approach is designed to retain patients in the healthcare system by helping clients to navigate the system of care.

New Haven Healthy Start Networked Data Management and Information System: Provides improved quality assurance and helps to increase “real time” availability of data for improved care coordination.

Department of Mental Retardation

A major state program that is funded by the Department of Mental Retardation is the **Birth to Three System**. Birth to Three provides services to children (ages 0 to 3) who have a developmental delay or who have a diagnosed condition with a high probability of leading to a developmental delay. In Connecticut, the Department of Mental Retardation is the lead agency, but services are delivered through 36 Birth to Three programs contracted to or operated by the lead agency. The total funding provided by the state is just over \$30 million and the federal government supports the system with \$5.1 million annually.

Department of Mental Health and Addiction Services (DMHAS)

The Department of Mental Health and Addiction Services supports residential and outpatient Specialty Programs for Women and Children. There is a total of \$1,537,065 state funding for the programs serving pregnant and postpartum women and children ages 15 months to 5 years. Eight residential sites are located in Stamford, Middletown, New Haven (2), Groton, Putnam, and Waterbury. The six outpatient sites are located in Norwalk, Bridgeport, New Haven, Groton, New Britain, and Danbury. The residential programs have recently been brought under utilization management of an Administrative Service Organization in order to avoid or minimize waiting lists. It is also important to note that women can also enter treatment in co-ed facilities where there are, in fact, many more women served annually.

Department of Children and Families

Programs supported by the Department of Children and Families include: Project Substance Abuse Family Evaluation (SAFE), Supportive Housing for Families (SHF), and Substance Abuse Families at Risk (SAFAR).

Project SAFE, started in 1995, provides priority access to drug screens, substance abuse evaluations and a variety of outpatient substance abuse treatment services to substance abusing primary caregivers on the DCF caseload. Two-thirds of the 9,100 individuals served by Project SAFE in FY 03-04 were women. Hartford and New Haven each have an Outreach and Engagement Team. These teams assist individuals and families in overcoming barriers that keep them from completing treatment or attending their substance abuse evaluations recommended by the DCF worker or court.

Supportive Housing for Families provides subsidized housing and case management services for the families of the children who are involved with DCF and whose parent is actively in addiction recovery or treatment for a serious mental health problem or other related problem. SHF is currently offered statewide and accesses housing vouchers from the Department of Social Services that are designated for child welfare clients.

There are 11 **SAFAR** programs across the state, located in nine of the 13 area offices (all except Danbury, Torrington, Meriden, & Stamford/Norwalk). They began in 1992 to meet the needs of substance abusing mothers & their young children. They were chosen by area offices to meet local needs for the target population served by these offices. They provide case management and support services to about 450 families annually, about half of whom are DCF-involved. About one-third of the children discharged in FY 03-04 were five years and under, and another one-third were unborn. The programs have started using the Ages and Stages Questionnaire to assist in the identification and referral of children under five who have developmental problems.

Types of services offered by SAFAR Programs include:

- Working with DCF's inner city families with in-home case management, support services, and groups and activities for parents & children (Bridgeport Community Health Center in Bridgeport and Family Life Education in Hartford).
- Working with pregnant and parenting teen mothers and their families, providing prenatal case management, groups and /or home visits (Wheeler Clinic in New Britain and Rockville General Hospital in Vernon and Manchester).
- Providing parenting, child care, family therapy, and/or parent education groups in three DMHAS-funded residential statewide substance abuse treatment programs for pregnant or parenting women and their children

(Crossroads and Amethyst House in New Haven and The Connection in Middletown).

- Providing in-home parenting, reunification and recovery support services to parents in recovery from alcohol/drug dependence (United Services in the Wauregan section of Plainfield).
- Facilitating the identification of a safe caregiver and placement of newborns born to mothers incarcerated at York Correctional Facility in Niantic. Staff from the hospital work with inmates during the prenatal period to identify a caregiver for the baby in order to avoid an automatic DCF referral. Prenatal education is provided for pregnant women as well as postpartum follow up (Lawrence and Memorial Hospital in New London).
- Providing child care and parent support services for DCF-involved infants and toddlers (Child and Family Agency in Southeastern Connecticut in New London).
- Providing in-home case management and support services to families with a newborn identified as high risk by DCF (Child Guidance Clinic of Greater Waterbury in Waterbury).

PROkids Plus Program, a comprehensive primary care program, works to enhance attachment relationships and promote resiliency in children born to substance-abusing mothers. It is based on the Empathic Care Model of intervention strategies and has four main components: enhancement of primary care, family development/home visit, collaboration, and advocacy. Children join the program between 0-3 months of age and are eligible for follow-up through their first three years. The program serves Hartford and the border towns and is based out of Connecticut Children's Medical Center (CCMC). It just completed a four-year federal funding cycle, with the support of DCF. Since September 30, 2004, PROkids Plus has been only partially funded, currently by the Connecticut Children's Medical Center. It is currently functioning at about one-half of its previous capacity while seeking additional funding.

IV. Strategic Perinatal Health Plan

The following section is the statewide perinatal plan developed by the Perinatal Advisory Committee during the August to November 2004 timeframe. The committee identified priority areas of focus which included reducing infant and fetal mortality, reducing poor birth outcomes particularly with regard to racial and ethnic disparities, and expanding the role of the father in perinatal health. There was also significant discussion regarding cultural competency with regard to program development, staff capacity, and provider awareness. This is a working document to guide the Department of Public Health over the next five years as they plan and develop perinatal health services in the state. The most immediate step for the Perinatal Health Strategic Plan is for the Commissioner of DPH to authorize the formal establishment of a *Statewide Perinatal Health Advisory Committee*. The committee will have oversight regarding this strategic plan and serve as a resource for perinatal health service delivery in the state.

The definitions used to develop the strategic plan include the following:

- ◆ **Goal:** a broad general statement concerning what is intended to be accomplished.
- ◆ **Objectives:** specific measurable statements of what the initiative will achieve in support of the goal.
- ◆ **Strategies:** specific methods, processes or steps used to accomplish – link the objectives to the goals.
- ◆ **Performance Measures:** help to establish evidence that an objective was achieved. Evidence can be derived from a measure (such as a survey) or indicator data from existing databases.

The Perinatal Health Advisory Committee did not view its role as including involvement in determining funding decisions for DPH or any other state agency. Therefore, objectives and performance measures are not always presented quantifiably or as measurable evidence. As stated above, the strategic plan is a working document to guide officials of DPH over the next five years as they plan and develop perinatal health services in the state.

Goal 1: Reduce perinatal health disparities, particularly preterm/low birth weight births and infant and fetal mortality between and among racial and ethnic groups.

Objectives	Strategies	Performance Measures	Responsible Agency or Department	Time Frame
<p>1. Assure that services are competent to language, culture and diversity, including health literacy.</p>	<p>a. Develop a health disparities curriculum and train perinatal providers including clinicians, community based organizations, consumers and paraprofessionals.</p> <p>b. Maintain the statewide Perinatal Advisory Committee (PHAC) that includes consumers, providers and community-based organizations (CBOs).</p> <p>c. Develop train-the-trainer program that includes the use of consumers as leaders.</p>	<p>a. 80% of the Title V Department of Public Health (DPH) programs, including Department of Social Services (DSS) subcontractors, will receive training on the health disparities curriculum.</p> <p>b. The PHAC will include diverse representation from consumers, providers, and CBOs and be sanctioned by the DPH Commissioner.</p> <p>c. Consumers are trained and empowered to manage roles within consortium – roles are clearly defined.</p>	<p>DPH in collaboration with DSS and the Perinatal Health Advisory Committee (PHAC).</p>	<p>Curriculum developed 2005</p> <p>Implementation 2006-2007</p> <p>June 2005</p> <p>Recruited and trained by 2006</p>

Goal 1 (continued): Reduce perinatal health disparities, particularly preterm/low birth weight births and infant and fetal mortality between and among racial and ethnic groups.

Objectives	Strategies	Performance Measures	Responsible Agency or Department	Time Frame
<p>2. Collaborate with CT Workforce Coalition to recruit people of color to enter the health care field, and to promote National Health Service Corps and DPH's state loan repayment programs.</p>	<p>a. Partner with other state agencies such as Department of Education (DOE) to identify resources currently in place to support skill development for people of color interested in the health care field.</p> <p>b. Expand DPH-funded programs that promote health careers for minority youth (i.e. CT Youth Health Service Corps).</p>	<p>a. Resource and opportunity inventory of programs and funding sources in the state.</p> <p>b. Youth programs are focused on supporting interest among minorities in health careers.</p>	<p>DPH in collaboration with DOE and DOL.</p>	<p>2005-2007</p>
<p>3. Encourage Title V program-funded staff to incorporate culturally-competent, evidence-based strategies and initiatives into their programs and services.</p>	<p>a. Programs will document culturally competent and developmentally appropriate strategies to address adverse pregnancy outcomes identified in Title V.</p> <p>b. Programs strive for demographics reflecting</p>	<p>a. 95% of Title V funded programs will receive an approval rating from DPH during their annual site visit on the Culturally Competent Assessment Evaluation.</p>	<p>DPH/Family Health Division.</p>	<p>2005-2006</p>

Goal 2: Improve access to a continuum of health care services for underserved and/or unserved women of child bearing age.

Objectives	Strategies	Performance Measures	Responsible Agency or Department	Time Frame
<p>1. Increase the percentage of women who receive early, timely and sufficient prenatal care by continued funding for programs such as Comadrona, Healthy Choices for Women and Children, and Healthy Start.</p>	<p>a. Socially promote the importance of early prenatal care and recognizing the symptoms of pregnancy for early diagnosis.</p> <p>b. Enhance pre-conceptional and prenatal health care to all women, especially those 35 years and older.</p> <p>c. Increase prenatal screening available for under/uninsured women.</p>	<p>a. Social promotion marketing plan is developed.</p> <p>b. Social promotion marketing plan will be developed.</p> <p>c. Establish baseline and assess where targeted interventions are needed.</p>	<p>DPH in collaboration with PHAC.</p>	<p>2006</p> <p>2008</p>

Goal 2 (continued): Improve access to a continuum of health care services for underserved and/or unserved women of child bearing age.

Objectives	Strategies	Performance Measures	Responsible Agency or Department	Time Frame
<p>2. Strengthen innovative case management and community outreach services to women and men to improve access to perinatal health care.</p>	<p>a. Utilize the existing statewide MCH infrastructure to identify/develop universal assessment protocols for pregnant and interconceptional women.</p>	<p>a. Universal protocol questions will be adopted and incorporated.</p> <p>80% of Title V DPH programs will provide screening for perinatal depressions, traumatic stress, domestic violence and basic needs.</p>	<p>DPH/MCH will monitor the implementation and the PHAC will evaluate effectiveness.</p> <p>Contractual program requirement by relevant state departments.</p>	<p>2005-2006</p>
	<p>b. Increase awareness of families new to the community of ways to access health care including Medicaid and community health centers (CHCs).</p>	<p>b. Currently funded MCH case management and outreach programs will spend at least 5% of their time conducting case finding activities by visiting non-traditional settings.</p>		<p>2006-2007</p>
	<p>c. Identify and evaluate outreach strategies to engage under/ unserved women, such as interagency efforts to transition women from correctional institutions back into the community.</p>	<p>c. Community-based providers will provide supportive services to women returning to the community from residential/institutional settings.</p>		<p>2006-2007</p>

Goal 2 (continued): Improve access to a continuum of health care services for underserved and/or unserved women of child bearing age.

Objectives	Strategies	Performance Measures	Responsible Agency or Department	Time Frame
<p>3. Explore/support the development of a Medicaid Family Planning Waiver (using the California model) that would subsidize a range of primary GYN services and family planning supplies for under-insured or uninsured women and men.</p>	<p>a. Encourage DSS to prepare a budget option for creation of the Medicaid Family Planning Waiver and identify resources needed to develop waiver.</p>	<p>Assign staff to work on waiver by 4-1-05.</p> <p>Submit waiver to CMS by 1-1-06.</p> <p>Waiver approved by 4-1-06.</p>	<p>DSS with input from DPH and community groups.</p>	<p>2005</p> <p>2006</p> <p>2006</p>

Goal 2 (continued): Improve access to a continuum of health care services for underserved and/or unserved women of child bearing age.

Objectives	Strategies	Performance Measures	Responsible Agency or Department	Time Frame
<p>4. Reduce provider related-barriers to ensure that adequate health care providers and facilities exist to make appropriate pregnancy-related and perinatal care available to Connecticut women and infants throughout the continuum of risk from basic to complex medical care.</p>	<p>a. Identification of provider-related barriers that interfere with access to care.</p> <p>b. Make recommendations/course of action steps to PHAC, Legislature, Commission on Women’s Health, DSS – HUSKY, March of Dimes about how to address gaps in providers and resources.</p> <p>c. Collaborate with the CT Health Care Workforce Shortage Coalition (AHEC).</p>	<p>a. Current and 5-year projected obstetric and newborn health care provider workforce needs are assessed.</p> <p>b. Plan of action with recommendations developed by PHAC and submitted to the appropriate state agencies.</p> <p>c. PHAC representation on the health care workforce coalition.</p>	<p>DPH in collaboration with Consortium membership (To Be Determined)</p>	<p>2005-2008</p>

Goal 3: Enhance and encourage male-partner involvement in the continuum of women’s health care from preconceptional, prenatal to postnatal periods.

Objectives	Strategies	Performance Measures	Responsible Agency or Department	Time Frame
<p>1. Raise awareness among health care and social services providers and among educators for the need and the barriers to men receiving preventive and reproductive health care.</p>	<p>a. Support conferences, training opportunities for program staff that focus on men’s health and its relationship to the health of their children.</p> <p>b. Support innovative prenatal care that involves men; as a best practice, for example, Department of Children and Families (DCF) Pro Kids Program.</p>	<p>a. Develop and implement outreach brochures for consumers and providers, participate in the Male Involvement Network established through the New Haven Family Alliance, and participate in the DSS-sponsored Fatherhood Initiative.</p> <p>b. A male-inclusive protocol in DPH-funded programs is developed and implemented and the ProKids Program is strengthened.</p>	<p>a. DPH in collaboration with DSS and Real Dads Forever and the Male Involvement Network located at the New Haven Family Alliance.</p> <p>b. DPH in collaboration with State Department of Education and Real Dads Forever. DPH in collaboration with DCF.</p>	<p>2005-2007</p>

Goal 3 (continued): Enhance and encourage male-partner involvement in the continuum of women’s health care from preconceptional, prenatal to postnatal periods.

Objectives	Strategies	Performance Measures	Responsible Agency or Department	Time Frame
<p>2. Encourage male involvement in reducing unintended pregnancies.</p>	<p>a. Develop culturally-competent messages for boys and young men emphasizing avoiding unintended pregnancies, contraceptive methods available, procreative awareness, and how to support their partner’s use of contraception.</p>	<p>a. Interventions are piloted in three urban communities and three small towns for their effectiveness.</p> <p>Determine the number of fathers to be educated and how they will be identified.</p>	<p>a. DPH in collaboration with DSS/Teen Pregnancy Prevention, SDE, DOL.</p>	<p>2005-2007</p>
	<p>b. Culturally competent programs will include career development, supporting education and planning for life goals.</p>	<p>b. Employment and educational interventions are incorporated as standard practice in pregnancy prevention.</p>	<p>b. DPH in collaboration with DSS/Teen Pregnancy Prevention.</p>	<p>2007-2009</p>

Goal 3 (continued): Enhance and encourage male-partner involvement in the continuum of women’s health care from preconceptional, prenatal to postnatal periods.

Objectives	Strategies	Performance Measures	Responsible Agency or Department	Time Frame
<p>3. Create a pilot Fatherhood Development Program with an emphasis on prenatal care.</p>	<p>2006 Program curriculum will include: empathy for mom, emotional attachment to fetus, fetal development, and planning for arrival of child emotionally, financially and physically.</p> <p>b. Use of interactive methods and visual aids to educate and prepare men for delivery of child.</p>	<p>a. Fathers will be educated in the physical, spiritual, emotional, and literacy areas of child development and their ability to enhance these areas of development as determined by program protocol will be promoted.</p>	<p>DPH in collaboration with PHAC.</p>	<p>2006</p>

Goal 4: Reduce pregnancies and poor birth outcomes among adolescents.

Objectives	Strategies	Performance Measures	Responsible Agency or Department	Time Frame
1. Support the work of school-based health centers that are addressing students' reproductive health care needs.	Promote comprehensive sex education throughout the high schools in the state.	Establish baseline and determine how to increase the number of public schools that implement the State Department of Education's guidelines for sex education.	DPH in collaboration with State Department of Education and PHAC.	2006-2008

Goal 4 (continued): Reduce pregnancies and poor birth outcomes among adolescents.

<p>2. Incorporate reproductive health care needs into well child visits through the transitional period from pediatrics to adult primary care.</p>	<p>a. Provide training opportunities for medical providers that cover adolescent health care and reproductive health care needs.</p> <p>b. Clarify state regulations regarding provision of confidential reproductive services to minors.</p> <p>c. Encourage the inclusion of reproductive health care services during well child and episodic visits.</p> <p>d. Enhance routine prenatal screening services.</p>	<p>a. Curriculum review of the state’s two medical schools. Endorse Category 1 CME units provided by the medical schools.</p> <p>b. Appropriate state agency approves PHAC interpretation of the regulations.</p> <p>c. Expanded billing codes identified and submitted to appropriate state agency.</p> <p>d. Baseline of pregnant women who receive prenatal screening and testing.</p>	<p>DPH in collaboration with American Medical Association and American Association of Pediatrics, Connecticut Chapters.</p>	<p>2006-2008</p>
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Goal 4 (continued): Reduce pregnancies and poor birth outcomes among adolescents.

Objectives	Strategies	Performance Measures	Responsible Agency or Department	Time Frame
3. Promote increased access to intensive case management (i.e. Carrera Model) for minority teenage women in urban communities.	Increase the capacity of intensive case management slots available.	Service capacity is increased by 10% annually. Evaluation component is developed in collaboration with the Carrera Model.	DPH in collaboration with DSS.	2006-2009
4. Engage and support parents in the initiation of parent child dialogue regarding sex and pregnancy, such as the Latino teen pregnancy study.	<p>a. Empower parents with tools to engage children in a culturally-appropriate and timely basis.</p> <p>b. Support efforts by faith-based communities to develop program to help parents and other adults talk to teens about sex.</p>	<p>a. Resources and tools shared with parents.</p> <p>b. Expertise made available to faith-based communities to design programs free of charge.</p>	DPH	2006

Goal 5: Reduce unintended pregnancies for all women.

Objectives	Strategies	Performance Measures	Responsible Agency or Department	Time Frame
<p>1. Preconceptional and interconceptional health care needs to be approached as a continuum of care (longitudinal view) to promote pregnancy planning and/or early confirmation of pregnancy, such as the New Haven Healthy Start Inter-conceptional Assessment Tools.</p>	<p>a. Enhance/expand the MCH infrastructure to target women between pregnancies and develop/adopt universal assessment protocols to identify needs during the interconceptional period.</p> <p>b. Identify at least 3 to 5 primary reasons for unintended pregnancies and target specific interventions accordingly.</p> <p>c. Collaborate with advocacy groups (PCSW) to expand Medicaid eligibility to parents within 185% FPL. Legislatively support a Family Planning Medical Waiver in the state up to 300%.</p>	<p>a. 35% of women receiving services from Title V DPH programs, will be assessed for need during the inter-conceptional period.</p> <p>b. Primary reasons for unintended pregnancies identified and interventions targeted accordingly.</p>	<p>DPH in collaboration with PHAC.</p>	<p>2005-2009</p>

Goal 5 (continued): Reduce unintended pregnancies for all women.

Objectives	Strategies	Performance Measures	Responsible Agency or Department	Time Frame
<p>2. Increase the availability of contraceptives.</p>	<p>a. Explore/support the development of a Medicaid Family Planning Waiver (using the California model) that would subsidize a range of primary GYN services and family planning supplies for underinsured or uninsured men and women.</p>	<p>Assign staff to work on waiver by 4-1-05.</p> <p>Submit waiver to CMS by 1-1-06.</p> <p>Waiver approved by 4-1-06.</p>	<p>DSS with input from DPH, community groups, and family planning agencies.</p>	<p>2005</p> <p>2006</p>

Goal 6: Reduce recognized birth-related risk factors for children with special health care needs.

Objectives	Strategies	Performance Measures	Responsible Agency or Department	Time Frame
<p>1. Decrease the number of premature births, which is a leading cause of developmental disabilities.</p>	<p>a. Identify local and regional risk factors through collection and analysis of local, regional, and statewide birth outcomes data (i.e. EVRS, death certificates, FIMR, perinatal periods of risk, and Birth Defects Registry.</p> <p>b. Create and implement local and regional prevention strategies aimed at preventing premature births based on risk identification in Strategy a.</p> <p>c. Enhance preterm birth risk identification and prevention research projects in the state and support their efforts (MOD, YNHH, UConn).</p> <p>d. Recruit and train</p>	<p>a. Increase the number of organizations currently conducting these activities and work to enhance their capacity.</p> <p>b. Develop baseline data representing preterm birth prevention strategies and their impact among specific target populations.</p> <p>c. Develop research partnerships (e.g. DPH, UConn, Yale, MOD, health departments, etc.) to facilitate obtaining grant funding opportunities.</p>	<p>DPH in collaboration with CMS, local health departments, FIMR.</p>	<p>2005-2008</p>

Objectives	Strategies	Performance Measures	Responsible Agency or Department	Time Frame
<p>1 (cont'd). Decrease the number of premature births which is a leading cause of developmental disabilities.</p> <p>2. Reduce poor neonatal outcomes secondary to birth injuries and congenital anomalies.</p>	<p>consumers through MOD, CBOs, FIMR, Healthy Start, etc.) to help create local, regional, and statewide plans focused on consumer education and awareness.</p> <p>a. Improve ability of all hospitals that provide OB care to meet ACOG guidelines for performance of emergency cesarean section.</p> <p>b. Review guidelines for maternal transfers to tertiary perinatal/neonatal centers for high risk antepartum, intrapartum & postpartum care.</p> <p>c. Assessment of</p>	<p>d. Enhanced educational opportunities for consumers that increase their understanding of psychosocial and medical risk factors for preterm birth.</p> <p>a. Provision of guidance for hospitals to make change to meet ACOG standards for performing emergency cesarean sections.</p> <p>b. Evaluation of need for creation of statewide guidelines governing transfers.</p>	<p>DPH in collaboration with CMS, local health departments, FIMR.</p> <p>DPH in collaboration with Connecticut Hospital Association (CHA), CSMS, CT ACOG, local health departments.</p>	<p>2005-2008</p>

Objectives	Strategies	Performance Measures	Responsible Agency or Department	Time Frame
<p>2. Reduce poor neonatal outcomes secondary to birth injuries and congenital anomalies (cont'd.).</p>	<p>current patterns of high-risk attendance and referrals including assessment of insurance, transportation, outreach, care coordination, and other factors impacting on access to high risk OB care.</p> <p>d. Assessment of current levels of test performance. Confirm that all OB providers are counseling patients regarding availability of these tests. Determine state of the art testing (what other diseases can be assessed through genetic screening?).</p>	<p>c. Facilitate access to high risk OB care for all women.</p> <p>d. Enhance genetic screening for all pregnant women including, ultrasound, quad screen, and amniocentesis for detection of abnormal chromosomes as well as specific diseases (i.e. – cystic fibrosis, Fragile X, Sickle cell).</p>	<p>DPH in collaboration with Connecticut Hospital Association (CHA), CSMS, CT ACOG, local health departments.</p>	<p>2005-2008</p>

Goal 7: Improve the state’s system capacity to collect high quality maternal child health data that is disseminated in a timely manner.

Objectives	Strategies	Performance Measures	Responsible Agency or Department	Time Frame
<p>1. Increase the timeliness of the state’s data review and analysis process so the professional community will have access to current perinatal information.</p>	<p>a. Develop and utilize software that does not allow for missing fields in EVRS data.</p> <p>b. Provide birth outcome data to local health departments for their own analysis.</p> <p>c. Reach consensus on definitions to be used consistently and yearly for comparison purposes.</p>	<p>a. Review of data collection forms, definitions and interpretations.</p> <p>b. Local health departments are provided with clear and specific instructions.</p> <p>c. Data collection methods are improved by complete and accurate information being recorded properly and submitted on time.</p> <p>Release of data is provisional for one year only.</p>	<p>Task Force assignment by DPH Commissioner.</p>	<p>2005-2007</p>

Goal 8: Improve access to mental health, substance abuse treatment and dental health services which can improve the overall health for pregnant and postpartum women.

Objectives	Strategies	Performance Measures	Responsible Agency or Department	Time Frame
<p>1. Increase the percentage of women who receive needed behavioral health services during the prenatal and interconceptional period, e.g. through replication of established models such as New Haven Healthy Start.</p>	<p>a. Utilize the existing statewide MCH infrastructure to cross-train paraprofessionals on Perinatal Depression Screening.</p> <p>b. Work collaboratively with DSS using 211-Infoline, to improve access to behavioral health services (using New Haven “Mom’s Hotline” as a model).</p>	<p>a. 80% of Title V DPH and DSS funded programs will receive training to provide perinatal depression screening.</p> <p>b. Evaluate current capacity for referrals and secure referrals for behavioral health services.</p>	<p>DPH in collaboration with DSS, 211-Infoline.</p>	<p>2005-2009</p>

Goal 8 (continued): Improve access to mental health, substance abuse treatment and dental health services which can improve the overall health for pregnant and postpartum women

Objectives	Strategies	Performance Measures	Responsible Agency or Department	Time Frame
2. Improve the ability of 200 providers to identify individuals with mental health, substance abuse, treatment and dental health needs and improve access to those services	<p>a. Support the creation and distribution of screening tools to identify individuals in need of services and the capacity to receive such services.</p> <p>b. Encourage Title V program providers to include 2 simple screening questions for depression during well woman and well child care visits.</p>	<p>a. Partner with DMHAS and DCF to address the demand for mental health and substance abuse services for pregnant and postpartum women.</p> <p>b. 85% of these providers agree to use the screening information obtained in their practice.</p>	<p>DPH in collaboration with DHMAS.</p> <p>DPH in collaboration with DOI, MCOs.</p>	2007-2009
3. Train 200 dentists and other oral health care specialists on the importance of treating pregnant women as well as the association between poor maternal oral health and preterm/low birth weight and early childhood caries.	a. Develop and implement CME training to educate obstetricians, dentists, and other well woman providers on the association of poor maternal oral health and preterm/low birth weight and early childhood caries.	a. 85% of the participants will agree on the evaluation that the training will be used in their practice.	DPH in collaboration with UConn Health Center/MCH, ACOG, MOD and AHEC.	2005-2006

Goal 8 (continued): Improve access to mental health, substance abuse treatment and dental health services which can improve the overall health for pregnant and postpartum women.

Objectives	Strategies	Performance Measures	Responsible Agency or Department	Time Frame
4. Increase access for pregnant women to receive oral health care services and treatment.	a. Explore the development of co-located oral health/obstetric services/well woman to enhance use of oral health by reproductive age	a. Best practice models are identified and incorporated in this strategic plan.	DPH in collaboration with PHAC.	2006

	<p>women, especially those who are pregnant.</p> <p>b. Investigate strategies for enhancing reimbursements to increase the Medicaid oral health providers in the state.</p>	<p>b. Increase rates of reimbursement for preventative and restorative oral health care.</p>		<p>2009</p>
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Goal 9: Improve inter-provider communication strategies regarding perinatal health care delivery.

Objectives	Strategies	Performance Measures	Responsible Agency or Department	Time Frame
1. Improve coordination of care among providers for women.	<p>a. Identify successful programs in state and out-of-state that address the barriers facing CT physicians.</p> <p>b. Determine primary barriers facing Connecticut's physicians to be addressed.</p>	<p>a. Promote program models that address the barriers to the coordination of care for CT physicians.</p> <p>b. Identification of barriers to be addressed.</p>	DPH in collaboration with PHAC.	2007
2. Improve timeliness of transfer of health information among the providers.	<p>a. Assess/inventory what hospitals and communities are currently doing to improve the way data is handled.</p> <p>b. Support the transfer of mother's health information to the pediatric providers to improve care coordination for the baby.</p>	<p>a. Improved documentation and communication systems that address pre- and postnatal care coordination.</p> <p>b. Increase the number of programs which develop linkages among providers and programs (i.e. private health care services, public or government funded community health services, hospital services).</p>	DPH in collaboration with CHA.	2008

V. *Maternal and Child Health Block Grant Performance Measures Related to the Perinatal Time Frame*

Of primary importance to the Perinatal Advisory Committee were the issues of reducing infant and fetal mortality, reducing unintended pregnancies for all women, reducing poor birth outcomes, especially with regard to racial and ethnic disparities, and expanding the role of the father in perinatal health care. The federal and state maternal child health performance measures as well as Healthy People 2010 objectives (listed below) were reviewed and discussed within this context.

National Performance Measure 1: The percent of newborns screened and confirmed with conditions mandated by their state screening program who receive appropriate follow up as defined by their state.

Current	100%
Goal	100%
HP 2010 Goal	100%

National Performance Measure 8: The rate of birth (per 1,000) for teens aged 15 through 17 years.

Current	14
Goal	13.6

National Performance Measure 11: Percentage of mothers who breastfeed their infants at hospital discharge

Current	73.2%
Goal	73.5%

National Performance Measure 12: Percentage of newborns that have been screened for hearing before hospital discharge.

Current	97%
Goal	99.9%

National Performance Measure 15: The percent of very low birth weight infants among all live births.

Current	1.5%
Goal	1.4%
HP 2010 Goal	0.9%

National Performance Measure 17: Percent of very low birth weight infants delivered at facilities for high-risk deliveries and neonates.

Current	87.5%
Goal	87.6%

National Performance Measure 18: Percent of pregnant women receiving prenatal care beginning in the first trimester.

Current	88.8%
Goal	89.2%
HP 2010 Goal	90%

State Performance Measure 4: The degree to which Title V Programs target service to racial and/or ethnic disparities in pregnancy outcomes.

Current	7
Goal	12

State Performance Measure 5: The degree to which DPH developed and implemented a statewide genetics plan. (Based on a scale of 1-10)

Current	8
Goal	10

State Performance Measure 6: The degree to which DPH has the infrastructure in place to collect and report accurate information on pregnancy-related mortality. (Based on a scale of 1-10)

Current	5
Goal	7

VI. *Summary and Future Steps*

The Perinatal Health Strategic Plan was developed within a larger context of maternal child health care planning on behalf of DPH. The Statewide Perinatal Health Plan is part of a broader state initiative that includes a five year MCH needs assessment for Title V. The information developed by the Perinatal Health Advisory Committee will help to fulfill the requirements of the five year needs assessment effort. Furthermore, the Family Health Division is collaborating with multiple partners within the agency, other state agencies, and with external community-based partners to conduct a community-centered MCH Needs Assessment. To maximize efficiency and effectiveness of funds within DPH, it is critical that any program within DPH that affects pregnant women, mothers, infants, children, and youth participate in this activity.

Title V of the Social Security Act requires that the state prepare a statewide needs assessment every five years that shall identify (consistent with health status goals and national health objectives) the need for:

- preventive and primary care services for pregnant women, mothers and infants
- preventive and primary care for children and adolescents; and
- services for children with special health care needs

An internal DPH MCH Needs Assessment Steering Committee has been established to determine the community-centered needs assessment structure, population subgroups, and establish DPH internal workgroups. These internal workgroups will gather and review data, and establish state priority needs based on DPH internal data. A draft summary of data and established state priority needs will be developed. The activities for the community-centered MCH needs assessment has begun and will conclude with the final report due in February 2005. The community-centered MCH needs assessment report must be submitted with the Federal Fiscal Year 2006 MCH Block Grant Application due on July 15, 2005.

A Community Partners Needs Assessment Steering Committee will be established to determine optimal methodology for gathering community input (such as identifying community data related to maternal and child health and commenting on the state priority needs established by the DPH internal workgroups), and to guide the subsequent review process. The draft summary of data and established state priority needs will be presented to the community according to the established process for comment and input. The state priority needs will be revised based on community feedback.

The most immediate step for the Perinatal Health Strategic Plan is for the Commissioner of DPH to authorize the formal establishment of the *Statewide*

Perinatal Health Advisory Committee to have oversight regarding this strategic plan and to act as an expert resource for the Department's decision-making responsibility regarding perinatal health service delivery in the state.

VII. *References & Resources*

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