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Assessment of the Initial Phase of the Train the Trainer Project Using the Helping You Take Care of Yourself Curriculum

Interim Report

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# CONTENTS

Section	Page
Introduction	1
Methods	3
Data Collection and Entry	3
Data Cleaning	
Data Analysis	6
RESULTS, DISCUSSION, AND LESSONS LEARNED	7
Key Findings	7
Discussion of Lessons Learned About the Project Implementation	
Process	11
Limitations of the Analysis	12
CONCLUSION	13
References	14
APPENDIX A: DATA COLLECTION FORMS	A.1
APPENDIX B: DATA RECODING DECISIONS	B.1
APPENDIX C: PRE- AND POSTTEST KNOWLEDGE BY QUESTION	
AND BY AGE, RACE/ETHNICITY, AND EDUCATION	
APPENDIX D: DEMOGRAPHIC CHARACTERISTICS OF THE	
POPULATION SERVED, BY UNIT OF THE CURRICULUM	D.1

# TABLES

Гab	le	Page
1	DEMOGRAPHIC CHARACTERISTICS OF THE POPULATION SERVED	17
2	DEMOGRAPHIC CHARACTERISTICS OF THE POPULATION SERVED, BY REGION OF TRAINING	18
3	RECEIPT OF MAMMOGRAMS AMONG POPULATION SERVED, BY DEMOGRAPHIC CHARACTERISTICS	20
4	RECEIPT OF PAP SMEARS AMONG POPULATION SERVED, BY DEMOGRAPHIC CHARACTERISTICS	21
5	Breast and Cervical Health Knowledge on the Pre- and Posttests, by Demographic Characteristics	22
6	Breast and Cervical Health Knowledge, by Pre- and Posttest Question	23
7	SUMMARY OF RESPONSES TO EVALUATION QUESTIONS	24

# FIGURES

Fig	ure	Page
1	NUMBER OF WOMEN EDUCATED BY EACH UNIT OF THE CURRICULUM	16

# ASSESSMENT OF THE INITIAL PHASE OF THE TRAIN THE TRAINER PROJECT USING THE HELPING YOU TAKE CARE OF YOURSELF CURRICULUM

#### INTRODUCTION

Breast and cervical cancer cause significant morbidity and mortality among women in the United States. Breast cancer is the second most common type of cancer diagnosed among women, exceeded only by skin cancer. In 2004, the breast cancer incidence rate was 117.7 per 100,000 women, and the mortality rate was 24.4 per 100,000. Although less prevalent than breast cancer, cervical cancer is also a significant health problem for women. In 2004, the cervical cancer incidence rate was 7.9 per 100,000 women, and the mortality rate was 2.4 per 100,000 women (U.S. Cancer Statistics Working Group 2007).

Research has shown that regular screenings for both breast and cervical cancers can lead to early detection, which significantly reduces mortality. The American College of Obstetrics and Gynecology (ACOG) recommends that women ages 40 to 49 have a mammogram every one to two years and women ages 50 and older have one annually. Routine screening with mammography is recommended to begin at earlier ages for women with certain risk factors (ACOG 2008). ACOG recommends that annual screening for cervical cancer using a Pap smear begin within three years after beginning sexual relations or at age 21, whichever comes first (ACOG 2003). Annual screening should continue until a woman is at least 30. Screening can typically be done every two to three years after age 30 if a woman has had three negative Pap tests in a row.

To make screening for breast and cervical cancer widely available and reduce morbidity and mortality, the U.S. Congress has passed various pieces of legislation authorizing the development of programs aimed at prevention, screening, and early detection. For instance, the Breast and Cervical Cancer Mortality Prevention Act of 1990 (Public Law 101-354) led

to the establishment of the National Breast and Cervical Cancer Early Detection Program (NBCCEDP), which is run by the Centers for Disease Control and Prevention (CDC). The program offers screenings, diagnostic services, surgical consultations, and referrals for treatment for breast and cervical cancers in every state, the District of Columbia, and five U.S. territories and for 12 American Indian/Alaska Native tribes or tribal organizations. Services are provided to uninsured and underinsured women whose earnings are at or below 250 percent of the federal poverty level; services are provided to women ages 40 to 64 for breast screening and to women ages 18 to 64 for cervical screening (CDC 2008). To ensure that women receive appropriate treatment when cancer is detected, Congress passed the Breast and Cervical Cancer Prevention and Treatment Act in 2000. The act gives states the option of offering women enrolled in the NBCCEDP access to treatment through Medicaid. All states and the District of Columbia have exercised this option (CDC 2007).

The Massachusetts Department of Public Health (MDPH) operates its BCCEDP through the Women's Health Network (WHN). In addition to clinical services, the WHN provides health education to the community through their Outreach and Education Team. The team consists of six Regional Community Outreach Specialists located in each one of the MA Executive Office of Health and Human Service Regions and is overseen by MDPH's Director of Community Services. The Helping You Take Care of Yourself curriculum developed in 2006 by the Outreach and Education team and Director is one type of education the WHN uses. The curriculum has breast and cervical health units and was designed as a "train the trainer model," whereby WHN Outreach and Education staff train community members and community health workers with the intention that they will then educate other women in the community about the issues presented. Each unit of the curriculum consists of PowerPoint presentations, flip charts, and models and has been translated into Spanish, Portuguese, and Khmer. The topics covered in the breast and the cervical health units are listed here:

#### Breast Health Unit Topics

- Breast anatomy
- What is breast cancer
- Benign conditions of breast cancer
- Risk factors for breast cancer
- Warning signs of breast cancer
- Breast cancer detection methods

#### Cervical Health Unit Topics

- Female reproductive anatomy
- What is cervical cancer
- What is Human Papilloma Virus (HPV)
- Risk factors for HPV and cervical cancer
- Pap test
- HPV test

<sup>&</sup>lt;sup>1</sup>In 1993, to piggyback on the NBCCEDP, Congress authorized the CDC to set up the Well Integrated Screening and Evaluation for Women Across the Nation (WISEWOMAN) program, which offers the following services to NBCCEDP participants ages 40 to 64: (1) screening for cardiovascular disease risk factors and referrals to appropriate medical and community resources; (2) risk reduction counseling to inform women of their screening results and provide interpretation and recommendations; (3) lifestyle interventions to help women eat more healthfully, increase physical activity, and quit smoking; and (4) rescreening to provide feedback to participants and their providers about changes in risk factor profiles.

<sup>&</sup>lt;sup>2</sup> In 2007, the WHN added a unit on cardiovascular health to the *Helping You Take Care of Yourself* curriculum.

To expand the reach of the Helping You Take Care of Yourself curriculum beyond women whom WHN staff could educate, WHN sought to train community-based organization (CBO) staff who would in turn educate women in their communities using the curriculum. In 2007, WHN contracted with Mathematica Policy Research, Inc. (MPR) to administer funds to 21 CBOs to carry out this education.<sup>3</sup> The WHN Outreach and Education team selected the organizations based on expertise with WHN-designated target populations and worked with them to identify the target number of women to educate. The Community Outreach Specialists held day-long sessions in their regions to train CBO staff to use the curriculum and provided technical assistance to the CBOs throughout the length of the MPR developed memoranda of understanding (MOUs) with each CBO that described the project and outlined expectations for participation. The MOUs stated that organizations would be paid \$30 per unit (breast or cervical health) for each woman who was educated. Organizations were able to choose whether to educate women in one unit or both units of the curriculum. If organizations opted to educate women in two units, the education could be conducted in one educational session or in two separate educational sessions.

The MOUs also outlined requirements for payment. Specifically, CBOs were asked to collect data from each woman educated using four standardized forms and to submit the forms to MPR by a specified date. At the beginning of each educational session, women were asked to fill out (1) a demographic form and (2) a pretest of their knowledge of breast and/or cervical health. After completing the educational session(s), they were asked to fill out (3) a posttest that was identical to the pretest and (4) an evaluation form of the education received. Copies of the four forms are included in Appendix A.

MPR analyzed the data submitted on the forms to describe the population served, assess the women's breast and cervical cancer screening health behaviors, determine baseline knowledge on breast and cervical health, assess whether the educational sessions improved knowledge, and assess satisfaction with the education. This report summarizes findings from the data received during the initial phase of the project, February through June 2007. An overarching goal of this report is to identify ways to improve the project before it is expanded further. The report is organized in the following sections: Methods: Data Collection and Entry, Data Cleaning, and Data Analysis; Results, Discussion, and Lessons Learned; and Conclusion.

#### **METHODS**

#### Data Collection and Entry

<sup>&</sup>lt;sup>3</sup> MPR contracted with 21 organizations, but only 18 organizations fully participated in the project. This is discussed in greater detail in the discussion section of this report.

The 21 CBOs submitted data forms for a total of 872 women who were educated during 96 educational sessions. Data submitted were reviewed for completeness, and organizations were paid for the number of women with complete sets of forms (demographic form, pretest, posttest, and evaluation form). Data were entered into a Microsoft Access database and analyzed using SAS version 9.0.4 Demographic, pretest, and posttest forms were linked by a unique identification number. Although the evaluation forms during the initial phase of the project contained the same unique identification number as the other three forms, the evaluation forms were linked only to the educational session in the database, not to the individual so as to keep these responses anonymous. This decision is explained in greater detail in the "Results, Discussion, and Lessons Learned" section of this report.

Responses were entered exactly as they appeared on the forms received. For example, participants occasionally answered questions that should have been skipped based on a response to a previous question. In these cases, the response indicated by the participant was entered. If a participant marked more than one answer (with the exception of the question on race) or if we were unable to determine the response selected by a participant, the response was coded as "missing." If more than one response was selected for the question on race, the full response was entered under the "Race Other" category. Occasionally, in addition to or instead of checking one of the boxes, respondents wrote responses in the margin for the questions on race and education. In these cases, written responses were entered in the "Race Other" or "Grade Specify" data entry fields for the race and education questions, respectively.

A small number of participants put an "X" or a line through the words "true" or "false" on the pretest and posttest forms. Because translations on these forms differed slightly depending on the language of the form, our coding decisions differed. Respondents using Spanish or Portuguese forms were instructed to "mark" the words "true" or "false" to indicate their responses, whereas respondents using forms in English or Khmer were instructed to "circle" the words "true" or "false." Responses on Spanish and Portuguese forms with an "X" or line through them were coded as if the answers had been circled based on the recommendation of native speakers of these languages and an MPR survey specialist. Although extremely rare, the same responses were typically coded as "missing" on English and Khmer forms, because it was unclear whether the word crossed out was intended to be the correct response or whether the word remaining was intended to be the correct response. The exception to coding them as "missing" on English and Khmer forms was if participants marked the checkboxes on their demographic forms or evaluation in the same way (using an "X" or a line). In these few cases, it was assumed that the "X" or line indicated the intended response on the pre- and posttests.

#### Data Cleaning

<sup>&</sup>lt;sup>4</sup> The Access database was developed by an MDPH contractor.

Two SAS data sets were created from the Access database: (1) an education data set containing information on the educational session attended, demographic sheet responses, pretest responses, and posttest responses for each woman educated and (2) an evaluation data set containing information on the educational session attended and responses to the evaluation forms for each woman educated.

The data sets were then checked for duplicates. If women appeared more than once for the same unit of the curriculum (breast or cervical cancer), we kept only the entry from the earlier educational session. To identify duplicates, last names, first names, birth dates, and city of residence were used. A total of four women were identified as having completed the same unit more than once.

The next step in data cleaning was to reclassify participant age. Participants were asked to provide their date of birth and to check whether their age was (1) under 40, (2) 41 to 64, or (3) 65 and over. Age was calculated by subtracting the participant's date of birth from the date of the educational session. We then ensured that this calculation was consistent with the age that had been checked. For the small number of discrepancies that existed, we assumed that the calculation of age based on the participant's date of birth was correct.

The next data-cleaning step involved making decisions about skip patterns not addressed when data were entered. There were four incidences of skip patterns on the demographic form, on which participants should have skipped a question based on their response to a previous question. For example, if a participant responded "no" to the question, "Have you ever had a mammogram?" she should have skipped the question, "If yes, when was your most recent mammogram?" Refer to Appendix B for decisions made on recoding responses when skip patterns were not followed.

Responses that were written in were addressed next in the data-cleaning process. Education level was one question that required recoding in this step. Participants were asked to specify their highest level of education attained. Response choices included a grade level, high school, a training program, and college. However, as noted earlier, some participants wrote in responses to this question. A number of women wrote in "GED." Other women noted that they had completed "some" college or one, two, or three years of college. Based on these written responses, we created a new education variable with the following categories: a grade level, high school degree or equivalent, a training program, and all or some college. Those writing "GED" were coded as completing a high school degree or equivalent. Those reporting that they completed some college were coded as all or some college. In addition, a few participants who filled out forms in Portuguese checked off the response "grade" for their highest level of education attained and wrote in either "1°," "2°," "3°," or "4°" in the "grade specify" field. A native Portuguese speaker was consulted, and we learned that "1" indicates that the participant completed middle school, "2" indicates that the participant completed high school, "3" indicates that the participant completed her third year of college, and "4" indicates that the participant completed college. Answers were recoded as appropriate.

Race and ethnicity questions on the demographic form also required recoding. Participants were asked whether they were of Hispanic or Latino origin and how they

describe their race. Response choices for the question on race were (1) white, (2) black/African American/Negro, (3) Asian, (4) Native Hawaiian or other Pacific Islander, (5) Native American/Alaskan Native, and (6) refused. A combined race/ethnicity variable was created based on the responses to these two questions. Participants of any race who reported that they were of Hispanic or Latino origin were classified as Hispanic. Other participants were classified as white, black, Asian, other, and refused based on their responses to the race question. The "other" category included respondents who checked off Native Hawaiian or other Pacific Islander or Native American/Alaskan Native. It also included those reporting being of mixed race (those who checked off more than one race or those who wrote in that they were of mixed race).

#### **Data Analysis**

Once data cleaning was complete, data were analyzed in three steps. First, data from the demographic forms were analyzed to gain an understanding of the population served by the program. Then, analysis focused on the changes in knowledge before and after the educational sessions. Finally, we examined satisfaction with the education.

**Population Served.** To gain a basic understanding of the population served by the curriculum, straight frequencies of the demographic data were run, including participants' age, city/town of residence, country of birth, length of time in the United States, race/ethnicity, language spoken most often at home, education, job, and health insurance status. Data were then analyzed by region of the state to determine whether differences existed.

Note that 11 women were educated in two units of the curriculum at two different educational sessions. Demographic data were thus entered twice for these women. So as not to double count them, we removed one set of demographic data for them during data analysis.

Health Behaviors. The analysis also included responses to questions on participants' health behaviors related to screening for breast and cervical cancer. Participants were asked if they had ever had a mammogram. If a participant answered "yes," she was asked when her most recent mammogram occurred. Response choices included "less than one year ago," "one to three years ago," "four to five years ago," and "more than five years ago." The same questions were asked regarding Pap smears. Frequencies on these health behavior questions were run first and then cross-tabs with select demographic variables (age, race/ethnicity, health insurance status, and education) were run to determine whether behaviors varied by demographic group. Chi-squared tests were used to assess the significance of differences.

<sup>&</sup>lt;sup>5</sup> Hispanic was re-coded as a race because approximately 62 percent of the 400 Hispanic women either checked 'refused' as their response or left the question blank. Hispanic women reported the following races: 139 (35 percent) white, 10 (3 percent) black, 2 (less than 1 percent) Native Hawaiian or Pacific Islander, 3 (less than 1 percent) Native American, 113 (28 percent) refused, 133 (33 percent) left the question blank.

Knowledge of Breast Health and Cervical Health. To assess knowledge of breast and cervical health before and after the educational sessions, responses on the pre- and posttests were examined. The pre- and posttests for both the breast and cervical health units contained five questions each. (Refer to Appendix A for copies of the pre- and posttests). Each test was scored on a five-point scale for which a score of 0 indicates that the participant responded incorrectly to all test questions and a score of 5 indicates that the participant responded correctly to all test questions. To determine whether knowledge changed as a result of attending the educational session, average pre- and posttest scores were calculated for all participants. Additionally, the percentage of participants who increased their scores between the pre- and posttests was calculated. Paired t-tests were used to assess the significance of the change among those who took both the pre- and posttests. Calculations were then stratified by age, race/ethnicity, and education. In order to assess which questions were the most difficult for participants both before and after the educational sessions, the percentage of participants who correctly answered each pre- and posttest question was calculated. The percentage change in correct answers between the pre- and posttests was also determined. Finally, analysis was stratified by age, race/ethnicity, and education to determine whether variation existed by group. This stratified analysis is shown in Appendix C.

Satisfaction with the Education. Participant satisfaction with the education was analyzed by examining responses to the brief evaluation form that participants filled out at the end of the educational sessions. On the evaluation form, participants were asked whether they would recommend the session to family members or friends. Then, participants were asked to rate the session and the group leader. Response choices for these two questions were "poor," "fair," "average," "good," and "excellent." Finally, participants were asked to write in their ideas for improving the sessions. To assess participant satisfaction with the education, frequencies on the three evaluation questions were run and responses to the open-ended question on recommendations for improvement were reviewed.

#### RESULTS, DISCUSSION, AND LESSONS LEARNED

During this initial phase of the project, a total of 872 women were reached by the curriculum in all six regions of Massachusetts. Data collected during these educational sessions suggest that (1) the curriculum reached a diverse population, (2) the population educated by the curriculum was less likely than the overall Massachusetts population to have received mammograms and Pap smears within the last year, (3) the curriculum was effective at increasing breast and cervical health knowledge, and (4) those educated were satisfied with the education they received. This section discusses these key findings in greater detail. Then, because the curriculum is in an early stage of development, the key lessons learned during implementation are discussed. Finally, the limitations of the analysis are presented.

#### Key Findings

**Population Served.** Figure 1 displays the number of women educated by each unit of the *Helping You Take Care of Yourself* curriculum, and Table 1 shows the characteristics of the

population served. There were 1467 participants (872 unique women) educated using the Helping You Take Care of Yourself curriculum during 96 educational sessions; those educated represented an extremely diverse population. Specifically, 595 women were educated in both breast and cervical health units, 203 women in breast health only, and 74 women in cervical health only. Participants ranged from ages 10 to 91.7 This wide age range suggests that women may have attended the sessions with family members, perhaps children and mothers.<sup>8</sup> The race/ethnicity breakdown of the population educated was as follows: Hispanic or Latina (46 percent), Asian (18 percent), white (18 percent), black (6 percent), and other (1 percent). Notably, the majority of participants were not born in the United States (73 percent). However, most of the foreign-born participants (73 percent) had been in the United States for more than five years. About half (45 percent) of the women educated completed forms in English, <sup>9</sup> 37 percent completed the forms in Spanish, 14 percent in Portuguese, and 5 percent in Khmer. The highest level of education attained by participants varied considerably with about one-third not completing high school, one-third with a high school degree or equivalent, and one-fourth completing some or all of a college degree. Another 7 percent had completed a training program. The majority of women (82 percent) reported having health insurance; 16 percent reported having no insurance.

Women were educated using the Helping You Take Care of Yourself curriculum in all six regions of Massachusetts (Boston, Central, Metrowest, Northeast, Southeast, and West). Table 2 shows the demographic characteristics of the women who attended educational sessions by region of the session. The number of women educated in each region ranged from 105 in the Metrowest region to 227 in the Northeast region. Significant variation in the characteristics of the population educated existed across regions of the state. For example, the population educated in the Southeast and Western regions tended to be slightly older than those educated in other regions. The Southeast region educated the highest proportion of whites (57 percent), and the Boston region educated the highest proportion of blacks (21 percent). The Central region educated the highest proportion of Asians (39 percent), and the Western region educated the highest proportion of Hispanics (69 percent). The Metrowest region had the lowest proportion of participants who were born in the

<sup>&</sup>lt;sup>6</sup> The sample for tables 1 through 4 is the total number of women educated by either or both units of the curriculum (872). We present this information for both units combined because there were no significant differences between those trained in breast health and those trained in cervical health (Appendix D).

<sup>&</sup>lt;sup>7</sup> Twenty-eight of the 872 women (4 percent) were under 18 years of age and 86 (10 percent) did not report a birth date.

<sup>&</sup>lt;sup>8</sup> In some cases, organizations told us that men accompanied women to the educational sessions and filled out forms; in a handful of other cases, the names on the forms were obviously male names. In both cases, data were not entered for men.

<sup>&</sup>lt;sup>9</sup> Although forms were completed in English, anecdotal evidence suggests that not all trainings were held in English. For instance, at least one CBO translated the educational materials into Vietnamese and had women complete the forms in English. The translation was not ad hoc, in that it was done in advance of the training, but it was not checked by translators external to the CBO. It is unclear if the women educated in Vietnamese could read English or if trainers helped them complete the forms in some way. This will be investigated more fully through a qualitative evaluation.

United States (4 percent), and the Southeast region had the highest (45 percent). The Central region had the highest percentage of women completing the forms in English (63 percent), the Western region had the highest percentage of women completing the forms in Spanish (64 percent), and the Metrowest region had the highest percentage of women completing the forms in Portuguese (34 percent). The Northeast region accounted for all women completing forms in Khmer. The percentage of participants with a high school degree or equivalent or higher (including a training program) ranged from 52 percent in the Boston region to 76 percent in the Southeast region. Finally, the percentage of participants who reported having health insurance ranged from 70 percent in the Northeast region to 92 percent in the Western region. These differences could indicate inherent differences that exist in the state by region. For example, it is known that the Northeast region of Massachusetts has a large Cambodian population. This could account for the higher percentage of women educated in Khmer in that region. However, some differences across regions may also result from the selection of organizations participating in the curriculum. For example, regions with an organization geared toward Hispanic or Latina women may show a higher proportion of Hispanics than do other regions.

**Health Behaviors.** Table 3 displays the findings related to participants' receipt of mammograms. Among participants ages 40 and older, 52 percent reported having received a mammogram within the past year, and 14 percent reported never having received a mammogram. By comparison, CDC's Behavioral Risk Factor Surveillance System (BRFSS) shows that 71 percent of women ages 40 and older in Massachusetts received a mammogram within the past year, and 5 percent had never received a mammogram (CDC 2006). This comparison shows that those educated by the Helping You Take Care of Yourself curriculum were less likely to have received mammograms within the recommended time frame of one year and more likely to have never received mammograms than were women of the same age in Massachusetts. Based on the results of chi-squared tests, significant differences in the receipt of mammograms existed across age groups and between women with and without health insurance. In comparison with the age 65 and older population, participants ages 40 to 64 appeared to be more likely to never have received mammograms and slightly less likely to have received mammograms in the past In addition, those without health insurance were less likely to have received mammograms in the past year (25 percent compared to 57 percent) and more likely to have never received a mammogram (40 percent compared to 10 percent) than were those with health insurance. Receipt of mammograms did not vary significantly among those in different education groups. Finally, the chi-squared test revealed that receipt of mammograms varied significantly by race/ethnicity; however, the test may not be valid because of the small sample sizes in a number of cells.

Table 4 presents information related to the receipt of Pap smears. Fifty-one percent of participants reported having received a Pap smear within one year, and 14 percent reported never having received a Pap smear. In comparison, BRFSS data show that 65 percent of women ages 18 and older in Massachusetts received a Pap smear within the past

year, and 6 percent had never received a Pap smear (CDC 2006). 10 The population educated by the Helping You Take Care of Yourself curriculum was less likely to have received Pap smears within the past year and more likely to never have received Pap smears. Based on the results of chi-squared tests, there were significant differences in the receipt of Pap smears by age, race/ethnicity, health insurance status, and education. Participants ages 65 and older appeared to be less likely than those less than age 40 to have received a Pap smear within the past year. Asians were less likely than the other racial/ethnic groups to have received Pap smears in the past year and more likely to never have received Pap smears. In contrast, blacks and Hispanics appeared to be more likely than the other racial/ethnic groups to have received a Pap smear within the past year. Those without health insurance were less likely to have received Pap smears in the past year (31 percent compared to 55 percent) and more likely to have never received a Pap smear (24 percent compared to 12 percent) than were those with insurance. Participants who had completed a high school degree or equivalent or less than a high school degree were less likely than those who had completed some or all college to have received a Pap smear in the past year and more likely to never have received a Pap smear, although we did not test to see if this effect is independent of age.

Knowledge of Breast and Cervical Health. Our results show that participant knowledge increased significantly after attending an educational session on both the breast and cervical health units of the Helping You Take Care of Yourself curriculum (Table 5). After the educational session on breast health, average scores increased from 3.8 to 4.5 on a five-point scale, a statistically significant increase based on a paired t-test (p-value < 0.01). Between the pre- and posttests, 49 percent of participants increased their scores on the breast health unit. Similarly, for those educated in cervical health, average scores increased from 3.4 to 4.5 on a five-point scale. This increase was also statistically significant using a paired t-test (p-value < 0.01). Between the pre- and posttests, 68 percent of participants increased their scores on the cervical health unit. Scores increased for both units for participants in all age groups, race/ethnicity groups, and education groups. Notably, average pretest scores on the cervical health unit were lower than average pretest scores on the breast health unit, whereas average posttest scores for both units were the same. This finding suggests that women have lower baseline knowledge of cervical health than they do of breast health, suggesting a greater need for education on cervical health. The increase in scores between the pre- and posttests for both units indicates that the curriculum is effective at increasing knowledge in breast and cervical health at least in the short-term.

Table 6 shows the percentage of participants correctly answering each of the pre- and posttest questions. In general, participants found the pretest for cervical health to be more difficult than the pretest for breast health. The percentage of participants who correctly answered each question increased for all questions in both units of the curriculum after the educational sessions. On the breast health unit, the question most commonly answered incorrectly on both the pretest and the posttest was "You should have a

<sup>&</sup>lt;sup>10</sup> Our sample includes a small number of women less than age 18, so the comparison group is not completely matched to the sample; but the small number of women less than age 18 is unlikely to change the results drastically.

clinical breast exam done by a health care provider every 5 years" (correct answer is false). Although this question exhibited the greatest percentage change in correct answers, 21 percent of participants answered it incorrectly on the posttest.

The pretest questions most commonly answered incorrectly on the cervical health unit included: (1) "Women should get their first Pap test at age 21 or 3 years after they become sexually active" (correct answer is true); (2) "Most women have been exposed to the Human Papilloma Virus (HPV)" (correct answer is true); and (3) "Getting a positive HPV test means you have cervical cancer" (correct answer is false). Although knowledge increased for each of these questions after the education, more than 10 percent of posttest participants continued to respond incorrectly to (1) "Women should get their first Pap test at age 21 or 3 years after they become sexually active" (correct answer true); and (2) "Getting a positive HPV test means you have cervical cancer" (correct answer false). A closer examination of posttest questions that participants continued to answer incorrectly on both the breast and cervical units may suggest items that need to be conveyed more clearly during educational sessions.

Satisfaction with the Education. Table 7 shows the results of the participant evaluation of the educational sessions. The vast majority of participants were satisfied with the Helping You Take Care of Yourself curriculum. Specifically, 97 percent of participants said that they would recommend that family members and friends attend the health educational sessions. Moreover, 96 percent of participants rated the health session as either "good" or "excellent," and 97 percent rated their group leader as either "good" or "excellent." Few respondents suggested ideas for program improvement. Many used the space to note that they found the educational session very useful. Some responded that expanding education to other health topics and in more locations would be helpful. Suggestions for program improvement included making the sessions longer, having more visual materials, bringing in speakers (both doctors and women who have experience with breast and/or cervical cancer), and offering food. This overwhelming satisfaction with the educational sessions suggests that women value the education provided and that the curriculum is worth expanding to more women and more health topics.

#### Discussion of Lessons Learned About the Project Implementation Process

The Helping You Take Care of Yourself curriculum will be expanded in the future both in terms of the number of individuals reached by the curriculum and the number of health education units included in the curriculum. As a result, a closer look at the process of implementation at this stage may help identify areas for improvement. Next, we discuss the lessons learned to date related to our agreements with the organizations and the data forms, as well as the implications the lessons have for project expansion.

Agreements with Organizations. Although MPR contracted with 21 organizations during the initial phase of the project, only 18 fully participated and 3 did not participate. Of the 3 organizations that did not participate, one was unable to conduct any educational sessions. Although the trainers at this organization seemed excited about the curriculum, they did not schedule any sessions. Anecdotal information suggests that having time to recruit women was an issue. The second organization sent its forms to MDPH instead of to

MPR. MDPH staff noticed that the submitted forms had all been filled out in the same handwriting. After further investigation, MDPH determined that the forms had been falsified by the organization. To prevent similar issues from occurring in the future, requirements have been added to the memoranda of understanding with organizations that require (1) one-week advance notice of educational sessions so that MDPH can drop in if it chooses and (2) submission of sign-in sheets with participants' phone numbers so the MDPH can confirm participation in the educational sessions. The third organization conducted breast and cervical health educational sessions with nine women who were not fluent in any of the languages into which the curriculum was translated. Ad hoc translations of the materials were used for this training. The women were low-literacy and had difficulty filling out the pre- and posttests. We paid this organization for educating these nine women, and we entered the data available from these sessions into the database. However, we did not include the nine women in any of the analyses in this report. It is possible that other ad hoc translations occurred that we were not aware of. It is also possible that illiterate or lowliteracy women participated and were given help completing forms. The extent to which these occurred will be examined more fully in a qualitative process evaluation that MPR is conducting.

Some organizations were unable to reach the number of women outlined in their agreements, whereas other organizations exceeded their targets. Anecdotal information suggests that organizations may have struggled with the timing and relatively short length of the project. Lengthening the funding period so that organizations have more time to schedule sessions and plan them around their existing calendars or national health months could increase the number of CBOs that reach their targets.

Data Forms. During the initial phase of the project, a few problems with the data forms were identified. For example, the question asking participants' age on the demographic form had response choices of "under 40," "41 to 64," and "65 and over." These categories do not include age 40 and will be fixed in the future. In addition, more than a third of participants refused to answer the question on race. Revising the response options may be considered to improve response rates for this question. Space could also be added for participants to write in their race if it is not captured by the categories. As noted earlier, a small number of participants put an "X" or a line through the words "true" or "false" on the pretest and posttest forms. Respondents using Spanish or Portuguese forms were instructed to "mark" the words "true" or "false" to indicate their responses on these forms, whereas respondents using forms in English or Khmer were instructed to "circle" the words "true" and "false." As a result, responses on Spanish and Portuguese forms with an "X" or line through them were coded as if the answers had been circled. The same responses were typically coded as "missing" on English and Khmer forms. To minimize confusion in the future, check boxes next to the words "true" and "false" will be added to the pre- and posttest forms.

<sup>&</sup>lt;sup>11</sup> Once all organizations had submitted forms, extra funds from those who did not reach their targets were used to pay organizations that educated women beyond the number in their agreements.

#### Limitations of the Analysis

The findings presented in this report suggest that knowledge increased substantially between pre- and posttests; however, we are unable to assess whether knowledge was retained in the longer term or if it influenced behavior (for example, did women get a mammogram after attending the education?). As part of the expansion of the *Helping You Take Care of Yourself* curriculum in 2008, MDPH contracted with MPR to conduct focus groups with women educated during these sessions. During the focus group, the posttest will be administered again to determine whether knowledge was retained from the education received months before. Women will also be asked if they received any services such as a Pap smear or mammogram and if the educational sessions influenced their decision to seek services.

A second limitation is related to the evaluation forms for the curriculum. Most women who were educated in both the breast and cervical health units of the curriculum attended one educational session in which both units were presented. These women filled out one demographic sheet and one evaluation sheet for both units of the session. In contrast, women who attended the breast health and cervical health units of the curriculum on two separate days were asked to fill out a blank set of data forms for each session. These women thus have two demographic sheets and two evaluation sheets. As noted earlier, we omitted one of the duplicate demographic forms for these women during analysis. However, because the evaluation forms were not linked to the other three forms, both evaluation forms that these women filled out remain in the data. As a result, those educated in both units in the same day have one evaluation sheet that summarizes their feedback on both sessions together, whereas those educated in the two units on different days have two separate evaluation sheets.

#### **CONCLUSION**

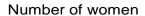
The Helping You Take Care of Yourself curriculum was developed in 2006 in an effort to provide accurate health information around breast and cervical cancer to women in the state's diverse communities. In early 2007, to expand the reach of the curriculum, MDPH trained CBO staff to educate women in their communities using the curriculum. The curriculum was successful in improving knowledge about breast and cervical health, and participants were satisfied with the education they received. Areas for improvement were identified, and many can be addressed easily, such as the revision of the memoranda of understanding and the data forms. In the future, an evaluation that examines the implementation of the project from various perspectives will build on the lessons learned that this report presents to give a comprehensive picture of successes and areas for improvement before further program expansion.

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# REPORT TABLES AND FIGURES

Figure 1. Number of Women Educated by Each Unit of the Curriculum



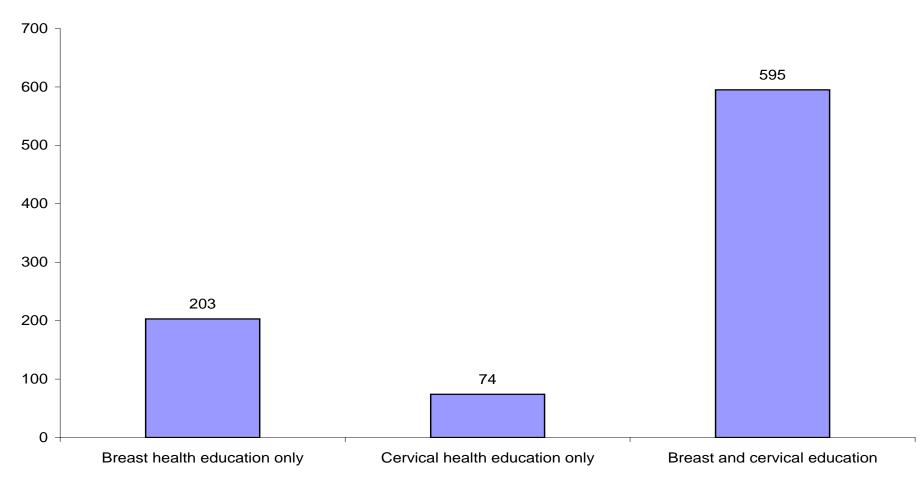


Table 1. Demographic Characteristics of the Population Served

	Number	Percent
Total	872	100.0
Age		
Under 40	381	43.7
40-64	373	42.8
65 and over	112	12.8
Unknown	6	0.7
Race/Ethnicity		
White	156	17.9
Black	54	6.2
Asian	159	18.2
Hispanic	400	45.9
Other	6	0.7
Refused/unknown	97	11.1
Country of Birth		
Born in U.S.	174	20.0
Foreign		
< 1 year in U.S.	50	5.7
1-5 years in U.S.	124	14.2
More than 5 years in U.S.	466	53.4
Unknown	58	6.7
Form Language		
English	388	44.5
Spanish	324	37.2
Portuguese	120	13.8
Khmer	40	4.6
Education		
Less than high school	284	32.6
High school or equivalent	284	32.6
Training program	57	6.5
College	204	23.4
Unknown	43	4.9
Health Insurance		
Yes	717	82.2
No	139	15.9
Unknown	16	1.8

Note: The sample for tables 1 through 4 is the total number of women educated by either or both units of the curriculum (872). We present this information for both units combined because there were no significant differences between those trained in breast health and those trained in cervical health (Appendix D).

Table 2. Demographic Characteristics of the Population Served, by Region of Training

	Bos	ston	Central		Metro	Metrowest		Northeast		Southeast		West	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Total	142	100.0	132	100.0	105	100.0	227	100.0	141	100.0	125	100.0	
Age													
Under 40	70	49.3	73	55.3	50	47.6	96	42.3	47	33.3	45	36.0	
40-64	44	31.0	56	42.4	39	37.1	113	49.8	62	44.0	59	47.2	
65 and over	27	19.0	2	1.5	16	15.2	15	6.6	32	22.7	20	16.0	
Unknown	1	0.7	1	8.0	0	0.0	3	1.3	0	0.0	1	8.0	
Race/Ethnicity													
White	1	0.7	1	8.0	11	10.5	35	15.4	80	56.7	28	22.4	
Black	30	21.1	1	8.0	1	1.0	10	4.4	8	5.7	4	3.2	
Asian	1	0.7	51	38.6	25	23.8	78	34.4	0	0.0	4	3.2	
Hispanic	48	33.8	76	57.6	52	49.5	95	41.9	43	30.5	86	68.8	
Other	0	0.0	1	8.0	1	1.0	0	0.0	4	2.8	0	0.0	
Refused/unknown	62	43.7	2	1.5	15	14.3	9	4.0	6	4.3	3	2.4	
Country of Birth													
Born in U.S.	17	12.0	29	22.0	4	3.8	22	9.7	63	44.7	39	31.2	
Foreign													
< 1 year in U.S.	7	4.9	5	3.8	1	1.0	26	11.5	2	1.4	9	7.2	
1-5 years in U.S.	27	19.0	17	12.9	16	15.2	51	22.5	7	5.0	6	4.8	
More than 5 years in U.S.	81	57.0	75	56.8	79	75.2	112	49.3	65	46.1	54	43.2	
Unknown	10	7.0	6	4.5	5	4.8	16	7.0	4	2.8	17	13.6	
Form Language													
English	61	43.0	83	62.9	25	23.8	92	40.5	82	58.2	45	36.0	
Spanish	56	39.4	49	37.1	44	41.9	71	31.3	24	17.0	80	64.0	
Portuguese	25	17.6	0	0.0	36	34.3	24	10.6	35	24.8	0	0.0	
Khmer	0	0.0	0	0.0	0	0.0	40	17.6	0	0.0	0	0.0	

Table 2 (continued)

	Boston		Central		Metrowest		Northeast		Southeast		West	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Education												
Less than high school	62	43.7	48	36.4	35	33.3	74	32.6	25	17.7	40	32.0
High school or equivalent	33	23.2	36	27.3	37	35.2	80	35.2	47	33.3	51	40.8
Training program	8	5.6	9	6.8	10	9.5	11	4.8	15	10.6	4	3.2
College	33	23.2	35	26.5	19	18.1	49	21.6	45	31.9	23	18.4
Unknown	6	4.2	4	3.0	4	3.8	13	5.7	9	6.4	7	5.6
Health Insurance												
Yes	125	88.0	114	86.4	78	74.3	158	69.6	127	90.1	115	92.0
No	14	9.9	14	10.6	26	24.8	66	29.1	10	7.1	9	7.2
Unknown	3	2.1	4	3.0	1	1.0	3	1.3	4	2.8	1	8.0

The sample for tables 1 through 4 is the total number of women educated by either or both units of the curriculum (872). We present this information for both units combined because there were no significant differences between those trained in breast health and those trained in cervical health (Appendix D).

Note:

Table 3. Receipt of Mammograms Among Population Served, by Demographic Characteristics

	Percent With Most Recent Mammogram Occurring: <sup>a</sup>									
	< 1 Year Ago	1-3 Years Ago	4-5 Years Ago	> 5 Years Ago	Never	Unknown				
Total	52.4	25.2	3.7	2.7	13.8	2.3				
Age**										
Under 40	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.				
40-64	51.5	23.3	3.2	2.7	16.9	2.4				
65 and over	55.4	31.3	5.4	2.7	3.6	1.8				
Unknown										
Race/Ethnicity**b										
White	52.6	31.6	5.3	5.3	5.3					
Black	50.0	10.0	5.0		30.0	5.0				
Asian	39.5	18.6	4.7	2.3	32.6	2.3				
Hispanic	57.8	27.5	3.8	1.4	7.6	1.9				
Other	50.0	25.0			•	25.0				
Refused/unknown	52.2	21.7		4.3	17.4	4.3				
Health Insurance**										
Yes	56.6	26.5	2.9	2.4	9.5	2.2				
No	24.6	18.5	9.2	4.6	40.0	3.1				
Unknown	62.5	12.5			25.0					
Education										
Less than high school	55.7	23.5	4.9	2.2	12.0	1.6				
High school or equivalent	44.2	24.6	4.3	5.1	18.8	2.9				
Training program	66.7	14.3			14.3	4.8				
College	56.3	27.7	1.8	1.8	10.7	1.8				
Unknown	45.2	35.5	3.2		12.9	3.2				

Note: The sample for tables 1 through 4 is the total number of women educated by either or both units of the curriculum (872). We present this information for both units combined because there were no significant differences between those trained in

breast health and those trained in cervical health (Appendix D).

n.a. = Not Applicable.

<sup>&</sup>lt;sup>a</sup>Among women ages 40 and older.

<sup>&</sup>lt;sup>b</sup>The chi-squared test shows highly significant variation between race/ethnicity groups regarding their receipt of mammograms. However, 30 percent of the cells have expected counts less than 5. Therefore, the chi-squared test may not be valid.

<sup>\*</sup>Significant variation exists between demographic groups (p < 0.05).

<sup>\*\*</sup>Highly significant variation exists between demographic groups (p < 0.01).

Table 4. Receipt of Pap Smears Among Population Served, by Demographic Characteristics

	Percent With Most Recent Pap Smear Occurring:									
	< 1 year ago	1-3 years ago	4-5 years ago	> 5 years ago	Never	Unknown				
Total	51.0	24.3	3.4	3.6	14.2	3.4				
Age**										
Under 40	55.6	21.8	8.0	1.3	17.6	2.9				
40-64	51.5	24.1	5.1	4.3	11.0	4.0				
65 and over	33.0	33.9	7.1	8.9	13.4	3.6				
Unknown	66.7	16.7			16.7					
Race/Ethnicity**										
White	49.4	26.3	7.7	4.5	10.3	1.9				
Black	61.1	16.7		1.9	14.8	5.6				
Asian	35.8	20.1	1.3	5.0	31.4	6.3				
Hispanic	59.5	24.5	3.0	3.0	7.8	2.3				
Other	50.0	16.7	33.3							
Refused/unknown	38.1	32.0	2.1	3.1	19.6	5.2				
Health Insurance**										
Yes	54.8	24.3	3.1	2.9	12.3	2.6				
No	30.9	25.9	5.0	6.5	23.7	7.9				
Unknown	56.3	12.5	6.3	6.3	18.8					
Education*										
Less than high school	46.8	25.7	2.8	4.9	16.9	2.8				
High school or equivalent	48.9	22.9	3.9	4.9	15.8	3.5				
Training program	57.9	26.3	1.8		10.5	3.5				
College	59.3	26.5	2.9	1.0	8.3	2.0				
Unknown	44.2	11.6	9.3	2.3	18.6	14.0				

Note: The sample for tables 1 through 4 is the total number of women educated by either or both units of the curriculum (872). We present this information for both units combined because there were no significant differences between those trained in breast health and those trained in cervical health (Appendix D).

<sup>\*</sup>Significant variation exists between demographic groups (p < 0.05).

<sup>\*\*</sup>Highly significant variation exists between demographic groups (p < 0.01).

Table 5. Breast and Cervical Health Knowledge on the Pre- and Posttests, by Demographic Characteristics

		Br	east Health	Unit		Cervical Health Unit				
	Pre	etest	Pos	sttest	_	Pre	Pretest		Posttest	
	Sample Size	Average Score	Sample Size	Average Score	Percent with Increased Score	Sample Size	Average Score	Sample Size	Average Score	Percent with Increased Score
Total Completing Both Pre- and Posttests	811	3.8	811	4.5**	49.2	684	3.4	684	4.5**	68.1
Total Completing Either or Both Pre- and Posttests	814	3.8	820	4.5	49.2	686	3.4	691	4.5	68.1
Age										
Under 40	344	3.9	347	4.4	43.7	297	3.4	298	4.5	66.3
40-64	354	3.9	356	4.5	49.1	286	3.3	291	4.5	73.0
65 and over	109	3.5	110	4.5	65.1	97	3.4	96	4.6	62.5
Unknown	7	3.0	7	4.0	71.4	6	3.5	6	3.8	16.7
Race/Ethnicity										
White	151	3.8	152	4.6	50.3	135	3.2	134	4.7	77.6
Black	54	3.7	54	4.3	46.3	47	3.5	47	4.3	48.9
Asian	141	3.3	142	4.1	59.0	113	2.8	116	4.2	75.9
Hispanic	370	4.0	371	4.6	46.1	296	3.6	297	4.5	63.9
Other	6	3.8	6	4.3	50.0	6	3.2	6	4.7	83.3
Refused/unknown	92	3.8	95	4.5	46.7	89	3.6	91	4.6	67.4
Education										
Less than high school	261	3.6	265	4.3	54.4	228	3.2	229	4.4	65.2
High school or equivalent	259	3.9	259	4.5	49.0	211	3.3	214	4.5	72.0
Training program	55	4.1	55	4.7	43.6	52	3.4	52	4.7	73.1
College	198	4.2	198	4.6	40.1	162	3.7	161	4.7	64.0
Unknown	41	3.2	43	4.2	68.3	33	2.9	35	4.3	75.8

Note: The first row of the table shows statistics for participants who completed both the pre- and posttests. A paired t-test was conducted for these participants in each unit of the curriculum to determine whether the increase in average scores was statistically significant. Paired t-tests were not conducted for individual demographic groups due to the small sample sizes.

<sup>\*\*</sup>Highly significant (p < 0.01).

Table 6. Breast and Cervical Health Knowledge, by Pre- and Posttest Question

	Brea	st Health l	Jnit			Cervical Health Unit					
	Pre	Pretest		Posttest			Pre	test	Pos	ttest	<del>-</del>
Question (Correct Response)	Sample Size	Percent Correct	Sample Size	Percent Correct	Percent Change	Question (Correct Response)	Sample Size	Percent Correct	Sample Size	Percent Correct	Percent Change
1. If you have a lump in your breast you absolutely have breast cancer (false)	623	76.5	735	89.6	17.1	1. If you get an abnormal Pap test, it means you have cervical cancer (false)	539	78.6	637	92.2	17.3
2. Starting at the age of 40, you should get a mammogram once a year (true)	699	85.9	783	95.5	11.2	2. Women should get their first Pap test at age 21 or 3 years after they become sexually active (true)	379	55.2	604	87.4	58.2
3. Mammograms cause breast cancer (false)	673	82.7	758	92.4	11.8	3. Cervical cancer is preventable through routine screening (true)	541	78.9	646	93.5	18.5
4. As women get older, their risk of breast cancer increases (true)	599	73.6	738	90.0	22.3	4. Getting a positive HPV test means you have cervical cancer (false)	432	63.0	599	86.7	37.7
5. You should have a clinical breast exam done by a healthcare provider every 5 years (false)	514	63.1	645	78.7	24.6	5. Most women have been exposed to the Human Papilloma Virus (HPV) (true)	411	59.9	622	90.0	50.2

Source: Analysis of data collected from those educated during the initial phase of the *Helping You Take Care of Yourself* curriculum.

 Table 7. Summary of Responses to Evaluation Questions

Question	Frequency	Percentage
Would You Suggest That Your Family or		
Friends Come to this Health Session?		
Yes	898	97.3
No	11	1.2
Missing	14	1.5
Overall, How Would You Rate this Health		
Session?		
Excellent	578	62.6
Good	306	33.2
Average	22	2.4
Fair	4	0.4
Poor	0	0.0
Missing	13	1.4
Overall, How Would You Rate the Group		
Leader?		
Excellent	619	67.1
Good	273	29.6
Average	15	1.6
Fair	1	0.1
Poor	0	0.0
Missing	15	1.6
Total	923	100.0

# APPENDIX A DATA COLLECTION FORMS

T		11
ш	ı)	#

Date:	
Location:	

## WHN Health Education – Demographics Form

The answers provided on this sheet will be used to improve future programs. Please fill it out and return it to the group leader. Thank you.

2. What is your date	of birth?			
3. How old are you?	☐ under 40	<b>4</b> 1-64	☐ 65 and ov	ver
4. What city or town	do you live in?			
5. Were you born in	the United States?	□Yes □	lNo	
	ng have you been i an 1 year 🔲 1 – :			years
6. Are you Spanish/I	Hispanic/Latina?		Yes □No	
7. How do you descr  White Black, A  Asian  8. Language spoken	frican American,	Negro	<ul><li>□ Native A</li><li>□ Refused</li></ul>	awaiian or other Pacific Islande American/Alaskan Native
9. Did you go to sch	ool?□ Yes □ N	Ю		
9a. If yes, what is	s the last grade you	ı finished?	☐ Training Pr	rogram 🗖 College
9a. If yes, what is	s the last grade you 	ı finished? h School [		
9a. If yes, what is ☐ Grade	s the last grade you	ı finished? h School		
9a. If yes, what is ☐ Grade  10. What is your job	s the last grade you	i finished? h School		
9a. If yes, what is ☐ Grade  10. What is your job  11. Do you have hea  12. Have you ever ha  12a. If yes, when was ☐ less th	s the last grade you	u finished? h School □  Yes □  Yes □  mammogram □ 4 – 5 ye	□ No □ No m?	
9a. If yes, what is ☐ Grade  10. What is your job  11. Do you have hea  12. Have you ever ha  12a. If yes, when was ☐ less th	the last grade you High?  High  High	☐ Yes ☐ Yes ☐ mammogram ☐ 4 – 5 ye ☐ more the	□ No □ No m? ears ago	

Date:	
Location:	

# **WHN Health Education Pre-test**

**Breast Health and Breast Cancer Screening Unit**For the following statements below, please <u>CIRCLE</u> if they are **TRUE** or **FALSE**.

1. If you have a lump in your breast you absolutely have breast cancerTRUE	FALSE
2. Starting at the age of 40, you should get a mammogram once a yearTRUE	FALSE
3. Mammograms cause breast cancer	FALSE
4. As women get older, their risk of breast cancer increases	FALSE
5. You should have a clinical breast exam done by a healthcare provider every 5 years	FALSE
Cervical Health and Cervical Cancer Screening Unit For the following statements below, please CIRCLE if they are TRUE or FALSE.	
	FALSE
For the following statements below, please <u>CIRCLE</u> if they are <b>TRUE</b> or <b>FALSE</b> .	FALSE FALSE
For the following statements below, please <u>CIRCLE</u> if they are <b>TRUE</b> or <b>FALSE</b> .  1. If you get an abnormal Pap test, it means you have cervical cancer	
For the following statements below, please <a href="CIRCLE">CIRCLE</a> if they are <b>TRUE</b> or <b>FALSE</b> .  1. If you get an abnormal Pap test, it means you have cervical cancer	FALSE

For Internal Use ONLY

Organization Name

Yellow paper

Date:	
Location:	

# **WHN Health Education Post-test**

# **Breast Health and Breast Cancer Screening Unit**

Fo	r the following statements below, please <u>CIRCLE</u> if they are <b>TRU</b>	E or FALSE.	
1.	If you have a lump in your breast you absolutely have breast cand	cerTRUE	FALSE
2.	Starting at the age of 40, you should get a mammogram once a year	earTRUE	FALSE
3.	Mammograms cause breast cancer	TRUE	FALSE
4.	As women get older, their risk of breast cancer increases	TRUE	FALSE
5.	You should have a clinical breast exam done by a healthcare pro every 5 years		FALSE
Fo	ervical Health and Cervical Cancer Screening Unit or the following statements below, please <u>CIRCLE</u> if they are TRU If you get an abnormal Pap test, it means you have cervical cancer.		FALSE
2.	Women should get their first Pap test at age 21 or 3 years after th become sexually active		FALSE
3.	Cervical cancer is preventable through routine screening	TRUE	FALSE
4.	Getting a positive HPV test means you have cervical cancer	TRUE	FALSE
5.	Most women have been exposed to the Human Papilloma Virus (	(HPV) <b>TRUE</b>	FALSE
•		For Internal Use ONLY Organization Name	
Ye	llow paper		

## **WHN Health Education Participant Evaluation**

Please take a minute to let us know how you liked this Women's Health session.

1.	. Would you suggest that your family or friends come to this health session?  \[ \sum \text{Yes} \sum \text{No} \]								
2.	Overal	l, how would yo	ou rate this healt	h session?					
	Poor 1	Fair 2	Average 3	Good 4	Excel 5	llent			
3.	Overal	l, how would yo	ou rate the group	leader?					
	Poor 1	Fair 2	Average 3	Good 4	Excel 5	llent			
4.	Do better?	you have	any idea		how	to	make	the	sessions
ID		you for filling	out this form! F	—— Please nass it i	n before y	vou lea	ve.		

For Internal Use ONLY
Organization Name

# APPENDIX B DATA RECODING DECISIONS

Skip pattern questi	0115		
5: Were you born in the United	5a: If no, how long have you been in the United		
States?	States?	Recode Decisions	Frequency
Yes	Less than 1 year	Recode 5a to logical skip	0
Yes	1-5 years	Recode 5a to logical skip	4
Yes	More than 5 years	Recode 5a to logical skip	35
Missing	Less than 1 year	Recode 5a to missing	2
Missing	1-5 years	Recode 5a to missing	3
Missing	More than 5 years	Recode 5a to missing	11

## Skip pattern questions

9: Did you go to school?	9a: If yes, what is the last grade you finished?	_ Decision	Frequ ency
No	Grade X	Change 9 to yes and keep 9a as is	7
No	High School	Change 9 to yes and keep 9a as is	12
No	Training Program	Change 9 to yes and keep 9a as is	2
No	College	Change 9 to yes and keep 9a as is	7
Missing	Grade X	Change 9 to yes and keep 9a as is	8
Missing	High School	Change 9 to yes and keep 9a as is	5
Missing	Training Program	Change 9 to yes and keep 9a as is	0
Missing	College	Change 9 to yes and keep 9a as is	6

12: Have you ever had a mammogram?	12a: If yes, when was your most recent mammogram?	 Decision	Frequency
No	Less than 1 year ago	Change 12 to yes and keep 12a as is	6
No	1–3 years ago	Change 12 to yes and keep 12a as is	2
No	4–5 years ago	Change 12 to yes and keep 12a as is	1
No	More than 5 years ago	Change 12 to yes and keep 12a as is	1
Missing	Less than 1 year ago	Change 12 to yes and keep 12a as is	6
Missing	1–3 years ago	Change 12 to yes and keep 12a as is	5
Missing	4–5 years ago	Change 12 to yes and keep 12a as is	0
Missing	More than 5 years ago	Change 12 to yes and keep 12a as is	0

## Skip pattern questions

13: Have you ever had a Pap smear?	13a: If yes, when was your most recent Pap		
	smear?	Decision	Frequency
No	Less than 1 year ago	Change 13 to yes and keep 13a as is	2
No	1–3 years ago	Change 13 to yes and keep 13a as is	0
No	4–5 years ago	Change 13 to yes and keep 13a as is	0
No	More than 5 years ago	Change 13 to yes and keep 13a as is	3
Missing	Less than 1 year ago	Change 13 to yes and keep 13a as is	9
Missing	1–3 years ago	Change 13 to yes and keep 13a as is	14
Missing	4–5 years ago	Change 13 to yes and keep 13a as is	1
Missing	More than 5 years ago	Change 13 to yes and keep 13a as is	3

B.2

## APPENDIX C

PRE- AND POSTTEST KNOWLEDGE
BY QUESTION AND BY AGE,
RACE/ETHNICITY, AND EDUCATION

C.2

Appendix C.1 Pre- And Posttest Knowledge By Age

			Breast Health	n Unit		Cervical Health Unit				
	Pretest		Posttest		_	Pretest		Posttest		_
	Sample Size	Percent Correct	Sample Size	Percent Correct	Percent Change	Sample Size	Percent Correct	Sample Size	Percent Correct	Percent Change
Question 1										
Total	623	76.5	735	89.6	17.1	539	78.6	637	92.2	17.3
Age										
Under 40	269	78.2	306	88.2	12.8	242	81.5	275	92.3	13.3
40-64	277	78.2	324	91.0	16.3	223	78.0	270	92.8	19.0
65 and over	72	66.1	101	91.8	39.0	69	71.1	87	90.6	27.4
Unknown	5	71.4	4	57.1	-20.0	5	83.3	5	83.3	0.0
Question 2										
Total	699	85.9	783	95.5	11.2	379	55.2	604	87.4	58.2
Age										
Under 40	293	85.2	331	95.4	12.0	157	52.9	259	86.9	64.4
40-64	310	87.6	342	96.1	9.7	146	51.0	249	85.6	67.6
65 and over	91	83.5	103	93.6	12.2	74	76.3	93	96.9	27.0
Unknown	5	71.4	7	100.0	40.0	2	33.3	3	50.0	50.0

			Breast Health	n Unit		Cervical Health Unit					
	F	Pretest	Р	osttest	-	F	Pretest	P	osttest	-	
	Sample Size	Percent Correct	Sample Size	Percent Correct	Percent Change	Sample Size	Percent Correct	Sample Size	Percent Correct	Percent Change	
Question 3											
Total	673	82.7	758	92.4	11.8	541	78.9	646	93.5	18.5	
Age											
Under 40	294	85.5	327	94.2	10.3	227	76.4	278	93.3	22.1	
40-64	298	84.2	331	93.0	10.4	229	80.1	274	94.2	17.6	
65 and over	78	71.6	95	86.4	20.7	80	82.5	89	92.7	12.4	
Unknown	3	42.9	5	71.4	66.7	5	83.3	5	83.3	0.0	
Question 4											
Total	599	73.6	738	90.0	22.3	432	63.0	599	86.7	37.7	
Age											
Under 40	254	73.8	321	92.5	25.3	185	62.3	253	84.9	36.3	
40-64	261	73.7	308	86.5	17.3	180	62.9	256	88.0	39.8	
65 and over	81	74.3	103	93.6	26.0	63	64.9	86	89.6	37.9	
Unknown	3	42.9	6	85.7	100.0	4	66.7	4	66.7	0.0	
Question 5											
Total	514	63.1	645	78.7	24.6	411	59.9	622	90.0	50.2	
Age											
Under 40	222	64.5	251	72.3	12.1	206	69.4	268	89.9	29.7	
40-64	232	65.5	298	83.7	27.7	152	53.1	264	90.7	70.7	
65 and over	55	50.5	90	81.8	62.1	48	49.5	84	87.5	76.8	
Unknown	5	71.4	6	85.7	20.0	5	83.3	6	100.0	20.0	

## Appendix C.1 (continued)

Pre- and posttest questions (and correct answers) are as follows:

#### Breast Health Unit

- (false).
- 2. Starting at the age of 40, you should get a mammogram once a year (true). become sexually active (true).
- 3. Mammograms cause breast cancer (false).
- 4. As women get older, their risk of breast cancer increases (true).
- 5. You should have a clinical breast exam done by a healthcare provider 5. Most women have been exposed to the Human Papilloma Virus every 5 years (false).

#### Cervical Health Unit

- 1. If you have a lump in your breast you absolutely have breast cancer 1. If you get an abnormal Pap test, it means you have cervical cancer
  - 2. Women should get their first Pap test at age 21 or 3 years after they
  - 3. Cervical cancer is preventable through routine screening (true).
  - 4. Getting a positive HPV test means you have cervical cancer (false).
  - (HPV) (true).

Appendix C.2 Pre- and Posttest Knowledge by Race/Ethnicity

		Bre	east Health l	Jnit		Cervical Health Unit				
	Pre	etest	Pos	ttest	_	Pre	test	Pos	ttest	- Percent Change
	Sample Size	Percent Correct	Sample Size	Percent Correct	Percent Change	Sample Size	Percent Correct	Sample Size	Percent Correct	
Question 1										
Total	623	76.5	735	89.6	17.1	539	78.6	637	92.2	17.3
Race/Ethnicity										
White	133	88.1	144	94.7	7.6	111	82.2	130	97.0	18.0
Black	36	66.7	44	81.5	22.2	41	87.2	42	89.4	2.4
Asian	65	46.1	101	71.1	54.3	57	50.4	88	75.9	50.4
Hispanic	316	85.4	353	95.1	11.4	258	87.2	284	95.6	9.7
Other	6	100.0	6	100.0	0.0	5	83.3	6	100.0	20.0
Refused/unknown	67	72.8	87	91.6	25.8	67	75.3	87	95.6	27.0
Question 2										
Total	699	85.9	783	95.5	11.2	379	55.2	604	87.4	58.2
Race/Ethnicity										
White	122	80.8	143	94.1	16.4	64	47.4	121	90.3	90.5
Black	38	70.4	53	98.1	39.5	26	55.3	38	80.9	46.2
Asian	124	87.9	135	95.1	8.1	73	64.6	108	93.1	44.1
Hispanic	328	88.6	354	95.4	7.6	154	52.0	252	84.8	63.1
Other	3	50.0	6	100.0	100.0	1	16.7	4	66.7	300.0
Refused/unknown	84	91.3	92	96.8	6.1	61	68.5	81	89.0	29.9
Question 3										
Total	673	82.7	758	92.4	11.8	541	78.9	646	93.5	18.5
Race/Ethnicity										
White	131	86.8	147	96.7	11.5	90	66.7	126	94.0	41.0
Black	45	83.3	47	87.0	4.4	33	70.2	40	85.1	21.2
Asian	90	63.8	119	83.8	31.3	87	77.0	106	91.4	18.7

		Bre	east Health l	Jnit		Cervical Health Unit				
- -	Pretest		Pos	ttest	_	Pre	Pretest		ttest	_
	Sample Size	Percent Correct	Sample Size	Percent Correct	Percent Change	Sample Size	Percent Correct	Sample Size	Percent Correct	Percent Change
Hispanic	325	87.8	353	95.1	8.3	247	83.4	278	93.6	12.2
Other	6	100.0	6	100.0	0.0	5	83.3	6	100.0	20.0
Refused/unknown	76	82.6	86	90.5	9.6	79	88.8	90	98.9	11.4
Question 4										
Total	599	73.6	738	90.0	22.3	432	63.0	599	86.7	37.7
Race/Ethnicity										
White	109	72.2	142	93.4	29.4	93	68.9	127	94.8	37.6
Black	41	75.9	48	88.9	17.1	36	76.6	39	83.0	8.3
Asian	109	77.3	127	89.4	15.7	53	46.9	86	74.1	58.1
Hispanic	259	70.0	328	88.4	26.3	186	62.8	260	87.5	39.3
Other	3	50.0	3	50.0	0.0	5	83.3	6	100.0	20.0
Refused/unknown	78	84.8	90	94.7	11.7	59	66.3	81	89.0	34.3
Question 5										
Total	514	63.1	645	78.7	24.6	411	59.9	622	90.0	50.2
Race/Ethnicity										
White	85	56.3	119	78.3	39.1	70	51.9	123	91.8	77.0
Black	39	72.2	42	77.8	7.7	30	63.8	41	87.2	36.7
Asian	79	56.0	106	74.6	33.2	43	38.1	96	82.8	117.5
Hispanic	258	69.7	302	81.4	16.7	212	71.6	277	93.3	30.2
Other	5	83.3	5	83.3	0.0	3	50.0	6	100.0	100.0
Refused/unknown	48	52.2	71	74.7	43.2	53	59.6	79	86.8	45.8

Pre- and posttest questions (and correct answers) are as follows:

## Appendix C.2 (continued)

## Breast Health Unit

- 1. If you have a lump in your breast you absolutely have breast cancer 1. If you get an abnormal Pap test, it means you have cervical cancer (false).
- 2. Starting at the age of 40, you should get a mammogram once a year (true). become sexually active (true).
- 3. Mammograms cause breast cancer (false).
- 4. As women get older, their risk of breast cancer increases (true).
- 5. You should have a clinical breast exam done by a healthcare provider 5. Most women have been exposed to the Human Papilloma Virus every 5 years (false).

### Cervical Health Unit

- (false).
- 2. Women should get their first Pap test at age 21 or 3 years after they
- 3. Cervical cancer is preventable through routine screening (true).
- 4. Getting a positive HPV test means you have cervical cancer (false).
- (HPV) (true).

Appendix C.3 Pre- and Posttest Knowledge by Education

		Bre	ast Health l	Jnit		Cervical Health Unit				
_	Pre	test	Pos	ttest		Pre	test	Pos	ttest	<u>-</u>
	Sample Size	Percent Correct	Sample Size	Percent Correct	Percent Change	Sample Size	Percent Correct	Sample Size	Percent Correct	Percent Change
Question 1										
Total	623	76.5	735	89.6	17.1	539	78.6	637	92.2	17.3
Education										
Less than high school	172	65.9	230	86.8	31.7	156	68.4	202	88.2	28.9
High school or equivalent	202	78.0	232	89.6	14.9	170	80.6	197	92.1	14.3
Training program	48	87.3	51	92.7	6.3	41	78.8	48	92.3	17.1
College	175	88.4	188	94.9	7.4	153	94.4	158	98.1	3.9
Unknown	26	63.4	34	79.1	24.7	19	57.6	32	91.4	58.8
Question 2										
Total	699	85.9	783	95.5	11.2	379	55.2	604	87.4	58.2
Education										
Less than high school	227	87.0	248	93.6	7.6	152	66.7	202	88.2	32.3
High school or equivalent	219	84.6	251	96.9	14.6	105	49.8	186	86.9	74.7
Training program	48	87.3	53	96.4	10.4	25	48.1	48	92.3	92.0
College	176	88.9	189	95.5	7.4	77	47.5	140	87.0	82.9
Unknown	29	70.7	42	97.7	38.1	20	60.6	28	80.0	32.0
Question 3										
Total	673	82.7	758	92.4	11.8	541	78.9	646	93.5	18.5
Education										
Less than high school	199	76.2	233	87.9	15.3	182	79.8	212	92.6	16.0
High school or equivalent	213	82.2	242	93.4	13.6	162	76.8	199	93.0	21.1
Training program	49	89.1	55	100.0	12.2	45	86.5	50	96.2	11.1
College	184	92.9	195	98.5	6.0	131	80.9	154	95.7	18.3
Unknown	28	68.3	33	76.7	12.4	21	63.6	31	88.6	39.2

_		Bre	east Health l	Jnit		Cervical Health Unit				
_	Pretest		Pos	Posttest		Pre	Pretest		Posttest	
	Sample Size	Percent Correct	Sample Size	Percent Correct	Percent Change	Sample Size	Percent Correct	Sample Size	Percent Correct	Percent Change
Question 4										
Total	599	73.6	738	90.0	22.3	432	63.0	599	86.7	37.7
Education										
Less than high school	193	73.9	234	88.3	19.4	126	55.3	191	83.4	50.9
High school or equivalent	194	74.9	235	90.7	21.1	125	59.2	179	83.6	41.2
Training program	40	72.7	54	98.2	35.0	33	63.5	47	90.4	42.4
College	145	73.2	177	89.4	22.1	127	78.4	153	95.0	21.2
Unknown	27	65.9	38	88.4	34.2	21	63.6	29	82.9	30.2
Question 5										
Total	514	63.1	645	78.7	24.6	411	59.9	622	90.0	50.2
Education										
Less than high school	138	52.9	201	75.8	43.5	123	53.9	200	87.3	61.9
High school or equivalent	170	65.6	203	78.4	19.4	124	58.8	196	91.6	55.8
Training program	40	72.7	43	78.2	7.5	33	63.5	50	96.2	51.5
College	143	72.2	165	83.3	15.4	115	71.0	145	90.1	26.9
Unknown	23	56.1	33	76.7	36.8	16	48.5	31	88.6	82.7

Pre- and posttest questions (and correct answers) are as follows: Breast Health Unit

- 1. If you have a lump in your breast you absolutely have breast cancer (false).
- 2. Starting at the age of 40, you should get a mammogram once a year (true).
- 3. Mammograms cause breast cancer (false).
- 4. As women get older, their risk of breast cancer increases (true).
- 5. You should have a clinical breast exam done by a healthcare provider every 5 years (false).

#### Cervical Health Unit

- 1. If you get an abnormal Pap test, it means you have cervical cancer (false).
- 2. Women should get their first Pap test at age 21 or 3 years after they become sexually active (true).
- 3. Cervical cancer is preventable through routine screening (true).
- 4. Getting a positive HPV test means you have cervical cancer (false).
- 5. Most women have been exposed to the Human Papilloma Virus (HPV) (true).

## APPENDIX D

# DEMOGRAPHIC CHARACTERISTICS OF THE POPULATION SERVED, BY UNIT OF THE CURRICULUM

Appendix D. Demographic Characteristics of the Sample by Unit of the Curriculum

	Breast H	ealth Unit	Cervical F	lealth Unit
	Number	Percent	Number	Percent
Total	798	100.0	669	100.0
Age				
Under 40	330	41.4	286	42.8
40-64	353	44.2	280	41.9
65 and over	110	13.8	97	14.5
Unknown	5	0.6	6	0.9
Race/Ethnicity				
White	151	18.9	134	20.0
Black	54	6.8	46	6.9
Asian	121	15.2	111	16.6
Hispanic	372	46.6	281	42.0
Other	6	0.8	6	0.9
Refused/unknown	94	11.8	91	13.6
Form Language				
English	338	42.4	295	44.1
Spanish	300	37.6	234	35.0
Portuguese	120	15.0	120	17.9
Khmer	40	5.0	20	3.0
Country of Birth				
Born in U.S.	159	19.9	135	20.2
Foreign				
< 1 year in U.S.	40	5.0	30	4.5
1-5 years in U.S.	110	13.8	91	13.6
More than 5 years in U.S.	437	54.8	369	55.2
Unknown	52	6.5	44	6.6
Health Insurance				
Yes	652	81.7	562	84.0
No	130	16.3	97	14.5
Unknown	16	2.0	10	1.5
Education				
Less than high school	250	31.3	226	33.8
High School or equivalent	258	32.3	205	30.6
Training program	52	6.5	50	7.5
College	196	24.6	156	23.3
Unknown	42	5.3	32	4.8