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An Evidence-Based Proposal Supporting Prostate Specific Antigen in Protective Service

Occupations

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December 8, 2021

Submitted to the Faculty of Daemen College Department of Nursing
In partial fulfillment of the requirements of the degree of
Master of Science in Adult Gerontology Primary Care Nurse Practitioner

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EBP Proposal Approval Form**Daemen College****Department of Nursing**

This is to certify that Shannon Robinson in the Master of Science in Adult Gerontology Primary Care Nurse Practitioner program, Daemen College Nursing Department has successfully completed the EBP Project Proposal entitled An Evidence-Based Proposal Supporting Prostate Specific Antigen in Protective Service Occupations in partial fulfillment of the requirements for the degree of the Master of Science in Adult Gerontology Primary Care Nurse Practitioner program.

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Mom & Dad, thank you for always believing in me.

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Abstract

Clinical Problem: Prostate cancer is the most common cancer among men in the United States and is the leading cause of death (CDC, 2021). Etiology of prostate cancer remains unclear but in recent research it has been shown that there is an association between occupation and prostate cancer risk (Sritharan, et al., 2019). Specifically protective service occupations including firefighters, policeman and detectives, guards, and watchmen (Sritharan et al., 2019).

Significance: With new evidence of risk factors, it is important that these individuals understand that they are at an increased risk of being diagnosed with prostate cancer. In 2018, New York State reported 15,714 cases of prostate cancer. With such a high incidence it is important that these individuals are participating in secondary prevention measures in the hopes that prostate cancer is caught early.

PICOT Question: This EBP proposal is framed around the following PICOT question: Among persons who are in protective service occupations, what is the impact of a Nurse Practitioner led shared decision coaching program that utilizes a decision aid on improved knowledge of prostate cancer, confidence in shared decision making for prostate cancer screening and patient satisfaction over 12 weeks?

Clinical Change: The change that will be implemented in this proposal is a nurse practitioner led shared decision coaching that will occur in a primary care setting with participants in protective service occupations. Education will be provided during the decision coaching and an opportunity to ask questions about prostate cancer and an individual's specific risk factors will be allotted. Following the decision coaching the patient will be given the choice to have a PSA test ordered for them and if they decide to follow through with PSA testing, the nursing staff will take their blood draw then.

Desired Outcome: The desired outcome of this evidence-based proposal will include improved knowledge of prostate cancer specifically anatomy and function, risk factors, screening, and symptoms of prostate cancer. Other outcomes include increase in PSA testing with improved confidence in decision making regarding the testing and improved satisfaction with the interaction between the patient and nurse practitioner.

Summary: Through a review and synthesis of the literature, it was determined that the use of decision coaching and the use of decision aids are effective interventions for improving knowledge, satisfaction, and confidence.

Keywords: prostate cancer, PSA testing, protective service occupations, shared decision making, informed decision making

An Evidence-Based Proposal Supporting Prostate Specific Antigen in Protective Service Occupations

Prostate cancer is the most common cancer among men in the United States and is one of the leading causes of cancer death in men of all races (CDC, 2021). The latest incidence data from the Centers for Disease Control and Prevention is from 2018. In 2018, it was noted that in the United States there was 211,893 new cases of prostate cancer reported, and 31,488 men died from prostate cancer (CDC, 2021). For every 100,00 men, 108 new prostate cancer cases were reported, and 31 men passed away (CDC, 2021). In New York state specifically, the age adjusted rate of new cases were 132.4 per 100,000 (CDC, 2021). New York State had a total of 15,714 cases reported that year.

The etiology, also known as the cause of prostate cancer, remains unclear but the most well-established risk factors include age, family history of prostate cancer, and ethnicity (Sritharan et al., 2018). Other risk factors potentially contributing to higher rates of prostate cancer include diet, obesity, smoking, sexual behavior, sexually transmitted disease, genetic mutations, hormone levels, and occupation (Sritharan et al., 2018). Men older than the age of 50 and of African American ethnicity, as well as men who have a family history of the cancer, are at an increased risk of prostate cancer and are more likely to seek out secondary prevention measures (Sritharan et al., 2019). Recent studies completed in Canada examined work-related risk factors for prostate cancer and have shown an association between employment and prostate cancer risk (Sritharan, et al., 2019). The occupations at higher risk for prostate cancer include management and administration, farming, construction, transportation, and protective service occupations including firefighters, policeman and detectives, guards, and watchmen (Sritharan et al., 2019). The results of Sritharan et al. (2019), suggest that night shift work is associated with

prostate cancer and that those are frequent hours that protective service occupations work. Significant elevated risks were observed across protective services occupations for firefighters and police officers but there was no observed significant increased risk for armed forces and other protective services (Sritharan et al, 2018). The logic surrounding the increased risk of prostate cancer in protective services occupations involves increased exposure to diesel exhaust, dust and particulate matter, chemical agents, and radiation (Sritharan et al., 2018). Many overnight protective service occupations may also have a disruption in their circadian rhythm due to the hours of work (Sritharan et al., 2019). Protective service occupations can also be under constant psychological stress which may impact biological processes leading to the development of cancer (Sritharan et al., 2018). Even though the etiology remains unclear on prostate cancer, there is an obvious and documented correlation between prostate cancer and protective service occupations.

Because it is known that persons in service occupations have a higher risk of prostate cancer occurrence, it is important to implement prevention strategies in this population. Primary prevention and early intervention for prostate cancer may include measures such as diet and lifestyle modification and education programs promoting healthy living and early screening.

Secondary prevention measures are screenings to identify disease in the earliest stages, before the onset of signs and symptoms of a disease, examples include mammography and regular blood pressure testing (Prevention, n.d.). Secondary prevention measures are also important to managing prostate cancer cases. Secondary prevention includes screening for prostate cancer using the Prostate Specific Antigen (PSA) test and digital rectal exams (DRE). The PSA is a blood test that measures the level of PSA in the blood (CDC, 2021). Prostate Specific Antigen is a substance made by the prostate that can be elevated in individuals who

have prostate cancer as well as in persons with other conditions that affect the prostate such as an enlarged prostate, prostate infection, certain medical procedures, and certain medications (CDC, 2021). A normal PSA level is between 1-1.5 ng/ml. An above normal PSA level in the blood tends to a greater likelihood that a prostate problem is present (CDC, 2021). There are many factors that can affect the PSA level including an increased age and African American race. Another secondary prevention measure is a Digital Rectal Examination (DRE). The DRE is when a health care provider inserts a gloved lubricated finger into a man's rectum to feel the prostate for anything abnormal such as a tumor (CDC, 2021). A DRE is not currently recommended by the U.S. Preventative Services Task Force (USPSTF) as a screening test because of the lack of evidence on the benefits (CDC, 2021).

Many facilities and providers respect the USPSTF recommendations when it comes to cancer screening recommendations. The USPSTF is an independent, volunteer panel of national experts in prevention and evidence-based medicine that works to improve the health of people nationwide by making evidence-based recommendations about clinical preventive services such as screenings, counseling services, and preventive medications (U.S. Preventative Service Task Force, n.d.). The USPSTF uses a grading scale (Grade A, B, C, D, and I) to determine the suggestions of practice. The USPSTF recommendation for prostate cancer screening for men between the ages of 55 through 69 is a Grade C (U.S. Preventative Service Task Force, 2018). The Grade C prostate cancer recommendation includes that the decision to undergo periodic PSA based screening for prostate cancer should be an individual one (U.S. Preventative Service Task Force, 2018). Providers and patients should consider the balance of benefits and harms based on family history, race/ethnicity, comorbid medical conditions, patient values about the benefits and harms of screening and treatment specific outcomes and other health needs (U.S. Preventative

Service Task Force, 2018). Clinical decisions about PSA testing involve more considerations than evidence alone and should be individualized with each patient (Jama, 2018). Before one decides to proceed or not with the PSA test, one should have the opportunity to discuss the potential benefits and harms of screening with their provider and should incorporate their values and preferences in the decision (U.S. Preventative Service Task Force, 2018).

There is an uncertainty that is associated with PSA testing and the USPSTF recommends a discussion occur between the patient and provider about the risks and benefits of PSA testing. This can be called shared decision making (SDM) between patient and provider. Since the introduction of SDM, decision-making studies have shown that the patient-provider conversations are not occurring (Hopper, et al., 2017). In Hopper et al. (2017), the authors explored the barriers to prostate cancer screening and identified that there was a variation in patient-provider communication. Several participants felt that appointments with their providers were rushed or too short leading to the patient coming prepared the next time with notes on questions to ask (Hopper et al., 2017). Others felt that their provider never discussed prostate cancer screening with them or when discussed, they did not give them enough time to make an informed decision about the screening (Hopper et al., 2017). Participants also expressed the need for more information about prostate cancer symptoms, risks for developing prostate cancer, prostate cancer screening, and information about follow up for repeat PSA testing (Hopper et al., 2017). This research has shown that some individuals are not engaging in SDM with their provider. It would be beneficial to both the patient and the provider if SDM occurred with the use of a decision aid to help provide better education on prostate cancer and give individuals the knowledge and time to make an informed decision.

Definition of Terms

During this evidence-based proposal the reader may come across some terms that they are not familiar with. These are terms will be used frequently in this proposal.

- **Protective Service Occupation:** Firemen both volunteer and paid, investigators, police officers and detectives.
- **Motivational Interviewing:** An interviewing technique that allows for a genuine conversation to occur between the patient and nurse practitioner.
- **Shared Decision Making:** A patient deciding with the nurse practitioner on their specific risks and benefits of going through with PSA testing.
- **Decision Aid:** A tool that provides education about prostate cancer which aids in increasing knowledge.
- **Informed Decision Making:** A patient has all the information and education on risks and benefits of PSA testing that will lead to them making the nest decision for themselves.

Identification of Problem

The literature supports prostate cancer is one of the most common cancers without clear etiology. It is known that prostate cancer is more common in African American men, in individuals with a family history of prostate cancer and in those over the age of 65. The literature also supports those occupational hazards are common to specific occupations such as protective service occupations. This occupation can increase the risk of being diagnosed with prostate cancer. The USPSTF recommends PSA screening in individuals at risk for being diagnosed with prostate cancer. It is important for individuals to be informed properly and to not make decisions on PSA testing when the risks and benefits of testing are not clearly understood. Even with the

USPSTF recommendations being published regarding prostate cancer screening, an increase in communication and SDM between providers and patients has not been experienced (U.S. Preventative Service Task Force, 2018). With the absence of conversations and SDM, there is a risk that those who are at increased risk of prostate cancer will not be screened and will not receive proper recommended PSA testing.

Significance of the Clinical Problem

Protective service occupations, whether it be fireman, policemen, or detectives, have an increased risk of being diagnosed with prostate cancer (Sritharan et al, 2018). With proper cancer screening in individuals who do have a greater risk of being diagnosed with prostate cancer, an earlier diagnosis may lead to improved outcomes. With 31,488 deaths in the United States in 2018, there is no doubt that prostate cancer is prevalent. Engaging high risk patients in SDM and informed decision making will increase knowledge of the risks, and benefits to screening for prostate cancer. Early screening has the potential to increase survival rate with earlier detection and less invasive treatment options.

EBP Proposal Purpose

The purpose of this EBP proposal is to improve knowledge on prostate cancer, ensure that there is a productive engagement of shared decision making between the nurse practitioner and those in the protective service occupations and improve the patient's confidence in their decision regarding PSA screening. The process of SDM, increased risk communication and the use of the decision aid is intended to increase overall patient satisfaction including satisfaction with communication between patient and nurse practitioner.

PICOT Question

This EBP proposal is framed around the following PICOT question:

Among persons who are in protective service occupations, what is the impact of a Nurse Practitioner led shared decision coaching program that utilizes a decision aid on improved knowledge of prostate cancer, confidence in shared decision making for prostate cancer screening and patient satisfaction over 12 weeks?

Summary

Chapter one has presented data on the prostate cancer prevalence, etiology, and primary and secondary prevention measures as well as screening using the PSA and DRE. Presented were the USPSTF recommendations for prostate cancer screening and the use of shared decision making. It is known that prostate cancer is seen more frequently in protective service occupations such as firefighters and police officers. It is of prime importance that interventions include the use of SDM in the protective service occupation employee that includes coordination with the NP who can guide the patient toward EBP education and screening. Chapter two will provide a review of the literature and presentation of the evidence to support a change in prostate screening using SDM in protective service occupations.

Chapter Two: Synthesis of the Evidence

A thorough search of the literature was conducted to gather support for this evidence-based proposal. The three main themes that emerged from the literature are: 1) Shared Decision Making (SDM) between the Nurse Practitioner and the patient 2) Community Health Workers and Motivational Interviewing and 3) The use of a decision aid to provide better education to the patient. A comparison will be drawn between the role of the nurse practitioners as a community health worker or health coach in the decision-making process for prostate cancer screening. A synthesis of the literature will be presented in this chapter.

Search Strategies

Various search strategies and databases were used to gather quality research and literature to the relevant topic that is discussed in this evidence-based proposal. The main databases used were MEDLINE with full text and CINAHL. Access to full-text articles were obtained via the Daemen College Library website. Keywords that were used to search for appropriate literature included “shared decision making”, “prostate cancer”, “community health coaching”, “motivational interviewing”, and “decision aid”. All articles were derived from scholarly and peer-reviewed sources and have been published within the last five years (2016 to 2021) except for two articles that were published in 2015 and 2012. Articles were chosen based on the relation to prostate cancer, secondary prevention measures, community health workers and decision aids. Articles did not need to include all the criteria listed above. The level of evidence in this literature review is primarily level I. Ten out of the fifteen articles are level I. Level I articles are experimental studies, randomized controlled trials (RCT), and systemic reviews of RCT with or without meta-analysis. Two out of the fifteen articles used level II evidence, this included quasi-experimental study, systemic review of a combination of RCTs and quasi-experimental studies

only, with or without meta-analysis. Three out of the fifteen articles were level V. Level V evidence includes literature reviews. Refer to appendix A for a matrix review of the literature.

Synthesis of the Evidence

Theme One: Shared Decision-Making

The first theme that emerged from the literature was the importance of shared decision making between the nurse practitioner (NP) and the patient. This theme was prevalent in two studies completed by Stamm et al. (2017), and Makarov et al. (2021). As explained in chapter one, it is important to understand that the decision on whether to screen for prostate cancer or not is the patient's choice. At the same time as the choice for screening is the patient's, the role of the NP to assist the patient with understanding his risk of developing prostate cancer, the benefits, and risks of testing so that an informed decision can be made.

The purpose of the Stamm et al. (2017), study was to evaluate whether the use of a decision aid with or without shared decision making during a primary care visit influenced knowledge of prostate cancer screening and rates of PSA-based prostate cancer screening. The results were identified by stratifying outcomes by short term provider relationship (STPR) and long-term provider relationship (LTPR). Stamm et al. (2017), stated that shared decision making (SDM) in prostate cancer screening should have three components: The patient must have a defined choice; the patient must be apprised of his options; and lastly, the decision must ensue based upon the patient's values, preferences, and provider guidance. Stamm et al. (2017), discussed that the patients who had a decision aid along with SDM were significantly more likely to report the possibility of a diagnostic procedure or surgery compared to those who received usual care. Participants who received a decision aid alone were significantly less likely to report that they always felt encouraged to discuss all health concerns. The overall results of

the study showed that the use of a decision aid alone is an inadequate substitute for a direct conversation between patients and providers through SDM.

Makarov et al. (2021), discussed the use of community health workers (CHW) and decision coaching to promote SDM for prostate cancer screening. The purpose of the study is to evaluate the efficacy of a community health worker led decision-coaching program to facilitate SDM for prostate cancer screening among black men in the primary care setting. It is known that CHW-led interventions improve awareness, knowledge, support, and efficacy to reduce the impact of chronic disease and cancer in underserved populations (Makarov, et al., 2021). With this knowledge it seems that CHW's are ideally suited to help primary care practices seeking to facilitate SDM for PSA screening. This study is currently ongoing with an anticipated completion in March of 2023. The anticipated result of the study is that the use of a CHW led decision coaching will improve or optimize decision quality regarding prostate cancer screening.

Theme Two: Community Health Worker and Motivational Interviewing

The second theme that emerged from the literature was that CHW's and motivational interviewing (MI) improved behavior and knowledge or education on disease processes. The theme was prevalent in many of the articles that were reviewed (Alaofè, et al., 2017; Alizadeh-Sabeg, et al., 2021; Brandford et al., 2018; Kim et al., 2016; Makarov et al., 2021; Palmas, et al., 2015; Portillo, Vasquez & Brown 2020; Stacey, et al., 2012; Roland et al, 2017). Kim et al. (2016), conducted a review of studies that looked at the impact of community-based health workers (CBHW). Most studies focused on preventing cancer and cardiovascular disease. The tasks that were carried out in these studies included providing education and counseling, helping patients navigate the health care system, managing care, and providing social services and support when needed. The interventions completed by CBHW were performed in collaboration

with other health care professionals such as primary care providers. In total, 30 studies tested the effect of CBHW-led intervention on cancer control, 21 of the studies (70%) found improvements in cancer screening behaviors. The CBHW builds trust and rapport and can communicate with the community; thus, explaining why CBHWs play an important role in patient-center care teams.

Similarly, Roland et al. (2017), identified 24 articles that all reported positive outcomes of CHW interventions within federally qualified health centers. According to Roland et al. (2017), the CHW's efforts have led to an increase in cancer screening and timely completion of diagnostic follow-up and cancer treatment initiation.

Makarov et al. (2021), is an ongoing study that proposed that a CHW-led decision coaching program facilitates SDM for prostate cancer screening discussions in black men in a primary care setting. The anticipated outcome of the study that there will be an increase in PSA screening. There will also be improvement and optimized decision quality. Another outcome that is anticipated is that there will be improved behaviors and norms surrounding PSA screening.

For the last 19 years Americans have rated the honesty and ethics of nurses highest among a list of professions that Gallop asked the U.S. adults to assess annually (Reinhart, 2020). In 2020, 85% of Americans stated nurses' honesty and ethical standards are "very high" or "high" (Reinhart, 2020). The American Association of Nurse Practitioners (2019) explained that seeing a nurse practitioner for care has been tied to having higher rates of satisfaction, more health counseling added focus on prevention, improved communication, greater follow up, fewer emergency room visits, and more time spent with patients. All NP's start off their career as registered nurses (RN) and may progress to become NPs. Many qualities such as honesty and ethics remain as core values in NPs from their time spent as RNs. It can be assumed that higher

rates of satisfaction and improved communication with NPs can be attributed to the time spent in the role of an RN, trust built in the NP who function as an RN, improved communication skills, increased follow-up and increased time spent with patients. Nurse practitioners can make great health coaches who can help move patients to decision making.

Alizadeh-Sabeg et al. (2021), used a randomized control trial to study the effect of motivational interviewing (MI) on the change in breast cancer screening behaviors. Motivational interviewing is considered a client-centered approach, aimed at improving the motivation of clients to change their behavior over time. The results of the Alizadeh-Sabeg et al. (2021), study showed that MI-based counseling increased women's motivation for displaying breast cancer screening behaviors. Before the MI-based counseling, participants were in the contemplation stage but after the intervention (MI-based counseling sessions) most participants entered the action stage for self-breast checking and clinical breast examination.

Stacey et al. (2012), is an older article but serves to provide adequate information in decision coaching. In this systemic review, Stacy et al. (2012), explored characteristics and effectiveness of decision coaching evaluated within trials of patient decision aids (PtDAs) for health decisions. Decision coaching used with PtDAs compared to usual care showed an improvement in knowledge and participation in decision making without any report of dissatisfaction. It was also mentioned that decision coaching by someone within the health care team is one strategy for ensuring relevant PtDAs are subsequently discussed with the patients. The NP functioning in the role of a decision coach in the health care team can ensure relevant information regarding prostate cancer will be discussed with patients in this EBP.

Palmas et al. (2015), reviewed the efficacy of CHW intervention to improve glycemia in people with diabetes as opposed to usual care. The interventions included education provided by

a diabetes educator, being managed by a diabetes nurse, or receiving a 6-month diabetes self-management education program. Those who received a 6-month diabetes self-management education program later. Articles that were reviewed compared the use of a CHW such as a diabetes educator to the usual care that they would receive. The meta-analysis suggested the use of CHW lasting at least 12 months resulted in a modest reduction of hemoglobin A1c compared to usual care. It was also discussed that studies that have a more visit intensive CHW protocol might have had greater efficacy. Similarly, Alaofè et al. (2017), discussed diabetes prevention and management with the use of CHW interventions. These interventions included providing nutritional education and established appropriate daily exercise activities for 3 months. Ten studies were reviewed, and seven of the ten positive outcomes were observed. These positive outcomes included increased knowledge of type 2 diabetes mellitus symptoms and prevention measures; increased adoption or treatment-seeking and prevention measures; increased medication adherence; and improved fasting blood sugar, glycated hemoglobin, and body mass index. Both articles used community health workers and interventions that improved health promotion behavior and showed a reduction in Hemoglobin A1c. The use of CHWs can improve knowledge of prostate cancer and potentially improve confidence in shared decision making for prostate cancer screening and patient satisfaction. Nurse practitioners taking on the role of CHW would positively effect teaching because they have the knowledge of prostate cancer, diagnostic procedures, and secondary prevention measures. They would also be able to answer questions that the participants may have during the session.

Portillo, Vasquez, and Brown (2020), explained that MI is a client-centered technique intended to bring awareness to risky behaviors and increase the chances that the person will change their behavior. It was shown that MI adherence by CHWs improves over time and is

achievable. Nurse Practitioners, by their training, are adept with MI techniques. Portillo et al. (2020), discussed the CHWs serving as a bridge between the community and health-care professionals due to their ability to empathize with participants. Lastly, Branford et al. (2019), described the feasibility of training CHWs to deliver MI to promote cancer screening in underserved populations. The article concluded that one of the most powerful strategies to address cancer disparities in the use of CHWs to influence behavior surrounding cancer screening. When CHWs were trained to use MI, the CHWs felt that it was feasible and valuable to the work of promoting cancer screening in underserved populations (Branford et al., 2019).

The behavior change desired in this EBP would be improved knowledge of prostate cancer, confidence in SDM for prostate cancer screening and patient satisfaction. As nurses and NPs are one of the most trusted professions, the NP has an ability to empathize with patients making them an ideal CHWs or decision coaches. Implementing the NP as a decision coach who uses SDM and MI strategies in protective service occupations who are at greater risk for developing prostate cancer may improve adherence to prostate cancer screening.

Theme Three: The Use of a Decision Aid

Lastly, the third theme that was established from the matrix was the use of a decision aid to help the nurse practitioner in engaging in SDM (Allen, Filson, & Berry, 2020; Allen, et al., 2019; Owens, et al., 2018; Owens, Wooten, & Tavakoli, 2019; Rim, et al., 2018; Stacey, et al., 2012). Decision aids are patient based tools developed to help patients make medical decision about their healthcare (O’Conner, et al., 2009). Approximately half of the articles reviewed discussed the effective use of a decision aid.

Owens et al. (2018), explained that informed decision making (IDM) is characterized by a patient having a clear understanding about the disease, possessing knowledge of the risks,

benefits, and uncertainties of screening and subsequent treatment, and actively engaging at the level of decision-making desired. The decision aid that Owens et al. (2018), specifically used was iDecide, which is an embodied conversational agent-led, computer-based prostate cancer screening decision aid. The use of iDecide increased knowledge of prostate cancer as well as vastly improving informed decision-making self-efficacy. Over half of the men that participated in the study reported that they intend to participate in IDM with their healthcare provider within the next six months.

Rim et al. (2018), examined current primary care providers' perspectives on the use of decision aids (DA) and explored whether providers' beliefs and interest in use of a DA was associated with offering PSA tests for early detection of prostate cancer. It was explained that DAs are tools intended to help people weigh the benefits and harms of a health decision. In one controlled trial conducted, the authors found that providing patients a DA without a personal conversation and clinical encounter resulted in greater likelihood of a patients having a PSA test without improved knowledge of the test or the potential benefits and harms of their decision. This is then defeating the purpose of a DA. When a NP has receptivity towards tools or Das, they can assist in and supplement conversations about PSA testing. Currently only 11% of providers use a DAs when discussing PSA testing with patients while 54% of providers currently do not use DAs but are interested in learning about incorporating a DA into their practice (Rim, et al., 2018).

Allen, Filson, & Berry, (2020) piloted an online DA in primary care settings. The goal was to determine the impact of an online DA on patients' ability to engage in SDM about prostate cancer screening. Barriers were identified that deterred fully engaging patients in SDM such as the short duration of medical appointments and the need to prioritize a range of health

concerns. Allen, Filson, & Berry (2020), completed a meta-analysis and systemic reviews that demonstrated that DAs can effectively increase patients' knowledge about prostate cancer screening, promote confidence in the ability to engage in decision-making with one's provider and decrease decisional conflict. One goal of this EBP is to promote confidence in shared decision making, this article shows that a DA can increase one's confidence. The online DA that was developed for the Allen et al. (2020) study, provided men with the knowledge and skills to participate in SDM about PSA testing with their providers. At completion of this study the mean average of individuals who felt that the DA prepared them "very well/well" for the conversation about SDM with their provider were 89.5%.

Owens, Wooten, & Tavakoli, (2019) evaluated the use of psychometric properties of computer based prostate cancer screening DAs. The article discussed that for African American men to make informed decisions they need prostate cancer knowledge to be explained in plain language. It was shown that self-efficacy, computer anxiety and attitude towards technology did not correlate with technology acceptance or use. The article determined that the computer-based decision aid acceptance scale showed potential as playing a key role in increasing prostate cancer knowledge and assisting in informed decision making among African American men. One can conclude from the literature that the use of a DA can increase knowledge and decision making.

Allen et al. (2019), explained that many national studies show that many patients do not experience SDM in the context of prostate cancer screenings. Shared decision making is often difficult to accomplish in clinical practice due to the short duration of clinical visits, the need to address competing health priorities and communication challenges between patients and providers (Allen et al., 2019). Decision aids are promising means to prepare men to engage in SDM that can often occur prior to the appointment. Principle findings showed that DAs are an

effective intervention to complement patient/provider engagement in SDM by providing patients with information needed to assess their options and examine their values (Allen et al., 2019).

Stacey et al. (2012), explored the characteristics and effectiveness of decision coaching and the use of patient DAs. Decision coaching along with the use of a DA shows improvement in knowledge and participation in decision making without reported dissatisfaction. Two trials that used both decision coaching and a DA showed improved patient knowledge and treatment options for individuals with schizophrenia and women considering breast cancer genetic testing. Articles that also used coaching along with DAs compared to usual care had higher perceived participation in decision making. The use of a DA and decision coaching can improve both knowledge and participation in the decision-making process (Stacey et al., 2012). This is useful information seeing that this EBP is measuring both improved knowledge and confidence in decision making.

Synthesis of the Whole

The review of literature that has been completed for this evidence-based proposal provides great evidence to support the use of a decision aid with a community health worker or health coach improves knowledge, satisfaction, and confidence. The three themes identified in the research positively influence the PICOT question. The articles that were reviewed for this proposal touched base on more than one option to improve knowledge, satisfaction, or confidence. Community health workers or health coaching and motivational interviewing have also shown to improve knowledge and communication (Alizadeh-Sabeg et al., 2021; Brandford et al., 2018; Portillo, Vasquez & Brown, 2020). Roland et al., 2017 recognized that community health workers lead to positive outcomes related to completion of cancer screenings (RR = 1.35, 95% CI: 0.95–1.92). A nurse practitioner would make an ideal community health worker or

health coach because they hold trust with the community. Generally, nurse practitioners spend more quality time with patients and patients feel that nurse practitioners listen to their concerns. These feelings and relationships that the patients have towards the nurse practitioners can improve satisfaction.

Research has proven that the use of a decision aid will improve knowledge and leads to better communication and improvement in SDM (Allen et al., 2019; Allen, Filson & Berry, 2020; Owens et al., 2018; Owens, Wooten & Tavakoli, 2019). The use of a decision aid can also lead to better informed decisions regarding PSA screening (Allen et al., 2019). This is important because informed decisions lead to an improvement in confidence in decision (Stamm et al., 2017) proved that there are better outcomes when shared decision making and a decision aid are used together when compared to usual care (72% DA, 78% DA + SDM, 87% UC, $p = 0.0285$). Stacey et al. (2012), was one specific article that compared the use of a decision aid alone, the use of community health worker alone, as well as the combination of both the decision aid and usual care. The use of a decision aid and community health worker working together improved knowledge (15.0 v. 10.9; $P = 0.01$), participation (COMRADE 79.5 v. 69.7; $P = 0.03$), and satisfaction (odds ratio 1.49; 95% confidence interval, 1.11–2.01; $P = 0.008$) compared to usual care. This evidence showed that the use of both a decision aid and community health worker will meet all the requirements that were identified in the PICOT question. Unfortunately, there has not been a significant amount of research done supporting the use of SDM, DAs and CHWs regarding prostate cancer and protective service occupations. This evidence-based proposal will provide more information regarding individuals in protective service occupations at risk of prostate cancer and the use of a decision aid, community health workers (the NP for the purposes of this EBP) and shared decision making.

Proposed Clinical Change

A thorough analysis and review of literature was completed. It was determined that the combination of a decision aid and community health worker, such as a nurse practitioner are both appropriate and successful methods to improve knowledge of prostate cancer, confidence in shared decision making for prostate cancer screening and patient satisfaction. Research has shown that individuals in protective service occupations have an increased risk of being diagnosed with prostate cancer. Research has also proven that with the change that the USPSTF completed regarding PSA and the decision to test for PSA being put directly on the patient there have been less providers participating in shared decision making.

In this EBP we will determine the impact that a Nurse Practitioner led decision coaching program will have on individuals who are in protective service occupations such as improved knowledge on prostate cancer, increased confidence in decision making and improved satisfaction. The goal of the nurse practitioner led decision coaching using a DA will be to improve knowledge of prostate cancer, confidence in shared decision making for prostate cancer screening and patient satisfaction. Knowledge of prostate cancer, confidence in shared decision making for prostate cancer screening and patient satisfaction will be completed during the decision coaching session and the decision aid that will be given out in the waiting room while the patient waits for the decision coaching to begin. During the decision coaching session, the nurse practitioner will educate on where the prostate is located, what prostate cancer is, risk factors, signs and symptoms of prostate cancer, secondary prevention measures and the risks of the PSA testing. The nurse practitioner will also review the patients specific risk factors. During this session the patient will be allotted time to ask about questions or concerns about anything they learned about prostate cancer, PSA testing or any other questions they have regarding their

health related to their prostate. At the completion of the decision coaching session the patient will be asked if they would like to proceed with PSA testing.

Summary

A synthesis of evidence provides an inclusive summary of the findings from the literature. Three distinctive themes emerged that demonstrate the value of DAs to improve knowledge. The use of health coaching and motivational interviewing improves knowledge and communication. In chapter one it was discussed that the USPSTF recommended SDM regarding PSA testing and the literature did show that SDM provided better results in communication. As this evidence-based proposal moves forward further detail will be provided concerning guidance for implementation of the intervention and well as the various factors that will facilitate and impact the change.

Chapter Three: Framework

To support and strengthen this evidence-based proposal, a nursing theoretical framework and EBP model will be used. The nursing theory chosen to guide the proposal is the Health Promotion Model (Pender, 1982). The EBP model that will be applied is the Stetler Model (1976). The Stetler Model will guide the research methods and plan for implementation of this research. Both the framework and EBP model will be used congruently in this research proposal.

Theoretical Framework

Nola Pender developed the Health Promotion Model in 1982, which was later revised in 1996 (Sitzman & Eichelberger, 2017). Pender's Health Promotion Model is a high middle-range theory. Pender's Health Promotion Model believed that professionals intervened only after people developed an acute or chronic disease and experienced compromised lives (Sitzman & Eichelberger, 2017). Pender felt that this was not a proactive stance on health promotion and disease prevention (Sitzman & Eichelberger, 2017). Health professionals have multiple opportunities to encourage health-promoting behaviors related to presenting concerns and anticipated health challenges (Sitzman & Eichelberger, 2017). When using Pender's Health Promotion Model regarding this proposal it is using the idea that health professionals such as nurses or nurse practitioners are an important tool for educating males in protective service occupations positions on improved knowledge of prostate cancer, confidence in shared decision making for prostate cancer screening and patient satisfaction.

Pender's Health Promotion Model is simple to understand. It begins with an assessment by a healthcare professional, specifically gathering data related to behavior, personal factors, patient perceptions, and competing demands (Sitzman & Eichelberger, 2017). Then it shifts to planning the healthcare professional and the patient will work together to develop a health

promotion plan and the patient commits to the plan of action (Sitzman & Eichelberger, 2017). The implementation is the incorporation of health-promoting behavior (Sitzman & Eichelberger, 2017). Lastly, this will be evaluated based on the actual incorporation of health-promoting behavior (Sitzman & Eichelberger, 2017).

EBP Model

The EBP Model chosen for this proposal is Stetler Model (1976), this model follows the concept of research utilization (RU) (Stetler, 2001). The Stetler Model was developed in 1976 but later updated in 1994 to reflect a practitioner-oriented approach (Stetler, 2001). There are five phases of the Stetler Model, these phases will provide guidance for this proposal. The phases are preparation (Phase I), validation (Phase II), comparative evaluation/decision making (Phase III), translation/application (Phase IV) and evaluation (Phase V). The Stetler Model provides a clear set of guidelines that are designed to overcome potential barriers to the utilization and integration of evidence (Stetler, 2001).

Application of Framework to EBP Proposal

The Health Promotion Model (Penders, 1982), along with the phases of the Stetler Model (1976) can both be readily applied to this evidence-based proposal. In summary, Pender identified multiple factors that would have a potential influence on an individual's health-promoting behaviors. One factor that correlates with this research is interpersonal influences. Interpersonal influences are how significant others around the participant or patient affect motivation for positive change (Sitzman & Eichelberger, 2017). In this proposal, the significant other is the nurse practitioner. At the end of the research study, the nurse practitioner and the patient will be able to identify if the use of a decision aid enhanced knowledge of prostate cancer and promoted SDM regarding PSA testing and informed decision making. This will lead to nurse

practitioners identifying if the decision aid enhanced education and promoted informed decision making with SDM.

In this proposal, we will be assessing the patient's knowledge of prostate cancer, confidence in shared decision making for prostate cancer screening and patient satisfaction. The nurse practitioner will develop a nurse practitioner led decision coaching program to educate on prostate cancer knowledge, secondary prevention measures that enhances informed decision making with the use of SDM. We will evaluate that knowledge was increased and that confidence in decision making and satisfaction with the communication between the nurse practitioner and patients was accomplished.

The Stetler Model (1976) will be applied to this evidence-based proposal by following the phases in correct order. Phase I, which is Preparation, is to identify a priority need. This phase been completed when the purpose of the Evidence-based proposal was identified. The purpose was identified in the PICOT question and purpose statement. This information can be found in Chapter One. Phase II, which is Validation, can be found in Chapter Two as well as appendix A. Phase II assess sources of evidence for the level and overall quality of the research completed. It is looking to see if the articles have merit and goodness of fit in relation to the purpose of the project. A review of literature was conducted to review the relevance of the evidence and a matrix was built to assess the quantity and quality of the evidence. Phase III, which is Comparative Evaluation/Decision Making, involves summarizing the similarities and differences among the sources of evidence that are evaluated. This will then determine if it is acceptable and feasible to apply the finding to practice. This again has been completed in Chapter Two, through an extensive synthesis of the evidence and planning for implementation of the proposed intervention. Phase IV, Translation/Application, this phase is the development of

how to implement the summarized findings and identify practice implications that justify application of findings for change (Stetler, 2001). This was identified in Chapter Two in the description of the strategy for the proposed change. Phase V, Evaluation, which is the final phase. This is the identification of expected outcomes of the project and the determination whether the goals of the Evidence-Based Proposal were successfully achieved (Stetler, 2001). The evaluation can be formal or informal, as well as individual or institutional (Stetler, 2001). It is important to consider cost-benefit of various evaluation efforts and to use research utilization as a process to enhance credibility of evaluation data (Stetler, 2001). This phase will be discussed in the succeeding chapter, and it will include identification of stakeholders, budgeting and cost propositions and proposed plan for implementation.

Congruence of Framework to EBP Proposal

The theoretical framework and the EBP model are congruent with the topic of this proposal. The Health Promotion Model (1982) coincides with the proposed clinical change due to the idea that health care providers only intervened after an acute or chronic problem occurred. It places emphasis that health care providers need to be proactive and encourage health-promoting behaviors such as secondary prevention measures like PSA testing.

The Stetler Model (1976) is congruent with this proposal due to its systematic, step by step approach to Evidence-Based Proposals. It outlines the necessary steps for the proposal of an evidence based clinical change. This occurs by identifying a clinical problem (Phase I), to devising a plan for implementation (Phase IV). In the next chapter there will be a more specific outline of the Stetler Model (1976) that is specific to this Evidence-Based Proposal.

Setting

The setting in which the proposed nurse practitioner led decision coaching program will take place is a primary care office that is in proximity of multiple firehalls and police stations. This office is in the city Buffalo, New York and serves many male patients that are employed in protective service occupations. The clinicians in this office are two physicians, six primary care nurse practitioners and one physician assistant. The population that is primarily served at this office is individuals older than 18 years old to end of life. There is a total of nine healthcare providers in this office along with many other healthcare professionals such as registered nurses and licensed practical nurses. The registered nurses and licensed practical nurses complete all laboratory draws that the physicians and nurse practitioners order at that current visit. Without leaving the building patients also have access to a walk-in clinic and a pharmacy. The office is located near many fire halls, police stations and the district attorney office that employ many detectives. The facility serves many protective service occupations. This office does have another location located in another section of the city.

Population

The population of interest for the proposed clinical change comprises those in protective service occupations in an outpatient setting. These individuals will all be male and should be over 40 years old but no older than 69 years of age. The population can be easily assessed at local police stations, volunteer or paid fire halls or the district attorney's office which employ investigators which is near to the primary care office indicated in our setting.

System Focus

It is important to consider all the integral parts of the system that may affect the process of the proposed clinical change, or that may be affected by the proposed clinical change. A system focus will consider the factors that may be affected by this clinical change. We will

examine the small (micro) and large (macro) scale effects that may be impacted by the clinical change. Many factors both internal and external play a role in the impact of the proposed clinical change.

Micro/Macro Focus

When looking at the system with a microfocus lens, we are looking for smaller-scale details or components involved. Regarding the proposed clinical change of a Nurse Practitioner led shared decision coaching program that utilizes a decision aid on improved knowledge of prostate cancer, confidence in shared decision making for prostate cancer screening and patient satisfaction, there are many relationships that effect this category. When looking through a micro lens the primary relationship to consider is the levels of healthcare delivery. The levels of healthcare delivery include the patient and the care team. It is important to think about how the proposed clinical change will affect this relationship between the patient and the provider. Clinical changes that will occur include educational transaction which will include prostate cancer education and PSA testing. Effective teaching with the use of a decision aid will need to transpire to improve confidence in shared decision making and patient satisfaction. Another clinical change that will occur will be the conversation between the nurse practitioner and patient regarding shared decision making about secondary prevention measures such as PSA testing. This will transpire during the nurse practitioner shared decision coaching program. The patient's family can be involved during this process if the patient would like them to participate in the shared decision process with them.

When looking at the proposed clinical change with a macro lens, there are many interrelationships that may be affected. The macro lens is looking at the bigger picture and the entities that may be affected by the change in this EBP. Clinical changes will have an impact on

the healthcare system and society. Increasing education with a decision aid and a nurse practitioner led shared decision coaching program will increase confidence between patient and provider ensuring shared decision making is complete when discussing PSA testing. It will also reduce mortality in prostate cancer because patients will have a better understanding of prostate cancer and the risks and benefits of PSA testing.

The impact of the proposed clinical change is multifaceted and has significance across the entire healthcare system. Each factor plays a vital role in the healthcare system and society. A Nurse Practitioner led shared decision coaching program that utilizes a decision aid on improved knowledge of prostate cancer, confidence in shared decision making for prostate cancer screening and patient satisfaction yields influential outcomes that can be seen in both micro and macro scales.

Contextual Factors

There are known contextual factors that can impact the implementation of the proposed clinical change. The environment and socioeconomic status of each patient can affect the ability to achieve the desired outcomes. A lack of transportation to coaching program would prevent patients from receiving a nurse practitioner led shared decision coaching program. The population of interest is individuals in protective service occupations, these must hold a high school diploma or equivalent. This requirement will ensure that participants will have at least a 12th grade literacy level. This will be beneficial with the decision aid. Language may impact the patient's ability to understand the decision aid and prevent satisfactory communication between patient and nurse practitioner.

Summary

Factors that stem from the implementation of the proposed change are multilayered. It is important to evaluate how the clinical change may affect the health system on both a micro and macro level. It is established that this clinical change can affect both individuals and system levels and are also interconnected. Certain contextual factors may positively or negatively affect the implementation of the clinical change. The application of The Health Promotion Model (1982) and Stetler Model (1976) both provide support to successfully increase engagement of a Nurse Practitioner led shared decision coaching program that utilizes a decision aid on improved knowledge of prostate cancer, confidence in shared decision making for prostate cancer screening and patient satisfaction.

Chapter Four: Proposed Clinical Change

The proposed clinical change, based on the evidence, is to implement a Nurse Practitioner led shared decision coaching program that utilizes a decision aid which will improve knowledge of prostate cancer, confidence in shared decision making for prostate cancer screening and patient satisfaction. These changes are being implemented to improve knowledge and shared decision making between a patient and nurse practitioner to help improve knowledge regarding PSA testing which will lead to individuals having an informed decision and ensure that there is participation between the patient and nurse practitioner in performing shared decision making. This chapter will discuss the details of the proposed change with an in-depth description of the proposed clinical change, implementation, its stakeholders, data collection and budgeting.

Description of Proposed Clinical Change

The proposed clinical change will first entail recruitment of the participants. Recruitment will consist of the nurse practitioner contacting facilities that employ protective service occupations such as police stations, firehalls and the district attorney's office. The nurse practitioner will discuss with the leadership in these offices the information about the study and asking if it would be alright for flyers to be hung up on a bulletin board at each of the sites. The flyer will provide specific information regarding the program and a QR code that individuals will scan that will bring them to a short YouTube video (see appendix F). The YouTube video will be 2-3 minutes in length. The video will provide information on the study such as what the study is, who is the targeted population and why it is important to participate in the study (see appendix G).

At the completion of the YouTube video, the individual will be led to a Google form for them to provide their contact information if they are interested in participating in the study. The Google form will be created with an email specific to this study. The nurses at the primary care office will log into the email associated with the Google form and will be notified when a Google form is completed. After a nurse receives the notification that a form was completed, they will contact the individual who completed the Google form and conduct a 4-question screening to see if they meet the criteria for the study. If they meet the criteria the nurse will then discuss the purpose and design of the study and review the informed consent with the patient. Once this is completed the nurse will schedule them for the shared decision coaching session. The patient will then be sent a text message by the nurse who reviewed the study and informed consent with the patient. The texted link has the informed consent that was reviewed over the phone and the pre-questionnaire. The patient will be asked to complete the consent and questionnaire (see appendix D) prior to the decision coaching session and to bring them with the patient to this decision coaching session for review and processing by the secretary in the office.

Next is the implementation of a Nurse Practitioner led shared decision coaching with the use of a decision aid. The secretary will check the patient in and ensure that the informed consent was completed. The secretary will give the patient the decision aid after the check-in process is completed. The decision aid, implemented by Massachusetts Department of Public Health (see Appendix B) is an in-office decision aid, it has a questionnaire that would be completed right before the decision coaching with the nurse practitioner. The questionnaire consists of 6 questions that would establish if the patient had any risk factors for prostate cancer. It also provides frequently asked questions about PSA testing.

While waiting for the decision coaching session to begin the patient can complete the questionnaire that is attached to the decision aid and read the frequently asked questions on the decision aid. This will get the patient thinking about prostate cancer and PSA testing prior to the session. The patient will be called to start the nurse practitioner led decision coaching session. The nurse practitioner will review the answers of the decision aid questionnaire and assess the patient's risk of being diagnosed with prostate cancer. The conversation will consist of prostate cancer education, secondary prevention measures specifically PSA testing, any concerns he may have about PSA testing, along with the patient's personal risk factors such as family history, ethnicity and occupational or volunteer hazards. A motivational interview will occur between the patient and nurse practitioner allowing the patient to ask any question he has about any of the information that was discussed.

After the completion of the decision coaching session the nurse practitioner will give the patient the post-questionnaire (see appendix D) to evaluate their knowledge of what was discussed during the decision coaching. Once the patient has completed the post-questionnaire the nurse practitioner will review the questions that he has gotten wrong and answer any outstanding questions. This is to ensure that the patient will make an informed decision regarding PSA testing. If the patient decides to participate in PSA testing the nurse practitioner will put in the order for the nurses to draw the lab work. Prior to the nurse practitioner leaving the room after a decision was made about PSA testing, they will give the patient the COMRADE tool (see appendix C).

While the patient is waiting for the nurse to draw blood, he will have time to complete COMRADE tool (see appendix C). The COMRADE tool consists of two questionnaires that evaluate satisfaction with communication and confidence in decision making. If the patient

decides against PSA testing, he will be able to complete the COMRADE tool prior to check out. After, the nurse completes the lab work the patient will be directed to the front desk where the secretary will then check them out and the patient will give the secretary his completed COMRADE tool as well as the post-questionnaire. The secretary will place the tool in their chart.

Once the PSA test has resulted in the patient's chart, the nurse practitioner will contact the patient and advise them on where to go based on the results. Individuals that do have an elevated PSA greater than 4ng/ml will be referred to a urologist that will be associated with this research. Individuals with a PSA greater than 2.5ng/ml should have their PSA tested on a yearly basis; they will be asked if they would like to schedule that appointment at this time. Those with a PSA less than 2.5ng/ml will need to be retested in two years unless symptoms of prostate cancer occur. If this happens the patients are advised to contact the office for testing.

Data will be tracked with the data tracking sheet (see appendix J). Information that will be tracked includes if the patient decided to have PSA testing done, if they were referred to urology depending on their PSA level and if they followed-up with the urologist. The nurse practitioner will oversee completing the tracking sheet.

Stakeholders

To successfully implement any clinical change, it is important to identify all probable stakeholders who may be impacted by the clinical change. There are many stakeholders that has been identified both internal and external to the primary care office setting. The primary stakeholders involved in this clinical change are the nurse practitioner and the patient. The nurse practitioner's will be leading the decision coaching and participating in the shared decision making. The patient will actively be participating with the decision aid and the decision coaching

sessions. They will complete the decision coaching by making an informed decision on if they would like to proceed with PSA testing. Nurses will be playing the role of screening patients prior to making their appointment to establish if they qualify for the study. Other stakeholders that will be impacted by the clinical change include secretarial staff, family members, videography, IT, analyst, urologist, and insurance companies and possibly the employers depending on if the patient is in a paid protective service occupation or volunteer.

Roles

When implementing a change in clinical practice, it is important to establish and designate roles that each member will fulfill to complete the desired clinical goal. The primary role of the nurse practitioner will be to lead the decision coaching session and provide knowledge to the patient on anatomy and function of the prostate, risk factors of developing prostate cancer, prostate cancer screening, prostate cancer symptoms and evaluate their specific risk of developing prostate cancer. The nurse practitioner will also need to answer all questions that the patient may have regarding prostate cancer and PSA testing. It is important that the conversation leads to informed decision making and shared decision-making regarding PSA testing, this conversation will be a motivational interview. The nurse practitioner will also review the answers of the post-questionnaire with the patient after they complete it. Following the results of PSA testing the nurse practitioner will also oversee contacting the patient with their results and advising them on the correct course from there. The nurse practitioner will also need to complete the data tracking sheet (see appendix J).

The role of the nursing staff will be to continuously check to see if there are notifications from the Google forms of individuals interested in participating in the study. They will then contact the patient after they give their contact information after the YouTube video. During the

initial conversation between the patient and the nurse, the nurse will screen the patient to make sure that they meet the study criteria and document the answers in the patient's chart. The nurse will then discuss the purpose and design of the study, will read, and review the informed consent. Once this is completed the nurse will set up an appointment for the decision coaching session and then send the patient via text message the informed consent and pre-questionnaire (see Appendix D). The nursing staff will also have the role of drawing the PSA test if the patient decides to have secondary prevention measures done.

Secretarial staff will have multiple different roles. They will first oversee checking the patient in and ensuring that the informed consent was completed. After confirmation that the informed consent is completed, the secretary will give the patient the decision aid (see Appendix B) to be read and completed prior to the NP visit. The patient will hold onto the decision aid until they are seen for decision coaching. At the end of the visit the secretarial staff will collect the COMRADE scale (Appendix C) and the post-questionnaire (see Appendix D).

The role of the videographer will create a 2–3-minute YouTube video that describes the purpose of the study and who qualifies to participate in the study. The IT department has the role to create a QR code that will be on the flyer that is handed out at different protective service employee places of work. The QR code will direct whoever is scanning it to the YouTube Video. They will also set up the google form with an email that will be associated for with the study.

An analyst is needed to analyze the results of the pre- and post-questionnaire, COMRADE tool and the number of patients that did vs. those that did not decide on following through with PSA testing. This information can be found on the data tracking sheet (see appendix J).

The role of the urologist will be to be on standby for patients that do have an elevated PSA and need to be referred to urology. The nurse practitioner will refer patients to the urologist who have an elevated PSA testing. The nurse practitioner will keep track of this data on the tracking sheet (see appendix J). The nurse practitioner will also be tracking if the patient attended the appointment with the urologist.

Insurance companies will also be affected both positively and negatively. If an individual is diagnosed with prostate cancer in a timely fashion treatment option may not be as serious as a prostatectomy or radical prostatectomy. Instead, radiation can be a treatment option which would be less invasive and more inexpensive than the surgical options. This will affect the insurance companies in a positive way. The insurance companies will be billed for nurse practitioner led decision coaching. It will be billed as a nurse practitioner visit. This will negatively affect the insurance companies since they will need to pay for the visits.

Step by Step Description

Stetler's Phases of Evidence-Based Practice

Phase One: Preparation.

The need of this evidence-based proposal was acknowledged by conducting preliminary research on the topic. It was identified that protective service occupations are at a higher risk of being diagnosed with prostate cancer. It was also noted that when USPSTF identified that informed decision making, and shared decision making should occur when discussing and deciding on going through with PSA testing, providers were not bringing up the topic of PSA testing with their patients. Research has shown that the use of decision aids, health coaching and shared decision making positively influence informed decision making regarding secondary prevention measures such as PSA testing. To shape the purpose of the project, a PICOT question

was formed: “Among protective service occupations, what is the impact of a Nurse Practitioner led shared decision coaching program that utilizes a decision aid on improved knowledge of prostate cancer, confidence in shared decision making for prostate cancer screening and patient satisfaction over 12 weeks?”. Measurable outcomes that were identified were improved knowledge of prostate cancer, confidence in shared decision making and patient satisfaction.

Phase Two: Validation.

A thorough review of the relevant and available literature published within the last two years except for two articles that we published in 2015 and 2012. The literature review was conducted to gather credible evidence for this proposal. Multiple search strategies and databases were used to compose the literature that was reviewed for this proposal. A matrix of literature was completed to analyze the strengths, weaknesses, and similarities of each study and to appraise the evidence (see Appendix A).

Phase Three: Comparative Evaluation/Decision Making.

Once the findings had been summarized and organized in the matrix (see Appendix A), a full synthesis of the evidence was conducted. From there three themes emerged: 1) Shared Decision Making; 2) Community Health Workers and Motivational Interviewing; and 3) The Use of a Decision Aid. The use of a decision coach and decision aid was proven to improve knowledge along with improving communication and satisfaction. Based on the findings a decision was made to put this evidence-based knowledge into effect and move forward with the proposal.

Phase Four: Translation/Application.

Once the evidence-based intervention was determined, a plan for implementation in a primary care setting was constructed. The application of proposed change was described earlier

in this chapter. The proposed change included identifying the relevant stakeholders, their roles, and responsibilities, and how the change will be interpreted into the workflow or clinical change. Adequate education for all stake holders will be necessary and a formal education session will be provided.

Phase Five: Evaluation.

To evaluate the success of the clinical change, various anticipated outcomes will be clarified. We will evaluate the knowledge with a pre- and post- questionnaire (see Appendix D) to establish if each patient benefitted from the decision coaching. This pre- and post-questionnaire was used in Owens et al, (2018) article. This EBP uses the COMRADE tool to evaluate satisfaction and confidence with decision making (Appendix C) (Edwards et al., 2003). A cost-benefit analysis will be conducted to evaluate the feasibility of the proposed clinical change. The data collection and analysis procedures and the cost benefit analysis process will be outlined in further detail in the chapter.

Workflow and Responsibilities

For this proposed clinical change to occur, a few alterations in the workflow be implemented. To recruit patients for this clinical change, the recruiting process will be completed by nurse practitioners. The nurse practitioners will contact firehalls, local police stations and the district attorney's office. The nurse practitioner will speak to either the individual in charge and will explain the study that will be conducted and seek permission to hang up flyers on bulletin boards. Once permission is received the nurse practitioner will go to these sites to hang up the flyers. The nurse practitioner and IT department will team up to create a flyer (see Appendix F) that contains information about the study and a QR code that will scan and bring up a YouTube video that will provide information about the study.

The responsibilities for IT include developing a QR code for the informative flyer (see Appendix F) and creating a function that after the YouTube is completed the webpage is redirected to a Google form to fill out contact information that will be sent to the primary care office for those who are interested in participating in the study. The IT department will also oversee setting up the google form with the email associated with the study. The videographer will work with the nurse practitioner to create the short 2–3-minute YouTube video about the study. The responsibility of the videographer is to create the YouTube video that is informative to the viewer. The information contained in the YouTube video will be who is at risk for prostate cancer, what this study is, and the criteria needed to be met to participate in the study. At the completion of the video the IT tech will set up the video to automatically open a Google form for the individual watching the video. The Google form will allow them to input their name and contact number if they would like to participate in the study. The Google form will be created under an email that is specific for this study. Once the patient inputs their contact information and submits the information, a notification will be sent to the specific email that is monitored by the nursing staff at the primary care office.

The nursing staff has a plethora on responsibilities in this clinical change that occur in different times during the change. The screening questions will include age, gender, occupation, and previous diagnosis of prostate cancer. The criteria that would allow the individual to participate in the study would be age greater than 40 years old, male, no previous diagnosis of prostate cancer and protective service occupation. The nurse will document this information in the patient's chart. Once the nurse verifies that the individual calling meets the criteria the nurse will explain the purpose and design of the study and to read and explain the informed consent to the patient. If the patient wishes to continue the nurse will be responsible for scheduling them for

the nurse practitioner led decision coaching session. Once the appointment is scheduled the nurse will send the informed consent and pre-questionnaire via text to the patient to complete prior to the decision coaching session. Later in the clinical change the nurse will be responsible for checking the patient's chart to see if the nurse practitioner ordered PSA testing, if the nurse practitioner did order PSA testing the nurse will be responsible for going to the patient's room and drawing the blood for the test.

Once the patient arrives at the office for the nurse practitioner led decision coaching session, the patient will be checked in with the secretarial staff. The staff will be expected to check in the patient in a timely manner and ensure that the patient has completed the informed consent. Once it is established that the patient has completed the informed consent and the patient is checked in the secretary will give the patient the decision aid (see Appendix B). The decision aid offers education or frequently asked questions regarding prostate cancer. The decision aid also has six questions that the patient will fill out. The questions specifically address the patient's individual risk for developing prostate cancer. The patient will hold onto the decision aid until the coaching session begins with the nurse practitioner. The responsibilities of the secretarial staff include checking the patient in, printing all documentation such as decision aids and questionnaires, making sure all documents have associated number to the patient to maintain confidentiality, keeping track of questionnaires ensuring that are completed. The completed questionnaires are needed to analyze the results of the study. The secretarial staff will also check the patient out and ensure that the patient's chart has the correct contact information.

Once the patient is checked in and the decision aid is completed the patient will be called into a room to begin the NP led decision coaching session. Since the nurse practitioner is one of the primary stakeholders in this clinical change, they have many responsibilities. The nurse

practitioner's responsibilities include ensuring that the NP is properly educated on what they need to educate the patient on such as prostate cancer knowledge, risk factors, symptoms, or secondary prevention measures. This is important because the nurse practitioner will be educating the patients on this information. Other responsibilities include actively encouraging the patient to participate in the conversation and encouraging the patient to participate in the shared decision-making regarding PSA testing. This will happen in a back-and-forth conversation and will be considered the motivational interviewing. The nurse practitioner will also oversee the ordering of PSA lab test if that is what both the patient and they decided on. The nurse practitioner is also responsible for reviewing answers to the post-question to ensure that the patient understands all the information that was discussed in the session. Later in the clinical change, the nurse practitioner will be responsible for contacting the patient and discussing results of the PSA test. Depending on the PSA test results, the nurse practitioner will then suggest the next steps for the patient whether that be referring them to a urologist or scheduling another appointment to see the patient.

The nurse practitioner will take on the role as a decision coach which will be different from their role as a nurse practitioner. In this clinical change the nurse practitioner will lead one on one decision coaching appointments with each patient. Topics of conversation that the nurse practitioner will discuss during the decision coaching will include the anatomy and function of the prostate, symptoms that correlate with prostate cancer, screening measures and risk factors. The nurse practitioner will also discuss each patient's specific risk factors of developing prostate cancer. These risks were established when the patient answered the 6 questions on the decision aid (see Appendix B) that was given by the secretarial staff. The patient will ask all questions that they may have regarding prostate cancer knowledge, risk factors, symptoms, or secondary

prevention measures. With the patient being able to ask the nurse practitioner questions regarding PSA testing and risk factors for developing prostate cancer this leads to informed decision making. At the end of the decision coaching session the nurse practitioner will give the post-questionnaire for the patient to complete. Once completed the nurse practitioner will go into the patient's room to review the answers of the post-questionnaire (see appendix D). This is important as the patient should understand the correct answers and rationale as to why they are the correct answers. Having the correct information should allow for the patient to make an informed decision regarding PSA testing.

Once the questionnaire has been reviewed and the patient has a better understanding of everything that was discussed in the nurse practitioner led decision coaching session the nurse practitioner and patient will use shared decision making to decide if the patient should through with PSA testing. The patient will need to give the nurse practitioner a yes or no regarding testing for PSA at this visit. The nurse practitioner will record their answer in the data tracking sheet (see appendix J). If the patient does decide to follow through with getting PSA testing done the nurse practitioner will order the PSA test. Before leaving the room, the nurse practitioner will give the COMRADE tool (see Appendix C), the patient will have time to complete the tool while they wait for the nursing staff to come in and draw blood or before they leave if they have decided not to complete the PSA test.

Once the order for the PSA test has been placed, the nursing staff will get a notification for a blood draw. The nurse will gather materials and head to the patient's room to draw the lab work. Once the nurse is done obtaining the blood work, and the COMRADE tool is complete the patient will be directed to bring paperwork to the front desk and check out. The patient will turn the completed questionnaire and COMRADE tool to the secretary. The secretary will place the

questionnaire and COMRADE tool in the designated folder. Once the patient is checked out, the nurse practitioner led decision coaching session is completed.

After the completion of the decision coaching session, the data tracking and analysis will begin. The responsibility of the analyst is to transcribe and evaluate all the data that was collected. The data includes screening information that included demographics, the pre- and post-questionnaire, the COMRADE tool, and those who followed through with PSA testing.

While the data is being analyzed, the nurse practitioner will be checking for results of the PSA for the patients. Once the PSA test has resulted the nurse practitioner will contact the patient to review their results. Based on the results, the nurse practitioner will decide on the plan for follow-up. The nurse practitioner will follow these guidelines for deciding follow-up. Those with a PSA less than 2.5ng/ml will need to be retested in two years unless symptoms of prostate cancer occur. The nurse practitioner will encourage the patient to schedule an appointment in one year for a yearly physical. If the patient is willing the nurse practitioner will schedule that appointment while on the phone with the patient. Those with a PSA greater than 2.5ng/ml should have their PSA tested on a yearly basis. They will also be asked if they would like to schedule that appointment at this time. For patients with an elevated PSA greater than 4ng/ml, they will be referred to a urologist.

There will be an active urologist that will accept transferring of patients with an elevated PSA greater than 4ng/ml. The responsibility of the urologist will be to take over care of the patient with the elevated PSA and continue diagnostic tests to establish the diagnosis of prostate cancer. The nurse practitioner will make a note in the patients charts who are transferred to urology and follow up with them in 1 month to evaluate if they attended the appointment with

the urologist. Patients that were transferred to urology and the one month follow up will be tracked on the data tracking sheet (see appendix J) by the nurse practitioner.

Education Plan

An organized educational plan is required for successful implementation of the proposed clinical change. Education will first occur with secretarial staff, nursing staff and the nurse practitioners. After that occurs, education must take place with the patients and other stakeholders.

Education for the secretarial staff, nursing staff, and nurse practitioners is essential for implementation of the proposed clinical change. The secretarial staff must be educated on the data collection process and proper location to place completed post-questionnaires and completed COMRADE tools. The nursing staff will have extensive education on contacting the patient and understanding the screening questions that must be answered to evaluate if a patient can participate in the study. The nursing staff will also be educated that they need to specify what the informed consent entails and review it with the patient. They will also be educated on how to send the informed consent and pre-questionnaire to the patient once it has been established that they meet the criteria to participate in the study. Appendix H has education materials for the staff and specifically the nurses who will be involved in the EBP (see appendix H). Scheduling appointments and obtaining laboratory blood draws is already part of the nursing staff job description. Extra education is not required for those two areas.

Education for the nurse practitioner is essential since they are the primary stakeholder in this clinical change. The nurse practitioner must be agreeable to the decision coaching sessions and be educated on the use of a decision aid to improve prostate cancer knowledge, and shared decision making between them and the patient. The nurse practitioners must also be educated on

prostate cancer and the decision coaching program. Appendix I has the educational materials and plan for the nurse practitioner.

The second phase of the education plan will include providing patients with educational materials. The decision aid (see Appendix B) that was given at the beginning of the appointment contains information about PSA testing and frequently asked questions regarding PSA testing.

Desired Outcomes

The aim of the proposed clinical change is to increase the knowledge of prostate cancer for protective service occupations and improved satisfaction with shared decision making and improved confidence in decision making regarding PSA testing. The success of these outcomes will be measured via the collection of data from a pre- and post- intervention questionnaire that will assess the level of knowledge. The COMRADE questionnaire will measure both improved satisfaction and improved confidence. The desired outcomes of this evidence-based proposal are increased shared decision making with prostate cancer screening in protective service occupations. This will be tracked using the COMRADE tool. The COMRADE tool will track the satisfaction in the conversation and confidence in decision making. All patients will complete this after the nurse practitioner led decision coaching. Multiple studies indicated that a use of a decision aid and community health workers can produce these outcomes (Alizadeh-Sabeg et al., 2021; Brandford et al., 2018; Portillo, Vasquez & Brown, 2020).

Data Collection

A plan for data collection is necessary to ensure that outcomes of the clinical change can be properly evaluated.

Knowledge. Collecting data before the intervention then after can illuminate the overall success in improving knowledge about prostate cancer, satisfaction, and confidence. Data

collection methods include a pre- and post-questionnaire (see Appendix D) that will be given to individuals before their decision coaching session. Willingness to participate in the study will be expressed upon the patient attending to scheduled appointment. The pre-questionnaire will be sent via text message along with the informed consent. This will be sent by the nurse after the nurse discuss the purpose and design of the study and reviews what the informed consent entails with the patient. Upon arrival the patient will check in with the secretary and the secretary will confirm an informed consent was completed. Once this occurs the secretary will give the patient the decision aid to read over and complete while waiting for the nurse practitioner led decision coaching session to begin. The patient will be escorted to a room and will complete the decision coaching session. At completion of the decision coaching session the patient will be given the post-questionnaire to complete. Once completed the nurse practitioner will review the answers with the patient to ensure all questions were answered correctly and that the patient understands all the information. The patient will then be asked to decide if they would like to follow through with PSA testing.

Satisfaction and confidence. After a decision is made the nurse practitioner order the PSA test and will then give the patient the COMRADE tool to fill out. After the nurses have completed the PSA testing, the patient will then return the post-questionnaire and COMRADE tool to the secretarial staff at check-out.

Shared Decision making. The tracking tool that will be used to keep track if patients have decided on PSA testing and if they needed to be referred to urology and the tracking of patients following through with urology will all be tracked on the data tracking tool (see appendix J). The nurse practitioner will keep track of this tool and mark yes or no to what patients have decided on PSA testing and the follow-up process.

All data that is collected will be kept in secure files without identifiable information. All paperwork will have a unique number that is associated with that patient. All paperwork will have the number on it to avoid personal information such as name or date of birth to remain on the paperwork.

Data Analysis and Evaluation Plan

Knowledge. Once all the data has been collected, a data analysis will be conducted to determine if the intervention was successful or not. Scores on the pre-questionnaire will be recorded on a data tracking tool and scores on the post-questionnaires will also be recorded on a data tracking tool. Using descriptive statistics, a change in scores will be calculated to determine the percentage of improved knowledge resulting from the decision coaching session.

Satisfaction and confidence. The COMRADE questionnaire will be evaluated for the percentage of improved satisfaction and confidence in the patient decision making. The COMRADE tool uses the Likert scale to measure a participant's satisfaction and confidence in decision making.

Shared decision making. Data will also be analyzed to see the percentage of individuals who followed through with getting PSA testing done after attending the nurse practitioner led decision coaching verse those who did not follow through with PSA testing. This will be tracked using the data tracking sheet (see appendix J).

A descriptive change will be used to determine if there was an association between the intervention and improved knowledge of prostate cancer, improved satisfaction and confidence in shared decision making for prostate cancer screening. It is anticipated that those who are educated with information that they learned in the nurse practitioner decision coaching will score better on the post-questionnaire and have higher rates of satisfaction and confidence.

Communication Plan

Communication about the proposed clinical change will ensure proper implementation of the process. It is a necessary component to the clinical change. It will be necessary to discuss how the clinical change will affect the workflow for all the stakeholders and how it will be communicated to everyone. The plan will first start with a brief in-person meeting with secretarial staff, nursing staff and nurse practitioners to notify them of changes that will be put in place for them. There will be a discussion about the paperwork such as the decision aid that will be handed out at check in along with paperwork that will be collected at the completion of the appointment. The roles and responsibilities will be communicated for all involved with the clinical change. It is important to allow time during the meeting to give staff members time to ask questions or give concerns they may have. Contact information will be given to staff if they have any more questions or concerns, they can reach out. Additional meetings will be provided on an as needed basis to ensure readiness for implementation.

Once the results of the study have been determined, communication of the results to the stakeholders is important. It is important to notify the stakeholders with the results of the study, it is important because they need to know what they will need to do to sustain the change. Stakeholders such as the nurse practitioners will need to adapt to shared decision making and informed decision making to sustain the change. Patients will need to be comfortable with using motivational interviewing during the coaching sessions this will help sustain the informed decision making and shared decision making. Once the data and results are finalized the information will be presented on large graphs and flyers. Graphs and flyers will be presented in the front of the office for other patients to see. The results will also be shared with the second

office during the monthly meeting with providers. This will help with expansion of the study to this site. The results will also be present in the front of the second office as well.

Timeline

The timeline for implementation of the proposed clinical change will be in accordance with the five specific phases of the Stetler Model (1976). Below is a table that summarizes the timeline for this evidence-based project.

Step of Project	Timeframe
Phase One: Preparation	2 weeks
Phase Two: Validation	3 weeks
Phase Three: Comparative Evaluation/Decision Making	5 weeks
Phase Four: <ul style="list-style-type: none"> • Translation (communication of the change, training, acquiring materials) • Application (implementation) 	5 weeks 12 weeks
Phase Five: Evaluation	8 weeks
Total Time	35 weeks

During phase one a clinical problem was identified, and a clinical question was formulated. After two weeks of extensive thorough search of research a formal PICOT question was established. Measurable outcomes of the clinical question were considered.

During phase two a collection of evidence and an extensive review of literature was completed. Once this was completed the evidence was placed and organized into a matrix. Three

weeks was given for completion of the review of literature and matrix. Once the matrix was completed, phase three was able to begin.

During phase three the evidence that was found in the previous phase was synthesized and three themes were transpired. Phase three took five weeks. During the five weeks the best evidence was identified. A decision was then made to move forward with the implementation.

Phase four is the most extensive phase with two different components of the phase. The first component of phase four is translation, five weeks was given for this phase. The second component of phase four is application, twelve weeks was allotted for this phase. This will give a total of seventeen weeks for phase four. In the five weeks of the transition section introduction of the clinical change and preparation. Communication of the clinical change to the stakeholders that is outlined in the “Communication Plan” section will also occur during those five weeks. Education about the clinical change and its translation into the workflow will occur via in-person meetings with staff, along with training sessions. During this five weeks, essential materials such as printing of the decision aids and questionnaires that are essential for the implantation phase will be obtained. The following section in phase four, application is when the clinical change will be applied. Over the twelve weeks the nurse practitioner will lead decision coaching sessions to first responders. Patients will be given the decision aid, pre- and post- questionnaires along with the COMRADE forms that need to be completed. Sufficient time is allotted to ensure for data collection. At the end of the twelve weeks, no longer data will be completed.

The final phase, phase five entails an examination of the data that was collected. After an examination of data, an evaluation of the success of the clinical change is completed. The cost-effectiveness of the clinical change will also occur during this phase. Once completed the results of the clinical change will be communicated with the stakeholders. Communication with the

stakeholders is important during this phase to ensure that the changes that occurred will be sustained. Anticipating that the results will be beneficial, talk on expanding this study will also occur in this phase. Phase five will take a total of eight weeks to be completed.

Budget

An assessment of the budget is an important step when considering the implementation of the clinical change. The cost will be a major determinant of whether an intervention is feasible or not. It is necessary to examine the potential cost to both the primary care office and the patients that will be participating. A complete budget table for implementation, with all associated costs can be seen in Appendix E.

Costs that are included in the budget include meeting and presentation preparation, staff attendance at meetings and training sessions, materials, videographer, IT, and compensation. Ten hours will be allotted to the change leader (nurse practitioner). Included in these 10 hours are time to prepare for the staff education meetings, time to prepare for education of recruitment site leaders, development of a marketing plan for contacting employers to discuss the study and ask for permission to hang up flyers for the study, and time it takes to drive to each location for distribution of the flyers. Compensation for travel costs will be at current NYS mileage reimbursement.

Staff will be expected to attend a training session that will be accounted for in the organizational costs. Attendees will include the lead physician, two nurse practitioners, one physician assistant, one registered nurse, two licensed practical nurses, one office manager and two secretaries. Everyone will be trained on the decision aid, pre- and post-questionnaire, and the COMRADE tool and how collection procedures will transpire. They will also be informed of screening measures that need to be completed during the initial phone call with the patient and

locating the informed consent to see if it has been completed or not. They will also be informed on the anticipated outcomes of the clinical change. Salary and estimated wages have been estimated using ziprecruiter.com for the geographical region. Material costs will cover patient resources and data collection tools (see Appendix B, C, D) along with the recruitment flyer (see Appendix F) and a brief educational sheet for staff.

Lastly, it is important to understand the costs which may be incurred by the patient. These costs are highly variable as each patient's insurance situation varies. It is presumed that most patients will have insurance seeing that they are occupied in protective service occupations, but everyone's financial situation is different. Direct costs that may occur include visit copays and the cost of a lab draw. It is presumed that this will all be covered under the patient's insurance.

Return on Investment

Return on investment is an important factor to consider with the implantation of any clinical change (see appendix E). In this specific study there is a great gain on the return of investment. The nurse practitioner led decision coaching session will be billable hours which will improve the return on investment. The program itself will bring more patients into the primary care setting thus leading to more yearly physicals, sick visits etc. All these appointments will be billable hours and return on investment. Insurance companies will also see a return on investment with having less invasive procedures such as radiation verses a radical prostatectomy.

The COMRADE tool that is part of the clinical change that measures satisfaction. The goal is to have improved satisfaction at the conclusion of the study. Improved satisfaction will benefit the office by word of mouth. If the participates are satisfied with the experience they had during the study, they will refer their friends to become patients at the facility. This will increase

profit related to an increase in patients. In this case, the primary care office will not lose money due to the implementation of the clinical change.

Summary

This chapter discussed putting the clinical change into motion. Stakeholders and their roles were discussed along with the education plan that needs to be in place to educate everyone on the clinical change. There were other factors that determine if an implementation of a new clinical change is feasible. The budget was discussed along with the return on investment that shows that this clinical change is feasible and that the clinical change will not negatively affect the primary care office.

Chapter Five: Conclusions

Evidence-based practice guides clinical changes that better communication for patient-care delivery. When implementing an evidence-based intervention, it is important to observe the potential impact that the change could have on the healthcare system. The anticipated outcomes should be assessed to consider the risks and benefits of implementing the change in the current primary care practice. The aim of this evidence-based project is to develop a program to increase knowledge in protective service occupation individuals about prostate cancer and PSA testing, along with improving satisfaction with shared decision making and confidence in informed decision making in a primary care setting.

Potential Impact

The implication of this evidence-based proposal in a primary care setting has the potential to impact many aspects of the health care system. Those affected by the change will include patients and nurse practitioners. Patients will have an improved knowledge of prostate cancer and secondary prevention measures. This proposal will lead to improved shared decision making between the nurse practitioner and the patient, this will change how providers and patients decide on PSA screening. With the early and appropriate prostate cancer screening we will have earlier identification of prostate cancer leading to earlier and less invasive treatment options. With less invasive treatment options, the patient should maintain a better quality of life and costs of care will be contained for both the insurance companies and the patients.

The impact that this evidence-based proposal will have on the nurse practitioner will include improved communication skills with patients. The improved communication skills will cross over to other patients that the nurse practitioner is treating. This will improve overall rating at the primary care office and lead to more individuals wanting to become patients at that office.

Anticipated Outcomes

With the implementation of this evidence-based proposal, the main anticipated outcome is improved knowledge of prostate cancer, along with improved satisfaction and confidence in shared decision-making regarding PSA testing. The evidence provided indicates that the decision coaching and the use of a decision aid can improve knowledge, satisfaction, and confidence. Based on literature, it is predicted that the use of a decision aid and community health worker working together improved knowledge (15.0 v. 10.9; $P = 0.01$), participation (COMRADE 79.5 v. 69.7; $P = 0.03$), and satisfaction (odds ratio 1.49; 95% confidence interval, 1.11–2.01; $P = 0.008$) compared to usual care (Stacey et al., 2012). This EBP proposal utilizes the NP as the community health worker and is anticipated to yield similar results.

Secondary outcomes are also likely to result from this intervention. It is anticipated that the patients will be more aware about prostate cancer, secondary prevention measures and symptoms related to prostate cancer. Increased awareness will allow for future early identification of a potential need for PSA screening. Finally, a secondary outcome may be that the patients become more aware of their goals, values, and preferences about secondary prevention measures.

Implications for Practice

There are many practice implications highlighted in this evidence-based proposal. The first implication is for nurse practitioners to take on a role of providing shared decision making and informed decision making regarding prostate cancer and PSA testing. Prostate cancer is the most diagnosed cancer in the United States, and it is recommended that PSA testing is based on shared decision making and informed decision making between the provider and the patient. The nurse practitioner is the most ideal individual to provide the intervention identified in this

proposal because nurse practitioners are trusted by the community. Other implications include the patient participating in shared decision making and informed decision making. This is projected in the decision coaching and reviewing the answers of the post-questionnaire before deciding on PSA testing or not. The main goal of this intervention is to help those identified establish their risk factors of prostate cancer and identify their desire to follow through with PSA testing.

Sustainability

Once the data analysis has been completed and there is a demonstrated improved knowledge of prostate cancer, increased satisfaction with shared decision making, and improved confidence regarding PSA testing it will be important to expand this program. This program will first expand to other primary care offices. Nurse practitioners will travel to other primary care offices that have in house laboratory testing. Education will be provided to all employees and the nurse practitioner will stay at the new sites to oversee the beginning of the clinical change and be available to answer questions when needed. Once the program has been started flyers will be given out to other protective service occupation employers to gather more individuals to participate at the new primary care offices. Other locations that employee protective service occupations include factories such as General Mills and with the proximity to the Canada Border it would be beneficial to reach out to Border Patrol to implement them into the study. Both occupations would fall under the protective service occupations and could potentially be at an increased risk of developing prostate cancer.

Future EBP Project/Research

With completion of this evidence-based proposal supporting the implementation of a nurse practitioner led decision coaching with the use of a decision aid in the primary care setting,

there may be other areas of inquiry that could benefit from this evidence-based proposal. One area of future exploration would be to implement this proposal in other occupations that were identified in chapter one as an increased risk of developing prostate cancer including management and administration, farming, construction, and transportation (Sritharan et al., 2019). It would be feasible to identify these individuals in other occupations and bring them into the primary care office and establish the nurse practitioner led decision coaching sessions with them.

Another area of future exploration would include completing this research then start a qualitative research study with the individuals that participated in this current evidence-based proposal. In the qualitative study, there would be in person interviews with the protective service occupation participants. Topics of conversation would include how they felt about the program and any recommendation they would have about the program. The qualitative research study would improve the program and identify any changes that may be needed. Other ideas to expand nurse practitioner decision coaching would include provide the decision coaching to other diseases that would benefit from the coaching such as breast cancer. It was identified in Alizadeh-Sabeg et al (2021) that motivational based coaching increased individuals breast cancer screening behaviors.

Summary

The purpose of this evidence-based proposal was to examine the effectiveness of nurse practitioner led decision coaching using a decision aid to improve knowledge of prostate cancer, improved confidence in shared decision making for prostate cancer screening and patient satisfaction. After a thorough review and synthesis of the available literature and evidence, it was determined that decision coaching with the use of a decision aid were effective to improving

knowledge, confidence, and satisfaction. The following clinical question was developed: *Among persons who are in protective service occupations, what is the impact of a Nurse Practitioner led shared decision coaching program that utilizes a decision aid on improved knowledge of prostate cancer, confidence in shared decision making for prostate cancer screening and patient satisfaction over 12 weeks?* To answer this question a clinical change was proposed which involved the implementation of a nurse practitioner led decision coaching with the use of a decision aid. An extensive plan was discussed for the implementation of the proposed clinical change and a thorough evaluation of all components were completed. All components of the clinical change were considered with guidance of the nursing theory Health Promotion Model (Pender, 1982) in conjunction with the steps of the evidence-based proposal model Stetler Model (1976). A plan was developed for the evaluation of the clinical change, including strategies for data collection and analysis. With meaningful data, a decision can be made to move forward with incorporating the nurse practitioner led decision coaching with the use of a decision aid into the primary care setting with the hopes to improve knowledge of prostate cancer, confidence in shared decision making for prostate cancer screening and patient satisfaction in protective service occupations.

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Roland, K. B., Milliken, E. L., Rohan, E. A., DeGross, A., White, S., Melillo, S., Rorie, W. E., Signes, C.-A. C., & Young, P. A. (2017). Use of community health workers and Patient navigators to improve cancer outcomes among patients served by federally qualified health centers: a systematic literature review. *Health Equity, 1*(1), 61–76. <https://doi.org/10.1089/heq.2017.0001>

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Appendix A: Matrix of Evidence

Reference	Description/ Summary –	Analysis/Evaluation –	Synthesis –
<p>Kim, K., Choi, J. S., Choi, E., Nieman, C. L., Joo, J. H., Lin, F. R., Gitlin, L. N., & Han, H.-R. (2016). Effects of community-based health worker interventions to improve chronic disease management and care among vulnerable populations: A systematic review. <i>American Journal of Public Health, 106</i>(4). https://doi.org/10.2105/ajph.2015.302987</p>	<p>Main Points:</p> <ul style="list-style-type: none"> • Community-based health workers (CBHWs)- public health workers who are trusted members of the community they serve. • CBHWs tending to save on costs. • CBHW interventions are effective in promoting a wide range of healthy behaviors such as breast cancer screening, self-management of diabetes, hypertension, and asthma. <p>Research Type:</p> <ul style="list-style-type: none"> • Systemic review <p>Purpose:</p> <ul style="list-style-type: none"> • Provide a critical review of the evidence on CBHW interventions. Specifically, examining the types of interventions in which CBHWs are employed, the 	<p>Strengths:</p> <ul style="list-style-type: none"> • 30 studies out of 67 involved CBHWs for cancer prevention. <p>Weaknesses:</p> <ul style="list-style-type: none"> • None of the cancers in the studies were prostate cancer. <p>Why included:</p> <ul style="list-style-type: none"> • most studies focused on preventing cancer and cardiovascular disease. • Touched base on cost outcomes with CBHWs • Explained qualifications and characteristics of CBHWs 	<p>Light of the Whole</p> <p>How relates:</p> <ul style="list-style-type: none"> • CBHWs play an essential role in bridging between the health care services and the communities they serve. <p>Similar:</p> <ul style="list-style-type: none"> • Describe benefits of CBHW. • CBHW used in collaboration with providers. <p>Differs:</p> <ul style="list-style-type: none"> • Provided range of CBHW with multiple disease processes. <p>Level of Evidence:</p> <ul style="list-style-type: none"> • Level I

	<p>qualifications and characteristics of CBHWs and the patient's outcomes and cost effectiveness of such interventions in vulnerable populations with non-communicable chronic conditions.</p> <p>Main Findings:</p> <ul style="list-style-type: none">• CBHWs delivered a wide range of interventions including education, counseling, navigation assistance, case management, social services, and social support.• CBHW interventions were performed in collaboration with health care professionals.• 21 out of the 30 CBHW-led intervention on cancer control found improvements in cancer screening behaviors.• Positive changes in mammogram uptake were noted in 9 out of 16 articles. <p>Conclusions:</p> <ul style="list-style-type: none">• CBHW interventions were effective in promoting CVD risk reduction, cancer		
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	<p>screening and cognitive functioning.</p> <ul style="list-style-type: none"> • CBHWs play an essential role in bridging between the health care services and the communities they serve. • Can be an effective intervention model that is also cost effective for certain health conditions 		
<p>Owens, O. L., Felder, T., Tavakoli, A. S., Revels, A. A., Friedman, D. B., Hughes-Halbert, C., & Hébert, J. R. (2018). Evaluation of a computer-based decision aid for promoting informed prostate cancer screening decisions among African American men: Idecide. <i>American Journal of Health Promotion, 33</i>(2), 267–278. https://doi.org/10.1177/0890117118786866</p>	<p>Main Points:</p> <ul style="list-style-type: none"> • PSA test can lead to over treatment of indolent PrCA. • American cancer society (ACS), American urological association, and the US preventative services task force to recommend informed decision making (IDM) with healthcare provider to determine whether to receive PSA screening for PrCA or not. • Informed decision making is characterized by a patient having a clear understanding about the disease, possessing knowledge of the risks, benefits, and uncertainties of screening and subsequent treatment, and actively engaging in a level of decision-making desired. 	<p>Strengths:</p> <ul style="list-style-type: none"> • Study approved by institutional review board • Large Sample size <p>Weaknesses:</p> <ul style="list-style-type: none"> • Participants resided in one location. <p>Why included:</p> <ul style="list-style-type: none"> • Asked if they have had discussion with doctor about PrCA before. 	<p>Light of the Whole: How relates:</p> <ul style="list-style-type: none"> • iDecide is an effective resource for increasing PrCA knowledge. <p>Similar:</p> <ul style="list-style-type: none"> • Discussed SDM • Computer based decision aid. <p>Differs:</p> <ul style="list-style-type: none"> • Does not mention the use of iDecide and SDM. <p>Level of Evidence:</p>

	<ul style="list-style-type: none"> • Men receiving an IDM intervention reported significant increase in knowledge about PrCA compared to control group. <p>Type:</p> <ul style="list-style-type: none"> • Experimental study. <p>Purpose:</p> <ul style="list-style-type: none"> • To evaluate the effects of iDecide on prostate cancer knowledge, informed decision-making self-efficacy, technology use self-efficacy, and intention to engage in informed decision-making among African American men. <p>Main Findings:</p> <ul style="list-style-type: none"> • Research suggests men involved in IDM have numerous benefits such as improved knowledge, reduce delusional conflict, higher IDM self-efficacy. • Increase in knowledge of prostate cancer • Categories of highest change were screening, anatomy, symptoms 		<ul style="list-style-type: none"> • Level I
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	<ul style="list-style-type: none"> • Lowest change were risk factors • Increase in participants confidence to figure out the best screening choice & asking medical question without feeling dumb. • Postintervention respondents reported that they planned to make an informed decision with their health care provider about whether to receive a PrCA screening within the next 6 months or mot. <p>Conclusions:</p> <ul style="list-style-type: none"> • iDecide led to significantly higher overall knowledge across all domains. • iDecide a CBDA designed for individuals of varying literacy levels, greatly improved their existing PrCA knowledge. 		
<p>Rim, S. H., Hall, I. J., Massetti, G. M., Thomas, C. C., Li, J., & Richardson, L. C. (2018). Primary care providers' intended use of decision aids for prostate-specific antigen testing for prostate cancer screening. <i>Journal of Cancer Education</i>, 34(4), 666–670. https://doi.org/10.1007/s13187-018-1353-5</p>	<p>Main Points:</p> <ul style="list-style-type: none"> • Decision aids are tools intended to help people weigh the benefits and harms of health decisions. <p>Type:</p> <ul style="list-style-type: none"> • Randomized Control Study <p>Purpose:</p>	<p>Strengths:</p> <ul style="list-style-type: none"> • 70.5% response rate for PCP and 41.3% for NPs. • Medium time of NP practicing medicine were 14 years. <p>Weaknesses:</p> <ul style="list-style-type: none"> • Study did not differentiate between the 	<p>Light of the Whole: How relates:</p> <ul style="list-style-type: none"> • Gives explanation of reasons why SDM may not be occurring and if providers are willing to

	<ul style="list-style-type: none"> • Examine current primary care providers perspectives on use of decision aids. <p>Main Findings:</p> <ul style="list-style-type: none"> • Only 11% of providers currently use a DA when discussing PSA with pts. • 35% of practitioners do not use a DA and were NOT interested in using one. • 54% currently do not use a DA but are interested in learning about incorporating one into their practice. • 52% of providers responded that they decided together with their patients/family member about PSA testing. <p>Conclusions:</p> <ul style="list-style-type: none"> • Provider receptivity towards tools can assist in and supplement these conversations about PSA testing. • Biggest impact in increasing PCP use may be targeting family practitioners who were most likely to not currently use a DA but were interested in using one. 	<p>use of a patient DA and a physician DA.</p> <p>Why included:</p> <ul style="list-style-type: none"> • Questions pertaining to prostate cancer screening were limited to primary care physicians and nurse practitioners. <p>What learned:</p> <ul style="list-style-type: none"> • Many practitioners routinely offer and recommend PSA for all asymptomatic pts. Regardless of whether patient asks. 	<p>participate in SDM.</p> <p>Similar:</p> <ul style="list-style-type: none"> • Focused on primary care settings. <p>Differs:</p> <ul style="list-style-type: none"> • Providers opinion on SDM. <p>Level of Evidence:</p> <ul style="list-style-type: none"> • Level I
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<p>Stamm, A. W., Banerji, J. S., Wolff, E. M., Slee, A., Akapame, S., Dahl, K., Massman, J. D., Strong, M. C., Pittenger, K. R., & Corman, J. M. (2017). A decision aid versus shared decision making for prostate cancer screening: results of a randomized, controlled trial. <i>The Canadian Journal of Urology</i>, 8339–8346.</p>	<p>Main Points:</p> <ul style="list-style-type: none"> • Shared decision making (SDM) is widely encouraged by both American Urology Association and Choosing Wisely for prostate cancer screening. • SDM is challenging due to time restraints and competing patient priorities. • Strategy to mitigate the difficulties in implementing SDM is to utilize a decision aid (DA). • U.S. Preventive Services Task Force (USPSTF) guidelines, which recommend against PSA-based prostate cancer screening. • American Cancer society recommends that decisions about prostate cancer screening be made in a setting of shared decision making- this setting decisions are made by patients in conjunction with provider considering current scientific evidence as well as the values and preferences of the individual patient • American Urological Association recommends that in men aged 55-69 yrs. SDM 	<p>Strengths:</p> <ul style="list-style-type: none"> • Approved by the Benaroya Research Institute at Virginia Mason’s Institutional Review Board. • Done in the U.S. • Questions developed by research team based on content in the VMMC prostate cancer screening DA • High return rate of questionnaires. • Inclusion of patients from multiple providers. <p>Weaknesses:</p> <ul style="list-style-type: none"> • Prostate cancer questionnaire as not validated and requires further study to authenticate. • DA may be different due to varying education levels. <p>Why included:</p> <ul style="list-style-type: none"> • Completed at primary care offices. • Includes components of SDM. 	<p>Light of the Whole:</p> <p>How relates:</p> <ul style="list-style-type: none"> • DA alone is an inadequate substitute for a direct conversation between patient and provider. <p>Similar:</p> <ul style="list-style-type: none"> • Compared the use of a DA alone vs. DA with SDM. • Occurred in Primary Care Setting. <p>Differs:</p> <ul style="list-style-type: none"> • Looking at long term and short-term provider relationship. <p>Level of Evidence:</p> <ul style="list-style-type: none"> • Level I
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	<p>is the preferred model to determine whether patients should undergo PSA-based screening for prostate cancer.</p> <ul style="list-style-type: none"> • Decision aids (DA) aim to underscore the exact decision that needs to be made, provide information about options, outcomes, risks, benefits and clarify personal values. • DA initially designed to complement rather than replace counseling by a provider • Time constraints further impact primary care practices they are increasingly employed as independent sources of information despite seldom superiority to physician judgement <p>Type:</p> <ul style="list-style-type: none"> • Randomized Control Study <p>Purpose:</p> <ul style="list-style-type: none"> • Evaluate whether a DA with or without SDM during a primary care visit influenced knowledge of prostate cancer screening and rates of PSA-based prostate cancer screening, stratifying, 	<ul style="list-style-type: none"> • Provides key limitations of SDM and key advantages of SDM. • Provides what a decision aid is. 	
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	<p>outcomes by short term provider relationship and long-term provider relationship.</p> <p>Main Findings:</p> <ul style="list-style-type: none">• 3 intervention groups- usual care (UC), DA alone and SDM and DA used together• Patients in DA + SDM were significantly more likely to report discussing the possibility of diagnostic procedure or surgery compared to those in UC• DA group significantly less likely to report that they always felt encouraged to discuss all health concerns.• DA+SDM group answered more questions correctly than the UC group. <p>Conclusions:</p> <ul style="list-style-type: none">• Providing patients, a DA without a personal interaction resulted in a greater chance of undergoing PSA-based screening without improving knowledge about screening or understanding of the consequences of this decision.		
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	<ul style="list-style-type: none"> • DA + SDM were more likely to report that they had discussed the possibility of a procedure or intervention during their visit compared to DA alone. 		
<p>Roland, K. B., Milliken, E. L., Rohan, E. A., DeGroff, A., White, S., Melillo, S., Rorie, W. E., Signes, C.-A. C., & Young, P. A. (2017). Use of community health workers and Patient navigators to IMPROVE cancer outcomes among patients served by Federally qualified HEALTH Centers: A systematic literature review. <i>Health Equity, 1</i>(1), 61–76. https://doi.org/10.1089/hecq.2017.0001</p>	<p>Main Points:</p> <ul style="list-style-type: none"> • CHWs and patient navigators (PN) work to address disparities and improve cancer outcomes through education, connecting patients to and navigating them through the health care system, supporting patient adherence to screening and diagnostic services and providing social support and linkages to financial and community resources. • CHW/PN efforts have led to increase in cancer screening and timely completion of diagnostic follow-up and cancer treatment initiation. <p>Type:</p> <ul style="list-style-type: none"> • Systemic Literature Review <p>Purpose:</p> <ul style="list-style-type: none"> • First to identify studies that evaluated the effectiveness of these interventions in addressing cancer prevention 	<p>Strengths:</p> <ul style="list-style-type: none"> • All articles reviewed were written in the U.S. • All articles focused on cancer. • 24 articles reviewed <p>Weaknesses:</p> <ul style="list-style-type: none"> • CHW/PN were more often supervised by research project manager or study investigator. <p>Why included:</p> <ul style="list-style-type: none"> • Explained CHW/PN intervention characteristics. 	<p>Light of the Whole:</p> <p>How relates:</p> <ul style="list-style-type: none"> • CHWs increase cancer screening and timely completion of diagnostic follow-up and cancer treatment. <p>Similar:</p> <ul style="list-style-type: none"> • Discussed the use of CHW. • Completed in primary care setting. <p>Differs:</p> <ul style="list-style-type: none"> • Discusses diagnostic follow-up and treatment with CHWs.

	<p>and control disparities among the medically underserved (increasing screening, reducing time to diagnosis and treatment, and reducing barriers to care).</p> <ul style="list-style-type: none"> • To subsequently describe the components and characteristics to those intervention development and evaluation. <p>Main Findings:</p> <ul style="list-style-type: none"> • All studies but 2 reported significant positive outcome from the CHW/PN intervention. • Screening rates improved for women overdue for a mammogram or never screened, women at risk for inadequate pap test screening and follow-up, and men and women noncompliant with colorectal cancer screening guidelines after participating in CHW/PN interventions. <p>Conclusions:</p> <ul style="list-style-type: none"> • CHW/PN programs can improve completion and timeliness of breast, cervical and colorectal cancer 		<p>Level of Evidence:</p> <ul style="list-style-type: none"> • Level I
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	<p>screening and diagnosis among the medically underserved populations served by FQHCs.</p> <ul style="list-style-type: none"> • CHW/PN partnership can serve unique needs of diverse and underserved communities in both clinical and community settings. • CHW/PN interventions are effective in increasing cancer screening and the timeliness of diagnostic resolution among medically underserved populations 		
<p>Allen, J. D., Filson, C. P., & Berry, D. L. (2020). Effect of a prostate cancer screening decision aid for African American men in primary care settings. <i>Cancer Epidemiology Biomarkers & Prevention</i>, 29(11), 2157–2164. https://doi.org/10.1158/1055-9965.epi-20-0454</p>	<p>Main Points:</p> <ul style="list-style-type: none"> • SDM about prostate cancer screening is recommended but does not always occur. • DA had interactive segments and provided individualized assessment of prostate cancer risk. • Immediately after clinical visit, patients reported to the degree to which they were engaged by their provider in SDM. • All organizations agree that men should be offered the PSA test only after being fully informed about the potential risks and benefits of screening 	<p>Strengths:</p> <ul style="list-style-type: none"> • Study approved by the International Review Boards at Tufts University, Emory University school of medicine and the Atlanta VA medical Center. <p>Weaknesses:</p> <ul style="list-style-type: none"> • Relatively small sample. • Did not randomly assign patients to receive the DA- cannot infer causality. <p>Why included:</p>	<p>Light of the Whole: How relates:</p> <ul style="list-style-type: none"> • DA developed to prepare men to engage in SDM in primary care settings. <p>Similar:</p> <ul style="list-style-type: none"> • Describes goals of DA. • Used a pre/post evaluation design.

	<p>and discussing decisions with their health care provider (SDM).</p> <ul style="list-style-type: none"> • Barriers to SDM include short duration of medical appointments and the need to prioritize a range of health concerns. • DA's can effectively increase patients' knowledge about PrCA screening, promote confidence in the ability to engage in decision-making with provider and decrease decisional conflict. • DA's advantage could be administered prior to medical visits and could increase meaningful patient engagement in decision making. <p>Type:</p> <ul style="list-style-type: none"> • Quasi-experimental study. <p>Purpose:</p> <ul style="list-style-type: none"> • Determine the impact of an online DA on patients' ability to engage in decision-making about prostate cancer screening. <p>Main Findings:</p>	<ul style="list-style-type: none"> • Provided individualized assessment of prostate cancer risk. • Only 23% of men who undergone PSA testing within the past year had discussed the advantages and disadvantages of screening with their health care provider. 	<ul style="list-style-type: none"> • Completed in primary care settings. <p>Differs:</p> <ul style="list-style-type: none"> • DA was delivered via video following the format of a popular TV show. <p>Level of Evidence:</p> <ul style="list-style-type: none"> • Level II
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	<ul style="list-style-type: none">• Following visit patients completed questionnaire that assessed their perceived involvement in SDM with their provider.• Nearly all reported that they would choose to undergo screening for PrCA before using DA, significantly less likely to choose to undergo screening after using DA.• Most felt that the DA had prepared them “very well/well” for SDM with their provider.• PCSPrep can help to prepare men to engage in SDM when administered in primary care clinics. <p>Conclusions:</p> <ul style="list-style-type: none">• Additional research will be needed to better understand the feasibility of implementing the DA in primary care from the perspectives of providers and clinic staff.• Patient reports of engagement of SDM were suboptimal.• Provider interventions such as educational materials and reminder systems could improve communication skills		
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	and intention to engage patients in preference-sensitive decisions.		
<p>Owens, O. L., Wooten, N. R., & Tavakoli, A. S. (2019). Development and initial PSYCHOMETRIC evaluation of the COMPUTER-BASED prostate cancer Screening decision aid acceptance scale for African American men. <i>BMC Medical Research Methodology</i>, 19(1). https://doi.org/10.1186/s12874-019-0776-y</p>	<p>Main Points:</p> <ul style="list-style-type: none"> • Recommendations for PrCA are not clear cut and evolved over the past two decades. • Recommend that men make an informed decision with a healthcare provider about whether to receive PrCA screening • USPSTF released draft recommendations that are more consistent with agencies that support informed decision making. • To engage in informed decision-making AA men, need plain language PrCA knowledge information and adequate decision self-efficacy. • Questions were modified to refer generally to a CBDA as opposed to generally referring to a “system”. <p>Type:</p> <ul style="list-style-type: none"> • Randomized Control Study. <p>Purpose:</p>	<p>Strengths:</p> <ul style="list-style-type: none"> • Study approved by IRB. • Completed in the U.S. • Large sample of participants. <p>Weaknesses:</p> <ul style="list-style-type: none"> • Pretest was only conducted with 2 participants. <p>Why included:</p> <ul style="list-style-type: none"> • Provides more information on another article in this literature review. 	<p>Light of the Whole: How relates:</p> <ul style="list-style-type: none"> • Shows that this specific DA shows promise as playing a key role in increasing knowledge and assisting in informed PrCA screening decision making. <p>Similar:</p> <ul style="list-style-type: none"> • Pre/posttest given. • Focuses on prostate cancer. <p>Differs:</p> <ul style="list-style-type: none"> • DA was completely computer based. <p>Level of Evidence:</p> <ul style="list-style-type: none"> • Level I

	<ul style="list-style-type: none"> To evaluate the psychometric properties of the 24-item Computer Based Prostate Cancer Screening decision aid Acceptance scale in AA men using CBDA for informed PrCA screening decision making. <p>Main Findings:</p> <ul style="list-style-type: none"> Acceptance of the use of CBDA for PrCA screening. <p>Conclusions:</p> <ul style="list-style-type: none"> Computer Based Prostate Cancer screening decision aid acceptance scale shows promise as playing a key role in increasing PrCA knowledge and assisting in informed PrCA screening decision making among AA men. 		
<p>Makarov, D., Feuer, Z., Ciprut, S., Martinez-Lopez, N., Fagerlin, A., Shedlin, M., Gold, H. T., Li, H., Lynch, G., Warren, R., Ubel, P., & Ravenell, J. (2021). Randomized trial of community Health Worker-led DECISION coaching to PROMOTE shared decision making for prostate cancer Screening among black male patients and their providers. https://doi.org/10.21203/rs.3.rs-128422/v2</p>	<p>Main Points:</p> <ul style="list-style-type: none"> Nationally representative study of men considering PSA screening reported that only half were asked their preferences, and pros and cons of screening were discussed in only 32% of the time. Decision coaching is the process by which a non- 	<p>Strengths:</p> <ul style="list-style-type: none"> Study completed in NYS 4 FNPs assisted as providers in the study. Used American Cancer Society prostate cancer early detection decision Aid. <p>Weaknesses:</p>	<p>Light of the Whole:</p> <p>How relates:</p> <ul style="list-style-type: none"> Focused on Prostate Cancer screening and SDM.

	<p>healthcare provider coach provides a patient with individualized, nondirective guidance to meet decision making needs in preparation for consultation with a healthcare provider.</p> <p>Type:</p> <ul style="list-style-type: none"> • Randomized control trial <p>Purpose:</p> <ul style="list-style-type: none"> • To evaluate the efficacy of a community healthcare worker (CHW)- led decision-coaching program to facilitate SDM for prostate cancer screening among black men in the primary care setting with the aim of improving/optimizing decision quality. <p>Main Findings:</p> <ul style="list-style-type: none"> • CHWs seem ideally suited as decision coaches in primary care practices seeking to facilitate SDM for PSA screening among black men. <p>Conclusions:</p> <ul style="list-style-type: none"> • Ongoing study, anticipated that there will be an improvement in awareness, 	<ul style="list-style-type: none"> • Study is currently ongoing. • Completion anticipated for March 2023. <p>Why included:</p> <ul style="list-style-type: none"> • Different approach to SDM 	<ul style="list-style-type: none"> • Used in primary care settings. <p>Similar:</p> <ul style="list-style-type: none"> • Facilitates SDM for prostate cancer screening decisions. <p>Differs:</p> <ul style="list-style-type: none"> • DA is provided in mail. • CHW led decision occurs 1hr prior to appointment. <p>Level of Evidence:</p> <ul style="list-style-type: none"> • Level I
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	<p>knowledge, support, and efficacy to reduce the impact of chronic disease and cancer in underserved populations when CHW is used.</p>		
<p>Allen, J. D., Reich, A., Cuevas, A. G., & Ladin, K. (2019). Preparing African American men to make informed prostate cancer screening decisions: Development and pilot testing of an interactive online decision aid (preprint). https://doi.org/10.2196/preprints.15502</p>	<p>Main Points:</p> <ul style="list-style-type: none"> • DA are promising means to prepare men to engage in SDM and can be administered before a clinical visit. • Development and pilot testing of an interactive individually tailored web-based DA designed specifically for AA men. <p>Type:</p> <ul style="list-style-type: none"> • Quasi-experimental Study. <p>Purpose:</p> <ul style="list-style-type: none"> • Aimed to describe the development and pilot testing of an interactive web-based decision aid; prostate cancer screening preparation (PCSPrep) for African American men designed informed decision making for prostate cancer screening. <p>Main Findings:</p> <ul style="list-style-type: none"> • DAs found to be effective interventions to complement patient/provider engagement in SDM by providing patients 	<p>Strengths:</p> <ul style="list-style-type: none"> • Completed in the U.S. • Addressed issues with false-positives tests results in the DA. <p>Weaknesses:</p> <ul style="list-style-type: none"> • Small convenience sample with no control group. <p>Why included:</p> <ul style="list-style-type: none"> • Decision aid that is discussed is for prostate cancer screening. 	<p>Light of the Whole:</p> <p>How relates:</p> <ul style="list-style-type: none"> • Proves that DA's have been found to be effective interventions to complement patient/provider engagement in SDM. <p>Similar:</p> <ul style="list-style-type: none"> • Survey questions included incidence of prostate cancer, risk factors, screening modalities. • Used a decision Aid. <p>Differs:</p> <ul style="list-style-type: none"> • Provided assistance during completion of

	<p>with information needed to assess their options and examine their values as they relate to those options.</p> <ul style="list-style-type: none"> • It has been suggested that offering DAs for prostate cancer screening outside of a clinical setting may be particularly important to AA men who report difficulty communicating with medical providers and may have a high level of medical mistrust. • PCSPrep to be feasible to administer in community settings even among those who reported low levels of computer skills. • High levels of agreement when asked the extent to which PCSPrep helped prepare them to organize their thinking, make decision and have conversations about screening with their provider. <p>Conclusions:</p> <ul style="list-style-type: none"> • Decision support may improve the accuracy of disease risk among this population and at the same time enable men to make decisions without undue internal conflict. 		<p>survey completion.</p> <p>Level of Evidence:</p> <ul style="list-style-type: none"> • Level II
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<p>Alizadeh-Sabeg, P., Mehrabi, E., Nourizadeh, R., Hakimi, S., & Mousavi, S. (2021). The effect of motivational interviewing on the change of breast cancer screening behaviors among Rural Iranian women. <i>Patient Education and Counseling</i>, 104(2), 369–374. https://doi.org/10.1016/j.pec.2020.08.011</p>	<p>Main Points:</p> <ul style="list-style-type: none"> • Education may raise women’s awareness of breast cancer, but it is not adequate alone. • 61% of women in Saudi Arabia had high knowledge of mammography but less than 1/3 have had a mammography preformed. • Regular screening depends largely on motivational factors, especially one’s perception of the risk of disease and impact of screening behaviors on reducing the risk of breast cancer. • MI is considered as a client-centered approach aimed at improving the motivation of clients to change their behavior. <p>Type:</p> <ul style="list-style-type: none"> • Randomized Control Trial <p>Purpose:</p> <ul style="list-style-type: none"> • To determine the effect of motivational interviewing (MI) on the change of breast cancer screening behaviors among rural Iranian Women <p>Main Findings:</p> <ul style="list-style-type: none"> • Most participants were at the contemplation stage before the 	<p>Strengths:</p> <ul style="list-style-type: none"> • Provided educational booklet to participants along with counseling sessions. • Counseling provided by certified counselor in MI. <p>Weaknesses:</p> <ul style="list-style-type: none"> • Not completed in U.S. • Done on breast cancer not prostate cancer. • Did not provide education during MI. <p>Why included:</p> <ul style="list-style-type: none"> • Shows benefits of motivational interviewing. 	<p>Light of the Whole</p> <p>How relates:</p> <ul style="list-style-type: none"> • Motivational Based counseling increased motivation for displaying breast cancer screening behaviors. <p>Similar:</p> <ul style="list-style-type: none"> • Participants from low socioeconomic status and lack of easy access to advanced screening facilities. <p>Differs:</p> <ul style="list-style-type: none"> • Participants attended educational sessions and 4 weekly consecutive MI sessions.
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	<p>intervention while at the end of most individuals in the intervention group entered action stage for self-breast checking and CBE.</p> <ul style="list-style-type: none"> • Only 16 participants entered action phase for mammogram. <p>Conclusions:</p> <ul style="list-style-type: none"> • MI-based counseling increased the Iranian rural women's motivation for displaying breast cancer screening behaviors. 		<ul style="list-style-type: none"> • Sessions were in groups of 5-7 participants. <p>Level of Evidence:</p> <ul style="list-style-type: none"> • Level I
<p>Stacey, D., Kryworuchko, J., Bennett, C., Murray, M. A., Mullan, S., & Légaré, F. (2012). Decision coaching to Prepare patients for making health decisions. <i>Medical Decision Making</i>, 32(3). https://doi.org/10.1177/0272989x12443311</p>	<p>Main Points:</p> <ul style="list-style-type: none"> • Decision coaching aims to develop patients' confidence and skills in deliberating about options and helps prepare patients to discuss decisions with their practitioner. • Decision coaching refers to the process by which a supportive and knowledgeable health professional provides a patient with individualized nondirective guidance to meet decision-making needs in preparation for consultation with the person responsible for ultimately sharing the decision with patient. 	<p>Strengths:</p> <ul style="list-style-type: none"> • Compared decision coaching, decision aid and neither. <p>Weaknesses:</p> <ul style="list-style-type: none"> • Not within 5 years. • Did not include articles that had decision coaching without having a DA. <p>Why included:</p> <ul style="list-style-type: none"> • Trials included in the study some focused on decisions related to prostate cancer screening. 	<p>Light of the Whole:</p> <p>How relates:</p> <ul style="list-style-type: none"> • Decision coaching by someone within the health care team is a strategy for ensuring that DA are provided and discussed with patients. <p>Similar:</p> <ul style="list-style-type: none"> • Measured knowledge improvement with use of

	<p>Type:</p> <ul style="list-style-type: none"> • Systemic Review of Randomized Control Trial <p>Purpose:</p> <ul style="list-style-type: none"> • To explore characteristics and effectiveness of decision coaching evaluated within trials of patient decision aids (PtDAs) for health decisions. <p>Main Findings:</p> <ul style="list-style-type: none"> • Coaching compared with usual care improved knowledge. • Coaching plus PtDAs with usual care improved knowledge and participation in decision making without reported dissatisfaction. • Coaching versus usual care-women had higher knowledge of breast cancer genetic testing with decision coaching over those who only had usual care. • No difference in measured knowledge between coaching and PtDA alone. • More consistent values seen in women exposed to coaching vs PtDA alone. 	<ul style="list-style-type: none"> • 4 trials measured satisfaction. 	<p>coaching and a DA.</p> <p>Differs:</p> <ul style="list-style-type: none"> • Did not specifically address what was being educated (i.e., prostate cancer screening). <p>Level of Evidence:</p> <ul style="list-style-type: none"> • Level I
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	<ul style="list-style-type: none"> • Coaching plus PtDA vs PtDA alone there was no difference in Prostate cancer screening. <p>Conclusions:</p> <ul style="list-style-type: none"> • Growing interest in decision coaching. • Decision coaching appears to improve knowledge . 		
<p>Palmas, W., March, D., Darakjy, S., Findley, S. E., Teresi, J., Carrasquillo, O., & Luchsinger, J. A. (2015). Community health worker interventions to improve glycemic control in people with diabetes: A systematic review and meta-analysis. <i>Journal of General Internal Medicine</i>, 30(7), 1004–1012. https://doi.org/10.1007/s11606-015-3247-0</p>	<p>Main Points:</p> <ul style="list-style-type: none"> • Education from a certified diabetes educator. • Components in the articles differed substantially. <p>Type:</p> <ul style="list-style-type: none"> • A Systematic Review and Meta-Analysis <p>Purpose:</p> <ul style="list-style-type: none"> • To review the efficacy of community health worker interventions to improve glycemia in people with diabetes. <p>Main Findings:</p> <ul style="list-style-type: none"> • CHW interventions lasting at least 12 months result in modest reduction in Alc, compared to usual care. 	<p>Strengths:</p> <ul style="list-style-type: none"> • Used an outpatient setting. • Primarily used MEDLINE for literature search. <p>Weaknesses:</p> <ul style="list-style-type: none"> • Studied mostly minority populations • Detailed data describing the exact number of CHW participant encounters was not available for several studies. <p>Why included:</p> <ul style="list-style-type: none"> • Integrated CHW intervention with patients PCP. 	<p>Light of the Whole: How relates:</p> <ul style="list-style-type: none"> • CHW interventions reduced the Alc in participants. <p>Similar:</p> <ul style="list-style-type: none"> • CHW intervention resulted positively (lowered Alc). • Targeted participants in low socioeconomic stratum. <p>Differs:</p>

	<ul style="list-style-type: none"> • Studies with more visit intensive CHW protocol might have shown greater efficacy. <p>Conclusions:</p> <ul style="list-style-type: none"> • CHW interventions showed a modest reduction in Alc compared to usual care. 		<ul style="list-style-type: none"> • Studied lowering of Hemoglobin Alc. <p>Level of Evidence:</p> <ul style="list-style-type: none"> • Level I
<p>Alaofè, H., Asaolu, I., Ehiri, J., Moretz, H., Asuzu, C., Balogun, M., Abosedo, O., & Ehiri, J. (2017). Community health workers in Diabetes prevention and management in developing countries. <i>Annals of Global Health</i>, 83(3-4), 661. https://doi.org/10.1016/j.aogh.2017.10.009</p>	<p>Main Points:</p> <ul style="list-style-type: none"> • Outcomes included increased knowledge of T2DM symptoms and prevention measures; increased adoption of treatment-seeking and prevention measures; increased medication adherence and improved fasting blood sugar, glycated hemoglobin, and BMI. • Pt. education- an inexpensive and effective diabetes management option is not practiced routinely. • CHWs serve as bridges among their ethnic, cultural, or geographic communities and health care providers. <p>Type:</p> <ul style="list-style-type: none"> • Literature review <p>Purpose:</p>	<p>Strengths:</p> <ul style="list-style-type: none"> • Gave inclusion/exclusion Criteria. <p>Weaknesses:</p> <ul style="list-style-type: none"> • Limited research reviewed. • Study not done in the U.S. <p>Why included:</p> <ul style="list-style-type: none"> • Touched based on CHW and high-income countries- have also improved health behaviors & outcomes. • CHW improve knowledge and health outcomes. 	<p>Light of the Whole: How relates:</p> <ul style="list-style-type: none"> • Shows positive outcomes with the use of CHW. <p>Similar:</p> <ul style="list-style-type: none"> • Increased awareness of symptoms and prevention measures. <p>Differs:</p> <ul style="list-style-type: none"> • Articles focused on T2DM. • Focused on descriptions of training and supervision

	<ul style="list-style-type: none"> To critically appraise evidence regarding the effectiveness of CHW interventions for prevention and management of type 2 diabetes mellitus (TDM) in low-and middle-income countries (LMICs). <p>Main Findings:</p> <ul style="list-style-type: none"> Positive outcomes in 7 out of 10 articles. One article had health volunteers provide nutritional education and established appropriate daily exercise activities for 3 months- mean score for health promotion behavior was significantly higher after intervention. <p>Conclusions:</p> <ul style="list-style-type: none"> CHW have potential to improve knowledge, health behavior and health outcomes related to prevention and management of T2DM in LMICs. Further research is needed into the influence of CHWs on disease awareness, health behaviors and health outcomes. 		<p>procedures for CHWs.</p> <p>Level of Evidence:</p> <ul style="list-style-type: none"> Level V
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<p>Portillo, E. M., Vasquez, D., & Brown, L. D. (2020). Promoting Hispanic Immigrant health via community health workers and motivational interviewing. <i>International Quarterly of Community Health Education</i>, 41(1), 3–6. https://doi.org/10.1177/0272684x19896731</p>	<p>Main Points:</p> <ul style="list-style-type: none"> Examines three innovative strategies designed to overcome the health disparities Hispanic immigrants face; the use of CHW, vouchers for preventative health services and motivational interviewing (MI) Strategies were implemented in a health promotion program called Healthy Fit. CHW conducted brief MI aimed at enhancing the participants intrinsic motivation to follow through and complete health behavior changes. <p>Type:</p> <ul style="list-style-type: none"> Program Evaluation <p>Purpose:</p> <ul style="list-style-type: none"> Examine three innovative strategies designed to overcome the health disparities Hispanic immigrants face. <p>Main Findings:</p> <ul style="list-style-type: none"> CHW help participants connect with liaisons who serve as a 	<p>Strengths:</p> <ul style="list-style-type: none"> Discusses the use of CHW and MI. <p>Weaknesses:</p> <ul style="list-style-type: none"> Specifically looking at Healthy Fit program. <p>Why included:</p> <ul style="list-style-type: none"> CHW are conducting the motivational interview. 	<p>Light of the Whole: How relates:</p> <ul style="list-style-type: none"> CHWs increase access to healthcare by communicating sensitive information, advocating on participants behalf and creates a partnership with participants. <p>Similar:</p> <ul style="list-style-type: none"> Healthy fit program reaches out to those in low socioeconomic areas. <p>Differs:</p> <ul style="list-style-type: none"> Used for novels which are health education comics to provide education.
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	<p>bridge between health care providers and the community.</p> <ul style="list-style-type: none"> • Use of MI enriches conversation between CHW and participants, helping participants address health barriers. <p>Conclusions:</p> <ul style="list-style-type: none"> • Combination of all three strategies makes healthy fit a promising low-cost program which promotes wellness in an underserved immigrant population. 		<ul style="list-style-type: none"> • Focuses on the Healthy Fit program. <p>Level of Evidence:</p> <ul style="list-style-type: none"> • Level V
<p>Brandford, A., Adegboyega, A., Combs, B., & Hatcher, J. (2018). Training community health workers in motivational interviewing to promote cancer screening. <i>Health Promotion Practice, 20</i>(2), 239–250. https://doi.org/10.1177/1524839918761384</p>	<p>Main Points:</p> <ul style="list-style-type: none"> • CHWs are increasingly being used in cancer prevention and control efforts. • CHWs are frontline public health workers who have a close understanding of the community. • Goal of CHWs is to increase health knowledge and self-sufficiency through a range of activities such as outreach, community education, social support, and advocacy efforts. <p>Research Type:</p>	<p>Strengths:</p> <ul style="list-style-type: none"> • Completed in the U.S. <p>Weaknesses:</p> <ul style="list-style-type: none"> • Limited information on training of all CHWs. <p>Why included:</p> <ul style="list-style-type: none"> • Includes training for CHW with MI. • Discussed CHW with cancer prevention. 	<p>Light of the Whole: How relates:</p> <ul style="list-style-type: none"> • CHWs agreed that the use of MI is feasible and valuable in promoting cancer screenings in underserved populations. <p>Similar:</p> <ul style="list-style-type: none"> • CHW goals are to increase health

	<ul style="list-style-type: none"> • Literature Review. <p>Purpose:</p> <ul style="list-style-type: none"> • To describe the feasibility of training CHWs to deliver motivational interviewing intervention to promote cancer screening in underserved populations. <p>Main Findings:</p> <ul style="list-style-type: none"> • Participants receiving the MI intervention tended to be more specific and detailed in listing tangible barriers to mammography. • Challenges making the training meaningful for all levels of CHWs. • MI is a successful and feasible technique for a CHW to promote cancer screening. • Training increased confidence and provided the CHWs with a skill set that could be adapted to meet the needs of the community served. <p>Conclusions:</p> <ul style="list-style-type: none"> • Most powerful strategies to address cancer disparities is the use of CHWs to influence 		<p>knowledge and self-efficacy.</p> <p>Differs:</p> <ul style="list-style-type: none"> • Focuses on training for CHW to conduct motivational interviewing. <p>Level of Evidence:</p> <ul style="list-style-type: none"> • Level V
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	behavior surrounding cancer screenings.		
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Appendix B: Decision Aid

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

IN-OFFICE DECISION AID

Talk to your provider

Should you get the PSA test?



New research is changing how providers use the PSA (prostate-specific antigen) test. It's not a regular test that you'll get automatically at your checkup — now, you have to decide if you want it. **Talk it over with your provider during your appointment.**



What's the PSA test?

It's a blood test. It checks for levels of protein (prostate-specific antigen) made by a man's prostate. Sometimes a high level may indicate an increased risk of prostate cancer.



What do I do?

Talk about the test with your doctor. Learn about the possible benefits and harms, and about your individual risk for prostate cancer. Then decide if the test is right for you.



What's the Problem?

If you have a high PSA level, the next steps might be biopsy and treatment for cancer. These may not be necessary.

Before you talk to your provider

Start by answering a few questions. Then learn more about the PSA test on the back of this sheet.

Do you have risk factors for prostate cancer? For instance:

1. Has anyone in your family had prostate cancer?

(circle all that apply)

Yes No
 Father Brother Son
 Grandfather Other _____

2. Are you African-American or black?

Yes No

3. Have you previously had a high PSA level?

Yes No I don't know

Other factors to consider:

4. How concerned are you about getting prostate cancer?

Very Somewhat Not Very

5. When you make a decision about your health, do you talk it over with anyone first – like your wife, partner, or friends? Who? (write your answer in the space to the right)

6. How would you describe yourself?

(circle one)

I like to get all the medical tests I can — it gives me peace of mind.

I take things as they come and am not likely to request tests unless my provider recommends them.



Frequently Asked Questions about the PSA test

If the PSA test can tell me if I'm at risk for prostate cancer, why wouldn't I want the test?

The PSA test can't tell you for sure if you have prostate cancer. Lots of things can cause a high PSA level. Cancer is just one of them. The only way to know if you have prostate cancer is to get a biopsy.

So what are the benefits of getting the PSA test?

A high PSA could be a sign of a dangerous type of cancer. The test could help you catch it early, when it may be easiest to cure.

Besides a high PSA level, what raises my risk of prostate cancer?

If you have a family history of prostate cancer — especially if your brother or father had it — your risk is 2 to 3 times higher. If you're African-American or black, your risk is 50% higher. The risk of prostate cancer also goes up with age, especially after age 50.

But the PSA is just a blood test — why not get it to be safe?

The test itself is easy. The harms come afterward. If you get a high result, **the test can't tell you if the cause is cancer or something else.** So to be sure, you would get more tests or a biopsy of the prostate. A biopsy positive for prostate cancer could lead to treatment — radiation or surgery — that may not provide you with any benefit. The treatment may cause immediate complications and may leave you with lasting side effects.

What side effects could the PSA test lead to?

Some men who get treatment have problems urinating — they may leak or lose bladder control. They might have sexual problems — like impotence (trouble getting hard during sex). Rarely, men have more serious problems, like infections, blood clots, or heart attacks.

How do I decide?

We can't give you an easy answer. Providers are still studying the best way to use the PSA test. **But don't ignore the issue.** Learn more about the test. Talk to your provider, your family, and friends. Decide what's right for you.

Learn more about PSA testing at: www.mass.gov/cancerscreenings

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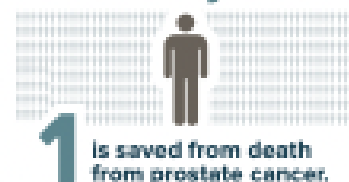
The PSA test has benefits **and** risks:

According to one study

out of every
1000

men who get the PSA test

over 10 years:



30 or more

will get diagnosed with prostate cancer and may get treatment that causes harm and does not provide any benefit.

➔ **Side effects** from treatment can include:



Incontinence
(leaking urine and having accidents)



Impotence
(trouble staying hard during sex)



Blood Clots and Heart Attacks

It's not a simple decision. But it's an important one.

Talk to your provider



Make your own choice.

Appendix C: COMRADE Tool

Satisfaction with Communication

1. The doctor made me aware of the different treatments available.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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2. The doctor gave me the chance to express my opinions about the different treatments available.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
----------------	-------	---------	----------	-------------------
3. The doctor gave me the chance to ask for as much information as I needed about the different treatment choices.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
----------------	-------	---------	----------	-------------------
4. The doctor gave me enough information about the treatment choices available.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
----------------	-------	---------	----------	-------------------
5. The doctor gave enough explanation of the information about treatment choices.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
----------------	-------	---------	----------	-------------------
6. The information given to me was easy to understand.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
----------------	-------	---------	----------	-------------------
7. I know the advantages of treatment or not having treatment.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
----------------	-------	---------	----------	-------------------
8. I know the disadvantages of treatment or not having treatment.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
----------------	-------	---------	----------	-------------------
9. The doctor gave me a chance to decide which treatment I thought was best for me.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
----------------	-------	---------	----------	-------------------
10. The doctor gave me a chance to be involved in the decisions during the consultation.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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Confidence in Decision

1. Overall, I am satisfied with the information I was given.

Strongly Agree Agree Neutral Disagree Strongly Disagree

2. My doctor and I agreed about which treatment (or no treatment) was best for me.

Strongly Agree Agree Neutral Disagree Strongly Disagree

3. I can easily discuss my condition again with my doctor.

Strongly Agree Agree Neutral Disagree Strongly Disagree

4. I am satisfied with the way in which the decision was made in the consultation.

Strongly Agree Agree Neutral Disagree Strongly Disagree

5. I am sure that the decision made was the right one for me personally.

Strongly Agree Agree Neutral Disagree Strongly Disagree

6. I am satisfied that I am adequately informed about the issues important to the decision.

Strongly Agree Agree Neutral Disagree Strongly Disagree

7. It is clear which choice is best for me.

Strongly Agree Agree Neutral Disagree Strongly Disagree

8. I am aware of the treatment choices I have.

Strongly Agree Agree Neutral Disagree Strongly Disagree

9. I feel an informed choice has been made.

Strongly Agree Agree Neutral Disagree Strongly Disagree

10. The decision shows what is important to me.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Appendix D: Knowledge Questionnaire

Domain	Question
Anatomy and function	1. The prostate gland is a reproductive organ located below the bladder.
Risk factors	2. The prostate gland makes some of the fluid that's part of semen. 3. Older men are more likely to get prostate cancer. 4. More AA men are diagnosed with prostate cancer than whites. 5. AA men who have fathers or brothers with prostate cancer are more likely to get prostate cancer than those who do not. 6. Who do you think is more likely to get prostate cancer? 7. Who do you think is more likely to get prostate cancer?
Screening	8. A PSA blood test can be done to check for prostate cancer. 9. A digital rectal examination or DRE can be done to check for prostate cancer. 10. The only way a man can know for sure if he has prostate cancer is to have a prostate biopsy. 11. A prostate biopsy is when a blood test is used to check for proteins in the blood.
Symptoms	12. Neither the PSA nor DRE is 100% accurate. 13. A man can have prostate cancer and can have no symptoms. 14. The warning signs of prostate cancer are always present with prostate cancer. 15. Pain often in your lower back could be a sign of prostate cancer. 16. Having a hard time passing urine. 17. Passing urine often, especially at night. 18. Blood in the urine or semen. 19. Painful ejaculation. 20. Pain in the stomach.

Appendix E: Budget Table

Cost Activity	Amount	Type
Meeting and Presentation Preparation	\$750.00 *Calculated based on the average NP hourly rate in the geographical area for 10 hours of preparation	Direct/Fixed
30-Minute Introduction Meeting and 1-Hour Training Session Attendance (2 NPs, 1 RN, 2 LPN 1 office manager, 2 secretaries)	\$559.5 * Calculated based on the average hourly rate in the geographical area	Direct/Fixed
1-Hour NP Video Training	\$180.00	Direct/Fixed
Patient Materials (Decision Aid, Pre- & Post-Questionnaire, COMRADE Tool & folders)	\$69.50 *Calculated based on \$0.08 per page printed front & back, \$0.15 per page for color printed front & back & \$1.00 per folder for 50 patients	Direct/Fixed
1-Hour Videographer	\$150.00 *Calculated based on the average rate for a videographer in the geographical area	Direct/Fixed
Staff Education Materials (Staff Education Sheet)	\$0.64 *Calculated based on \$0.08 per page print front and back	Direct/Fixed
1-Hour IT (Set Up OR Code)	\$33.00 *Calculated based on the average IT hourly rate in the geographical area for 1 hour of assistance	Direct/Fixed
Recruitment Flyers	\$4.00 *Calculated based on \$0.08 per page printed front only (printed 50 flyers)	Direct/Fixed
Total Costs	\$1,746.64	Variable

Benefit Gains	Amount	Type
Billable 30–45 minute Nurse Practitioner visit.	\$5,100.00 *Calculated based on the average rate of billable hour & 30 patients.	Direct/ fixed
Saved Insurance Costs	\$13,100 *Calculated based on cost of radiation for 30 days verses radical prostatectomy.	Direct/ fixed
Patient Retention from Satisfaction. (15 patients will transfer primary care to this office)	\$2,550.00 *Calculated based on the average rate of billable hour & one physical a year.	Direct/ fixed
Patient Recruitment. (Each participant will recruit 1 one friend to participant in study)	\$5,100.00 *Calculated based on the average rate of billable hour & 30 recruitments.	Direct/ fixed
Total Gains	\$25,850.00	Variable

Total Costs	\$1,746.64	
Total Benefits	\$25,850.00	
	Cost/Benefit Amount	\$24,103.36

Appendix F: Recruitment Flyer

Prostate Cancer Are YOU at Risk?



- Are you a fireman, police officer or detective?
- Are you concerned about your risk of developing prostate cancer?

Watch this short YouTube Video to find out more information about this study and to potentially participate.

Scan QR Code to be redirected to the YouTube Video.

Appendix G: Recruitment Video

YouTube Video

Information that will be include in the YouTube video that will recruit participants.

Information about Prostate Cancer.

- What is prostate cancer?
 - Prostate cancer is a form of cancer that begins in the gland cells of the prostate, and it is only found in males.
- Risk factors:
 - Age, family history of prostate cancer, ethnicity and recently occupation.
- Statistics on prostate cancer:
 - In 2018 211,893 were diagnosed with prostate cancer and 31,488 men died from the disease.

Information about the Study and who can participate.

- What the program consists of:
 - The study will consist of one nurse practitioner led decision coaching session.
 - You will be asked to complete documentation that will establish your knowledge of prostate cancer and evaluate your satisfaction with the decision coaching session and your confidence in decision making.
 - At the completion of decision coaching session, you will be asked if you would like to have your PSA tested.
 - All information will remain confidential.
- Who can participate in the study?
 - Males greater than age 40
 - Protective Service Occupation
 - Volunteer Firemen
- What is a Protective service occupation?
 - Firefighters, policemen and detective.

Appendix H: Staff and Nurse Education

EBP Staff Education

- Patients' paperwork (informed consent, pre- and post- questionnaire, & COMRADE tool) will be identified by a number associated with their chart to maintain confidentiality.
 - Example: Name- John Doe- #0046
- Nurse practitioner led decision coaching will provide education to protective service occupations about prostate cancer and PSA testing.
- The goal of this proposal is to improve knowledge about prostate cancer, increase the number of individuals getting PSA testing done.
- Other goals include improved satisfaction with shared decision making and improved confidence in decision making.

Nurse Education

- Frequently check google forms email for responses to participate in study.
- When responses are received, reach out to individual who completed the google form.
- Educated them on purpose of study and review informed consent.
- Send informed consent and pre-questionnaire to patients after phone conversation.
- During decision coaching frequently refresh EMR to see if PSA testing was ordered, if so, go to patients' room and draw labs for the PSA testing.

Appendix I: Nurse Practitioner Education

Nurse Practitioner Education

What you will be educating the participants:

- **Anatomy & Function**
 - Prostate gland is a reproductive organ located below the bladder.
 - The prostate gland makes some of the fluid that is part of semen.
- **Risk factors**
 - Age increases your risk of developing prostate cancer.
 - African American ethnicity has higher diagnosis rate than Caucasians.
 - Family history of prostate cancer increases your risk of being diagnosed with prostate cancer.
- **Screening**
 - PSA stands for prostate specific antigen; it is a protein made by the prostate gland and can be found in the blood. An increased PSA may indicate prostate cancer.
 - DRE also known as digital rectal exam is done to establish if any nodules or tumors can be felt on the prostate gland.
 - A biopsy of the prostate gland is the only way to properly diagnose prostate cancer.
 - Prostate cancer biopsy is a procedure that will remove samples of suspicious tissue from the prostate gland.
 - PSA testing and DRE are not definitive in diagnosing prostate cancer.
 - Risks related to PSA testing.
- **Symptoms**
 - Signs and symptoms of prostate cancer include trouble urinating, decreased force in the stream of urine, blood in urine or semen, bone pain, losing weight without trying and erectile dysfunction.
 - Early stages of prostate cancer you may not have any signs or symptoms.

