

BREAST CANCER SCREENING IN NATIVE AMERICAN WOMEN AT AN URBAN
MINNESOTA COMMUNITY CLINIC

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Breast Cancer Screening in Native American Women at an Urban Minnesota
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North Dakota State University's regulations and meets the accepted standards
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DOCTOR OF NURSING PRACTICE

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ABSTRACT

The Native American Community Clinic (NACC) in Minneapolis, MN, expressed a need for a breast cancer screening patient education brochure and a policy regarding breast cancer screening, due to the absence of these in their clinic. Native American women have some of the lowest breast cancer screening rates along with the poorest five-year survival rate for breast cancer. Early screening and detection of breast cancer is thought to be the key to survival. The reason for these low breast cancer screening rates among Native American female patients is multifactorial, but lack of knowledge and provider recommendation are two known barriers.

The purpose of this practice improvement project was to develop a culturally appropriate breast cancer screening patient education brochure with a policy that outlines use. The healthcare providers, medical director, and the patient advisory group at the NACC evaluated the brochure, and the medical director evaluated the policy. The *Plan, Do, Study, Act* method was utilized to facilitate the process and address the clinic goals.

The project first reviewed current guidelines and literature for breast cancer screening. After one set of guidelines was selected, the brochure was created. The healthcare providers, medical director, and patient advisory group members were then given a qualitative survey. The responses to the survey gave suggestions for revisions, which were made to the brochure. Revisions included things such as using different guidelines, including more information on mammography, and including photographs of Native American women.

The policy was then created. The policy included which guidelines to use when offering screening, whom to offer screening to, and guidance on how to properly document breast cancer screening and education after each visit. The medical director was then given a qualitative

survey, which inquired about necessary revisions. The medical director suggested only one minor revision (change in wording).

Following a total of four meetings and multiple revisions, the educational brochure and policy were approved by the NACC medical director. Future research should focus on expanding culturally appropriate patient education materials in clinical settings, such as the NACC.

Keywords: Native American, Breast Cancer Screening, Patient Education, Policy

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DEDICATION

To my husband and son, Somendra and Nixon York

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CHAPTER ONE. INTRODUCTION

Background and Significance

Early screening and detection of breast cancer was thought to be the key to survival. However, Native American women have some of the lowest screening rates, and the rates have been declining since 2005. On the other hand, screening rates have remained steady or increased among women from other ethnic groups (Ndikum-Moffor, Braiuca, Daley, Gajewski, &Engelman, 2013). The mortality rate from breast cancer could be reduced by 30 percent in Native Americans if recommendations for screening were followed (Roubidoux, 2012). These low screening rates likely contribute to higher mortality among Native American women (Ndikum-Moffor et al., 2013).

Native Americans ‘five-year life expectancy after the diagnosis of breast cancer is 63 percent. This is the poorest five-year relative survival of any ethnic and minority group in the United States (Burhansstipanov et al., 2010). The question is, “why”?Why are Native Americans facing health disparities, and more importantly, how can the screening, detection and treatment rates improve?

Native Americans face many health-related disparities, including lower rates of screening and higher rates of advanced disease presentation. The cause of disparity is multidimensional. Patient-related reasons for disparity may include lack of knowledge; provider; or hospital mistrust; lack of access; lack of transportation; fear of being diagnosed; and fear of feeling embarrassed during the mammogram (Ndikum-Moffor et al., 2013). Unfortunately, health disparities in the Native American population are as much of a problem today as they were years ago. The reason for these disparities is also not completely understood. Ethnicity-specific data explaining disparities are lacking, but it is known that early detection and treatment for cancer

are generally underutilized in minority populations (Pandhi, Guadagnolo, Kanekar, Petereit, & Smith 2010).

Cultural competency is an emerging topic that still has challenges, making this provider-related disparity difficult to improve. Reasons for disparity caused by providers may include lack of cultural competency and lack of recommending breast cancer screening to patients (Daley et al., 2011). According to Diallo and McGrath (2013) cultural competence is difficult to define and difficult to measure, and thus difficult to teach. Cultural competency is also difficult to apply due to the abstractness of the concept. More research and efforts need to be made to formulate a definition that will be more applicable in the real world (Diallo& McGrath, 2013). Even with the implementation of a number of programs and theories around cultural competency for almost two decades, the initial goal of fighting health disparities and inequities remains unmet(Diallo& McGrath, 2013). Knowledge deficits of Native American women regarding breast cancer have been documented by Filippi et al. (2013), who found that many women have a general understanding of breast cancer but lack knowledge about screening. Patients want breast cancer information and screening procedures explained in simple language (Filippi et al., 2013). Increasing access to, and use of, preventive health services is likely to aid in the reduction of the health disparities and incidence and mortality of breast cancer among Native Americans.

To improve early detection and screening rates for Native Americans, interventions should be culturally tailored, and factors such as access barriers, tribal-specific information, the role of family, and women's opinions about screening tests should be considered when planning breast cancer screening interventions with Native American communities (Ndikum-Moffor et al., 2013).

Unfortunately, the approach for health-related screenings, such as mammography, cannot be the same for every person or for every cultural group. Native Americans have a unique cultural background, and therefore the approach needs to be unique as well. Practice-based mammography interventions such as sending reminders or telephone counseling have not been effective with the Native American population because of migratory patterns and cultural factors (Ndikum-Moffor et al., 2013). Native American women tend to have an on-reservation, off-reservation migratory living pattern that contributes to the difficulty of reaching them to improve required screening. The approaches to getting Native American women to not only get mammograms but to return for future screening need to be culturally tailored.

Statement of the Problem

Increases in breast cancer screening have positively affected millions of women by increasing detection and decreasing mortality. Most racial groups, especially non-Hispanic Caucasians, have experienced earlier detection rates (Roen, Roubidoux, Joe, Russell, &Soliman, 2013). Unfortunately, Native American women have had the lowest mammography screening rates in the U.S. (Roen, Roubidoux, Joe, Russell, &Soliman, 2013).

Morbidity and mortality rates associated with breast cancer are disproportionately high among the Native American population (Daley et al., 2012). One major factor that was thought to contribute to these high morbidity and mortality rates is low screening rates, due to the lack of culturally appropriate education regarding mammography in the Native American population (Daley et al., 2012). Many Native American women lack knowledge about breast cancer screening (Engelman et al., 2011). Educating patients on the importance of mammography and general facts in a culturally appropriate way has the potential to improve patient outcomes by increasing screening and re-screening rates, reducing mortality associated with breast cancer, and

promoting a healthy patient-provider relationship. Filippi et al. (2013) found that women do want more information about breast cancer and screening procedures. They also found that women believed that there is a lack of education about the specifics of mammography. Patient education should be culturally tailored and at the appropriate literacy level (Daley et al., 2012).

Screening for breast cancer in the Native American population has fallen behind when it comes to making advances to increase breast cancer screening rates and identifying breast cancer earlier on, unlike in other cultural groups. Educating patients on breast cancer screening has the potential to improve patient outcomes, reduce mortality associated with breast cancer, and promote a healthy patient-provider relationship. Data showed that Native Americans are less likely than Caucasians and most other ethnic populations to have received a variety of preventive services including mammograms (Holm et al., 2010). Breast cancer education needs to be culturally tailored to reach as many of the people as possible within the Native American community, as with all other communities.

If the trend of breast cancer screening rates among Native Americans remains the same or worsens, the health status of these women is likely to stay the same instead of improving. Decreased rates manifest in increased medical costs, which has a negative impact on not only the patients themselves, but also on their families and communities. Therefore, addressing the phenomenon of low screening and re-screening rates as well as late detection of breast cancer among Native Americans should improve outcomes.

Project Objectives

The goals of this practice improvement project:

1. Create a culturally appropriate, evidence-based breast cancer screening educational brochure for Native American women at the Native American Community Clinic (NACC).

2. Develop a policy outlining the use of the educational brochure for the NACC.
3. Evaluate the appropriateness of the educational brochure and policy.

CHAPTER TWO. LITERATURE REVIEW AND FRAMEWORK

Literature Review

Reviewing the literature was an important component of this practice improvement project. There were multiple studies done in the past, which offered guidance and support to each of the main components of this project.

Breast Cancer Screening Among Native American Women

Historically, Native American women are diagnosed at a later stage and have a poorer five-year survival rate than non-Hispanic Whites. At diagnosis, Native Americans were more likely to have larger, higher-grade estrogen receptor/progesterone receptor negative tumors with more lymph nodes that are positive and a higher risk of mortality (Roubidoux, 2012).

Roubidoux (2012) stated, “It is believed that screening Native Americans starting at the recommended age of 40 years old and annually thereafter could reduce the breast cancer rates among this population by 30 percent” (p. 69). Initial mammography is important, but re-screening is of great importance too. Re-screening is associated with reduced mortality and earlier diagnosis. There are many predictors of mammography screening, provider recommendation and patient attitudes are two of these predictors, with provider recommendation being the highest. Increased awareness and screening among non-Hispanic Caucasians has successfully lowered the negative effects of breast cancer, including mortality.

Native American women lag behind on the American Cancer Society’s recommended schedules for mammography screening. Regardless of the payment form or insurance, screening is still poor, but having only Indian Health Service, insurance correlates with lower breast cancer screening. Research within the last two years observed that there were significant associations between perceived discrimination and not being current on clinical breast examination and

mammography (Gonzales et al., 2013). Unfortunately, perceived discrimination is not only associated with lower rates of breast cancer screening, but also healthcare disengagement. The association between perceived discrimination and cancer screening is compelling enough to suggest the need for the implementation of culturally responsive care practices (Gonzales et al., 2013). Culturally responsive care embraces cultural competency in providers by integrating patient-level health beliefs, expectations, and cultural practices. Culturally responsive care may be particularly important in systems with racial and other differences between patient and providers, and providers with limited experience interacting with patients from under-represented racial and ethnic groups (Gonzales et al., 2013).

Friederichs-Fitzwater, Navarro, and Taylor (2010) found in their research that Native American women have the lowest cancer-screening rate of any ethnic or racial group. Native American women in the U.S. are less likely than non-Hispanic white women to be diagnosed with localized breast cancer. More often, their breast cancer has metastasized at the time of diagnosis, and therefore Native American women have the lowest five-year survival rate when compared to other ethnic groups. The researchers also found that the biggest barrier to breast cancer screening with mammography was related to cultural beliefs, not access to care. The researchers, Friederichs-Fitzwater, Navarro, & Taylor(2010), found that a more holistic educational method designed by Native American women prompted individual intent and action to seek mammograms, as well as led to changing unhealthy eating and a sedentary lifestyle.

Pandhi, Guadagnolo, Knekar, Petereit, and Smith (2010) found that Native Americans in the northern plains had the lowest incidence of breast cancer screening. Interestingly, these researchers found that only 29 percent of their Native American sample reported that a doctor or nurse had ever recommended cancer screening. When a doctor or nurse recommended

screening, the women were nearly twelve times as likely to have the screening test. In addition, they found that women aged 61-80 who had physical exams yearly were significantly more likely to have a cancer screening. Pandhi et al. (2010) noted that cancer screening in general was markedly underused in Native American women. Future research directed towards creating methods to improve the rate of cancer screening in Native American women is needed.

McLafferty, Wang, Luo, and Butler (2011) looked into the rural and urban inequalities in late-stage breast cancer, with an emphasis on risk and access. They found no evidence of rural disadvantage when it comes to late-stage breast cancer diagnosis. These same researchers suggested that rural and urban inequalities in late-stage breast cancer stem primarily from differences in demographic characteristics, therefore implying there is not a disadvantage or advantage for those living in a rural area (McLafferty, Wang, Luo, and Butler, 2011).

Native American Health Beliefs

Traditional Native American healing is as diverse as the more than 500 indigenous tribes of North America that practice it, yet several common themes can be identified (Carlock, 2006). Healing is one of the areas in which Native Americans differ so much from Western societies. The basis of healing is the merging of mind, body, and spirit. Healing is more akin to “recovering one’s wholeness” or to reestablishing harmony with nature (Rybak & Decker-Fitts, 2009). Wellness from a Native American standpoint is the attainment or maintaining of a balance of mental, spiritual, and physical aspects of living.

Native American healing practices are multidimensional and include ceremonies, smudging, powwow, prayers, songs, sweats, visions, and herbal medicine. These healing practices are considered sacred and private to Native culture and therefore are not recorded, and likely never will be. In fact, many Native people believe that making this information public

would contribute to cultural exploitation. This is thought to be one reason why information from reliable sources is difficult to find.

Providing culturally competent health care is one promising way to raise the health status of Native Americans (Carlock, 2006). Culturally competent care is care that is tailored to the specific cultures and languages of the patients receiving the care. One way to provide culturally competent care is to utilize linguistically and culturally appropriate health education materials (Carlock, 2006).

Health Literacy

When designing a health-related educational tool for patients, the level of health literacy of the target population is an important component to consider. Health literacy is the ability to obtain, process, and understand basic health information and services in order to make appropriate health decisions, and it is essential to promoting healthy people and communities (U.S. Department of Health & Human Services, 2008). A practical example of health literacy is the ability to read and understand an educational brochure, learn what screening should be done and when, and seek medical care appropriate to the suggestion.

Health literacy is a major problem within the U.S. The Institute of Medicine reported that 90 million American adults lack basic health literacy (IOM, 2012). Subsequent reports and publications by the American Medical Association, the National Institute of Health, and The Joint Commission on Accreditation of Hospitals substantiate the extent and magnitude of the health literacy problem (Galvin & Laccarino, 2012). Low health literacy rates that are due to lack of knowledge about the human body, the course of a disease, or how lifestyle changes can affect health outcomes have been linked to poor disease management, increased hospitalizations, and poor adherence to medication regimens (Eadie, 2014).

Health literacy rates vary from person to person and place to place. The elderly, racial, and ethnic minorities, individuals with less than a high school diploma or a GED certificate, individuals of lower socioeconomic status, individuals with English as a second language, and those with compromised health are at highest risk for low health literacy (Galvin & Laccarino, 2012).

Health literacy may not be related to years of education or general reading ability (National Network of Libraries of Medicine, 2013). However, health literacy is typically categorized by level of education. The common categories are below basic, basic, intermediate, and proficient health literacy. Individuals with less than a high school education typically fall into the below basic category. Those individuals with a high school diploma and/or vocational, trade, or business education are generally categorized as basic health literacy. An individual with an associate's degree or college graduates tend to fall in the intermediate category. Lastly, individuals with a graduate-level degree tend to have achieved the highest level of health literacy, which is proficient (U.S. Department of Health & Human Services, 2008).

Minnesota is one of three states where six percent of people lack basic prose literacy skills, which is much lower than California, Florida, and New York but similar to surrounding states such as North Dakota, South Dakota, and Wisconsin (Maas, 2010). The NACC, the collaborating clinic, is located in Hennepin County, in which five percent of people lack basic prose literacy skills, slightly below the state average. Unfortunately, Minnesota lacks research on health literacy statistics.

National Center for Education Statistics (2013) found that 26 percent of twelfth grade Native Americans are at or above the proficient level for reading, which is more than 20 percent lower than Asians and Caucasian Americans. Native American students have a low graduation

rate, 82 percent, which is over ten percent lower than Caucasian students (National Indian Education Association, 2015).

Unfortunately, Native Americans are still facing lower literacy rates. There is very little research on health literacy among the Native American population. However, Wachacha and Lamer (2012) at Indian Health Services, found that most of their Native American patients read at between sixth– and eighth-grade levels. Simplifying patient education material by writing at a sixth-grade level or lower is thought to increase comprehension (Safeer & Keenan, 2005).

Rural and urban areas historically have differed in their health literacy rates. There are thoughts that rural areas have lower health literacy rates compared to urban populations (Zahnd, Scaife, and Francis 2009). Traditionally, Native American tribes were located in rural areas, but over time, this has changed, and now many tribal members live in urban locations, such as Minneapolis. Zahnd, Scaife, and Francis (2009) found in their study that there was no statistically significant data representing a difference between urban and rural populations when it comes to health literacy rates.

Low health literacy is thought to contribute directly to lower utilization of preventive services and lower participation in health promotion and disease prevention activities, often resulting in negative health outcomes (Schapira et al., 2011). According to Indian Health Service's (IHS) *White Paper on Health Literacy* (2009), patient education materials are often written three to four grade levels above the reading level of most Native American patients. Therefore, IHS suggests that in order to improve minority health, medical professionals must provide patients with written materials that are culturally relevant, and are at or below the health literacy level of the intended audience.

Health care providers in primary care settings, such as the NACC, face the great challenge of educating patients on a variety of prevention services, including breast cancer screening. This is a huge challenge due to the amount of information patients retain while in the office. Most patients forget approximately 80 percent of what their healthcare provider tells them immediately after they leave the office, and approximately 50 percent of what is remembered is incorrect information (Heinrich, 2010). This is predominantly secondary to the level of health literacy that the Native American patients attain.

Framework

The Plan-Do-Study-Act (PDSA) cycle is a part of the Institute for Healthcare Improvement Model, a simple yet powerful tool for accelerating quality improvement (AHRQ, 2013). Dr. W. Edwards Deming, the creator of the PDSA cycle, included four key steps (Plan-Do-Study-Act) for carrying out change. The steps make up a cycle, and just as a circle has no end, the PDSA cycle should be repeated again and again for continuous improvement (ASQ, n.d.). The PDSA cycle is shorthand for testing a change by planning it, trying it, observing the results, and acting on what is learned (AHRQ, 2013). (See Figure 1.)

The PDSA Cycle

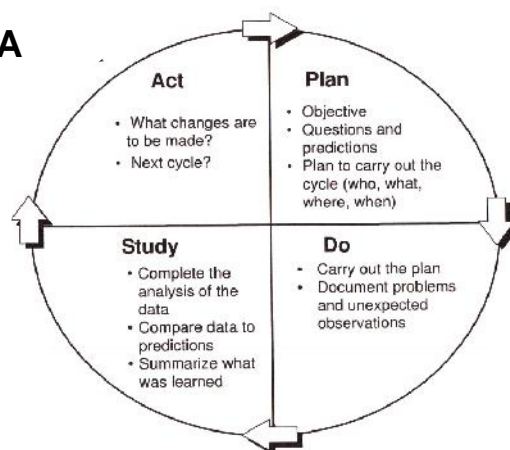


Figure 1. PDSA model (AAP, n.d.). Reprinted with permission from Ms. Amanda Cozza, editorial specialist of the American Academy of Pediatrics (Appendix A). The image above illustrates the PDSA cycle and the components within.

The American Society for Quality (ASQ, n.d.) recommends using PDSA in the following situations:

- When starting a new improvement project.
- As a model for continuous improvement.
- When developing a new or improved design process, product or service.
- When defining a repetitive work process.
- When planning data collection/analysis to verify and prioritize problems or root causes.
- When implementing any change.

There are three fundamental questions to be addressed for practice improvement projects (Institute for Healthcare Improvement, 2014). Goal achievement may entail many cycles of PDSA. The questions are as follows:

- What are we trying to accomplish?
- How will we know that a change is an improvement?
- What changes can we make that will result in improvement?

PDSA Steps

The four steps of the PDSA cycle are described in more detail below. The PDSA cycle is illustrated as a circle, which means that the steps may be repeated many times within a project until a desired outcome is achieved.

Step 1.*Plan*: Recognize an opportunity and plan the test or observation, including a plan for collecting data. Planning should include what the change is; a prediction of the results; specific action steps; who is responsible for what, when, where, and how; and what will be measured (American Academy of Pediatrics, n.d.).

Step 2.*Do*: Test the change by carrying out a small-scale study for a short period of time or with a few patients. Collect data and begin analysis.

Step 3.*Study*: Complete data analysis to see if the planned change was made and if it resulted in an improvement. Decipher and summarize what was learned.

Step 4.*Act*: Decide what should be done differently based on the results. If the results were successful, incorporate what was learned from the test into wider changes (ASQ, n.d.). If the results were unsuccessful, decide what to do differently. Lastly, plan for the next cycle.

CHAPTER THREE. ORGANIZATION AND STRATEGIC PLAN

The objective of this project was to develop an evidence-based and culturally appropriate educational brochure and a policy for the NACC. Stakeholders within the NACC identified that there is a need for a patient education brochure on breast cancer screening and a policy for the providers to follow as a guide. Discussions with stakeholders led the author to start creating a culturally appropriate brochure directed toward informing and educating Native American women about the importance of breast cancer screening. This project was developed because key people in the NACC felt that the low rates of breast cancer screening were problematic and they wanted a project directed towards improving breast cancer screening. Expert opinion and structured discussion to gain qualitative knowledge to evaluate the components was used in the project.

Stakeholders

The stakeholders identified in the study included the Native American Community Clinic adult healthcare providers and medical director, the performance improvement manager, and the patient advisory group, which was made up of a registered nurse, a dietitian, a Native American community member, and a non-Native American community member. The clinic employs six healthcare providers, five of which are adult healthcare providers. There was a 100 percent participation rate amongst the healthcare providers in this project. There are three nurse practitioners and one physician. A letter of consent was given to participants, inviting them to participate in the study.

Operational Definitions

Self-breast awareness

Self-breast awareness is women understanding normal appearance and feel of their breasts, but without a specific interval or systematic examination technique. The goal of self-breast awareness is for women to be alerted to any changes, no matter the amount, in their breasts, and report the changes to their provider.

Clinical breast examination

A clinical breast examination is a breast examination performed by a health care provider at a routine clinic visit.

Mammography

Mammography is an x-ray technique used to study the breasts (ACOG, 2011). Mammograms are used to screen for breast cancer in women.

Setting

The setting for this project was the Native American Community Clinic in Minneapolis, Minnesota. This clinic is located in a suburban community within the metropolitan center of Minnesota. The clinic's mission is to promote health and wellness of body, mind, and spirit in Native American families; decrease health disparities for Native Americans in the metropolitan area; and provide quality care regardless of ability to pay. The clinic uses a blend of western medicine and traditional Native American medicine. The traditional Native American medicine services that they use are dark room ceremonies for cancer, smudging, spiritual healers, and elders.

The majority (60-70 percent) of the Native Americans that utilize the NACC come from the Leech Lake, White Earth, and Red Lake tribes. The NACC has over 17,000 patient visits per

year, and 85 percent of NACC medical patients are Native American. This clinic has roughly 2,000 female patients over the age of 40. The majority of the patients seen at NACC have medical assistance (41 percent) and the second most common insurance status is uninsured (35 percent) (Native American Community Clinic, n.d.).

Evaluation Methods

A separate brief qualitative questionnaire was designed to evaluate the adult healthcare providers', the medical director's, and the patient advisory group's acceptance of the breast cancer screening patient education brochure (Appendixes B, C, and D). A brief qualitative questionnaire was designed to evaluate the medical director's acceptance of the policy on breast cancer screening (Appendix E). The stakeholders voiced acceptance of the brochure, and the policy was used to determine the success of the project.

Procedure

The performance improvement manager at the NACC, Shannon Fahey, granted permission to conduct this project within the clinic. The participants were informed that they were selected to partake in a research study because they were healthcare providers, the medical director, or patient advisory group members at the NACC. Upon initiation of the study, the participants were approached and their consent to participate in the study was attained by the author.

After consent was attained from each participant, they were then given a copy of the educational brochure to review. Once each participant had an opportunity to review the educational brochure, a brief structured discussion was held. During the structured discussion, qualitative survey questions were asked to each of the participants. There were two meetings held with the healthcare providers and medical director and one meeting held with the patient

advisory group members. After each of the meetings, the content of the educational brochure was revised based on the results of the qualitative survey.

Protection of Human Subjects

The development of an educational brochure and policy for breast cancer screening at the NACC posed no or minimal risk to the participants. Though it is not possible to identify all potential risks, lack of confidentiality due to the small sample of participants and the structure of the open conversations to collect data is one identified risk. This information was included in the consent form that each participant received prior to the initiation of the project. All participants received contact information for any questions or concerns regarding the study. The North Dakota State University Institutional Review Board (Appendix F) granted approval for the study on September 17, 2014.

CHAPTER FOUR. APPLICATION AND RESULTS

The Plan, Do, Study, Act model was used as a framework to plan, carry out the plan, observe the results, and act on what was learned in this study. This model is to be used in cycles and can be repeated in order to achieve continuous improvement in the project. The educational brochure portion of this practice improvement project used three cycles (1, 2, and 3) of the PDSA model in order to achieve a satisfactory outcome. The policy portion of this project took only one cycle to achieve satisfactory results.

PDSA

Plan 1.1: Educational Brochure

Shannon Fahey, the NACC's performance improvement manager, was contacted and asked if the clinic had a need for a practice improvement project to improve health outcomes for Native Americans within the clinic. Shannon identified a need for an educational brochure on breast cancer screening due to the low rates of breast cancer screening within the clinic. Other participants in the study were then consulted to see if they agreed with this. The consensus of the group was that there was a need for more educational tools such as a brochure that could be placed in examination rooms and the lobby that would encourage Native American patients to be screened for breast cancer. The project's participants believed that many of the NACC's patients are under-informed about the importance of breast cancer screening. Another reason they thought that the implementation of patient education into the NACC would be important was because at the time of the project initiation there were no educational materials relating to breast cancer screening.

After discussions with the project participants, it was anticipated that by having a culturally appropriate educational brochure regarding breast cancer screening, the patients'

knowledge about breast cancer screening would improve, patient's educated decision-making on whether or not to pursue screening would improve, and breast cancer screening rates within the NACC would increase. The participants also believed that by adding patient educational materials, breast cancer screening would improve just as the rates of smoking cessation did in the past with the addition of patient education materials.

Once the decision was made to develop an educational brochure, meetings were scheduled with the medical director, healthcare providers, and the patient advisory group. The first meeting was held with the healthcare providers and the medical director on November 11, 2014. After the healthcare providers and the medical director were given a brief description of the practice improvement project and the objectives, each member was given a consent to participate form. All of the members present chose to participate in the project. The healthcare providers and the medical director were then given a copy of educational brochure #1, the original brochure (Appendix G). After they had a chance to review the brochure, questions were asked to the participants by the author. After this meeting, the suggested revisions were made to the educational brochure.

The next meeting was scheduled with the patient advisory group for December 8, 2014. Arrangements were made for the author to attend and participate in one of their regular quarterly meetings. The patient advisory group consisted of a Native American community member, a dietitian, a registered nurse, and a non-Native American community member.

Do 1.2: Educational Brochure

A literature review and a breast cancer screening guideline search provided information for the original educational brochure. The American Congress of Obstetricians and

Gynecologists, the American Cancer Society, and the United States Preventive Task Force were the chosen sources for information.

The original educational brochure included information that was mainly gathered from the American Cancer Society's resources. The brochure was a tri-fold brochure that included information regarding breast self-examination, mammograms, and clinical breast examinations. The brochure title, the clinic name and contact information, information on how to perform a self-examination of the breast, mammography facts, a clinical breast examination description, a short summary on when to obtain screening, and the NACC logo were all included in the brochure. The American Cancer Society (2014) screening recommendations included information as follows:

- Breast self-examinations should begin at age 20 and performed monthly thereafter.
- Clinical breast examinations should begin at age 20 and should be performed every one to three.
- Mammograms should begin at age 40 and should be performed yearly.
- Family history may suggest the need for more frequent mammograms.

The educational brochure #1 can be viewed in Appendix G.

Study 1.3: Educational Brochure

The educational brochure on breast cancer screening that was created for this study was used in a small, focused opinion gathering that took place at the NACC and included the adult healthcare providers and the medical director. The project's objective was to create a culturally appropriate, evidence-based breast cancer screening educational brochure specifically for Native American women who receive care at the Native American Community Clinic. Evaluation of the cultural appropriateness of the brochure was another objective of the project. The project

took place in the Native American Community Clinic located in downtown Minneapolis. Each provider, the medical director, and each member of the patient advisory group received a consent form and a verbal introduction of the practice improvement project highlighting the objectives during the meeting I arranged. Each participant willingly agreed to participate. The providers, medical director, and patient advisory group members were informed that the project included a brief survey that would take 10-15 minutes to complete. Three surveys were developed for this project: survey #1 for the healthcare providers, survey #2 for the medical director, and survey #3 for the patient advisory group members (Appendixes B, C, and D). Surveys #1 and #2, for the healthcare providers and medical director, were identical and included six questions. The questions were mainly yes/no followed by why/why not, giving the participant the opportunity to elaborate on answers. Survey #3, for the patient advisory group members, included three questions that were also mainly yes/no followed by why/why not.

The questions on the healthcare provider and the medical director's survey asked if they routinely offer breast cancer screening and, if so, whether at annual physicals, episodic visits, or both. The survey also asked about their thoughts on whether this brochure will be useful for patients and themselves; what changes to the brochure they might like to see; their willingness to offer the brochure to patients; and their opinion on the cultural appropriateness of the brochure (Appendixes B and C).

The healthcare providers and the medical director preferred that the American Congress of Obstetricians and Gynecologists (ACOG) guidelines for breast cancer screening be used in the brochure, rather than the American Cancer Society guidelines. All of the providers and the medical director offer breast cancer screening at annual physicals but not typically at episodic visits. The providers and medical director agreed that the brochure would be a useful

educational resource for their female patients. Additionally, they all felt the brochure would be beneficial in their practice because they would have something to show their patients and the patients could take it home to review after the visit. The medical director wanted the brochure to include more information on mammograms and less information on breast self-examinations, because mammograms detect breast cancers earlier and thus save more lives than breast self-exams; the healthcare providers agreed. All participants at this meeting indicated that they were likely to offer the brochure to their patients. In addition, they suggested that pictures of Native American women would make the brochure more appealing. However, none of the participants felt that the brochure was culturally inappropriate. The medical director also wanted information about family history to be included in the brochure; the healthcare providers agreed. Lastly, the providers and medical director suggested that information regarding the mammogram van be included in the brochure. The mammogram van is the main service through which Native American women from the NACC get screening, mainly because of convenience. This van comes to the NACC to provide free mammograms four times per year. The NACC strives to make visits to the mammogram van culturally appropriate by having sage and sweet grass available and offering to smudge women if they are anxious.

Act 1.4: Educational Brochure

The providers' and medical director's suggestions were considered in the revisions to the brochure. All suggestions and opinions were analyzed and then used to make revisions to the brochure. The ACOG guidelines for breast cancer screening were used instead of the ACS's guidelines, more information regarding mammography and less information regarding breast self-examinations was included, and a few other minor changes were made. After these

revisions were made, the brochure then was named educational brochure #2 (Appendix H), which was the brochure brought to the next meeting.

The first meeting was enlightening in that suggestions were made by the participants about what changes they would like to see in the educational brochure. The information obtained from the participants using the survey questions offered adequate detail on what should be done. The survey data also provided information regarding the usefulness of the educational brochure. The next meeting was with the patient advisory group members.

Plan 2.1: Educational Brochure

The second meeting was held with the patient advisory group members on December 8, 2014. After the patient advisory group members were given a brief description of the study, each member was given a consent to participate form. Next, the patient advisory group members were given a copy of educational brochure #2 (Appendix H). After they had a chance to review the brochure, the participants were asked for their input. After the meeting, the information that was gathered was carefully analyzed to ensure that it was not only valid and truthful but evidence based as well. The information gathered was also compared to current guidelines and research, if available. The information was then synthesized and used to revise the brochure. The next meeting was held with the healthcare providers and the medical director on December 9, 2014.

Do 2.2: Educational Brochure

The suggestions of the providers and the medical director were used; the ACS guidelines were removed, and the ACOG guidelines for breast cancer screening were added to brochure #2. More information about mammograms was added to this brochure, and most of the information regarding breast self-examination was excluded. This decision was made partially based on the opinion of the medical director and healthcare providers as well as what the ACOG guidelines

suggested. The information about mammograms included what mammograms are, when to get them, how long they take, and why women should get one. Breast self-examination was changed to breast self-awareness in the brochure. The ACOG guidelines no longer endorse breast self-examination, but they teach the concept of breast self-awareness. The difference between the ACS guidelines and the ACOG guidelines are as follows: the ACS suggested performing breast self-examinations monthly starting at age 20, whereas the ACOG guidelines suggested teaching breast awareness, which teaches women to understand the normal appearance and feel of their breasts, but without a specific interval or systematic examination technique.

The next change that occurred during this cycle was the inclusion of photographs of Native American women. The NACC had these photographs and shared them, along with consent from the people in them. Photographs were included mainly to catch the eye of the Native American woman. Another change that occurred during this cycle was the addition of information regarding the mammogram van. Brochure #2 can be viewed in Appendix H.

Study 2.3: Educational Brochure

The questions on the patient advisory group survey asked if they thought the brochure would be useful to Native American patients(why or why not), if they had any recommendations for change, and if they thought the brochure was culturally appropriate(why or why not) (Appendix D).

The patient advisory group liked brochure #2 overall and had only minor revision suggestions. They recommended that a “catchy” phrase be added to the front of the brochure. They suggested the phrase be something like “We're ready when you're ready.” They also suggested that an illustration of some kind be added to the front of the brochure. They thought that the front was too plain and not eye-catching. Next, they suggested using the term “doctor”

or “nurse practitioner” instead of “healthcare provider.” They thought that the term “healthcare provider” could be confusing to patients. Lastly, they suggested adding a very short patient story on breast cancer survival. Storytelling is an important part of Native American culture, and that Native American women would relate to it, if it were included. The group unanimously agreed that the brochure would be useful to Native American patients in the NACC. All the members thought that brochure #2 was culturally appropriate. They all also liked the section on breast self-awareness and the “things to report to your healthcare provider.” They thought that giving examples was a good thing to include in the brochure.

Act 2.4: Educational Brochure

The results of the survey collected from the patient advisory group members were analyzed and synthesized to make necessary revisions to educational brochure #2. A short patient story about breast cancer survival was sought out, but unfortunately, the clinic did not have one. Due to this project’s IRB limitation and a time constraint, seeking a story directly from a patient was not possible. The participants did not have suggestions on how to obtain a patient story any other way. The suggestion regarding the front of the brochure was considered, and the patient advisory group's advice was taken. A photograph of the clinic and a phrase were added to the front of the brochure. A similar phrase to what was suggested was added. The phrase was changed slightly to “When you are ready, we are here,” which accommodated the brochure being written at a -grade level. The previous saying was written at a 7.6-grade level. These two suggestions were added to add visual appeal to the brochure. After these revisions were made, the brochure then was named educational brochure #3 (Appendix I).

The second meeting was beneficial for many reasons. The patient advisory group supported the section on breast self-awareness and symptoms to report if noticed. They also

supported having the photographs in the brochure; they felt that the photos made the brochure more personal and attention grabbing. The third and final meeting was with the healthcare providers and the medical director.

Plan 3.1: Educational Brochure

The third meeting was held with the healthcare providers and the medical director on December 9, 2014. At the meeting, the healthcare providers and the medical director were given a copy of educational brochure #3. After reviewing the brochure, the participants were asked for their input, utilizing the same set of questions previously used. The data collected during this meeting was sparse, as many participants did not have anything to add or change. The data that was collected was analyzed. The medical director felt as though no additional meetings would be needed, and all other participants agreed. The final educational brochure was then sent to a graphic designer to achieve a more professional look.

Do 3.2: Educational Brochure

The information included in brochure #3 had only minor differences compared to brochure #2. The front page of the brochure included a photograph of the clinic. The phrase “when you are ready, we are here” as suggested by the patient advisory group, was added, which the healthcare provider and medical director liked. This phrase was chosen mainly because it fit the desired reading level and was close to what was suggested by the patient advisory group. The content of the screening recommendations in the brochure remained the same. The suggestion to change “healthcare provider” to “doctor” or “nurse practitioner” was omitted because at the NACC, they have both nurse practitioners and doctors providing care, therefore changing it would not be accurate for this clinic. Brochure #3 can be viewed in Appendix I.

Study 3.3: Educational Brochure

The healthcare providers' and medical director's survey in this cycle was identical to the survey utilized in the previous meeting with the healthcare providers and the medical director (Appendixes B and C). The healthcare providers and the medical director thought that brochure #3 was close to the final product. The medical director suggested that the font be changed. They also supported the look of the front of the brochure and all the content within. Their answers to the first three and second-to-last survey questions were unchanged from the first meeting. All of the providers offer breast cancer screening at annual physicals but not typically at episodic visits. The providers agreed that the brochure would be useful for their Native American female patients. They also stated that the brochure would be beneficial in their practice. All participants stated that they would offer this brochure to their patients. Lastly, the healthcare providers and the medical director stated that the brochure was culturally appropriate with the added photographs. The medical director stated that if the font were changed, no other meetings would be needed in the future.

Act 3.4: Educational Brochure

Since there was only one minor revision request (font change), there was only minor analysis needed. The graphic designer used for the formatting of the brochure was consulted with regarding an appropriate font for a patient education brochure. The font was then changed to Aleo-Light, suggested by the graphic designer. After this revision was made, the brochure was then named brochure #4 (Appendix J), the final brochure before being sent off to a graphic designer. The final educational brochure, which has been professionally formatted, can be viewed in Appendix K.

The third and final meeting was gratifying because the healthcare providers and the medical director were happy with the product. The brochure was approved by the healthcare providers and the medical director.

Plan: Policy

Along with the educational brochure, Shannon Fahey suggested that a clinical policy be developed to outline the use of the educational brochure. At the time of the project implementation, the NACC did not have any policies written or in use. After this need was identified, the medical director was asked if she thought this would be helpful, and she agreed that it would be good for the clinic to have a policy. Shannon and the medical director agreed that the policy would help the NACC establish a guideline for best practices in regards to breast cancer screening and education within the clinic. They also thought that the policy would offer the healthcare providers guidance.

The medical director was selected to be the person to review and approve the policy and ensure that it would fit within the clinic and meet their goals. The medical director was also asked questions regarding the policy to ensure that it would be something that would fit in their clinic and ensure that it would be usable by the healthcare providers within the NACC.

After the decision had been made that a clinical policy to outline the use of the educational brochure would be created, a meeting was scheduled on December 9, 2014, with the medical director, and the creation of the policy began.

Do: Policy

The policy for breast cancer screening was developed. The policy was made to offer guidance about when to offer breast cancer screening to patients, what guidelines to use, and where and what should be documented. Another facility's policy was used as guidance for the

formatting of the policy. Generally, healthcare policies include a purpose, policy statement, procedures, scope, and policy owner and contact information (UC Davis, n.d.). The policy created in this project included all of these components. A review of the literature, along with provider input, directed the choice of guidelines. The ACOG guidelines were chosen for inclusion in the policy and the educational brochure because the guidelines are evidence based, endorsed by the leading expert in women's health care, and are up-to-date.

During the first policy meeting, the medical director was given a consent form, and the objectives of the project were briefly discussed. The medical director willingly chose to participate in the project. The medical director was given the opportunity to review policy #1, ask questions regarding the policy, and offer suggestions for change (Appendix L). The policy included broad but pertinent breast cancer screening information. The policy information included the ACOG guidelines on breast cancer screening, whom to offer breast cancer screening to, and guidance on how to properly document breast cancer screening and education after each visit in the electronic medical record.

Study: Policy

The project's objective was to develop a policy outlining the use of the educational materials for the NACC and to evaluate it. This portion of the project also took place within the NACC. At the arranged meeting, the medical director was asked two questions pertaining to the policy: whether or not the policy would reflect what the clinic staff plans to implement within the NACC (why/why not), and what recommendations or revisions should be made (Appendix E).

The medical director had one minor revision suggestion. She wanted “eligible patient” to be included in the policy with a brief description of what an eligible patient for breast cancer screening is. Eligible patient refers to those patients who are 40 years and older or those whom

the medical care provider deems appropriate for a mammogram. The medical director was otherwise pleased with the format and content of the policy. She stated that if this revision were made, she would approve the policy and no further meetings would be needed.

Act: Policy

There was only one minor revision suggestion, so analyzing the data for the policy portion of this project was minimal. However, the results of the survey were reviewed and analyzed. After the analysis of the data, the current guidelines were reviewed to establish what an eligible patient might be. According to the ACOG guidelines, an eligible patient refers to those patients who are 40 years and older or those whom the medical care provider deems appropriate for a mammogram, so ultimately the healthcare provider is responsible for choosing who an eligible patient is. Based on the guideline search and analysis, a revision was made to the policy. After the revision was made, the policy was then named policy #2 (Appendix M), which was the final policy. The policy that was created for this practice improvement project was given to the NACC in digital copy format for them to use, update, and alter at the clinic. They are responsible for the implementation of the policy.

The first and final meeting regarding the policy was highly satisfying overall. The policy needed only minor changes in order to be usable and fit the NACC's goals. The medical director appeared to be satisfied with the policy. This is the first policy in the NACC and will serve as a template for other policies in the future. This portion of the project was also successful because the policy was ultimately approved by the medical director. Responsible officers are required to undertake a formal review of policies and procedures at least every three years (University of Melbourne, 2013). Therefore, including suggestions for when to revise and update the policy will be important in the future. The NACC was advised to perform revisions within three years.

CHAPTER FIVE. DISCUSSION AND CONCLUSIONS

Interpretation of Results

The development and evaluation of an educational brochure and policy on breast cancer screening for Native American women within the NACC was successful. Data collection via the brief questionnaire and the structured discussions went smoothly with all of the stakeholders. The brief survey used provided the stakeholders an avenue to provide feedback and make suggestions for revisions. The survey also provided structure to the discussions. As detailed in the previous chapter, many suggestions for revisions to the brochure and policy were made; the suggestions were considered, analyzed, and adopted; and necessary revisions were made. The objective of developing a high quality, culturally appropriate educational brochure, and healthcare policy for the NACC was achieved. Following the suggested revisions, the stakeholders collectively agreed that the educational brochure and policy were culturally appropriate for the Native American population served at the NACC. Healthcare providers and the medical director plan to utilize the educational brochure in patient care.

The first objective of this project was to create a culturally appropriate, evidence-based breast cancer screening educational brochure for Native American women at the NACC. Carlock (2006) found that providing culturally competent healthcare is one promising way to raise the health status of Native Americans. Therefore, creating a brochure that would have a positive impact on Native American women by being culturally appropriate is important. The stakeholders in this project were all asked if they thought the educational brochure was culturally appropriate; they then had a chance to suggest revisions. After an analysis of their suggestions, revisions were made, and they were then presented with the final copy of the educational brochure, which they all collectively approved. Carlock (2006) also suggested that one way to

provide culturally competent care is to utilize linguistically and culturally appropriate health education materials. The educational brochure that was created was approved by the stakeholders because they felt it was culturally appropriate for Native American women that go to the NACC, which is congruent with the research suggestions.

Health literacy was an important consideration while developing the educational brochure. The average American reads at an eighth- or ninth-grade level, but Wachacha and Lamer at Indian Health Services (2012) found that most of their Native American patients read between a sixth- and an eighth-grade level. Therefore, the final patient education brochure was written at a grade 6.2 reading level. Originally, the hope was that the educational brochure would be written at or below a grade level of six, but unfortunately, the word "mammogram" made this difficult due to the complexity of the word. This could not be eliminated, due to the importance of the word, but without this word, the brochure would have been at a reading level of grade 5.6. Having the brochure written at a lower grade level was important because Safeer and Keenan (2005) found that simplifying patient education material by writing at a sixth-grade level or lower increases comprehension.

The success of this project was made possible partially by the use of the chosen framework, the PDSA model. The PDSA model, designed specifically to accelerate improvements, guided the author to include all key components of a practice improvement project, which included planning, implementing, evaluating, and revising the study to ensure success. The PDSA model offered a stepwise approach for carrying out a practice improvement project, which helped the author to stay focused on the important aspects of the project. As shown in chapter two, this model is illustrated as a circle to demonstrate that the cycles should be repeated again and again for continuous improvement. The educational brochure needed three

cycles of the PDSA model in order to be accepted by the stakeholders of this project, whereas the policy needed only one cycle. The cycle approach of the PDSA model ensured that the project would be successful mainly because it offered a chance to make changes.

Limitations

Because this study took place in a relatively small clinic, there was also only one person available to review the policy. Having more than one person to review the policy would help to ensure consensus on the content. Future research should recruit multiple people who have experience with policy making to evaluate the clinical policy.

Another limitation of this study is that there were only 10-15 minutes allotted for each meeting. This time constraint possibly limited the number of suggestions made by providers. This time constraint also possibly caused the participants to review the educational brochure or the policy less thoroughly. To ensure completeness of the study, future research should allow more time for structured discussion and data collection.

When the survey data was gathered, responses were not anonymous. Having an open, structured discussion with all the participants together may not have given the participants the opportunity to express their true opinions. Having an anonymous data collection method in future research may add validity to the data collected.

Recommendations for Further Improvements

Recommendation 1

Patient education brochure improvement recommendations:

1. Offer the breast cancer screening educational brochure to all eligible patients who qualify to have breast cancer screening at every clinical opportunity.
2. Allocate a portion of the 2015 budget for the printing of the brochure.

3. Allocate a location in the exam rooms for the brochure to make for easy access for the providers.
4. Allocate a location in the waiting room for the brochure so that patients can take a copy if they wish.
5. Review brochure annually to ensure that the information is up to date.

Recommendation 2

Clinical policy on breast cancer screening improvement recommendations:

1. The final “policy #2” should continue to be followed with all patients presenting to the clinic who are appropriate to receive breast cancer screening, as deemed by the healthcare provider.
2. Continue to review “policy #2” every two to three years. Review the most current breast cancer screening guidelines and assess for needed revisions.
3. Review the breast cancer screening “policy #2” with all new staff members of the NACC to ensure full understanding of the process.

Recommendation 3

Patient education expansion improvement recommendations:

The success of this study has provided evidence that this project could be expanded to other topics, such as prostate cancer screening, ovarian cancer screening, and smoking cessation. The Plan, Do, Study, Act framework can be utilized to guide future projects such as this one. There are many other health-related topics that could be covered and that would be useful within the NACC.

Recommendation 4

Dissemination of results improvement recommendations:

In addition to the PDSA model, it is recommended that future practice improvement projects utilize the Diffusion of Innovation Theory. The Diffusion of Innovation Theory, created by E.M. Rogers in 1963, refers to the process that occurs as people adopt a new idea, product, practice, or philosophy (Kaminski, 2011). This theory is helpful when deciding if adoption of a clinical practice change will be accepted and determining which components will need more effort to avoid diffusion. In simple terms, this theory will help aid in the dissemination of future practice improvement projects such as this one, making a greater impact.

The Diffusion of Innovation Theory describes why some ideas are successful, while others never become widely accepted. There are five elements that help determine if adoption or diffusion of a new activity will happen: relative advantage, compatibility, complexity, trialability, and observability.

Recommendation 5

Utilizing the PDSA at the NACC improvement recommendations:

Future improvement recommendations made at the NACC should follow the Plan, Do, Study, and Act framework. The cycle is a powerful tool that can be used for accelerating quality improvement projects.

Step 1. *Plan*: Recognize an opportunity and plan the test and data collection.

Step 2. *Do*: Test the change by carrying out a small-scale study for a short period. Collect data and begin analysis.

Step 3. *Study*: Complete data analysis to see if the planned change was made and resulted in an improvement. Summarize what was learned.

Step 4. *Act*: Decide what should be done differently based on the results. If the results were successful, incorporate what was learned from the test into wider changes (ASQ, n.d.). If the results were unsuccessful, decide what to do differently and plan for the next cycle.

Implications for Future Research

A suggestion for a future practice improvement project is to expand culturally appropriate educational brochures within the NACC. Having culturally appropriate educational materials is critical to reducing health disparities and supports positive health outcomes (National Institutes of Health, 2014). One member of the patient advisory group mentioned that in the past, adding patient education materials into the NACC had positive results and responses from the patients. Other affiliates with the NACC have also verbally mentioned a need for expanded patient education.

Another practice improvement project for the future could consist of expanding clinical policies within the NACC. The breast cancer screening policy was the first policy to surface in this clinic, so there is room to expand in many directions. Having well developed policies in place can provide many benefits to a primary healthcare clinic such as the NACC. Developing additional policies for the NACC could guide their healthcare providers and employees in decision-making, set a framework for delegation, give employees a means of communicating information, set rules, and boundaries, and do so much more (Bianca, 2015).

The above suggestions for future practice improvement projects should utilize the Plan Do Study Act model for planning, implementation, and evaluation. This method would help the researcher identify what education is needed within the particular setting, decide how to develop and evaluate the education, and encourage the researcher to suggest further projects.

Implications for Advanced Nursing Practice

Patient education is a very important part of providing care to patients. Patient education is not only a patient's right, but also the nurse practitioner's responsibility to provide to their patients. Providing effective and up-to-date educational materials can help patients understand medical complexities while reducing anxiety and increasing compliance. Providing patient education, such as the breast cancer screening patient education brochure developed in this project, would help providers educate their patients using up-to-date and evidenced-based information. The CDC (2012) states the following:

- A patient who understands is more likely to be invested in his or her treatment.
- An educated patient may feel more involved and accountable for his or her health care decisions.
- The patient-provider relationship becomes more trusting as information is shared and made specific to the patient's level of understanding (CDC, 2012).

There are numerous benefits of providing patient education. Increasing adherence to the medical plan, increasing patient responsibility and satisfaction, increasing provider satisfaction, enhancing quality of care, and improving patient outcomes are a few examples (Dreeben, 2010).

Nurse practitioners do an excellent job providing safe and effective care to their patients. However, staying up to date on clinical guidelines can be difficult, which is one of the many reasons why following a policy can aid nurse practitioners in providing effective, up-to-date, and evidenced-based healthcare to their patients. Following a healthcare policy, such as the breast cancer screening policy developed in this project, guides healthcare providers. Having an understanding of the current recommendations for breast cancer screening along with a guide as to when and how to use the guidelines will allow for enhanced clinical judgment during the

decision-making process and will likely improve patient outcomes. Following such a policy will help healthcare providers adopt a consistent and clear approach to providing breast cancer screening or referring screening to other providers. Promoting timely breast cancer screening to patients promotes early detection and treatment for breast cancer.

Dissemination Strategies

Dissemination of the results of this study is very important. Creating a sound dissemination strategy for a research project leads to increased awareness of the research and therefore maximizes the impact that the research can have in improving health outcomes of the patients that will benefit from it (Brigham and Women's Hospital, n.d.). Dissemination of the results of this practice improvement project will be directed towards audiences that can directly benefit from the results of the study.

In April of 2014, a poster presentation was held at NDSU to showcase the graduate student's projects. My poster, titled "Implementation of an Educational Tool, Algorithm, and Policy for Breast Cancer Screening among Native American Women," was displayed at the event. My poster included a brief description of the problem, objectives, project design, framework, timeline, analysis, and expected conclusions. The event was open to the public, with special invitations going out to undergraduate nursing major students. Many of the nursing graduate school professors attended the event as well. The poster presentation was setup so that people attending the event could ask questions about the project in a one-to-one, informal manner. Several attendees were intrigued by my project and many had questions. Many attendees thought that this would be a very useful project.

In April of 2015 there is a second NDSU graduate poster presentation scheduled. I will again be submitting my poster. I plan to display my poster, which will include the results of the

project. I will be there to present my project and answer any questions that attendees might have. I also plan to have extra copies of my brochure and policy to give out to those that are interested.

In March of 2015, there was a Pink Shawls Project event, which is organized by the American Indian Cancer Foundation. This event targeted Native American women 40 years old and older with the hopes to increase breast cancer screening. The purpose of the Pink Shawls is to raise awareness about breast health issues within Native American communities. Pink Shawls provides breast health education and promotes programs that increase access to screening through coordination and use of available resources (American Indian Cancer Foundation, 2015). At the event, they provided materials for up to ten women to make shawls, which raise awareness about breast health in a culturally specific way. The educational brochure created in this project was available for the Native American women that attended this event. The term pink shawls refers to the pink shawls that women knit or crochet for Native American breast cancer patients to symbolically and actually wrap the breast cancer patient with comfort, warmth and love.

In May of 2015 there is an event called the Powwow for Hope, which focuses on cancer awareness. The goals are to “provide an opportunity for everyone to offer love and support to the cancer survivors and caregivers in the community, to honor loved ones who have battled cancer, and to learn more about cancer prevention and resources (American Indian Cancer Foundation, 2015). “The NACC organizes a team, which has a table with cancer screening incentives and literature at this event. The team raises money to fight cancer and address the cancer burdens faced by many Native Americans. This event targets Native American

community members. The educational brochure that was developed in this practice improvement project will be available for the participants at the NACC table during this event.

Upon completion of this practice improvement project, the educational brochure will be used as a template for other settings in which the brochure would be appropriate. Nurse Practitioners and other providers at IHS clinics within the region will be offered a template of the educational brochure that can be customized. The brochure should be personalized with pictures and the contact information for each individual IHS clinic.

Upon completion of my practice improvement project, I plan to disseminate the outcomes with others. I will summarize the study and provide each recipient with a copy of the brochure and policy.

Conclusion

Mammography screening has been directly linked to the early detection and treatment of breast cancer, but and unfortunately, Native American women are not seeing higher rates of screening and early detection. The current research suggests that one of the reasons for this is lack of education by providers. Overcoming one of the NACC providers' barriers, lack of patient educational materials, by developing a culturally appropriate brochure on breast cancer screening was one solution. A patient educational brochure and clinical policy will assist in the education about breast cancer screening and mammography among Native American women at the NACC. Developing these tools using the PDSA framework model provided guidance to overcome weaknesses and helped make the study a success. The methodical use of the PDSA model addressed the areas of weakness, and they were then continually addressed until satisfactory results were attained. Developing a culturally appropriate and evidence-based patient educational brochure and policy on breast cancer screening has successfully provided the

NACC healthcare providers with a means to educate their patients and has been a successful practice improvement within the NACC.

REFERENCES

- Agency for Healthcare Research and Quality (AHRQ).U.S. Department of Health and Human Services.(2013).*Plan-do-study-act (PDSA) cycle*. Retrieved from <http://www.innovations.ahrq.gov/content.aspx?id=2398>
- Agho, A.O., Deason, L.M., & Rivers, P.A. (2011).Provider perceptions of health literacy in an urban community. *International Journal of Health Promotion & Education*, 49(2), 36-43.
- American Academy of Pediatrics.(n.d.).*Quality improvement resources*. Retrieved from <http://www.aap.org/en-us/professional-resources/practice-support/quality-improvement/Quality-Improvement-Innovation-Networks/Pages/Quality-Improvement-Resources.aspx>
- American Cancer Society. (2014). *American cancer society guidelines for the early detection of cancer*. Retrieved from <http://www.cancer.org/healthy/findcancerearly/cancerscreeningguidelines /american-cancer-society-guidelines-for-the-early-detection-of-cancer>
- American Congress of Obstetricians and Gynecologists (2011).*Annual mammograms now recommended for women beginning at age 40*. Retrieved from <http://www.acog.org/About-ACOG/News-Room/News-Releases/2011/Annual-Mammograms-Now-Recommended-for-Women-Beginning-at-Age-40>
- American Indian Cancer Foundation.(2015). *Current projects*. Retrieved from <http://www.americanindiancancer.org/projects>
- American Society for Quality.(n.d.).*Plan-Do-Check-Act (PDCA) cycle*. Retrieved from <http://asq.org/learn-about-quality/project-planning-tools/overview/pdca-cycle.html>

Bianca, A. (2015). *Purpose of organizational policies and procedures in health care settings.*

Retrieved from <http://smallbusiness.chron.com/purpose-organizational-policies-procedures-health-care-settings-81742.html>

Brigham and Women's Hospital.(n.d.).*Research dissemination best practices resource document.*

Retrieved from

<http://www.brighamandwomens.org/Research/centers/PCERC/documents/PCERC%20Dissemination%20Best%20Practices%20Resource%20Document.pdf>

Burhansstipanov, L., Krebs, L., Seals, B., Bradley, A., Kaur, J., Iron, P., . . .Gamito, E. (2010).

Native American breast cancer survivors' physical conditions and quality of life.

American Cancer Journal,116, 1560-1571. doi: 10.1002/cncr.24924

Burhansstipanov, L., Dignan, M., Jones, K., Krebs, L., Marchionda, P., &Kaur, J. (2012). A

comparison of quality of life between native and non-native cancer survivors. *Journal of Cancer Education*, 27(Suppl 1), S106-S113.dx.doi:10.1007/s13187-012-0318-3

Carlock, D. (2006). Native American health: Traditional healing and culturally competent health care internet resources. *Native American Health*, 25(3), 67-76.

dx.doi:10.1300/J115v25n03_06

Center for Disease Control and Prevention. (2012). *The importance of patient education.*

Retrieved from

http://www.cdc.gov/tb/publications/guidestoolkits/interviewing/selfstudy/module2/2_2.htm?mobile=nocontent

- Daley, C., Filippi, M., James, A., Weir, M., Braiuca, S., Kaur, B., . . . Greiner, A. (2011). American Indian community leader and provider views of needs and barriers to mammography. *Journal of Community Health, 37*, 307-315. dx.doi:10.1007/s10900-011-9446-7
- Davis, T.C., Arnold, C.L., Rademaker, A., Bailey, S.C., Platt, D.J., Reynolds, C., . . . Wolf, M.S. (2012). Difference in barriers to mammography between rural and urban women. *Journal of Women's Health, 21*(7), 748-755. dx.doi: 10.1089/jwh.2011.3397
- Diallo, A. & McGrath, J. (2013). A glance at the future of cultural competency in healthcare. *Newborn and Infant Nursing Reviews, 13*(1), 121-123. dx.doi:10.1053/j.nainr.2013.07.003
- Dreeben, O. (2010). *Patient education in rehabilitation*. Gainesville, FL: Jones and Bartlett.
- Eadie, C. (2014). Health literacy: A conceptual review. *Academy of Medical-Surgical Nurses, 23*(1), 9-13.
- Galvin, W. & Laccarino, A. (2012). Low-literacy patient education and its effect on adherence to the care plan. *American Academy of Respiratory Care, 10*-13.
- Gonzales, K., Harding, A., Lambert, W., Fu, R., & Henderson, W. (2013). Perceived experiences of discrimination in health care: A barrier for cancer screening among American Indian women with type 2 diabetes. *Women's Health Issues, 23*(1), e61-e67. dx.doi.org/10.1016/j.whi.2012.10.004
- Healthy People 2020. (2013). *Health communication and health information technology*. Retrieved from <http://www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicid=18>

- Heinrich, C. (2010). Health literacy: The sixth vital sign. *Journal of the American Academy of Nurse Practitioners*, 24, 218-223. dx.doi: 10.1111/j.1745-7599.2012.00698.x
- Indian Health Services. (2009). *Indian health service: White paper on health literacy*. Retrieved From <https://www.ihs.gov/healthcommunications/documents/toolkit/IHSHealthLiteracyWhitePaper.pdf>
- Institute for Healthcare Improvement. (2014). *Science of improvement: How to improve*. Retrieved from <http://www.ihl.org/resources/Pages/HowtoImprove/ScienceofImprovementHowtoImprove.aspx>
- Institute of Medicine. (2012). *Facilitating state health exchange communication through the use of health literate practices – a practice summary*. Retrieved from <http://www.iom.edu/reports/2012/facilitating-state-health-exchange-communication-through-the-use-of-health-literate-practices.aspx>
- Kaminski, J. (2011). Diffusion of innovation theory. *Canadian Journal of Nursing Informatics*, 6(2). Retrieved from <http://cjni.net/journal/?p=1444>
- Maas, N. (2010). A report from the Minnesota health literacy partnership. *Minnesota Health Literacy Partnership*. Retrieved from <http://healthliteracymn.org/sites/default/files/images/files/Take%20Charge%20of%20Your%20Health%20report%20FINAL.pdf>
- National Center for Education Statistics. (2013). *Are the nation's twelfth-graders making progress in mathematics and reading*. Retrieved from <https://nces.ed.gov/>
- National Guideline Clearinghouse.(2010). Breast cancer screening clinical practice guidelines. Retrieved from <http://www.guideline.gov/content.aspx?id=33565&search=mammography#Section420>

National Indian Education Association.(2015). *Statistics on Native students*. Retrieved from <http://www.niea.org/Research/Statistics.aspx>

National Institutes of Health.(2014). *Cultural Competency*. Retrieved from <http://www.nih.gov/clearcommunication/culturalcompetency.htm>

National Network of Libraries of Medicine.(2013). *Health Literacy*. Retrieved from <http://nnlm.gov/outreach/consumer/hlthlit.html>

National Patient Safety Foundation. (2012). *Health literacy: Statistics at-a-glance*. Retrieved from <http://www.npsf.org/>

Native American Community Clinic.(n.d.).*How you pay*. Retrieved from <http://nacc-healthcare.org/how-you-pay/>

Ndikum-Moffor, F., Braiuca, S., Daley, C., Gajewski, B., &Engelman, K. (2013).Assessment of mammography experiences and satisfaction among Indian/Alaska native women. *Women's Health Issues*, 23(6),395-402. dx.doi:10.1016/j.whi2013.08.003

Safeer, R. & Keenan J. (2005).Health literacy: The gap between physicians and patients. *American Family Physician*, 72(3), 463-468.

Roen, E., Roubidoux, M., Joe, A., Russell, T., &Soliman, A. (2013).Adherence to screening mammography among American Indian women of the northern plains. *Breast Cancer Research and Treatment*, 139, 897-905. dx.doi:10.1007/s10549-013-2580-4

Roubidoux, M. (2012). Breast cancer and screening in American Indian and Alaska native women. *Journal of Cancer Education*, 27(Suppl 1), S66-S72. dx.doi:10.1007/s13187-012-0323-6

Rybak, C. & Decker-Fitts, A. (2009).Understanding Native American healing practices. *Counseling Psychology Quarterly*, 22(3),333-342.

- U.C. Davis. (n.d.). *Guide to writing and maintaining campus wide administrative policy*. Retrieved from <http://manuals.ucdavis.edu/resources/GuidetoWritingPolicy.pdf>
- University of Melbourne.(2013). *Information sheet – policy and procedure review*. Retrieved from <http://www.policy.unimelb.edu.au/assets/pdf/info-sheet-policy-review.pdf>
- U.S. Department of Health & Human Services. (2008). *America’s health literacy: Why we need accessible health information*. Retrieved from <http://www.health.gov/communication/literacy/issuebrief/>
- Wachacha, M. & Lamer, C. (2012). Health communications within the IHS: Health literacy and health education [PowerPoint slides]. Retrieved from <http://www.ihs.gov/healthcommunications/.../HealthCommunications.pptx>
- Zahnd, W.E., Scaife, S.L., & Francis, M.L. (2009). Health literacy skills in rural and urban populations. *American Journal of Health Behavior*, 33(5),550-557.

APPENDIX A. PERMISSION TO USE THE REPEATED PDSA CYCLE

From: Cozza, Amanda <acozza@aap.org>
Sent: Monday, July 28, 2014 11:43 AM
To: Molly Vaishnav<molly.cornell@my.ndsu.edu>
Subject: Permission for use of images

Dear MsVaishnav:

Many thanks for your request. By way of this e-mail, permission is granted to use the indicated images as you've described.

This permission is granted nonexclusively for one-time use and educational purposes only and is limited to print format. Rights granted do not apply to revised editions, foreign language editions, or any versions via electronic media. Near the material, please prominently place a credit line to the AAP and the original source of the material.

Kind regards,
Amanda
Ms Amanda Cozza
Editorial Specialist
American Academy of Pediatrics
141 Northwest Point Blvd
Elk Grove Village, IL 60007-1019
Phone: 847/434-7133
Fax: 847/434-8780
E-mail: ACozza@aap.org

APPENDIX B. PROVIDER SURVEY #1

Survey Questions- Clinic Provider

Do you routinely offer breast cancer screening for female patients over 40 years old? If so, at physicals? Episodic visits? Or both?

Do you think the breast cancer educational brochure will be useful information to Native American patients at your clinic? Why? Why not?

Will the breast cancer educational brochure be beneficial to you as an asset to your practice?

Is there anything you would recommend changing in the brochure that was developed?

Why? Why not?

Will you offer the educational brochure to your patients? Why? Why not?

Do you think the educational brochure is culturally appropriate? Why? Why not?

APPENDIX C. MEDICAL DIRECTOR SURVEY #2 (BROCHURE)

Questions for- the NACC Medical Director

Do you routinely offer breast cancer screening for female patients over 40 years old? If so, at physicals? Episodic visits? Or both?

Do you think the breast cancer educational brochure will be useful information to Native American patients at your clinic? Why? Why not?

Will the breast cancer educational brochure be beneficial to you as an asset to your practice?

Is there anything you would recommend changing in the brochure that was developed?

Why? Why not?

Will you offer the educational brochure to your patients? Why? Why not?

Do you think the educational brochure is culturally appropriate? Why? Why not?

APPENDIX D. PATIENT ADVISORY GROUP SURVEY #3

Questions for the NACC- Patient Advisory Group

Will the breast cancer educational brochure be useful information to Native American patients at the Native American Community Clinic? Why?Why not?

Is there anything you would recommend deleting or modifying in the breast cancer educational brochure that was developed?

Is the breast cancer educational brochure culturally appropriate? Why?Why not?

APPENDIX E. MEDICAL DIRECTOR SURVEY (POLICY)

Questions for- the NACC Medical Director

Does the policy on breast cancer screening reflect what the clinic staff plans to implement at the Native American Community Clinic? Why?Why not?

Do you have any recommendations or revisions to make to the breast cancer screening policy?

APPENDIX F. NDSU IRB EXEMPT



September 17, 2014

Dr. Tina Lundeen
Nursing

Re: IRB Certification of Exempt Human Subjects Research:
Protocol #PH15051, "Breast Cancer Screening in Native American Women at an Urban Minnesota Community Clinic"

Co-investigator(s) and research team: Molly Vaishnav

Certification Date: 9/17/14 Expiration Date: 9/16/17
Study site(s): The Native American Community Clinic, Minneapolis, MN
Sponsor: n/a

The above referenced human subjects research project has been certified as exempt (category # 2) in accordance with federal regulations (Code of Federal Regulations, Title 45, Part 46, Protection of Human Subjects). This determination is based on the original protocol materials (received 9/12/14).

Please also note the following:

- ☐ If you wish to continue the research after the expiration, submit a request for recertification several weeks prior to the expiration.
- ☐ The study must be conducted as described in the approved protocol. Changes to this protocol must be approved prior to initiating, unless the changes are necessary to eliminate an immediate hazard to subjects.
- ☐ Notify the IRB promptly of any adverse events, complaints, or unanticipated problems involving risks to subjects or others related to this project.
- ☐ Report any significant new findings that may affect the risks and benefits to the participants and the IRB.

Research records may be subject to a random or directed audit at any time to verify compliance with IRB standard operating procedures.

Thank you for your cooperation with NDSU IRB procedures. Best wishes for a successful study.
Sincerely,

Kristy Shirley

Digitally signed by Kristy Shirley
DN: cn=Kristy Shirley, o=NDSU,
ou=SPA,
email=kristy.shirley@ndsu.edu, c=US
Date: 2014.09.17 08:27:55 -0500

Kristy Shirley, CIP, Research Compliance Administrator

For more information regarding IRB Office submissions and guidelines, please consult www.ndsu.edu/irb. This Institution has an approved Federal Wide Assurance with the Department of Health and Human Services: FWA00002439.

INSTITUTIONAL REVIEW BOARD

NDSU Dept 4000 | PO Box 6050 | Fargo ND 58108-6050 | 701.231.8995 | Fax 701.231.8098 | ndsu.edu/irb

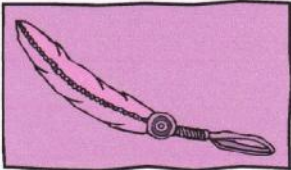
Shipping address: Research 1, 1735 NDSU Research Park Drive, Fargo ND 58102

NDSU is an EQ/AA university.

APPENDIX G. BROCHURE #1

Breast Cancer Screening for Native American Women

3 Easy Steps



**Native American Community Clinic
(NACC)**
1213 E. Franklin Avenue
Minneapolis, MN 55404
612-872-8086

1

Breast Self-Examination

Breast self-examination (BSE), performed at the same time each month, takes little time, costs nothing and can help you be aware of how your breasts normally look and feel.

Contact your health care provider if you discover any changes. Breast self-exams are not a substitute for regular breast exams by a health care provider or for screening mammograms.

Look.

Look at your breasts in the mirror with hands at sides, then clasped overhead. Look for changes in size or shape, or nipple changes. Then press hands on hips and push elbows forward to tighten chest muscles. Look for dimpling, puckering, redness, or changes in shape, size, texture, or skin color.



Touch.

Use the pads of your three middle fingers. Begin in your armpit, using small circular motions with varying degrees of pressure, to examine your entire breast area.



A. Stand in front of a mirror.

Squeeze both nipples between thumb and forefinger to check for nipple discharge.

B. In the shower.

BSE is easier when your skin is wet and soapy. In the shower, raise your right arm above your head. Cover your entire breast area. Repeat for left side.



C. Lying down.

Lying down helps to flatten the breast, making it easier to examine. Do this by pressing firmly against the chest wall. Place a pillow under right shoulder. Begin at the armpit and make a series of small circles. Use light, medium, and deep pressure. Cover your entire breast area. Repeat for left side.



2

Mammogram

Mammogram, is an x-ray picture of your breast that can find lumps that are too small to feel.

Mammograms are still the best way to find breast cancer early. Finding breast cancer early is still the best way to survive it.

Tests show that if you are 50 or over, getting a mammogram every 1-2 years could **SAVE YOUR LIFE!**

-Every year for women age 40 and over.

-If anyone in your family has had breast cancer, talk with your healthcare provider. You may need to start testing earlier.



3

Clinic Breast Examination

Clinic breast examination is performed by a medical provider or doctor. They use their hands to feel for lumps or other changes. It should be done every 1-3 years depending upon age.

When to get screened

Screening Type	Age	How Often
Breast Self-Exam	20+	Monthly
Clinic Breast Exam	20+	Every 1-3 Years
Mammogram	40+	Every Year



NATIVE AMERICAN COMMUNITY CLINIC
HONORING HEALTH AND TRADITION

BREAST CANCER SCREENING

MAMMOGRAM

What is a mammogram

Mammogram is an x-ray picture of your breast that can find lumps that are too small to feel.

Mammograms are still the best way to find breast cancer early. Finding breast cancer early is still the best way to survive it.

Tests show that if you are 50 or over, getting a mammogram every 1-2 years could **SAVE YOUR LIFE!**

When to get a mammogram

Every year for women age 40 and over. If anyone in your family has had breast cancer, talk with your healthcare provider. You may need to start testing earlier.

Why get a mammogram

- Mammograms are done to test for breast cancer.

- Mammograms can lower your chance of dying from breast cancer by up to 50%.
- Mammograms can find cancer early when they are most treatable.
- If a family member has had breast cancer you may be able to get genetic testing to see if you are more likely to get breast cancer. Ask your healthcare provider if you are interested.



Screening Type	Age	How Often
Mammogram	40+	Every Year
Clinic Breast Exam	20+	Every 1-3 Years



CLINICAL BREAST EXAM

Clinic breast exam is performed by a healthcare provider. They use their hands to feel for lumps or other changes. For women ages 29-39 it should be done every 1-3 years. For women 40 and older it should be done every year.



SELF BREAST AWARENESS

Have a sense of what is normal for your breasts so that you can tell if there are any changes. Even if you find a small change in your breasts report it to your healthcare provider.

Things to report to your healthcare provider:

- Lumps
- Puckering
- Redness
- Nipple discharge
- Change in color, shape, or skin texture

Remember most lumps and changes in your breasts are not cancer but you should still tell your healthcare provider.



The mammogram van comes to the Native American Community Clinic 4 times per year.

Call today to make your appointment!

612-872-8086

APPENDIX I. BROCHURE #3



BREAST CANCER SCREENING



When you are ready, we are here

MAMMOGRAM

What is a mammogram

Mammogram is an X-ray picture of your breast that can find lumps that are too small to feel.

Mammograms are still the best way to find breast cancer early. Finding breast cancer early is still the best way to survive it.

Tests show that if you are 50 or over, getting a mammogram every 1-2 years could **SAVE YOUR LIFE!**

When to get a mammogram

Every year for women age 40 and over.

If anyone in your family has had breast cancer, talk with your healthcare provider. You may need to start testing earlier.

How long does it take

Usually mammograms take about 30 minutes.

Why get a mammogram

- Mammograms are done to test for breast cancer.
- Mammograms can lower your chance of dying from breast cancer by up to 50%.
- Mammograms can find cancer early when they are most treatable.

If a family member has had breast cancer you may be able to get genetic testing to see if you are more likely to get breast cancer. Ask your healthcare provider if you are interested.



CLINICAL BREAST EXAM

Clinic breast exam is performed by a healthcare provider. They use their hands to feel for lumps or other changes. For women ages 29-39 it should be done every 1-3 years. For women 40 and older it should be done every year.



SELF BREAST AWARENESS

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Things to report to your healthcare provider:

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- Nipple discharge
- Change in color, shape, or skin texture

Remember most lumps and changes in your breasts are not cancer but you should still tell your healthcare provider.

The mammogram van comes to the Native American Community Clinic 4 times per year.

Screening Type	Age	How Often
Mammogram	40+	Every Year
Clinic Breast Exam	20+	Every 1-3 Years

Call today to make your appointment!

612-872-8086



APPENDIX J. BROCHURE #4



MAMMOGRAM

What is a mammogram

Mammogram is an x-ray picture of your breast that can find lumps that are too small to feel.

Mammograms are still the best way to find breast cancer early. Finding breast cancer early is still the best way to survive it.

Tests show that if you are 50 or over, getting a mammogram every 1-2 years could **SAVE YOUR LIFE!**

When to get a mammogram

Every year for women age 40 and over.

If anyone in your family has had breast cancer, talk with your healthcare provider. You may need to start testing earlier.

How long does it take

Usually mammograms take about 30 minutes.

Why get a mammogram

- Mammograms are done to test for breast cancer.

- Mammograms can lower your chance of dying from breast cancer by up to 50%.

- Mammograms can find cancer early when they are most treatable.

If a family member has had breast cancer you may be able to get genetic testing to see if you are more likely to get breast cancer. Ask your healthcare provider if you are interested.



BREAST CANCER SCREENING



What you need to know

When you are ready, we are here!

CLINICAL BREAST EXAM

Clinic breast exam is performed by a healthcare provider. They use their hands to feel for lumps or other changes. For women ages 20-39 it should be done every 1-3 years. For women 40 and older it should be done every year.



SELF BREAST AWARENESS

Have a sense of what is normal for your breasts so that you can tell if there are any changes. Even if you find a small change in your breasts report it to your healthcare provider.

Things to report to your healthcare provider:

- Lumps
- Puckering
- Redness
- Nipple discharge
- Change in color, shape, or skin texture

Remember most lumps and changes in your breasts are not cancer but you should still tell your healthcare provider.

Screening Type	Age	How Often
Mammogram	40+	Every Year
Clinic Breast Exam	20+	Every 1-3 Years

The mammogram van comes to the Native American Community Clinic 4 times per year.

Call today to make your appointment!
612-872-8086



APPENDIX K. FINAL BROCHURE

MAMMOGRAM

What is a mammogram

Mammogram is an x-ray picture of your breast that can find lumps that are too small to feel.

Mammograms are still the best way to find breast cancer early. Finding breast cancer early is still the best way to survive it.

Tests show that if you are 50 or over, getting a mammogram every 1-2 years could SAVE YOUR LIFE!

When to get a mammogram

Every year for women age 40 and over.

If anyone in your family has had breast cancer, talk with your healthcare provider. You may need to start testing earlier.

How long does it take

Usually mammograms take about 30 minutes.



The mammogram van comes to the Native American Community Clinic 4 times per year.



NATIVE AMERICAN COMMUNITY CLINIC

BREAST CANCER SCREENING

What you need to know

*Call today to make
your appointment!*

612-872-8086

*When you are ready,
we are here!*

WHY GET A MAMMOGRAM?

- Mammograms are done to test for breast cancer.
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If a family member has had breast cancer you may be able to get genetic testing to see if you are more likely to get breast cancer. Ask your healthcare provider if you are interested.



CLINICAL BREAST EXAM

Clinic breast exam is performed by a healthcare provider. They use their hands to feel for lumps or other changes. For women ages 20-39 it should be done every 1-3 years. For women 40 and older it should be done every year.



SELF BREAST AWARENESS

Have a sense of what is normal for your breasts so that you can tell if there are any changes. Even if you find a small change in your breasts report it to your healthcare provider.

Things to report to your healthcare provider:

- Lumps
- Puckering
- Redness
- Nipple discharge
- Change in color, shape, or skin texture

Remember most lumps and changes in your breasts are not cancer but you should still tell your healthcare provider.

Screening Type	Age	How Often
Mammogram	40+	Every Year
Clinic Breast Exam	20+	Every 1-3 Years

APPENDIX L. POLICY #1

Breast Cancer Screening

Approved By:		Written By:	Molly Vaishnav, RN, BSN, DNP-S
Original Date:		Effective Date:	
Review Date:		Revised Date:	

Scope:

This policy may apply to the health care providers providing medical care within the Native American Community Clinic (NACC).

Purpose:

The purpose of this policy is to guide regular promotion for breast cancer screening among women patients.

Policy:

NACC staff will follow the established guidelines for breast cancer screening.

Procedure:

I. Breast Cancer Screening

- a. Patient presents with the opportunity to partake in breast cancer screening.
- b. The provider completes a need for breast cancer screening assessment based upon the American Congress of Obstetricians and Gynecologists (ACOG)'s current recommendations and provider judgment.
- c. The provider offers and teaches how to perform a self-breast examination (SBE) if indicated.

- d. The provider offers and performs a clinical breast examination (CBE) if indicated.
- e. The provider offers and refers patient to have a mammogram if indicated.
- f. The provider or the clinic staff offers a breast cancer screening patient education brochure for all patients who qualify to have a SBE, CBE, and/or mammogram.
- g. The provider and/or clinic staff refer patient to community worker if needed.

II. Documentation

- a. The provider documents the examination in the electronic medical record (EMR).
- b. The provider documents the patient education given in the EMR.

APPENDIX M. POLICY #2

Breast Cancer Screening

Approved By:	Kari Rabie, MD	Written By:	Molly Vaishnav, RN, BSN, DNP-S
Original Date:	12/9/2014	Effective Date:	
Review Date:		Revised Date:	

Scope:

This policy may apply to the health care providers providing medical care within the Native American Community Clinic (NACC).

Purpose:

The purpose of this policy is to guide regular promotion for breast cancer screening among women patients.

Policy:

NACC staff will follow the established guidelines for breast cancer screening.

Procedure:**I. Breast Cancer Screening**

- a. Eligible patient presents to the clinic.
- b. The provider completes a need for breast cancer screening assessment based upon the American Congress of Obstetricians and Gynecologists (ACOG)'s current recommendations and provider judgment.
- c. The provider offers and teaches how to perform a self-breast examination (SBE) if indicated.

- d. The provider offers and performs a clinical breast examination (CBE) if indicated.
- e. The provider offers and refers patient to have a mammogram if indicated.
- f. The provider or the clinic staff offers a breast cancer screening patient education brochure for all patients who qualify to have a SBE, CBE, and/or mammogram.
- g. The provider and/or clinic staff refer patient to community worker if needed.

II. Documentation

- a. The provider documents the examination in the electronic medical record (EMR).
- b. The provider documents the patient education given in the EMR.

¹ Eligible patient refers to those patients who are 40 years and older or those whom the medical care provider deems appropriate for a mammogram

APPENDIX N. EXECUTIVE SUMMARY

Introduction and Background Information

The Native American Community Clinic (NACC) identified a lack of patient education regarding breast cancer screening within their clinic in addition to an unacceptably low number of their Native American female patients getting their annual breast cancer screening. At the time of the project initiation, there were no patient education materials for the NACC patients relating specifically to breast cancer screening. According to Roen, Roubidoux, Joe, Russell, Soliman (2013), Native American women have the lowest mammography screening rates in the U.S. Educating patients on the importance of mammography and general facts in a culturally appropriate way has the potential to improve patient outcomes by increasing screening and re-screening rates, reducing mortality associated with breast cancer, and promoting a healthy patient-provider relationship.

The purpose of this practice improvement project was to make breast cancer screening patient education available in the NACC by developing an evidence-based, culturally appropriate educational brochure on breast cancer screening for Native American women and a clinical policy to guide healthcare providers. To help the NACC healthcare providers educate their patients about breast cancer screening, a need for a culturally appropriate, up-to-date, evidence-based brochure was identified. Developing a breast cancer screening patient education brochure improved access to information regarding breast cancer screening within the NACC, and developing a policy standardized the method by which healthcare providers approach breast cancer screening, provide education, and document encounters related to breast cancer screening.

Process

In order to achieve a systematic, well-planned project, the four-phase Plan, Do, Study, Act (PDSA) method was used. The PDSA cycle is shorthand for testing a change by planning it, trying it, observing the results, and acting on what is learned (AHRQ, 2013). In this project there were a total of four cycles implemented, three regarding the educational brochure and one regarding the policy.

Cycle 1: Educational Brochure

The NACC's performance improvement manager identified a need for an educational brochure for breast cancer screening. It was decided that an educational brochure on breast cancer screening, which would be culturally appropriate and evidencebased, would be developed for the NACC. The original brochure (brochure #1) included current recommendations for breast cancer screening from the American Cancer Society. The first meeting was held with the healthcare providers and the medical director. Each member was given a brief introduction, consent to participate, and a copy of a brochure that was drafted prior to the meeting by the author. Qualitative survey questions were asked to the participants after they reviewed the brochure, which included suggestions for revisions and a question on the cultural appropriateness of the brochure. The healthcare providers and the medical director requested that the American Congress of Obstetricians and Gynecologists (ACOG) guidelines be used in addition to a few other minor revision requests. The results of the survey were used to make necessary revisions. After the revisions were made, the new brochure (brochure #2) was brought to the next meeting, and the PDSA cycle started again.

Cycle 2: Educational Brochure

The second meeting was held with the patient advisory group members. Each member was given a brief introduction, consent to participate, and a copy of brochure #2. Qualitative survey questions were asked to the participants after they reviewed the brochure, which included suggestions for revisions and a question on the cultural appropriateness of the brochure. The screening guidelines used in brochure #2 followed the ACOG guidelines. The patient advisory group members liked brochure #2 and had only minor revision suggestions. The results of the survey obtained from the patient advisory group members were used to make necessary revisions. After the revisions were made, the new brochure (brochure #3) was brought to the next meeting, and the PDSA cycle started again.

Cycle 3: Educational Brochure

The third meeting was held with the healthcare providers and the medical director again. At this meeting, the healthcare providers and the medical director were given a copy of educational brochure #3. The same qualitative survey that they received during cycle 1 was given to the participants after they reviewed the brochure. Brochure #3 had only minor differences compared to brochure #2. It had some revised formatting, included photographs, and had a more developed front page. The healthcare providers and the medical director thought that brochure #3 was very close to the end product, suggesting only that the font be changed. The results of the survey obtained from the healthcare providers and medical director were used to make necessary revisions to the educational brochure. The new brochure was named brochure #4. Brochure #4 was then sent to a graphic designer to achieve a more professional look. After the revisions were made to the educational brochure, the medical director felt as though no additional meetings would be needed, and all other participants agreed.

Cycle 4: Policy

The NACC's performance improvement manager identified a need for a policy on breast cancer screening. A policy for breast cancer screening was to be developed by the author to be used within the NACC to offer guidance for when to offer breast cancer screening to patients, what guidelines to use, and what should be documented where. The medical director was selected to be the person to review and approve the policy. The first and final meeting was held with the medical director after the construction of the policy. The policy information included which guidelines to use when offering breast cancer screening, whom to offer breast cancer screening to, and guidance on how to properly document breast cancer screening and education after each visit. The medical director was given a copy of the original policy (policy #1) followed by a qualitative survey that included opportunity to suggest revisions. The medical director had one minor revision suggestion: she wanted "eligible patient" to be included in the policy with a brief description of what an eligible patient is. The results of the survey were used to make necessary revisions. After the revisions were made, the policy was renamed policy #2, which would be the final policy. The medical director approved the final policy. The NACC members are responsible for implementing the policy into their clinic.

Conclusion

Utilizing the PDSA model to guide this practice improvement project facilitated the success of the study. The PDSA model helped identify what things needed to be changed within the project. The areas that required change included the use of certain guidelines, format changes, and content. Each of the identified areas where changes were suggested was continually addressed until satisfaction and approval by the healthcare providers and medical director were obtained.

The process of developing a culturally appropriate educational brochure and policy on breast cancer screening was the focus of the project. The PDSA model was used to design and implement the project within the NACC. The NACC could use this approach to broaden their patient educational materials. This same approach could be used to replicate this study in other facilities. Clinics that serve a minority population could consider following this project's approach in order to offer their patients culturally appropriate educational materials.