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Implementing a Result Notification and Referral System in a Nurse-Led Wellness Center

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IMPLEMENTING A RESULT NOTIFICATION AND REFERRAL SYSTEM IN A NURSE-LED WELLNESS CENTER

by

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Christine Bollom

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Abstract

Cervical and breast cancer screenings reduce the risk of morbidity and mortality for American women. In 2017, about 70% of U.S. women over the age of 21 obtained a Papanicolaou (Pap) test, which screens for cervical cancer. African American women have a cervical cancer screening rate of 74.6% and Hispanic women have a rate of 68.6%. The cervical cancer screening rates decrease to 51% for women who are uninsured (Centers for Disease Control and Prevention, 2017). In the United States, 50% of women older than 40 are current on their screening mammogram. African American women have a screening mammogram rate of 55% and Hispanic women have a rate of 46%. Women who are uninsured have a screening mammogram rate of 21% (American Cancer Society, 2017a).

This data suggest that underserved populations may not be appropriately screened, or followed up on in the instance of an abnormal finding, which causes delays in treatment. There are established standards of care that guide practice regarding how often women are screened, based on age and risk factors. Despite these set standards, delivery of care varies by provider, patient population, and facility location. A nurse-led wellness center in an urban south-central city in Texas was the site of this quality improvement project, aimed at improving the follow-up process after cervical and breast cancer screening.

This project established a system for patient notification of test results and a referral process for ongoing care. Results indicated that the center was able to successfully implement this process by establishing a workflow that included the creation of an algorithm, a reference binder, and a checklist for staff to follow. Preliminary results indicate that 100% of patients have been notified of test results and that staff have followed the referral process 100% of the time.

Keywords: result notification process, referrals, primary care, preventive screening

Women's Preventive Health

Women's preventive health needs have lacked adequate attention by the health care community. Women often carry a disproportionate amount of stress due to the responsibilities at home and in the workplace. Women who are low-income can be affected more due to having to care for children or elders at home while maintaining the responsibility of providing income for the household (King et al., 2016). This leaves little to no time and energy for prioritizing preventive health care. Women without a permanent residence also struggle with obtaining preventive health services. Research indicates that barriers for women from racial and ethnic minorities and of low socioeconomic status include having difficulty navigating the health care system, having misconceptions regarding preventive health care services, and not having an established provider to recommend appropriate screening services (Asgary, Naderi, & Wisnivesky, 2017).

A key factor in poorer health is related to a lack of health insurance coverage. In 2012, one-fifth of the female population in the United States did not have health insurance coverage. Lack of coverage can be attributed to ineligibility for public health insurance programs like Medicaid and Medicare, lack of access to employer-provided health insurance, and inability to afford commercial health insurance (King et al., 2016). Women who lack health insurance coverage do not obtain preventive care like mammograms and Pap tests, cannot afford prescription medications like contraception, are less likely to have prenatal care, are more likely to have uncontrolled chronic diseases, and die from cancers like breast and cervical cancer at a higher rate (King et al., 2016). In addition to low screening rates, adherence with follow-up recommendations for ongoing health care has been identified as a problem. According to Oakley-Girvan, Londono, Canchola, and Davis (2016), a process for prompt diagnosis and

treatment of an abnormal screening result improves survival rates and eliminates the disparity in women, particularly those of a racial and ethnic minority and lower socioeconomic group.

Statement of the Problem

Background

Women from a low socioeconomic background and racial and ethnic minority groups are vulnerable to poor health outcomes due to lack of preventive health services. Without appropriate health screening services, there is an increased risk of communicable diseases, such as sexually transmitted infections, and non-communicable diseases like cancer. This has led to recent efforts by governmental and professional organizations to make changes so that this gap is closed (King et al., 2016).

In 2010, the Patient Protection and Affordable Care Act (ACA) was signed into law and with it came a change that prioritized preventive care, to prevent illness progression and mortality. The U.S. Department of Health and Human Services (HHS) tasked the Institute of Medicine (IOM) with identifying what guidelines should be implemented for women's preventive health services (IOM, 2011). Together, the IOM, the U.S. Preventive Services Task Force, the American Academy of Pediatrics' Bright Futures recommendations for adolescents, and the Centers for Disease Control and Prevention's (CDC) Advisory Committee on Immunization Practices defined preventive health services. The group made evidence-based endorsements regarding which screening services providers should recommend for women (IOM, 2011).

Since the guidelines were made in 2011, there has been further research on how to better screen women for diseases. In 2016, the Health Resources & Services Administration formed a team of clinicians, academic professionals, and health professional organizations to update the previously released guidelines (Health Resources & Services Administration, 2018). It is from

the development of these guidelines that the Women's Preventive Services Initiative was created by The American College of Obstetricians and Gynecologists (ACOG). The recommendations serve as the gold standard for women's preventive services and use the expertise of the ACOG coalition to develop, review, and provide ongoing updates. The recommendations state that preventive health care services for women should include assessment of physical and psychosocial status; primary and secondary prevention, including screening; risk factor assessment; immunizations; counseling; education; prenatal care; and interpregnancy care (Women's Preventive Services Initiative, 2018).

Breast cancer is the fourth leading cause of cancer death in the United States and is the most common and deadliest form of cancer in women, accounting for 15.3% of new cancer cases in 2018 (National Cancer Institute, 2018a). Due to lack of early screening, it is estimated that one in eight women will be diagnosed with invasive breast cancer. Breast cancer accounts for 20% of all female deaths in (Texas Department of State Health Services [Texas DSHS], 2018a). In Texas, only 65% of women over the age of 40 have had a screening mammogram within the past 2 years. African American women are more likely to be diagnosed at later stages, and breast cancer deaths are more common in African American women than any other racial/ethnic group (Texas DSHS, 2018a).

Cervical cancer was previously a leading cause of cancer death for women in the United States. However, rates have decreased with efforts aimed at preventing and screening. Due to lack of prevention and screening, cervical cancer accounts for 0.8% of all new cancer diagnoses (National Cancer Institute, 2018b), and it is estimated that 0.6% of all women in the United States will be diagnosed with cervical cancer in 2019 (Texas DSHS, 2018b). In Texas, only 70% of women over the age of 18 have had a Pap test within the past 3 years. The risk of cervical

cancer increases for low-income women, due to their lack of health care and inability to afford and have access to cervical screening services (American Cancer Society, 2017b). Additionally, cervical cancer deaths are more common in African American women than any other racial/ethnic group (Texas DSHS, 2018b).

Significance

This project took place in an urban area and focused on low-income, Hispanic, and African American women. Lack of health insurance is a major factor in breast cancer screening disparities in the United States. In 2015, only 31% of women ages 40-64 without health insurance had a screening mammogram within the previous 2 years, compared to 68% of those with health insurance (Susan G. Komen Breast Cancer Foundation, 2018). Other barriers include low income, inability to get to a mammography center, lack of a primary care provider, low education level, lack of awareness and recommendations regarding screening mammograms, lack of child care, inability to miss work, fear of negative results, recent migration to the country, and cultural or language differences (Susan G. Komen Breast Cancer Foundation, 2018).

Although breast cancer rates in African American women are lower than Caucasian women, the breast cancer mortality rate was 41% higher. African American women have greater delays in follow-up care following an abnormal mammogram and are diagnosed at more advanced stages of breast cancer (Susan G. Komen Breast Cancer Foundation, 2018). For Hispanic women, breast cancer is the most common type of cancer and the leading cause of cancer-related deaths. Like African American women, Hispanic women often have delayed follow up care after a screening mammogram and are diagnosed at more advanced stages (Susan G. Komen Breast Cancer Foundation, 2018).

Because of the increased morbidity and mortality rates in low-income, Hispanic, and African American women, the implementation of this project became a priority at the center. According to the CDC, Hispanic women account for most of the new cervical cancer diagnoses in the United States, followed as a close second by African American women (CDC, 2018). The rate of new cervical cancer diagnosis in Hispanic and African American women is disproportionately higher than white women (Table 1) (CDC, 2018). The lack of screening in Hispanic and African American women can be attributed to a lack of the resources needed to obtain appropriate screening (Foundation for Women's Cancer, 2018). Underserved populations, such as the population this project was focused on, lack adequate cervical cancer screening services and follow-up care, which may be attributed to cost and access.

Table 1

Rate of New Cancers by Race/Ethnicity, Female

Race	Rate	Case Count	Population
White	7.5	9,904	127,490,839
Black	8.7	1,989	23,597,205
American Indian/Alaska Native	5.6	118	2,306,878
Asian/Pacific Islander	5.8	661	10,767,196
Hispanic	9.8	2,395	28,559,246

Note: Rate per 100,000 women. Data Source: U.S. Cancer Statistics Working Group. U.S. Cancer Statistics Data Visualization Tool, based on November 2018 submission data (1998-2016): U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute, https://www.cdc.gov/cancer/dataviz, June 2019.

Assessment

The project was performed in a tax-exempt facility which has only been open for 3 years and is a nurse-led center staffed by three Family Nurse Practitioners (FNPs), one registered nurse, one pharmacist, and two front desk clerks. There are also two additional registered nurses who are based in the facility but primarily do clinical outreach work outside of the center. There is a physician who serves as a medical director for the facility and the delegating physician for the FNPs. The facility is open on Mondays and Wednesdays from 9:00 a.m. until 1:00 p.m., and on Fridays from 9:00 a.m. until 4:00 p.m. The facility is called a center and not a clinic, as patients are seen for well-care visits and not sick visits. The center primarily cares for a lower socioeconomic population and only accepts Medicaid or cash as form of payment. Children may be referred to the center from school or Head Start programs, which are federally funded programs that offer services to low income families with children ages birth to 5 years to promote school readiness.

Services for children include low cost immunizations, tuberculosis (TB) screening, and physical exams. Services for adults include immunizations and TB screening because of lack of health insurance or for immigration process requirements (Figure 1). The center services about 20 patients per day and can schedule appointments via phone or email for physical exams, and walk-ins for immunizations and TB testing. As services are considered well-care visits and there is no need for follow-up, the people seen here are not considered established patients.

While there were no women's preventive health care services provided at the center, it is in a unique position to provide much needed services to a population that has been identified as being at risk for poorer health outcomes. The center is located on the east side of San Antonio, Texas, which is known to be a lower socioeconomic status area that is designated as a Promise

Zone. Promise Zones were designated by the Obama administration high poverty areas, which enable communities to work with federal, state, and local organizations to help decrease crime, increase educational opportunities, and improve public health (U.S. Department of Agriculture, 2015). The zip code that the center is in is composed of 52% female, 70% Hispanic, and 16% African American, and with a median household income of $28,643. Data indicate that 24% of the population is uninsured, only 26% have attended some college or have an associate degree, and 37% live below the poverty line (Community Information Now, 2018).

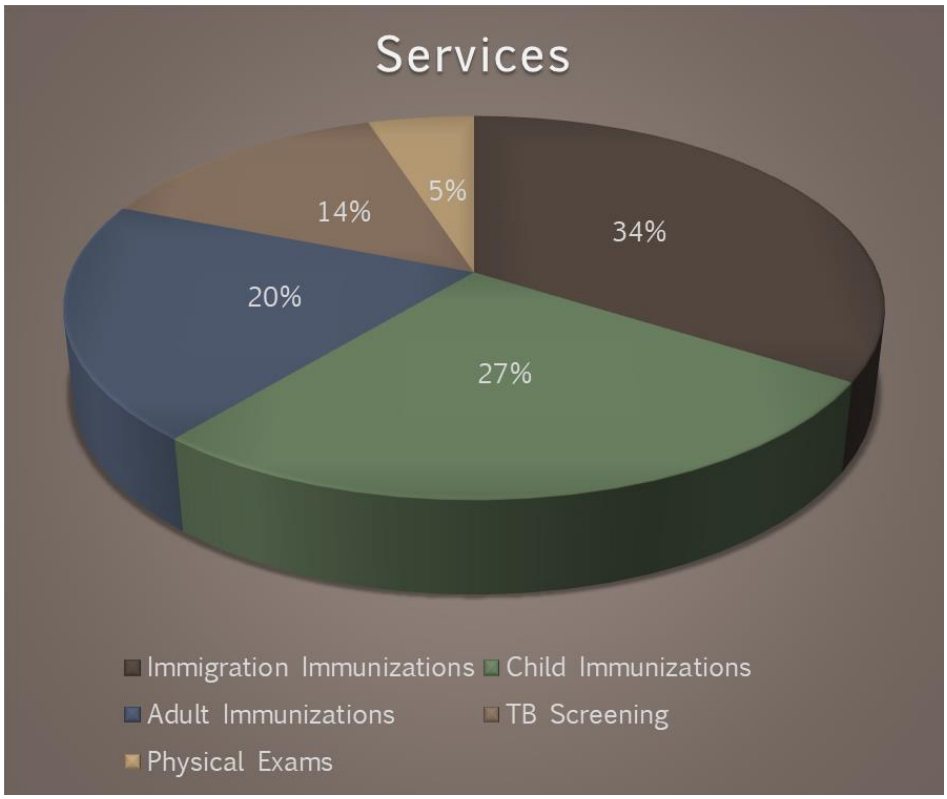

Figure 1. Services provided at the center during the assessment phase of the project. This chart provides rate of services in percentage form.

There is a lack of preventive health services for the women in the area. While there is a federally tax-exempt facility that does offer services, the facility does not provide services free of

charge. In addition, it does not accept Healthy Texas Women, a state-funded program in which women receive free preventive services such as screening mammograms and Pap tests. The communities surrounding the center stand to benefit from women's preventive health care services to decrease the disparities concerning health equity and resources. By providing these much-needed services to marginalized populations, the community can thrive.

Organization's Readiness for Change

The center is motivated and ready to implement changes that will help decrease health disparities in the surrounding communities. The staff, including health care providers, are passionate about helping vulnerable populations, as it is something the center has already been doing with the provision of immunization and physical exam services. In early 2018, the center applied to become a provider for a state-funded program called Healthy Texas Women, which was approved in April of 2019. The center was also approved to receive a grant from a local organization in June 2019. These grants support the expansion of services to women with limited income and access to health care services, are available to women between the ages of 40 and 65, and do not require proof of citizenship. They will cover the costs of providing cervical cancer and breast cancer screening for qualifying women. The staff is eager to start providing these additional services and welcomes an evaluation of the center.

Project Identification

Purpose

The purpose of the project was to implement a result notification and referral process in a healthcare center located in a low-income community. The aim was to provide the center with a process that staff could use to be notified of breast and cervical cancer screening results, and to follow-up with the patient, if needed. This enabled the center to provide wellness services,

including Pap tests and screening mammograms, and adhere to national standards. The new process began with the Nurse Practitioner reviewing the laboratory results and ended with treatment and/or a referral, when deemed necessary. By implementing this project, the expected outcomes included (1) increasing the number of eligible, low-income women who receive cervical cancer screening results (2) increasing the number of low-income women who receive screening mammogram results; and (3) increasing the number of women who are treated for sexually transmitted infections.

Objectives

The project consisted of three measurable objectives and two non-measurable objectives, as follows:

Objective 1: Develop a process for Pap test and screening mammogram result notification.

Objective 2: Develop a process for follow-up that included treatment or referral, if deemed necessary.

Objective 3: 80% of female patients to be notified of cervical cancer screening results between April 1, 2019 and July 31, 2019.

Objective 4: 80% of female patients to be notified of screening mammogram results between April 1, 2019 and July 31, 2019.

Objective 5: 100% of abnormal results to be addressed via treatment or referral between April 1, 2019 and July 30, 2019.

Anticipated Outcomes

There are currently no services provided by the center that implement any of the guidelines for women's preventive health care services, which include providing breast and cervical cancer screening results and follow-up. The implementation of this project was applied

to all women who requested services through this center. However, the intended population of the project was for women ages 18 to 65. The anticipated principal outcomes of this intervention were to (a) increase the number women who receive Pap test results to 80% over a 4 month period, (b) increase the number of women who received screening mammogram results to 80% over a four-month period, and (c) increase the number of abnormal results that were addressed via treatment or referral to 100% over a 4 month period. It was also anticipated that the process for these services was to be written up and implemented after staff was educated on the processes.

Summary and Strength of Evidence

In 2015, Collins, Stradman, Vanderpool, Neace, and Cooper implemented a result notification and referral process in a health care clinic in an underserved area of Kentucky. Screening results were mailed to patients, and abnormal results had an attached request to call the clinic within 4 business days. Those who did not respond were sent a certified letter by mail and staff followed-up with home visits. Researchers conducted a bivariate analysis to analyze results (Collins et al., 2015). Barriers to screening were identified as cost (28.4%), lack of perceived need (25.6%), lack of transportation (11.0%), fear of results (9.1%), lack of time (8.8%), and pain, discomfort, or fear of the screening process (5.7%). Motivations for screening were identified as referrals from provider (25.6%), current problems or symptoms (17.0%), perceived need (11.7%), knowing someone with history of cancer (9.8%), and receiving a $20 gift card for participation (8.5%) (Collins et al., 2015). Results indicated that 68 women (20%) received abnormal results, and only16 women received follow-up care at the facility. The study noted that there was a problem with follow-up care in women enrolled in public programs such as Medicaid, despite being offered follow up care. A study discussed in the article noted that

recent data collected from Medicaid found follow up care rates were 10.1% - 31.5%, demonstrating that follow-up care within this population is difficult (Collins et al, 2015).

A quality improvement project for cervical cancer screening was also implemented at an urban safety net clinic in Virginia (Hills, Kulbok, & Clark, 2015). The demographics of the clinic were 66% female, 56% between the ages of 35 and 64, 38% black, and 13% Hispanic. All patients were deemed to be at or below 200% of the federal poverty level, and 56% were unemployed. The project facilitator focused on four problems, identified as inaccuracy of the cervical cancer screening database; excessive provider time used to identify screening status; variability in interpreting and managing screening results; and patient follow up and compliance after screening; and aimed to improve the process related to those problems (Hills et al., 2015). First, a two-step clinical decision support system was implemented, because evidence that using this approach allows for incorporation into provider workflow and provides support to clinician at dates and times needed and with computer assistance. This ensured continuity in interpreting screening results, as results were placed in a database that was easily accessible to all providers. The project facilitator also met with providers to educate them and discuss national guidelines, clinic protocol, updated workflows, and project rationale. Based on recommendation from the U.S. Preventive Services Task Force, reminder letters for cervical cancer screening were sent to patients. Finally, the facilitator created a procedure manual that included a clinical pathway algorithm, so that consistency and best practices were ensured with every patient (Hills et al., 2015). The program focused on women between the ages of 21 and 65 that were established patients without a history of cervical cancer, and that were considered average risk. The project implementation resulted in 1,032 patients, of which 72.8% aged between 30 and 65 were appropriately screened for cervical cancer. The number of appropriately screened patients

increased from 393 in 2012 to 719 in 2013. Using a quality measure tool, it was estimated that the number of appropriately screened women was 69.7%, an increase on the previous year's 38.1% (Hills et al., 2015).

In a committee opinion, ACOG (2012)'s Committee on Patient Safety and Quality Improvement presented the importance of a tracking and reminder system for clinicians who provide women's health. According to ACOG, the lack of a tracking and reminder system for patient follow up causes delayed treatment and missed diagnoses and places the patient at an increased risk for poor health outcomes, and it is the responsibility of the health care provider to contact patients regarding referrals, imaging, and laboratory results. ACOG further suggests that there are a variety of ways in which health care providers can implement a tracking and reminder system that includes electronic systems that are part of the electronic health record (EHR) and manual systems such as logbooks, file folders, card files, and a paper-based "tickler system." Information that should be placed in a tracking system includes Pap test results, laboratory results, mammography results, imaging results, pathology reports, referrals, recommendations, and follow-up details. All results should be signed and dated by the health care provider and filed permanently in the patient's chart. Follow-up appointments should be scheduled, and rescheduled if the patient misses the appointment. Reminder systems for health care providers should be in one central location and all staff should be trained on their use so that they are used appropriately and effectively. All tracking and reminder systems should contain ordering date, patient name, identifying number, name of test or procedure, referral, date of results, date of follow-up, and completion of evaluation and patient notification. Reminder systems may be incorporated using telephone alerts or calls or custom alerts using a patient portal (ACOG, 2012).

The CDC released a manual on intervention strategies to increase mammography rates in 2008 that is still used and cited in current articles. The CDC emphasizes the benefit of telephone calls as reminders and appointment scheduling, which is less expensive and more effective than mailed communication (Wong, 2008). It also recommended that women be notified of their screening mammography results within 2 weeks and are promptly followed up to track if recommendations and referrals have been followed (Wong, 2008). This is important information for a facility that intends to implement a follow-up system. Hispanic women have a high cervical cancer mortality rate due to a lack of recommended follow up related to cultural health beliefs, immigration status, and language barriers (Duggan et al., 2012). In a parallel randomized controlled trial study focusing on Hispanic women, it was determined that adherence to follow-up recommendations after an abnormal Pap test may be aided by assigning a culturally-appropriate patient navigator (Duggan et al., 2012). This specialized case manager can help the patient navigate through potential barriers such as health beliefs, work demands, family responsibilities, transportation, language, and childcare. Though a patient navigator may be unattainable for a center, one staff member may be assigned the responsibility of reaching out to the patient and helping guide them with referrals, treatment, and recommendations. Furthermore, follow ups and method of contact may need to be tailored to certain populations. A formative analysis and randomized trial published in 2016 found that text messages decreased follow-up time in Hispanic women who received abnormal mammogram results (Oakley-Girvan et al., 2016). Furthermore, a text message was most effective and concerns of a frequent change in phone numbers or sharing of cellular phones was not observed (Oakley-Girvan et al., 2016). This intervention was done in an overburdened, understaffed, and underfunded facility which indicated that implementation of this contact method was feasible at the center.

Methods

Project Interventions

Design. The quality improvement project was implemented starting on April 1, 2019 and evaluated through July 31, 2019. Because there was no current recall notification process in place, the implementation and evaluation of the intervention involved tracking the laboratory results, recall process, and referral follow-up via the EHR. Project interventions included implementing a recall process that included: (1) provider acknowledgement of screening results via documentation; (2) patient notification of screening test results with appropriate documentation: (3) follow-up appointment for treatment and/or referral, as indicated: and (4) referral follow-up with appropriate documentation.

Providers were reminded on how to correctly acknowledge screening results in the EHR. Once the provider reviewed and acknowledged the results for a patient, they were to assign the case to the front desk staff through the EHR. If the screening test result was normal, no subsequent follow-up appointment was needed and the provider filled out a standard mail out card with notification of normal results. Once the front desk staff received the assigned case, they prepared the mail-out card for delivery. If the screening test result was abnormal, the provider assigned the case to the front desk staff, who scheduled a follow-up appointment via phone call.

When the patient was seen for the follow-up appointment, the provider discussed the screening test results with the patient. The patient received treatment, if indicated, or was referred out for further health care services. If the patient was referred out, the providers signed a referral letter and the front desk staff provided the patient with the referral letter during checkout. After 2 weeks, the front desk staff followed up with the patient via phone call to check on the status of the referral appointment. If the patient was unable to be contacted and notified of

abnormal results, there was one more attempt made on a separate day. After two attempts, a certified letter containing the screening test result was mailed.

Each step of the intervention required documentation of completion in the EHR. All staff, including providers and front desk staff, were educated on how to document the steps correctly. This process changed the way the staff communicated with each other and with their patients. It was able to provide a fast and efficient way for patients to get notified of their screening test results and ensure appropriate health care treatment and monitoring.

Setting. The nurse-led wellness center serves the local community and, through its outreach programs, worked with local charities and organizations that allowed for a partnership in which the center provided these screening tests. The wellness center also had the opportunity to partner with a local federally qualified health center located in the same area. Some barriers that affected the ease of transition into this quality improvement project included limited hours of operation and limited staffing.

Planning. To implement this project, policies and algorithms were created for the center. The Result Notification Process Policy and the Referral and Follow-Up System Policy were designed using the standards recommended by ACOG and the CDC regarding the implementation of a notification system. An accompanying algorithm for each process (Figures 2 and 3) was placed with the policy in an easily accessible binder that was specifically created as a reference guide for the staff to use. An important aspect of the algorithm is that it allowed the provider to use it as a reference for the management of results and for where to refer patients with abnormal results. All staff, including providers, RNs, and front desk staff, were taught how to use the policies and algorithms, which were designed so that all members of the team would find them useful. Copies of the algorithms were posted at the front desk.

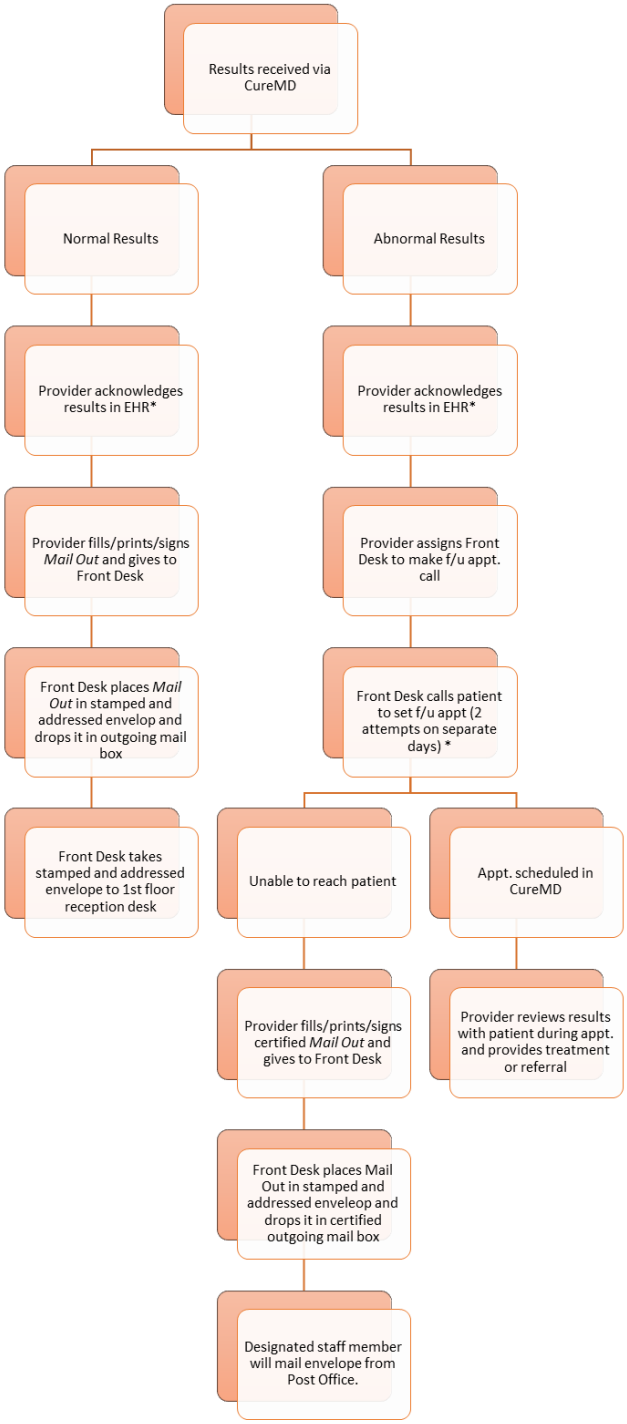

Figure 2. Result notification process algorithm. This algorithm was intended for staff to have as a reference and provided a step-by-step process. The design followed the recommendations of ACOG and CDC when implementing a notification system.

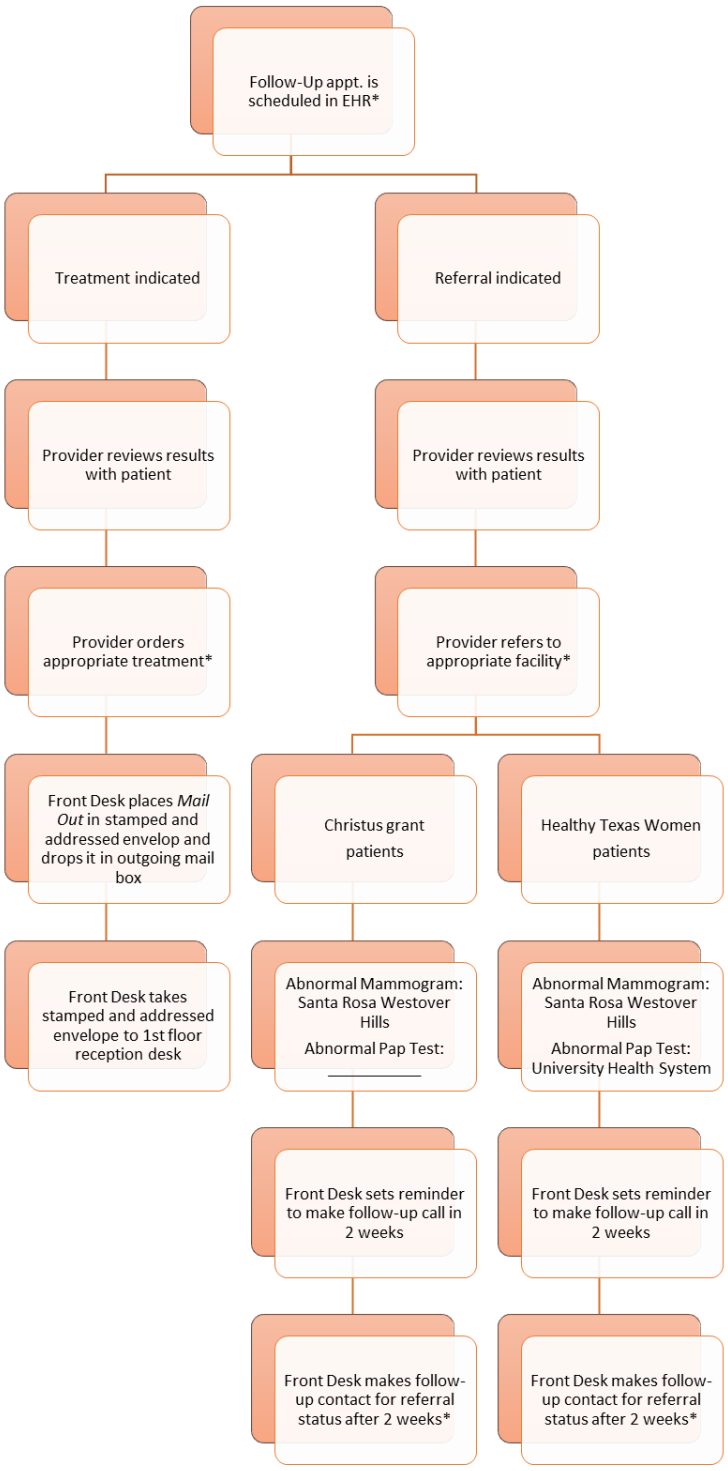

Figure 3. Referral and follow-up process algorithm. This algorithm was intended for staff to have as a reference, and provided a step-by-step process. The design followed the recommendations of ACOG and CDC when implementing a referral and follow-up.

The front-desk binder included process patient forms, organizational guidelines and recommendations, provider resources, cervical cancer and breast cancer facts, provider codes, and articles on evidence. Additionally, a file folder for patient envelopes, an outgoing mailbox, and an organization file for patient forms were placed at the front desk.

Ethical considerations. Some of the ethical implications of this project included failure to adhere to the notification and follow-up process. This would be a standard of care issue that not only impacts the quality of care, but also patient outcomes. This failure placed the patient at risk for delays in treatment that could lead to morbidity and mortality.

Results

Data Collection

Evaluation of the interventions was performed by reviewing the EHR documentation from April 2019 through July 2019. All interventions made by staff were to be documented in the EHR, respective to their role in the process. EHR documentation was reviewed at least bi-weekly, and information was placed into a worksheet for analysis. Data WERE collected and analyzed to evaluate the success of the interventions. For the cervical and breast cancer screening result notification, the documentation included (a) provider documentation acknowledgement of screening results, (b) provider documentation of standard mail out card filled out by provider, (b) front desk staff documentation of standard mail out card placed for delivery, (c) provider documentation of assigning phone call to schedule follow-up appointment for abnormal results, (d) front desk staff documentation of placing at least two phone calls to schedule follow-up appointment for abnormal results, and (e) front desk staff documentation of certified letter placed for delivery after no contact. The outcome variable for these interventions was patient notification of cervical and breast cancer screening results. For referral status follow-up, the

documentation included (a) front desk staff listing of patients in the clipboard designated for follow-up phone calls and (b) front desk staff documentation of referral follow-up phone call made and documentation of status.

Objective 1: Increase the rate of female patients notified of cervical cancer screening results to 80%. The notification rate was 100% after project implementation. The post-intervention data indicated that out of 2 women, 2 were notified appropriately (Table 2).

Table 2

Notification of Cervical Cancer Screening Results

Variable	Total Sample	Notified Appropriately	Deficient Notification	Rate (*p*Value)
Age (in years)				
18-25				
26-35	1	1		100%
36-45	1	1		100%
46-55				
Race/Ethnicity				
White non-Hispanic				
Black non-Hispanic				
Hispanic	2			100%

Objective 2: Increase the rate of female patients notified of screening mammogram results to 80%. The notification rate was 0% after project implementation. The post-intervention data indicated that out of 0 women, 0 were notified appropriately (Table 3).

Table 3

Notification of Screening Mammogram Results

Variable	Total Sample	Notified Appropriately	Deficient Notification	Rate (*p*Value)
Age (in years)				0%
18-25				
26-35				
36-45				
46-55				
Race/Ethnicity				0%
White non-Hispanic				
Black non-Hispanic				
Hispanic				

Objective 3: Increase the rate of female patients contacted about referral status to 100%. The contact rate was 0% after project implementation. The post-intervention data indicated that out of 0 women, 0 were contacted appropriately (Table 4).

Table 4

Contact Regarding Referral Status

Variable	Total Sample	Contacted Appropriately	Deficient Contact	Rate (*p*Value)
Age (in years)				0%
18-25				
26-35				
36-45				
46-55				
Race/Ethnicity				0%
White non-Hispanic				
Black non-Hispanic				
Other				

The process algorithms were referenced by staff, which increased the notification rates and contact rates for referral status. Periodical reminders at staff meetings and quick huddle meetings allowed the staff to ask questions so that the process was completed efficiently. Utilizing EHR improved the efficiency of the staff when documenting and checking on status.

Discussion

The most important outcome of the project intervention was that a notification and referral process was implemented at this facility, which had not been implemented prior to the start of the project. An algorithm flow sheet for the new processes allowed the staff to quickly reference them and ensure that steps were followed correctly. ACOG standards suggest that the notification process be tailored to the facility in which the process is being implemented. The notification and referral system that this center adopted was an essential workflow process. It is highly likely that it will continue to be a successful and cost-effective intervention for the facility.

The results of the project indicate that the easy-to-reference tools increase the likelihood of staff adherence to the workflow process. Although the center had only two patients during this project, the project lasted only 4 months, which is a short time frame to evaluate the success of a new process. In addition, the grant that funds women between the ages of 40 and 65 was not approved until June 2019. According to Tofthagen et al. (2018), there is evidence that shows that a new program or clinic can have a slow start, that facilities that are not for profit struggle with funding problems, and that many facilities find it difficult to disseminate information regarding the services that are to be provided. It is only through partnering with other organizations that referrals start to be made to the facilities. This center is not immune to the struggles of starting a new program and obtaining patients for it. Tofthagen et al. (2018) recommends that facilities

partner with local organizations so that more people are aware of what is offered within their community.

Limitations

The greatest limitation to the implementation of this project was the patient turnout for the women's health program. Once the facility was ready to receive patients, it was difficult to bring women in who were eligible for the Healthy Texas Woman program. Staff were educated on the process prior to the launch, several weeks lapsed before the first patient was seen. Initially, the local organizations that helped underserved women had communicated to the facility that there were women in need of these services. When the program launched, the women were not agreeable or had been seen by a different provider for these services. While the population the center serves may have contributed to its slow start up, new partnerships with homeless shelters and other outreach attempts helped with referring patients to the new services. Monnat (2014) identified that women of a lower socioeconomic status and minority race/ethnicity do not actively seek preventive health services, particularly mammograms and Pap tests. Many studies suggest that this is a multi-faceted problem that facilities often encounter. Staff at the facility performed outreach services that included disbursement of informational flyers and discussion with current patients to educate them on the process and the need for these services.

Recommendations

Notification and follow-up systems that are incorporated using the current EHR can reduce cost to the facility and improve efficiency in the staff's respective roles. Currently, the facility uses paper patient information forms and, because staff scans the paper forms into the EHR, it was not difficult for them to incorporate this system into the new program. This

combination of EHR and paper documentation worked well for this facility and the staff was able to comply with the process and efficiently utilize the system using the tools available. It is important that staff be educated on the tools that will be available for them to utilize when a new project is initiated.

Implications

National standards guide health care providers in providing quality health services. An important portion of these services include a notification and referral system that is consistently followed so that patients have improved health outcomes. Due to various circumstances, underserved populations of women are at higher risk of having poor health outcomes that may lead to death. It is imperative that providers and health care facilities that elect to provide women's health services adhere to set standards and recommendations so that women receive appropriate screening, diagnosis, treatment, and follow-up. This project enabled this organization and its providers to adopt a notification and referral system that was effective, efficient, and in alignment with their budget. This project also facilitated them in following recommended standards, and improved the health outcomes of the women in the community they serve.

Initiating and supporting the clinic staff with implementing a process that adheres to set standards is important in the DNP role. By addressing gaps in health care facilities where improved care can be provided, the DNP can make a significant impact in the community they serve. Increasing the number of women who are notified of test results, and subsequent care if needed, is one way the DNP can help in reducing health disparities. It is vital that a DNP prepared nurse support the implementation of recommended standards that are tailored for the facility so that they may be easily implemented, thereby ensuring successful utilization of the process.

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