

Community Health Program Planning 2009: Field Action Report

Health Outreach to Reduce Low Birth Weight in New Haven, CT

Facing budgetary limitations, the New Haven Maternal and Child Health Department considers ways to improve its outreach strategy to target women at risk for low birth weight

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New Haven, CT has been a site of emphasis for interventions to reduce poor birth outcomes since 1989, when New Haven had the highest infant mortality rate among cities with more than 100,000 people at a rate of 18.5 infant deaths per 1,000 live births¹. In spite of an increase in enrollment and additional funding and resources, the fetal and infant mortality rates, and incidence of low birth weight have not shown significant improvement or have increased over the past five years.

The New Haven Health Department wanted to know how it could improve its outreach strategy to better target women at risk for low birth weight and other poor birth outcomes. A team of four students performed an evaluation of the department's outreach efforts, using data on birth outcomes in New Haven for 2000-2005, focus group and individual interviews with outreach workers, and mapping of priority areas and outreach sites. The evaluation found that department should focus its outreach efforts on women with specific risk factors and those who live in specific geographic areas in order to target women who are at greatest risk. Several of the recommendations add new information to the risk profile and contradict previous perceptions.

The Maternal and Child Health Department of the New Haven Health Department (NHHD) is a site of both federal and state Healthy Start programs. Facing budgetary limitations, the department must act strategically to leverage existing resources to address the rising health burden posed by low birth weight in New Haven, CT. Maria Damiani, the Interim Director of the Women's and Maternal and Child Health Department, requested an evaluation of the current MCH department outreach strategy.

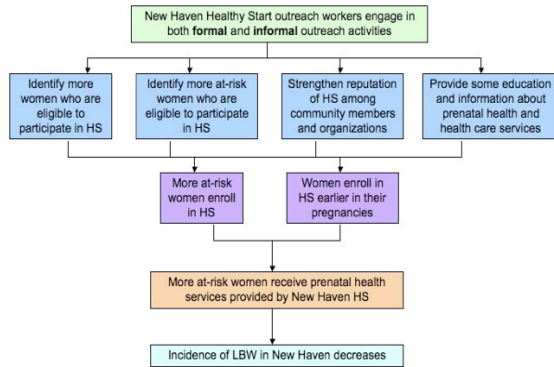
A team of four MPH candidates used available community-level data in an analysis to inform outreach targeting and implementation. The goal was to enable the New Haven Health Department to maximize outreach and case management resources by identifying and prioritizing populations at highest risk for negative health outcomes. It was assumed that once women enrolled in the MCH programs, the program would have a measurable impact on reducing the rate of low birth weight of participants. This assumption was based on a recent evaluation of the Connecticut state Healthy Start program, which found that enrollment in Healthy Start reduced the prevalence of low birth weight from 8.6 percent to 8.0 percent.

The study included three components: (1) Analysis of vital statistics data for 2000-2005 to determine risk factors for low birth weight in New Haven, (2) Qualitative interviews of staff who conduct outreach to understand the current strategy and (3) Mapping of high-risk neighborhoods for LBW and MCH outreach sites. Potential areas for improvement in the MCH outreach strategy to identify women at risk for LBW were identified.

Results

Program Theory

The following diagram demonstrates the program theory for how MCH/Healthy Start outreach efforts affect low birth weight.



Focus group and interviews

Results from the group interview elucidated the processes involved in the program's outreach efforts. Outreach workers and case managers for Federal Healthy Start and the MANOS program (Maternal and Newborn Outreach Services) shared information concerning services provided, referral agencies, agencies to which women are referred, participant characteristics, and perspectives on barriers to access.

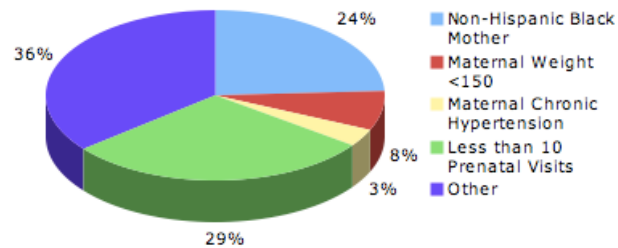
The Maternal and Child Health Division provides services that include distribution of educational materials and literature. Most referrals come from partner hospitals, medical liaison, case management, CBO referrals and the New Haven Health Department's HUSKY Application Assistance Program. The most common perceived method of referral was word of mouth.

Other means by which referrals were made were through hospitals, hotlines, schools/universities, government agencies and services, shelters, food banks and grocery stores. It was unanimous that there are women who are eligible for MCH services but do not participate. This was believed to be due to time constraints, fear of the program being linked with the Department of Children and Families (DCF), mental health issues, and language and cultural barriers that prevent effective communication.

Data Analysis

The following diagram demonstrates the population attributable risk percentages for LBW that were observed in the data analysis. Non-Hispanic Black women accounted for 24% of the population attributable risk and having fewer than 10 prenatal visits accounted for 29% of the population attributable risk.

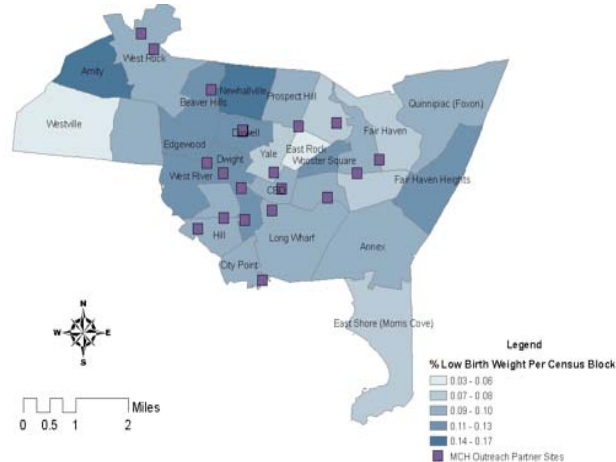
Figure 1. Population Attributable Risk for LBW in New Haven, 2000-2005.



Mapping

The following diagram demonstrates the proportion of LBW births from 2000-2005 by neighborhood in New Haven. The neighborhoods with the highest proportion of LBW births were Amity, Beaver Hills, Dwight, Edgewood, Fair Haven, Fair Haven Heights, Newhallville and Quinnipiac. Priority tracts without any outreach partner sites were Amity, Fair Haven Heights, Newhallville, and Quinnipiac.

Figure 2. Map of Percentage of Low Birth Weight Per Census Block, by Neighborhood, 2000-2005, with MCH Outreach Partner Sites Identified



Key Findings

- The most important risk factors for LBW in New Haven include living in a high risk area, maternal African-American race, maternal chronic hypertension, deceased siblings born alive, and being over age 35.
 - The most important protective factors for LBW in New Haven include having 10 or more prenatal visits.
 - Four neighborhoods with the highest proportion of LBW need to receive additional MCH outreach efforts: Amity, Fair Haven Heights, Newhallville, and Quinnipiac.
 - NHHD can improve its outreach strategy to target women with the most important risk factors and women in priority neighborhoods. Outreach workers should also strongly encourage women to have at least 10 prenatal visits.
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Evaluation and Discussion

The findings of this research project are important but also subject to the following limitations:

- Project was focused on low birth weight alone: MCH department is also focused on other negative health outcomes
- Focus group and individual interviews were subject to time limitations. The comments from interviewees and the notes taken by the researchers may not completely describe all outreach efforts and may be inaccurate or biased.
- Researchers were not able to access Healthy Start enrollment data. The correlation between outreach efforts and program enrollment is unknown.
- Any issues with the validity of the database are unknown.

The following recommendations were made in conjunction with NHHD MCH outreach workers, Maria Damiani, and other program staff and administrators:

- Collaborate with Yale on racial disparities research
- Prioritize high risk women for outreach
- Identify resources in high risk areas
- Link with other services
- Emphasize frequent prenatal visits
- Evidence-based outreach that is focused and deliberate

Next Steps

In April, 2009 the research team presented the results of this evaluation and discussed recommendations with NHHD MCH administrators and outreach workers. The MCH department will create a work plan to implement the recommendations made in this report. Outreach workers will attempt to implement recommendations and will have the support of administrators in their efforts.

References

Daponte, B et al., "An Examination of Connecticut's Healthy Start Program, 2006-2007." 10 December 2008.

Reguero, W and M Crane. "Project MotherCare: one hospital's response to the high perinatal death rate in New Haven, CT." *Public Health Reports*. 1994 Sep-Oct; 109(5): 647-652.

Resources

National Healthy Start Association

<http://www.healthystartassoc.org/>

New Haven Health Department

<http://www.cityofnewhaven.com/Health/>