



University of Kentucky
UKnowledge

Theses and Dissertations--Public Health (M.P.H.
& Dr.P.H.)

College of Public Health

2021

The Witness Project In Whitehall, OH

Freda Allyson Hucek
University of Kentucky, allyhucek@gmail.com

Follow this and additional works at: https://uknowledge.uky.edu/cph_etds



Part of the [Public Health Commons](#)

[Right click to open a feedback form in a new tab to let us know how this document benefits you.](#)

Recommended Citation

Hucek, Freda Allyson, "The Witness Project In Whitehall, OH" (2021). *Theses and Dissertations--Public Health (M.P.H. & Dr.P.H.)*. 330.

https://uknowledge.uky.edu/cph_etds/330

This Graduate Capstone Project is brought to you for free and open access by the College of Public Health at UKnowledge. It has been accepted for inclusion in Theses and Dissertations--Public Health (M.P.H. & Dr.P.H.) by an authorized administrator of UKnowledge. For more information, please contact UKnowledge@lsv.uky.edu.

STUDENT AGREEMENT:

I represent that my capstone and abstract are my original work. Proper attribution has been given to all outside sources. I understand that I am solely responsible for obtaining any needed copyright permissions. I have obtained needed written permission statement(s) from the owner(s) of each third-party copyrighted matter to be included in my work, allowing electronic distribution (if such use is not permitted by the fair use doctrine) which will be submitted to UKnowledge as Additional File.

I hereby grant to The University of Kentucky and its agents the irrevocable, non-exclusive, and royalty-free license to archive and make accessible my work in whole or in part in all forms of media, now or hereafter known. I agree that the document mentioned above may be made available immediately for worldwide access unless an embargo applies.

I retain all other ownership rights to the copyright of my work. I also retain the right to use in future works (such as articles or books) all or part of my work. I understand that I am free to register the copyright to my work.

REVIEW, APPROVAL AND ACCEPTANCE

The document mentioned above has been reviewed and accepted by the student's advisor, on behalf of the advisory committee, and by the Director of Graduate Studies (DGS), on behalf of the program; we verify that this is the final, approved version of the student's capstone including all changes required by the advisory committee. The undersigned agree to abide by the statements above.

Freda Allyson Hucek, Student

Dr. Kathryn Cardarelli, Committee Chair

Dr. Sarah Wackerbarth, Director of Graduate Studies

THE WITNESS PROJECT IN WHITEHALL, OH

CAPSTONE PROJECT PAPER

A paper submitted in partial fulfillment of the
requirements for the degree of
Master of Public Health
in the
University of Kentucky College of Public Health

By Freda Allyson Hucek
Columbus, Ohio

Lexington, Kentucky
July 21, 2021

Chair
Dr. Kathryn Cardarelli

Committee Member
Dr. Caitlin Pope

Committee Member
Dr. Jerod Stapleton

Abstract

The Witness Project (WP) is an evidence-based breast cancer screening intervention that will be implemented in Whitehall, Ohio, at three different churches by the Franklin County Health Department. The WP will target African American women 50-74 years old who are non-compliant with current United States Preventative Services Task Force (USPSTF) breast cancer screening recommendations. African American women face disproportionately higher mortality rates from breast cancer when compared to other racial and ethnic groups in the United States and in Whitehall. African American women are less likely to discuss breast cancer and preventive screening services within their community. The WP uses Witness Role Models (WRMs) and Lay Health Advisors (LHAs) to run 1-hour educational sessions at the identified church locations. The WRMs are breast cancer survivors who share their stories and experiences about early breast cancer detection through screening. The WRMs serve as social support to the participants and can answer any questions they may have regarding their experience. The LHAs serve as a community resource to the participants by educating women about breast cancer screening and connecting participants with screening services. The WP will be partnering with The James Mobile Mammography Unit and the OhioHealth Eastside Health Center to connect participants to screening services. In order to measure the short-term outcomes (breast cancer screening knowledge, self-efficacy, social support, connections to community resources), a pre- and post-program survey will be collected prior and at the conclusion of the educational sessions. The results of the program will be disseminated to the Community Advisory Board (CAB), community partners and collaborators.

Target Population & Need

Breast Cancer

In 2017, there were a reported 250,250 breast cancer cases in the United States, making it the second most common form of cancer among all women.¹ It affects both African American and white women at the same rates, but African Americans face disproportionately higher mortality rates.² In 2017, there were an estimated 42,000 deaths due to breast cancer.¹ When examining the age-adjusted rate of breast cancer as of 2017, for every 100,000 women, there 125 women diagnosed with breast cancer, and 20 of those women will die from breast cancer.¹

Ohio experiences higher age-adjusted breast cancer rates than the national age-adjusted rate.¹ Ohio also experiences higher age-adjusted breast cancer rates than neighboring states such as Kentucky, Indiana, Michigan, and West Virginia.¹ In 2017, there were 9,830 cases of breast cancer reported; in comparison, West Virginia only reported 1,474 cases.¹ For every 100,000 women in Ohio, there are 130.1 cases of breast cancer. Columbus, Ohio, a city that resides in Franklin County, experiences one of the highest rates of age-adjusted breast cancer rates than any other county.¹ In Franklin County, for every 100,00 women, there are 133 cases of breast cancer. From 2013 to 2017, there were 4,397 cases of breast cancer and 797 deaths.¹ African American and white women experience the highest breast cancer rates in Franklin County compared to other racial demographics such as Asian/Island Pacific and Hispanics¹. In 2017, within Franklin County, the percentage of annual mammogram screenings of women enrolled in Medicare ages 64-74 years old are broken down by different racial and ethnic groups as follows: 35% Asian, 45% Black, 39% Hispanic, and 46% White.³

Table 1. Characteristics of Breast Cancer Burden in United States Populations, 2020

<u>Location</u>	<u>Female Population</u>	<u># Of New Cases Annually</u>	<u># Of Deaths Annually</u>	<u># Of New Cases of Late-Stage Breast Cancer</u>	<u>Proportion of Women Who Screened Using a Mammogram in the Past Two Years</u>
United States ⁴	154,540,194	198,602	40,736	70,218	77.5%
Ohio ⁴	5,895,383	8,319	1,820	2,972	77.0%
Franklin County, OH ⁴	585,597	730	161	263	80.7%

Breast Cancer Screening Barriers

Inner-city women in Columbus, Ohio, experience barriers and burdens when seeking breast cancer screening such as mammograms and ultrasounds.⁵ Decreasing barriers and limitations for inner-city women to seek affordable and effective preventive screenings is crucial for detecting and treating breast cancer.⁵ Women face a magnitude of barriers, such as being uninsured or underinsured, cultural/language barriers, lack of transportation, education, social support, and childcare.⁵ African American women experience different barriers based on their culture and beliefs associated with breast cancer.⁶ High cancer vulnerability is a barrier for African American women.⁶ Researchers found that women who feel as though they could get cancer are less likely to get a mammogram.⁶ Another barrier for African American women is that interventions that target their racial group focus on rescreening, and interventions do not target women who have never screened or encourage repeat screening with an aspect of education and accessibility which the WP will work towards improving.⁶

Targeted Geographic Region

There are five areas of Columbus identified by researchers that experience higher breast cancer mortality rates, including North Linden, Whitehall, Northeast Columbus, Forest Park, and Southeast Columbus.⁶ In addition, a wide range of racial and ethnic minority women reside in these areas, such as Nepali, Somali, Bhutanese, and Spanish-speaking women.⁶ Although there are multiple areas in Columbus that need increased breast cancer education and screening, we will be focusing on Whitehall for this specific intervention.⁶ Whitehall is located on the Eastside of Columbus and is located in zip codes 43213, 43219, and 43227.⁷ In 2019, an estimated 18,926 individuals resided in Whitehall, and 50.1% of the population were females.⁸ There are 7,243 households with an average of 2.61 individuals per household.⁸ The mean household income is \$42,526, with 21% of individuals living in poverty.⁸ There are 15.3% of adults 65 and under who report living without healthcare insurance, and 10.5% of the population under 65 reports living with a disability.⁸ White and African Americans make up the two largest racial groups in Whitehall, with 43.8% white and 39.4% African Americans.⁸ In addition, 37.3% of the population in Whitehall identify as non-Hispanic, while 16.7% identify as Hispanic or Latino.⁸ Within Whitehall, 84.6% of individuals, have a high school degree, while only 14.5% have a Bachelor's degree or higher.⁸

Community Resources

There are various resources available to the residents who reside in and around Whitehall identified by the city of Whitehall in their Community Resource Directory.⁹ The Columbus Free Clinic is a resource available to individuals in Whitehall.⁹ It offers free medical services to primary care, urgent care, laboratory, imaging, and social work services.⁹ The Franklin County

Public Health Department is also available to residents, focusing on primary prevention methods.⁹ The Heart of Ohio Family Health at Whitehall is located in Whitehall and offers primary care services, gynecological care, diagnostic laboratory services, and transportation services.⁹ They accept Medicaid, Medicare, all insurance plans and have a fee based on income for uninsured individuals.⁹ Whitehall Community Health Action Team (CHAT) is a specific organization that focuses on the Whitehall community and provides resources for women, children, and families in need.⁹ OhioHealth Eastside Health Center is also located in Whitehall and offers various services to families.¹⁰ They provide rehabilitation services which include cancer rehabilitation, imaging services such as mammograms, MRIs, ultrasounds, CT scans, and X-Rays. They offer other resources such as wellness classes, a mother's milk bank, and primary care services and resources.¹⁰ The James Mobile Mammography Unit is another resource specifically dedicated to breast cancer screening available to women in Whitehall since the unit is mobile and travels across Columbus.⁵ The James identified Whitehall as a location where there is a need for increased breast cancer screening and education.⁵

Witness Project Reach

The Witness Project (WP) will be implemented in Whitehall, Ohio, targeting zip codes 43213, 43219, and 43227.¹¹ We propose to target English-speaking low-income African American women ages 50-74 years old per the United States Preventative Service Task Force (USPSTF) recommendations for breast cancer screening protocol.¹² This intervention will specifically target African American women who are non-compliant with the USPSTF recommendations for biannual mammograms.¹² African Americans in Whitehall will be targeted in this intervention because of a recent study conducted by the Ohio State University stating that

African American women are at high risk of breast cancer due to the lack of education about preventive care such as mammograms.¹³ Whitehall has a large African American community, with 39.4% of the residents identifying as African American.⁸ The overarching goals of the WP are to increase knowledge about breast cancer screening and increase compliance with the USPSTF.¹¹ The WP program will be implemented at three different sites: Village Baptist Church, Whitehall United Methodist Church, and District Three African Methodist Episcopal (AME) Church.¹⁴⁻¹⁶ The WP will enhance the programs and services already available in Whitehall by targeting African American women who historically experience the highest breast cancer mortality rates.¹¹ The WP will also bring in spirituality using breast cancer survivors who serve as Witness Role Models (WRMs) and Lay Health Advisors (LHAs) within church settings to target negative stigmas and beliefs and barriers African American women face.¹¹ This program aims to target 540 women over three years. Four educational programs will be conducted in year one with approximately 30 women per program targeting 120 women. Each program will have 2 LHAs and 3-4 WRMs. For each program, 1 LHA will have 15 women and be responsible for conducting the follow-up calls and connecting participants to screening services. For the following two years after the pilot year, there will be 7 programs a year targeting around 210 women per year. The same ratio of 2 LHAs and 3-4 WRMs per 30 women will apply. To continually address community needs, the Community Advisory Board (CAB), LHAs, and WRMs will work together to make adaptations when needed to serve the community best.

Program Approach

Lay Health Advisors

Lay Health Advisors (LHAs), also known interchangeably as Peer Health Educators, Peer Supporters, or Lay Health Educators (LHE), can be found in a variety of domains in public health practice.¹⁷ One domain they offer support in is health promotion, particularly in cancer screening methods such as mammography.¹⁷ The primary goal of LHAs is to encourage community members to adopt new behaviors that promote healthy health outcomes.¹⁷ A crucial role of LHAs is to share information in which a person with no professional background or knowledge would understand.¹⁷ The focus of LHAs is to give community members information, emotional support and appraise health problems in the community.¹⁷ Through their work, they can often make a significant change in health outcomes by decreasing various barriers, changing behaviors, and increasing prevention measures in the community.¹⁷

LHAs can be used in various ways, such as community educators, offering one-on-one support, or group-based support to accommodate community needs.¹⁷ Research conducted with cancer patients engaging in peer support programs demonstrated that all platforms were equally effective.¹⁷ Lay Health Advisors have been utilized in public health practice for decades, and research through the University of Arizona has shown they are involved in seven core services.¹⁷ These core services involve: “bridging cultural mediation between communities and the health care system; providing culturally appropriate and accessible health education and information; assuring that people get the services they need; providing informal counseling and social support; advocating for individuals and communities within the health and social service

systems; providing direct services (such as basic first aid) and administering/encouraging health screening tests; building individual and community capacity."¹⁷

Standard Screening Practice for Breast Cancer

Mammograms are the most common form of screening used to detect breast cancer and are used by taking an X-ray picture of the patient's breasts to determine any abnormalities in the breast tissue.¹⁸ A mammogram is conducted by having the patient stand in front of the X-ray machine, and an X-ray technologist will help place their breast on a plastic plate.¹⁸ Once the breast is on the device, the machine will flatten the breasts to scan the breast tissue.¹⁸ The X-ray technologist will take X-ray scans of all different sides of the breast to ensure that all tissue was examined for abnormalities.¹⁸ The same procedure will be replicated for the other breast.¹⁸ If mammogram results are abnormal, a patient may be recommended to a breast cancer specialist for diagnostic testing, including a biopsy of the abnormal tissue to conclude if the abnormality is cancerous or benign.¹⁸ Magnetic resonance imaging (MRI) is another screening method commonly used for women at high risk for breast cancer.¹⁹ Women typically recommended for MRIs include those with a genetic mutation such as *BRCA1* or *BRCA2*, a family history of breast cancer, or a genetic syndrome such as Cowden syndrome.¹⁹

The United States Preventive Services Task Force (USPSTF) outlines recommended screening protocol for women by age bracket.¹² The USPSTF recommends that women 50-74 years old screen for breast cancer biannually using mammography.¹² For women 40-49 years old, USPSTF recommends that breast cancer screening is optional but should be consulted with one's doctor.¹² Individuals with a family history of breast cancer, genetic mutation, or syndromes that increase the risk for breast cancer may decide to start screening at an early age.¹²

Description of Evidence-Based Intervention

The Witness Project (WP) is a community-based intervention started in 1991 at the University of Arkansas Medical Center to address high mortality rates among African American women in the community due to breast cancer.²⁰ The WP was initially intended to reach low-income African American women in rural communities and has expanded to different United States regions.²⁰ There are two overarching initial goals of the WP: (1) to increase education and awareness regarding breast cancer, (2) to increase screening for breast cancer.²⁰ A long-term goal of the WP is to decrease breast cancer mortality and health disparities among African American women.²⁰ The program is designed to be set up and implemented within a year and then continue within the community in the years to follow.¹¹

Through community findings, it was found that breast cancer is not commonly discussed among African American women.²⁰ When creating the WP, researchers specifically targeted cultural and spiritual beliefs to increase awareness and screening.²⁰ Researchers found that women in the community believed that breast cancer was a fatal disease with no benefit in early detection because early-stage treatment could not save lives.²⁰ To address barriers regarding screening, diagnosis, and breast cancer treatment, it was first crucial to use the WP to address community concerns centered around cultural and spiritual beliefs.²⁰ The WP aims to address the fear of mortality resulting from breast cancer diagnosis using informal and formal support.²⁰

The WP is set up in a unique way in which breast cancer survivors serve as WRMs to share their stories of cancer detection, treatment, and the process as a whole.²⁰ The WP utilizes educational sessions led by both WRMs and LHAs.¹¹ It serves as a spiritual method of witnessing in which they share their religious views, experience, and cancer treatment to other

members of the church, family, and friends.¹¹ The breast cancer survivors, also known as WRMs, are then paired with LHAs. The WP recommends three WRMs for every two LHAs.¹¹ It is crucial to have at least two WRMs so that women can gain different perspectives from survivors.¹¹ The LHA educates the WRMs about mammograms as an early detection screening method and breast cancer as a whole.²⁰ Messages are crafted in a different way to honor the community's culture and beliefs.²⁰ Most of the group sessions where WRMs share their stories were held directly after church programs.²⁰ Worship or Sunday School targets the entire church population, not just those interested in breast health.²¹ They often include biblical quotations or scriptures to resonate with the women.²¹ The WRMs also stress the need to spread the message about early detection and prevention of breast cancer among the community.²¹

Table 2. Description of Lay Health Advisors & Witness Role Models

<u>Term</u>	<u>Alternative Terms</u>	<u>Description in Context of WP</u>
Lay Health Advisors (LHAs) ¹¹	Peer Health Educators, Peer Supporters, Community Navigator, Lay Health Educators (LHE)	They are typically not breast cancer survivors who are trained to educate in a lay manner. They guide and educate participants about screening and help connect women to resources to receive screening.
Witness Role Models (WRMs) ¹¹	Witnessing, Witness	Breast cancer survivors who share their stories of early detection through screening to participants. They are educated about mammograms and breast cancer by the LHAs but serve as support in the form of a peer to participants.

The WP uses both informal and formal support measures by utilizing educational sessions groups and touching on the component of spirituality.²⁰ Educational sessions are led by LHAs and WRMs and provide a safe environment for women to share their experiences regarding women's health and breast cancer.²⁰ Research has shown that African American women do not share their experiences due to fear of stigma from others, so educational sessions

give women an outlet to share their experiences.²⁰ They also encourage other women to learn about screening methods for breast cancer.²⁰ The educational sessions are grounded in increasing self-efficacy to empower women to seek health behaviors that are beneficial to their health.²⁰ This increases affirmation among African American women to seek the ability to save their lives and change the negative stigma regarding breast cancer detection and treatment.²⁰ The WP uses educational sessions to understand the community and individuals' beliefs regarding breast cancer.²⁰ Leaders in the church often serve as LHAs and have large social networks to extend education.²⁰ Spirituality is another form of support and plays a crucial role in the WP.²⁰ Research has shown a strong interconnectedness between spirituality, health beliefs, health behaviors, and ultimately health outcomes.²⁰

The WP used various theories and models to build the program in relation to individuals' and communities' beliefs, behaviors, and health outcomes.¹¹ The Health Belief Model (HBM)²² was used to address individual perception, modifying factors, and the likelihood of action.¹¹ The Trans-theoretical model²³ was also used in the WP to address motivational and behavioral stages during a period of time.¹¹

In 2008, the WP was implemented across various counties in South Carolina (SC).²⁴ The project was run by the South Carolina Cancer Disparities Community Network (SCCDCN) and the State Baptist Young Woman's Auxiliary (YWA).²⁴ This program was initially a pilot program for the implementation of the WP across the state of SC.²⁴ The goal of the pilot implementation of WP was to recruit and train 20 WRMs and 20 LHAs.²⁴ The goal was to reach 200 participants with the aid of the WRMs and LHAs.²⁴ The study ultimately trained (both pre- and post-test) 13 WRMs and LHAs.²⁴ Researchers found through the pre and post-tests that there

was a 19% increase in knowledge of breast cancer from training within the WRMs and LHAs received.²⁴ Data collection presented those 422 participants attended presentations about the WP, and 145 individuals registered for the program.²⁴ Out of the 145 participants registered, 56 (38.6%) participants requested assistance, and 34 participants (23%) were referred for screening methods.²⁴ Overall, SCCDCN found success in using the WP to help increase breast cancer knowledge by using WRMs and LHAs.²⁴ They also found an increase in screening among African American women in the community through outreach within churches.²⁴ The WP overall has been shown to have adequate evidence for a successful community-based intervention and has been implemented across the nation.²⁴

Recruitment & Eligibility

Various eligibility criteria must be met to be a participant in the WP implementation in Whitehall, Ohio. To meet the eligibility criteria, participants must be a low-income African American woman who resides in Whitehall, Ohio which falls under the zip codes of 43213, 43219, and 43227.⁷ The potential participants must speak English, be in the age bracket of 50-74 years old, and non-compliant with current USPSTF recommendations for biannual breast cancer screening. Women who experience any type of breast cancer symptoms such as a breast abnormality such as a lump, discomfort, or discharge will be connected with a patient navigator and are not eligible for this intervention. If an abnormality is detected during the WP women will also be connected with a patient navigator either through the The James or The Ohiohealth Eastside Health Center to ensure they receive the proper care. If the women meet the above criteria, they can participate in the WP at the three designated sites.

Participants will be recruited in a variety of different ways. The program director will work with the Community Advisory Board (CAB), LHAs, and WRMs to help recruit participants. Recruitment of participants will occur primarily in churches since the program setting is in churches and as a spiritual component. Pastors and other church figures will help recruit women to participate in this study since they are trusted members of the church and can reach the individuals in various settings such as Sunday School, Worship, or any other activities the church is hosting. A potential challenge is identifying women who are eligible for the WP in terms of being non-compliant with USPSTF recommendations. The CAB, WRMS, LHAs, and church leaders will be especially crucial in helping overcome this challenge with recruitment. Leaders in the church will also remind women about the upcoming educational sessions in the worship activities the week before the educational session is set to occur. Members of the CAB will also help recruit participants such as the Central Ohio African American Chamber of Commerce since they work with African American-owned businesses in the community. Physicians and other healthcare resources available to the community will also have information on the program and share it with eligible patients and may be interested in participating. The WP will be initially implemented in three churches but will partner with other churches in the community to help reach other African American women who want to participate.

A flyer will be handed out to interested individuals with more information about the WP, dates, times, and location of educational sessions. Flyers will also be hung and located around the church, African American-owned businesses, and available to healthcare providers. There will be an email and phone number on the flyer to contact an LHA to schedule an educational session time or have any questions or concerns. The women must be scheduled for educational

sessions to have an appropriate number of LHAs per group of participants. There will be approximately 30 women and two LHAs per session. Women can always reschedule if they need to. The LHAs will either remind the participant via a phone call or email depending on preference the week of the educational session. A voucher for transportation can be provided, such as Uber, taxi, or bus if the women identify they need assistance with transportation for the educational session. African American women in this program have strong religious beliefs and values. They are more likely to attend a program with a spiritual component if it is located and endorsed by their church.

Participants are only expected to attend one educational session approximately 1-hour long hosted by LHAs and WRMs and are highly encouraged to screen for breast cancer following the educational session. An incentive provided to the women for attending the educational session is a \$25 Visa gift-card which will be passed out to the participants following the educational session. Women are only paid for attending the first session but can attend as many sessions as they feel they need to. This will help encourage women to participate because it not only benefits their health, but they are rewarded for doing so as well. Retention is not a common problem for the WP since women only attend one educational session. LHAs will be reaching out to women within a week with a thank you note for attending the program via the mail. They will then reach out to participants via a telephone call up to three additional times to see if they need help connecting with services to receive a mammogram. The LHAs will contact the participants one month, two months, and three months following their educational session to discuss screening services and screening status. The LHAs will track conversations using a call-sheet log.

Educational Sessions

At each church, LHAs and WRMs will lead 1-hour long educational sessions that target the WP's core goals, which are to educate about breast cancer and increase participation in screening services. LHAs and WRMs will arrive at the church 1-hour before the educational session so they can set up the room with appropriate equipment to play the video, rearrange tables and chairs, and layout forms and handouts. LHAs and WRMs will greet participants once they arrive and have them fill out the sign-in sheet. They will then give them a clipboard to fill out an informed consent form, pre-program survey, and program registration form. The pre-program survey will gauge short-term program outcomes, which are discussed in detail in the performance measures and evaluation section. They also can fill out a WRM application and LHA application if they would like to be considered for the roles in future educational sessions, which will be attached to the clipboard, making it known they are optional forms. There will also be handouts with the WP brochures, a mammography brochure, diet and nutrition information, and preventive health services resources on the clipboard.

Before starting the program, the LHAs will introduce themselves and will explain the informed consent form, pre-program survey, and registration form and give the participants time to fill out the forms. Once the program begins, a WRM will lead the group in a devotion/prayer to start the educational session. Next, a WRM will play a 13-minute video titled "If I Can Help Somebody" on a projector. This video includes a short segment from a pastor which focuses on helping one another with women sharing their cancer diagnosis and experiences. Following the video's conclusion, two to three WRMs will each share their own stories about their diagnosis and treatment of breast cancer, typically around five minutes per WRM. The LHAs will then

share a PowerPoint about breast cancer among African American women and share local resources. Following the PowerPoint, participants will be allotted time to ask questions to either the WRMs or LHAs. Closing remarks will follow the questions segment and provide information on how to contact LHAs for resources on screening services or any other questions. A WRM will then lead a devotion/prayer, and the program will be formally concluded. The LHAs will then give the women the post-program survey to collect information on short-term outcomes following the educational session.

The LHAs will give the participants the \$25 Visa gift-cards for their participation and explain the process of contacting them within a month to connect them to screening services. Women might stay after the program to ask questions if they did not feel comfortable doing so in front of the group. If the mobile mammography unit is there after that the educational session the LHAs will explain how the screening process will work and introduce a representative and walk the women to the mobile unit. The WRMs and LHAs will clean up the room and pay the church \$150 for renting out the meeting space for three hours. The three hours ensures there is enough time for the set-up, educational session, and clean-up. Following the program, thank you cards will be sent out within a week to thank participants for attending the educational session. The LHAs will then contact participants via phone or email to help ensure they are connected with screening services. The LHAs will attempt to contact participants up to three times.

The LHAs will serve as a community navigator to help participants find screening services such as The James Mobile Mammography Unit and OhioHealth Eastside Health Clinic. The LHA will work with community resources to provide transportation and a free or low-cost

mammogram to participants. If a participant is diagnosed with breast cancer or needs additional testing, they will then be paired with a patient navigator to guide them and offer support.

Planning & Piloting

To ensure that the WP is ready for implementation at the three different churches, there will be a planning and piloting period. In the first year of the grant, months one through six will be dedicated to planning and piloting. Educational sessions will not begin until month seven. WRMs and LHAs will undergo training during the planning and piloting portion of the intervention. Training of LHAs and WRMs is a day-long training program utilizing a PowerPoint and will last from 8:00 am to 4:00 pm (Appendix A). Pre- and post-test will be given to LHAs to ensure they meet the required education needs and are optional for WRMs. WRMs will be paid per hour, and LHAs will be full-time paid employees. WRMs and LHAs will be paid for both training and educational sessions. The training of LHAs and WRMs will ensure the program is conducted with consistency at each church. Feedback from LHAs and WRMs will be encouraged so that changes can be made for continuous quality improvements. The CAB will review training materials and program materials to ensure they are inclusive to participants and non-stigmatizing. If a complaint were to be received about the program to a WRM or LHA, they must contact the program director to ensure we resolve the complaint promptly.

Community Advisory Board

To effectively implement The Witness Project in Whitehall, OH, a Community Advisory Board (CAB) will be established. The CAB will ensure all materials are culturally component, medically accurate, relevant to the community, and enrich the community with education about breast cancer. The CAB will utilize the PEN-3 model to ensure that all messages are culturally

appropriate and developed specifically for African American communities.¹¹ The CAB is composed of different members in the community, such as not-for-profit organizations whose work focuses on breast cancer, church pastors, public health officials, medical officials, and members of the community who work with African American businesses. All of the CAB members were invited to join because they are experts in their line of work and will provide valuable insight to the WP. The CAB will meet quarterly via Zoom to discuss program development, implementation, and evaluation.

Table 3. Community Advisory Board

<u>Name</u>	<u>Affiliation</u>
Beverly Rose*	Breast Cancer Community Advocate
Lynn Smith*	Susan G. Komen Representative
Maya Davis	Whitehall United Methodist Church - Church Leader
Christopher Wright	District Three African Methodist Episcopal (AME) - Church Leader
Christina Miller	Village Baptist Church - Church Leader
Mary Moore	Ohio Department of Health Representative
Dr. Patricia Jones	OhioHealth Eastside Health Center Physician
Olivia Martin	OhioHealth Eastside Health Center Mammogram Laboratory Technician
Alyssa Carlin	OhioHealth Eastside Health Center Patient Navigator
Tina Anderson	The James Mobile Mammography Unit Representative
John Garcia	Central Ohio African American Chamber of Commerce Representative

* Breast cancer survivor

Adaptations

There are planned adaptations to the WP's implementation in Whitehall, OH, that differ from the original evidence-based program. The original WP discusses breast cancer and cervical cancer, but the WP will just focus on breast cancer for this implementation.¹¹ The program needs

to concentrate on just breast cancer during the pilot period of three years to evaluate the success of breast cancer screenings. It also ensures that the CAB and individuals working on the grant will not be overwhelmed with breast, cervical cancer screening, and education. Once the program is established, adding cervical cancer would be a great addition to the program, but it is essential to start small and grow over time. It is also important to know that in the original WP, the LHAs taught about self-breast examinations. In this intervention, we will not be teaching self-breast examinations because they are no longer recommended by the USPSTF.¹² Another adaptation is that both LHAs and WRMs were volunteers in the original WP and were not paid by the program.¹¹ To build the program, we have decided to pay the LHAs an annual salary and the WRMs an hourly rate. They also did not pay for a church rental space in the original program, but since we are establishing partnerships and trust with the churches, we thought it was necessary to pay them for using their space. The churches will be compensated \$150 for three hours, allowing time for set-up, the educational session, and clean-up. The last adaptation to this intervention will be the use of The James Mobile Mammography Unit. The James Mobile Mammography Unit will come to the different church site locations so that women can screen following an educational session or during a designated date and time.

Sustainability

To sustain the project after the three years of federal funding ends, we will work with community partners to provide proof of concept that the WP is beneficial in educating women about breast cancer and increasing breast cancer screening. Building trust within the community about the WP through our community partners and CAB members is crucial for sustainability. If the program is proven successful in order to sustain the program with finances, both LHAs and

WRMs will serve as volunteers instead of a paid position, and churches will take over in running the program. Supplies will be donated to the site programs after the funding for them to sustain the program. Church leaders who serve on the CAB will be given updates on the process of the WP twice a year to report back to church members during service. They will contact CAB members about the program and share progress and feedback about the program and future directions.

Potential Challenges

There are two potential challenges to the WP that have been identified and plans to address the potential challenges. A potential challenge of the WP is a loss to follow-up regarding reaching out to participants about screening services and getting screened. The LHA will reach out to participants up to three times to ensure they receive assistance in screening and answering any questions they may have. Another potential challenge is balancing facts and opinions. Since this intervention will be implemented in churches, it is necessary to respect the participant's and church's opinions and spirituality and provide the women with the facts surrounding breast cancer. Both LHAs and WRMs will receive specialized training on combating these situations respectfully and factually to address this potential challenge. Church leaders who serve on the CAB will also help LHAs and WRMs navigate these situations.

Performance Measures & Evaluation

Process Evaluation

A process evaluation will be conducted to ensure the proper implementation of the Witness Project in Whitehall, OH. The purpose of the process evaluation is to assure that the program's activities are being conducted as outlined, the fidelity of the original program is

upheld, participants recruited are eligible and meet the target population criteria, and that education, as well as screening measures, are being collected. The process evaluation will be conducted throughout the three-year period of the grant. The process evaluation must be conducted in-depth during the first pilot year of the program. If any adaptations, continuous training, or challenges are identified in the process evaluation, they can be changed before years two and three of the program. In addition, the Program Director will randomly sit in on two programs per year to ensure fidelity of the program. In years two and three of the program implementation process, evaluations will be done to ensure the program meets the outlined outcomes and goals it established before implementation. The sign-in sheet that participants fill out before the educational setting will serve as a way to collect data as to the reach of the educational sessions. It will also serve as a way to determine how many women attend each session to give both LHAs and WRMs a better idea of what times and site locations work best for hosting the educational sessions. LHAs are also expected to keep a call log of communication with the participants during follow-up or any other time they communicate. They will be asked to summarize what they discussed with the participant to identify any needs or barriers the women may have that the program is not addressing.

Focus groups will be conducted with church pastors, church leaders, and randomly chosen participants to gauge more insight on the implementation of the program and what they thought worked or could be improved upon. The purpose of the focus groups is to work towards quality improvement with feedback provided. The feedback provided from community leaders and participants will allow program staff to make adaptations to the program or provide additional resources and information if needed. During the first year of the program, two focus

groups will be conducted during month eight and month twelve lasting approximately 1-hour. During years two and three of the program two focus groups will be conducted mid-way through the year and at the end of the year again lasting approximately 1-hour. Church pastors, leaders, and participants will be compensated with a \$25 Visa gift-card for their time and insight. We will budget for eight individuals per focus group to meet saturation.

Short-Term Outcomes

A pre- and post-program survey will be given to participants to measure the short-term outcomes of the program. The pre- and post-program will gauge knowledge and self-efficacy regarding breast cancer screening, connections to support through LHAs and WRMs, community resources, intent to screen for breast cancer screening, and compliance with USPSTF recommendations. The pre-program survey will also collect the demographics of participants such as age, gender, race for federal reporting purposes and to share with the CAB. The survey will be conducted before and directly after the educational session via paper format at the church site locations. The women will then be paid after completing the post-program survey at the church with a \$25 Visa gift-card. LHAs can track some intermediate outcomes using the call sheet when they follow up after the educational session regarding screening services available to the participant.

Expected Outcomes

During the three-year grant program, short-term outcomes will be evaluated, and several short-term outcomes are expected to benefit the participants of the WP. Participants are expected to have increased knowledge, and self-efficacy surrounding breast cancer screening through the educational sessions. This will be measured using the pre- and post-program survey. Participants

should have increased access to social support and access to WRMs and LHAs, which will also be evaluated using the pre- and post-program survey. In addition to social support, participants should also have increased access to community resources through their communication with LHAs which will also be evaluated via the surveys participants fill out. The last short-term outcome that will be evaluated is the intent for women to screen for breast cancer again using the surveys.

It is possible to detect some intermediate outcomes, but the evaluation will focus on short-term outcomes for this three-year grant period. The following intermediate outcomes have been identified for the WP: increased breast cancer screening rates among African American women, increased compliance with the USPSTF recommendations among African American women, and increased incidence rates of breast cancer in African American women. If women are screened directly after the educational sessions with the mobile mammogram unit or have an appointment in months one through three after the educational session the LHAs could potentially collect data on screening and compliance. Participants are encouraged to share if they are diagnosed with breast cancer or have abnormal screening results with their LHA or WRMs connected to additional resources such as a patient navigator. The decision to share their diagnosis or screening results is entirely up to the participants. Still, they are encouraged to do so that they can be connected with resources to help them navigate their results and have the LHAs and WRMs serve as social support.

*Measures and Outcome Evaluations***Table 4. Measures for Participant Data Collection and Analysis**

<u>Construct</u>	<u>Measure</u>	<u>Psychometric Properties</u>
Knowledge and prevention surrounding breast cancer	Breast Cancer and Heredity Knowledge Scale (BCHK) ²⁵	11-Item Scale Test-retest reliability 0.76 Cronbach Alpha 0.23
Self-efficacy surrounding breast cancer screening	Internal Control Early Detection Subscale ²⁶	4-Item Scale Cronbach Alpha 0.76
Connections to support and access to social support	Medical Outcomes Study (MOS) Social Support Survey ²⁷	19-Item Survey Cronbach Alpha 0.97
Intent to screen for breast cancer	Informed Choice in Mammogram Screening Questionnaire (IMQ) ²⁸	2-Item Index Cronbach Alpha .525 - .793 Convergent and divergent validity
Enhanced connections to community resources through the use of Lay Health Advisors	Local Resource Review Sheet (created by Principal Investigator)	This instrument is not validated; however, we will use this to gauge baseline knowledge and connectedness to local resources

We will be conducting a post-program analysis and using data collected from both the pre- and post-program surveys to determine the efficacy of the WP implementation in Whitehall, OH. Short-term outcomes include knowledge and prevention surrounding breast cancer, self-efficacy surrounding breast cancer screening, connections and access to social support, intentions to screen, and enhanced community connections through surveys that include scales and indexes.

A comparative analysis of the pre- and post-program survey will be conducted utilizing t-tests for continuous variables and Chi-squared tests for categorical variables. Performance measures and data collected will show the effectiveness and allow us to make continuous quality improvements to the program. LHAs will collect the pre- and post-program surveys and then give them to a graduate student who will input the data into REDCap software. The Program

Director will run a data quality assessment for 5-10% of the total participants to ensure the data is accurate and to minimize data input errors due to human error. A Biostatistician will be hired at and will be in charge of running statistical tests and interpreting the results. The Biostatistician will download the data that has been inputted into REDCap and run the data through a statistical software program of their choice and compare the pre- and post-program survey results. The Biostatistician will relay the information back to the Program Director to share with the CAB and properly disseminate the data to any other community partners.

As shown in Table 4, several reliable and valid scales and indexes will be administered in the pre- and post-program surveys. The Breast Cancer and Hereditary Knowledge Scale (BCHK) is an 11-item scale used to gauge the participant's knowledge about breast cancer prevention, including those who have a family history of breast cancer.²⁵ The Internal Control Early Detection Subscale is a 4-item scale that will be used to measure participants' self-efficacy surrounding breast cancer.²⁶ The Medical Outcomes Study (MOS) Social Support Survey is a survey that was created for patients or participants that are susceptible to chronically ill diseases.²⁷ The MOS Social Support Survey measures participants' access and connections to social support through a 19-item survey.²⁷ The Informed-Choice in Mammogram Screening Questionnaire (IMQ) will be used to measure participants' intent to screen for breast cancer.²⁸ Two questions from the knowledge portion of the survey will be used, which collect information such as the participant's intention to participate in screening mammography within the next three months and the type of screening they intend to use.²⁸ Lastly, a Local Resources Review Sheet created by the Principal Investigator will assess connections to community resources following the educational session.

Limitations

Although there are many expected positive outcomes from the WP implementation in Whitehall, OH, some limitations must be addressed. One of the most significant limitations this study faces is the limitation with evaluating intermediate and long-term outcomes. During a three-year grant period, only short-term outcomes can be monitored and assessed with the possibility of some intermediate outcomes due to funding and resources available. To determine if intermediate and long-term outcomes have a sustainable change, the grant period must be longer than the three-year initial duration. Although not measuring intermediate and long-term outcomes is a limitation, it does not hinder the evaluation of short-term outcomes for the WP, which is the primary focus of this intervention.

Another potential limitation is a deficiency in literacy among African American women. The target population for this intervention is low-income women who may experience a deficiency in literacy. This is a potential limitation for completing this program and also a barrier the women may face. To help combat this limitation, LHAs and WRMs will undergo training on addressing the deficiency in literacy appropriately. LHAs will assist women by reading any documents they request or answer any questions about unknown vocabulary. LHAs and WRMs are mindful this may be a limitation and will use lay terms whenever possible or provide definitions to possible unfamiliar terms.

Potential participant disabilities are another limitation to the program that LHAs and WRMs need to be aware of and prepared for. Participants may face an array of disabilities, both physical and mental, that could again be a potential limitation or barrier to attending the educational session and seeking breast cancer screening. When LHAs call the participants to

schedule their educational session, they will ask if they want to disclose any disabilities in order for them to make accommodations or request any assistance, such as someone to read the forms and materials.

Capacity and Experience of the Applicant Organization

Within the Franklin County Health Department, we have an extensive history of implementing successful interventions throughout Franklin County. The WP is expected to meet the needs of low-income African American women who are not compliant with the current USPSTF guidelines, given the health department's experience. The Franklin County Health Department serves a diverse community across multiple suburbs and the city of Columbus. The Franklin County Health Department has a history of providing mammogram screening services, women's health services, and support for the residents of Franklin County.²⁹ The Franklin County Health Department is currently implementing the Community Health Improvement Plan (CHIP), initially started in 2018 to address chronic diseases, mental/behavioral health and addiction, access to overall healthcare, and maternal and infant care.²⁹ CHIP targets and addresses community needs that were identified through a community health assessment.²⁹ Breast cancer education and screening fall under both chronic disease prevention and access to healthcare.²⁹ To better meet the community's needs, the health department created a community cancer concern reporting form for residents or community officials to fill out if they need resources for a specific demographic or geographic region.²⁹ The Franklin County Health Department also works with the Ohio Department of Public Health, Ohio Cancer Data and Statistics, the National Cancer Institute, and Women Infants and Children (WIC) to provide resources for residents.²⁹

The Franklin County Health Department has a strict equal access policy that they follow in ordinance with the U.S. Department of Agriculture (USDA) and the Federal civil rights law.²⁹ The Franklin County Health Department prohibits agencies, institutions, offices, and employees from discriminating against race, age, color, national origin, sex, genetic information, or disability.²⁹ Any individual in need of services provided by the health department with a disability that requires alternative means of communication should contact the health department so that arrangements can be made to meet the need(s).²⁹

The Franklin County Health Department will be vital in implementing the WP due to their extensive work in the community, withstanding partnerships, and equal access policies. The Franklin County Health Department already has existing connections with members of the CAB, such as The James Mobile Mammography Unit, OhioHealth Eastside Health Center, and Susan G. Komen. This will be beneficial for the Franklin County Health Department to work with CAB members to implement the WP.

Partnerships & Collaboration

We have decided to partner with OhioHealth Eastside Health Center and The James Mobile Mammography Unit to help make it easier for women to receive screening. The mobile mammography unit will be at the different site locations following the educational sessions and offer additional times at the churches. There will be additional dates and times they will be at the sites to take the stress away from the participants of scheduling a mammogram, visiting a clinic or hospital, and worrying about transportation. The OhioHealth Eastside Health Center will also be available for women to receive screening and offer a wide variety of screening services such as ultrasounds and CT scans if the participant requires a different screening method other than a

mammogram. Transportation vouchers will be available to participants to pay for the cost of transportation to either a site location for the mobile mammography unit or attending the OhioHealth Eastside Health Center location. The James Mobile Mammography Unit and OhioHealth Eastside Health Center have experience working with women across Franklin County and those who have not been compliant with USPSTF recommendations. They also work with many organizations and academic institutions on various grants and research projects and regularly collect data and partner. Both partners are committed to preventive screening methods and decreasing breast cancer mortality rates in the community.

Aside from the partnerships, there will also be a variety of collaborations. The CAB is composed of various members in the community and will serve as collaborative members for the implementation of the WP. A member of Susan G. Komen in the Columbus, Ohio division will provide insight on breast cancer in Columbus, ongoing efforts to reduce mortality rates, and screening opportunities. A church pastor and other leaders within each church will be invited to provide insight on spiritual beliefs regarding breast cancer and help with the recruitment of women. An Ohio Department of Health representative will join the board to provide crucial information regarding preventive measures concerning breast cancer. A physician and mammography laboratory technician and patient navigator will join the board to ensure all materials are medically accurate and provide insights into how women feel before and after receiving a mammogram. A representative from The James Mobile Mammography Unit will also be invited. Lastly, a member of the Central Ohio African American Chamber of Commerce will be on the board to help with recruitment and outreach since they work with African American-owned businesses in the community.

Project Management

The Project Director, Ally Hucek MPH, will oversee the implementation of the WP in Whitehall, OH (Appendix D). Ally Hucek is a current employee at the Franklin County Health Department and has experience working in women's health and preventive screening services. The Project Director will be hired at 100% effort and supervise the LHAs and WRMs to ensure the fidelity of the program and run the training of the LHAs and WRMs. The Project Director will maintain project operations such as the budget, materials, program schedule, and communications with partners and CAB members. The Project Director will also work with the Principal Investigator from the Franklin County Health Department (Appendix D). The Principal Investigator will identify a Master of Public Health Student at the Ohio State University who will serve as the Graduate Assistant for the WP.

Two full-time LHAs will be hired who are interested in health promotion to serve the Whitehall community (Appendix D). The LHAs will be in charge of running the educational sessions, connecting participants to screening services, and ascertaining screening status. The LHAs will be responsible for recruiting, scheduling, and contacting participants following the educational sessions. If the participants are diagnosed with breast cancer or an abnormal result is found, they will be responsible for pairing the participant with a patient navigator or other services.

Five WRMs will be hired who are breast cancer survivors to share their experiences and stories with participants (Appendix D). They will be paid hourly for training and for attending the educational sessions and reimbursed for transportation costs. Their role is to talk about their

personal experiences for approximately five minutes per educational session. They may answer any questions participants may have and serve as social support to the participant.

A Graduate Assistant will be hired from The Ohio State University College of Public Health and supervised by the Principal Investigator and Project Director (Appendix D). The Graduate Assistant will be paid hourly to enter data into REDCap from the pre- and post-program surveys. They will also be working with the Program Director in year one to create the survey in REDCap.

A Biostatistician will be hired at 5% effort to analyze the pre-and post-program surveys (Appendix D). The Biostatistician will analyze the data and report the findings to the Project Director and Principal Investigator. The Project Director will then be responsible for disseminating the results to CAB members and partners of the WP.

Lastly, a Principal Investigator (PI) from the Franklin County Health Department will be hired at 20% effort to oversee data collection and work in conjunction with the Biostatistician and Graduate Assistant. The PI will be responsible for creating a local resource review sheet. Along with the Project Director, the PI will sit in on projects and oversee the focus groups.

To allow for professional development, the Project Director will be attending annual conferences. LHAs and WRMs will be invited to local conferences and meetings for professional development. The Graduate Assistant will be encouraged to submit an academic poster for a regional conference. The budget also allows for competitive pay for all employees with a 3% increase in salary and fringe benefits annually, which will hopefully minimize staff turnover. The individuals hired for this project will have personal ties to screening services, women's health, and breast cancer which should also minimize staff turnover.

References

1. U.S. Cancer Statistics Working Group. U.S. Cancer Statistics Data Visualizations Tool, based on 2019 submission data (1999-2017): U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; www.cdc.gov/cancer/dataviz, released in June 2020.
2. Breast Cancer Statistics. (2020, June 08). Retrieved September 18, 2020, from <https://www.cdc.gov/cancer/breast/statistics/index.htm>
3. County Health Rankings & Roadmaps. (2020). <https://www.countyhealthrankings.org/app/ohio/2020/rankings/franklin/county/outcomes/overall/snapshot>.
4. Quantitative Data: Measuring Breast Cancer Impact in Local Communities. Susan G. Komen Columbus. (2020). <https://komencolumbus.org/wp-content/uploads/2012/08/Columbus-Quantitative-Section-Final.pdf>.
5. OSUCCC-James. (2019, May 02). Mobile mammography units meet women where they live. Retrieved September 18, 2020, from <https://www.10tv.com/article/sponsor-story/mobile-mammography-units-meet-women-where-they-live-2019-jun/530-28c00aa7-b63f-4106-ac43-27e7fa163d0c>
6. Bloom, J. R., Grazier, K., Hodge, F., & Hayes, W. A. (1991). Factors affecting the use of screening mammography among African American women. *Cancer epidemiology, biomarkers & prevention: a publication of the American Association for Cancer Research*, cosponsored by the American Society of Preventive Oncology. <https://www.ncbi.nlm.nih.gov/pubmed/1845174>.
7. Map of All ZIP Codes in Whitehall, Ohio. Zipdatamaps.com. (2021). <https://www.zipdatamaps.com/zipcodes-whitehall-oh>.
8. QuickFacts Whitehall city, Ohio. U.S. Census Bureau. (2019). <https://www.census.gov/quickfacts/whitehallcityohio>.
9. Community Resource Directory 2020. Community Resource Directory | Whitehall, OH - Official Website. (2021). <https://whitehall-oh.us/409/Resource-Directory>.
10. *OhioHealth Eastside Health Center in Columbus, Ohio*. OhioHealth.com. (n.d.). <https://www.ohiohealth.com/locations/health-center/eastside-health-center>.
11. *The Witness Project*. The Witness Project | Evidence-Based Cancer Control Programs (EBCCP). (1991). <https://ebccp.cancercontrol.cancer.gov/programDetails.do?programId=270521>.

12. Recommendation: Breast Cancer: Screening: United States Preventive services taskforce. (2016, January 11). Retrieved May 12, 2021, from <https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/breast-cancer-screening>
13. Viviano, J. A. (2019, January 16). Ohio State study: Black women at risk of breast cancer get less preventive-care information. The Columbus Dispatch. <https://www.dispatch.com/news/20190115/ohio-state-study-black-women-at-risk-of-breast-cancer-get-less-preventive-care-information>.
14. Village Baptist Church. (n.d.). <https://m.facebook.com/VBCWhitehall/>.
15. *Love with Us. Learn with Us. Serve with us.* Whitehall UMC. (n.d.). <https://whitehallumc.org/>.
16. AME Church. (2021, April 8). *Home.* AME Church. <https://www.ame-church.com/>.
17. Pinto, R., Flynn, S., Jorge, F., & Virani, T. (2014). Lay health educator role in improving cancer screening rates in underserved communities. *Health, 06(05)*, 328-335. doi:10.4236/health.2014.65048
18. What is a mammogram? (2020, September 14). Retrieved May 11, 2021, from https://www.cdc.gov/cancer/breast/basic_info/mammograms.htm
19. Breast cancer screening (pdq®)—patient version. (2020, December 16). Retrieved May 11, 2021, from <https://www.cancer.gov/types/breast/patient/breast-screening-pdq>
20. Boyd, A. S., & Wilmoth, M. C. (2006, February 1). Innovative Community-Based Intervention for African American Women with Breast Cancer: The Witness Project®. OUP Academic. <https://academic.oup.com/hsw/article-abstract/31/1/77/628227>.
21. Erwin, D. O., Spatz, T. S., Stotts, R. C., & Hollenberg, J. A. (1999). Increasing mammography practice by African American women. *Cancer practice*. <https://www.ncbi.nlm.nih.gov/pubmed/10352065>.
22. LaMorte, W. (2019). Behavioral Change Models. The Health Belief Model. <https://sphweb.bumc.bu.edu/otlt/MPH-Modules/SB/BehavioralChangeTheories/BehavioralChangeTheories2.html>.
23. LaMorte, W. (2019). Behavioral Change Models. The Transtheoretical Model (Stages of Change). <https://sphweb.bumc.bu.edu/otlt/ MPH-modules/sb/behavioralchangetheories/behavioralchangetheories6.html>.

24. Mayo, R., Scott, D., & Williams, D. (2009). The Upstate Witness Project: Addressing Breast and Cervical Cancer Disparities in African American Churches. *The Journal of the South Carolina Medical Association Symposium Issue: Cervical Cancer in South Carolina*, 105 (7), 221–319 .
25. Ondrusek, N., Warner, E., & Goel, V. (1999). Development of a knowledge scale about breast cancer and heredity (BCHK). *Breast Cancer Research and Treatment*, 53(1), 69–75. <https://doi.org/10.1023/a:1006114710328>
26. Russell, K. M., Champion, V. L., & Perkins, S. M. (2003). Development of Cultural Belief Scales for Mammography Screening. *Oncology Nursing Forum*, 30(4), 633–640. <https://doi.org/10.1188/03.onf.633-640>
27. Sherbourne, C. D., & Stewart, A. L. (1991). *The MOS social support survey*. *Social science & medicine* (1982). <https://pubmed.ncbi.nlm.nih.gov/2035047/>.
28. Reder, M., Berens, E.-M., Spallek, J., & Kolip, P. (2019, March 19). *Development of the Informed Choice in Mammography Screening Questionnaire (IMQ): factor structure, reliability, and validity*. *BMC Psychology*. <https://bmcp psychology.biomedcentral.com/articles/10.1186/s40359-019-0291-2>.
29. *Home*. Franklin County Public Health. (2021, April 15). <https://myfcph.org/>.

Appendix A: Lay Health Advisor and Witness Role Model Training Schedule¹¹

<u>Time</u>	<u>Activity</u>
8:00 am	Registration/Devotion/Refreshments
8:30 am	Pre-test/Introductions
9:00 am	The Witness Project Overview
9:15 am	Show video “If I Can Help Somebody: Witnessing to Save Lives”
9:30 am	Special Issues
10:00am	Break
10:15 am	Breast Cancer Facts
10:30 am	Mammography Facts
10:45 am	Resources/Informed Consent/Registration Forms
11:00am	Working Lunch “Eating Healthy”
12:00pm	How to Set-Up a Program
12:45pm	Break Out Groups for LHAs and WRMs
2:45 pm	Break
3:00pm	Mock Program
3:45 pm	Closing/Discussion
4:00 pm	Graduation/Picture

Appendix B: Logic Model

Program: The Witness Project (WP) Logic Model

Situation: African American women facing disproportionately higher rates of breast cancer mortality than any other racial or ethnic group.¹⁻² In Franklin County, Ohio researchers have identified the city of Whitehall as an area with high rates of breast cancer mortality when compared to other parts of the county.⁵ Therefore, this intervention will target African American in Whitehall because research has shown African American are at a high risk of breast cancer mortality due to a lack of education about preventive care such as a mammogram.¹³ The Witness Project proposes to increase breast cancer screening in African American women in Whitehall.¹¹

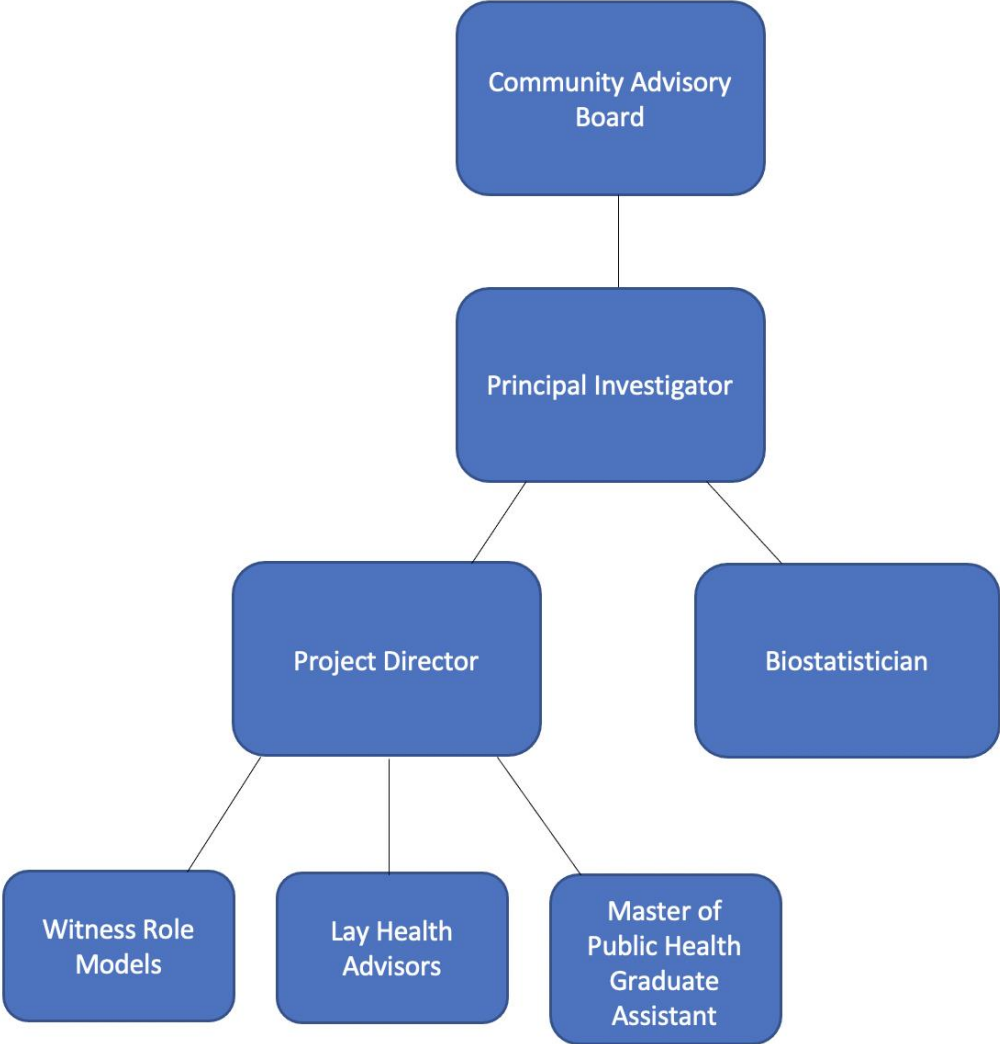
Inputs	Outputs		Outcomes-Impact		
	Activities	Participation	Short	Intermediate	Long
<ul style="list-style-type: none"> Facilities for participant recruitment and educational sessions (Church multipurpose rooms, Church lobbies, outside booth for after Church services) Evidence-based programs to increase education regarding breast cancer screening Existing community navigation services such as The James Mobile Clinic, OhioHealth Eastside, and Susan G. Komen Support from The National Witness Project 	<ul style="list-style-type: none"> Hire and train Witness Role Models and Lay Health Advisors (time/labor, salaries) Establish transportation with the use of shuttle services and vouchers Establish partnership with The James mobile mammography unit and The OhioHealth Eastside Health Center Recruit non-compliant African American women to participate in study Implement Witness Project 1-hour educational sessions Lay Health Advisors follow-up with participants for screening services 	<ul style="list-style-type: none"> Quality-trained WRMs and LHAs Educational sessions run by Lay Health Advisors in breast cancer screening, detection, and treatment Educational sessions run by Witness Role Models to share experiences regarding breast cancer diagnosis Patient self-advocacy, and knowledge regarding breast cancer screening Community navigation services implemented to connect participants to screening and treatment services 	<ul style="list-style-type: none"> Improved knowledge and prevention surrounding breast cancer screening Improved self-efficacy surrounding breast cancer screening Enhanced connections to support and access to Lay Health Advisors and Witness Role models Increased intent to screen for breast cancer Enhanced connections to community resources through the use of Lay Health Advisors 	<ul style="list-style-type: none"> Increased rates of breast cancer screening among African American women Increase compliance with USPSTF recommendations among African American women Increased incidence rates of breast cancer in African American women 	<ul style="list-style-type: none"> Increased early-stage detection of breast cancer in African American women Decreased breast cancer mortality rates in African American women Reduction in negative stigma surrounding breast cancer screening and diagnosis in African American communities

External Factors
 African American women face a multitude of barriers such as being uninsured or underinsured; cultural/language barriers; lack of transportation; lack of education; lack of social support and childcare; high cancer vulnerability.⁵⁻⁶

Appendix C: Gantt Chart

The Witness Project Gantt Chart													
Task	Description	Timeline											
		Year 1				Year 2				Year 3			
		Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4
1	Program Development												
1.1	Finalize IRB and Program Measures	X											
1.2	Hire and Train Lay Health Advisors and Witness Role Models	X	X										
1.3	Establish 1-Hour Educational Sessions	X	X										
1.4	Establish Community Partnerships With OhioHealth Eastside Health Center and The James Mobile Mammography Unit	X	X										
1.5	Create Community Advisory Board	X	X										
1.6	Hire and Train Research Staff (PI, GAs)	X	X										
1.7	Form and Conduct Focus Groups		X		X		X		X		X	X	
1.8	Finalize Site Location Schedule For Educational Sessions	X			X				X			X	
2	Program Implementation												
2.1	Recruit Eligible Participants			X	X	X	X	X	X	X	X	X	
2.2	Participants Engage In Educational Sessions			X	X	X	X	X	X	X	X	X	
2.3	Participants Are Recommended To Screening Services			X	X	X	X	X	X	X	X	X	
2.4	Community Advisory Board Meetings	X	X	X	X	X	X	X	X	X	X	X	
2.5	Dissemination of Program Results to Community Advisory Board Members						X		X		X	X	
3	Outcome Measurement and Evaluation												
3.1	Pre and Post-Program Survey Implementation			X	X	X	X	X	X	X	X	X	
3.2	Lay Health Advisor Reaches Out To Participants To Ascertain Screening Status			X	X	X	X	X	X	X	X	X	
3.3	Data (Outcome) Analysis									X	X	X	

Appendix D: The Witness Project Organizational Chart



Appendix E: Budget and Justification

Table 1. The Witness Project Three Year Budget

<u>Cost Category</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>
Personnel	\$151,400	\$155,942	\$160,626
Fringe	\$50,899	\$52,425	\$53,997
Supplies	\$10,615	\$4,925	\$4,925
Travel	\$7,500	\$9,000	\$9,000
Research Incentives	\$3,400	\$5,650	\$5,650
Total	\$223,814	\$227,942	\$234,198

Table 2. Year 1 Personnel & Fringe Costs

<u>Position</u>	<u>Number of Individuals</u>	<u>Time Requirement</u>	<u>Baseline Salary</u>	<u>Salary</u>	<u>Fringe Benefits</u>	<u>Total Cost</u>
Project Director	1	100%	\$50,000	\$50,000	\$16,805	\$66,805
Principal Investigator	1	20%	\$100,000	\$20,000	\$5,486	\$25,486
Biostatistician	1	5%	\$100,000	\$5,000	\$1,372	\$6,372
Graduate Assistant	1	200 hours	\$20 hourly	\$4,000	--	\$4,000
Lay Health Advisor	2	100%	\$70,000	\$70,000	\$27,236	\$97,236
Witness Role Model	5	24 hours	\$20 hourly \$480 annually	\$2,400	--	\$2,400
Total	11	--	--	\$151,400	\$50,899	\$202,299

Table 3. Year 2 Personnel & Fringe Costs

<u>Position</u>	<u>Number of Individuals</u>	<u>Time Requirement</u>	<u>Baseline Salary</u>	<u>Salary</u>	<u>Fringe Benefits</u>	<u>Total Cost</u>
Project Director	1	100%	\$51,500	\$51,500	\$17,309	\$68,809
Principal Investigator	1	20%	\$103,000	\$20,600	\$5,651	\$26,251
Biostatistician	1	5%	\$103,000	\$5,150	\$1,413	\$6,563
Graduate Assistant	1	200 hours	\$20.60 hourly	\$4,120	--	\$4,120
Lay Health Advisor	2	100%	\$72,100	\$72,100	\$28,052	\$100,152
Witness Role Model	5	24 hours	\$20.60 hourly \$494.40 annually	\$2,472	--	\$2,472
Total	11	--	--	\$155,942	\$52,425	\$208,367

Table 4. Year 3 Personnel & Fringe Costs

<u>Position</u>	<u>Number of Individuals</u>	<u>Time Requirement</u>	<u>Baseline Salary</u>	<u>Salary</u>	<u>Fringe Benefits</u>	<u>Total Cost</u>
Project Director	1	100%	\$53,045	\$53,045	\$17,828	\$70,873
Principal Investigator	1	20%	\$106,090	\$21,218	\$5,820	\$27,038
Biostatistician	1	5%	\$106,090	\$5,305	\$1,455	\$6,760
Graduate Assistant	1	200 hours	\$21.22 hourly	\$4,244	--	\$4,244
Lay Health Advisor	2	100%	\$74,264	\$74,264	\$28,894	\$103,158
Witness Role Model	5	24 hours	\$21.22 hourly \$510 annually	\$2,550	--	\$2,550
Total	11	--	--	\$160,626	\$53,997	\$214,623

Principal Investigator – 20%: The Principal Investigator from the Franklin County Health Department will supervise the Project Director and work closely with the Biostatistician. The Principal Investigator is ultimately responsible for all activities involved in the implementation of the Witness Project. The Principal Investigator is also responsible for overseeing the fidelity of research activities as outlined by the Institutional Review Board (IRB) protocol. They will attend focus groups for feedback, randomly sit in on educational sessions, create a Local Resource Review Sheet and oversee data collection. They will discuss the statistical analysis of the data with the Biostatistician.

Project Director – 100%: The Project Director from the Franklin County Health Department will be responsible for project operations such as scheduling site locations, program materials, budget, establishing the Community Advisory Board, holding focus groups, ensuring fidelity, and disseminating results. The Project Director will also oversee the Lay Health Advisors, Witness Role Models, and Graduate Assistant.

Biostatistician – 5%: The Biostatistician will utilize the data from the pre- and post- program surveys entered in REDCap by the Graduate Assistant. The Biostatistician will use a statistical analysis software program to run different statistical tests depended on the measure collected.

Graduate Assistant - Hourly: The MPH Graduate Assistant will be in charge of data input with the pre- and post-program surveys utilizing REDCap. The Project Director will oversee the Graduate Assistant, but they will also work closely with the Principal Investigator and Biostatistician.

Lay Health Advisors – 100%: The two Lay Health Advisors will play a crucial role in the implementation of the Witness Program and will work closely with the Project Director and Witness Role Models. Lay Health Advisors are responsible for recruiting participants. The Lay Health Advisors will run the educational sessions and teach participants about breast cancer and different screening methods. They will serve as a community resource and help connect participants with screening services. They will be compensated by the mile for transportation to and from site locations or will be provided with a transportation voucher.

Witness Role Models - Hourly: The five Witness Role Models will be paid as hourly employees. The main responsibility of the Witness Role Models is to share their stories and experience with early detection of breast cancer through screening methods. They will be trained in the first year of the program which is included in the budget. They will also be compensated by the mile for transportation to and from site locations or will be provided with a transportation voucher.

Fringe Benefits: Fringe benefits will be calculated in the budget to cover the cost of health insurance, life insurance, disability, retirement and other employee benefits. An annual increase of 3% in both salary and fringe benefits will be calculated to cover the cost of living and other expenses.

Table 4. Year 1 Program Supply & Equipment Costs

<u>Item/Supply</u>	<u>Number of Items/Sessions</u>	<u>Cost</u>
Snacks & Refreshments	4 Sessions	\$600 (~\$5 Per Participant)
WIFI Hotspot	1	\$420 (\$35 Monthly)
Laptops	4	\$5,600
Witness Project Pins	20	\$75
Printing Costs	--	\$1,000
Clipboards	40	\$250
Pens	~ 150 Pens	\$50
Folders	~ 150 Folders	\$140
Portable Speaker	1	\$250
Projector	1	\$150
Projector Screen	1	\$150
Thank You Cards & Envelopes	3 Packs of 50	\$50
Postage	--	\$300
Tissues	10 Boxes	\$30
Educational Sessions - 3 Hour Room Rental	4 Sessions	\$600 (\$50 Hourly)
Training - 14 Hour Room Rental	1 Session	\$700 (\$50 Hourly)
Training - Lunch	1 Session	\$250
Total	--	\$10,615

Table 5. Year 2-3 Program Supply & Equipment Costs

<u>Item/Supply</u>	<u>Number of Items/Sessions</u>	<u>Cost</u>
Snacks & Refreshments	7 Sessions	\$1,050 (~\$5 Per Participant)
WIFI Hotspot	1	\$420 (\$35 Monthly)
Printing Costs	--	\$1,000
Pens	~ 250 Pens	\$75
Folders	~ 250 Folders	\$200
Thank You Cards & Envelopes	5 Packs of 50	\$80
Postage	--	\$600
Tissues	14 Boxes	\$50
Room Rental for 3 Hours	7 Sessions	\$1,050 (\$50 Hourly)
Supply Replacement	--	\$400
Total	--	\$9,850

Program Supplies & Equipment: Program supplies and equipment will be used to run the educational sessions at the different site locations. The site room rental fee and training costs are also calculated in the program supplies and equipment.

Table 6. Year 1 Travel Costs

<u>Travel</u>	<u>Cost</u>
Annual Conferences	\$5,000
Mileage Reimbursement	\$1,000
Transportation Vouchers	\$1,500
Total	\$7,500

Table 7. Year 2-3 Travel Costs

<u>Travel</u>	<u>Cost</u>
Annual Conferences	\$5,000
Mileage Reimbursement (\$0.56 per mile)	\$2,000
Transportation Vouchers	\$2,000
Total	\$18,000

Annual Conferences: The Project Director or Principal Investigator will attend an annual conference in Washington, DC. In order to cover this cost, there is \$5,000 dedicated for conference fees, travel, housing, and food. There is also money in the budget to cover annual regional conferences for the Project Director, PI, and other staff members.

Mileage Reimbursement: Mileage reimbursement will be budgeted for Lay Health Advisors and Witness Role Models to cover the cost of travel to and from the site locations at \$0.55 per mile. Mileage reimbursement will also be used to cover the cost of travel to annual regional conferences.

Transportation Vouchers: Transportation vouchers for Ubers, taxis, bus passes, and parking will be available to participants to cover the cost of transportation to the site locations and the cost of transportation to attend screening services. The transportation vouchers can also be used to cover the cost of transportation for Lay Health Advisors or Witness Role Models if they do not have their own transportation means.

Table 8. Year 1 Research Incentive Costs

<u>Research Incentive Item</u>	<u>Number of Items</u>	<u>Cost</u>
\$25 Visa Gift-Card Participant Incentive	120	\$3,000
\$25 Visa Gift-Card Focus Group Incentive	16	\$400
Total	136	\$3,400

Table 9. Year 2-3 Research Incentive Costs

<u>Research Incentive Item</u>	<u>Number of Items</u>	<u>Cost</u>
\$25 Visa Gift-Card Participant Incentive	210	\$5,250
\$25 Visa Gift-Card Focus Group Incentive	16	\$400
Total	226	\$11,300

Research Incentives: As a research incentive, \$25 Visa gift-cards will be provided to participants for attending a one 1-hour long educational session. There will also be \$25 Visa gift-cards provided as an incentive to individuals to attend a focus group twice a year with eight members attending each session.