AMCHP Case Study
The Healthy Women, Healthy Babies Program: A Delaware Case Study

Introduction
Improving women’s health before pregnancy can result in improved pregnancy outcomes for women and infants. Preconception care aims to promote the health of women of reproductive age before conception in order to improve pregnancy-related outcomes. Many states are integrating and implementing programs to address and improve preconception health and health care. State Title V agencies serve a pivotal role in guiding policies and programs toward a focus on preconception care.

Recent courses of action within the state of Delaware illustrate this point. In 2004, Delaware’s then-Governor, Ruth Ann Minner, appointed an Infant Mortality Task Force (IMTF) to investigate the reasons for Delaware’s increasing infant mortality rate. In May 2005, the IMTF issued a report that included 20 recommendations to reduce the number of Delaware babies who die before their first birthday (infant mortality) and eliminate the racial disparity in the rate at which these babies die. In addition, the Delaware Healthy Mother and Infant Consortium (DHMIC) was launched as a successor to the IMTF to advocate for, and oversee, the implementation of the recommendations of the Task Force. In 2009, the DHMIC established the Healthy Women, Healthy Babies (HWHB) plan as a statewide preconception health care program to meet the needs of many of the report’s recommendations.

The HWHB Program
Overall, the HWHB program provides preconception and prenatal care for women who are at risk for poor birth outcomes. The program targets African-American women as well as women whose most recent pregnancy resulted in a poor birth outcome. The risk factors that providers are looking for when enrolling women into this preconception care service include:

- BMI greater than or equal to 30
- Chronic disease (diabetes, hypertension)
- Federal poverty level at or below 300 percent
- High stress (based on a self-reported Perceived Stress Scale)
- Late entry into prenatal care (after first trimester)
- Maternal age under 18 or over 35
- Mental illness (based on clinical diagnosis and/or self-reported Patient Health Questionnaire)
- Risk for birth defects

Through the HWHB framework, women receive a broad set of American College of Obstetricians and Gynecologists/Centers for Disease Control and Prevention/United States Preventive Services Task Force-mandated preconception services at participating clinic sites located throughout the state of Delaware. The Delaware Division of Public Health (DPH) reimburses the sites based on the four bundled service options available to women in the program. These bundle services are defined as follows:

- **Bundle Service A: Preconception Care.** Includes services for clinical interventions, risk assessment and health promotion
- **Bundle Service B: Psychosocial Care.** Includes mental health services
- **Bundle Service C: Prenatal Care.** Includes services for prenatal care and interconception visits
- **Bundle Service D: Nutritional Care.** Includes services for nutrition and obesity prevention services

The HWHB Program within the MCH Priorities for the State of Delaware
In addition to responding to the recommendations in the IMTF report, the HWHB program aligns with and answers to several of Delaware’s state priority needs for 2010. The HWHB plan addresses three of the 10 priority needs established by Delaware’s 2010 MCH Needs Assessment Workgroup. These specific priority needs and the performance measures assigned to each of them include:

1. **Infant Mortality:** Reduce infant mortality and eliminate the disparity in infant mortality for Black women.
2. **Low Birth Weight/Prematurity:** Reduce low birth weight deliveries and births occurring between 32 and 36 weeks gestation.
3. **Obesity Among Women of Childbearing Age:** Decrease obesity among women of childbearing age, that is, women between the ages of 15 and 44.

In the context of the MCH Pyramid of Health Services, the HWHB program provides for direct and enabling health services.

The HWHB Program and the Life Course Approach
One of the noteworthy features of the design of the HWHB program is its alignment with the life course approach, a model that conceptualizes birth outcomes as the end product of the entire life course of the mother leading up to the pregnancy
and not simply only the nine months of pregnancy. The life course approach recognizes that a multifaceted interaction of behavioral, biological, environmental, psychological and social factors contribute to health outcomes throughout the course of an individual’s life. Recent public health and social science literature suggests this model to be a robust indicator of individual and community health and encourages its application in the health care field.

As demonstrated by its underlying conceptual framework (shown below), the HWHB program aligns with the tenets of the life course model. The preconception program gives enrolled women the tools to maintain a healthy weight, eat a nutritious diet, include adequate amounts of folic acid daily, manage chronic disease, understand and mitigate environmental risk factors around them and work toward achieving or maintaining a tobacco and substance free lifestyle. Through these highly vetted and comprehensive efforts, the HWHB program helps enrolled women meet both the objectives of their respective reproductive life plans and personal health goals.

The Next Steps for the HWHB Program
A detailed evaluation plan has been designed for the HWHB program. The evaluation plan focuses on both the short-term outcomes of the HWHB program (i.e., improved health measures of the enrolled women) as well as the long-term outcomes (i.e., reduction in poor birth outcomes). Once implemented, this plan will continuously help the state of Delaware enhance its maternal and child health indicators and programs. Moreover, the evaluation will provide a framework to the greater MCH community on how to effectively implement a large-scale preconception care program.

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Association of Maternal & Child Health Programs
2030 M Street, NW, Suite 350
Washington, DC 20036
(202) 775-0436 • www.amchp.org

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HWHB Conceptual Framework

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<th>Activities</th>
<th>Outputs</th>
<th>Intermediate Outcomes</th>
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<tbody>
<tr>
<td>Clinical care</td>
<td>Reproductive health plans</td>
<td>• Decrease BMI</td>
<td>• Decrease in LBW and VLBW babies</td>
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<td>Risk reduction</td>
<td>Number of preconception or interconception visits</td>
<td>• Increase in proper nutrition</td>
<td>• Decrease in premature births</td>
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<tr>
<td>Health promotion</td>
<td>Number of risks and barriers to care</td>
<td>• Increase in proper birth spacing</td>
<td>• Decrease in birth defects</td>
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<td>Mental health</td>
<td>Number of clients in case management</td>
<td>• Increase in diagnosis and treatment of depression</td>
<td>• Decrease in disparity ratio of poor birth outcomes</td>
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<td>services</td>
<td>• Number of clients receiving mental health services</td>
<td>• Increase in parenting self-efficacy</td>
<td>• Decrease in infant mortality</td>
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<tr>
<td>Nutrition services</td>
<td>• Number of clients receiving nutrition services</td>
<td>• Increase in early entry into prenatal care</td>
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<td>• Increase in planned pregnancies</td>
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1 Recommendations to Improve Preconception Health and Health Care - United States: [http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5506a1.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5506a1.htm)
2 State of Delaware 2010 Title V MCH Needs Assessment.