An Evaluation of the Client Navigator Program for Enhanced Breast and Cervical Cancer Screening Among Underserved Women in the State of Georgia

Danielle M. Pendrick
Georgia State University

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An Evaluation of the Client Navigator Program for Enhanced Breast and Cervical Cancer Screening Among Underserved Women in the State of Georgia

By

Danielle Pendrick

B.A., Psychology
University of West Georgia

A Thesis Submitted to the Graduate Faculty of Georgia State University in Partial Fulfillment of the Requirements for the Degree

MASTER OF PUBLIC HEALTH

ATLANTA, GEORGIA
30303
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ABSTRACT

Danielle Pendrick
An Evaluation of the Client Navigator Program for Enhanced Breast and Cervical Cancer Screening Among Underserved Women in the State of Georgia

The National Cancer Institute estimates that 207,090 women will be diagnosed with and 39,840 women will die from breast cancer in 2010. During this same period, 12,200 women will be diagnosed with and 4,210 women will die from cervical cancer.1 Screening for breast and cervical cancers can reduce morbidity and mortality through early detection, yet many women are not getting regular lifesaving screenings as recommended.2 The National Breast and Cervical Detection Program (NBCCEDP) was established in 1990 in order to provide low-income, uninsured, and underserved women access to breast and cervical cancer screening and diagnostic services. Georgia’s participation in the NBCCEDP led to the development of The Breast and Cervical Cancer Program (BCCP), which provides cancer screening to women 40 to 64 years of age who are uninsured and/or underinsured and at or below 200% poverty level.

Deaths from breast and cervical cancers could be avoided if screening rates increased among women at risk. “Mammography and Pap tests are underused by women who have no source or no regular source of health care, women without health insurance, and women who immigrated to the United States within the past 10 years”.3 In order to better eliminate barriers to screening, Georgia’s Breast and Cervical Cancer Program uses client navigators to communicate with minority populations. The purpose of this study was to assess the effectiveness of the Client Navigator Program utilized to enhance breast and cervical cancer screening rates for women throughout the State of Georgia.

Evaluation surveys based on the SWOT analysis approach (soliciting participant feedback on program strengths, weaknesses, opportunities and threats) were administered to client navigators and clients of the program in order to determine key elements of program success. In total, 14 Client Navigators and 54 Clients completed the survey. Evaluation findings demonstrated that personal characteristics of Client Navigators, internal characteristics of the program itself, resources provided by the program, and program partnerships were the areas of greatest program strength. Funding was repeatedly listed as the greatest program threat. Findings from this study provide insights for how the overall program can be improved in the future, and thus, improving health outcomes for women who are at greatest risk of breast and cervical cancer throughout the state.

INDEX WORDS: breast cancer, cervical cancer, screening, client navigation, evaluation
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An Evaluation of the Client Navigator Program for Enhanced Breast and Cervical Cancer Screening Among Underserved Women in the State of Georgia

by

Danielle Pendrick

Approved:

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Committee Chair

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Committee Member

__________________________________________
Committee Member

Date
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Chapter I

INTRODUCTION

1.1 Background

Client Navigation as a Health Promotion Prevention Strategy

The Breast and Cervical Cancer Client Navigation Program (BCCCNP) was initiated in the Fall of 2001, and in the past decade has served over 18,000 women in Georgia. The BCCCNP program uses trained community health workers, or Client Navigators, to effectively reach women in rural and low-income areas at high risk of not receiving potentially life-saving medical screenings. As health advocates, Client Navigators promote and encourage positive, healthful behaviors among their community. The main focus of the Client Navigator has been to support the case management and public health education and client recruitment process at the local level. The Navigators roles include promoting client recall, re-screening, and follow-up, participating in outreach activities, providing client and community education, eliminating barriers to care, and facilitating client movement through the healthcare system.

The evaluation of the BCCCNP includes a comprehensive examination of factors that influence program impact. Primary components of the evaluation plan include an assessment of
the variation in implementation intensity, considering the web of influence that social and institutional factors have on health protective behavior, and social and organizational determinants of health that may be associated with health screening and compliance.

**Definitions of Study Terminology**

Patient Navigators, also referred to as Community Health Advisors, Client Navigators, Lay Health Advisors or Workers, Outreach Workers, and Promotoras de Salud, are trained and trusted members of the community who serve as a bridge between their peers and health professionals. As health advocates, client navigators promote and encourage positive, healthful behaviors among their peers. The main focus of the Client Navigation has been to support the case management and public education and client recruitment process at the local level.

One of the requirements of state and federal funding is that each funded breast and cervical cancer program recruit eligible clients for screening. Recruitment is primarily achieved through county health departments and partners, who also screen women for program eligibility. Outreach efforts have been concentrated on women in high-priority groups, including women 50-64 years of age, women of racial or ethnic minority groups, lesbians, women with special needs (physical and mental disabilities or with language barriers), and women who live in hard-to-reach geographical areas.

**Georgia**

According to 2007 Cancer Atlas figures, Georgia ranks 24th lowest out of 50 states in terms of national breast cancer incidence rates. In terms of mortality, Georgia ranks in the lowest bottom quartile (21st), although the breast cancer rate is above the United State’s (U.S.) national average rate. In terms of racial distribution, breast cancer rates are highest among
White women when compared to other racial categories; yet mortality rates are highest for African American women living in Georgia. It is estimated that 12,200 women have been diagnosed with and 4,210 women have died of cervical cancer in 2010. From 2003-2007, the median age at diagnosis for cancer of the cervix was 48 years of age. Approximately 0.2% were diagnosed under age 20; 14.5% between 20 and 34; 26.1% between 35 and 44; 23.7% between 45 and 54; 16.3% between 55 and 64; 10.4% between 65 and 74; 6.5% between 75 and 84; and 2.4% 85+ years of age. The age-adjusted incidence rate was 8.1 per 100,000 women per year. These rates are based on cases diagnosed in 2003-2007 from 17 Surveillance Epidemiology and End Results (SEER) geographic areas.

From 2003-2007, the median age at death for cancer of the cervix uteri was 57 years of age. Approximately 0.0% died under age 20; 5.1% between 20 and 34; 16.0% between 35 and 44; 23.2% between 45 and 54; 20.9% between 55 and 64; 15.0% between 65 and 74; 13.0% between 75 and 84; and 6.7% 85+ years of age. The age-adjusted death rate was 2.4 per 100,000 women per year. These rates are based on patients who died from 2003-2007 in the U.S.

Nationally, Georgia ranks 33rd lowest out of 48 reporting states in terms of cervical cancer incidence. For mortality, Georgia’s death rate is 33rd lowest out of 40 reporting states. The incidence of cervical cancer is highest among Hispanic women (11.7 per 100,000) followed by African American (10.4 per 100,000) and White women (8.0 per 100,000). In Georgia, African American women have the highest mortality rates (4.4 per 100,000) compared to 3.4 per 100,000 for Hispanic women and 2.2 per 100,000 for White women.
1.2 Purpose of Study

The purpose of this study is to examine the BCCNP to assess program satisfaction. This study will also use SWOT methodology to qualitatively evaluate the internal and external Strengths, Weaknesses, Opportunities, and Threats that impact a program. Finally, recommendations will be made to further improve program impact and satisfaction.

1.3 Research Questions

1. What are the most common strengths identified by Client Navigators regarding the Client Navigation program to enhance breast and cervical cancer screening in Georgia?

2. What are the most common weaknesses identified by Client Navigators regarding the Client Navigation program to enhance breast and cervical cancer screening in Georgia?

3. What are the most common opportunities identified by Client Navigators regarding the Client Navigation program to enhance breast and cervical cancer screening in Georgia?
Chapter II

REVIEW OF THE LITERATURE

In this chapter, support for this study’s research questions is synthesized from the scientific literature.

2.1 Problem of Breast and Cervical Cancer

Breast cancer, also known as malignant breast neoplasms, originates from breast tissue. The majority of breast cancers are epithelial tumors that develop from cells lining ducts or lobules; less common are non-epithelial cancers that grow from supporting connective tissue cells. Most patients present with an asymptomatic lump discovered during self-examination or mammography. Symptoms can include breast pain or enlargement, nondescript thickening in the breast, skin changes, and discharge from the nipple. MRI, mammography, or breast examination confirms the diagnosis. Treatment usually includes surgical excision, often with radiation therapy, with or without chemotherapy, hormonal therapy, or both. Risk factors for breast cancer include increased age, family and personal history of breast cancer, the presence of BRCA1 and BRCA2 genes, history of radiation therapy, lack of physical activity, race, later age reproductive history, and exposure to the hormonal drug diethylstilbestrol. Some breast cancers are sensitive to hormones such as estrogen and/or progesterone, which make it possible to treat
them by blocking the effects of these hormones in the target tissues. Estrogen and progesterone receptor positive tumors have better prognosis and require less aggressive treatment than hormone negative cancers. Breast cancers without hormone receptors, or which have spread to the lymph nodes in the armpits, or which express certain genetic characteristics, are higher-risk, and are treated more aggressively.7

Prognosis and survival rate varies greatly depending on cancer type and staging. Breast cancers are classified by different schemata and every aspect shapes treatment approach and prognosis. Classification of breast cancer is primarily based on the histological appearance of tissue in the tumor.7 The practical purpose of classification is to describe each individual occurrence of breast cancer in a way that helps select which treatment method is estimated to have the best chance for a positive outcome; all while maintaining increased efficacy and minimized toxicity. Description of a breast cancer typically includes the histopathological type, the grade and stage of the tumor, receptor status, and the presence or absence of genes as determined by DNA testing. As knowledge of cancer cell biology develops these classifications are updated.7

2.2 Burden of Cervical Cancer

Cervical cancer is malignant neoplasm of the cervix uteri or cervical area. About 80 to 85% of all cervical cancers are squamous cell carcinoma caused by human papillomavirus (HPV) infection; less often, cervical cancer is caused by an adenocarcinoma.5 The early stages of cervical cancer may be completely asymptomatic. The first symptom of early cervical cancer is usually vaginal bleeding, and other symptoms include a vaginal mass, pain during sexual intercourse, and vaginal discharge.9 Symptoms of advanced cervical cancer may include loss of
appetite, weight loss, fatigue, pelvic pain, back pain, leg pain, single swollen leg, heavy bleeding from the vagina, leaking of urine or feces from the vagina, and bone fractures.  

The American Cancer Society provides the following list of risk factors for cervical cancer: HPV, smoking, HIV infection, Chlamydia, stress and stress-related disorders, dietary factors, hormonal contraception, multiple pregnancies, and exposure to the hormonal drug diethylstilbestrol.  

The HPV infection with high-risk types has been shown to be a necessary factor in the development of almost all cases of cervical cancer. The U.S., Canada, Australia and the Great Britain have licensed HPV vaccines proven effective against the two strains of HPV that currently cause approximately 70% of cervical cancer.

Diagnosis for cervical cancer is conducted by a screening cervical Papanicolaou (Pap smear) test and biopsy. Treatment consists of surgery (including local excision) in early stages and chemotherapy and radiotherapy in advanced stages of the disease. While a pap smear is an effectual screening test, confirmation of the diagnosis of cervical cancer or pre-cancer requires a biopsy of the cervix. Staging is based on biopsy, physical examination, and chest x-ray results. The 5-yr survival rates are as follows: Stage I: 80 to 90%, Stage II: 60 to 75%, Stage III: 30 to 40%, Stage IV: 0 to 15%. Overall (all stages combined) 5-year survival rate is about 72%.

2.3 Burden of Breast Cancer

It is estimated that 207,090 women have been diagnosed with and 39,840 women have died of breast cancer in 2010. The following information is based on National Cancer Institute’s SEER Cancer Statistics Review. From 2003-2007, the median age at diagnosis for breast cancer was 61 years of age. Approximately 1.9% between 20 and 34; 10.5% between 35 and 44; 22.6% between 45 and 54; 24.1% between 55 and 64; 19.5% between 65 and 74; 15.8% between 75 and
84; and 5.6% 85+ years of age. The age-adjusted incidence rate was 122.9 per 100,000 women per year. These rates are based on cases diagnosed in 2003-2007 from 17 SEER geographic areas.

Table 2.1 Breast Cancer Incidence Rates by Race

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Races</td>
<td>122.9 per 100,000</td>
</tr>
<tr>
<td>White</td>
<td>126.5 per 100,000</td>
</tr>
<tr>
<td>Black</td>
<td>118.3 per 100,000</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>90.0 per 100,000</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>76.4 per 100,000</td>
</tr>
<tr>
<td>Hispanic</td>
<td>86.0 per 100,000</td>
</tr>
</tbody>
</table>

From 2003-2007 in the U.S., the median age at death from breast cancer was 68 years of age. Approximately 0.0% died under age 20; 0.9% between 20 and 34; 6.0% between 35 and 44; 15.0% between 45 and 54; 20.8% between 55 and 64; 19.7% between 65 and 74; 22.6% between 75 and 84; and 15.1% 85+ years of age. The age-adjusted death rate was 24.0 per 100,000 women per year.\(^\text{11}\)
Table 2.2 Breast Cancer Mortality Rates by Race

| Race/Ethnicity                  | Female  
<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All Races</td>
<td>24.0 per 100,000</td>
</tr>
<tr>
<td>White</td>
<td>23.4 per 100,000</td>
</tr>
<tr>
<td>Black</td>
<td>32.4 per 100,000</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>12.2 per 100,000</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>17.6 per 100,000</td>
</tr>
<tr>
<td>Hispanic</td>
<td>15.2 per 100,000</td>
</tr>
</tbody>
</table>

Based on rates from 2005-2007, the lifetime risk of developing breast cancer for women born in 2010 is 12.15%. On January 1, 2007, in the U.S. there were approximately 2,591,855 women alive who had a history of cancer of the breast.\textsuperscript{11} This includes any person alive on January 1, 2007 who had been diagnosed with cancer of the breast at any point prior to January 1, 2007 and includes persons with active disease and those who are cured of their disease. The survival statistics presented here are based on relative survival, which measures the survival of the cancer patients in comparison to the general population to estimate the effect of cancer. The overall 5-year relative survival for 1999-2006 from 17 SEER geographic areas was 89.0%. Five-year relative survival by race was: 90.2% for White women; 77.5% for Black women.\textsuperscript{11}
Table 2.3 Stage Distribution and 5-year Relative Survival by Stage 1999-2006, All Races, Breast Cancer

<table>
<thead>
<tr>
<th>Stage at Diagnosis</th>
<th>Stage Distribution (%)</th>
<th>5-year Relative Survival (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Localized (confined to primary site)</td>
<td>60</td>
<td>98.0</td>
</tr>
<tr>
<td>Regional (spread to lymph nodes)</td>
<td>33</td>
<td>83.6</td>
</tr>
<tr>
<td>Distant (cancer has metastasized)</td>
<td>5</td>
<td>23.4</td>
</tr>
<tr>
<td>Unknown (unstaged)</td>
<td>2</td>
<td>57.9</td>
</tr>
</tbody>
</table>

2.4 Burden of Cervical Cancer

It is estimated that 12,200 women have been diagnosed with and 4,210 women have died of cervical cancer in 2010. From 2003-2007, the median age at diagnosis for cancer of the cervix was 48 years of age. Approximately 0.2% were diagnosed under age 20; 14.5% between 20 and 34; 26.1% between 35 and 44; 23.7% between 45 and 54; 16.3% between 55 and 64; 10.4% between 65 and 74; 6.5% between 75 and 84; and 2.4% 85+ years of age. The age-adjusted incidence rate was 8.1 per 100,000 women per year. These rates are based on cases diagnosed in 2003-2007 from 17 SEER geographic areas.

Table 2.4 Cervical Cancer Incidence Rates by Race

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Races</td>
<td>8.1 per 100,000 women</td>
</tr>
<tr>
<td>White</td>
<td>7.9 per 100,000 women</td>
</tr>
<tr>
<td>Black</td>
<td>10.1 per 100,000 women</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>7.5 per 100,000 women</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>7.7 per 100,000 women</td>
</tr>
<tr>
<td>Hispanic</td>
<td>12.0 per 100,000 women</td>
</tr>
</tbody>
</table>
From 2003-2007, the median age at death for cancer of the cervix uteri was 57 years of age. Approximately 5.1% between 20 and 34; 16.0% between 35 and 44; 23.2% between 45 and 54; 20.9% between 55 and 64; 15.0% between 65 and 74; 13.0% between 75 and 84; and 6.7% 85+ years of age. The age-adjusted death rate was 2.4 per 100,000 women per year.\textsuperscript{5} These rates are based on patients who died from 2003-2007 in the U.S.

Table 2.5 Cervical Cancer Mortality Rates by Race

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Races</td>
<td>2.4 per 100,000</td>
</tr>
<tr>
<td>White</td>
<td>2.2 per 100,000</td>
</tr>
<tr>
<td>Black</td>
<td>4.4 per 100,000</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>2.1 per 100,000</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>3.4 per 100,000</td>
</tr>
<tr>
<td>Hispanic</td>
<td>3.4 per 100,000</td>
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Based on rates from 2005-2007, the lifetime risk of developing cervical cancer for women born in 2010 is 0.68%. The overall 5-year relative survival for 1999-2006 from 17 SEER geographic areas was 70.2%. Five-year relative survival by race was: 71.7% for White women; 60.7% for Black women.\textsuperscript{5}
Table 2.6 Stage Distribution and 5-year Relative Survival by Stage at Diagnosis for 199-2006, All Races, Cervical Cancer

<table>
<thead>
<tr>
<th>Stage at Diagnosis</th>
<th>Stage Distribution (%)</th>
<th>5-year Relative Survival (%)</th>
<th>Relative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Localized (confined to primary site)</td>
<td>49</td>
<td>91.2</td>
<td></td>
</tr>
<tr>
<td>Regional (spread to regional lymph nodes)</td>
<td>35</td>
<td>57.8</td>
<td></td>
</tr>
<tr>
<td>Distant (cancer has metastasized)</td>
<td>11</td>
<td>17.0</td>
<td></td>
</tr>
<tr>
<td>Unknown (unstaged)</td>
<td>5</td>
<td>58.1</td>
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2.5 Breast and Cervical Cancer Screening

Screening for and early detection of breast and cervical cancer reduces death rates and greatly improves cancer patients’ survival. Despite the availability of screening tests, deaths from breast and cervical cancer occur more frequently among women who are uninsured or under-insured. Mammography and Pap tests are underused by women who have less than a high school education, are older, live below the poverty level, or are members of certain racial and ethnic minority groups.

In order to help eliminate these health disparities, Congress passed the Breast and Cervical Cancer Mortality Prevention Act of 1990 (Public Law 101-354). In response, the Centers for Disease Control and Prevention (CDC) established the National Breast and Cervical Cancer Early Detection Program (NBCCEDP). The function of the NBCCEDP is to provide public education and outreach, breast and cervical cancer screening, and post-screening diagnostic services. Currently, the NBCCEDP funds all 50 states, the District of Columbia, 5
U.S. territories, and 12 American Indian/Alaska Native tribes or tribal organizations. In 2000, Congress passed the Breast and Cervical Cancer Prevention and Treatment Act, which gave states the option to offer women in the NBCCEDP access to treatment through Medicaid. To date, all 50 states and the District of Columbia have approved this Medicaid option. The NBCCEDP is implemented through cooperative agreements with state and territorial health departments, tribes, and tribal organizations.

The primary purpose of the NBCCEDP is to help low-income, uninsured, and underinsured women gain access to breast and cervical cancer screening and diagnostic services. Screening services are mainly offered through non-profit organizations and local health clinics. Though the program is administered within each state, the CDC provides matching funds and support to each state program. Through NBCCEDP partners, women who are uninsured or underinsured can obtain breast and cervical cancer testing for little to no cost. These services include clinical breast examinations, mammograms, pap tests, pelvic examinations, diagnostic testing if results are abnormal, and referrals to treatment. \(^{14}\) Since 1991, NBCCEDP-funded programs have served more than 3.7 million women, provided more than 9.2 million breast and cervical cancer screening examinations, and diagnosed more than 44,885 breast cancers, 2,554 invasive cervical cancers, and 123,563 premalignant cervical lesions. \(^{14}\)
Figure 2.1 Number of Women Receiving Mammograms Through the NBCCEDP, 1991-2002


Figure 2.2 Number of Mammography Screenings Provided Through the NBCCEDP, 1991-2002

Figure 2.3 Number of Women Receiving Pap Tests Through the NBCCEDP, 1991-2002


Figure 2.4 Number of Pap Test Screenings Provided Through the NBCCEDP, 1991-2002

While screening services are key to early detection of breast and cervical cancer, their existence alone is not enough to bring about a decrease in the morbidity and mortality associated with these diseases. Other activities must also occur to positively impact cancer related costs. The NBCCEDP has eight major components, which are outlined in the next section.

1. Program Management

The overarching goal of program management is to implement all program components in accordance with established policies and procedures; to identify and leverage resources; and to provide leadership in planning, coordination, implementation, and evaluation.

2. Evaluation

Evaluation activities must be carefully planned and implemented to ensure that program data are credible and useful. This information is critical to guiding operations and ensuring program success.

3. Partnerships

A successful national program to control breast and cervical cancer depends on the involvement of a variety of committed partners at the local, state, and national levels. Such partners help strengthen and maintain the NBCCEDP by contributing their expertise, connections, resources, and enthusiasm to the activities of the program.

4. Professional Development

Professional development activities in the NBCCEDP are designed to improve the ability of health care providers to screen for and diagnose breast and cervical cancer so that women receive appropriate and high-quality screening and diagnostic services. Related activities include
increasing the impact of the program on breast and cervical cancer mortality and improving providers’ performance in following up on abnormal screening resources.

5. Recruitment

The purpose of recruitment is to increase the number of women in priority populations receiving clinical screening services by raising awareness, addressing barriers, and motivating women to use these screening services. Raising awareness through public education involves the systematic design and delivery of clear and consistent messages about breast and cervical cancer and the benefits of early detection using a variety of outreach and in reach strategies to promote the clinical services available for program-eligible women.

6. Data Management

The collection, analysis, and use of quality data are essential for guiding program efforts. To meet CDC’s data management expectations, a grantee is required to:

a. Establish and maintain a data system for collecting, editing, and managing the data needed to track a woman’s receipt of screening, rescreening, diagnostic, and treatment services.

b. Establish mechanisms for reviewing and assessing the completeness, accuracy, and timeliness of data collected.

c. Establish protocols to ensure the security and confidentiality of all data collected.

d. Collaborate with other existing systems to collect and analyze population-based information on breast and cervical cancer, including incidence and mortality rates, cancer stage at diagnosis, and the demographic profile of cancer patients
7. Quality Assurance

The NBCCEDP provides guidance on quality assurance and improvement methods that use data to identify training needs, improve services, and ultimately ensure women receive high-quality care.

8. Screening

Screening and diagnostic services are the “heart” of the program. Screening encompasses five distinctly different program activities: screening, tracking, follow-up, case management, and rescreening. These activities work together to ensure that women in the program receive timely and appropriate follow-up.

A recent study performed by Hoerger at al. estimated colleagues examined the effects of the NBCCEDP on breast cancer mortality.\textsuperscript{15} Researchers modified a breast cancer simulation model based on existing Cancer Intervention and Surveillance Modeling Network to reflect screening frequency for NBCCEDP participants, and screening data for uninsured women was used as a control. Simulations for participants who received NBCCEDP program screening (Program), participants who received screening without the program (No Program), and participants who received no screening (No Screening) were compared for differences in life-years among women. Among 1.8 million women who were screened between 1991 and 2006, the Program saved 100,800 life-years compared with No Program and 369,000 life-years compared with No Screening. Per woman screened, the Program saved 0.056 life-years (95\% CI0.031, 0.081) compared with No Program and 0.206 life-years (95\% CI0.177, 0.234) compared with No Screening. Per woman with invasive breast cancer and screen-detected invasive cancer, the Program saved 0.41 and 0.71 life-years, respectively, compared with No
These results demonstrate that NBCCEDP breast cancer screening has reduced mortality among medically uninsured and underinsured low-income women, and that breast and cervical cancers related mortality could be avoided if cancer screening rates increased among women at risk.

2.6 Georgia Breast and Cervical Cancer Program

The Breast and Cervical Cancer Program (BCCP) in Georgia was established in 1992 in response to the Breast and Cervical Cancer Prevention and Treatment Act. It is funded jointly through state and federal funding, and implemented statewide through contract agreements with public health districts and other participating primary care providers, as well as agreements with participating mammography facilities and cytology laboratories. The primary purpose of the BCCP is to provide screening and follow-up services to low income, uninsured and/or underinsured women throughout the state of Georgia. Outreach efforts have been initiated to reach women in high-priority groups, including women 50-64 years of age, those belonging to racial or ethnic minority groups, gay women, those with special needs (physical and mental disabilities or with language barriers), and women who live in rural areas. Georgia currently provides breast and cervical cancer screening services to approximately 16,000 women age 40 and older and cervical cancer screenings to 125,000 younger women annually.

In order to qualify for BCCP services, a participant must live at or below 200% of the federal poverty level, and be uninsured and/or underinsured. Services provided by the program include clinical breast examinations, pelvic examinations, pap tests, referrals for mammograms (if 40 or over), diagnostic evaluation if results are abnormal, as well as referrals to treatment through the Women’s Health Medicaid Program. Participants who wish to receive free or
reduced breast cancer screening must be between the ages of 40-64; women over the age of 65 who do not qualify for Medicare Part B are able to receive both breast and cervical cancer screenings. Women over the age of 21, or women who have become sexually active in the last three years may qualify for cervical cancer screenings. At least 75% of the women who receive mammography screening with CDC funding must be 50-64 years of age, and at least 50% of the women who receive mammography screening with State funding must be 50-64 years of age.16

2.7 Client Navigation

Client navigation, or patient navigation, as it is more commonly called, refers to a process by which a trained navigator offers individualized assistance to patients, families, and caregivers in order to help overcome health care system barriers and facilitate timely access to quality medical care. Patient Navigators are trained culturally-competent health care workers who work to ensure cancer patients’ needs are appropriately and effectively addressed. Patient navigation has been shown to effectively reduce cancer mortality, and has also been applied to reduce mortality in other chronic diseases. Dr Harold P. Freeman, founder of the Patient Navigation Strategy, established the nation’s first patient navigation program in 1990 at Harlem Hospital Center to help improve access to cancer screening and address the delays in clinical follow-up and barriers to cancer care that residents encountered.17

The patient navigation strategy seeks to reduce treatment disparities and barriers to care, which can include as financial barriers (including uninsured and under insured), communication barriers (such as lack of understanding, language/cultural), medical system barriers (fragmented medical system, missed appointments, lost results), psychological barriers (such as fear and distrust), as well as other barriers (such as transportation or the need for child care). The patient
navigation model has been expanded to include the timely movement of an individual across the entire health care continuum from prevention, detection, diagnosis, treatment, and supportive, to end-of-life care.\textsuperscript{17}

The patient navigator model has been proven an effective strategy in reducing unequal access to cancer care. A 2008 meta-analysis by Wells et al identified sixteen studies that provided data on the efficacy of navigation in improving timeliness and receipt of cancer screening, diagnostic follow-up care, and treatment.\textsuperscript{18} Appendix A includes a table which showcases the outcomes of published patient navigation efficacy studies. Overall, there was evidence of some degree of efficacy for patient navigation in increasing participation in cancer screening and adherence to diagnostic follow-up care after the detection of an abnormality. The reported increases in screening ranged from 10.8\% to 17.1\%, and increases in adherence to diagnostic follow-up care ranged from 21\% to 29.2\% compared with control patients.\textsuperscript{18}

In October 2005, the National Cancer Institute (NCI) and the American Cancer Society awarded grants to nine academic research institutions in order to establish the Patient Navigator Research Program (PNRP). Institutions include the Northwest Portland Area Indian Health Board, Northwestern University, University of Texas, University of Rochester, Boston Medical Center, Ohio State University, George Washington University, and the H. Lee Moffett Cancer Center and Research Institute. The goal of the PNRP is to develop innovative patient navigation interventions which reduce or eliminate cancer health disparities, as well as to test their efficacy and cost-effectiveness. These interventions are designed to decrease the time between a cancer-related abnormal finding, definitive diagnosis, and delivery of quality standard cancer care services. The primary participants for this research program are racial/ethnic minorities, individuals with lower socioeconomic status, and residents of rural areas.
2.8 Theoretical Perspectives of Client Navigator Program

Client Navigation is a healthcare model adopted by the BCCP in 2001. Nationwide, client navigation has been proven to be an effective way to reach women who are never or rarely screened for cancer. Integrating diverse health promotion principles, client navigation has been found to be an effective means of following up on clients who are considered high risk for not returning to the program for needed screenings. Although many client navigators serve in a volunteer capacity for organizations such as the American Cancer Society, BCCP has received some funding from the CDC through mini-grant to encourage the initiation of the Navigation model in Georgia.

The main focus of the Client Navigation has been to support the case management and public education and client recruitment process at the local level. The primary role of the Client Navigator (CN) is to provide hands on support to BCCP clients so as to make the screening and/or follow up process easier for them. The Client Navigator’s role includes such activities as promoting client recall and re-screening, promoting client follow-up when screening results are abnormal, participating in outreach activities, providing client and community education, eliminating barriers to care, and facilitating client movement through the healthcare system. Client Navigators help women to overcome barriers that may inhibit a woman from obtaining recommended breast and cervical cancer screening, diagnostic work-up and/or treatment. Barriers include but are not limited to lack of transportation, lack of childcare, lack of information, lack of financial resources, language, and certain beliefs or values. As a facilitator, the client navigator can provide the interpersonal contact that is often needed to help overcome fear and other barriers, serve as a familiar face to guide clients through the medical process, help reduce refusal of services, help district coordinators and case managers recruit, educate, and refer
women to the BCCP, provide post-screening education to BCCP clients about the importance of adhering to follow-up, reinforce the importance of rescreening at appropriate intervals, assist in making follow-up phone calls to patients to notify or remind them of appointments, meet clients at the health care facility at the time of their appointments when indicated, and interpret for non-English speaking clients.

Client Navigation programs have been evaluated by several different designs. Tingen et al., 1998, Weinrich et al., 1998, and Dignan et al., 2005 used prospective randomized controlled trial designs to evaluate participant screening adherence and participation. Dignan et al. used face-to-face navigator intervention and telephone navigator intervention to measure mammography screening guideline adherence.\(^\text{19}\) They found that participants in either intervention group were more likely to receive mammography according to guidelines after intervention than before intervention, and that telephone intervention was more effective than face-to-face intervention.\(^\text{19}\) Tingen et al. used randomized to traditional prostate cancer education, peer educator only, client-navigator only, or combination of peer educator and client navigator designs to measure participation in free prostate cancer screenings.\(^\text{20}\) The study found that participants who received either client navigation intervention or combined intervention were more likely to participate in the screening program than prostate cancer education participants.\(^\text{20}\) Weinrich et al. also used randomized to traditional prostate cancer education, peer educator only, client navigator only, or combination of peer educator and client navigator programs to evaluate participation in free prostate cancer screenings.\(^\text{21}\) Researchers found that study participants who received either client navigation or peer education intervention more likely to participate in screening program than traditional intervention participants. Participants
who received education alone were as likely to participate in screening as combined peer education and client navigation intervention participants.\textsuperscript{21}

Ell et al. 2002 and Gise-Davis et al. 2006 used prospective comparison to measure adherence to follow up care after mammograms, and pre-post comparison of navigation participants on several measures. Ell et al. used health education, navigation, and counseling to measure adherence to follow up care following abnormal mammograms, timeliness of diagnostic resolution, and timeliness of initiation of cancer treatment. Researchers found that intervention participants were more likely to adhere to follow up recommendations than non-enrollees, and also that were enrollees more likely to get to diagnostic resolution in a timely manner than non-enrollees.\textsuperscript{22} Gise-Davis et al. used a pretest-posttest comparison of navigation participants to measure change over time (baseline, three months, six months, nine months) in depression, trauma symptoms, desire for information on breast cancer, emotional and social quality of life, self-efficacy to cope with cancer, and doctor-patient relationship.\textsuperscript{23} Researchers found that trauma symptoms and desire for breast cancer resource information decreased and emotional wellbeing and cancer self-efficacy increased.

Nash et al., 2006, and Battaglia et al., 2007 used retrospective comparison to measure adherence to follow up services before and after navigation intervention. Nash et al. found that there was an increase in number of people who received screening colonoscopies and a decline in broken appointment rates (from 67.2\% to 5.3\%) after patient navigation intervention.\textsuperscript{24} Similarly, Battaglia et al. found that Navigation participants more likely to have timely follow-up than participants screened before intervention. Intervention effect remained after controlling for race, age, insurance status, reason for referral and source of referral; and using a propensity score analysis to adjust for differences in pre and post intervention samples.\textsuperscript{25}
2.9 Program Evaluation

The SWOT approach is widely used in many professional fields to qualitatively evaluate the internal and external Strengths, Weaknesses, Opportunities, and Threats that impact a program. Strengths are internal positive attributes of the program that can help facilitate activities, and weaknesses are internal attributes of the program that may hinder achievement of its activities and goals. Opportunities include external conditions that may facilitate program activities, and threats are external conditions that may stand in the way of activities. The SWOT approach provides information which in turn can be used for strategic planning and quality improvement efforts. SWOT analysis is well suited for participatory evaluation because it is based on respondents’ perceptions, and can contribute to participants’ awareness and empowerment, facilitating the development of commonly shared organizational goals.

In 2008, Huerta et al. used SWOT analysis to identify the potential strengths and weaknesses of the Israeli smallpox revaccination program. As a result, several strengths (program track record, residual population immunity), weaknesses (vaccination production technology, anti-vaccination sentiment), opportunities (global war on terrorism, threat of war in Iraq), and threats (dissent within the medical community, side effects) were identified. Similarly, Camden et al. used SWOT to evaluate a pediatric rehabilitation program (PRP) in Quebec, Canada. Providers working in the PRP completed a SWOT questionnaire, and the responses were used by a planning committee to assist in the development of a new service delivery model. Current program strengths included favorable organizational climate and interdisciplinary work, and weaknesses included lack of psychosocial support to families and long waiting times for children. Opportunities included working with community partners,
whereas fear of losing professional autonomy with the new service model was identified as a threat. Researchers in Kirkkonummi, Finland used SWOT analysis to measure the quality of public oral health services from the adult client’s perspective. Before treatment, patients filled out a questionnaire that measured the importance of their expectations in different aspects of oral care. After the appointment, they filled out a similar questionnaire that measured the enactment of these expectations in the treatment situation. Patients identified strengths as appropriate number of staff and equipment, good hygiene, and appropriate costs. Weaknesses centered around communication between doctors and patients, for example, patients wanted more information about the causes of oral health problems, their risk of developing oral diseases, and alternative treatment possibilities. Opportunities included receiving estimates about treatment costs and time needed for treatment. No threats were identified.

The ACS Client Navigation Program SWOT Analysis and Evaluation for Client Navigators and Supervisors/Nurses survey instruments were developed by the evaluators in partnership with ACS and staff of the BCCCNP. The framework for the instruments used incorporated constructs from the SWOT methodology. For the client navigator surveys, the SWOT analysis prompted participants to evaluate the BCCCNP on a variety of program elements. These elements were: People, Resources, Overall Program, Growth, and Effectiveness. In addition to these SWOT items, Client Navigators were asked three additional questions regarding job specific improvement. These included: identification of resources needed to be a better navigator, items to enhance job performance as a client navigator, and agreement that supervisor provides feedback necessary for job improvement. Three demographic questions [gender, race/ethnicity, age] as well as two items related to practice locale [district and counties served] were also asked. The complete instrument administered to
Client Navigators is included in Appendix B.
Chapter III

METHODS AND PROCEDURES

A cross-sectional survey design was used to conduct this study. Given that the nature of evaluation research includes participants of an existing program, the study group—client navigators, their supervisors, and clients of the program were important stakeholders to include in this study. The surveys were administered using an electronic platform—Psychdata—which is an academic version of Survey Monkey that operates without any commercial sidebars. The student primary investigator (PI) and study staff also attempted to elicit participation using the telephone and mail-based surveys.

The ACS Client Navigator Program staff provided the names and contact information for all 3 groups of stakeholders. For both the client navigators and their supervisors—the initial contact was via email. Respective survey link were embedded within an electronic invitation to participate. Interested participants would click to continue with the survey if they wished to participate after reviewing details of the evaluation study. For clients, the student PI and study staff contacted individuals by phone to see if an email address could be obtained. When clients did not have an email address, survey questions were asked over the phone and immediately entered. For clients with whom no telephone contact was made—letters were sent in the mail.
encouraging participation. Mailings included the complete survey and an addressed stamped envelope for return.

### 3.1 Study Instrumentation

The study involved two survey instruments. The instruments were developed in collaboration with research faculty and staff from GSU Institute of Public Health and representatives from the ACS Client Navigator administration. The Client Navigator survey consisted of 37 items and is included in Appendix B. The Client survey—created for individuals who have utilized the ACS Breast and Cervical Cancer Client Navigator Screening program in Georgia, consisted of 17 items and is included in Appendix B.

Once 3 reminders to complete the surveys were sent, the survey was officially closed and the online link was removed. Data was downloaded from the Psychdata server and imported into SPSS—the Statistical Package for Social Sciences, Version 18.0 (Chicago, IL, www.spss.com). Descriptive statistics were run to summarize the demographic profile, SWOT perceptions of the Client Navigator program, and overall satisfaction.

Responses to open-ended questions were reviewed line by line and coded for categories, constantly comparing emerging categories to each other to determine their nature and significance. The researcher and a co-coder developed the initial codebook through independent coding of 14 surveys. They met after the initial coding to discuss and agree upon an initial draft of the codebook. The surveys were then recoded with the revised codebook. From this coding process, patterns and themes emerged when compared across responses. The emerging themes were then grouped into categories when possible.
CHAPTER IV

RESULTS

4.1 Research Questions

The following paragraphs describe the findings of this evaluation study and address the following research questions:

1. What are the most common strengths identified by Client Navigators regarding the Client Navigation program to enhance breast and cervical cancer screening in Georgia?

2. What are the most common weaknesses identified by Client Navigators regarding the Client Navigation program to enhance breast and cervical cancer screening in Georgia?

3. What are the most common opportunities identified by Client Navigators regarding the Client Navigation program to enhance breast and cervical cancer screening in Georgia?

The PI was successful in obtaining 24 complete surveys from client navigators, and 54 from clients within a 61 day time period. The age, ethnic, disclosure status, and educational attainment distribution of the sample are presented in Tables 4.1 and 4.3.
Client Navigators (CNs) play a significant role in helping clients find appropriate screening facilities and resources. They must be skilled in building relationships, solving problems, and maintaining open communication with women they serve, their supervisors/managers, as well as other stakeholders. Table 5 presents a summary demographic profile of the fourteen client navigators who completed a navigator satisfaction survey.

Table 4.1 Demographic Profile of Client Navigators

<table>
<thead>
<tr>
<th>Gender</th>
<th>Female</th>
<th>71%</th>
<th>(11)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No Response</td>
<td>29%</td>
<td>(3)</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>African American</td>
<td>14%</td>
<td>(2)</td>
</tr>
<tr>
<td></td>
<td>Caucasian</td>
<td>36%</td>
<td>(5)</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>7%</td>
<td>(1)</td>
</tr>
<tr>
<td></td>
<td>Asian</td>
<td>7%</td>
<td>(1)</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>7%</td>
<td>(1)</td>
</tr>
<tr>
<td></td>
<td>No Response</td>
<td>29%</td>
<td>(4)</td>
</tr>
<tr>
<td>Age</td>
<td>20-29</td>
<td>21%</td>
<td>(3)</td>
</tr>
<tr>
<td></td>
<td>30-39</td>
<td>14%</td>
<td>(2)</td>
</tr>
<tr>
<td></td>
<td>50-59</td>
<td>36%</td>
<td>(5)</td>
</tr>
<tr>
<td></td>
<td>No Response</td>
<td>29%</td>
<td>(4)</td>
</tr>
</tbody>
</table>

The navigators were asked to assess the BCCNP in terms of strengths, weaknesses, opportunities and threats they identified with the PEOPLE, PROGRAM, EFFECTIVENESS, RESOURCES, and GROWTH of the program. The key SWOT responses are reported and discussed in order of survey appearance. Evaluation findings demonstrated that client navigators view the timeliness, communication, and help offered to clients as the greatest strengths among people associated with the program. Weaknesses that were identified by client navigators which
could be seized as opportunities to improve staff and people involved in the program were collaboration, enhanced communication and financial support.

Table 4.2 Client Navigator SWOT Summary

<table>
<thead>
<tr>
<th>SWOT Dimension</th>
<th>Percent</th>
<th>Frequency (n=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengths</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never/ 0 Day</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>1-5 Days</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>6-10 Days</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>11-20 Days</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>21 Days or More</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Weaknesses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never/ 0 Day</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>1-5 Days</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>6-10 Days</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>11-20 Days</td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td>21 Days or More</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>Opportunities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never/ 0 Day</td>
<td>55</td>
<td>55</td>
</tr>
<tr>
<td>1-5 Days</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>6-10 Days</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>11-20 Days</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>21 Days or More</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Threats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never/ 0 Day</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>1-5 Days</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>6-10 Days</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>11-20 Days</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>21 Days or More</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 4.3 represents the mean and range of client navigator satisfaction by age, educational attainment, and ethnicity.
Table 4.3 Client Navigator Program Satisfaction by Demographic Characteristics

<table>
<thead>
<tr>
<th>Demographic Features</th>
<th>Mean Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
</tr>
<tr>
<td>21 and Under</td>
<td>0.44 (0-4.00)</td>
</tr>
<tr>
<td>22 to 33</td>
<td>4.32 (0-42.00)</td>
</tr>
<tr>
<td>34 to 45</td>
<td>4.97 (0-24.67)</td>
</tr>
<tr>
<td>45 and Above</td>
<td>3.53 (0-32.00)</td>
</tr>
<tr>
<td><strong>Educational Attainment</strong></td>
<td></td>
</tr>
<tr>
<td>High School or Less</td>
<td>5.81 (0-23.33)</td>
</tr>
<tr>
<td>Some College</td>
<td>3.56 (0-42.00)</td>
</tr>
<tr>
<td>Graduated from College</td>
<td>2.28 (0-24.67)</td>
</tr>
<tr>
<td>Post Graduate School</td>
<td>5.36 (0-32.00)</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>3.35 (0-42.00)</td>
</tr>
<tr>
<td>Non-White</td>
<td>4.20 (0-24.67)</td>
</tr>
</tbody>
</table>

Summary SWOT perceptions from navigators are presented in Figure 4.1. Direct quotes from client navigators who completed the survey follow.

Figure 4.1 Client Navigator SWOT Assessment of PEOPLE within the BCCCNP
Direct Client Navigator Quotes Regarding Program Strength

“Patients are recalled in a timely manner for abnormal follow-ups.”

“I think that patient/CN communication is very good regarding the process of the BCCP program.”

“Education about the different types of programs within the ACS that is beneficial to the patients.”

Individuals go out of their way to help people in need whether it is listening at length to their problems or relating their stories to help individuals. Also, helping people find the resources to help achieve their mammograms and other tests that they might have to endure.

Direct Client Navigator Quotes Regarding Program Weaknesses

…clients are lost to follow-up and there is no way to contact them via phone or home visit. I think the biggest struggle is dealing with the illegal citizens that come through the program because if they are diagnosed with Breast or Cervical cancer they cannot go on Women's Health Medicaid and this is an issue.

“There is a language barrier regarding non-English speaking patients and CN's who are not able to communicate with them.”

“A lot of clients are unaware about the program.”

Direct Client Navigator Quotes Regarding Program Opportunities
“More funding for the client navigation program.”

Some of the opportunities that I see is that through marketing individuals will learn about this program. Also, networking with other agencies has helped find out about their programs, so we can further help the individuals. Example, learning about which doctor that will help with lower cost radiation and/or chemo, etc.

Direct Client Navigator Quotes Regarding Program Threats

One threat would be the ages that we can work with. When I am out marketing the older women, I always have younger individuals that need help with mammograms and/or pelvic exams but cannot afford it. I help them by telling them where to obtain low cost mammograms and/or pelvic examinations.

“Funding!!!”

In terms of the program, client navigators viewed the benefits to clients as the greatest strength. They identified a lack of funding, time, and attention as weaknesses and opportunities to improve. A summary of SWOT responses to the overall BCCCP program is presented in Figure 4.2.
Figure 4.2 Client Navigator SWOT Assessment OF the BCCCNP PROGRAM

Direct Client Navigator Quotes Regarding Program Strengths

“Education to the general public about the cancer programs out there to help women stay one step ahead of becoming a victim and empowering them to get the screening available to them.”

“Strengths would be helping different women in the community and be able to use what I have learned from them to help other women.”

Direct Client Navigator Quotes Regarding Program Weaknesses

“Funding runs out before I can do recalls. Many screening patients get left behind. There is a lot of missed opportunity for outreach because there is no funding for the screenings for people met at those events.”
“I think that there is not enough publicity connected with this program. I have been a social worker for more than 13 years in Atlanta and Athens and I have never heard of this program before…”

“Not at time having enough time, being that the job is only part-time.”

Direct Client Navigator Quotes Regarding Program Opportunities

“Recruit more client navigators.”

“Reaching more to the community to provide information about breast and cervical cancer.”

Direct Client Navigator Quotes Regarding Program Threats

“Lack of sufficient funding.”

“One would be the ages of the women that are seen is very limited. Also, some individuals that have insurance have high co-pay and/or deductible cannot afford these and they do not know about the Health Department. More publicity is needed.”

Client Navigators acknowledged well managed data, large number of clients, and promptness as strengths of the program’s effectiveness, while a lack of funding was identified as weakness. They also acknowledged the program’s contact information protocol and lost lab results as potential threats to the program’s effectiveness and protocol overhaul and expansion of program outreach as possible opportunities to improve the program effectiveness. A summary of SWOT responses to the overall BCCCP program’s effectiveness is presented in Figure 4.3.
Direct Client Navigator Quotes Regarding Program Strengths

I think the CN program is very effective. It’s a program that has been around for years and has helped a lot of women.” The data collection is on top of the individuals with abnormal tests. They analyze this information and call the appropriate individuals to help them with their decisions and resources.

Direct Client Navigator Quotes Regarding Program Weaknesses
Income levels should be used as a determination but I wish it could be used with Medicaid like any other insurance where you pay a percentage. Getting private insurance is expensive and if Medicaid would help instead of just saying no because income too high, we could help more people. Chemo is a very expensive treatment and, even with a decent living, would take all your money to go through it, if you were able to keep working. Medicaid should work on a % level and cover just the current problem. Then it could cover more people.

One of the main weaknesses that I see is the timeframe that things are done. The county moves slowly and by the time some individuals get help and resources, it has been months. People are overworked and cannot get to everything at once.

Direct Client Navigator Quotes Regarding Program Opportunities

Reexamining the protocol so that patients who have an abnormal CBE and a negative mammogram aren't sent to the doctor--saving funds for patients who have a true need for a follow-up.

More people are being seen and treated for breast and cervical cancer than would be otherwise without the program. Navigators get out there in the communities and let this program be known. I have gotten calls from people wanting to know if I could help get them on Medicaid for other reasons that cancer because of me being known of by word of mouth.

Direct Client Navigator Quotes Regarding Program Threats

A big threat is this. Every time a patient comes in they are supposed to be asked about their current address, phone number and how they want to be contacted. This is not done. A
lot of the times I am trying to reach some patient only to find out that they have a NO CONTACT on their HIPPA form or they have a disconnected number, or invalid address. When I finally do make contact with the patient, they inform me that there were no problems contacting them at their phone number, for example. Most of them do not even know that they have a NO CONTACT item on their chart. All Health Department should be doing the same thing. Also, there needs to be an easier way to find the patient's current address and phone numbers in their chart. It is my belief that it should be the only thing on the front inside of the chart and kept up to date each time a person comes in to the Health Department and initialed and dated by the Health Department worker and the patient.

SWOT findings found that client navigators identified effective resources as one of the greatest strengths associated with the program. Navigators identified the lack of funding and publicity as weaknesses in the program’s resources, both of which could be seized as opportunities to improve resources involved in the program. A summary of SWOT responses to the overall BCCCP program’s resources is presented in Figure 4.5.
Figure 4.4 Client Navigator SWOT Assessment of BCCCP RESOURCES

Direct Client Navigator Quotes Regarding Program Strengths

“Women's Health Medicaid and Family Planning are get resources for women they need help with financial support, and many women are very grateful for these resources.”

“The resources connected to the program are great!! We can help find anything the patient needs by just placing one phone call to the ACS and getting detail info for what the patient needs.’

Direct Client Navigator Quotes Regarding Program Weaknesses
“A big weakness is that the Health Departments have a problem about getting this information to the people that they serve. The financial support is there but few know about it.”

“Not enough funding, client navigators are not compensated enough”

Direct Client Navigator Quotes Regarding Program Opportunities

“More funding from outside sources”

“Partnering with other programs, such as Screen Atlanta, to provide other screening options for patients when our screening funds are low.”

Direct Client Navigator Quotes Regarding Program Threats

“Private Doctors not telling women about the program.”

“Different cuts in the state and what resources will be taken away that the program could use”

Client navigators found new education and partnership opportunities as strengths to the program’s growth potential, while a lack of funding, staff, and provider cooperation were identified as weaknesses. They also identified a lack of funding and program awareness as threats to the program’s growth and increases in outreach (specifically to the Hispanic community), networking, and partnerships as opportunities to improve the program growth. A summary of SWOT responses to the overall BCCCP program’s potential growth is presented in Figure 4.5.
Direct Client Navigator Quotes Regarding Program Strengths

“In my community I think the program will grow when the citizens and business become aware of it.”

“Great partnership helps us help our clients to get appropriate screenings. The American Cancer Society is also great giving us the information on new awareness products coming out so we can provide this information to our clients.”

Direct Client Navigator Quotes Regarding Program Weaknesses

“Providers who do not cooperate with the procedures of BCCP.”
“Not being able to cover all the 10 counties in our district.”

Direct Client Navigator Quotes Regarding Program Opportunities

“Branching out to other organizations for partnerships“

Some of the opportunities for growth are that I am able to find agencies that at first I did not know existed and now through networking, I can make contact with these new companies. Also, when current and new material comes out, Olga is the first to let the CN know what is available.

Direct Client Navigator Quotes Regarding Program Threats

One of the threats that I foresee is that the program will not grow very fast because of the limited finances. The finances also play a part in promotion of this program. More individuals would become part of our program if they just knew about it. A lot of the time, getting the word out involves money and money is a scarcity in many places.

The Client Navigators were also asked to identify things/resources that may enhance their performance as a navigator and keeps them satisfied in fulfilling their professional role. Direct quotes from Client Navigator respondents follow.

Please indicate what you need to be a better Client Navigator

“A provider who sends reports in a timely manner, patients who show up for all of their appointments, and a pay increase.“

I think my big challenge as a client navigator is not having the extra money to do different things in the community to promote the program. I feel like our yearly training is great and I
learned a lot last year from it, but at times I feel like I still don’t know everything that is out there for me to help the women. I would like to learn also I guess different ways to communicate to the public so I could get the word out more so our program would be bigger and would be helping more women.

“A supervisor that is more involved with the community.”

It would help greatly is I had a pay increase. I have a master's in social work that I am bringing to this program. I am paid a little above minimum wage. I did understand the pay scale when I took the job but a pay raise would greatly improve my life. The item that I would like to see in training is how the CN is supposed to contact someone when the HIPPA form will not allow it. I have received many files of individuals who have NO CONTACT on their files but they send the file to me because as they said, "That is what they were told the next step is." So, communication with the staff at the Health Departments would also be beneficial about what a CN does and does not do.”

Please share what encourages you to continue being a Client Navigator

“Speaking with my patients and giving them hope, relief, or comfort.”

“It’s a rewarding experience to know that I have helped a woman and possibly saved her life. If the program wasn’t there she might not have had the resources to get her diagnoses or treatment done.”

“Knowing I am helping someone that otherwise would not be able to get the treatment she needs.”

I really enjoy helping people and finding valuable resources for them. When they are in a financial and emotional bind, I enjoy helping them out so they can be at ease about their health. I also enjoy the hours (as I work part-time). This enables me to stay at home with
my 5 year old more. I enjoy finding resources that I did not know existed and networking with various new individuals and learning about their programs. The more I know, the more I can help patients know.

“Helping other people by providing information to help them overcome breast and cervical cancer.”

“Client navigator is needed to help patients with follow-up, language barriers, appointments, etc.”

There is a need for the service. This is the only program in the county that attempts to educate women about the risk of breast and cervical cancers. The only sign of breast cancer some women know is the lump. I was one of those women until I became a CN. I want other women to know better.

Overall, the results of the Client Navigator satisfaction survey were positive. Over half of all participants agreed or strongly agreed that the Client Navigator role objectives were achieved for all activities: promoting client recall and re-screening, promoting client follow-up for abnormal screens, participating in outreach activities, providing client and community education, eliminating barriers to care, and facilitating client movement through the health care/service system [Figure 4.6]. This indicates that the navigators believe that the BCCN program is successfully facilitating client movement through the system by providing client and community education, eliminating barriers to care, and participating in outreach activities.
Client Navigator responses to open-ended questions were coded for categories. Results of the recoding are presented in the tables below.
<table>
<thead>
<tr>
<th>People associated with the Client Navigator Program</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strengths</strong></td>
</tr>
<tr>
<td>Medicaid Signup (1)</td>
</tr>
<tr>
<td>Community outreach (3)</td>
</tr>
<tr>
<td>Patient /CN Communication (2)</td>
</tr>
<tr>
<td>Teamwork (1)</td>
</tr>
<tr>
<td>Personal Characteristics of Client Navigators (10) (Dedication, Persistence, Determination, Responsible, Caring, Respectful, Timeliness)</td>
</tr>
<tr>
<td>Trained Staff (1)</td>
</tr>
<tr>
<td>Accessing Resources (4)</td>
</tr>
<tr>
<td>(Financial Aid, Education)</td>
</tr>
<tr>
<td><strong>Opportunities</strong></td>
</tr>
<tr>
<td>Funding (1)</td>
</tr>
<tr>
<td>Material language Option (1)</td>
</tr>
<tr>
<td>Diversity (1)</td>
</tr>
<tr>
<td>Education (3)</td>
</tr>
<tr>
<td>Outreach (7)</td>
</tr>
<tr>
<td>(Marketing, Networking, Education)</td>
</tr>
</tbody>
</table>
When asked to identify strengths, weaknesses, opportunities, and threats related to the people associated with the Client Navigator program, respondents most commonly identified timeliness, community outreach, and dedication as program strengths, missing contact info, patients lost to follow up, and language barriers as weaknesses, marketing, networking, and education as opportunities, and loss of program funding as a main program threat.

Table 4.5 SWOT of the Client Navigator Program

<table>
<thead>
<tr>
<th>Client Navigator Program</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strengths</strong></td>
</tr>
<tr>
<td>Aiding navigation through system (4)</td>
</tr>
<tr>
<td>Outreach (2)</td>
</tr>
<tr>
<td>Internal Program Characteristics (3)</td>
</tr>
<tr>
<td>(Beneficial, Effective)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Opportunities</strong></td>
</tr>
<tr>
<td>Funding (1)</td>
</tr>
<tr>
<td>Early Detection (2)</td>
</tr>
<tr>
<td>Outreach (5)</td>
</tr>
<tr>
<td>(Increased recruitment of navigators, program growth)</td>
</tr>
<tr>
<td>Client Assistance (1)</td>
</tr>
<tr>
<td>Education (1)</td>
</tr>
</tbody>
</table>
When asked to identify strengths, weaknesses, opportunities, and threats of the Client Navigator Program itself, respondents identified aiding patient navigation through the system and community outreach as program strengths, funding as a program weakness, outreach and program growth as opportunities, and funding as the main program threat. Responses are presented in Table 4.6.

Table 4.6 SWOT of the Effectiveness of the Client Navigator Program

<table>
<thead>
<tr>
<th>Effectiveness of the Client Navigator Program</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strengths</strong></td>
</tr>
<tr>
<td>Program protocol (2)</td>
</tr>
<tr>
<td>Program effectiveness (1)</td>
</tr>
<tr>
<td>Client Care (2)</td>
</tr>
<tr>
<td>Data Organization (2)</td>
</tr>
<tr>
<td>Prompt assistance (1)</td>
</tr>
<tr>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

When asked to identify strengths, opportunities, weaknesses, and threats of the effectiveness of the Client Navigator program, participants most commonly identified program
protocol and data organization as program strengths, lack of funding and slow time frames as weaknesses, increased funding and community outreach as opportunities, and lack of funding as the main program threat. Responses are presented in Table 4.7.

Table 4.7 SWOT of the Resources of the Client Navigator Program

<table>
<thead>
<tr>
<th>Resources of the Client Navigator Program</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strengths</strong></td>
</tr>
<tr>
<td>Helps People in Need (3)</td>
</tr>
<tr>
<td>Great Resources (4)</td>
</tr>
<tr>
<td>Financial Support is Strong (1)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Opportunities</strong></td>
</tr>
<tr>
<td>Partnering (4)</td>
</tr>
<tr>
<td>Knowledge (1)</td>
</tr>
<tr>
<td>Outreach (1)</td>
</tr>
<tr>
<td>Client Assistance (1)</td>
</tr>
<tr>
<td>Outside Funding (1)</td>
</tr>
</tbody>
</table>

When asked to identify strengths, weaknesses, opportunities, and threats of the Client Navigator program, participants most commonly identified helping people in need and great resources as program strengths, lack of funding as the main program weakness, partnering as an
opportunity, and lack of funding as the foremost program threat. Responses are presented in Table 4.8

Table 4.8 SWOT of the Growth of the Client Navigator Program

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
</table>
| New Information and Education for CNs (1)  
Partnering (5)  
Awareness (2) | Noncooperation From Providers (1)  
Large Coverage Area (1)  
Lack of Program Growth (1)  
Lack of Funding (2)  
Missing Client Contact Information (1) |

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
</table>
| Partnering (4)  
Outreach (1)  
Outreach to Hispanic Population (1) | Lack of Funding (2)  
Losing potential partners (1) |

When asked to identify program strengths, weaknesses, opportunities, and threats, Client Navigators most commonly identified partnering and awareness as strengths, lack of funding as the main program weakness, partnering as an opportunity, and lack of funding as the key program threat.
4.3 Clients

Women who have received services through the Client Navigator Program were also included in the evaluation design. The ACS provided contact information of 330 clients of the Client Navigator program. Evaluation staff successfully completed surveys with 54 clients, following three rounds of attempts (16% response rate). The profiles of client demographic characteristics are contained in Table 4.9.

Table 4.9 Demographic Profile of Client Sample

<table>
<thead>
<tr>
<th>Race / Ethnicity</th>
<th>African American</th>
<th>Caucasian</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>50%</td>
<td>48%</td>
<td>2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>20-29</th>
<th>30-39</th>
<th>40-39</th>
<th>50-59</th>
<th>60-69</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4%</td>
<td>4%</td>
<td>31%</td>
<td>39%</td>
<td>22%</td>
</tr>
<tr>
<td></td>
<td>(2)</td>
<td>(2)</td>
<td>(17)</td>
<td>(21)</td>
<td>(12)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impairment/Disability</th>
<th>Visually Impaired</th>
<th>Disabled</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9%</td>
<td>7%</td>
</tr>
<tr>
<td></td>
<td>(5)</td>
<td>(4)</td>
</tr>
</tbody>
</table>

Clients were asked to specify the nature of their first contact with the Client Navigator, specific barriers that the navigator helped to overcome, and services that were obtained through the program. Table 4.10 presents a complete overview of results.
Table 4.10 Summary of Client Interactions with Navigators

<table>
<thead>
<tr>
<th>Barriers Client Navigator Helped Clients Overcome</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of Information</td>
<td>13%</td>
<td>(7)</td>
</tr>
<tr>
<td>Lack of Financial Resources</td>
<td>30%</td>
<td>(16)</td>
</tr>
<tr>
<td>Certain Beliefs or Values</td>
<td>10%</td>
<td>(5)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Clients First Contact with Client Navigator</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Fair</td>
<td>4%</td>
<td>(2)</td>
</tr>
<tr>
<td>Friend or Family Member</td>
<td>4%</td>
<td>(2)</td>
</tr>
<tr>
<td>Health Department</td>
<td>68%</td>
<td>(36)</td>
</tr>
<tr>
<td>Doctor</td>
<td>8%</td>
<td>(4)</td>
</tr>
<tr>
<td>Breast Test Center</td>
<td>2%</td>
<td>(1)</td>
</tr>
<tr>
<td>Radio</td>
<td>2%</td>
<td>(1)</td>
</tr>
<tr>
<td>Project Hope</td>
<td>2%</td>
<td>(1)</td>
</tr>
<tr>
<td>Clinic</td>
<td>8%</td>
<td>(4)</td>
</tr>
<tr>
<td>Navigator Building</td>
<td>2%</td>
<td>(1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Services Navigator Helped Clients Obtain</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follow up Services</td>
<td>15%</td>
<td>(8)</td>
</tr>
<tr>
<td>Physician/Surgical Appointment</td>
<td>13%</td>
<td>(7)</td>
</tr>
<tr>
<td>Clinical Breast Exam</td>
<td>24%</td>
<td>(13)</td>
</tr>
<tr>
<td>Pap</td>
<td>20%</td>
<td>(11)</td>
</tr>
<tr>
<td>Mammogram</td>
<td>41%</td>
<td>(22)</td>
</tr>
<tr>
<td>Breast Biopsy</td>
<td>2%</td>
<td>(1)</td>
</tr>
<tr>
<td>Medicaid</td>
<td>2%</td>
<td>(1)</td>
</tr>
<tr>
<td>Food</td>
<td>2%</td>
<td>(1)</td>
</tr>
<tr>
<td>Financial Help</td>
<td>2%</td>
<td>(1)</td>
</tr>
</tbody>
</table>

Clients were asked to indicate their level of agreement with a series of items related to interactions with Client Navigators. Figure 4.7 presents an overview of client satisfaction with navigator activities.
Figure 4.7 Client Satisfaction Summary

Program Strengths

Clients were asked to describe program elements that they most appreciated. Themes included that they received quality care and that navigators were kind, caring, patient, understanding, knowledgeable, and professional. Others identified that they the program provided ease of connecting with the healthcare system and they valued the follow-up. Relief from the financial burden of screening expense was also cited. Direct quotes follow.

Direct Client Quotes Regarding Program Strengths

“I am just thankful it’s around because my cancer could have gone undiagnosed and I could have died. I do not have the means for mammograms as I am out of work.”

“The people were great. Very friendly and laid back...THANK YOU!”
“Knowing that an informed and compassionate person was always a phone call or email away.”

“The fact that being diagnosed with breast cancer was a huge financial burden. I feel very blessed.”

“I like Ms. XXXX, she was gentle and explained everything. The environment was nice and pleasant.”

“I loved Mrs. XXXX.”

“Everybody was friendly, put me at ease. I could always call Roseanne”

“I liked everything- XXXX is an exceptional women and everyone in the office.”

Program Weaknesses

Clients identified that there was a lack of information regarding billing processes and subsequent steps following initial contacts. The client age minimum was also cited as a weakness, as many women were interested in the breast exam screening before the age of 50. Another common weakness that clients described was not fully knowing what to expect as they were screened and results were delivered.

Direct Client Quotes Regarding Program Weaknesses

“They didn't have any recommendations as to how I could obtain treatment for my abnormal paps.”

“The age- a lot of women under 50 need mammograms too”

“I didn't know what to expect”
CHAPTER V

DISCUSSION AND CONCLUSION

The objective of the Evaluation of the Breast and Cervical Cancer Client Navigator Program in Georgia was to obtain information about the program that could be used to increase screening rates in Georgia and to assess client satisfaction.

As mentioned in earlier chapters, the purpose of this study was to determine the answers to these follow questions.

1. What are the most common strengths identified by Client Navigators regarding the Client Navigation program to enhance breast and cervical cancer screening in Georgia?
2. What are the most common weaknesses identified by Client Navigators regarding the Client Navigation program to enhance breast and cervical cancer screening in Georgia?
3. What are the most common opportunities identified by Client Navigators regarding the Client Navigation program to enhance breast and cervical cancer screening in Georgia?

5.1 Common Strengths, Weaknesses, and Opportunities

Clients reported the highest satisfaction rates in response to question number 2 (The Client Navigator was responsive and understood my needs) and question number 3 (The Client Navigator was attentive to my needs and followed through). Clients reported the lowest amount
of satisfaction in response to question number 5 (I received reminders from the Client Navigator in regards to my appointments) and questions number 6 (The Client Navigator helped me to overcome barriers to care). Overall, clients reported very high levels of program satisfaction.

The most common program strengths identified by Client Navigators were the personal characteristics of Client Navigators, internal characteristics of the program itself, resources provided by the program, and program partnerships with outside sources. Respondents identified program strengths of the Navigators as dedication, persistence, determination, responsibility, respectfulness, and timeliness. They also identified the internal characteristics of the program as beneficial and effective.

The main program weaknesses identified by participants included lack of funding, missing client contact information or patients lost to follow-up, and a lack of program awareness in the community. Lack of funding was identified as a program weakness in the four dimensions of program, effectiveness, resources, and growth.

Opportunities acknowledged by Client Navigators included education of Client Navigators, outreach, and partnering with outside sources. Participants described opportunities for outreach as marketing, networking, increased recruitment of navigators, as well as program growth.

The program threat most commonly identified was overwhelmingly the lack of funding. Other threats, such as age limit for screening, lack of marketing, and losing potential partners were also identified, but on a much smaller scale. Lack of funding was identified as a threat in all six dimensions of SWOT analysis.

5.2 Study Strengths and Limitations
A main strength of the study was that participants came from both urban and rural areas, which provides a better representation of the state of Georgia as a whole. Another strength survey questions were developed with assistance of client navigators, nurses, program manager, the director of the BCCCNP, a representative from the Georgia Department of Health. This ensured that the information provided by the evaluation would be relevant to the stakeholders.

One limiting factor to the evaluation was the number of participants for both navigators and clients. The total sample size for the navigators was 14, and the client sample size was 54. Due to the size of the respective samples, the analyses were constrained to descriptive statistics. Another limiting factor was the inability to contact clients due to inaccurate contact information.

5.3 Implications of Findings

The findings from client satisfaction surveys are encouraging. Clients displayed high levels of satisfaction among every dimension measured in the survey. The BCCCNP would do well to continue with the high quality of Client Navigators that are currently servicing their client base. Program weaknesses and opportunities provide venues for growth. Lack of funding was a predominant theme identified in both dimensions.

5.4 Future Areas of Research

In order to better eliminate disparities in breast and cervical cancer deaths, researchers should examine geographic distribution of Hispanic population as well as compare rural and urban morbidity and mortality statistics. In order to improve the BCCCNP program, researchers could examine long term health outcomes for patients who presented with abnormal screenings (would better indicate program effectiveness) and compare against women not receiving
BCCCNP support, as well as compare BCCCNP partner distribution to countywide cancer distribution.

5.5 Conclusion

The Breast and Cervical Cancer Client Navigator Program has proven to be an effective tool in reaching out to medically underserved women with potentially life-saving measures. The SWOT open-ended analysis provided insight into key elements of program success. Personal characteristics of Client Navigators, internal characteristics of the program itself, resources provided by the program, and program partnerships with outside sources were considered the greatest program strengths. Results from the SWOT analysis also illustrate the need for increased funding and increased program awareness.

The SWOT analysis has proved to be an invaluable tool that can benefit not only BCCCNP Program clients, navigators, and managers, but also others who are working on reducing breast and cervical cancer related morbidity and mortality. The lessons learned from the evaluation can be helpful to future program planners by setting priorities and objectives, giving examples as to specific methodology, and regularly using evaluation tools such as SWOT. The real value now lies in what decisions will be made from this information. It is hoped that BCCCNP navigators, managers, and stakeholders, as well as others involved in women’s’ reproductive health efforts, would develop a work plan for improvement. The ability and willingness to implement change is needed to continue preventing needless breast and cervical cancer related illness and death.

References


### Table 6.1 Outcomes of Published Patient Navigation Efficacy Studies

<table>
<thead>
<tr>
<th>Cancer</th>
<th>Design</th>
<th>Participant/Locations</th>
<th>Outcome/Measures</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast</td>
<td>Prospective RCT (face-to-face navigator intervention, telephone navigator intervention, control)</td>
<td>157 Native American women, Denver, Colorado</td>
<td>Adherence to mammography screening guidelines</td>
<td>Participants in either intervention group more likely to receive mammography according to guidelines after intervention than before intervention. Telephone intervention more effective than face-to-face intervention.</td>
</tr>
<tr>
<td>Breast</td>
<td>Prospective comparison of cervical cancer screening intervention plus patient navigation or control group that received 2 hour general health education session</td>
<td>Korean America women (50 in control group; 52 in intervention group)</td>
<td>Difference between intervention and control in receipt of Pap screening at follow up</td>
<td>39 of 52 intervention participants requested navigation services. Intervention participants more likely to receive Pap smear than control participants (p&lt;.001).</td>
</tr>
<tr>
<td>Colorectal</td>
<td>Prospective RCT (patient navigation or control)</td>
<td>40 participants in control group; 38 participants received patient navigation, East Harlem, New York</td>
<td>Colorectal cancer screening adherence</td>
<td>1. At 3-month chart review more patient navigation participants scheduled endoscopy appointments (p=.005) 2. At 6-month chart review, more patient Navigation patients had completed an endoscopy (p&lt;.02)</td>
</tr>
<tr>
<td>Colorectal</td>
<td>Retrospective comparison of patients who received care before and after patient navigator plus gastrointestinal suite improvement intervention.</td>
<td>1,767 patients who received diagnostic or screening colonoscopies either before or after intervention; Patients who completed preadmission testing, Bronx, New York</td>
<td>1. Rate of colonoscopies 2. Rate of broken appointments</td>
<td>1. Increase in number of people who received screening colonoscopies. 2.Broken appointment rate declined from 67.2% to 5.3%.</td>
</tr>
<tr>
<td>Study Authors</td>
<td>Condition</td>
<td>Study Design</td>
<td>Participants</td>
<td>Key Findings</td>
</tr>
<tr>
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</tbody>
</table>
| Rahm et al., 2007  | BRCA ½ genetic counseling                                                | Prospective RCT                    | 125 participants Referred for genetic counseling, Kaiser Permanente, Colorado | 1. Genetic counseling participation within 9 months of referral  
2. Time from referral to completed genetic counseling appointment  
1. No significant difference in appointment Attendance between navigation and usual care. Not enough power to detect differences.  
2. Patient navigator intervention participants had appointments scheduled significantly sooner than usual care participants. |
<p>| Tingen et al., 1998| Prostate cancer                                                           | Prospective RCT                    | 1522 participants in a prostate cancer screening program, southeastern state  | Participation in free prostate cancer screening. In multiple logistic regression, participants who received either client navigation intervention or combined intervention more likely to participate in screening program than prostate cancer education participants. |
| Weinrich et al., 1998| Prostate cancer                                                           | Prospective RCT                    | 1717 participants in a prostate cancer screening program, southeastern state  | Participation in free prostate cancer screening. African-American and total study participants Who received either client navigation or peer education intervention more likely to participate in screening program than traditional intervention participants. Participants who received education alone were as likely to participate in screening as combined peer education and client navigation intervention participants. |</p>
<table>
<thead>
<tr>
<th>Battaglia et al., 2007</th>
<th>Breast</th>
<th>Retrospective comparison of women seen before and after navigation intervention</th>
<th>1332 women with abnormal screening, Boston, Massachusetts</th>
<th>Timely follow up from referral to diagnostic resolution</th>
<th>Navigation participants more likely to have Timely follow-up than participants screened before intervention. Intervention effect remained after (1) controlling for race, age, insurance status, reason for referral and source of referral; and (2) using propensity score analysis to adjust for differences in pre and post intervention samples.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ell et al, 2002</td>
<td>Breast</td>
<td>Prospective, study enrollees compared to non-enrollees. Intervention included health education, navigation, and counseling</td>
<td>Women who received Abnormal mammograms. 605 participants were compared to 695 non enrollees, Los Angeles, California; and New York, New York.</td>
<td>1. Adherence to follow up care following abnormal mammogram. 2. Timeliness of diagnostic resolution. 3. Timeliness of initiation of cancer treatment.</td>
<td>1. Intervention participants more likely to adhere to follow up recommendations than non-enrollees. 2. Enrollees more likely to get to diagnostic resolution in a timely manner than non-enrollees. 3. Non statistically significant difference in timeliness of initiation of cancer treatment between enrollees and non-enrollees.</td>
</tr>
<tr>
<td>Ell et al, 2002</td>
<td>Breast</td>
<td>Prospective, study enrollees compared to non-enrollees. Intervention included health education, navigation, and counseling</td>
<td>Women with low grade and high grade squamous intraepithelial lesions prescribed follow up repeat screening. 196 women enrolled in study compared to 369 non-enrollees, Los Angeles, California</td>
<td>Adherence to follow up appointments.</td>
<td>Intervention participants had significantly better rates of adherence to at least one follow up appointment ($p=.0002$ and $p=.0001$).</td>
</tr>
</tbody>
</table>
| Ell et al., 2007 | Breast | Prospective RCT (patient navigation plus counseling or usual care) | Women who received Abnormal mammograms (96 in intervention group; 108 in control group), Los Angeles, California | 1. Adherence to diagnostic follow up through diagnostic resolution.  
2. Timely adherence from index screen to diagnostic resolution  
3. Timely entry rates for cancer patients. |
|-----------------|--------|---------------------------------------------------------------|-------------------------------------------------|---------------------------------|
| Ferrante et al., 2008 | Breast | Prospective RCT (usual care Or usual care plus patient Navigation) | Women with suspicious mammogram results (BIRADS 4 or 5), 50 participants assigned to usual care, 55 participants assigned to usual care plus patient navigation. Newark, New Jersey | 1. Mean diagnostic interval less in intervention group than usual care ($p=.001$)  
2. One month after diagnostic resolution, anxiety lower and satisfaction higher in intervention group when compared to usual care ($p<.001$). |
<table>
<thead>
<tr>
<th>Study</th>
<th>Type</th>
<th>Patients</th>
<th>Study Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freeman et al., 1995</td>
<td>Prospective</td>
<td>Patients with an abnormal screening test compared to patients who did not receive navigation</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>1. Patients with an abnormal screening test</td>
<td>For breast, cervical, prostate, or colorectal cancer (n=1136).</td>
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<td>2. Patients with cancer</td>
<td>(n=8), Harlem, New York.</td>
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<td>1. Whether patients obtained a biopsy following a suspicious/abnormal finding</td>
<td></td>
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<td></td>
<td></td>
<td>2. Amount of time to complete biopsy</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. Non significant finding that 85.7% of Navigated patients obtained a biopsy whereas 56.5% of Non navigated patients completed a biopsy.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>2. 71.4% of navigated patients completed biopsy in less than 4 weeks whereas 38.5% of non-navigated patients completed the biopsy in less than 4 weeks (p=.047)</td>
<td></td>
</tr>
<tr>
<td>Giese-Davis et al., 2006</td>
<td>Breast</td>
<td>Prospective, pre-post comparison of navigation participants</td>
<td>29 women recently diagnosed with breast cancer, Santa Cruz, California</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Change over time (baseline, three months, six months, nine months) in depression, trauma symptoms, desire for information on breast cancer, emotional and social quality of life, self-efficacy to cope with cancer, and doctor-patient relationship</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trauma symptoms and desire for breast cancer resource information decreased and emotional wellbeing and cancer self-efficacy increased.</td>
<td></td>
</tr>
<tr>
<td>Nash et al., 2006</td>
<td>Colorectal</td>
<td>Retrospective, comparison of patients who received care before and after patient navigator plus gastrointestinal suite improvement intervention.</td>
<td>1,767 patients who received diagnostic or screening colonoscopies either before or after intervention; Patients who completed pre-admission testing. Bronx, New York</td>
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<td></td>
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</table>
Appendix B. Survey Materials

Client Navigator Study Questionnaire

The Client Navigator Role specified several Objectives. Please indicate for each objective, using a scale of 1-5, to what extent you agree the objectives have been fulfilled.


1) Goal 1. Promote client recall and re-screening
1 2 3 4 5 NA

2) Goal 2. Promote client follow up when screening results are abnormal
1 2 3 4 5 NA

3) Goal 3. Participate in outreach activities
1 2 3 4 5 NA

4) Goal 4. Provide client and community education
1 2 3 4 5 NA

5) Goal 5. Eliminate barriers to care
1 2 3 4 5 NA

6) Goal 6. Facilitate client movement through the system
1 2 3 4 5 NA

7) Please choose of all barriers that you have helped a client overcome.
Lack of transportation
Lack of child care
Lack of information
Lack of financial resources
Language
Cultural beliefs or values
Other (please specify)
8) Please choose the barrier that you find to be most encountered by clients.

Lack of transportation
Lack of child care
Lack of information
Lack of financial resources
Language
Cultural beliefs or values
Other (please specify)

The next section of the survey asks you to consider the Client Navigator (CN) program according to 5 key focus areas: PEOPLE, PROGRAM, EFFECTIVENESS, RESOURCES, GROWTH.

**People**: team members, staff, key stakeholders, clients

**Program**: design, activities, operations, processes, scope of work, work plan

**Effectiveness**: data collection, analyses, dissemination, evidence-based practice

**Resources**: financial support, intellectual capacity

**Growth**: partnerships, awareness/knowledge, policy-level changes, sustainability

Briefly, the categories of SWOT are defined as:

**STRENGTHS**: what was done well, successes, strong areas of the project

**WEAKNESSES**: struggles, unmet goals/duties

**OPPORTUNITIES**: prospects for future development, possibilities for innovation

**THREATS**: external forces limiting project, factors that posed barriers to progress

![SWOT Diagram]

Please identify the strengths, weaknesses, opportunities, and threats involved with **PEOPLE** of the CN Program.

**PEOPLE**: team members, staff, key stakeholders, clients
10) What are STRENGTHS you identify with PEOPLE associated with the CN program?
11) What are WEAKNESSES you identify with PEOPLE associated with the CN Program?
12) What are OPPORTUNITIES you identify with PEOPLE associated with the CN Program?
13) What are THREATS you identify with PEOPLE associated with the CN Program?

Please identify Strengths, Weaknesses, Opportunities and Threats associated with the CN PROGRAM.

PROGRAM: design, activities, operations, processes, scope of work, work plan

14) What are STRENGTHS you identify with the CN PROGRAM?
15) What are WEAKNESSES you identify with the CN PROGRAM?
16) What are OPPORTUNITIES you identify with the CN PROGRAM?
17) What are THREATS you identify with the CN PROGRAM?

Please identify Strengths, Weaknesses, Opportunities and Threats associated with EFFECTIVENESS of the CN Program.

EFFECTIVENESS: data collection, analyses, dissemination, evidence-based practice

18) What are STRENGTHS you identify with the EFFECTIVENESS of the CN Program?
19) What are WEAKNESSES you identify with the EFFECTIVENESS of the CN Program?
20) What are OPPORTUNITIES you identify with the EFFECTIVENESS of the CN Program?
21) What are THREATS you identify with the EFFECTIVENESS of the CN Program?

Please identify Strengths, Weaknesses, Opportunities and Threats associated with RESOURCES of the CN Program.

RESOURCES: financial support, intellectual capacity

22) What are STRENGTHS you identify with RESOURCES of the CN Program?
23) What are WEAKNESSES you identify with RESOURCES of the CN Program?
24) What are OPPORTUNITIES you identify with RESOURCES of the CN Program?
25) What are THREATS you identify with RESOURCES of the CN Program?
Growth: partnerships, awareness/knowledge, policy-level changes, sustainability

Please identify the strengths, weaknesses, opportunities, and threats involved with Growth of the CN Program.

26) What are STRENGTHS you identify with Growth of the CN Program?
27) What are WEAKNESSES you identify with Growth of the CN Program?
28) What are OPPORTUNITIES you identify with Growth of the CN Program?
29) What are THREATS you identify with Growth of the CN Program?

30) Please indicate what you need to be a better Client Navigator. (i.e. training, pay increase, communication enhancement)

31) Please share what encourages you to continue being a Client Navigator.

32) My supervisor gives me continual feedback which allows me to improve as a Client Navigator.

Strongly Disagree  Disagree  Neither Disagree or Agree  Agree  Strongly Agree

The final section of the survey asks you to describe yourself.

33) Gender:  Male  Female
34) Race/Ethnicity:
   African American
   Caucasian
   Hispanic
   Asian
   Other (Please specify)

35) Age:
   20-29
   30-39
   40-49
   50-59
   60+

36) Please indicate the health district in which you serve as Client Navigator.

37) Please list the counties in which you serve as a Client Navigator

Thank You. Your input is important for tailoring the future Client Navigator Program
Client Questionnaire (English)

1) The role and services of the Client Navigator program was explained to me on my first visit.
   Strongly Disagree  Disagree  Neither Disagree or Agree  Agree  Strongly Agree

2) The Client Navigator was responsive and understood my needs.
   Strongly Disagree  Disagree  Neither Disagree or Agree  Agree  Strongly Agree

3) The Client Navigator was attentive to my needs and followed through.
   Strongly Disagree  Disagree  Neither Disagree or Agree  Agree  Strongly Agree

4) The Client Navigator educated me and prepared me for what to expect in my appointment/test.
   Strongly Disagree  Disagree  Neither Disagree or Agree  Agree  Strongly Agree

5) I received reminders from the Client Navigator in regards to my appointments.
   Strongly Disagree  Disagree  Neither Disagree or Agree  Agree  Strongly Agree

6) The Client Navigator helped me to overcome barriers to care.
   Strongly Disagree  Disagree  Neither Disagree or Agree  Agree  Strongly Agree

7) Please check of all barriers that the Client Navigator helped you overcome.
   Lack of transportation  Lack of child care  Lack of information  Lack of financial resources
   Language  Certain beliefs or values  Other (please specify)

8) Please check the way in which you first had contact with a Client Navigator.
   Health Fair/Event
   Church/Faith Based Setting
   Friend/Family Member
   Health Department
   Other (please specify)

9) Please check all the services that the Client Navigator helped you to obtain.
   Follow up Services
   Physician/Surgical Appointment
   Clinical Breast Exam
   Pap
   Mammogram
Other (please specify)

10) Please identify what you liked most about the Client Navigator Program.

11) Please identify what you liked least about the Client Navigator Program.

12) Would you recommend the Client Navigator to a friend or family member?  Yes  No

13) Please check the race/ethnicity that applies to you.
African American
Caucasian
Hispanic
Asian
Other (Please specify)

14) Please choose the age bracket that applies to you.
20-29
30-39
40-49
50-59
60-69
70-79
80+

15) Do any of the following apply to you?
Visually impaired
Hearing impaired
Disabled

16) Please indicate the county in which you live.

17) Please indicate the zip code in which you live.

Thank You. Your input is important for tailoring the future Client Navigator Program.