

## Implementing the WISEWOMAN Program in Local Health Departments: Staff Attitudes, Beliefs, and Perceived Barriers

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### ABSTRACT

**Background:** Although most health departments recognize the need for programs to reduce the risk of cardiovascular disease (CVD) among older, low-income women, they face numerous barriers to successfully implementing such programs. This paper explores counselors' attitudes and beliefs about patients and perceived barriers to implementing the North Carolina Well-Integrated Screening and Evaluation for Women Across the Nation (WISEWOMAN) program.

**Methods:** Health departments were assigned to provide patients with either an enhanced intervention (EI) or a minimum intervention (MI). Cross-sectional baseline and 12-month follow-up surveys were completed by health department counselors designated to deliver the MI or EI. Both surveys addressed counselors' beliefs about patients' motivation and attitudes, their counseling practices, and their personal diet and physical activity behaviors and attitudes. The follow-up survey also addressed opinions about the feasibility of long-term WISEWOMAN implementation.

**Results:** Counselors were skeptical about patients' motivation to improve their lifestyle, citing high perceived cost and burden. At follow-up, EI counselors reported having higher self-efficacy for counseling, incorporating more behavioral change strategies, and spending more time counseling than did counselors at MI sites. They were also more likely to report making healthful personal lifestyle choices. All counselors identified lack of time as a major barrier to counseling, and most cited obtaining low-cost medications for patients, ensuring that patients made follow-up visits, and implementing the program with existing staff as key challenges to the long-term sustainability of WISEWOMAN.

**Conclusions:** Our findings provide insight into the organizational challenges of implementing a CVD risk-reduction program for low-income women. We discuss ways in which intervention and training programs can be improved.

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## INTRODUCTION

**I**N THE UNITED STATES, cardiovascular disease (CVD) is responsible for more morbidity and death than any other single cause. Since 1984, the number of deaths from CVD among women has exceeded the number among men,<sup>1,2</sup> and approximately one of two women dies of heart disease or stroke. The disease burden also falls disproportionately on individuals of low socioeconomic status (SES) and on those from racial/ethnic minority groups.<sup>1</sup> These populations are less likely to have adequate insurance and, thus, have less access to healthcare, necessary medications, and preventive services.<sup>3,4</sup>

Individuals can lower their CVD risk substantially by making lifestyle changes, such as improving nutrition, exercising more, controlling weight, and stopping smoking.<sup>5,6</sup> Some research indicates, however, that women are less likely than men to be counseled on healthy lifestyle choices for CVD prevention in primary care settings.<sup>7</sup> To address CVD risk among women and make progress toward the *Healthy People 2010* goal of decreasing health disparities,<sup>8</sup> it is important to develop lifestyle intervention strategies specifically for low SES and ethnic minority women. Because women often serve as gatekeepers for their families<sup>9</sup> as they plan, shop for, and prepare meals, implementing CVD risk reduction programs for low-income women may also improve dietary practices and reduce CVD risk for other members of their families.

Local health departments are a logical choice for the delivery of lifestyle interventions because they are often used by people who have little or no insurance. However, the use of local health department personnel also presents challenges that must be addressed in the design of CVD prevention programs. In this paper, we explore staff attitudes toward CVD risk reduction counseling and what they perceive as barriers to implementing a CVD risk reduction program within local health departments. We also evaluate the feasibility and acceptability of an intervention tool designed to address some of these barriers.

## MATERIALS AND METHODS

### *Study design*

The Well-Integrated Screening and Evaluation for Women Across the Nation (WISEWOMAN)

program is a federally funded CVD risk reduction program that includes screening for CVD risk factors (both clinical and behavioral) and emphasizes the development, implementation, and evaluation of lifestyle interventions to improve nutrition, increase physical activity (PA), and encourage other positive lifestyle changes among low-income women between 40 and 64 years of age.<sup>10</sup> Women enrolled in the National Breast and Cervical Cancer Early Detection Program (NBCCEDP) are eligible to participate in WISEWOMAN. Projects currently operate in 14 sites in 13 states, including North Carolina, where the project has been implemented in local health departments.

To test the effectiveness of an intervention tool (*New Leaf . . . Choices for Healthy Living*<sup>11,12</sup>) in addressing CVD lifestyle risk factors (diet, PA, smoking) among North Carolina participants in the NBCCEDP, we recruited patients from 33 local health departments. We asked 11 health departments to provide the usual care protocol for decreasing CVD risk factors (the minimum intervention [MI]), and we asked the other 22 to provide the *New Leaf* program (enhanced intervention [EI]), using a nonrandomized, group design.<sup>13</sup> The study was approved by the Institutional Review Board of the School of Public Health at the University of North Carolina in Chapel Hill.

The *New Leaf . . . Choices for Healthy Living* program is a theory-informed lifestyle intervention that was developed to help healthcare providers serve as health counselors even if they have had little previous training in lifestyle modification. It offers providers a time-efficient tool to use in counseling patients to adopt healthy eating and exercise habits by helping providers identify their patients' high-risk behaviors as well as heart-healthy behaviors.<sup>11</sup> Patients are asked to collaborate with their health counselor to set goals for decreasing the high-risk behaviors and are encouraged to continue healthy behaviors. Counselors review tip sheets with the patient to help her overcome potential barriers to change. The *New Leaf* tool is designed to increase the self-efficacy of both patients and counselors by helping them collaborate in setting achievable goals and by providing practical advice to help counselors assist their patients in reaching these goals.

At each participating health department, the WISEWOMAN project coordinators identified health counselors (usually health educators, nutritionists, or nurses) to deliver the intervention.

In the EI sites, counselors received a half-day training session on site. This training included an overview of general WISEWOMAN screening and data recording/reporting protocols, as well as detailed training in the use of the *New Leaf* materials for assessment, counseling, and follow-up. At the MI sites, training focused primarily on WISEWOMAN protocols, and the health counselors were instructed to continue their usual practices of counseling patients identified as being at elevated risk for CVD. In most cases, this involved providing a wide variety of print materials available at the site and, sometimes, a limited amount of counseling.

EI health counselors used the *New Leaf* intervention tool in three 30-minute counseling sessions over the first 6 months of the study. During the first visit, counselors and patients collaborated to set goals to decrease patients' high-risk behaviors. During the second and third visits, they reviewed patients' progress toward reaching these goals and had the opportunity to set new goals and to address patients' attitudes toward healthy lifestyle change and the barriers they faced in making these changes.

To examine the attitudes of the counselors toward intervention delivery, we asked the EI and MI health counselors to complete self-administered pretest and posttest surveys. Because of high staff turnover in county health departments and our desire to protect respondent identity, we chose to administer the surveys cross-sectionally rather than attempt to follow the same cohort of counselors before and after the intervention. The two surveys included only those staff participating in the project at the time (baseline and follow-up), and counselors were surveyed at the second time point only if they were perceived by the WISEWOMAN coordinator as having had a sufficient level of project involvement to allow them to respond to the survey questions.

#### *Pretest survey*

At the beginning of the first WISEWOMAN staff training session, we distributed an anonymous three-page pretest survey to staff designated as WISEWOMAN health counselors and asked them to complete it before training began. A preliminary question asked them about the average number of patients per month they counseled about such lifestyle changes as smoking cessation, dietary improvements, and increased PA.

Subsequent sections of the pretest survey assessed counselors' beliefs about patient knowledge, attitudes, and beliefs about making heart-healthy changes (Table 1), their beliefs about resources for and success in counseling patients about diet and PA changes (Table 2), how often they used various counseling strategies (Table 3), the time spent counseling patients on heart-healthy changes (Table 4), and their personal dietary and PA beliefs and habits (Table 5).

#### *Posttest survey*

The posttest survey was administered approximately 1 year after the WISEWOMAN project began. We mailed the surveys to WISEWOMAN coordinators at each health department, who then distributed them to health counselors to complete anonymously. Although most sections of the posttest survey were identical to those in the pretest survey, we also asked counselors to estimate the average number of educational contacts they had with each WISEWOMAN patient and to assess the usefulness of WISEWOMAN training sessions and materials. To identify potential challenges of program expansion, we asked respondents to assess the success of various strategies for recruiting patients, to describe their experiences referring patients with abnormal clinical findings to health department physicians or private community physicians, to assess the value of WISEWOMAN to their patients, and to identify possible barriers to their patients' participation.

*Additional questions for EI counselors.* In the posttest survey, we also asked EI health counselors about how useful they found the *New Leaf* intervention materials to be. Questions focused on the usefulness and practicality of the lifestyle assessment instruments, the overall helpfulness of the *New Leaf* materials as a counseling tool, and barriers to the intervention's long-term implementation. We also elicited suggestions about how to modify the materials.

#### *Analysis*

Because of the cross-sectional nature of the data and the small sample size, no pretest/posttest statistical tests were performed between MI and EI sites. Instead, we used descriptive statistics to compare pretest and posttest data for MI and EI health counselors.

## RESULTS

Pretest surveys were completed by 66 EI and 33 MI health counselors, all of whom were female; 13% were nonwhite (primarily African American), 67% were nurses, 14% were health educators, 10% were nutritionists, and 10% were from various other health professions. They had completed an average of 15.4 years of schooling and had an average of 9 years of community health experience. Forty-nine counselors from the EI sites and 20 from the MI sites completed the posttest surveys.

*Attitudes and beliefs about patients*

At baseline, few counselors thought that patients were “highly motivated to improve their lifestyles” (2%) or very likely to comply with recommendations for lifestyle change (1%) (Table 1). Only one fourth to one fifth of the counselors reported that their patients believed strongly in the importance of a prudent diet (26%) or PA (18%), whereas 39% reported that their patients perceived a prudent diet as “too costly,” and 48% reported that patients viewed increasing their PA levels as “burdensome.”

*Attitudes and beliefs about counseling*

At baseline, few counselors were confident in their ability to help patients make lasting dietary and PA changes (Table 2). At the 12-month fol-

low-up, self-efficacy for diet and PA counseling was higher among EI staff compared with MI staff. At baseline and follow-up, both groups of counselors were more likely to strongly agree that they had adequate educational resources for dietary counseling than for PA counseling, although this difference tended to be greater among MI counselors. Similarly, at baseline, a higher percentage of all counselors reported feeling better prepared to help facilitate dietary changes than changes in PA. At baseline and follow-up, about twice as many EI counselors as MI counselors reported feeling prepared to help patients increase their PA (21% vs. 9% at baseline, 29% vs. 17% at follow-up), whereas the percentages feeling prepared to help patients with diet were similar at follow-up (42% vs. 41%). All health counselors were more likely at follow-up than at baseline to describe dietary and PA counseling as essential parts of their role, but they also were more likely to perceive time as a major limiting factor for counseling.

*Counseling strategies*

Both MI and EI counselors were more likely to report using goal setting to help patients change behaviors at follow-up than at baseline, although the EI counselors were more likely to report using diet and PA goal setting at both times (Table 3). At follow-up, the percentage of EI counselors giving out written materials on PA was substantially

TABLE 1. BASELINE HEALTH COUNSELOR ATTITUDES AND BELIEFS ABOUT PATIENTS WITH CVD RISK FACTORS

<i>“The majority of patients I counsel who have heart disease risk factors”</i>	<i>Negative response (% responding 1 or 2)<sup>a</sup></i>	<i>Positive response (% responding 5 or 6)<sup>b</sup></i>
Are (not at all/highly) motivated to improve their lifestyle	15	2
Are (not likely/very likely) to follow my lifestyle recommendations	20	1
(Do not believe/believe strongly) in the importance of a prudent diet	15	26
(Have no idea/know) what dietary changes are necessary	23	21
Feel following a prudent diet is (too costly/not too costly)	39	14
(Do not believe/believe strongly) in the importance of PA	15	18
(Have no idea/know) how to increase [their level of] PA	17	24
Would think increasing PA level is (burdensome/easy)	48	12

<sup>a</sup>Response options 1 and 2 represent the negative end of the 6-point semantic differential scale.

<sup>b</sup>Response options 5 and 6 represent the positive end of the 6-point semantic differential scale.

TABLE 2. PERCENTAGE OF COUNSELORS IN MINIMUM INTERVENTION (MI) AND ENHANCED INTERVENTION (EI) GROUPS WHO STRONGLY AGREED WITH SELECTED STATEMENTS ABOUT THEIR ATTITUDE TOWARD DIETARY AND PHYSICAL ACTIVITY COUNSELING

<i>Items assessing attitudes and beliefs<sup>a</sup></i>	<i>Baseline MI</i> (n = 33)	<i>Baseline EI</i> (n = 66)	<i>Follow-up MI</i> (n = 20)	<i>Follow-up EI</i> (n = 49)
I am generally successful in helping patients				
Make lasting dietary changes	6	8	6	24
Increase PA and maintain it	3	11	6	20
I have educational resources available to offer an effective				
Dietary treatment to my patients	48	48	39	44
PA program to my patients	9	22	11	31
I feel well prepared to help patients				
Change their dietary habits	30	39	41	42
Increase their PA	9	21	17	29
I see dietary counseling as an essential part of my role	38	50	56	63
I see PA counseling as an essential part of my role	42	45	61	49
Time is a major limiting factor in offering dietary and PA counseling	36	59	61	65

<sup>a</sup>Response options were on a 1–6 scale, with 1 = strongly disagree; 6 = strongly agree.

greater than at baseline, whereas the percentage of MI counselors giving out diet-related print materials was substantially greater. After the intervention, EI counselors were more likely than MI counselors to report discussing patients' attitudes about making lifestyle changes and the obstacles they faced (Table 3), and they reported spending, on average, 2–3 times longer doing so (Table 4). The amount of counseling time at follow-up was much greater than at baseline among EI counselors but not among MI counselors (Table 4).

#### *Personal beliefs*

At follow-up, EI counselors were more likely than MI counselors to report following a prudent

diet (52% vs. 37%) and being physically active (61% vs. 37%) (Table 5). They were also less likely to describe healthy PA habits as inconvenient.

#### *Implementation challenges*

EI counselors identified several challenges associated with implementing the WISEWOMAN program on a long-term basis (Table 6). The most commonly perceived potential problems were obtaining medications for patients who cannot afford treatment (74%), getting patients to return for follow-up (42%), implementing the program with the existing number of staff members (32%), and recruiting patients (31%). One EI health counselor observed that it was "very difficult to ac-

TABLE 3. PERCENTAGE OF HEALTH COUNSELORS WHO REPORTED THEY ALMOST ALWAYS USE SELECTED COUNSELING PRACTICES

<i>Counseling strategy<sup>a</sup></i>	<i>Baseline MI<sup>b</sup></i> (n = 33)	<i>Baseline EI<sup>c</sup></i> (n = 66)	<i>Follow-up MI</i> (n = 20)	<i>Follow-up EI</i> (n = 49)
Help participant set short-term goals				
To improve diet	18	40	33	59
To increase physical activity level	30	53	44	67
Give out written materials concerning				
Low-fat diets	58	77	78	73
PA	42	48	44	65
Discuss lifestyle changes				
Attitudes	36	48	33	75
Obstacles	45	52	39	68

<sup>a</sup>Response options were on a 1–6 scale, with 1 = never; 6 = almost always.

<sup>b</sup>Minimum intervention.

<sup>c</sup>Enhanced intervention.

TABLE 4. AVERAGE NUMBER OF MINUTES SPENT COUNSELING PATIENTS ABOUT LIFESTYLE CHANGE

Counseling activity	Baseline MI <sup>a</sup> (n = 32)	Baseline EI <sup>b</sup> (n = 64)	Follow-up MI (n = 20)	Follow-up EI (n = 49)
Diet	10	13	11	32
PA	6	9	6	25
Smoking	7	7	5	13
Alcohol use	4	5	4	8
Other <sup>c</sup>	29	43	8	21

<sup>a</sup>Minimum intervention.

<sup>b</sup>Enhanced intervention.

<sup>c</sup>Other included topics such as blood pressure, cholesterol, diabetes mellitus, and stress management.

quire good attendance for individual or group counseling after [the] initial enrollment visit—due to work schedule of patient or transportation. Patients lost the initial excitement of the program after enrollment.” In discussing organizational constraints, counselors noted that although they appreciated the “excellent material” in the *New Leaf* notebook, “time is a factor in its use.” One counselor reported that “local political preference for other programs” made it difficult to prioritize the WISEWOMAN project.

EI counselors described the on-site WISEWOMAN training sessions as useful for project implementation because it allowed them to ask questions specifically related to their sites. About three quarters reported “always” or “almost always” using the *New Leaf* diet and PA assessment and counseling materials, and 84% described the *New Leaf* notebook as “very helpful” for counseling WISEWOMAN patients. Many counselors offered suggestions for improving the *New Leaf* manual, which included shortening the assessments and including diabetes-specific dietary recommendations.

## DISCUSSION

Although the results of our survey of public health professionals provide considerable information about how to improve the delivery of lifestyle interventions in health department settings, our study has several limitations. One is that it was a nonrandomized, group-assigned intervention trial in which health counselors from health departments that participated in Phase One of the WISEWOMAN project (1995–1997) were assigned to the EI group and those from health departments joining WISEWOMAN since 1997 were assigned to the MI group. Baseline differences in attitudes, beliefs, and practices reflect this difference in counselors’ prior exposure to the intervention materials. To roughly assess the counselors’ exposure to the program materials, we calculated the average number of months that each group of counselors reported working with the WISEWOMAN project. EI counselors averaged 11.7 months, and MI counselors averaged 9.8 months. In addition to indicating a slightly

TABLE 5. PERCENTAGE OF HEALTH COUNSELORS WHO STRONGLY AGREED WITH SELECTED STATEMENTS ABOUT DIET AND PA

Personal attitude or belief <sup>a</sup>	Baseline MI <sup>b</sup> (n = 33)	Baseline EI <sup>c</sup> (n = 66)	Follow-up MI (n = 20)	Follow-up EI (n = 49)
A prudent diet				
Is often inconvenient	21	14	26	23
Generally tastes very good	36	39	32	39
Is something I usually follow	36	42	37	52
Being physically active or exercising is				
Often inconvenient	30	26	37	23
Hard to fit into my schedule	36	30	37	35
Currently a regular part of my life	45	44	37	61

<sup>a</sup>Response options were on a 1–6 scale, with 1 = strongly disagree; 6 = strongly agree.

<sup>b</sup>Minimum intervention.

<sup>c</sup>Enhanced intervention.

TABLE 6. PERCENTAGE OF COUNSELORS WHO PERCEIVED SELECTED FACTORS AS PROBLEMS IN LONG-TERM IMPLEMENTATION OF WISEWOMAN

<i>Programmatic Area<sup>a</sup></i>	<i>Big problem (%)</i>	<i>Somewhat of a problem (%)</i>
Obtaining medications for patients who cannot afford treatment	74	23
Getting patients back in for follow-up visits	42	56
Implementing with existing number of staff	32	47
Recruiting patients	31	54
Getting patients to bring <i>New Leaf</i> notebook to each visit	25	56
Length of counseling visit	16	54
Referral to physician	13	50
Length of clinical visit	9	69

<sup>a</sup>Response options were on a 1–3 scale, with 1 signifying a big problem, 2 signifying somewhat of a problem, and 3 signifying not a big problem.

longer duration of exposure to program materials among EI counselors, these numbers also highlight the rapid staff turnover among both groups. Because of this rapid turnover, the study essentially consisted of two cross-sectional surveys. The pretest survey did not include those health counselors who were hired after the intervention began (and who, consequently, did not attend the baseline training). Almost half of the EI counselors who completed the posttest survey did not complete the pretest survey, and about three fourths of the MI counselors who completed the posttest survey did not complete the pretest survey. In addition, because the surveys were completed anonymously, we could not assess individual changes in responses even by counselors who completed both surveys.

Results from studies that examine the challenges of adopting and implementing health promotion interventions can be extremely useful in designing programs.<sup>14</sup> Notwithstanding its limitations, our study can make an important contribution to the literature because few previous studies<sup>15–18</sup> have examined the challenges involved in implementing chronic disease risk reduction interventions in public health settings with significant time and resource constraints. Studies that examine the challenges of adopting and implementing health promotion interventions in such settings are needed to guide the design of future programs.<sup>14</sup> Our results suggest that carefully designed staff training is needed and can play a pivotal role in influencing providers' attitudes and beliefs about patient motivation and barriers. Counselors who delivered our lifestyle intervention often reported doubting whether patients were motivated to improve their health habits or follow recommendations

for lifestyle change. They also reported that patients perceived a healthy diet as too costly and increased PA as burdensome. In a study of counseling practices among Australian general practitioners, researchers found that general practitioners' perception of their patients' motivation to quit smoking (or lack thereof) was one of the primary factors determining whether or not they provided them with smoking cessation counseling.<sup>19</sup> Although the accuracy of healthcare providers' assumptions about their patients' interest in and motivation for change is unclear, any counseling training should address these baseline assumptions and perhaps provide success stories from other interventions that demonstrate that many patients are willing and able to change their behaviors.

At 12-month follow-up, EI health counselors reported greater confidence than MI counselors that they were able to help patients make lasting dietary and PA changes. We speculate that this greater self-efficacy may have been the result of seeing patients successfully change their behavior by setting and achieving small dietary and PA goals. Healthcare providers' lack of confidence in their ability to help patients change their behaviors has been identified as a substantial barrier to their use of behavior change counseling.<sup>20,21</sup> Hands-on training strategies, such as role-playing, may be effective in increasing provider confidence.

To bolster staff morale and train new staff, we recommend that training be offered not only at baseline but at periodic intervals throughout an intervention. The North Carolina WISEWOMAN team has attempted to provide ongoing training by creating a video to help train new staff and reinforce training and boost morale for current staff.

Although the *New Leaf* intervention tool was designed to make counseling straightforward and quick, counselors reported that the time required to administer the intervention was a barrier to its implementation. Similar complaints have been voiced by counselors using other approaches to behavioral change intervention.<sup>19,22,23</sup> Health department staff accustomed to passively distributing health education materials to clients may lack the training and experience to engage in a more involved and tailored counseling process. To develop tools that meaningfully influence behavior yet also can be easily implemented in busy public health settings, it may be important to conduct formative research to identify organizational constraints and possible strategies to work around such constraints.

The *New Leaf* intervention tool appeared to help EI counselors use such strategies as setting short-term goals and discussing obstacles to and attitudes about behavior change. As expected, at follow-up, EI counselors reported spending more time counseling patients; they also were more likely to report following healthy dietary and PA practices themselves, perhaps because they learned to make healthy lifestyle choices as a result of counseling patients.

Our findings also show that both MI and EI counselors devoted less time and preparation to PA counseling than to dietary counseling and generally perceived themselves to lack the skills and training necessary to help patients increase their level of PA. This lack of confidence indicates that training for providers delivering lifestyle interventions with a PA component should emphasize the development of effective PA counseling skills.

In their posttest responses, EI health counselors identified several key challenges to the long-term sustainability of the WISEWOMAN project, including the high cost of CVD-related medications, the difficulty of ensuring that patients returned for follow-up visits, and the challenge of implementing the program without additional staff. These concerns, along with those more specific to intervention delivery, illustrate the importance of organizational factors to the success of efforts to promote individual lifestyle change. Health counselors' skepticism about patient motivation and their concerns about medication affordability suggest the need to improve the organizational environment in which the counselors work. Health agencies that offer patient services, such as plain language print materials

about low-cost medication programs, may promote a more positive attitude toward counseling among staff members.

Despite the limitations in our study design, our results provide important insights for understanding potential individual and organizational determinants of success or failure in implementing behavior change interventions. These insights may be useful in training counselors for subsequent health promotion and disease prevention programs for underserved and ethnic minority women.

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