INTRODUCTION

When a baby is born too early and too small, it impacts both the family and the community. Prematurity is currently the leading cause of newborn death in the United States. The average hospital cost for a preterm baby is $77,000 as compared with $1,700 for a baby born without complications; preterm babies have higher rates of health problems such as cerebral palsy, mental retardation, and learning disabilities, meaning that the cost of prematurity often continues long after the baby leaves the hospital. Communities struggle to provide special education, and health and social services to children and adults suffering the lingering, and often, lifelong effects of being born before full term. Premature birth is a growing problem in the United States, where the rate increased 27% between 1982 to 2002.

African American and Latino babies are far more likely than white babies to be born too early and too small—and the gap is growing. Rates of prematurity and low birth weight are important measures of a community’s health. High or increasing rates of prematurity and low birth weight, particularly in families of color, can be indicators of serious problems with accessibility to and quality of health care.

Although Chester County residents have excellent health outcomes when compared with state and national health outcomes, women and infants of color in Chester County have outcomes that are far worse than their white neighbors.

Ten years after Maternal and Child Health Consortium (MCHC) initiated our Healthy Start program to improve the health of Chester County’s most vulnerable and underserved families, we wanted answers to these questions:

■ What were some of the differences in health outcomes for Healthy Start infants?
■ Has Healthy Start closed the gap in health outcomes for African American and Latino women?
■ Which Healthy Start services have made the greatest difference?

This report describes the answers to these questions and the difference Healthy Start has made in the lives of women and children.

WHAT IS HEALTHY START?

MCHC’s Healthy Start program is a countywide prenatal and postpartum home visiting and case management program that helps promote safe pregnancies and deliveries for low-income women and prompt enrollment
of children into pediatric care and health insurance programs. Studies have found home visiting to be a cost-effective, community-oriented approach that improves the health of mothers and children, including infant cognitive and socio-emotional development, parenting behaviors and attitudes, and child abuse prevention. At the heart of Healthy Start are 11 Family Health Advocates (Advocates), most of whom are bilingual and bicultural. These dedicated women are trusted members of the communities where they live and work, and provide the compassionate mix of emotional support, health information and referrals essential to a healthy pregnancy. Reflecting the ethnic and cultural characteristics of their communities, Advocates provide a culturally sensitive link between expectant mothers and a complex health care and social service system.

**EVALUATION METHODOLOGY**

In 2005, through funding from Hispanics in Philanthropy Funders’ Collaborative for Strong Latino Communities in Philadelphia and the federal Healthy Start program, MCHC commissioned an independent evaluation to determine the impact of our Healthy Start program on maternal and child health outcomes. Linda Hock-Long, Ph.D., Director of Research for the Family Planning Council of Southeastern Pennsylvania conducted the quantitative evaluation of maternal and child health outcomes. The data sources used included Healthy Start program data and electronic birth records from the Pennsylvania Department of Health’s Division of Health Statistics. Data from 2,435 births (1996 to 2005) to Healthy Start participants were compared with data of Chester County “non-participants” who gave birth during this same period. This report focuses on Healthy Start participants compared with community residents who gave birth during the same time period and live in the same Chester County communities where Healthy Start participants reside.

Debra Bill, MPH, Ph.D., CHES, Associate Professor, Department of Health, West Chester University conducted the qualitative component of the evaluation. Dr. Bill conducted two focus groups in Kennett Square and Coatesville to better understand Latino women’s perceptions of their experiences with Healthy Start.

"My Advocate helped me so much when I was pregnant ... I could call her any time with a question and she would call me back right away. She checked in with me to see if I was OK during my pregnancy and if I kept my [prenatal] appointments. She helped me find a pediatric doctor to help my baby who needed surgery."

—Focus Group Participant & Healthy Start Mom

**KEY FINDINGS**

The impact of the Healthy Start program has been sustained over ten years and has been far-reaching in improving health outcomes for participants. This impact was achieved during a time span when a complicated health system was becoming more complex, especially for low-income women.

Key findings in outreach and health outcomes include the following:

**Outreach**

Healthy Start was successful at reaching and enrolling women at highest risk for poor health outcomes. During the period of 1996 - 2005:

- 81% were Latino or African American
- 38% had one or more medical risk factors
- 61% had not completed 12 years of education
- 60% were not receiving prenatal care at time of enrollment (98% were linked to prenatal care)
- 66% had no health insurance at time of enrollment (98% obtained Medicaid or Emergency Medicaid health insurance coverage)

"She who has health, has hope; and she who has hope, has everything."

—Arabian Proverb
Preterm and Low Birth Weight Outcomes

Healthy Start participants had rates of low birth weight and preterm birth that were consistently better than national, state, and local rates. The following charts provide more detail about how low birth weight and preterm rates compare among different populations.

Definitions:

**Low Birth Weight** - When a child is born at less than 5 pounds 8 ounces (or 2500 grams).

**Preterm or Premature Birth** - When a child is born less than 37 weeks after conception.

For the time period of 1996-2005, the preterm birth rate for Healthy Start participants was 7.3% and surpassed the Healthy People 2010 objective to reduce preterm births to 7.6% of all births.
Nationally, preterm birth rates for African American and Latino infants did not change very much during the time period of 1996-2005 (17.5% for African American and 11.5% for Latino). Likewise, Pennsylvania rates did not change very much (15% for African American and 11.8% for Latino) for the same time period.

For the time period of 1996-2005, the average preterm birth rate for African American Healthy Start infants (7.8%) was much lower than the average rate for African American babies living in the Healthy Start community area (12.8%). The average preterm birth rate for Latino Healthy Start infants (6.5%) was lower than the average rate for Latino infants in the Healthy Start community area (9.0%).

### Potential Preterm Births Prevented 1996 - 2005

<table>
<thead>
<tr>
<th></th>
<th>Potential Preterm Births Prevented 1996-2005</th>
<th>Estimated Cost Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>21</td>
<td>$1,617,000</td>
</tr>
<tr>
<td>Latino</td>
<td>40</td>
<td>$3,080,000</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>$4,697,000</td>
</tr>
</tbody>
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Healthy Start efforts helped to prevent an estimated 61 preterm births during 1996-2005 with significant estimated cost savings of $4,697,000.

### Low Birth Weight Rates 1996 - 2005

Between 1996 and 2005, 5.6% of Healthy Start infants were born at a low birth weight. This was just above the Healthy People 2010 national goal that low birth weight rates be reduced to 5%.
For the years 1996-2005, the average low birth weight rate for African American Healthy Start infants was 7.8%, much lower than the average low birth weight for Chester County infants residing in the community area (12%). For the same time period, the average low birth weight rate for Latino Healthy Start infants was also significantly lower (4.5%) than the low birth weight rate for Latino infants residing in the community area.

Given the significance of lower preterm and low birth weight rates for Latino and African American women enrolled in Healthy Start shown over ten years, it will be important to conduct future investigations to better understand the impact of the Healthy Start program on maternal and child health outcomes.

**FACTORS CONTRIBUTING TO OUR SUCCESS**

Culturally Responsive Staff. Advocates represent, especially for new immigrants, a culturally-effective method to provide outreach, education, advocacy, and access to healthcare for pregnant women. Providing accessible services in the home removes multiple access barriers to care for many low-income families. Advocates (known as “Promotoras” in the Latino community) are used extensively within the public health system in Mexico because they are effective change agents and are cost-effective.

Strong Outreach Component. Advocates establish strong personal contacts with community leaders, church leaders, business owners, and health and social service agency staff. These individuals, in turn, through personal contacts with women, refer pregnant women to Healthy Start. About 50% of referrals are from community-based agencies and 42% are from “word of mouth” referrals from current and former Healthy Start participants.

Co-located With Network of Five Accessible, Community-Based Offices. To help integrate services, Healthy Start sites are located in close proximity to other services provided to community women, such as a migrant health center, a community center, a social service agency, hospitals, WIC or a family planning agency.

Comprehensive Training Program for Home Visitors. Advocates receive a comprehensive, standardized training and ongoing in-service education to assure that they are well-trained and well-prepared for their jobs.
Training components include: Cultural Effectiveness; Interpersonal Communication; Screening and Assessment; Health Issues Related to Pregnancy; Infant and Child Development; Parenting Information; and Community Resources.

### Tangible Services That Women Value.
Advocates provide four key services that participants highly value including home visits, access to health insurance, medical interpretation services, and transportation assistance.

## HEALTHY START SERVICES

### Strategies That Work

<table>
<thead>
<tr>
<th>LINKING TO NEEDED RESOURCES</th>
<th>REDUCING BARRIERS</th>
<th>EMOTIONAL AND SOCIAL SUPPORT</th>
<th>HEALTH EDUCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary and Specialty Healthcare</td>
<td>Health insurance enrollment</td>
<td>Peer “maternal role models”</td>
<td>Pregnancy/Labor &amp; Delivery</td>
</tr>
<tr>
<td>WIC (Women, Infant &amp; Children) nutrition program</td>
<td>Medical interpreting</td>
<td>Non-judgmental listening</td>
<td>Child Development</td>
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<tr>
<td>Mental Health</td>
<td>Translation of medical documents, insurance forms, etc.</td>
<td>Guidance</td>
<td>Parenting</td>
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<tr>
<td>Social Services</td>
<td>Transportation assistance</td>
<td>Hope</td>
<td>Life Long Wellness</td>
</tr>
<tr>
<td>Community Services</td>
<td>Cultural Effectiveness Training</td>
<td>Encouragement</td>
<td>Smoking Cessation</td>
</tr>
</tbody>
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2. National Center of Health Statistics. Health, United States 2005 with Chartbook on Trends in the Health of Americans. Hyattsville, Maryland 2005. Preterm birth rates have gone up over time due in part, to the increase in multiple births resulting from the wider use of infertility treatments and technology that improve the likelihood that high-risk pregnancies result in viable births.
3. The national Healthy Start Initiative was established in 1991 under the U.S. Health Resources and Services Administration (HRSA). Maternal and Child Health Bureau to reduce racial, ethnic, and economic disparities in perinatal health service use and perinatal health outcomes. MCHC was awarded initial funding from the Robert Wood Johnson Foundation Local Initiatives Funding Partnership in 1995, and HRSA funding in 1997, to establish Healthy Start outreach, case management, and education services in economically poor and racially/ethnically diverse communities with disproportionately high rates of inadequate prenatal care and adverse birth outcomes.
6. Dr. Bill presented her findings in two reports:
7. Healthy People 2010 is a set of national health objectives designed to identify the most preventable threats to health and to establish national goals to reduce these threats. More information is available at www.healthypeople.gov.
8. Multiply number of preterm births averted by $77,000 average hospital costs as determined by March of Dimes research.
9. The following calculation was used to derive the estimated number of African American preterm births prevented (21): Multiply the preterm birth rate of African American community residents that did not enroll in Healthy Start (12.8%) by the number of African American Healthy Start participants served (411) which equals 53. We then subtract 32 (the number of preterm African American Healthy Start infants) from 53 and arrive at 21 potential African American preterm births prevented.
10. The following calculation was used to derive the estimated number of Latino preterm births prevented (40): Multiply the preterm birth rate of Latino community residents that did not enroll in Healthy Start (9.0%) by the number of Latino Healthy Start participants served (1,574) which equals 142. We then subtract 102 (the number of preterm Latino Healthy Start infants) from 142 and arrive at 40 potential Latino preterm births prevented.
11. A review of research released in May 2007 supports the use of community health outreach workers as a method to increase the rate of participation in health screenings and health care, especially for child and maternal health. Wasserman, M. “Use of Preventive Maternal and Child Health Services by Latina women: A Review of Published Intervention Studies.” Medical Care Research and Review, 2007, 64, 4-5.