



Healthy Women, Healthy Futures

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Healthy Women, Healthy Futures (HWHF) is an interconception program offered to mothers living in poverty who have children attending selected early childhood education centers (ECE) in Tulsa, OK. A program of the University of Oklahoma College of Nursing, HWHF is funded by the George Kaiser Family Foundation. The program collaborates with Educare and the Community Action Program of Tulsa to facilitate women's access to medical homes and comprehensive primary care (including vision and dental services). In addition, culturally relevant group health classes are provided on site at the ECEs for one hour each week in English and Spanish by HWHF Nurse Educators. The evidence-informed curriculum, developed by the Nurse Educators, is offered at participants' literacy level and has shown to be effective by the subsequent measurement of changes in participants' lifestyles and physiologic measures. Health navigation (case management) is provided to participants and includes home visitation. At program admission, a team consisting of the Nurse Educator, Health Navigator, and participant develop an individualized health plan, including a reproductive life plan, which is reviewed every six months, and revised as needed. Individualized disease self-management education is provided by Nurse Educators for those with a chronic condition such as diabetes, hypertension and asthma.

HWHF was initiated in October 2008 as a demonstration project focused on addressing Tulsa County's high and disparate fetal-infant mortality revealed by a Perinatal Periods of Risk analysis (PPOR). Women's pre-pregnancy health (41%) was the most influential factor contributing to these deaths and reflects Oklahoma's rank of 48 out of 51 in women's health (citation: <http://hrc.nwlc.org/key-findings>).

HWHF is in its fifth year and has served over 170 participants. The average age of participants is 29. The majority (80%) is Hispanic; 10% are black; 6% white, Non-Hispanic; and 4% Native American. Fifty-five percent have less than a high school education. Approximately 47% are married. The average number of children per participant is 2.5. Each participant enrolls in the program for two years. HWHF has an average retention rate of 88% over the past four years. HWHF has changed lives. Participants are assessed at program admission and twice each year to determine the program effectiveness. Program evaluation measures participants' health knowledge, emotional and physical health, lifestyles, and birth outcomes. Participants' quantitative and qualitative feedback is included.

Program outcomes include:

- Improved health knowledge, demonstrated by statistically significant differences in pre and post test scores.
- Improved health, demonstrated by increases in HDL (good cholesterol) values, and decreased total cholesterol/HDL ratio values, an objective indicator of improved nutrition and exercise (also statistically significant).
- Statistically significant improvements in level of depression, reduced through counseling, program and social support.

Development of positive lifestyle practices including increased daily exercise per week and daily consumption of fruits and vegetables, as well as reduction in dietary fat and sugar/carbohydrates at statistically significant levels.

Maternal-infant outcomes of those who become pregnant during program enrollment are also evaluated. Thirty-seven women have become pregnant in the past five years. All received first trimester prenatal care and the majority had adequate pregnancy spacing. A number of pregnancies were at moderate to high risk for poor infant outcomes, with mothers diagnosed with obesity, advanced maternal age, and chronic illnesses including type 2 diabetes, hypertension, hypothyroidism, and asthma. Maternal prenatal conditions included placenta previa, placenta accreta, gestational diabetes (20%) and oligohydramnios. To date, 33 infants have been born, with 29 (88%) at term; four were born at 34+ to 36 weeks gestation, with one NICU admission for hydrops fetalis. All infants were born at weights appropriate for gestational age and appear to be doing well. Twenty-four (73%) were initially breastfed, with 42% receiving breast milk for at least six months. Three of those infants were still being breastfed at one year. Analysis of HWHF cost benefit demonstrates an approximate \$3 savings for each program dollar spent. Savings have been demonstrated in avoided ambulatory and emergency room visits by participants and family members after consultation with Nurse Educators. Cost savings are also realized related to controlling gestational diabetes and other high risk pregnancy conditions, with possible resultant NICU admissions; management of chronic illnesses; and smoking cessation. Some participants have been able to attend school or obtain employment once vision problems were resolved.

For more information (including videos featuring program participants!) about Healthy Women, Healthy Futures, visit:

<http://nursing.ouhsc.edu/Community-Impact/healthy-women-healthy-futures.cfm>

