



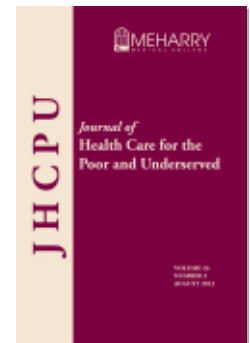
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The Maternal Infant Health Outreach Worker Program in Low-income Families

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Abstract: Vanderbilt University Medical Center's Maternal Infant Health Outreach Worker program (MIHOW) is a community-based intervention dedicated to enhancing birth outcomes and healthy child development. Trained neighborhood women provide home and group services to underserved families in rural and inner city communities. This report describes MIHOW's history and work in Tennessee, Kentucky, West Virginia, Mississippi, and Louisiana.

Community health workers have been shown to affect health outcomes around the world, especially in challenged communities. The body of literature supporting the use of community health workers addresses their impact on diabetes, asthma, and other health issues.^{1,2,3,4,5} However, only a limited body of research addresses the impact of well-trained community health workers on birth outcomes. Quasi-experimental studies of Vanderbilt University Medical Center's Maternal Infant Health Outreach Worker program (MIHOW), one such intervention, suggest that the program reduces incidence of low birth weight births and increases prenatal visits, immunizations, and behaviors that reduce the risk of sudden infant death syndrome (SIDS).

The Vanderbilt Center for Community Health Solutions (CHS) was launched under the name Center for Health Services in 1972 by medical, nursing and undergraduate students from Vanderbilt University and Meharry Medical College to address the lack of health care in low-income communities in the mid-South. With students working together from the two universities, students from Meharry led the early community partnerships in Nashville, and Vanderbilt students focused on partnerships in rural communities. As clinics were launched successfully in Nashville, the rural focus took prominence and, by 1982, the CHS had worked with approximately 100 communities

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in Appalachia and other low-income, especially rural, areas on various health projects. In light of the historic lack of professional health care, high infant mortality, and poverty in the Appalachian mountains,⁶ the CHS engaged in a series of conversations with the Ford Foundation during the early 1980s to encourage foundation investment in central Appalachia.

When the Foundation signaled an interest in teen pregnancy and parenting, the CHS response was based on the results of informal surveys among its partner agencies who suggested that community women who received structured training in health and wellness could be powerful promoters of health by providing educational home visits.

Persuaded by this argument, the Ford and Robert Wood Johnson Foundations provided funding for the first MIHOW sites between 1982 and 1987. Six agencies in rural Tennessee, Kentucky and West Virginia recruited and employed lay Outreach Workers to educate pregnant mothers about healthy pregnancy, child health, and seeking medical services. Community Health Solutions provided the program structure, including planning, management, evaluation, and training support.

The agencies selected each had a strong, positive reputation in their communities, and served as a respected anchor for recruitment of very low-income women early in pregnancies. In the first cohort of women, 73% of participating families had monthly household incomes below \$750 and 28% had monthly household incomes below \$250. Nearly 30% of mothers lacked transportation to health care, and 39% were without health insurance.⁷

Today, nearly 30 years later, in addition to two of the original six programs, there are 15 sites in Kentucky, Mississippi, Tennessee, and West Virginia. Based on participant intake materials, it is estimated that the program has served more than 15,000 families and the economic challenges MIHOW families face are largely the same. A cohort of women from 2001–2007 showed that 77% of participants lived below the poverty level, with 38% living on \$500 or less per month. While transportation and health insurance numbers have improved, only 52% of MIHOW participants have finished high school and only 48% have a father figure in the home.* The program continues to meet the needs of very challenged families, and has received considerable recognition from advocacy groups, state and federal governments, and foundations.

Program Components

While several elements of MIHOW programs can be tailored to fit the structure of its partner agencies including child care centers, primary health care facilities, or multi-service community agencies, all MIHOW programs have key features which are uniform throughout the network:

1. Strength-based approach

Recognizing that regardless of living conditions or circumstances, every family has strengths, MIHOW workers are taught to recognize and document family strengths and

*Smith, S. MIHOW Outcomes 2002–2007. Nashville, TN: Vanderbilt University, April 2008 (Unpublished materials).

focus on the needs identified by the family. To set the stage for healthy living, lasting motivation, and self-sufficiency, they help the family recognize its own strengths and use those strengths to address their own needs.

2. Trained community mothers who mentor their peers

To become Outreach Workers, applicants must meet the following requirements: resident of target community, same race, culture and language use of families served, strong problem-solving and communication skills, respect for children, and enjoyment of bringing up their own child(ren).

Outreach workers must shadow an Outreach Worker on a home visit and complete at least 40 hours of initial training before they begin to serve families. Initial training orients Outreach Workers to the MIHOW model and instructs them in the following areas: recognizing and building on mothers' strengths, developing active listening skills, use of the MIHOW curriculum, understanding Outreach Worker safety, record keeping, confidentiality, how to conduct home visits, nonjudgmental mentoring, elements of a healthy pregnancy, labor and delivery, breastfeeding, recognizing and accessing community resources, and balancing home and work. Proficiency in each area is assessed by the Outreach Worker's direct supervisor.

In addition to initial training, Outreach Workers attend ongoing monthly training sessions, addressing such topics as nutrition, infant and child development, mental health, positive parenting skills, contraception and sexually transmitted infections, and self-sufficiency. Training by MIHOW has been approved by the West Virginia State Training and Registry System as early childhood education professional development and aligns with MIHOW's Standards of Practice for Outreach Workers (SoPOW).⁸ The SoPOW consists of four levels of increasing professionalism and measures the following sets of skills: communication, interpersonal, capacity building and empowerment, and knowledge base. Though Outreach Workers have varying areas of interest and expertise, each worker must be assessed as proficient at Level 1 of the SoPOW in order to begin home visits and will complete work on Level 2 within the first year to continue employment.

Since 1982, we estimate that about 100 MIHOW workers have completed initial training. Because most enjoy and even thrive in this role, Outreach Worker turnover is low. An informal 2011 survey of five long term MIHOW sites found a mean Outreach Worker tenure of 7.25 years.

As peers, they model and articulate the mother's significant role in nurturing children. In home visits, they help mothers set goals, develop self-esteem, and practice advocating for themselves and their children.

3. Monthly home visits and education groups

Families participating in MIHOW receive monthly home visits from early pregnancy until the child's third birthday, and families are also encouraged to attend group gatherings. The home visit curriculum includes three or four objectives for each visit and provides the Outreach Worker with content and activities for each hour-long visit.

4. A program structure that supports community mothers and links them across communities and to a university base

In each locality, a Site Leader is responsible for worker recruitment, training, and supervision. Site Leaders also raise funds for the program and serve as the program's spokespeople in the community. In each state or multi-state region, a Regional Consultant serves as liaison between the region and Vanderbilt and provides ongoing assistance to sites in such areas as program management, supervision, and accreditation.

Vanderbilt CHS-based MIHOW staff develop and disseminate curriculum materials, training materials, and a monthly newsletter and assist sites in program management, data collection, and grant writing. Community Health Solutions MIHOW also coordinates a site accreditation system and organizes annual MIHOW conferences which bring about 100 Site Leaders, Outreach Workers, and Regional Consultants together for training and networking.

The curriculum that Outreach Workers follow in their work with mothers includes user friendly, research based tools, organized in a series of *MIHOW Home Visit Guides*.⁹ These research-based, month-by-month education and resource guides cover the prenatal period until age three. They give Outreach Workers step-by-step instructions to help mothers reach program objectives related to trimester of pregnancy or age of child. They include strategies to improve mother and child self-image, sharpen problem-solving skills, and promote planning, goal setting, and self-advocacy. The curriculum has been reviewed by the Vanderbilt Kennedy Center and the Vanderbilt Department of Pediatrics, and is constantly evolving based on the needs of the Outreach Workers and participants served.

5. An accreditation system that monitors program fidelity across varied sites, sponsoring organizations, and cultural groups

To ensure that each site operates the MIHOW model as designed, each one must be accredited through the Commitment to Excellence MIHOW Accreditation Program (CEMAP®)¹⁰ and must be reaccredited every five years. Accreditation begins with a self-appraisal, submission of program materials and an in-depth interview with the MIHOW Director. Then an accreditation team consisting of a Vanderbilt CHS staff member, a site leader from an accredited site outside of the agency's region, and an Outreach Worker from an accredited site within the agency's region performs an on-site review. The three-day review includes interviews with community stakeholders, agency staff, and program participants, and chart and training reviews. Interviews and chart/material reviews assess understanding and use of the strength-based approach, quality and relevance of monthly training programs, quality of caseload management, and adherence to MIHOW confidentiality and safety policies. Six sites have successfully achieved accreditation, five are in early steps, and one has failed review.

The accreditation process measures a site's progress in meeting the MIHOW Standards of Practice for Sponsoring Agencies (SoP)¹¹ which outline the MIHOW practice protocols and philosophy. For example, Standard 6 addresses the training of Outreach Workers, requiring that training be regular and ongoing, and that Outreach Workers participate in the planning, implementation and evaluation of the training. Training must be research-based and address a specific set of prenatal, birth and early child-

hood issues. To meet the needs of the community Outreach Workers, the training sessions must be interactive and include opportunities for peer-to-peer education, case presentations, and mentoring.

The results of quasi-experimental studies and enthusiastic community response suggest that MIHOW's nonjudgmental lay mentors are well trained to build upon low-income families' strengths and nurture their social, emotional, and physical health. Cost and rural logistics precluded randomized control trials until recently but in fall 2011, support of the federal government and the state of West Virginia made a randomized control trial possible. The randomized control trial includes two West Virginia MIHOW sites and is being conducted by the West Virginia Department of Health and Human Resources and Marshall University. The study will evaluate MIHOW's effect on prenatal care, birth outcomes, breastfeeding, child health and safety protective factors.

Cost Effectiveness

The West Virginia randomized control trial currently underway will provide important information about potential cost savings from the use of MIHOW Outreach Workers. However, given the high cost of care of low birth weight infants and data for 450 MIHOW participants from Mississippi, West Virginia, and Tennessee during 2002–2007 suggesting that the low birth weight rates of MIHOW participants in those states were lower than their state rates' by 3.0, 4.5, and 1.7 percentage points respectively,^{*12} we would expect considerable cost savings to each state where the program operates.

The MIHOW program may also influence other health outcomes with major financial implications for the public and private insurance and health care systems, including tobacco use, physical activity, nutrition, home accident prevention, and mental health.

Several studies of home visiting programs in other settings found even greater savings on investment when increased tax revenues due to maternal employment, lower use of welfare, and decreased criminal justice system involvement were considered. The Rand Corporation, in 2005, found a net benefit of \$5.70 per dollar invested in home visiting to high-risk families by a home visiting program similar to MIHOW, and the Washington State Institute for Public Policy cited an average of \$2.24 saved for each dollar invested in home visiting programs similar to MIHOW.^{13,14}

Conclusion

Quasi-experimental data and community response suggest that MIHOW benefits families and communities in many ways, and for multiple reasons. The sponsoring community agencies are selected not only because they are familiar with local strengths, needs, and customs, but also because they are experienced in working with local volunteers and uniquely able to identify strong local mothers to serve as Outreach Workers. In return, the local agencies benefit from Vanderbilt's expertise in development, training, and health science, which also support the tenacious, nonjudgmental lay mentors who

*Smith, S. MIHOW Outcomes 2002–2007. Nashville, TN: Vanderbilt University, April 2008 (Unpublished materials).

are trained to recognize and build on low-income families' strengths. The resulting synergy nurtures families' social, emotional, and physical health.

Because of the program's emphasis on the strength-based approach and the mother as a primary change agent, the positive effects of MIHOW may follow the family past the child's third year of life and beyond the scope of early childhood development. Additionally, as a result of the program's employment of local women familiar with the culture, the curriculum can be used effectively in a variety of different cultural settings.

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