

IDENTIFYING BARRIERS TO PREVENTIVE/PRIMARY CARE UTILIZATION OF MEN
IN A RURAL SETTING

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DOCTOR OF NURSING PRACTICE

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ABSTRACT

The purpose of the project was to identify barriers preventing men living in a rural setting, ages 19-60 from participating in routine preventative/primary care. Nationally and globally, men experience greater rates of morbidity and mortality due to chronic illness (Xu, Murphy, Kochanek, Bastian, & Arius, 2018). The literature suggests men do not routinely engage in primary care services (Centers for Disease Control and Prevention [CDC], 2015). The lack of participation leads to men experiencing poorer health outcomes (Banks & Baker, 2013; Baker & Shand, 2017; Pinkashov et al., 2013). Consistent and early access to primary care will help reduce the disparity and improve male health outcomes.

The objectives of the practice improvement project (PIP) were: (1) identify actual and potential primary care uptake barriers of men aged 19-60 in a rural ND community; (2) discuss those barriers with rural ND healthcare clinic providers and clinical director and provide recommendations to improve men's uptake in primary care services; and (3) measure effectiveness of providers implementing recommendations to reduce those barriers.

Participants were recruited to voluntarily complete a 20-item questionnaire, free blood pressure screening, body fat analysis, and grip test. The survey results identified barriers in the areas of health literacy, confidentiality, empowerment, and self-efficacy. Through the utilization of a barrier screening survey, the coinvestigator was able to implement an educational presentation to the rural providers. The educational session provided interventional strategies for improving male utilization of primary care services. As result of the PIP, the rural healthcare organization was able to adopt two of the recommendations into practice.

Additionally, the coinvestigator recommended incorporating body fat analysis and grip testing into the yearly examination. The screenings are relatively low-cost and non-invasive.

Both screenings can offer the provider additional information regarding the overall health of their patients (Legrand et al., 2014; Park et al., 2019; Prasitsiriphon & Pothisiri, 2018). The additional health information can lead to more informed decision making and potentially aid in improved health outcomes for the patients.

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to achieve my highest level of education and to constantly strive for my goals. I love you all and am thankful for your love and support.

DEDICATION

I would like to dedication this disquisition in memory of my father, Earl Seibold. He is gone, but
not forgotten.

I would also like to dedicate this disquisition to all my family, those previously listed and all
others. Without your love and support I would have never made it this far.

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CHAPTER I. INTRODUCTION

Background

The state of men's health is at a significant juncture. In many parts of the world men are the beneficiaries of more opportunities, greater social status, and greater privileges than women. These advantages however do not translate into improved health outcomes (Baker & Shand, 2017). Worldwide, men experience a shorter life span than women. For example, in a health comparative risk analysis of 21 world regions, 67 mortality risk factors were identified. Men were at greater mortality risk for 60 of the 67 risk factors (Lim et al., 2012). In the United States alone, men live an average of 4.8 years less than women, 76.5 years compared to 81.4 years (Arias, Heron, & Xu, 2017). According to the report prepared by Xu, Murphy, Kochanek, Bastian, and Arius (2018) of the top 15 causes of death, men led women in all but two categories. The 15 causes of death were (1) heart disease, (2) cancer, (3) unintentional injuries, (4) chronic lower respiratory diseases, (5) cerebrovascular disease, (6) Alzheimer's disease, (7) diabetes, (8) influenza and pneumonia, (9) kidney disease, (10) suicide, (11) septicemia, (12) chronic liver disease, (13) hypertension, (14) Parkinson's disease, and (15) aspiration pneumonia. Causes of death from cerebrovascular disease and Alzheimer's were the two categories men did not have higher incidence than women. Death from Alzheimer's disease was greater in women, and death from cerebrovascular disease was approximately the same. The higher incidence of death from Alzheimer's disease is likely due to women having a longer life expectancy therefore have increased risk for developing Alzheimer's as the risk increases with age. The health disparities become even greater when taking into consideration rural versus urban residence. Individuals in rural America were at greater risk of dying from multiple

potentially preventable conditions including heart disease, cancer, unintentional injuries, chronic lower respiratory disease, and stroke (Centers for Disease Control and Prevention, 2018).

One possible explanation for this finding is that men have a tendency to not seek medical care on regular basis, specifically primary care. In 2017, 22.3% of men surveyed had no healthcare office visits within the past year compared to 12.6% of females without healthcare office visits (Centers for Disease Control and Prevention [CDC], 2017). Females also accounted for 66.8% of all preventative care visits with males accounting for 33.2% (CDC, 2015). The lack of men seeking regular healthcare can lead to the manifestation of delayed diagnosis of chronic disease and subsequent treatment resulting in poorer health outcomes. To emphasize, males in the United States were more likely than females to have mildly elevated, moderately elevated, and severely elevated blood pressures during all ambulatory (out-patient) care visits. Females were almost twice as likely to have normotensive blood pressure readings than males (CDC, 2015).

Additionally, there is significant cost associated with men's health in terms of lost productivity and medical treatments. In the United States, the cost associated with men's early mortality and morbidity is between \$136-479 billion annually (Brott et al., 2011; Thorpe, Richard, Bowie, LaVeist, & Gaskin, 2013). The premature death of a male loved one is not only unfortunate and emotionally detrimental to those closest but can place undo financial burden on their families. The financial burden can be compounded in lower-income households. The partners and/or spouses of the deceased may have to take on additional caring responsibilities, limiting educational and financial opportunities, which in turn can limit current and future income (Edstrom, Hassink, Shahrokh, & Stern, 2015). Based on financial impact, improving men's health is not only beneficial for men, but can have a great impact on families and society.

As stated previously, men are already at greater risk than women from suffering a premature death from 13 of the top 15 causes of death. Now combine that with taking residence in a rural community, and the health disparity only grows. Approximately 15% of United States population live in rural areas (CDC, 2018). Rural Americans typically have higher rates of tobacco use, poorly controlled hypertension, and greater rate of obesity, placing them at great risk of developing chronic health conditions. Furthermore, rural Americans report less leisure time physical activity, reduced seatbelt use, experience higher rates of poverty, less access to healthcare, and are less likely to be insured (CDC, 2018). Moreover, rural Americans are less likely to engage in health preventative behaviors. According to a report from the CDC (2018) only one in four rural individuals participate in at least four of five health behaviors preventing chronic disease. The health behaviors include not smoking, alcohol abstinence or moderation of drinking, maintaining a normal body weight, being physically active, and getting adequate sleep (CDC, 2018).

Purpose of the Project

The purpose of the project is to identify barriers preventing men living in a rural setting, ages 19-60 from participating in routine preventative/primary care. Evidence bespeaks of the lack of primary care participation of men within the identified age group (CDC, 2015). The lack of participation in preventative medicine robs men of vital resources, strategies, and interventions to promote a healthy lifestyle. Additionally, the lack of participation contributes the delay of management of chronic disease conditions resulting in men dying younger and sicker (Banks & Baker, 2013; Baker & Shand, 2017; Pinkashov et al., 2013). Successful identification of barriers preventing men from participating in routine healthcare will improve

the development of strategies for providers to incorporate to address these barriers, resulting in potentially improved men's health outcomes.

Congruence of the Project to the Organization's Strategic Plan

A rural healthcare clinic in North Dakota was utilized in the implementation of the practice improvement project (PIP). The clinic coordinates a men's health promotion event every March, which has been well attended by men age 60 and older. Through collaboration with the director of healthcare center, an additional need was identified. The clinic was successful in getting men involved in the event and primary care visits older than 60, but there was a lack of participation of men ages 19-60 not only in the event, but in primary care visits. To address the need, the coinvestigator assessed the community to determine the barriers impacting the lack of primary care service uptake within the age group. Once the barriers were identified the coinvestigator disseminated the results with the providers of the clinic with recommendations.

CHAPTER II. LITERATURE REVIEW

Literature Review and Synthesis

Barriers

Lack of self-knowledge and insight.

Why are men less likely to participate in preventive/primary care? A review of the current literature offers some insight into the question. Lack of knowledge and insight is one explanation. In a study of 237 university students by Yahia, Wang, Rapley, and Dey (2016), the researchers found college age men at one university in the United States were less likely to be knowledgeable about nutrition. Additionally, the researchers found these men were more likely to be obese or overweight. The investigators found 48% of the males involved were overweight or obese compared to 22% of females. The males in the study were also more likely to have diets consisting of unhealthy fats, red meats, high sugar content, and alcoholic beverages.

To support the above, in the United States, males are more likely to consume less than one fruit serving per day than women; 39.3% of men compared to 32.9% of women, and less than one vegetable serving per day than females; 21.5% of men compared to 16.7% of women (CDC, 2019). More men are overweight (body mass index (BMI) of 25-30) than women; 40.7% of men compared to 29.8% of women (CDC, 2019). Males also tend to be less informed in other areas as well, such as identifying themselves as being overweight, recognizing signs/symptoms of chronic disease, and proactively seeking professional assistance (Houle et al., 2015; Leone & Rovito, 2013; Pinkashov et al., 2013). Poor dietary intake and elevated BMI are contributors to numerous chronic health conditions including hypertension, cardiac disease, diabetes, and cerebrovascular disease. Lack of preventative strategies and poor control of these

disease process contributes to men experiencing negative health consequences and premature death (American Heart Association, 2020).

Masculinity.

The underlying notion of masculinity has been shown to be a potential barrier. Several studies have examined the construct of masculinity and how masculinity plays a role into preventative medicine (Leone & Rovito, 2013, Levant, Hall, & Rankin, 2013; Teo, Ng, Booth, & White, 2016). In a study by Levant et al., (2013) the authors described characteristics that have been identified as being masculine. Their study included: restrictive emotionality (not admitting feelings), avoiding femininity (only participating in things that are considered manly, i.e. watching sports), self-resiliency (performing one's own maintenance), toughness (taking risks even if getting hurt is possible), and maintaining heterosexuality, such as avoiding health encounters that may include exams like a digital rectal exam. These characteristics can be self-preservative, but in the realm of health, these characteristics can result in negative health promoting behaviors (Houle et al., 2015). Including avoiding healthcare settings, because not feeling well is a sign of weakness; having difficulty discussing their issues; asking too few questions; feeling they should be able to manage their problems on their own; and feeling they are not sick enough to require help (Hooper & Quallich, 2016; Houle et al., 2015; Teo et al., 2016).

Additionally, men tend to view health as more a feeling than something to be maintained. If they feel "good" there is no reason to see a provider on a routine basis (Teo et al., 2016). The concept of preventative medicine does not seem to enter the equation. Men tend to have the "if it isn't broke, why fix it" line of thinking (Pinkashov et al., 2013). Inherently, there is seemingly nothing wrong with that line of thinking for many things. Unfortunately, chronic disease

processes do not operate under the set of rules of “being broken”; living organisms have a profound ability to adapt to chronic issues without showing they “are broken”. Many of the chronic illnesses’ men are afflicted with go undetected or show no outward manifestations of their destructive process until too late in the disease process. Engaging in routine wellness exams, preventative screenings, and health monitoring can help greatly reduce or even prevent the burden of chronic disease. Regrettably, many men do not see the benefit of yearly wellness exams and primary care visits. Instead, men often wait to engage in the healthcare system until there is a problem with their ability to earn money, provide for their family, be employed, and/or sexual dysfunction (Baker, 2019; Banks & Baker, 2013; Hooper & Quallich, 2016).

Because of the masculine characteristics, issues can arise once the man does engage in the healthcare setting. Healthcare providers can have difficulty obtaining the “whole story,” which can result into miscommunication (Leone & Rovito, 2013; Vaidya, Partha, & Karmakar, 2012). Miscommunication can ultimately lead to the male patient no longer having faith in the healthcare provider or feeling disrespected by the healthcare provider. The feeling of disrespect may lead to the male patient delaying care in the future and reluctance to engage in the healthcare system (Leone, Rovito, Mullin, Mohammed, & Lee, 2017).

Masculinity in men has also been manifested historically by men being involved in some of the highest risk/dangerous professions, including but not limited to military, law enforcement, mining, fire, and rescue. Men have been raised in social environments that praise and reward men for being in these professions leading to a sense of pride and can reinforce risk taking behavior and to the ideal of masculinity (Addis & Mahalik, 2003; Leone & Rovito, 2013; Leone et al., 2017). Being involved in higher risk professions means men are also are greater risk for

experiencing negative health consequences as a result of the inherent dangers associated with these professions including physical, emotional, and exposure hazards.

Mental health including alcohol and substance misuse.

Depression and other mental health disorders are under diagnosed in males. Many mental health professionals believe the incidence of male depression rates are equivalent to women, men are less likely to report depression (Baker, 2019). Globally, men are greater risk for committing suicide. In 2016, the global suicide rate for men was 14 per 100,000 compared to 8 per 100,000 women (Baker, 2019). In the United States, a 2015 report from the Centers of Disease Control and Prevention concluded suicide was responsible for 44,193 deaths, approximating one death for every 12 minutes. Reporting from 2013 to 2015 showed the average suicide rate for men in a rural setting was 31.62 per 100,00, compared to 8.06 deaths per 100,000 in rural women, and 20.2 deaths per 100,000 in urban men (Ivey-Stephenson et al., 2017). The report also concluded the suicide rates were higher in rural areas compared to urban areas (Centers for Disease Control and Prevention [CDC], 2018). Higher rural suicide rates are in part attributed to greater social isolation and lack of mental health resources (State of Victoria's Health Department, 2013). Men seeking help for mental health conditions, especially depression can be viewed as a sign of weakness. Men also view depression as an issue they should be able to handle independently, without professional intervention (Edstrom et al., 2015; Mack, Jones, & Ballesteros, 2017; Mellor et al., 2017). Seeking help for an emotional problem is often considered a sign of weakness or not masculine. Unfortunately, not seeking professional assistance leads to the development of unhealthy coping strategies. One method for coping with their depression is turning to substance abuse with drugs and alcohol.

Alcohol and substance use.

Many men have adopted poor coping strategies, turning to alcohol or other mind-altering substances (Baker, 2019). Around the world in 2016, 39% of men consumed alcohol compared to 25% of women. In the United States, men are twice as likely to participate in binge drinking (5 or more drinks per occasion for men, 4 or more drinks per occasion for women), with 23% of men reporting binge drinking 5 times in the past 30 days consuming an average of eight drinks per occasion (Centers for Disease Control and Prevention [CDC], 2017). In a report from the CDC (2017), 58% of men reported consuming alcohol in the past 30 days. Additionally, 4.5% of men compared to 2.5% of women met the diagnostic criteria for alcohol dependence in one year. The use of alcohol can lead to a myriad of health consequences for men. Men are more likely than women to experience alcohol related injuries and death (CDC, 2017). Men are more likely than women to be involved in fatal car accident due to alcohol consumption by almost twofold. Consumption of alcohol can also lead to negative health consequences in the realm of reproductive health. Excessive alcohol use can result in infertility, impotence, increase the risk of having unprotected sex resulting in contraction of a sexual transmitted infection, and potentiate a greater risk of sexual assault (CDC, 2017). Excessive alcohol use also puts the male at greater risk of developing certain cancers including mouth, throat, esophagus, liver, and colon cancer. As stated previously, men are more likely than women to commit suicide. Alcohol use also seems to be risk for suicidal behavior as men are more likely to have been drinking prior to committing suicide (CDC, 2017).

Alcohol use is not the only substance men turn towards for coping. Worldwide, men are three times more likely to use cannabis, cocaine, or amphetamines. Additionally, 80% of individuals who inject non-prescription drugs are males (Baker, 2019). The problem is even

greater in rural communities. The rate of deaths from drug overdoses is greater in rural communities compared to urban communities (CDC, 2018). In 2015, the rate drug overdose death rates in rural America were 17 death per 100,00 deaths, compared to 16.2 deaths per 100,000 deaths in urban American. Even more striking, death rates from drug overdose in rural America have increased by 325% from 1999-2015, compared to an increase of 198% in urban America (Mack et al., 2017). Several explanations include individuals in rural communities generally have limited resources, experience social isolation, and increased time for emergency response.

Health literacy.

Health literacy being defined as an individual's ability to successfully navigate through the healthcare system gathering applicable information to improve and sustain positive health outcomes for the community, family, and themselves. Men also seem to have a lack of understanding how to access healthcare appropriately. In the United States, nearly half of men had poor health literacy compared to 39% of women. As stated previously, men have a tendency to adopt the "if it's not broke why fix it philosophy" (Pinkashov et al., 2013). Which means, they often only seek out healthcare once something has gone wrong (Addis & Mahalik, 2003; Baker, 2019; Leone et al., 2017), often leading men to seek out immediate care settings vs. primary care settings. The result of the encounter may fix the current problem at hand but do little in the realm of health maintenance. To compound the lack of understanding, men have a predisposition to view themselves as healthier than what is actual (Leone et al., 2017). Therefore, they often see little benefit health maintenance which can account for why men have such little uptake in regular health screenings or preventative care.

When men do successfully navigate the healthcare system, they are often confronted by another set of barriers. Men express frustration with the lack of flexible hours, such as not having clinic hours after regular business hours. They feel providers do not spend sufficient time with them to discuss problems. Men report the clinic settings as being too feminine, such as not having more male specific reading materials in the waiting areas. Men also report frustration with unpredictable waiting times to see a healthcare provider (Banks & Baker, 2013). All these factors can result in further reluctance to participate in preventative health maintenance.

Another contributing factor to health literacy is related to fear (Teo et al., 2016). Because of men's lack of knowledge regarding healthcare they tend to adopt a fear of going to seek medical care. There is a belief just by going to the doctor, they will be diagnosed with a disease. Lack of knowledge of disease process contributes to the fear. There is also a fear regarding what to expect through various screening processes. Men are also afraid if they are diagnosed with a disease, they will not know how to manage the illness.

Men's health initiatives.

Unfortunately, all the above stated has led to the normalization and acceptance of men having poorer health outcomes, leading to less healthcare resources for men. Key initiatives focusing on health are generally reserved for women and children. Many global and national health campaigns fail to recognize the significance and impact on men's health (Hawkes & Buse, 2013). Hawkes and Buse (2013) note most nations around the world, including the United States, do not have Offices of Men's Health to promote, advocate and research men's health. The lack of public support can ultimately have deleterious impact on the social and economic health of communities. For a community to be vivacious, all members must be

supported equally regardless of gender, race, or creed (Hawkes & Buse, 2013; Rovito et al., 2017).

Men are more likely to abuse alcohol, tobacco, other drugs and be more involved in homicidal/violent conflicts. Additionally, men are more likely to adhere to poor dietary intake and lead more sedentary lifestyles outside of work (Addis & Mahalik, 2003; Leone & Rovito, 2013; Leone et al., 2017). All these factors combined contribute to men's increased morbidity and mortality.

Potential Strategies for Improved Healthcare Utilization

All hope is not lost. Men in fact do want to have better health. In a 2016 survey by the Men's Health Network in conjunction with Chattem, the researchers found out of the 832 men surveyed, 90% of men in the United States want to take control of their health, they just don't know where to start.

One recommendation based on the above barriers is to increase global and national focus on men's health (Hawkes & Buse, 2013; Rovito et al., 2017). The development and implementation of these male specific initiatives with stable funding sources would likely lead improved men's health outcomes. These initiatives should include all major stake holder from both the public and private sectors. The improved health outcomes ultimately leading to decreased financial burden and healthier communities. Recently, there has been progress in the area global support. WHO Europe has adopted strategies specific to men's health encouraging 53 countries to adopt male specific programs focusing on areas such as, self-care, parenting, family care, substance abuse, healthy eating, and physical activity (Baker, 2019). Additionally, men's health policies have been developed in Australia, Brazil, and Ireland.

Another recommendation is to implement educational initiatives through schools addressing health and well-being topics for boys and adolescents (Houle et al., 2015). The reluctance to engage in the health system appears to manifest in reinforcing negative health behaviors as men age (Houle et al., 2015). Once men reach middle age (between 40 and 65 years of age) and older, they often display worse health maintenance behaviors such as avoiding healthy diets, consistent exercise and stress management, even though they seemingly would have more time and resources available (Sunderland, Slade, Carragher, Buchan, & Batterham, 2013). There is, therefore, no coincidence men experience the highest amounts of mental health and physical health problems at middle age (Sunderland et al., 2013). Developing a strong health education foundation in younger males, targeting key areas such as heart health, exercise, dietary intake, safe sex practices, and healthy weight, could translate into better health maintenance strategies. These strategies could then be utilized through all stages of life providing better health outcomes for men.

Mellor et al., (2017) proposed additional interventions. In their study, the researchers incorporated a work-place health promotion program using middle-age men employed in four separate Australian government agencies. The men were assigned to either a no intervention or intervention group. The intervention group participated in 90-minute workshops for four consecutive weeks addressing topics such as stress management, coping strategies, healthy diet, exercise, self-efficacy, and positive body image. Upon conclusion, the researchers did note some positive trends in improving overall health and coping strategies in the intervention group including decreasing body fat percentage and adopting healthy lifestyle changes. The observations lend support to appropriate interventions and education having a positive impact on men's health.

Providing health education and outreach to adult males, especially fathers and spouses, will have a trickledown effect to their children and families. Having a healthier spouse who is more engaging will not only reduce the financial burden for the family but will result in better interpersonal relationships (Rovito et al., 2017). In studies, investigators have found relationships with fathers can have an impact on children's risk-taking behavior, and paternal guidance can improve health outcomes (Garbarino & Haslam, 2005; Lopez & Corona, 2012). Not only can relationships improve child outcomes, but there seems to be a reciprocal effect on the father's health as well. The more involved and educated the father is and sees the positive impact he is having on his children, the more likely the father will continue with the healthy behaviors and less likely to participate in risky behavior (Baker et al., 2014).

The first step to improving men's health might simply involve getting men to participate in preventive/primary care on a more consistent basis. One recommendation is to increase visibility by developing male-specific advertising campaigns (Baker et al., 2014; Galdas, 2013). Galdas (2013) recommends bringing advertisement into events and locations heavily attended by men, such as sporting events, taverns, local gyms. Galdas (2013) also strongly encourages offering alternative clinic times, specific to the population, that would allow more convenient access. Another recommendation for improving primary care uptake is having more male specific literature available in the waiting rooms and making the waiting area and clinical experience more male friendly. To further empower men in the clinical setting, there should be ample opportunities for men to discuss issues with their provider, even if the results is longer encounter times. Providers must take the time to explain the importance of preventive health screenings and exams that is easily understandable (Galdas, 2013; Hooper & Quallich, 2016).

When discussing health information with men, the language used can be just as important as the information relayed. Major corporations have employed the rebranding concept. For example, Coca Cola and Pepsi Cola adapted their marketing for diet soda. They added Coke Zero and Pepsi Max because their marketing research found men were hesitant to buy “diet” branded products (Baker, 2019). These same strategies can be employed in the healthcare setting as well. For example, many men prefer to discuss “healthy eating” and “fitness” rather than dieting, or “stress” instead of mental health (Robertson et al., 2014).

Providing men with information and enhancing their knowledge base regarding health issues specifically geared toward men or have greater impact on men have proven to be beneficial (Baker, 2019). These health issues include heart disease, diabetes, cancer, mental health, accidents/injuries, sexual and reproductive health, mental health, suicide, and violence.

Theoretical Framework

The Iowa Model of Evidence-Based Practice

The theoretical model used to guide the implementation of the practice improvement project is the Iowa Model of Evidence-Based Practice to Promote Quality Care. The Iowa Model provides a progressive outline for implementing an evidence-based intervention for clinical improvement which can be incorporated into a primary care setting (Iowa Model Collaborative, 2017). Permission to use the Iowa Model of Evidence-Based Practice to Promote Quality Care was obtained 09/23/2018 (see Appendix F). To begin incorporating the Iowa Model of Evidence-Based Practice one must select a topic, or “trigger” which are problem-focused or knowledge-focused” stemming from providers and/or heads of facilities pursuing practice improvement opportunities or examining current practice standards against emerging research/most current national guidelines (Melnyck & Fineout-Overholt, 2015). Once a problem

has been deemed a priority for the organization, the Iowa Model guides the researcher to form a team responsible for appraising the issue through comprehensive research. Based on the results of the research it may be deemed necessary to develop recommendations for practice to pilot the change addressing the issue (Melynk & Fineout-Overholt, 2015). The next step of the process is to implement a pilot change of practice and evaluate for outcome improvement. Implementation and practice protocols are then modified as needed. Finally, if the practice changes implemented have been determined beneficial for the practice and improving health outcomes, the practice change is integrated into practice. The process of integration of the practice change will need to be continually evaluated, and the results disseminated (Melnick & Finout-Overholt, 2015).

Topic selection.

For the practice improvement project, the topic selected was chosen based on collaboration with providers and the clinical director from a rural primary care facility. The providers and clinic director of a rural health clinic in North Dakota vocalized concern regarding men ages 19-60 regularly participating in routine health maintenance. In the rural community used for the PIP, most males are seen on a routine basis from infancy through late adolescence. Based on discussion with the rural clinic director, once men complete high school, they have very limited follow-up with a primary care provider (T. Schwartz, personal communication, September 25, 2018). If men within the age group do return to the clinic setting, the visits are generally for episodic, urgent, or emergent care. The providers of the rural clinic and the clinic director have taken steps to promote men's health by implementing programs providing free blood pressure screening, and reduced cost PSA, and cholesterol screening during the Nation College Athletic Association's (NCAA) basketball tournament. From the event, there has been strong uptake of men being seen in the clinic, however, they are generally age 60 and

older. The question then becomes determining the barriers preventing men 19-60 from participating in routine health maintenance.

Team assembly.

The next step in the in the Iowa Model is to form a team. A team of five individuals were assembled to assist the coinvestigator in the development, implementation, and evaluation of the practice change (Melnyck & Finout-Overholt, 2015). The team was composed of five stakeholders: a doctor of nursing practice (DNP/FNP) graduate student (the coinvestigator), a family nurse practitioner (FNP) graduate school faculty member (the committee chair), a DNP/FNP graduate school faculty member with an interest in the proposed project, a FNP practicing at rural health clinic, and a graduate school appointed faculty member. The coinvestigators role included developing a project proposal with literature review and synthesis of relevant evidence, design the project implementation and evaluation, determine the risk to subjects, and collaborate with committee members. After the project proposal was approval IRB approval was obtained (see Appendix B). Once IRB approval was obtained, the coinvestigator implemented the practice improvement project with collaboration from all committee members.

Research and related literature assembly and critique.

A review of literature was conducted including relevant potential barriers preventing men from participating in routine health screenings, preventive health and/or primary care utilization. Through the literature review potential recommendations were for improving male uptake of routine healthcare through a primary care were identified. Upon conducting the literature review, a gap in research was noted. There were limited data reflecting barriers specific to a male population in a rural farming community. Thus, the coinvestigator determined there was need for an evaluation of healthcare uptake barriers for men in a rural farming community in

North Dakota. By determining barrier for the patient population, recommendations could be made based on the strategies found through the literature review.

Piloting a practice change.

The next step in the Iowa Model of Evidence-Based Practice was to pilot a change in practice. Once male healthcare barriers were determined, recommendations were formulated to improve men's uptake of engaging in routine healthcare through primary care services. The main objective for the PIP was for the clinic providers to implement intervention strategies specific to engaging men in routine healthcare visits. By incorporating the strategies, there would be increased uptake of men participating in routine primary care visits. Ultimately, successful implementation would result in improved male preventive medicine, better management of chronic disease processes in men, and enhanced male health outcomes.

Selecting outcomes to be achieved.

The literature review, project purpose and background of the identified problem, helped guide the direction for determine the direction for outcome development. The project outcomes are discussed in greater detail in a later section.

Collecting baseline data.

For the purpose of the PIP, the coinvestigator determined evaluation of potential barriers was needed for the specific patient population. The data are presented in the results section.

Develop an implementation plan.

By gathering baseline potential and actual barrier data from men in the rural setting, a provider education session was developed. The educational session was the foundation for bringing forth recommendations for interventions to be incorporated by the clinic providers. Review of recommendations with the clinic director yielded a plan for implementation of certain

interventions within the rural health system. The interventions have been discussed in greater detail in the interpretation of results section.

Integrate and sustain a practice change.

Integrating and sustaining a practice change was the next to last step in the Iowa Model. The integration portion was employed once the adopted interventions were carried out by the providers and clinic director of the rural health clinic. To evaluate the sustainability of the practice change was outside of the scope of the PIP paper and were to be determined by the providers and clinic director at a later date.

Dissemination of results.

The dissemination process of the PIP included several venues. The first venue occurred April of 2019 during the initial stages of development of the PIP. A public poster viewing event was held at North Dakota State University. During the event, the coinvestigator had the opportunity to share the proposed process for development and implementation of the PIP. Attendees were able view the PIP proposal poster, ask questions, and offer feedback. A second public poster viewing event occurred in September of 2019 at the North Dakota Nurse Practitioners Association's pharmacology conference. Prior to the event, the PIP had moved beyond the proposal process and into the implementation stage. Once again, attendees were able to ask questions and provide feedback. The final dissemination event will occur in April of 2020. The event will again be a public poster presentation held at North Dakota State University. During the event, the primary research will be able to disseminate results from the PIP and discuss the impact the PIP will have on nurse practitioners and men's health. The event will also provide a platform for the coinvestigator to discuss pitfalls and direction of future

research. Future publication options in a nursing research or men's health journal are also being explored.

Pender's Health Promotion Model

Dr. Pender's Health Promotion Model (2015) was the guiding theoretical model for the PIP. The model incorporates three major themes including individual characteristics and experiences, behavior-specific cognitions and affect, and behavioral outcomes. Within each theme subsets exist. In the individual characteristics and experiences theme there are the subsets of prior related behavior and personal factors (biological, psychological, and socio-cultural (Pender, 2015). For the purposes of the clinical improvement project, prior related behavior was considered men typically not engaging in routine healthcare screenings. Personal factors can include the male constructs of masculinity and men's perceived role in society.

In the theme of behavior-specific cognitions and affect, there are the subsets of perceived benefits of actions; perceived barriers to actions; perceived self-efficacy; activity-related affect; interpersonal influences including family, peers and providers; and situational influences (Pender, 2015). The PIP addressed many of these subsets through the barrier assessment questionnaire in an attempt to determine what are the perceived or actual barriers preventing men from engaging in routine primary care visits.

The final theme in Pender's Behavior Change Model (2015) is behavioral outcome and includes the subsets of immediate competing demands and preferences; commitment to a plan of action; and health promoting behavior. Immediate competing demands are considered to be things the individual has little control over. The preferences are considered items the individual has a greater ability to control. For the purposes of the project, men are not specifically the targets of the intervention. The intervention, education and recommendations for the providers

in the rural setting were the primary focus. Successful implementation was considered once the providers were presented with recommendations to improve men's access that will allow men to commit to a plan of action and ultimately demonstrate health promoting behavior of engaging in routine primary care health visits.

CHAPTER III. PROJECT DESCRIPTION AND METHODS

Project Objectives

1) Identify actual and potential primary care uptake barriers of rural men ages 19-60 within the service area or a predetermined rural healthcare clinic service area during two separate events in September and October of 2019. The events included a high school football game and “burger night” at a local tavern in the rural community.

2) Review findings with recommendations for the identified barriers with the providers and director of clinical operations employed by the rural healthcare clinic, December 2019.

3) Providers will implement at least 2 recommendations within the clinic by the end of February 2020.

Project Design

Setting and Participants

The participants for the study consisted of two populations. The population for the first set of participants were men between the ages of 19-60 within a predetermined rural health clinic service area. The age group was defined by the clinical director based on analysis of current clinic trends. Once men advance beyond high school age a significant decrease in their participation with routine healthcare has been noted. The clinical director also reported there seems to be consistent number of men engaging in routine primary care visits past the age of 60 within the community. The second population of participants were providers and the director of clinical operations employed by the rural health clinic.

Immediate implementation of interventions addressing the barriers to men not participating in preventive medicine would be the ideal scenario. Unfortunately, based on the

review of literature, there was a lack of congruence of recommendations for the rural male population, and the actual barriers for the population were unknown.

Resources and Materials

A questionnaire adapted from a study by (Mansfield, Addis, & Courtenay, 2005) was utilized. The original questionnaire was developed for assessing barriers preventing men from engaging in mental health visits with the Veteran's Administration (VA). The authors of the questionnaire addressed the following barriers with the questionnaire questions: institutional barriers, staff skill and sensitivity; logistic barriers; stigma related barrier; and concerns about social consequences. The questionnaire was felt to be appropriate for the clinical improvement project as the barriers represented were consistent with barriers noted in review of literature. The questions were modified to reflect a primary care setting vs. the VA. Permission and approval of adaption has been received from the authors (See appendix B). The questionnaire consisted of 20 questions rated on a 0-4 Likert scale.

The electronic body fat analyzer (Omron model: HBF-306C) and digital grip dynamometer (Camry model: EH101) was provided by the North Dakota State University School of Nursing. Electronic and manual blood pressure measurement devices were provided by the rural clinic site.

Project Implementation

Actual and potential barriers were surveyed for the previously described population. The questionnaire included the following demographic information: age, race, occupation, and residence. The barriers questionnaire was distributed during two public events during fall of 2019. The first event was a local High School Homecoming football game in a rural North Dakota town. The second venue was a local tavern in the same rural North Dakota town, during

an event designated as “burger night.” To incentivize completion of the questionnaire a booth was set up offering free blood pressure screening, hand-held body fat analysis, and grip test using a digital hand dynamometer at each venue. The screenings were offered on a voluntary basis and participants were allowed to complete zero to all of the screenings. The results of the screenings were provided to the participants with information on normal values and instructions to contact a primary care provider with questions or concerns. Participants were allowed to complete the voluntary questionnaire at a private booth and the results were secured in a lock box.

The providers and director of clinical operations voluntarily participated in a 50-minute educational presentation presented at the rural health clinic. The presentation was done using a PowerPoint format (See Appendix D.) The presentation consisted of the results of the barriers survey, provided information specific to the clinic’s patient population and provided recommendations to promote increased uptake of primary care utilization for the defined male population. The recommendations were developed based on positive responses to the barriers questionnaire (Appendix C). A positive response equated to at least 44% of respondents reporting a barrier hindering their use of healthcare slightly, moderately or very much.

Recommended Interventions Education

The education session provided a brief background regarding why the PIP was being done, review of results of barriers survey, screening findings, and recommendations to increase men routinely engaging in primary health visits. The presentation slides are included in Appendix D. The majority of the education session focused on recommendations and why the recommendations would be beneficial for the clinic and providers. Through the barrier survey results, the following barriers were identified for the patient population who participated. First,

there seems to be a barrier of health literacy identified through positive responses for the survey items “I am not sick enough to be seen in the clinic;” “my problems aren’t a big deal;” and “I don’t want to overreact, my problems aren’t serious.” To address these barriers the following recommendations were suggested. Distribute simple, but impactful posters discussing the importance of routine health screenings and primary care to area businesses frequently attended by men. Having information targeted to men’s health available in the clinic waiting room. Send personalized letters to area men with information regarding the importance of routine health screenings by age group. Having an online resource available on the clinic’s website with information focusing on target areas of highest concern such as cardiovascular health, risk taking behavior, mental health, alcohol/substance use, obesity, cancer, diabetes, and sexual/reproductive health (Baker, 2019).

The next barriers addressed during the educational presentation addressed barriers regarding confidentiality, empowerment, and self-efficacy. The survey items specific to these barriers included: “I don’t like to get emotional over things;” “I don’t like other people telling me what to do;” “I don’t like to talk about my feelings;” “I would think less of myself for needing help;” and “privacy is important to me, I don’t want others to know about my problems. The recommendations to address these barriers include interventions such as providing online or mobile application base registration for appointments. Incorporating electronic scheduling addresses several of the barriers. Allowing the man to feel more empowered by making the appointment and provides a measure of perceived privacy by not having to speak with anyone. Another recommendation included implementing a monthly or quarterly group-based health discussion. Group discussions have been shown to increase men’s uptake of primary care services (Baker, 2019). The group format allows men to feel more empowered, garner a sense of

unity, and promoting self-efficacy. An additional intervention included partnering with local businesses by offering health screenings/assessments at the workplace. Workplace screenings allow men to have greater control over their schedules and provide a convenient way to be engaged in the healthcare system. A final recommendation was to provide education about routine primary care visits during health visits that corresponded with life milestones, such as high school graduation or the birth of a child. Often a high school senior is engaging with a provider for sports physical or an expectant father is present during a prenatal visit. These are opportune times to provide education or even schedule an annual visit (Baker, 2019; Baker & Banks, 2013; Baker & Shand, 2017).

Several additional recommendations were made not specific to any identified barrier but found to be beneficial through the literature. These recommendations such as simply stating during the visit that confidentiality will be maintained. Also, during the visit, be direct with the male patient and use language at the level of the patient. Ensure preventative health interventions are informed by men's health research and include messages relevant to men. Provide ample opportunities for questions and distribute educational health literature for the patient to read after the visit. And finally, give encouragement and reinforcement for men engaging in health promotion behaviors (Baker, 2019; Teo et al., 2016).

CHAPTER IV. EVALUATION

Upon completion of the educational session, the participants were sent an evaluation of using the Qualtrics analytic platform. The evaluation consisted seven questions with 0-4 Likert scale (see Appendix H). A follow up visit, two months post education, was completed with director of clinical operations to determine what interventions were implemented into the rural practice.

Objective One

Objective one, to identify actual and potential primary care uptake barriers of men ages 19-60 in a rural setting, was done utilizing 20-item barriers question rating each potential barrier on a 0-4 Likert scale.

Objective Two

The second objective in the clinical improvement project was to disseminate the barriers survey results and with providers and clinic director from the rural health clinic and provide intervention recommendations. To evaluate objective two, the coinvestigator reviewed the barriers survey results and concluded interventions should be focused on areas the participants gave the highest frequency of positive responses. A positive response defined as answering with a slightly, moderately, or very much response to the questionnaire item. The primary research determined the most likely barriers were represented by at 44% of the participants having a positive response to an item. The educational material developed consisted of interventions noted in the literature at best addressing these barriers.

Objective Three

Evaluation of objective three was conducted through multiple steps. The first was follow-up survey sent to the two providers, director of clinical operations, and director of nursing

who attended the educational session. The questions focused on the presumed quality of the content and the likeliness of implementing any of the interventions recommended. The final part of evaluation objective three focused on follow-up review two months post educational session to determine what interventions recommended have been implemented.

Protection of Human Subjects

To ensure the protection of the rights and safety of the human subjects taking part in the author's practice improvement project, North Dakota State University Institutional Review Board (IRB) approval was obtained prior to PIP implementation. Participants voluntarily participated in health screenings, questionnaire completion and educational session. Health screenings conducted were non-invasive. Participant demographic information collected was generalized with little chance for identification. All information was either secured in metal lock box or by password encrypted web-based program (Qualtrics). Due to the aforementioned, there was minimal risk for participant harm. The PIP was granted exempt status through the NDSU IRB #PH20028 (see Appendix F). The rural PCPs and individuals who chose to participate in the PIP were provided informed consent documentation notifying them of the potential risks and benefits of the project (see Appendix H). Participation in the PIP was deemed as acceptance of consent for the project.

CHAPTER V. RESULTS

The PIP was evaluated after project implementation to measure outcome attainment. Both quantitative and qualitative data were analyzed to determine the results of the EBP initiative. The following section includes participant demographics, barriers questionnaire results, post-education survey results, and interventions implemented into practice the rural health clinic.

Barriers Questionnaire Demographics and Screening Results

The demographic information obtained from the participants who completed the barriers survey included age, town of residence, ethnicity, education, and marital status. There was a total of 16 participants who completed the 20-item barriers questionnaire. Age was broken down into age ranges to maintain confidentiality. The age breakdown for the participants was: one participant age 19-24 (6.25%), one participant age 36-40 (6.25%), five participants age 41-45 (31.25%), one participant age 46-50 (6.25%), two participants age 51-55 (12.5%), two participants age 56-60 (12.5%), and four participants age 61 or older (25%). Of the 16 participants, 14 (87.5%) reported their primary residence with the rural clinic service area, one (6.25%) participant was outside the service area, and one (6.25%) did not report area of primary residence. Of the 16 participants, 14 (87.5%) identified as Caucasian and 2 (13%) did not designate an ethnicity. Education included highest grade completed with the options of high school diploma, GED, some college, college graduate, and graduate degree. Two (12.5%) participants reported having a high school diploma, four (25%) reported some college, five (31.25%) reported college degree, two (12.5%) reported graduate degree, and three (18.75%) did not report a highest level of education. Marital status options included single, married, widowed, divorced, and other. Two participants (12.5%) reported marital status as single, nine (56.25%)

reported being married, one (6.25%) reported being widowed, and four (25%) did not report marital status. Table 1 represents barriers questionnaire participants demographic information.

Table 1

Demographics for Barriers Questionnaire Participants

Question	Response (N=16)	Average (%)
Age		
19-24	1	6.25%
25-30	0	0%
31-36	0	0%
36-40	1	6.25%
41-45	5	31.25%
45-50	1	6.25%
51-55	2	12.5%
56-60	2	12.5%
61+	4	25%
Residence		
Within Service Area	14	87.5%
Outside Service Area	1	6.25%
Not Reported	1	6.25%
Ethnicity		
Caucasian	14	87.5%
Not Reported	2	12.5%
Education		
HS Diploma	2	12.5%
Some College	4	25%
College Graduate	5	31.25%
Graduate Degree	3	18.75%
Not Reported	2	12.5%
Marital Status		
Single	2	12.5%
Married	9	56.25%
Widowed	1	6.25%
No reported	4	25%

As part of the questionnaire completion process, a booth was set up offering free blood pressure screening, hand-held electronic body fat analysis, and grip test using a digital hand dynamometer at each venue. The systolic blood pressure readings for the 14 participants who completed the blood pressure screening were as follows: 122, 118, 118, 138, 131, 138, 122, 143, 142, 147, 140, 151, 150, and 158. The mean systolic blood pressure for all participants was 137. The body fat percentage readings for the 13 participants who completed the hand-held electronic body fat analysis were as follows: 24.9%; 32.4%; 22%; 35.9%; 24.3%;35.9%; 25.5%; 28.2%; 33.5%; 32.2%; 27.4%, 23.8%, and 11.2%. The mean body fat percentage for all participants was 27.47% body fat. The grip strength results measured in kilograms of force for the 12 participants who completed the screening were as follows: 55.5, 46.8, 67.8, 67.1, 54.2, 38.7, 41.8, 38.8, 41.1, 43.4, 47.6, and 51.3. Then mean grip strength for the 12 participants was 49.5 kilograms. Table 2 represents the screening results.

Table 2

Screening Results

Screening	Response (N=16)	Mean (%)
Systolic Blood Pressure		
<130	4	25.00%
130-140	3	18.75%
140-150	5	31.25%
>150	2	12.5%
Declined Screening	2	12.5%
Body Fat%		
8-21.9	1	6.25%
22-28	6	37.5%
>28	6	37.5%
Declined Screening	3	18.75%
Grip Strength in Kilograms		
38-47.9	7	43.75%
48-57.9	3	18.75%
58-67.9	2	12.5%
Declined Screening	4	25.00%

Objective One: Participant Responses to Barriers Questionnaire

The barriers questionnaire utilized within the PIP addressed objective one which was to identify actual and potential primary care uptake barriers of men ages 19-60 within a rural healthcare service area in a North Dakota farming community by the end of October 2019. Participants voluntarily participated in a 20-item Likert scale survey. The total number of men who participated in the survey was 16. The survey (Table 3) asked respondents to indicate the degree to which each potential barrier hindered your use of healthcare on a 4-point scale with 1 indicating “not at all,” 2 “slightly,” 3 “moderately,” and 4 “very much.

Table 3

Barriers Survey Results

Degree potential barrier hindered your use of healthcare	Not at all	Slightly	Moderately	Very Much
1. I don't trust doctors or nurses.	12	1	3	
2. Clinic staff members are not responsive to my needs.	11	3	1	1
3. I have difficulty finding transportation to the clinic.	16			
4. The nearest clinic is too far away.	16			
5. I have to pay more than I can afford at the clinic	13	3		
6. The clinic hours conflict with my parenting responsibilities.	13	3		
7. The clinic hours conflict with my work responsibilities.	11	3	1	1
8. I had to wait too long to get an appointment at the clinic.	15	1	1	
9. The clinic is for people who are different sex than me.	16			
10. The clinic doesn't feel comfortable for my age, race, or sex.	16			
11. My problems aren't a big deal; they will go away in time.	8	4	3	1
12. I am not sick enough to be seen in the clinic	8	4	2	2
13. I don't want to overreact; my problems aren't serious.	8	5	2	1
14. I don't like to get emotional about things.	7	6	2	1
15. I don't like other people telling me what to do.	9	3	3	1
16. I don't like to talk about my feelings.	6	5*	3*	3
17. I would think less of myself for needing help.	9	7		
18. Privacy is important to me, and I don't want other people to know about my problems.	8	3	4	1
19. I don't want to look stupid for not knowing how to figure these problems out.	9	4	3	
20. I'm concerned that other people might find out information in my clinic medical records.	12	2	1	1

* One participant provided two answers to item 16.

Objective Two: Review of Findings

The second objective in the clinical improvement project was to disseminate the barriers survey results and with providers and clinic director from the rural health clinic. The survey results showed at least 43% of the men surveyed provided a positive response to survey items 11-19 (Table 4). A positive response defined as answering slightly, moderately, or very much.

Table 4

Participant Most Frequent Positive Responses

Degree potential barrier hindered your use of healthcare	Not at all	Slightly – Very Much
11. My problems aren't a big deal; they will go away in time.	8 (50%)	8 (50%)
12. I am not sick enough to be seen in the clinic	8 (50%)	8 (50%)
13. I don't want to overreact; my problems aren't serious.	8 (50%)	8 (50%)
14. I don't like to get emotional about things.	7 (43.75%)	9 (56.25%)
15. I don't like other people telling me what to do.	9 (56.25%)	7 (43.75%)
16. I don't like to talk about my feelings.	6 (37.5%)	11 (68.75%)*
17. I would think less of myself for needing help.	9 (56.25%)	7 (43.75%)
18. Privacy is important to me, and I don't want other people to know about my problems.	8 (50%)	8 (50%)
19. I don't want to look stupid for not knowing how to figure these problems out.	9 (56.25%)	7 (43.75%)

* One participant provided two answers to item 16.

Objective Three: Implementation of Recommendations/Education Review

The primary goal for objective three was to evaluate the content of the educational presentation and determine the what interventions will be implemented within the rural healthcare clinic to improve men's uptake of routine primary care services. A post-education survey was sent to the two providers, director of nursing, and clinic director who attended the education presentation with three out four participants completing the survey. The questionnaire asked the participants to use a Likert rating scale to evaluate educational content and presenter effectiveness. The first four questions offered the response choices of very likely, likely, somewhat likely, and not at all. The first four survey items were: (1) "The information provided

will impact the way I practice;” (2) “The information presented will change how you approach engaging men in the primary care setting;” (3) You will incorporate two of the recommendation provided into practice;” (4) “More men will participate in routine primary care visits due to proposed interventions. Two participants completing the survey rated survey item one as likely, with one participant rating question one as somewhat likely. For survey item two, two participants gave the rating of very likely, with one participant giving a rating of likely. In regard to survey item three, one participant gave a rating of very likely, one gave a rating of likely, and one participant gave a rating of somewhat likely. As for question four, one participant provided a response of likely, and two participants provided the response of somewhat likely. and item two as very likely. Survey items five and seven used Likert scale options of excellent, above average, average, and poor. Survey item five asked the participants the following, “Please rate the content quality.” Two participants gave the item a rating of above average, and one participant rated content as excellent. Survey item seven asked the participants the following, “Please rate the performance of the presenter.” Two participants gave a rating of above average, and one participant rated the presenter as excellent. Survey item six used Likert scale options of extremely useful, very useful, moderately useful, slightly useful, and not useful at all. The survey question was, “How would you rate the usefulness of the information for your job?” Two participants rated the question as very useful, and one participant gave a rating of moderately useful. Table 5 represents the responses to the survey items.

The second part of objective three was to determine if recommended interventions were going to be incorporated into the clinic. A two-month post education follow up meeting with the clinical director was completed. Upon conclusion of the meeting, the clinical director disclosed the providers from the rural clinic will implement the two of the proposed interventions.

Table 5

Post-Education Survey Results

Survey Question	Answer/ Response (N = 3)	Mean (%)
The information provided will impact the way you practice.		
Very Likely	1	33%
Likely	1	33%
Somewhat Likely	1	33%
Not at All	0	0
The information presented will change how you approach engaging men in primary care.		
Very Likely	1	33%
Likely	2	66%
Somewhat Likely	0	0
Not at All	0	0
You will incorporate 2 of the recommendations provided into practice.		
Very Likely	1	33%
Likely	1	33%
Somewhat Likely	1	33%
Not at All	0	0
More men will participate in routine primary care visits due to the proposed interventions.		
Very Likely	0	0
Likely	1	33%
Somewhat Likely	2	66%
Not at All	0	0
Please rate the content quality.		
Excellent	1	33%
Above Average	2	66%
Average	0	0
Poor	0	0
How would you rate the usefulness of the information for your job?		
Extremely Useful	0	0
Very Useful	2	66%
Moderately Useful	1	33%
Slightly Useful	0	0
Not Useful	0	0
Please rate the performance of the presenter.		
Excellent	1	33%
Above Average	2	66%
Average	0	0
Poor	0	0

CHAPTER VI. DISCUSSION AND RECOMMENDATIONS

Interpretation of Results

The purpose of the practice improvement project was to identify potential and actual barriers preventing men from engaging in routine primary care visits for preventative health maintenance in a rural healthcare setting. Through identifying the healthcare utilization barriers, the coinvestigator disseminated the survey results and provided intervention recommendations to the rural providers and clinical director for implementation. Ultimately, all three project objectives were achieved, though there is additional discussion on a later section regarding objective three. Identifying barriers specific to the intended patient population allowed for development of an educational session in which multiple recommendations were made to potentially improve rural men engaging in routine health maintenance. The recommendations led to the future implementation of two interventions within the rural health organization. The results of each objective have been interpreted and discussed in the following sections.

Objective One

The project objective was aimed at identifying the actual and potential barriers within the male population in a rural healthcare service radius. Through two separate events, the coinvestigator was able to administer and analyze 16 barriers questionnaires. The results from the barriers questionnaire helped identify the most likely barriers for the intended patient population. By comparing the findings through to the findings in the literature review, a list of recommendations was developed.

Objective Two

The findings from the barriers survey were discussed with the clinic providers and clinic director during a one-hour educational presentation at the rural health clinic. All clinic staff

members were invited to attend, which result in a total of audience of eight people including two providers, the clinic director, director of nursing, a North Dakota State University faculty member and four staff nurses. A PowerPoint format was utilized with opportunities for questions and discussion.

Objective Three

Objective three focused on evaluation of content presented during the educational session and implementation of at least two recommendations made during the education. The post-educational survey was sent out to the two providers, clinic director, and director of nursing for evaluation as these were the team members identified by the clinic director as having the greatest impact on making operational decisions. Three of the four attendees provided response to the post-education survey. Based on the survey results, most participants felt the information presented would result in possible practice change and potentially engage more men in primary care services. The participants rated the educational material content highly and found some benefit from participating in the presentation.

As for integrating recommended interventions into the clinic, that portion of the objective was met. The clinic will be implementing a strategy to keep men transitioning from high school into the healthcare system. One recommendation made through the educational session was to target male populations at life transitions. The providers will be educating high school seniors on the importance of engaging in routine healthcare during either their last sports physical or well-child exam. The providers will also be preemptively scheduling a wellness exam for the high school senior males to be seen the next year. By scheduling the exam, the hope would be to keep men engaged in their health. With routine health visits with a primary care provider,

men will have the opportunity to adapt health promotion behaviors reducing likelihood of developing and/or improved management of chronic disease processes.

The second intervention to be implemented was improving healthcare access within the place of employment. The clinical director and providers were in the process of discussing a plan for offering routine health screenings to all employees of the rural health clinic. The screenings would allow employees to have their screenings completed during the workday without having to take time away from the workday. As a result of the project improvement project educational session, the clinic director and providers have committed to initiating the intervention. The intervention has the potential to improve access and utilization for men employed at the clinic, but should improve access for all employees of the clinic.

Evaluating Practice Change

The Iowa Model of Evidence-Based Practice

Though the Iowa Model of Evidence-Based Practice provided a structural foundation to developing and implementing the PIP, there are limitations in its utilization for evaluating a practice change with the project. Specifically, the step for integrating a sustained change was unable to be determined by the conclusion of the project due to time constraints. The PIP did not go beyond the design and pilot the practice change step in the Iowa Model. Additional time is needed to determine if the interventions implemented at the rural clinic will have a lasting effect on men's routine primary care uptake and if the interventions are sustainable.

Pender's Health Promotion Model

Pender's Health Promotion Model (2015) was utilized as the theoretical underpinnings for driving behavior change. Using Pender's model allowed the coinvestigator to evaluate and integrate strategies for behavior change at each level along the continuum of care. Pender's

Health Promotion Model framework incorporates three main concepts of individual characteristics and experiences; behavior-specific cognitions and affects; and behavioral outcomes. The following subsections will describe each concept in detail in relation to the PIP.

Individual characteristics and experiences.

Pender's model takes into consideration the individuality of a person's characteristics and experiences as part of the driving force for determining individual behavior (Pender, 2015). To further explain behavior, Pender recommends also incorporating prior related behavior and personal factors into the behavior explanation. Prior related behavior examines what the individual's behavior in relation to a certain event was in the past. The prior behavior can be predictive of what the person will do in the future (Pender, 2015). Additionally, personal factors including biological, psychological, and sociocultural influences can impact behavior.

Prior related behavior and personal factors.

The prior related behaviors identified through the PIP and review of literature are men not routinely engaging in primary care services and preventive health screenings. As was noted in the literature, there are a multitude of personal factors contributing to the lack of participation. The factors include masculine ideals, poor health literacy, and lack of self-awareness in terms of health and well-being (CDC, 2019; Leone & Rovito, 2013, Levant et al., 2013; Teo et al., 2016; Yahia et al., 2016). By taking these factors in consideration a plan for direction of the PIP was developed. Ultimately leading the coinvestigator in the direction of assessing barriers for men in a rural farming community in North Dakota, as barriers for the specific population were not identified in the literature.

Behavior-specific cognition and affect.

Pender identifies behavior specific variables as being the primary driving force behind behavior modification (Pender, 2015). These are the variables most likely to be changed with incorporating targeted interventions. Pender distinguishes the most influential variables as perceived benefits, perceived barriers, perceived self-efficacy, activity related affect, interpersonal influences, and situational influences.

Perceived benefits.

The perceived benefits in relation to the PIP include potentially prevent chronic disease conditions, implementing strategies for health maintenance, early identification of chronic diseases, and improved medical management. These benefits could possibly result in enhanced utilization of healthcare and men's health outcomes.

Perceived barriers.

The barriers survey was implemented in the PIP to identify the perceived barriers for the men within the rural community used for the PIP. The findings from the survey allowed the coinvestigator to develop an educational presentation for the rural health providers focusing on interventions to improve men's uptake of primary care services.

Perceived self-efficacy.

The interventions recommended through the PIP provider education incorporated strategies improving men's self-efficacy for healthcare utilization. Specifically, providing men with additional resources, such as on-line health information, informational posters, and health promotion flyers, could improve men's health awareness. Additionally, the recommendation to allow men to self-schedule clinic visits with on-line registration and/or mobile applications, provides men with greater opportunities for self-efficacy (Baker, 2019).

Activity-related affect.

Activity related affect in the PIP was done incorporating health screenings into the barriers survey events. Offering men an opportunity for free blood pressure, grip, and body fat screenings, provided the men an avenue to receive some level of healthcare in the comfort of familiar surroundings. Engaging men in the health screening process outside of the clinic setting could foster increased healthcare awareness and decrease the men's reluctance to engage in the healthcare system.

Interpersonal and situational influences.

Taking interpersonal and situational influences into consideration assisted in the development of some of the recommended interventions presented in the PIP provider education. Recommendations were made to target health promotion interventions at specific life milestones, such as high school graduation. Also, during the education presentation a recommendation was given to discuss improved health not only benefitting the men, but how improved men's health can impact the entire family. Bringing the context of healthcare outside of the individual and discussing men's health as an impact to family and community could result in improved health behavior change (Baker, 2019).

Behavioral outcome.

Behavior outcome is the final stage to Pender's Health Promotion Model and requires a commitment to a plan of action (Pender, 2015). Immediate competing demands and preferences can impact both the behavior change and commitment to action plan. Behavior change for the PIP was not directly targeted to men in the PIP. Instead, behavior change and commitment to an action plan was targeted to the rural healthcare providers through implementing interventions. The recommended interventions of providing healthcare services within the workplace and

educating and preemptively scheduling yearly well visits for senior high school males constitute a plan of action. Determining if these interventions resulted in men's behavior change will be determined upon the rural organizations annual review of clinic visits.

Project Findings Compared to Review of Literature

Many of the findings from PIP are consistent and with what was found through the literature review. While other findings were somewhat different and unexpected. The following sections will provide discussion on the PIP findings compared to the literature.

Barrier Survey Results Compared to Literature

The literature review findings suggest masculinity and men maintaining masculine ideals as some of the primary barriers to having men engage in routine healthcare. Examples of the masculine ideals include restrictive emotionality, avoiding femininity, self-resiliency, toughness, and maintaining heterosexuality (Levantet et al., 2013). The belief of the coinvestigator is that some of these ideals carried over into the barrier survey. For example, over 50% of the men participating in the survey reported at least talking about their feelings being "somewhat" of a barrier to accessing healthcare. The finding from the PIP suggest restrictive emotionality as being one of the barriers consistent with the rural male population surveyed. Likewise, 50% of the respondents reported feeling at least "somewhat" of a barrier to the items regarding their problems not being a big deal or not being significant enough to be seen in the clinic. These responses would suggest a correspondence to the ideals of toughness and self-resiliency, perhaps suggesting the men surveyed believe they can overcome their problems on their own.

The literature findings note a lack of flexible scheduling and feeling the clinic setting has been designed more for women and children as being significant barriers (Leone et al., 2017; Teo et al., 2016). Surprisingly, the literature findings were not consistent with the findings from

the results of the barrier survey. All respondents denied feeling the clinic setting was not appropriate for their age, sex, or race. The reasons could be multifaceted. One explanation, the rural clinic used for the PIP has a waiting room that is gender and age neutral. Additionally, the respondents were all Caucasian (98% of the county population is Caucasian), so one was not able to determine from the survey findings if minority patients feel the same.

Only three out the 16 respondents felt the clinic hours conflicted with their parenting obligations. Similarly, five of the sixteen respondents reported the clinic hours conflicted with their work obligations. There are several explanations for both issues. Regarding clinic hours and work conflicts, employment was not one of the demographic criteria reviewed, therefore participant employment status was unknown. Also, the population surveyed was from a farming community. Many of the farmers from the area are independent and set their own schedule, making clinic appointments during regular business hours more feasible. Regarding clinic hours interfering with parenting obligations, how many participants with children was unknown as this was not part of the demographic information requested. Lack of the specific demographic information may account for the reason parental obligation interference was not a significant reported barrier.

Another barrier found through the review of literature corresponded to men's lack of health literacy. The authors of several studies noted men are not as health literate compared to women and have difficulty navigating the healthcare system (Baker, 2019; Leone et al., 2017; Pinkashov et al., 2013). Men don't have a strong understanding of preventative medicine and think they should only access the healthcare system when they are ill. Results from the barrier survey were consistent with these findings as 50% of the respondents reported not being sick enough to be seen in the clinic as at least somewhat of a barrier to accessing healthcare. As

suggested in the literature, men need to be better educated on the importance of routine health screenings and participation with primary care providers on a consistent basis (Baker, 2019; Leone et al., 2017). Improved knowledge will help men prevent chronic problems and/or enhance the management of chronic disease, ultimately, improving male health outcomes.

Additionally, the combinations of masculine ideals, poor health literacy, fear of potential disease, perceptions of men thinking they are healthier than what is actual, contributes to a barrier of resistance (Baker, 2019; Leone et al., 2017; Pinkashov et al., 2013; Teo et al., 2016). The resistance was perhaps best illustrated through several comments and responses observed through the survey events. One potential participant stated, “I self-doctor.” Another person stated, “I am going for a smoke. You wouldn’t want my information anyways.” Several individuals stated, “I don’t want to know my numbers.” Yet another person stated, “I only go to the doctor when I am sick.” One might argue, the men making such comments would be the male who would benefit the most from health screenings and routine primary care visit. Unfortunately, neither the coinvestigator of the PIP, nor the results from the review of literature has been able to provide the “silver bullet” solution to address the resistance barrier. The best possible solution provided recommended earlier intervention and education to prevent resistance from occurring (Sunderland et al., 2013).

Screening results.

First, the coinvestigator must disclose the screenings were not conducted under ideal circumstances and as such should not be considered diagnostic. The screening results did however provide some interesting trends that should be considered. In regard to blood pressure, the average systolic blood pressure for all participants who completed the blood pressure screening was 137 mm/hg, with only four participants (29%) having a systolic blood pressure

(SBP) less than 130 mm/hg and seven participants (50%) having a SBP of 140 mm/hg or greater. According to the most recent guidelines from the American Heart Association (2017), 50% of the participants would be considered to have stage two hypertension with another 21% having stage one hypertension. Casual conversation with the participants during the screenings revealed very few participants were aware of having elevated blood pressure and/or were not being treated. High blood pressure left untreated can result serious health consequences including, organ damage, heart attack, and stroke (American Heart Association, 2017). Based on the SBP screening results, there seems to be a potential for the surveyed patient population to be at risk for hypertension.

As for body fat analysis, per manufacturer guidelines (Omron, 2012), the measurement was not taken during ideal times, thus the body fat measurements may not be completely accurate. The manufacturer states for the most accurate measurements, the device should be used at least two hours post meals, alcohol use, exercise, and consumption of fluids (Omron, 2012). Acknowledging many of the participants were screened at a bar or football game where food and beverages were likely consumed, there was potential for error in the measurements. However, there was likely some benefit to reviewing the results and discussing possible implications.

The average electronic reading for body fat of 13 participants completing the screening was 27.47%, with eight participants (61.5%) having a body fat percentage reading greater than 25%, five (38.5) of whom had readings greater than 30%. According to the manufacturer's reference range, the finding would place 61.5 participants in the categories of high to very high for body fat measurements (Omron, 2012). The body fat percentage results are greater than findings reported from the Centers for Disease Control and Prevention (2019), where 40.7% of

the men surveyed were found to be overweight. Being overweight has significant health implications. Obesity has been linked to many chronic diseases including but not limited to hypertension, metabolic syndrome, type two diabetes, stroke, heart failure, and cardiac arrest (American Heart Association, 2020). Several studies have found a correlation between elevated body fat percentage and hypertension (Kim, Hon, & Yang, 2012; Park et al., 2019). The researchers found individuals who had a normal body mass index but had high body fat percentage were at greater risk of having hypertension. Considering the participants screening results and the impact of being overweight can have on health, the screening results could be a significant finding.

Grip strength was the final screening item during the barrier survey event. Grip strength has been shown to be a possible indicator of strength, physical ability and overall health (Prasitsiriphon & Pothisiri, 2018). A decline in grip strength has been shown to contribute to a decreased quality of life and increased risk of debility (Legrand et al., 2014). Comparative analysis of grip strength over time provides the most reliable data points to determine risk of negative health outcomes. Unfortunately, grip data logging was not able to be achieved through the PIP as the grip test was only performed one time for each participant. To be able to evaluate for a trend, the participants would have needed grip testing to occur over a course of time, so the significance of the grip test screening performed yields little contributing information to participants overall health.

Project Limitations

Barriers Survey

The coinvestigator of the practice improvement project identified several limitations. One limitation included weather, which may have impacted the number of participants

completing the barriers survey. During the high school football, a significant rain event occurred resulting in premature termination of the survey session. At the second survey event, an early October blizzard was forecasted. Because this was a farming community, many of the potential participants did not attend “burger night” in order to prepare for the storm.

Another potential limitation could be related to members of the community not being familiar with the primary coinvestigator. As seen in the findings of the barriers survey, privacy was a consistent barrier with the participants. Not being a member of the community could have led to hesitancy for individuals to participate.

An additional limitation of the PIP barrier survey is associated with the men who did participate in the survey. Of the men who participated, four (25%) were greater than 61 years of age, thus being outside the intended survey age range. The men outside of the intended age range could skew the results in several ways. The participants ages 61 and above are potentially more likely to be retired, working less hours, and/or have grown children, therefore reporting clinic hours as less of a barrier. Also, as stated by the rural health clinical director, the men in the community greater than 61 year of age are typically seeing a primary care provider on a routine basis. Participant prior involvement with primary care was not one of the items requested on the survey form. The coinvestigator is therefore unable to determine if the four participants were in fact routinely engaging in primary care services.

A final potential limitation to completing the survey was the survey itself. Several participants reported some confusion regarding how to correctly respond to the items on the survey. They stated they felt the wording was confusing and they were not sure if they answered the questions appropriately. Based on the possible misunderstanding of the survey items, there was a potential for data corruption.

Educational Presentation

Originally, the coinvestigator anticipated all six providers employed within the rural clinic would be able to attend the educational session. Unfortunately, the only date available was when three providers were off, and one provider was unavailable due to medical reasons. Therefore, during the educational session only two providers were able to attend. A post education survey was submitted to the two providers, clinical director and director of nursing via email. Three participants completed the survey. However, as not all providers were in attendance and one participant did submit the post-education survey, the coinvestigator cannot determine if the educational material was deemed beneficial to all the clinic providers as was the original intent.

Intervention Integration

Ideally, a clinic follow-up six months to one-year post intervention implementation should occur. Unfortunately, due to time constraints of the PIP the coinvestigator was not able to evaluate if the intervention adopted by the clinic have been successful in increasing the men's uptake of primary care services. The rural health clinic plans on conducting their own review in a one-year post intervention. Those results will be shared with the coinvestigator for possible publication.

Implications for Advancing Nursing Practice

Improving men's participation in routine primary care visits not only benefits the individual but can have a dramatic effect on the community. Men having shorter life spans and dying younger puts unnecessary strain on the healthcare system and creates a greater financial burden (Brott et al., 2011; Thorpe, Richard, Bowie, LaVeist, & Gaskin, 2013). By providing education to providers on strategies to improve men's primary care uptake, the overall health of

the community can be greatly improved. The attitude of men seeking healthcare simply because they are men has been a barrier for far too long. Implementing the various strategies that have been discussed throughout the paper have been shown to improve men's access to healthcare (Baker, 2019; Leone et al., 2017; Leone & Rovito, 2013; Teo et al. 2016; State of Victoria Department of Health, 2013). Perhaps an organization employing every strategy outlined is not feasible, but one must begin somewhere. As nurse practitioners, our duty is to help our patients achieve the highest level of health and wellbeing possible. Nurse practitioners should examine the content included in the PIP and implement strategies that best coincide with their practice and patient population. If men can be routinely seen in the primary care setting, improved health outcomes are sure to follow.

Dissemination

Dissemination is the final and arguably the most important step of the Iowa Model of Evidence-Based Practice. The final step is essential for enhancing professional knowledge and adoption of evidence-based practice (Melnycyk & Fineout-Overholt, 2015). The dissemination process of the PIP has already occurred in multiple forums. The first opportunity for dissemination occurred April of 2019 during the initial stages of development of the PIP. A public poster viewing event was held at North Dakota State University. During the event, the primary coinvestigator had the opportunity to share the proposed process for development and implementation of the PIP. Attendees were able view the PIP proposal poster, ask questions and offer feedback. A second public poster viewing event occurred in after the coinvestigator's poster was accepted after peer review at the September of 2019 at the North Dakota Nurse Practitioners Association's pharmacology regional conference. Prior to the event, the PIP had moved beyond the proposal process and into the implementation stage. Once again, attendees

were able to ask questions and provide feedback. A future dissemination event will occur in April of 2020. The event will again be a public poster presentation held at North Dakota State University. During the event, the primary research will be able to disseminate results from the PIP and discuss the impact the PIP will have on nurse practitioners and men's health. The event will also provide a platform for the coinvestigator to discuss the pitfalls and direction of future research. Future publication of the results and project implications will be considered. The coinvestigator has identified three possible publication syndicates including the *Journal of the American Medical Directors Association*, the *Journal of Aging and Health*, and the *Nursing Research* journal. The journals were chosen are recognized by the Scimago Journal & Country Rank as being in the top 50 most influential journal publications, as well, as the PIP subject matter aligning well with publication criteria for the selected journals.

Recommendations for Future Practice Improvement Projects

The problem of getting men to engage in routine primary care visits does not seem to be going away anytime in the near future. There does seem to be a growing body of evidence offering strategies to improve men's primary care utilization. Throughout the literature, there was not significant findings addressing barriers of men from rural farming communities. The PIP offers some baseline data for a small rural farming community in North Dakota. With the information presented, future PIPs may be able to concentrate efforts more on interventions addressing the issues in a rural farming community. Implementing interventions early in the PIP process will allow for greater evaluation on determining if the interventions are successful or not. Follow-up should occur at regular intervals to determine if the interventions lead to increased men ages 19-60 participating in routine primary care visits. Ideally, a new investigator would be able to compare clinic visits month to month and year to year in the same community or similar

rural communities. By determining if men are engaging in primary care visits, the new investigator would be able to establish if the interventions were successful and sustainable.

Additional recommendations for future PIP projects include implementing annual grip strength testing and electronic body fat analysis in routine examinations. Incorporating annual grip measurement will help providers establish patient grip trends. As stated previously, comparative analysis of grip strength over time provides the most reliable data points to determine risk of negative health outcomes (Legrand et al., 2014; Prasitsiriphon & Pothisiri, 2018). Grip testing has been shown to be a possible indicator of strength, physical ability, and overall health (Prasitsiriphon & Pothisiri, 2018). The intervention is low cost, non-invasive, and can be easily integrated into an annual exam. There is also a benefit to using electronic body fat monitoring within the yearly exam. Potentially, body fat percentage is a better indicator of negative health outcomes, such as heart disease and hypertension, than body mass index calculations (Kim, et al., 2012; Park et al., 2019). Especially, when comparing year to year trends. Once again, the intervention is relatively low cost, non-invasive, and easily integrated into the yearly exam.

Conclusion

Nurse practitioners pride themselves as being the experts in the realm of health promotion, disease prevention, and health education (American Association of Nurse Practitioners, 2012-2020). However, in terms of men's health there is still work to be done. Men are dying earlier and are sicker than women worldwide and in the United States, with rural men in America being affected even more than their urban counterparts. There does not seem to be an easy solution to the problem, but with additional efforts progress can be made. The hope of the coinvestigator was to find a "silver bullet" solution to increasing men's participation in

routine health screenings and primary care engagement. Unfortunately, there does not seem to be one simple solution. Improving men's utilization of primary care services necessitates a multifaceted approach. The solution involves improved health education for men starting at a younger age. There needs to be greater commitment from both national and global organizations to make men's health a priority. Providers need to engage with community stakeholders to provide improved access to healthcare and make navigating the healthcare system simpler not only for men, but for everyone, especially in rural settings.

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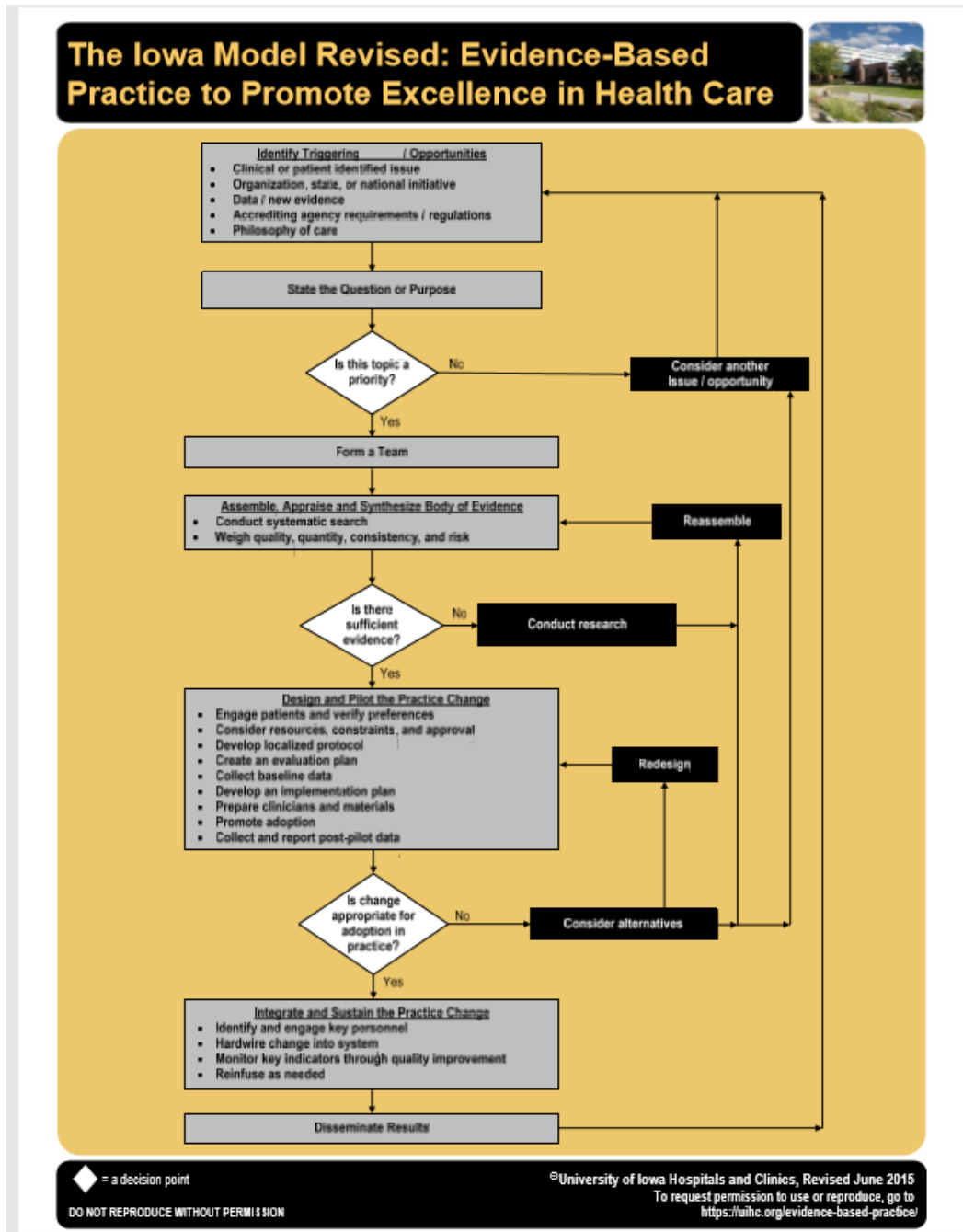
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APPENDIX A. IOWA MODEL OF EVIDENCE-BASED PRACTICE TO PROMOTE QUALITY CARE



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APPENDIX B. BARRIER SURVEY PERMISSION

Sure! Good luck with your research.

Abigail K. Mansfield Marcaccio, PhD
Psychologist, Family Research and Family Therapy
Department of Psychiatry, Lifespan Physician Group

From: Seibold, Shaun
Sent: Wednesday, March 20, 2019 3:04 PM
To: abigail_marcaccio
Subject: Permission to use a work

Dear Dr. Marcaccio,
My name is Shaun E. Seibold. I am Doctor of Nursing Practice student enrolled at North Dakota State University. For my dissertation, I am investigating barriers preventing men in a rural health setting participating regular preventative health screenings. I would be honored to have permission to use your barriers to Help Seeking Scale from your publication *Measurement of men's help seeking: Development and evaluation of the barriers to help seeking scale* (2005). If permission is granted, I would also like request to make the follow adaptations:

Adding the following:

The clinic doesn't feel comfortable for people my age, race, or sex
The clinic is for people who are a very different age than me.
I had to wait too long at the clinic
The clinic's hours conflict with my parenting responsibilities.
The clinic's hours conflict with my work schedule

Thank you for your assistance.

Sincerely,

Shaun E. Seibold

Sent from [Mail](#) for Windows 10

This transmission is intended only for the addressee(s) listed above and may contain information that is confidential. If you are not the addressee, any use, disclosure, copying or communication of the contents of this message is prohibited. Please contact me if this message was transmitted in error.

APPENDIX C. MODIFIED BARRIER SURVEY

Please indicate the degree to which each potential barrier hindered your use of health care on a 4-point scale with 1 indicating “not at all,” 2 “slightly,” 3 “moderately,” and 4 “very much	1: Not at all	2: Slightly	3: Moderately	4: Very Much
I don't trust doctors or nurses.				
Clinic staff members are not responsive to my needs.				
I have difficulty finding transportation to the clinic.				
The nearest clinic is too far away.				
I have to pay more than I can afford at the clinic				
The clinic hours conflict with my parenting responsibilities.				
The clinic hours conflict with my work responsibilities.				
I had to wait too long to get an appointment at the clinic.				
The clinic is for people who are different sex than me.				
The clinic doesn't feel comfortable for my age, race, or sex.				
My problems aren't a big deal; they will go away in time.				
I am not sick enough to be seen in the clinic				
I don't want to overreact; my problems aren't serious.				
I don't like to get emotional about things.				
I don't like other people telling me what to do.				
I don't like to talk about my feelings.				
I would think less of myself for needing help.				
Privacy is important to me, and I don't want other people to know about my problems.				
I don't want to look stupid for not knowing how to figure these problems out.				
I'm concerned that other people might find out information in my clinic medical records.				

APPENDIX D. PROVIDER EDUCATION PRESENTATION



Identifying Barriers to Preventative/Primary Care Utilization by Men in a Rural Setting

Shaun E. Seibold
Clinical Dissertation Proposal
North Dakota State University
School of Nursing



Objectives

By the conclusion of this presentation you will be able:

- Recognize the importance of engaging men in routine healthcare
- Identify potential barriers to men accessing routine healthcare within your service area
- Identify potential interventions to help men within your service area engage in routine healthcare



About Me

- **Education**
 - Graduated from Concordia College Accelerated Nursing Program - 2008
 - Bachelor of Arts in Psychology from the University of Montana - 2001
- **Nursing Experience**
 - Cardiac ICU
 - Hospice
 - Interventional Services Recovery
- **Interest in topic**
 - National and global need getting men more involved in preventive medicine
 - Specifically requested to research the topic by the clinical director of Northwood Deaconess Health Center
 - I happen to be a man who is not the best at seeing a provider routinely



Problem Statement

- Men are not utilizing primary care on consistent basis for preventative medicine contributing to men's health disparity



Literature Review/Synthesis

- In the United States, men live an average of 4.8 years less than women, 76.5 years compared to 81.4 years (Atlas, Heron, & Xu, 2017).
- Men account for 33.2% of all preventative care visits (Centers of Disease Control and Prevention (CDC), 2017).
- Of the top 15 causes of mortality, men's mortality rates are higher in 13 categories (CDC, 2015).
- In the United States alone, the cost associated with men's early mortality and morbidity is between \$136-\$479 billion annually (Brott et al., 2011; Thorpe, Richard, Bowie, LaVeist, & Gaskin, 2013).
- Rural men experience: higher rates of suicide, mortality due to accidents and chronic diseases, higher levels of social isolation and depression (Banks, 2010; State of Victoria Dept of Health, 2013)



Literature Review Cont..

- Men tend to have more functional view of their bodies. This results in delaying health-seeking until work, social and/or sexual function are impacted
- Common concerns noted in the literature include:
 - Not wanting appear weak or vulnerable; not wanting show weakness
 - Loss of control, not having a say in their healthcare
 - Worries of having a serious condition diagnosed
 - Attitudes regarding healthcare differ from women
 - Lack of flexible appointment times
 - Extended wait times in the clinic
 - Uncomfortable waiting rooms geared more towards women and children
 - Providers are more focused on health of women and children (Baker, 2019; Hooper & Quallrich, 2016; Houze et al., 2015; Teo, Ng, Booth, & White, 2016).



Method

- Booths set up at 2 locations
 - Local tavern
 - Homecoming football game
 - Booth consisted of BP screening, body fat analysis, grip test and barriers questionnaire
 - BP, body fat, and grip test instituted as incentive to complete the survey
- **Demographics**
 - Total of 16 participants: 11 from Northwood, 3 from Hatton, 1 from Fargo, 1 did not report
 - Participant age:
 - 41-45: 5
 - 61+: 4
 - 51-55: 2
 - 56-60: 2
 - 19-24: 1
 - 36-40: 1
 - 46-50: 1



Questionnaire

Please indicate the degree to which each potential barrier hindered your use of health care on a 4-point scale with 1 indicating "not at all," 2 "slightly," 3 "moderately," and 4 "very much"

	1: Not at all	2: Slightly	3: Moderately	4: Very Much
1. I don't trust doctors or nurses.				
2. Clinic staff members are not responsive to my needs.				
3. I have difficulty finding transportation to the clinic.				
4. The nearest clinic is too far away.				
5. I have to pay more than I can afford at the clinic.				
6. The clinic hours conflict with my parenting responsibilities.				
7. The clinic hours conflict with my work responsibilities.				
8. I had to wait too long to get an appointment at the clinic.				
9. The clinic is for people who are different sex than me.				
10. The clinic doesn't feel comfortable for my age, race, or sex.				
11. My problems aren't a big deal; they will go away in time.				
12. I am not sick enough to be seen in the clinic.				
13. I don't want to overreact; my problems aren't serious.				
14. I don't like to get emotional about things.				
15. I don't like other people telling me what to do.				
16. I don't like to talk about my feelings.				
17. I would think less of myself for needing help.				
18. Privacy is important to me, and I don't want other people to know about my problems.				
19. I don't want to look stupid for not knowing how to figure these problems out.				
20. I'm concerned that other people might find out information in my clinic medical records.				

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Results

Please indicate the degree to which each potential barrier hindered your use of health care on a 4-point scale with 1 indicating "not at all," 2 "slightly," 3 "moderately," and 4 "very much"

	1: Not at all	2: Slightly	3: Moderately	4: Very Much
1. I don't trust doctors or nurses.	12	1	3	
2. Clinic staff members are not responsive to my needs.	11	3	1	1
3. I have difficulty finding transportation to the clinic.	16			
4. The nearest clinic is too far away.	16			
5. I have to pay more than I can afford at the clinic.	13	3		
6. The clinic hours conflict with my parenting responsibilities.	13	3		
7. The clinic hours conflict with my work responsibilities.	11	3	1	1
8. I had to wait too long to get an appointment at the clinic.	15	1	1	
9. The clinic is for people who are different sex than me.	16			
10. The clinic doesn't feel comfortable for my age, race, or sex.	16			
11. My problems aren't a big deal; they will go away in time.	8	4	3	1
12. I am not sick enough to be seen in the clinic.	8	5	2	2
13. I don't want to overreact; my problems aren't serious.	8	5	2	2
14. I don't like to get emotional about things.	7	6	2	1
15. I don't like other people telling me what to do.	9	1	3	1
16. I don't like to talk about my feelings.	6	10	3	1
17. I would think less of myself for needing help.	9	7	4	1
18. Privacy is important to me, and I don't want other people to know about my problems.	9	4	4	1
19. I don't want to look stupid for not knowing how to figure these problems out.	9	4	3	1
20. I'm concerned that other people might find out information in my clinic medical records.	12	2	1	1

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Findings

44% of respondents reported rated these potential/actual barriers as slightly, moderately, or very much impacting their utilization of healthcare:

- My problems aren't a big deal; they will go away in time.
- I am not sick enough to be seen in the clinic.
- I don't want to overreact; my problems aren't serious.
- I don't like to get emotional about things.
- I don't like other people telling me what to do.
- I would think less of myself for needing help.
- Privacy is important; I don't want others knowing my problems.
- I don't want to look stupid for not knowing how to figure these problems out.

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Getting Men Into the Clinic

- Link health maintenance/preventative care with things important to men, such as being healthy for family and being able to provide for family
- Provide automatic reminders for health appointments
 - Personalized letters and reminders more effective than letters themselves
- Distribute flyers with educational information discussing the importance of preventative care visits at local businesses
- Mail informational letters to discussing importance of primary care visits to households
- Garner support from area businesses, setup health screenings at the worksite
- Offer online or app-based registration.
 - Gives the perception of increased control and privacy; Men respond well to technology
 - Digital services
- Have information targeted to men's health in waiting room

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Into the Clinic Cont...

- Link health promotion activities to important life transitions, such as HS graduation, becoming a parent
- Integrate interventions into community events such as Old-Fashioned Saturdays
- Incorporate group health promotions events (like your current March Madness event).
 - Peer support has been found as influencing factor
- Target health interventions and health service information towards men at desired age for uptake
 - Offer this information to family, significant others as well
- Men do care about their health though have reduced health literacy compared to women. Health literacy should focus more on benefits vs. consequences
- Rebranding: Instead diet and exercise, Example nutrition and fitness.
- Information should target areas of highest concern i.e. cardiovascular health, risk taking behavior, mental health, alcohol use, obesity, cancer diabetes

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Recommendations Cont....

During the Visit:

- Reassure privacy
- Be direct
- Use language at the level of the patient
- Ensure preventive health interventions are informed by men's health research and include messages relevant to men
- Provide opportunities for questions
- Provide encouragement and reinforcement for seeking health maintenance
- Provide literature to read after visit

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Considerations/Limitations

- Relatively small sample size due to weather, resistance to participate, not being part of community
- Questionnaire difficult to navigate

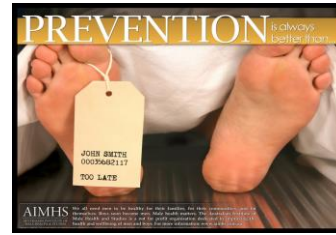
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Other Findings

- Average body fat %: 27.74% (n=13)
- Average systolic BP: 137 (n=14)
 - 3 participants in the 150s
 - 4 participants in the 140s
 - 3 participants in the 130s

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Questions?



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APPENDIX E. PENDER'S HEALTH PROMOTION MODEL PERMISSION

Dear Shaun:

You have permission to use the Health Promotion Model in your dissertation/clinical improvement project. Please see websites in attachment for related information.

Wishing you good health,

Nola Pender

On Mon, Feb 4, 2019 at 8:27 AM Seibold, Shaun wrote:

Hello Dr. Pender,

My name is Shaun E. Seibold. I am currently working on my DNP from North Dakota State University. For my dissertation/clinical improvement project I am looking at strategies to improve men's utilization of primary care for preventative health, specifically ages 20-60. For this project, I am considering using your Health Promotion Model.

Please consider this my formal request for permission to use this model. My anticipated graduation date is May of 2020.

APPENDIX F. NDSU IRB APPROVAL LETTER



August 14, 2019

Dr. Dean Gross
Nursing

Re: IRB Determination of Exempt Human Subjects Research:
Protocol #PH20028, "Identifying Barriers to Preventative/Primary Care Utilization by Men in a Rural Setting"

Co-investigator(s) and research team: Shaun Seibold
Date of Exempt Determination: 8/14/2019 Expiration Date: 8/13/2022
Study site(s): Northwood Deaconess Health Center
Sponsor: n/a


The above referenced human subjects research project has been determined exempt (category #1, 2(ii)) in accordance with federal regulations (Code of Federal Regulations, Title 45, Part 46, Protection of Human Subjects). This determination is based on the revised protocol submission (received 8/13/2019).

Please also note the following:

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

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

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


Kristy Shirley, CIP, Research Compliance Administrator

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

INSTITUTIONAL REVIEW BOARD
NDSU Dept 4000 | PO Box 6050 | Fargo ND 58108-6050 | 701.231.8995 | Fax 701.231.8098 | ndsu.edu/irb
Shipping address: Research 1, 1735 NDSU Research Park Drive, Fargo ND 58102

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APPENDIX G. BARRIER SURVEY PARTICIPANT CONSENT

NDSU North Dakota State University
School of Nursing
PO Box 6050
Fargo, ND 58108-6050
701.231.7395

Sir,

My name is Shaun Seibold, I have been a practicing RN for 10 years and currently in a doctoral program at NDSU. As part of my doctoral degree requirements, I need to complete a project that improves healthcare for patients. During my years of practice, I have noted males do not regularly see a healthcare provider. According to the research, the lack of routine visits to a primary care provider may have negative health outcomes for male patients.

I would appreciate your assistance with this research project on potential barriers for men participating in primary/preventive care visits. This research will help healthcare providers/systems better understand what keeps men from engaging in routine primary care visits and potentially improve healthcare outcomes.

All survey responses will be kept confidential. The questionnaire is anonymous and contains no personal identifying items. The survey should take less than 15 minutes to complete. Completion of the survey will constitute your consent to participate in the survey. Participant information will be used to provide education to healthcare providers on the barriers for males in seeking healthcare in the rural community. In addition, the survey results may be used in a future publication in a healthcare journal. "Identifying Barriers to Preventative/Primary Care Utilization by Men in a Rural Setting" has been determined exempt (category #1, 2(ii)) in accordance with federal regulations (Code of Federal Regulations, Title 45, Part 46, Protection of Human Subjects). This determination is based on the revised protocol submission (received 8/13/2019).

If you have any questions or comments, please feel free to contact: Dean Gross (dean.gross@ndsu.edu or 701-231-8355). If you have questions about the rights of human participants in research, or to report a problem, contact the North Dakota State University IRB Office by telephone at 701.231.8995 or toll-free at 855.800.6717, by e-mail at NDSU.IRB@ndsu.edu.

Thank you for your assistance.

Shaun Seibold BS, RN, DNP Graduate Student; North Dakota State University
Dean Gross, Ph.D., FNP-BC; North Dakota State University

APPENDIX H. PROVIDER CONSENT

Provider Educational Survey

NDSU North Dakota State University

School of Nursing

PO Box 6050

Fargo, ND 58108-6050

701.231.7395

Rural Clinic Providers:

I would appreciate your assistance with this research project on potential barriers for men participating in primary/preventive care visits. This research will help me understand what keeps men from engaging in routine primary care visits and help to address those issues. The information obtained from the completed surveys will enhance our ability to meet your needs as healthcare providers of male patients seeking care in a primary care clinic.

All survey responses will be kept confidential. The questionnaire is anonymous and contains no personal identifying items. The survey should take less than 5 minutes to complete. Completion of the survey will constitute your consent to participate in the survey.

If you have any questions or comments, please feel free to contact Dean Gross (dean.gross@ndsu.edu or 701-231-8355). If you have questions about the rights of human participants in research, or to report a problem, contact the North Dakota State University IRB Office by telephone at 701.231.8045, by e-mail at NDSU.IRB@ndsu.edu, or by mail at NDSU Sponsored Programs Administration, 1735 NDSU Research Park.

APPENDIX I. POST-EDUCATION SURVEY

	Very Likely: 1	Likely: 2	Somewhat Likely 3	Not at All: 4	
The information provided will impact the way you practice.					
The information presented will change how you approach engaging men in the primary care setting.					
You will incorporate 2 of the recommendations provided into practice.					
More men will participate in routine primary visits due to the proposed interventions					
	Excellent: 1	Above Average: 2	Average: 3	Poor: 4	
Please rate the content and quality of the information provided.					
Please rate the performance of the presenter.					
How would you rate the usefulness of this information for your job?	Extremely Useful: 1	Very Useful: 2	Moderately Useful: 3	Slightly Useful: 4	Not Useful at All: 5

APPENDIX J. EXECUTIVE SUMMARY

Purpose

The purpose the practice improvement project was to identify potential and actual barriers preventing men ages 19-60 from engaging in routine healthcare with primary care providers. The PIP focused specifically on rural men from a rural farming community in North Dakota as the literature provides little background for this specific patient population. The barriers were identified by hosting two health screening events at a local tavern and high school football game. The men were offered free blood pressure screening, body fat analysis and grip testing if they voluntarily participated in a barriers survey. Once the barriers were determined, the coinvestigator developed and implemented an education presentation for rural healthcare providers within the target community. The presentation focused on interventional strategies for improving primary care uptake by men from the specified community.

Barriers Identified

- Men surveyed reported poor health literacy by not recognizing the need for preventive healthcare
- Men surveyed express concerns with maintaining confidential interactions
- Men surveyed felt they should be able to handle their issues on their own without professional interaction

Intervention Recommendations

- Posters with men's health information distributed throughout the community where men frequent
- Post online courses and men's health information through the healthcare facility's website

- Allow for online or mobile application registration for healthcare appointments
- Focus men's health education efforts at times of life transitions such as graduating from high school and/or becoming a parent
- Partner with local businesses to provide onsite health screenings
- When men do receive healthcare, provide men's preventive care education and literature
- During the clinic visit, emphasize confidentiality and provide an atmosphere conducive to open dialogue

Screening Findings

- The average systolic blood pressure for the men screened was 137, which was considered stage 1 hypertension per the American Heart Association (2017)
- The average body fat percentage for the men screened was 27.5%, which per the manufacturer of the instrument used was considered high (Omron, 2012)
- The average grip strength for the men screened was 49.5kg, which per the manufacturer of the instrument used was average (Camry, nd)

Impact

Upon conclusion of the educational session, the rural health clinic will implement two of the recommended interventions. The providers will provide additional men's health education to high school senior males and schedule a primary care visit for the following year. The clinic will also provide yearly screening visits to all clinic staff during the workday for added convenience and increased uptake of primary care services.

Conclusion

Through the utilization of a barrier screening survey, the coinvestigator was able to implement an educational presentation to the rural providers. The educational session provided interventional strategies for improving male utilization of primary care services. The rural healthcare organization was able to adopt two of the recommendations into practice. Final determination for if the interventions improved male uptake of primary care services will be disclosed one-year post intervention implementation.

Additionally, the coinvestigator recommended incorporating body fat analysis and grip testing into the yearly examination. The screenings are relatively low-cost and non-invasive. Both screenings can offer the provider additional information regarding the overall health of their patients (Legrand et al., 2014; Park et al., 2019; Prasitsiriphon & Pothisiri, 2018). The additional health information can lead to more informed decision making and potentially aid in improved health outcomes for the patients.