Healthy Women, Healthy Futures

Location: Oklahoma
Date Submitted: 08/2011; updated 06/2013
Category: Promising Practice

BACKGROUND
Tulsa County’s premature birth and infant mortality statistics are higher than those of the State and are increasing. During 2005-2007, the county’s percent of premature births grew from 11 to 11.6% and infant deaths from 8.2/1,000 to 9.4/1000 live births. Tulsa Health Department data show 18 Tulsa County zip codes have premature birth rates over the county average of 11%. Eleven zip codes have infant mortality rates (IMR) ranging from 18.5/1,000 to 10.8/1,000 live births, higher than the 9.4/1,000 County rate. A recent Tulsa Fetal Infant Mortality Review Perinatal Periods of Risk (PPOR) analysis of 2003-2007 fetal and infant deaths revealed that women’s pre-pregnancy health was the major contributor to feto-infant deaths (41%). This finding is consistent with the Oklahoma State Health Department’s 2010 PPOR which revealed that 38% of feto-infant deaths in Oklahoma was related to women’s preconception health. Racial and ethnic disparities in premature births and in infant mortality are evident in Tulsa County statistics. Both the local and State PPORs demonstrate the importance improving the pre-pregnancy health of Tulsa women.

PROGRAM OBJECTIVES
HWHF is located in Tulsa, OK, and is administered by the University of Oklahoma College of Nursing. HWHF’s unique mission is to improve the physical, emotional, social, dental, and vision health of at-risk women living in poverty before they become pregnant again, thereby minimizing their risk of future premature birth or infant death. Program objectives include the improvement of participants’ functional health literacy, health status and lifestyle practices. An additional program benefit is that the woman’s health knowledge and changed lifestyle will lead to improved health of her current family.

TARGET POPULATION SERVED
HWHF is offered at 6 early childhood education centers (ECECs), located in diverse geographic areas of the Tulsa community. Eligible participants are women enrolled at the ECECs, and who are able to become pregnant, but not currently pregnant at time of enrollment.

PROGRAM ACTIVITIES
HWHF is based in Life Course Theory (LCT) which addresses the importance of early programming to one’s future health and development through both intergenerational programming (a woman’s preconception health) and prenatal programming (in utero). HWHF attempts to reduce participants’ risk factors, which diminish health, and improve their protective factors by improving their access to primary care and other health services, and through health education and care coordination. Participants attend weekly one hour classes offered in Spanish and English on site at the ECECs, and develop health and reproductive life plans while consulting with HWHF staff during home visitation.

Participants have provided written and verbal feedback about the program from inception. Comments are obtained and reviewed twice a year by all the HWHF staff for consideration of program revision. Both class content and services have been modified to meet participants’ needs or health interests.

PROGRAM OUTCOMES/EVALUATION DATA
Evaluation of program effectiveness is formally conducted twice each year. Participants’ demographic information, interconception risk factors, health status (selected

<table>
<thead>
<tr>
<th>TITLE V/MCH BLOCK GRANT MEASURES ADDRESSED</th>
</tr>
</thead>
<tbody>
<tr>
<td># 11: Percent of mothers who breastfeed their infants at 6 months of age.</td>
</tr>
<tr>
<td>#15: Percentage of women who smoke in the last three months of pregnancy.</td>
</tr>
<tr>
<td>#17: Percent of very low birth weight infants delivered at facilities for high-risk deliveries and neonates.</td>
</tr>
<tr>
<td>#18: Percent of infants born to pregnant women receiving prenatal care beginning in the first trimester.</td>
</tr>
</tbody>
</table>

Outcome Measure #1: The infant mortality rate per 1,000 live births.
parameters) and lifestyle information are gathered at admission to HWHF during home visitation. Repeat screenings and assessments are conducted at the end of each semester, with participants serving as their own “controls” to determine any changes in health and lifestyle. Outcome data include health screening variables (weight, BMI, blood pressure, glucose level, total cholesterol, HDL level and, cholesterol ratio), lifestyle practices (weekly exercise, number of daily fruits and vegetables consumed, amount of dietary fat, and amount of sugar/carbohydrate consumption, tobacco use, and alcohol consumption). It also measures women’s coping abilities and reported support. The PHQ9 scale is used to determine participants’ level of depression. Pre- and post-test scores are used to determine changes in knowledge or health literacy. Infant outcomes are measured by gestational age at birth (weeks and days), birth weights, congenital anomalies, NICU admissions, or other conditions. Maternal outcomes are also determined by report or medical records. Participant feedback is included in evaluation data.

Evaluation data to this point have shown health improvements due to improved knowledge and resultant behavior change; lifestyle improvements, such as increased exercise and better nutrition; and healthy, full-term pregnancies among participants. Additionally the two year program has an 89% retention rate in a population frequently characterized as non-compliant, apathetic, disinterested, mobile and difficult to retain in a program.

PROGRAM COST
The per-client cost is approximately $3,500. Costs include personnel: Director (.8 FTE), Administrative Assistant (.5 FTE); Site Nurse Educators (2 FTE); Health Navigators (2 FTE); Medical costs for physical and mental health services, dental services (some donated), vision care, pharmacy/medication costs, equipment and medical supplies; education materials, staff travel, childcare during classes, and class refreshments.

ASSETS & CHALLENGES
Assets
A consultant to the Community Service Council helped determine a strategic plan for maternal and child health in Tulsa County. Coupled with compelling data about the contribution of women’s pre-pregnancy health to feto-infant deaths in Tulsa, including the 2004 PPOR, this led the George Kaiser Family Foundation and Community Action Project (CAP) to circulate an RFP for the development of an interconception program utilizing the early childhood education centers.

Challenges
Initial challenges included participant recruitment and retention at one ECEC compared to the other geographic areas. Dedicated space for weekly classes with additional space for childcare was limited. Classes were originally offered during the day and evening to facilitate participants’ attendance, but new evening gang activity at the ECEC curtailed evening sessions. Weather impacted classes at this site in January 2011 as record snow fell caused the roof to collapse and required relocation. Finding other space on short notice proved difficult because of the time it took to develop and approve contacts between the University and the school districts. In addition, no space became available at a second Tulsa ECEC as the center provided community tax preparation, displacing HWHF for the spring semester. The contract negotiation process was a barrier to classes in this location as well. However, participant retention was not significantly impacted.

Overcoming Challenges
HWHF staff have been very flexible in “making do” with resources at different locations. Champions at the Community Action Project have advocated for HWHF since the earlier experiences in the planning for utilization of ECEC space, thereby “putting us at the table.” Space is now recognized as a major factor in planning for HWHF expansion.

LESSONS LEARNED
It was advantageous to start with a small population before expanding the program. This allowed time to build positive relationships with the two ECECs. Participant recruitment was facilitated because the program was already seen as valuable for their clients. Participant feedback was invaluable as the program developed. Participants also referred friends and family members to the program. HWHF is a comprehensive program and all program components should be retained –health services, weekly, on-site education, and health navigation/case management.

Going forward, it would be helpful for new participants to be admitted as a group at the beginning of the semester, rather than current open enrollment during the semester. HWHF provides graduated curriculum so participants’ knowledge builds on information presented sequentially. When someone new comes to mid-program they have “catching up” to do. This is currently addressed with periodic repetition of basic content in a different format or through individualized education.

FUTURE STEPS
HWHF was initially planned as a 3-year pilot program, beginning with an enrollment of 20 women in October, 2008 (10 at each of 2 early childhood education centers). By April 2011, HWHF expanded in phases to 6 ECECs and a total enrollment of 100. Funding is sufficient to continue through
December 2013. HWHF is collaborating with Community Action Program to obtain funding for expansion to all their early childhood education sites through private and public funding.

**COLLABORATIONS**
HWHF’s initial collaboration was with the Community Action Project who provides the majority of early childhood education (Head Start) programs in Tulsa, with Educare (Bounce Network) and the Tulsa City County Health Department (TCCHD). Health Navigators (social workers/case managers) are subcontracted through TCCHD. HWHF collaborated with Paseo de Salud Diabetes Prevention Program, (previously funded by the Robert Wood Johnson Foundation). Other collaborators include OU Physicians, who also have school based clinics in some of the early childhood education centers, OSU Physicians, Community Health Connection, an FQHC; five community pharmacies serving underserved populaces in Tulsa, Eye Care of Tulsa, Ocean Dental, Eastern Oklahoma Donated Dental Services, Childcare Solutions, yoga instructors, Bill and Ruth’s at OU (refreshments), and two regional medical laboratories.

**PEER REVIEW & REPLICATION**
HWHF has been presented at several national, regional and local conferences. External program evaluation was conducted by Q2 Consulting with a report submitted December 2011.

**RESOURCES PROVIDED**
Resources include participant recruitment brochures, a professional provider brochure describing the program.

For more information, visit [http://nursing.ouhsc.edu/Community-Impact/healthy-women-healthy-futures.cfm](http://nursing.ouhsc.edu/Community-Impact/healthy-women-healthy-futures.cfm)

“Voices”, an 8 minute video describing participants' experiences in HWHF is available through the HWHF website, as is "Who We Are", a three minute video describing program components and preliminary outcomes.

**Key words:** Interconception Health, Life Course, Health Disparities, Birth Outcomes, Infant Mortality, Health Education,

**For more information about programs included in AMCHP's Innovation Station database, contact bp@amchp.org. Please be sure to include the title of the program in the subject heading of your email**

---

Healthy Women, Healthy Futures

INNOVATION STATION | Sharing Best Practices in MCH