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Using Evidence-based Approaches to Increase Cervical Cancer Screening Understanding and Uptake Among African American Women

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DNP Project

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Abstract

Cervical cancer screening and prevention is an important aspect of primary care. Primary care providers (PCPs) have the role of either performing the initial screening test or referring to gynecologists for testing and follow-up care if needed. The PCPs have the opportunity to to discuss the importance of cervical cancer screening at each encounter. This is of particular importance for African-American (AA) women. According to Gopalini et al. (2020) AA women have significantly higher cervical cancer incidence and mortality rates than Non-Hispanic Whites. This quality improvement project was conducted to increase the understanding of cervical cancer screening and uptake among African American Women in a south Florida medical center. Educational sessions were implemented based on Cervical Cancer Screening (CCS) guidelines from the American College of Obstetricians and Gynecologists (ACOG), instructional materials from the Centers for Disease Control and Prevention (CDC), and best practices in recommending CCS to the participants by the project team leaders (PTLs). The project processes were guided by Dr. Elizabeth Barrett's Theory of Power as Knowing Participation in Change (PKPC) and underpinned by Dr. Jean Watson's theory of human caring. Twenty-five patients participated and followed through the end of the project. Every participant received educational sessions and materials, expressed an intent to complete pap test, and completed pap screenings. The tool *CCS-KAP Survey* (Cervical Cancer Screening Knowledge, Awareness, and Practices) was used to evaluate participants' cervical cancer screening knowledge and practices in both pre- and post-intervention periods. The results demonstrated enhanced knowledge and increased uptake for pap screenings among this group.

Keywords: cervical cancer, cervical cancer screening, educational sessions, adherence

Using Evidence-based Approaches to Increase Cervical Cancer Screening Understanding and Uptake Among African American Women

This paper will describe a quality improvement project undertaken to improve cervical cancer screening among African American women in an urban clinic setting in the southeastern United States. The rate of cervical cancer among African American women has been increasing over time. Cervical cancer is featured as a gruesome burden, and even though it is preventable, women from this community face high incidence and mortality rates. The identified reasons compelled the stakeholders to implement evidence-based interventions to help increase cervical cancer screening uptake among women from black communities.

Burden of Cervical Cancer Among African American Women

Cervical cancer is the fourth type of killer cancer among women in the United States (Yoo et al., 2017). The mortality rate for cervical cancer among African American women is 10.1 deaths per 100,000 women, which is more than twice that among white women. The introduction of the human papillomavirus vaccine has de-escalated the death rates among women. However, according to Yoo et al., (2017) despite the introduction of the vaccine, AA women are still experiencing a surge of deaths related to cervical cancer. The investigators also determined women in the AA communities are less likely to receive adequate gynecological care as compared to white women. The disparity of cervical cancer treatment in this minority group poses a great danger to women from this community. This situation demonstrates that the healthcare system needs to develop interventions that will reduce the deaths of black women from cervical cancer.

Several factors have played a major role in the aforementioned inequities such as the lack of access to medication among AA women, the stigma of HPV, and financial inability to pay for services. According to Tao et al. (2017), individuals with HPV-associated cervical cancer are

likely to be stigmatized because they are sexually transmitted. Black women are often socially and economically disadvantaged, and therefore they do not have the financial ability to access quality care. According to Gibson et al. (2019), black women are under-screened for cervical cancer because of financial constraints to access care. Furthermore, some of these women do not understand the need for the screening program even if offered free screening services. The healthcare industry needs to develop interventions to help African American women access quality healthcare and convey the need to undergo timely screening.

Call for Increased Cervical Cancer Screening

The call for increased cervical cancer screening understanding and uptake in African American women is compelling. During a meeting at a southeastern medical center, providers noted. The quality measure scores for cervical cancer screening within the organization were at 72% compliance. The organizational goal is for a 90% compliance rate. HRSA's goal in Clinical Quality Measures with related Healthy People 2020 Goals is 93% compliance. As a result of the screening gap, the clinic's leadership decided to implement strategies to improve the rate of cancer screening with a focus on African American women who are disproportionately affected by low cancer screening rates.

Cervical cancer is one of the cancers which can be prevented through screening. With a pap test, "most abnormalities are detected as pre-invasive lesions rather than invasive cancer" (American Cancer Society, 2019). More Black and Hispanic women contract HPV-associated cervical cancer than women of other races or ethnicities, possibly because of decreased access to screening tests or follow-up treatment (CDC, 2020). Other barriers to screening include provider recommendations. According to Ford et al. (2021) black women reported lack of health provider recommendation for a Pap test at a higher rate than white women. Misra-Hubert (2017) studied barriers to cervical cancer screening in older women who had health insurance and a primary

care provider. It was found that the patients were either never or rarely screened because they were regularly screened for chronic diseases such as diabetes, depression, and heart disease. The findings suggested that during primary care visits, cervical cancer screening is a low priority when multiple chronic illnesses have to be addressed. Other barriers to cervical cancer screening include inadequate knowledge of the disease process, fear of screening, and patient-provider relationship among this group.

Nursing Situation

A nursing situation describing this challenge involved Ada, a 48-year-old African American female who was seen for the first time at the clinic for physical examination. Ada was asked when her last cervical cancer screening was, and she mentioned that it was done "a year ago in the emergency room" because she was having pelvic pain. The project team leader (PTL) explained that cervical cancer screenings are not routinely done in the emergency room setting and further discussed the importance of the screening. Ada then stated, "I feel fine now and I don't need that test." The emergency room records were received and cultures for sexually transmitted infection was done. A pap was scheduled and completed. The patient had an abnormal pap showing abnormal cells HSIL and positive HPV. She was seen by a gynecologist for a colposcopy which was positive for cervical cancer and continued treatment with the specialist. Ada's situation is not unlike many others encountered in this setting.

Literature Review

Cervical cancer screening (CCS) is a screening test that is highly recommended by the U.S. Preventive Services Task Force (USPSTF, 2018) to decrease the number of deaths related to cervical cancer. The USPSTF (2018) and American Cancer Society (ACS, 2021)) recommend clinician participation in discussing preventative services to their patients (USPSTF, 2018 &

ACS, 2021). Strategies to reduce the gap in care and racial disparity includes providing patient education, provider education, and giving a strong provider recommendation to screening.

Provider Education

Moen et al. (2019) determined that educating providers on CCS and advising them on how to engage patients to participate in cervical cancer screening increase screening uptake. In studying health literacy among AA women, Akintolan et al. (2017) found that lower levels of information about cervical cancer reduced cervical cancer screening frequency. In a separate study, Gibson et al. (2019) confirmed that AA women who were less knowledgeable on cervical cancer testing were two and a half times more likely not to have undergone a screening test. According to Hall et al. (2018), this population segment also has inadequate knowledge of the severity of cervical cancer, which they do not fear as much as breast cancer.

Provider-Patient Relationship and Strong Recommendations

To determine which interventions could increase the likelihood of cervical cancer screening, Bellinger, Whitney, and Abdalla (2015) held focus groups with 28 AA women in South Carolina. Honest communication and provider-patient collaboration were among the most highly valued by all participants when considering their health care experiences. Additionally, the participants reported that their health care provider was influential as an important resource about cervical cancer. Blake, et al. (2015) also found that provider recommendation and support were key drivers for pap testing in a study of AA women on Medicaid in Georgia. The study participants indicated provider support and good communication were important in their decision to seek pap testing.

The literature review focused on interventions to increase cervical cancer screening uptake in AA women. The studies demonstrated that provider education, strong provider

recommendation, and a supportive patient-provider relationship contributed to increased rates of pap testing for AA women in the southeastern United States.

Project Purpose, Aim, and Objectives

The overall goal of this quality improvement project was to improve cervical cancer screening among African American women at this FQHC. The purpose was to provide education and resources to increase the completion of pap smear testing. The primary outcome measure of the success of the project is the proportion of women exposed to the intervention who declare intent to obtain and/or complete cervical cancer screening during the project period.

To achieve the overall goal for this project, the following objectives were created:

1) 100% of staff members will be notified about the project
2) 100% of providers within the unit will receive instructions on best practices in recommending cervical cancer screening.
3) 100% of medical assistants will be recruited to join the project during the monthly unit meeting.
4) Approximately 50 African American women aged 40-65 will be invited to participate in the project during scheduled clinic visits with the community team leader.
5) 100% of the project participants will be given a pre and post-test questionnaire measuring cervical cancer knowledge and intent to undergo screening.
6) 75% of the participants will be scheduled by front desk personnel for screening with available providers or will indicate an intent to be screened.
7) 100% of the participants will be contacted by the PTL's two days prior to the scheduled appointment to reinforce cervical cancer recommendations and answer any question which arises.

8) Cervical cancer screening rates will increase by 35% from May through August 2021 compared to January through April 2021.

9) 80% of participants will indicate an intent to complete the pap test.

10) 50% of the participants of age will express intent to receive the HPV vaccine.

Conceptual Framework

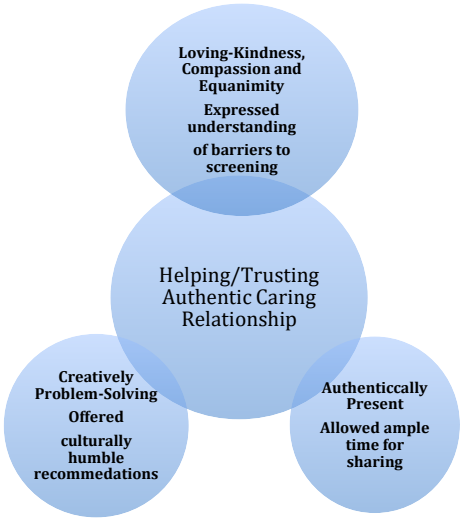
The Theory of Power as Knowing Participation in Change (PKPC) developed by Dr. Elizabeth Barrett (2010) helped guide the project's planning, implementation, and evaluation stage. The major concept of this theory is power- as- control and power -as -freedom. Power involves knowing participation in change by displaying awareness, choices, freedom to act intentionally, and involvement in creating change (Barrett, 2010). The PKPC theory (Appendix C) was applied to this project based on the understanding that patients will receive valuable information and support/guidance from their provider to make an informed decision on intent for a Pap test screening.

Caring Science Underpinnings

Dr. Jean Watson's (2018) theory of human caring was used as a guide during the project planning and implementation stage. The theory incorporates a framework for understanding the value of a patient and nurse relationship, allowing patients to reach their healthcare goals by displaying different modes of caring during encounters such as patience, kindness, and sensitivity. The team members facilitated ample uninterrupted time to allow the patient to feel comfortable and relaxed enough to express their true feelings and concerns to help guide their decision-making. Watson's Caritas processes are depicted in the Figure 1 to show the application to key project components as the PTLs developed meaningful relationships with the participants.

Figure 1

Watson's Caritas Processes



Project Description

The project was conducted at a south Florida Federally Qualified Health Center (FQHC). Key stakeholders include project participants, Dr. Deborah Gracia CMO, providers and clinic manager, and the support staff. The Project team leaders (PTLs) include Rosita Atilus, MSN, APRN who has 7 years of experience in the areas of school health, adult primary care, and women's health. Thamarre Paulino, MSN, APRN has 6 years of experience in the areas of adult primary care and women's health. The Community Team Leader (CTL), Marlene Bachrach, MSN, APRN has 20-years of experience in adult primary care and women's health. The Faculty Team Leader (FTL) Dr. Susan Bulfin, DNP, FNP-BC, FAANP, is the DNP Program Director and Professor at Florida Atlantic University. Her primary focus areas are community health, women's health, and the caring-based model for healthcare delivery.

Project Phases

Recruitment of the project participants was started in May after the approval of the health care agency and the DNP project committee. A meeting was held with the site's CEO, and she was informed of the project and its purpose and provided support. The project was implemented from May through August. There was ongoing data analysis from May through October and the project was evaluated. Findings were disseminated and presented to the agency via a ZOOM unit meeting and will be presented virtually at the Christine E. Lynn College of Nursing. The final project manuscript will be submitted to the University's digital repository.

1) May 2021: Project approval received from the committee
2) May 2021: Information session to engage stakeholders
3) May-August 2021: Recruitment of project participants
4) May-August 2021: PTLs implement instructional sessions with eligible participants
5) May-October 2021: Ongoing data analysis
6) November 2021: Manuscript and poster submission and approval
7) November 2021: Oral presentation

Recruitment and Protection of Participants

Participants were recruited during both office visits and telemedicine visits with the community leader. Inclusion criteria included (1) African American women (2) aged 40-65 (3) who are not up to date with their cervical cancer screening, and (4) who were given verbal consent to participate. Exclusion criteria included women who have a (1) history of cervical cancer (2) hysterectomy (3) and have had a pap screening test within 3 years. A total of 42 participants met the criteria and were recruited. The participant's informed consent was obtained. Their privacy and confidentiality were held throughout the project. All confidential documents

were kept locked securely in a filing cabinet accessible by the committee leader and project leader. Confidential documents which need to be destroyed were placed in a designated shredder.

Intervention

Providers were given educational materials and instructed on CCS guidelines (Appendix A) from the American College of Obstetricians and Gynecologists (ACOG) and best practices in recommending CCS to the participants by the PTLs. The team leaders were present at the clinic twice a week. The CCS-KAP Survey was administered during the first encounter with the participant. Once the participant completed the survey, they were educated on CCS tests, given time to have their questions answered, and elicit patient education feedback. A pamphlet "Cervical Cancer: Inside Knowledge About Gynecological Cancer " (*Appendix B*) developed by the CDC was issued to the patients by the team leaders during the office visit. Participants were later assisted by the front desk staff with scheduling pap tests with a provider. Before the date of the pap test, the team leaders called the participants and conducted a post-intervention test using the CCS-KAP survey. The participants were given ample time to ask specific questions about the test during this time.

Resources

The community team leader and the IT department provided access to the project participants, medical records, and access to the healthcare center. Resources used during the project include printing pre and post-test questionnaires and educational pamphlets for the patients. The clinic desktop and laptop computers were also used to access patients' charts and obtain demographic and medical information. The agency phone was used to contact patients for reminder calls for pap screenings and to complete the post-intervention survey. Email was also used to communicate with the patient and provide educational information for patients who were contacted via a telemedicine visit.

Tool/Measurements

The project leaders used evidence-based resources related to cervical cancer screening to develop the Cervical Cancer Screening Knowledge, Awareness, and Practices Survey (CCS-KAP) (Appendix C). Based on the objectives of the project, the tool evaluated participants' cervical cancer screening knowledge and practices. The survey consists of 19 closed-ended questions about cancer screening awareness, knowledge, and practices. The faculty leader and the community member served as expert reviewers to appraise the content validity of the tool.

Evaluation Plan/Measurable Outcomes

The project's success was evaluated by the extent to which each of the objectives were met.

1) 100% of staff members were notified about the project

   Goal was met: A unit meeting was held and the staff members were informed of the project goals and objectives.

2) 100% of providers within the unit received instructions on best practices in recommending cervical cancer screening.

   Goal was met: The providers in the unit received instructions by the PTL's. They implemented protocols/provider recommendations during visits with the participants.

3) 100% of medical assistants were recruited to join the project during the monthly unit meeting.

   Goal was met: The medical assistants in the unit were all recruited for the project.

4) Approximately 50 African American women aged 40-65 will be invited to participate in the project during scheduled clinic visits with the community team leader.

   Goal was partially met: Forty-two participants were recruited at the initiation of the project. Twelve participants declined to continue participation during the intervention phase. The participants who declined verbalized various reasons such as the "COVID 19

pandemic" and expressed that cervical cancer screening is "not of great importance at this time", were "afraid to come into the clinic", and testing would be done "at a later date". Some participants also stated that due to the pandemic, they did not have childcare readily available to come into the clinic to complete the test. Five participants contracted Covid 19 and were unable to continue the project. Eight participants were uninsured and expressed that they would not be able to pay for the pap test. They were referred to the eligibility department within the agency and placed on a sliding scale fee for the pap test, and therefore continued to the end of the project. . A total of a total of twenty-five participants continued the project through the end. Most stated that they were willing to complete the project because they had time. Several were on temporary lay-off from their job due to the coronavirus pandemic and were willing to complete the project at this time.

5) 100% of the project participants were given a pre and post-test questionnaire measuring cervical cancer knowledge and intent to undergo screening.

Goal was partially met. The remaining twenty-five participants received and completed both pre and post intervention questionnaires. The participants received an instructional session which consisted of a 45-minute session with the team leaders using patient educational material and guidance from ACOG and pamphlet "Cervical Cancer: Inside Knowledge About Gynecological Cancer" (Appendix A) developed by the CDC. The *CCS-KAP Survey* used consisted of 19 closed-ended questions about cancer screening awareness, knowledge, and practices.

6) 75% of the participants was scheduled by front desk personnel for screening with available providers or will indicate an intent to be screened.

Goal was met: All of the participants received scheduled appointments to perform a pap test.

7) 100% of the participants were contacted by the PTL's two days prior to the scheduled appointment to reinforce cervical cancer recommendations and answer any question which arises.

Goal was met: All of the participants who remained active in the project received appointment reminders and educational reinforcement by the PTL's.

8) Cervical cancer screening rates will increase by 35% from May through August 2021 compared to January through April 2021.

Goal was met: 80% of participants completed the pap test as noted by the pap results on their medical records.

9) 80% of participants will indicate an intent to complete the pap test.

Goal was met: 100% of the participants responded to the post-intervention survey which consisted of a 45-minute telephone session with intent to complete the pap smear.

100 % of the participants showed an increase in knowledge of cervical cancer screening as evidenced by an increase in cervical cancer survey tool pre/ post-test scores.

10) 50% of the participants of age will express intent to receive the HPV vaccine.

Goal was met: 100% of the participants of age did express the intent to receive the HPV vaccine as noted by comparison of the pre/post test scores.

Project Key Facilitators

The key facilitators for this project were the providers, unit manager, medical assistance, and receptionist. The providers were enthusiastic and open to the project's main goals and objectives. The unit manager allowed for scheduling of the patients to allow ample time during the provider visits to give instructions to the patients. The medical assistants knew of the makeup of the project participants, and we were able to help obtain and retain them throughout the

duration of the project. They also reinforced and reminded patients of cervical cancer screening scheduling. The receptionist was always readily available to schedule the patients for their pap test and was also available to place reminder calls before the date of the test alongside the medical assistant and team leaders.

Challenges Encountered

Key barriers noted during the implementation of the project were the language barrier and patients' low literacy levels. The project team leaders had to read and interpret the pre/post-test questionnaire for several female Haitian clients. This did take a great amount of time but fortunately, the team leaders spoke Haitian-Creole and were able to assist the patients who needed help.

Unintended Consequences

An unintended consequence was the inability to complete the pap test due to the COVIS-19 pandemic. Both the CEO and CMO of the medical center decided to stop screening exams such as pap tests due to the pandemic lockdown. The team leaders were still able to complete pre-test questionnaires and educational sessions with the clients. Once the lockdown was lifted and pap exams were allowed to be completed at the facility, the patients were already scheduled and ready to complete the test. They were given reminder calls and the post-test questionnaires were then administered. Telemedicine visits continued throughout this period and served as another platform to allow for the project to continue. A favorable unintended consequence was family participation. Several clients had either their daughter or another female family member present during the office visits. The family members were able to listen and also participate during the implementation stage. They asked questions and expressed the need to have their CCS

done and were given information on how to schedule a follow-up visit with a provider within the clinic.

Project Evaluation

Formative

This quality improvement project aimed to increase the intent to perform screening and increase the cervical cancer screening rate among African American women. In total, 25 participants completed this quality improvement project. All participants received education and materials on cervical cancer during the project. The percentage of patients intending to complete the pap exam indicates the project benefits in improving health literacy and helping guide healthcare decisions. There was one modification done during the planning and implementation stage of the project. The instruments used: pre and post-test had to be translated in Haitian-Creole to better assist Haitian clients. Assistance was obtained from the team leaders for the document translation.

Summative

Overall, the project met the stated objectives and resulted in improved knowledge and uptake of CCS. However, as indicated by the number of participants dropping out of the project, barriers to cervical cancer screening were prevalent among this group. According to Akintolan et al. (2017), personal barriers include the feeling of embarrassment, fear of finding cancer, anxiety about the procedure, lack of knowledge, the anticipation of pain, language barriers; and structural barriers such as cost, transportation, lack of time, and a male physician. The project found knowledge gaps that would inhibit women from performing CCS. Many of the participants were not aware of the recommended age to start screening and the intervals between screenings. 100% of the participants believed that cervical cancer screening is valuable but 60 % of the participants

stated their provider did not have the conversation with them about CCS. Their knowledge of CCS was derived from what was told to them by their family members and from the television. They were also not aware of the HPV vaccine for the prevention of cervical cancer. A total of 80% of the patients were covered by Medicare, Medicaid, or private insurance. Their CCS was covered by their insurance carrier. Only 8 participants were uninsured and assisted with a sliding scale fee within the agency to pay for testing.

Recommendations

Site-specific recommendations include adopting the project CCS processes into the primary care settings protocols. During quarterly meetings, providers and staff will be reminded of the protocol and need for cervical cancer screening discussion with their patients. The providers will be given ample time with the patients to complete the visit, educating their patients and providing strong recommendations to undergo CCS. The staff will also be required to place reminder calls to the client several days before their visit for pap testing. The staff will also be informed of the percentage of patients who are in adherence and nonadherence to their cervical cancer screenings and discuss any barriers they are faced with during the visits and ways to remedy them.

The project can be expanded to include other populations such as Hispanic- American women. According to the U.S. Department of Health and Human Services (2021) “Hispanic women are 40 percent more likely to be diagnosed with cervical cancer, and 30 percent more likely to die from cervical cancer, as compared to non-Hispanic white women”. This group is disproportionately affected by cervical cancer and would benefit from cervical cancer education and assessment of barriers they are faced with. Further quality improvement projects can also be implemented with a larger pool size and longer follow through after CCS screening to access the

effects of educational sessions/interventions on participants completion of follow up visits after testing for abnormal pap exams.

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APPENDIX A

CERVICAL CANCER

Inside Knowledge
About Gynecologic Cancer

There are five main types of cancer that affect a woman's reproductive organs: cervical, ovarian, uterine, vaginal, and vulvar. As a group, they are referred to as gynecologic (GY-neh-kuh-LAH-jik) cancer. (A sixth type of gynecologic cancer is the very rare fallopian tube cancer.)

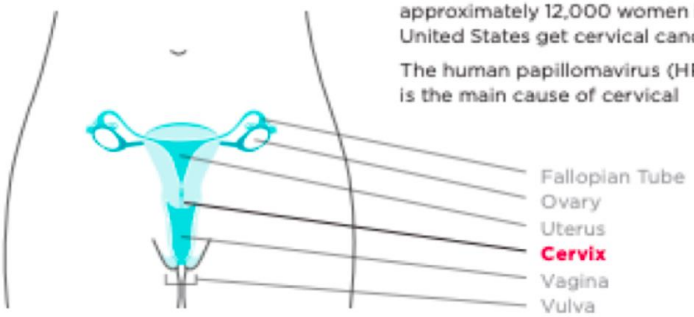
This fact sheet about cervical cancer is part of the Centers for Disease Control and Prevention's (CDC) *Inside Knowledge: About Gynecologic Cancer* campaign. The campaign helps women get the facts about gynecologic cancer, providing important "inside knowledge" about their bodies and health.

What is cervical cancer?

Cancer is a disease in which cells in the body grow out of control. Cancer is always named for the part of the body where it starts, even if it spreads to other body parts later.

When cancer starts in the cervix, it is called cervical cancer. The cervix is the lower, narrow end of the uterus. The cervix connects the vagina (the birth canal) to the upper part of the uterus. The uterus (or womb) is where a baby grows when a woman is pregnant.

Cervical cancer is the easiest gynecologic cancer to prevent with regular screening tests and follow-up. It also is highly curable when found and treated early.



Are there tests that can prevent cervical cancer or find it early?

There are two tests that can either help prevent cervical cancer or find it early:

- **Depending on your age, your doctor may recommend you have a Pap test, or an HPV test, or both tests together.**
- **The Pap test (or Pap smear) looks for precancers, cell changes, on the cervix that can be treated, so that cervical cancer is prevented. The Pap test also can find cervical cancer early, when treatment is most effective.**

  The Pap test only screens for cervical cancer. It does not screen for any other gynecologic cancer.
- **The HPV test looks for HPV—the virus that can cause precancerous cell changes and cervical cancer.**

Who gets cervical cancer?

All women are at risk for cervical cancer. It occurs most often in women over age 30. Each year, approximately 12,000 women in the United States get cervical cancer.

The human papillomavirus (HPV) is the main cause of cervical cancer. HPV is a common virus that is passed from one person to another during sex. Most sexually active people will have HPV at some point in their lives, but few women will get cervical cancer.

What are the symptoms?

Early on, cervical cancer may not cause signs and symptoms. Advanced cervical cancer may cause bleeding or discharge from the vagina that is not normal for you, such as bleeding after sex. If you have any of these signs, see your doctor. They may be caused by something other than cancer, but the only way to know is to see your doctor.

cdc.gov/cancer/knowledge 800-CDC-INFO

When should I get tested for cervical cancer?

The Pap test is one of the most reliable and effective cancer screening tests available. The Pap test is recommended for all women between the ages of 21 and 29 years old. If your Pap test results are normal, your doctor may say that you will not need another Pap test for three years.

If you are 30 years old or older, you may choose to have a Pap test, or an HPV test, or both tests together. If the results are normal, your chance of getting cervical cancer in the next few years is very low. Your doctor may then say that you can wait up to five years for your next screening.

The HPV test is also used to provide more information when women aged 21 years or older have unclear Pap test results.

For women aged 21-65, it is important to continue getting a Pap and/or HPV test as directed by your doctor—even if you think you are too old to have a child or are not having sex anymore. However, your doctor may tell you that you do not need to have a Pap or HPV test if either of these is true for you:

- **You are older than 65 and have had a normal Pap or HPV test for several years.**
- **You have had your cervix removed as part of a total hysterectomy for non-cancerous conditions, like fibroids.**

What raises a woman's chance of getting cervical cancer?

Almost all cervical cancers are caused by HPV. You are more likely to get HPV if you started having sex at an early age, or if you or your partner have had sex with several others. However, any woman who has ever had sex is at risk for HPV.

There are many types of HPV. Usually HPV will go away on its own, but if it does not, it may cause cervical cancer over time.

In addition to having HPV, these things also can increase your risk of cervical cancer:

- Smoking.
- Having HIV (the virus that causes AIDS) or another condition that makes it hard for your body to fight off health problems.
- Using birth control pills for a long time (five or more years).
- Having given birth to three or more children.

How can I prevent cervical cancer?

- See your doctor regularly for a Pap and/or HPV test.
- Follow up with your doctor if your cervical cancer screening test results are not normal.
- Get the HPV vaccine. It protects against the types of HPV that most often cause cervical, vaginal, and vulvar cancers. It is recommended for preteens (both boys and girls) aged 11 to 12 years, but can be given as early as age 9 and until age 26. The vaccine is given in a series of either two or three shots, depending on age. It is important to note that even women who are vaccinated against HPV need to have regular Pap tests to screen for cervical cancer. To learn more about the HPV vaccine visit **www.cdc.gov/hpv**.
- Don't smoke.
- Use condoms during sex.*
- Limit your number of sexual partners.

* HPV infection can occur in both male and female genital areas that are covered or protected by a latex condom, as well as in areas that are not covered. While the effect of condoms in preventing HPV infection is unknown, condom use has been associated with a lower rate of cervical cancer.

What should I do if my doctor says I have cervical cancer?

If your doctor says that you have cervical cancer, ask to be referred to a gynecologic oncologist—a doctor who has been trained to treat cancers like this. This doctor will work with you to create a treatment plan.

Where can I find free or low-cost cervical cancer screening tests?

If you have a low income or do not have insurance, you may be able to get a free or low-cost cervical cancer screening test through the National Breast and Cervical Cancer Early Detection Program. To learn more, call **800-CDC-INFO** or visit **www.cdc.gov/cancer/nbccedp.**

Where can I find more information about cervical and other gynecologic cancers?

Centers for Disease Control and Prevention: 800-CDC-INFO or www.cdc.gov/cancer/gynecologic

National Cancer Institute: 800-4-CANCER or www.cancer.gov

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

CDC Publication 899-912I. Revised January 2019

cdc.gov/cancer/knowledge
800-CDC-INFO

Inside Knowledge
About Gynecologic Cancer

APPENDIX B

Cervical Cancer Screening Knowledge, Awareness, and Practices Survey (CCS-KAP)

My name is Rosita Atilus/Thamarre Paulino and I am a Doctor of Nursing Practice student at Florida Atlantic University. The purpose of this survey is to assess your understanding, practices, and intent to complete a pap smear. Your responses will help me provide education and recommendations. The answers will be held in confidence and not shared with anyone. The survey will take approximately 10-15 minutes.

Cervical Cancer Screening Knowledge, Awareness, and Practices

1. Have you heard of cervical cancer?

- ❑ *Yes*
- ❑ *No*

2. What type of examination did you have to see if you have cervical cancer?

- ❑ *Pap Test*
- ❑ *Vaginal exam/cultures*
- ❑ *Pelvic Exam*
- ❑ *Not sure*
- ❑ *Other _____*

3. Do you know what a pap test is for?

- ❑ *Yes*
- ❑ *No*

4. Have you ever had a pap test?

- ❑ *Yes*
- ❑ *No*

5. If yes, when was the last time you had a Pap test?

- ❑ *Never*
- ❑ *Over 3 years*
- ❑ *4 years or more*

6. If not, why haven't you ever had a pap test?

- ❑ *Cost of screening*
- ❑ *I had no time*
- ❑ *The doctor did not advise me*

❑ *Fear of cancer (positive results)*
❑ *Pap smear test is painful*
❑ *Past vaginal exams have been uncomfortable*
❑ *I am embarrassed to have a provider look at my private area*
❑ *I don't have any symptoms/not necessary*
❑ *I am not sexually active so I don't need a pap smear*
❑ *It is against my religious beliefs or cultural values*
❑ *I don't know what the test is about*
❑ *I don't know any places to have one*
❑ *N/A*
❑ *Other _____*

7. When should a woman have her first pap/cervical cancer screening test?

❑ *Once you start having sex*
❑ *Age 21*
❑ *>30 years old*
❑ *>40 years old*

8. How often should a woman have a pap test for cervical cancer?

❑ *Every year*
❑ *Every 3 years*
❑ *Unknown*

9. At what age is pap/cervical cancer screening stopped?

❑ *> 50 years old*
❑ *65 years old*
❑ *After menopause*

10. Where did you find out about pap smears/cervical cancer screening?

❑ *Healthcare provider*
❑ *friends/family*
❑ *television or internet*

11. Did a health care provider talk to you about a pap test/cervical cancer and screening?

❑ *Yes*

❑ *No*

12. Has a healthcare provider ever offered you a Pap test?

❑ *Yes*

❑ *No*

13. What makes you more likely to get cervical cancer?

❑ *Early-onset of sexual activity*

❑ *Multiple sexual partners*

❑ *Smoking*

❑ *Family history of cervical cancer*

❑ *Human papillomavirus (HPV)*

❑ *Unknown*

14. Can early screening detect cervical infections/HPV so they do not develop into cancer?

❑ *Yes*

❑ *No*

15. Do you believe pap tests/cervical cancer screenings valuable?

❑ *Yes*

❑ *No*

16. Do you know what the human papillomavirus (HPV) is?

❑ *Yes*

❑ *No*

17. Did you know there is a vaccine to prevent cervical cancer?

❑ *Yes*

❑ *No*

18. Are you willing to have the pap test? (be screened for cervical cancer)?

❑ *Yes*

❑ *No*

19. Would you be willing to allow your daughter to be screened for cervical cancer?

❑ *Yes*

❑ *No*

❑ *I would allow her to decide*

APPENDIX D

Use of the PKPC to Increase Use of Cervical Cancer Screening

SPIRITUAL WORLDVIEW/MATERIAL WORLDVIEWS	
POWER AS FREEDOM	**POWER AS CONTROL**
Awareness • Patient education Pamphlets, face to face provider education Health literacy • Provider counseling and recommendations Receive instructions on best practices • Knowledge of risk factors for cervical cancer	**Freedom to Act Intentionally** •Motivation to get testing done Internal cues to action-beliefs, current knowledge of benefits to testing External cues to action providers strong recommendation, questions answered
Choices • Perceived seriousness and susceptibility of cervical cancer Testing ambivalence Testing knowledge Testing beliefs • Perceived benefits to testing Early cancer detection Early cancer treatment Knowledge of cervical cancer screening status •Perceived barriers Attitude about testing Mistrust of medical community Seeking only symptomatic care Perceived pain/fear associated with testing Scheduling/lack of time Cost for testing	**Involvement in Creating Change** •Decision making The patient indicates intent to be screened •Scheduling appointments Ease of obtaining appointments and rescheduling if needed • Reminders for testing- text, phone calls Completed cervical cancer screening

Intent to complete cervical cancer screening