Increasing Primary Care Provider Sexual Health Assessments in Older Adults

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Table of Contents

Abstract

Sexual health is essential to overall well-being across the lifespan, yet it is often not addressed in older adults. Sexually transmitted infection (STI) rates have consistently increased over the past several years, and this includes the older adult population. The older adult population is growing faster than any other age group. The purpose of increasing primary sexual health assessments of older adults is to identify at-risk behaviors and sexual health concerns ultimately improving quality of life and overall health. Guided by the Promoting Action on Research Implementation in Health Care Services (PARIHS) framework, an educational presentation and evidence-based screening tool were developed and presented along with guidelines and additional resources. Post-implementation data evaluation revealed that approximately 14% of patients screened were provided with an intervention. Interventions included sexual health counseling, STI behavior risk counseling, STI testing, HIV testing, hormone therapy, PDE-5 inhibitors, or referral. This evidence-based project confirmed the need for routine sexual health assessments in older adults and the importance of sexual health across the life span.

Keywords: sexual health, sexual dysfunction, older adults, geriatrics, ageism, baby boomers, primary care, providers, sexually transmitted disease or infection, HIV, screening tools, sexual health education, sexual health assessments, and barriers to sexual health screening.

Increasing Primary Care Provider Sexual Health Assessments in Older Adults

Sexuality and sexual expression are essential elements of the human experience throughout every stage of life. Though forms of sexual expression may change, intimacy and physical connection remain crucial. Despite the ageist attitudes of modern society, sexuality is not synonymous with youth, and older adults are not asexual beings. There is no predetermined age when sexual activity should cease. Sex and intimacy continue to be possible and enjoyable into the final decades of life. Technological advancements in medicine, research, and health promotion are all contributors to the globally increasing population of older adults. Not only is this population increasing, but they are also living longer than ever before. Pharmaceuticals and advancements in hormone therapy have helped many adults overcome previous barriers to sexual activity. With increased sexual activity comes the increased risk for sexually transmitted infections (STIs). Sexual health education and STI prevention programs have historically focused on youth. While this education and promotion are entirely appropriate, there is a lack of equitable resources provided to older adults despite the increased rates of STIs among this population.

Healthcare providers must treat patients holistically, and this includes evaluation of sexual health. The World Health Organization (WHO) (n.d.) defines sexual health as a "state of physical, emotional, mental, and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction, or infirmity". By completing sexual health assessments of older adults providers will not only be able to assess STI risk, but they will be able to address other sexual health issues that the patients may not have initially felt comfortable enough to mention.

Providing evidenced-based screening and management of sexual health in older adults is congruent with the philosophy of advanced practice nurses (APNs) as they deliver holistic care across the lifespan, including the older population, which is vulnerable to the consequences of undiagnosed STIs. Taxpayers should be invested in STI prevention and management due to the tremendous economic burden. There are approximately 20 million new STIs diagnosed each year in the U.S., with a cost estimated to be as much as $16 billion annually (Office of Disease Prevention and Health Promotion [ODPHP], n.d.). Many infections remain undiagnosed, and some are not reportable, indicating that this only represents a fraction of the actual number of infections (World Health Organization [WHO], 2019). Complications of untreated STIs may include pelvic inflammatory disease, urethral strictures and epididymitis, genital malignancies, colitis, proctitis, arthritis secondary to gonorrhea, chlamydia, and central nervous system disease secondary to herpes simplex virus (HSV) or syphilis (Chesson, Mayaud, & Aral, 2017). Beyond the consequences to physical health, STIs also carry a stigma and can have an adverse effect on relationships, self-esteem, and quality of life.

Background and Significance

By 2035, for the first time in United States history, older adults are projected to outnumber children (Vespa, 2018). The population aged 65 and older is expected to expand by 150% over the next 30 years, while the population aged 20 and younger will have a comparatively small increase, from 2.5 billion in 2016 to 2.6 billion by 2050 (He, Goodkind, & Kowal, 2016). People aged 65 and older will comprise 17% of the world population by 2050 and 21.4% of the population in North America (Roberts, Ogunwole,

Blakeslee, & Rabe, 2016). In the United States, by 2030, all of the baby boomers will be older than 65 years of age, and one in five U.S. residents will be retirement age (Vespa, 2018). Not only are the baby boomers moving into retirement age, but they are also expected to live much longer. Global life expectancy is anticipated to reach 76.2 years of age by 2050 (He et al., 2016). Life expectancy in the United States is 78.6 years of age as of 2017 (Centers for Disease Control and Prevention/National Center for Health Statistics/Office of Analysis and Epidemiology [CDC], n.d.).

It is a misconception to assume that older adults are not sexually active. According to Ouchida and Lachs (2015):

> 53% of people 65 to 74 years of age, and 26% of people 75 to 85 years of age having sex with at least one partner in the previous year; and 50% of sexually active individuals 75 to 85 years of age report having sex two to three times per month. (p. 48)

Many older adults are beginning new relationships after becoming divorced or widowed, possibly after many years with one partner. Of adults 65 years of age and older living in the United States, 49% of females and 23.5% of males are either divorced or widowed (Roberts et al., 2016). The internet and social networking have made it easier than ever to connect with people. According to the Pew Research Center, as of 2019, 40% of Americans 65 years of age and older use some form of social media.

Older adults entering into these new sexual relationships were coming of age during the sexual revolution. They have no fear of pregnancy, low-risk perception, limited knowledge about STI prevention, and consequently engage in high-risk sexual behaviors (Morton & Kim, 2015). Furthermore, they are less likely to request STI

testing, and the provider is less likely to offer testing. According to Syme, Cohn, and Barnack-Talvaris (2017), lifetime STI and HIV testing rates are significantly lower in older adults when compared to those 49 years of age and younger. Testing rates are low, yet as reported by Pereto (2018), between 2014 and 2017, diagnosis rates of herpes simplex, gonorrhea, syphilis, chlamydia, hepatitis B, and trichomoniasis rose 23% in patients over 60 years of age. In 2016, 17% of new HIV diagnoses were people 50 years of age and older, and 35% of those already had late-stage infection at the time of diagnosis (Centers for Disease Control and Prevention [CDC], 2017). Between 2012 and 2016, the most significant percentage increase of people living with HIV (56%) and those living with AIDS (54%) was among persons aged 65 years and older (CDC, 2017). Transmission of HIV is reduced up to 96% when antiretroviral therapy (ART) is used to suppress viral load (Leibowitz, Garcia-Aguilar, & Farrell, 2015). Routine screening leads to early diagnosis and treatment, improving long-term health outcomes and quality of life.

Oklahoma ranks 9th out of 50 states in rates of primary and secondary syphilis with a 335% increase since 2013; 19th in chlamydial infections with a 16% increase; and 10th in gonorrheal infections with a 64% increase (Centers for Disease Control and Prevention [CDC], 2018). In 2016, the CDC provided over $2 million in funding to Oklahoma to support AIDS and HIV programs, primarily targeted towards teens and young adults (Oklahoma State Department of Health [OSDH], n.d.).

The World Health Organization estimates that more than one million STIs are acquired every day (n.d.). Most new infections are due to one of four treatable STIs; chlamydia, gonorrhea, syphilis, or trichomoniasis (WHO, 2019). The Gonococcal

Antimicrobial Surveillance Programme (GASP) was initiated by WHO in 1990 to monitor gonococcal antimicrobial resistance worldwide (World Health Organization [WHO], n.d.). Data from 2009 to 2014 showed widespread resistance to penicillin, ciprofloxacin, sulphonamides, macrolides, fluoroquinolones, early-generation cephalosporins, and tetracycline (Wi et al., 2017). Increasing azithromycin resistance and evidence of emerging resistance to extended spectrum cephalosporins are further limiting the treatment options for providers (WHO, 2019).

Completing a comprehensive sexual health assessment identifies risk for STI and may also identify other sexual health concerns. Approximately 50% of postmenopausal women in the United States 50 to 74 years of age suffer from the consequences of sexual dysfunction (Ghazanfarpour, Khadivazdeh, & Babakhanian, 2016). Older men may experience sexual dysfunction due to andropause (Norton & Tremayne, 2015). Hormonal changes may slow sexual response and decrease arousal and pleasure (Levkovich, Gewirtz-Meydan, Karkabi, & Ayalon, 2018). Expected physiological changes may be accompanied by psychosocial and emotional changes that can have a profound impact on sexual function and may also increase the risk for STI transmission.

More than half of sexually active adults suffer from some sexual-related problem, but only 22% of women and 38% of men have mentioned this to a healthcare provider (Ouchida & Lachs, 2015). The patients are not mentioning sexual health to the providers, and the providers are not asking the patients about their sexual health. Fort Hayes University conducted a self-assessment survey of primary care providers. Knowledge and practice habits were measured using a 5-point Likert

scale. Of the respondents, 96.91% agreed or strongly agreed that a healthy sex life evokes feelings of joy and affection; 75.38% agreed that they were knowledgeable regarding medications that may cause sexual dysfunction; 58.77% agreed that sexually transmitted infections in aging adults are on the rise; yet, only 27.83% of respondents agreed that they routinely assess the sexual health of older patients, and only 19.79% have completed continuing education regarding sexual health and the older patient (Harding & Manry, 2017). According to Harding and Manry (2017), of the respondents who address the sexual health of older patients, "92.78% do not use a sexual health assessment tool" (p. 465).

Problem Statement

Despite rapidly increasing rates of STIs and a demonstrated need, less than 40% of primary care providers conduct sexual health histories with patients (Lanier et al., 2015). Approximately 80% of adults ages 65 and older see a primary clinician at least once per year, and typically average twelve visits per year (Ouchida & Lachs, 2015). There is ample opportunity for primary care providers to address the sexual health of older adults. The CDC developed a framework for patient-centered health risk assessments (HRA) targeted towards Medicare beneficiaries (Goetzel et al., 2011). According to Goetzel et al., (2011), recommendations aimed to achieve the following goals included:

1. Provide guidance to primary care providers on ways to use HRAs, including health promotion, disease prevention, and disease management.
2. Reduce health disparities through the use of HRAs with culturally sensitive care that is also available to persons with disabilities.

3. Improve health outcomes by identifying patients' modifiable risks with follow-up interventions to assess behavior change. (p.14)

Though this resource is from 2011, it is the direct link provided in the Centers for Medicaid and Medicare Services (CMS) Medicare Learning Network (MLN) annual wellness visit instructional booklet for providers dated August 2018 (Centers for Medicare & Medicaid Services [CMS], 2018). The HRA framework is intended to be used during the wellness visit to keep Medicare beneficiaries healthy (Goetzel et al., 2011); yet, nowhere in the booklet is sexual health directly addressed. Suggested topics for behavioral risk evaluation include motor vehicle safety, physical activity, tobacco use, nutrition, diet, exercise, and inappropriate prescription drug use (Goetzel et al., 2011). This booklet is only to be used as a guide, and each visit should be tailored to the individual patient; however, sexual health is not mentioned once anywhere in the booklet. The CMS Annual Wellness booklet does contain links to the U.S. Preventative Services Task Force (USPSTF), where there are recommendations for STI screening in sexually active adults. The problem does not necessarily lie in the recommendations, though increasing lifespan may require an evaluation of some screening measures. The essential problem is that providers are not asking older adults about their sexual activity despite recommendations to do so. The United States Preventive Services Task Force (USPSTF) recommends all adolescents and adults aged 15 to 65 years and *anyone at increased risk* should be screened for HIV, and asymptomatic adults at increased risk for infection should be screened for syphilis (United States Preventive Services Task Force [USPSTF], 2019). The CDC recommends STI screening of patients ages 13 to 64 years in all health-care settings (Centers for Disease Control and Prevention [CDC],

2015). Providers are unable to determine the risk without screening the patient. The CDC provides STI prevention resources to healthcare providers, including a guide to taking a sexual history, screening guidelines, treatment guidelines available in a mobile app, pocket guides, podcasts, videos, and free STI consultation services (Centers for Disease Control and Prevention [CDC], n.d.).

Addressing the sexual health of older adults validates their sexuality, builds trust, and allows the patient to feel comfortable sharing concerns that they may not have mentioned. Approximately 47% of women and 27% of men report some form of sexual dysfunction (Ports, Barnack-Talvaris, Syme, Perera, & Elston Lafata, 2014). Taking a sexual history opens the dialogue to evaluate risk assessment, provide education, and address any other sexual health concerns.

Purpose and Objectives

The purpose of this evidence-based project was to improve the sexual health of older adults by identifying STI risk and knowledge deficit through routine sexual health assessments. Older adults are less likely to practice safe sex than younger adults, and more likely to have limited knowledge about STIs (Ports et al., 2014). Routine sexual health assessments will identify high-risk behavior prompting appropriate testing and early intervention.

The objectives were to:

- Educate the providers and clinic staff on current STI rates and trends in the older population through a presentation that demonstrates the importance of routine sexual health assessments.

- Educate providers and clinic staff on the use of the evidence-based sexual health screening tool.
- Implement the use of an evidence-based sexual health screening tool.
- Supply providers with resources, including an evidence-based screening tool, pocket cards, treatment guidelines, ICD-10 diagnosis codes relevant to sexual health, and suggested resources for patients and additional clinical staff training.
- Evaluate the implementation process, screening tool, and provided resources.

The *Guide to Taking a Sexual History* is consistent with CDC recommendations for discussing sexual health with patients by addressing the five P's; partners, practices, past history of STDs, protection from STDs, and pregnancy plans (Centers for Disease Control and Prevention [CDC], 2019; US Department of Health and Human Services Centers for Disease Control and Prevention [CDC], n.d.). Implementation of an evidence-based screening tool also supports objectives identified in Healthy People 2020, specifically by improving the quality of life of older adults, promoting healthy sexual behaviors, and increasing access to services to prevent and treat sexually transmitted diseases (ODPHP, n.d.).

Review of Literature

An extensive search of relevant literature was conducted using Academic Search Complete, CINAHL Complete, Cochrane, Health Source, EBSCOhost, Medline Plus, PsychINFO, and PubMed. Keywords searched, alone or in combination, included: *sexual health, sexual dysfunction, older adults, geriatrics, ageism, baby boomers, primary care, providers, sexually transmitted disease or infection, HIV, screening tools, sexual health education, sexual health assessments,* and *barriers to sexual health screening*. Results

were limited to articles written in English and published in peer-reviewed journals between 2014 and 2019, with the exception of landmark studies or journal articles identified as pertinent to this Doctor of Nursing Practice (DNP) project.

Benefits of Sexual Activity

Regular sexual expression has been found to improve psychological and physical well-being and may reduce the mental and physical problems associated with aging (DeLamater & Koepsel, 2015). Some benefits of sexual expression across the life span include decreased pain sensitivity, decreased depression, increased self-esteem, increased relaxation, and improved cardiovascular health (Syme & Cohn, 2016). A prospective study using data from the English Longitudinal Study of Aging (ELSA) found a positive correlational between more frequent sexual activity and memory performance (Allen, 2018). These benefits continue into the last years of life. Sexual expression is not limited to intercourse, and older adults may garner the same benefits from physical touch, emotional intimacy, and masturbation (Flynn & Gow, 2015).

Health promotion and disease prevention are essential to the role of primary care providers. Age-specific diet, exercise, and safety are addressed across the lifespan. Given the benefits of continued sexual activity, not only should STI risk screenings be completed, but sexual intimacy should be actively promoted within the older adult population. Sexual expression and intimacy are directly linked to health and 85% of men and 61% of women indicate that it is integral to the quality of life (Syme, 2014).

Baby Boomers

Baby boomers are the demographic cohort of people born between 1946 and 1964, and the first baby boomers reached retirement age in 2011 ("Baby boom generation," n.d.). Baby boomers currently represent the fastest-growing segment of the United States population (Vespa, 2018). They are changing the face of aging in dramatic ways. Baby boomers are more active than previous generations, working longer, living longer, and having more years in retirement. They are focused on life-long learning, and over half of adults age 65 and older use the internet (Pew Research Center: Internet and Technology, n.d.).

Contrary to stereotype, baby boomers are generally as likely as adults aged 18 years and older to be engaged in social activities, including internet dating (Agogo, Milne, & Schewe, 2014). The increase in longevity in this population has not resulted in increased years of disability, but an increase in years of productivity (Lindland, Fond, Haydon, & Kendall-Taylor, 2015).

Baby boomers pioneered the sexual revolution and women's liberation in the 1960s ("Baby boom generation", n.d.). Sexual empowerment continues to be a central theme of this generation, and many will remain sexually active in the last decades of life. The divorce rate has doubled in the baby boomer population since the 1990s, and 10 out of every 1,000 people over the age of 50 are divorced (Covington, 2017). Through divorce, death, or by other factors, there is a vast population of single older adults entering the dating scene or embarking on new sexual relationships. Older adults are less likely to practice safe sex than younger adults and more likely to have limited knowledge of STIs (Ports et al., 2014). Primary care providers must be knowledgeable about older

adult sexual health and take a proactive approach to address STI risk in this population (Syme, 2014).

Ageism

Ageism is a major contributing factor to the lack of sexual health screenings in the older population. Ageism is defined as a systematic stereotyping of and discrimination against people based on their age (Franklin & Stiles, 2018). Robert Butler coined the term "ageism" in 1969 to illustrate the stigma and injustices associated with aging (Achenbaum, 2015). In a study conducted by Kent University, age was the single most prevalent basis for discrimination, more than those based on sexual orientation, gender, or religion (Snaedal, 2016). Ageism permeates every part of society and is recognized by the World Health Organization as a global problem. Aging is often perceived as a process of deterioration, incompetence, dependency, disease, and reduced potential (Lindland et al., 2015). These stereotypes profoundly impact the care of older adults and contribute to negative self-perception with repercussions for mental and physical health (Donizzetti, 2019). Internalization of these stereotypes elicit self-inflicted prejudices and can adversely affect health (Achenbaum, 2015). Older adults with the internalization of negative stereotypes report lower measures of perceived health, more loneliness, and more frequent hospitalizations (Chrisler, Barney, & Palatino, 2017).

Older adults are incorrectly perceived as asexual. If they sense this perception in their provider, this creates a barrier to discussing sexual health concerns. A qualitative study of 500 people ages 50 to 80 years found that only 10% of patients were asked if they were sexually active and none were asked about anal or oral sex, and physician-initiated sexual performance inquiries occurred three times more frequently in men than

in women (Ports et al., 2014). Reflecting an intersection of ageism and sexism and given that there are only 65 men for every 100 women in the age group of 65 to 74, constitutes a real problem (Chrisler et al., 2017).

Evidence suggests that physicians are more cynical about working with older adults, and given a choice, would rather work with younger patients (Chrisler et al., 2017). A longitudinal study was conducted to assess medical students' attitudes towards older adults over the course of medical school (De Biasio, Parkas, & Soriano, 2016). The University of California, Los Angeles (UCLA) Geriatrics Attitude Scale (GAS) was used to assess 404 U.S. medical students over four years, finding attitudes typically declined following the third year following the geriatric rotation (De Biasio et al., 2016). This change may be due to geriatric patient exposure, or possibly it is learned behavior from attending physicians, reflecting the true prevalence of ageist attitudes in healthcare. Nurses have been found to have more positive attitudes about working with older adults (Chrisler et al., 2017). However, a small survey of approximately 100 U.S. nurse practitioners found that only 2% "always" asked their older patients about sexual health (Hughes & Wittman, 2015).

Provider Barriers

Healthcare providers report a multitude of barriers to completing sexual health histories with older patients, including lack of time, lack of privacy, personal factors such as age and gender, lack of knowledge in sexual health, and insufficient training (Ports et al., 2014). A self-assessment survey of primary care providers, including nurse practitioners, physicians, doctors of osteopathy, and physician assistants, found that almost half of the respondents find it difficult to address sexual health in older

adults (Harding & Manry, 2017). According to Harding and Manry (2017), four common themes emerged from open-ended questions regarding provider barriers to completing sexual health assessments; "patient discomfort, lack of time, lack of an assessment tool, not a medical priority, and lack of proper training" (p. 464). A cross-sectional survey of 379 final-year medical students found that 46% felt inadequately prepared to take a sexual history (Ariffin et al., 2015). Providers acknowledge the importance of sexual health in older adults. Yet, they equate sexuality with younger adults and admit they are less likely to complete a sexual assessment of older patients (Pascoal, Slater, & Guiang, 2017). Some providers feel uncomfortable discussing sexual health with older adults, assuming sex should not be discussed in "old age" (Levkovich et al., 2018).

Older adults are typically more complex, and primary care visits are spent addressing chronic conditions. Chronic conditions can have a direct impact on sexual health, and sexual activity can have an impact on chronic conditions. Despite the apparent interconnection, sexual health is rarely addressed. A study evaluating primary care providers' assessment of sexual health found that 70% of providers did not address sexual activity with their cardiac patients (Harding & Manry, 2017). Healthcare providers prioritize chronic disease without considering the impact on sexual health and without addressing the priorities of the patient. Sexual health assessments identify STI risk and trigger appropriate testing. A person with an untreated STI has up to 10 times the risk of becoming infected with HIV (WHO, 2019). Many STI symptoms are presumed to be related to the aging process leading to missed diagnoses and poorer outcomes, including death.

Patient Barriers

Older adults are often reluctant to initiate discussions about sexual health with providers. Barriers to discussing sexual health with primary care providers include embarrassment, dissatisfaction with treatment, negative attitudes, and seeming disinterest by the healthcare provider (Bauer, Haesler, & Fetherstonhaugh, 2016). Some older adults do not think sex or sexual dysfunction are topics to be addressed by a primary care provider (Levkovich et al., 2018). Internalization of negative stereotypes can distort perceptions of health, and older adults may dismiss sexual dysfunction as part of the normal aging process (Chrisler et al., 2017).

Bauer, Haesler, and Fetherstonhaugh (2017) completed a systematic review examining the view of older people regarding health professionals' recognition of sexual health, finding research that indicates the majority of older women are too embarrassed to discuss sexual health despite approximately 40% wanting to be asked about sexual health. Personal characteristics of healthcare providers, including; appearing rushed, impersonal, unconcerned, or embarrassed, are noted to have a significant influence on the willingness of an older adult to discuss sexuality (Bauer et al., 2016).

The Geriatric Sexuality Breakdown Syndrome developed by Kaas in 1981 described a seven-step process by which societal ageism directly affects the sexuality of older adults; (1) identifying with stereotypical sexual problems of older adults, (2) relying on societal cues due to lack of aging sexual role models, (3) labeling of older adults as asexual, dirty, or shameful, (4) adoption and internalization of the asexual, dirty, or shameful role model, (5) attempting to distance from stereotypes by underreporting sexual dysfunction or disavowing sexual desire, (6) distancing and shame

result in loss of sexual interest, enjoyment, and performance skills, (7) self-identification of the sexual stereotype (Kaas, 1981).

Older adults encounter many challenges when accessing healthcare. Providers often make assumptions about cognitive impairment, frailty, or dependency levels. Providers may address the caregiver instead of the patient and use elderspeak or baby talk when speaking to the patient. Elderspeak is often used in an effort to convey caring, but it perpetuates the negative feedback loop that causes internalization of negative stereotypes, lower self-esteem, and increased dependent behaviors (Aldren & Toth-Cohen, 2015). Assumptions about cognitive deficits and functional decline are considered micro-aggressions that damage the patient-provider relationship (Chrisler et al., 2017). Faced with these overt biases, it is not surprising that older adults do not feel comfortable sharing sexual health concerns with primary care providers.

Sexual Health and the Older Man

The normal physiological changes associated with aging can have a significant impact on sexual activity. Between 19 and 40% of men over the age of 65 experience hypogonadism, a gradual decline in serum testosterone (Aversa, Donini, LaCava, Raso, & Sinclair, 2014). Decreasing testosterone levels, beginning in the fifth decade, often result in reduced sexual desire and diminished sexual responsiveness (Rabathaly & Chattu, 2019). Erectile dysfunction (ED) is defined as the inability to attain and maintain an adequate erection for satisfactory sexual intercourse and is the most frequently diagnosed sexual dysfunction of older adult males (Gareri, Castagna, Francomano, Cerminara, & De Fazio, 2014). Decreased testosterone levels cause a delayed response to sexual arousal, and more intense and longer-lasting physical contact may be required

to achieve an erection (Levkovich et al., 2018). In addition to hormonal, other causes of ED can include vascular, drug-induced, surgical, anatomical, neurogenic, and psychological changes (Gareri et al., 2014). The prevalence of ED increases with age. In Mola's (2015) research study, "77% of men over age 70 years of age reported ED, more than half of them had not discussed their ED with a healthcare provider, and 72% had never received any treatment" (p.88). Phosphodiesterase type 5 (PDE5) inhibitors such a Viagra and Cialis, are prescribed to treat ED and facilitate sexual intercourse (Harding & Manry, 2017). With access to these medications and new medications on the horizon, men who may not have remained sexually active during old age now have an option to facilitate continued intercourse.

Despite physiological changes, sexual interest does not diminish with age. A cohort study of 3032 respondents aged 25 to 74 years of age, over ten years, found that, among men, sexual interest remained stable across age groups (Levkovich et al., 2018). Swedish research of four birth cohorts of men aged 70 years found that sexual activity increased between the 1971 to 1972 cohorts (47%) to the 2001 to 2002 cohorts (66%) indicating that the number of older sexually active men is increasing (Fileborn et al., 2017).

According to cross-sectional data from the National Health and Nutritional Survey, men with erectile dysfunction have a 1 in 10 probability of having undiagnosed diabetes as compared to 1 in 50 in the absence of erectile dysfunction (Skeldon, Detsky, Goldberg, & Law, 2015). Metabolic syndrome, hypertension, hyperlipidemia, smoking, and depression have also been associated with ED (Gokce & Yaman, 2017; Skeldon, Detsky, Goldberg, & Law, 2015). Essentially, completing a sexual health assessment not

only identifies STI risk but may also lead to earlier diagnosis and treatment of chronic disease, improving long-term health outcomes and quality of life.

Sexual Health and the Older Woman

Older women are at the crossroads of ageism and sexism. There is a higher rate of sexual dysfunction in older women than older men, yet providers are more likely to raise sexual health issues with older men (Levkovich et al., 2018). Menopause, typically beginning between 45-55 years of age, is characterized by the absence of a period for 12 months and declining hormone levels. Declining estrogen levels in the post-menopausal period causes atrophy of the external female organs and less intensive orgasms (Levkovich et al., 2018). Approximately 50% of postmenopausal women in the United States experience some form of sexual dysfunction (Ghazanfarpour et al., 2016). According to Levkovich et al. (2018), 43% of post-menopausal women reported low desire, 39% reported issues with vaginal dryness, and 34% reported an inability to climax. Vaginal dryness and atrophic vaginitis increase STI risk due to micro-abrasions allowing direct access to the bloodstream (Spring, 2015). Research of older women experiencing urogenital symptoms had found that women typically do not discuss these symptoms even when they impact sexual functioning (Pascoal et al., 2017).

According to DeLamater and Koepsel (2015), although as many as 60% of post-menopausal women may experience the negative effects of declining estrogen levels, this does not necessarily result in decreased sexual activity, and some women report increased desire and excitement after menopause. Estrogen therapy and bioidentical hormone therapy (BHT) are available to combat the symptoms of menopause and improve quality of life, including sexual health (Thompson, Ritenbaugh, & Nichter, 2017). As research

continues, new interventions for addressing barriers to sexual health will emerge and, as a result, an increased number of older women may become sexually active.

Lesbian, Gay, Bisexual, Transgender, Queer

Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ) older adults can be defined as adults over 50 years of age of the sexual and gender minority (SGM) (Choi & Meyer, 2016). It is roughly estimated that there will be between 3 to 6 million older LGBTQ adults, including any gender minorities, living in the United States by 2030 (Los Angeles, CA: The Williams Institute, UCLA School of Law, 2019). Older LGBTQ adults of the baby boomer cohort are the first generation to reach middle adulthood after the gay liberation movement of the 1970s (Orel, 2014).

Healthcare disparities have been well documented among the LGBTQ population, and this is even more pronounced in the older LGBTQ population. Older LGBTQ adults are at increased risk for disability, smoking, increased alcohol consumption, and high-risk sexual behaviors (Cannon, Shukla, & Vanderbilt, 2017). Older women who have sex with women (WSW) are less likely to be provided preventative healthcare screening and are at increased risk for developing metabolic syndrome and cardiovascular disease (Cannon et al., 2017). There is a paucity of research on health outcomes in the transgender community. Men who have sex with men (MSM) have significantly increased STI risk. HIV prevalence among partners of men who have sex with men is 40 times that of partners of heterosexual men, and receptive anal sex increases risk 18 times more than vaginal sex (Centers for Disease Control and Prevention [CDC], 2016). A study evaluating the association of sexual minority stigma on high-risk sexual behaviors among 226 HIV positive gay and bisexual men found that nearly a third were engaged in

high-risk sexual behaviors, and more than a fifth engaged in multiple high-risk sexual behaviors (Emlet, Fredriksen-Goldsen, Kim, & Hoy-Ellis, 2016).

A records-based study was completed on 19,993 patients who visited a federally qualified health center in Los Angeles, California, between 2016 and 2017, examining STIs, HIV, and viral hepatitis incidence (Shover et al., 2018). As reported by Shover et al. (2018), 38% of people living with HIV tested positive for any STI during the study period, compared to 29% of those who were HIV negative at baseline.

According to studies, having a diagnosis of HIV does not negate high-risk behaviors, and high-risk behaviors may increase following an HIV diagnosis. Older LGBTQ were likely subjected to more stigmatizing behaviors and marginalization than the younger generations. LGBTQ patients may not disclose sexual orientation out of fear of negative adverse or receiving substandard care (Manzer, O'Sullivan, & Doucet, 2018). The National Resource Center on LGBTQ Aging offers numerous resources to help healthcare professionals provide culturally competent care.

Healthcare providers should have an understanding of the unique health issues of this at risk-population, with thoughtful reflection and acknowledgment of any personal values and beliefs that may affect care (Manzer et al., 2018). Completing culturally sensitive sexual health assessments will identify risks and trigger appropriate testing and sexual health education when needed.

Sexually Transmitted Infections (STIs)

Sexually transmitted infections, including HIV, are increasing in the older adult population. Underestimation of risk by both provider and patient results in lower testing rates and late diagnosis and treatment. Sexually active adults with unknown STIs

unwittingly spread the STIs to their partners, perpetuating the cycle. It is time for primary care providers to be proactive in addressing the STI risk in older adults.

The increase in STI rates among older adults is due to a multitude of factors; hesitation by both provider and patient to discuss sexual history, age-related decline in immune system increasing susceptibility to infection, underestimation of risk, access to medications to facilitate intercourse, lack of condom use, lack of STI knowledge, and increased sexual activity following divorce or loss of a spouse. Many STIs do not have symptoms, making testing even more unlikely. Chlamydia, gonorrhea, syphilis, and trichomoniasis are all treatable with antibiotics, though gonococcal antimicrobial resistance is increasing (WHO, n.d.).

Syphilis. Syphilis is caused by the *Treponema pallidum* bacterium and is associated with significant complications if left untreated, including increased risk for transmission of HIV, specifically in MSM with 45.5% of syphilis cases being HIV-positive (CDC, 2017). Primary syphilis presents with a painless chancre that may go unnoticed and progresses to the secondary stage characterized by a rash, which can mimic many other conditions and spontaneously resolves with or without treatment (World Health Organization [WHO], 2016). If the chancre goes unnoticed, the rash resolves, and the provider does not inquire about sexual activity, syphilis may progress to asymptomatic latent syphilis or tertiary syphilis (Hicks & Clement, 2019). Approximately 25 to 40% of patients with untreated syphilis will develop late-stage disease (WHO, 2016). In older adults, constitutional symptoms such as malaise, anorexia, weight loss, and myalgias may be attributed to normal aging; and late-stage syphilis may present with cardiovascular and central nervous system involvement that

may be attributed to common chronic disease in old age (Hicks & Clement, 2019). According to the CDC, rates of primary and secondary syphilis increased 11.8% among those 55 to 64 years of age, and 16.7% among those 65 years of age and older from 2012 to 2016 (2017). Manifestations of late syphilis can occur any time from 1 to 30 years after primary infection regardless of previous primary or secondary symptoms (Hicks & Clement, 2019). Syphilis is a treatable STI; but because it is asymptomatic, the lack of routine screening and diagnostics has led to increased rates of syphilis (Kojima & Klausner, 2018).

Gonorrhea. Gonorrhea is caused by *Neisseria gonorrhoeae* and is typically asymptomatic in women. Although the prevalence is much higher in younger age groups, the rates of infection have doubled in adults 55 and older from 2012 to 2016 (Centers for Disease Control and Prevention [CDC], 2017). Gonorrhea may be asymptomatic in up to 70% of women, while men may present with proctitis or urethritis with purulent discharge (Ghanem, 2018). According to Ghanem (2018), gonococcal infections may include cervicitis, epididymitis, urethritis, proctitis, conjunctivitis, and pharyngitis. A population-based retrospective cohort study between 2000 and 2010 in Taiwan found an increased risk for prostate cancer in men diagnosed with gonorrhea (Wang et al., 2017). Wang et al., (2017) found that prostate cancer risk was higher among subjects 70 years of age and older and those with HIV infection, with risk increasing 8.4% each year. Gonorrhea is treatable with antibiotics, but antimicrobial resistance is increasing (CDC,2017).

Chlamydia. Chlamydia is caused by the *Chlamydia trachomatis* bacterium and is the most common reportable disease in the United States (Centers for Disease Control

and Prevention [CDC], 2018). Rates of chlamydia are highest among adolescents and young adults (CDC, n.d.). However, since chlamydia is largely asymptomatic, anyone at high risk should be tested, including men who have sex with men, women who have sex with women, anyone with a history of STIs, and anyone with a new sex partner or more than one sex partner in the past three months (Hsu, 2019).

HIV. Human immunodeficiency virus attacks the immune system making the body vulnerable to opportunistic infections, there is no cure, but it can be treated to prevent progression to acquired immunodeficiency syndrome (AIDS) (CDC, 2018). HIV begins with a brief acute retroviral syndrome, then transitions to a chronic illness that progressively depletes CD4 T-lymphocytes critical for immune function over many years, and ends with symptomatic life-threatening immunodeficiency (Frieden, Jaffe, Cono, Richards, & Iademarco, 2015).

According to the CDC, in 2016, of people living with diagnosed HIV, nearly half were aged 50 and older (CDC, 2017). Of the 1.1 million people living with HIV in the United States, approximately 20% are unaware of their infection (Lanier et al., 2015). Early symptoms of HIV, weakness, fatigue and memory changes are often attributed to aging or other chronic disease resulting in approximately 35% of older adults not being diagnosed until late-stage HIV (Kwong, Reyes, Murphy, & Loveless, 2019; Frieden et al., 2015). Late-stage infection at the time of diagnosis results in delayed treatment and more immune system damage with an increased mortality rate (Centers for Disease Control and Prevention [CDC], 2018). Almost all people with AIDS will die from AIDS-related causes in the absence of treatment; however, providing

effective early treatment with antiretroviral therapy can result in a near-normal lifespan (Frieden et al., 2015).

STI Screening Recommendations. The USPSTF recommends screening for chlamydia in women 25 years and older if at increased risk, men who have sex with men annually and every three to six months if at increased risk, and annually for persons with HIV with more frequent screening depending on risk; screening for gonorrhea in sexually active women age 25 years and older if at increased risk, annually for men who have sex with men and every three to six months if at increased risk, and annually for persons with HIV with more frequent screenings if at increased risk; screening for syphilis at least annually for men who have sex with men and persons living with HIV with more frequent testing depending on risk; screening for trichomoniases in women in high-prevalence settings and at least annually for persons living with HIV; HIV testing all adolescents and adults 15 to 65 years of age and if at increased risk or seeking treatment for STDs, and at least annually for men who have sex with men (CDC, 2015). The American Academy of HIV Medicine recommends opt-out HIV screening for all adults, including those over age 65 (American Academy of HIV Medicine [AAHIVM], 2017). According to AAHIVM (2017), routine screening of all older adults is more effective than risk-based screening because providers and patients may not identify risks for HIV infection.

The CDC (2015) clinical prevention guidance includes an accurate risk assessment of persons at risk for STIs, pre-exposure vaccination for persons at risk for preventable STIs, identification of asymptomatic persons and persons with symptoms associated with STI, effective diagnosis, treatment, counseling, and follow-up, and

evaluation, treatment and counseling of sex partners of persons who are infected with a STI (Frieden et al., 2015). While screening emphasizes testing of higher-risk groups, adolescents, and men who have sex with men, it is impossible to evaluate risk without completing a sexual health assessment.

STI Screening Tools. Available screening tools specific to the older adult population include the Golombok-Rust Inventory of Sexual Satisfaction (Comprehensive Geriatric Assessment Toolkit, n.d.). This tool is outdated and is assumes heterosexual relationships and uses he/she pronouns. The *PLISSIT* model developed by Annon (1976) is a general framework for discussing sexual health with older adults through obtaining (P) permission, providing (LI) limited information, giving (SS) specific suggestions, and providing (IT) intensive therapy surrounding the sexuality of the patient. The Hartford Institute for Geriatric Nursing provides a tool in the Try This Series combining the *PLISSIT* model with suggested questions (Smyth, 2018). While this tool is undoubtedly usable, there are no additional resources or recommendations for providers.

The National LGBT Health Education Center offers a toolkit for the development and implementation of a system for collecting routine sexual health histories (LGBT Health Education, 2015). This toolkit includes a routine sexual history tool, an algorithm for conducting the sexual history, and resources for further learning (LGBT Health Education, 2015). The National LGBT toolkit appears all-inclusive and does not assume sexual orientation. It may prove to be credible for use in all populations with further research.

The CDC provides *A Guide to Taking a Sexual History* for providers that address the 5 P's, partners, practices, protection from STDs, past history of STDs, and prevention

of pregnancy (CDC, n.d.). Additional STD prevention resources include pocket guides, wall charts, podcasts, videos, and apps for mobile phones (CDC, n.d.). Given the credibility of the CDC and the comprehensive nature of provided resources, this is the most appropriate tool for screening older adults for STI risk.

Gaps in Practice

Health promotion and disease prevention have been the focus of nurse practitioners since their inception. Healthcare providers need to move away from a disease-oriented perspective and transition to patient-centered care (Agogo et al., 2014). More research on sexual health and sex practices of older adults is needed to shape future policy and recommendations. With the growing population of older adults, ageist attitudes in healthcare, and internalized stereotypes, STIs are going undiagnosed, and the long-term consequences to health and the budget are staggering. An excellent first step would be to explicitly require a sexual health assessment as part of the annual Medicare visit.

Healthcare education programs should include the sexual health of older adults, including the LGBTQ population. A qualitative study evaluating nurse practitioner experiences in education found that 91% of participants reported that they could not recall ever receiving any LGBTQ specific training in their NP program (Manzer et al., 2018). Current practicing providers need to be proactive in educating themselves on the unique needs of older adults and actively engage their patients in conversations about sexual health.

Summary

STI rates in older adults are increasing and will continue to increase without proactive intervention from primary care providers. Primary care providers typically have routine interactions with older patients. However, they feel ill-equipped to address their sexual health, either through a lack of formal education or personal biases and discomfort. In light of the rapidly expanding older population, there is a clear need for more focus on older adult health concerns in education programs. Even if these changes take place for future providers, they will do little to address the very present concerns facing older adults and the general population today. STIs are a global issue, and primary care providers must educate themselves and utilize the evidence-based tools available for routine sexual health assessments to identify STI risk in older adults.

Older adults are remaining sexually active in the final decades of life. Research and medical advancements have overcome many of the previous barriers to continued sexual activity. Older adults value sexual interactions and intimacy. It is damaging to self-esteem and self- perception when they are perceived as asexual. The stigma and ageist attitudes of the general population have made it difficult for older adults to view themselves as sexually vital or to bring up sexual health concerns with their primary care providers. Even when older adults mention possible symptoms of STIs, they are often dismissed as symptoms of aging. Older adult patients can be complex and time-consuming but associating sexual health with the effects of chronic disease management may help the provider to prioritize sexual health leading to earlier diagnosis and treatment of STI and, potentially, earlier diagnosis and treatment of some chronic diseases.

The role of nurse practitioners and all primary care providers should be to focus on disease prevention. Primary prevention of STIs requires a comprehensive assessment of modifiable behavioral risk factors as well as biological risk factors. Missed and undiagnosed STIs are contributing to the rapid spread of infection and the increasingly older population of people living with HIV. It is time for primary care providers to address the sexual health of older adults. Asking a few simple questions at routine healthcare visits will not only identify STI risk, but will significantly improve the patient-provider relationship, increase older adults' self-esteem, and ultimately reduces STI rates in this population.

Translational Framework

Evidence-based practice (EBP) is an integration of external evidence from scientific research, expert panels, evidence-based theories, and opinion leaders, with clinical expertise and patient preferences (Melnyk & Fineout-Overholt, 2019). It is no longer sufficient for providers to practice based solely on personal experience. Healthcare providers must stay abreast of the rapidly emerging research and ever-changing practice recommendations in order to provide high-quality care and improve patient outcomes. Clinical decision making must account for unique patient experiences, clinical setting, resources, research, and provider experience (Rycroft-Malone & Bucknall, 2010). According to Melnyk and Fineout-Overholt (2019), evidence-based practice includes the following steps

1. Ask the burning clinical question in PICOT format.
2. Search for and collect the most relevant best evidence.
3. Critically appraise the evidence.

4. Integrate the best evidence.

5. Integrate the evidence with one's clinical expertise and patient preferences and values in making a practice decision change.

6. Disseminate the outcomes of the EBP decision or change. (p. 379)

Conceptual frameworks and models have been developed to provide guidance through the often-challenging process of implementing evidence-based practice. Though the models may have slightly different details, they typically share the same core steps; identifying a problem, identifying and evaluating the strength of evidence, recommendations based on the evidence, implementation of evidence, and evaluation of outcomes (White, Dudley-Brown, & Terhaar, 2016). Several models were considered for the implementation of this evidence-based project. The Iowa Model provides a clear, step-by-step process, but does not provide the flexibility required for this project. The Advancing Research and Clinical Practice through Close Collaboration (ARCC) Model would be appropriate for system-wide implementation following a pilot study so that mentors could be developed and larger-scale educational programs developed but is not appropriate for a small pilot project.

The Promoting Action on Research Implementation (PARiHS) model developed by Kitson, Harvey, and McCormack in 1998, provides a conceptual framework for the implementation of research into practice (see Appendix A). The PARiHS model proposes three components required for successful implementation; the clarity of the evidence being used, the context in which the change is to be implemented, and the facilitation needed to ensure adoption of the change (White et al., 2016). The PARiHS model was chosen for this project because it is designed to evaluate the concepts

individually and then as part of a whole. It is not a linear process, but rather an amalgamation of evidence and processes occurring on a continuum. Other models considered were more rigid and linear, not allowing for such a broad interpretation of the evidence and processes.

Evidence

Evidence within the framework is broad. It is compiled from various sources, including; research evidence from published sources and formal experiments, professional knowledge and experiences, evidence based on patient preferences, and local collective knowledge (Robert et al., 2016; White et al., 2016). Evidence within the three domains is considered to be either high evidence to support the effectiveness or low evidence to support effectiveness (Kitson, Harvey, & McCormack, 1998). Qualitative and quantitative research should be well-conceived, designed, and executed research, judged as relevant, with conclusions drawn, with a lack of certainty and social construction acknowledged, to be valued as high evidence to support effectiveness (Rycroft-Malone & Bucknall, 2010). Research evidence that is poorly conceived, anecdotal, and unsystematic would be considered low evidence of effectiveness and not appropriate for implementation (Kitson et al., 1998).

Professional knowledge must be based on clinical experience and expertise that has been reflected upon, with a consensus among peers, judged as relevant with conclusions drawn to be considered high evidence (Melnyk & Fineout-Overholt, 2019). Anecdotal and lacking in critical reflection, judgment and consensus would be viewed as low evidence of effectiveness (Rycroft-Malone & Bucknall, 2010). Patient experience must be judged as relevant, valued as evidence, in partnership with healthcare

professionals with conclusions drawn to be considered high evidence (Melnyk & Fineout-Overholt, 2019). Local collective knowledge that is considered high evidence must be collected and systematically analyzed with critical reflection and conclusions drawn (Rycroft-Malone & Bucknall, 2010).

There is ample evidence supporting the increased rates of STIs among older adults. The focus of this project was to increase the rate of sexual health screening of older adults in primary care. Therefore, provider experiences and perceived barriers to completing sexual health screenings in this population were given equal weight to quantitative and qualitative research findings. Patient experiences and preferences regarding screenings were also considered to ensure successful implementation. The PARiHS model provides a framework to guide the evaluation of the various sources of evidence, as each component has the potential to impact implementation.

Context

Context refers to the environment where the change is to be implemented, and contextual factors of successful implementation include culture, leadership, and methods of evaluation (Rycroft-Malone & Bucknall, 2010). Successful implementation is more likely in an organization that has a patient-centered culture that values learning and continuing education (Kitson et al., 1998). Transformative leaders who empower team members by promoting teamwork through inclusive decision making cultivate an environment that is most conducive to successful implementation (Melnyk & Fineout-Overholt, 2019). People working under an oligarchic culture are less likely to have a sense of stewardship and personal responsibility to implement change. Evaluation is related to individual and organization performance measures and feedback (White et al.,

2016). Understanding the organizational structure, culture, feedback mechanisms, and processes is essential to successful project implementation.

This evidence-based project was implemented in a family medical practice with two primary care providers. This practice is part of a large medical group; therefore, it was essential to assess the culture of the healthcare organization, as well as the local culture of the practice. Lunch meetings with the physician afforded opportunities to inquire about individual staff members, including any obvious barriers to addressing the topic of sexual health. The physician did not identify any barriers and felt all members of the staff would be comfortable discussing sexual health with the patients. The physician was immediately agreeable to the project and did not seek approval from the organization. When the possibility of organization approval was mentioned he deferred to the quality officer and provided contact information. The project overview and timeline were presented to the quality officer. She was fully supportive and worked to obtain official approval from the organization, but eventually made a unilateral decision to allow the project to move forward without organizational oversight.

Facilitation

Facilitation is achieved by identifying key team members within the organization for task-oriented, practical support (Melnyk & Fineout-Overholt, 2019). The success of the project was dependent on facilitators who were supportive of implementation. Evaluation of the context identified potential facilitators. Understanding the culture of the organization helped to cultivate the presentation of materials and expectations for the project. The buy-in of team members was key to successful implementation. The

stakeholders, including the primary care providers and clinic staff, were invested in the project's potential to enact sustainable practice change.

Some potential barriers to successful implementation included lack of clarity, lack of stakeholder support, resistance to change, and biases (Moran, Burson, & Conrad, 2019). A review of the literature indicates that providers often fail to address sexual health in older adults due to high workload, fear of offending patients, assumptions, and lack of time (Levkovich et al., 2018). Timely and succinct education in a manner that did not burden the clinic staff was provided to promote support of the project. Adequate resources and suggested dialogue were provided to help staff overcome any potential discomfort while addressing the topics of sexuality and sexual health. A strengths, weaknesses, opportunities, and threats (SWOT) analysis of the organization may have been helpful to identify and address potential barriers to successful implementation (Moran et al., 2019). The values and mission statements were available on the organization website, and the presentation was personalized to reflect these values and demonstrate the benefits to patients and staff. Communicating the vision for the project and providing a guide to the process that did not impede workflow was essential to convincing office staff to actively participate. Sexual health can be an uncomfortable topic and identifying and addressing any potential barriers to implementation ensured completion of this evidence-based project.

Project Method and Design

This evidence-based pilot project, guided by the PARiHS Framework, was designed to identify STI risk in older adults through increased primary care provider sexual health assessments in this population. For the purpose of this project, older adults

are defined as people 55 years of age and older. A pre-implementation survey was completed by primary care providers to assess general knowledge of STIs in older adults, comfort level with assessing sexual health in older adults, and current practices (see Appendix B). A brief educational presentation outlined the increasing rates of STIs in older adults, the importance of sexual health assessments, a review of current guidelines and recommendations, and a guide to completing a sexual health assessment. Resources were provided, including an evidence-based screening tool (see Appendix C), an algorithm (see Appendix D), STI guidelines (see Appendix E), and additional resources for education, referral, and billing, including a list of ICD 10 diagnosis codes (see Appendix F). At the beginning of the older adult patient visit the nurse or aide assured the patient of confidentiality and completed the first section of the evidence-based screening tool. The primary care provider then completed the tool based upon the answers from the first question, including noting any interventions.

Key facilitators were identified to ensure project success through data collection and ongoing communication with the co-director of the project. Data was collected on a weekly basis, and a post-implementation survey (see Appendix G) was completed after the completion of the project to assess provider comfort level, STI awareness, ease of use of the screening tool, and any additional recommendations for future projects. An increase in primary care provider and clinic staff comfort level and willingness to conduct assessment beyond the timeline of the project was the predicted outcome. Project success indicates it may be appropriate for system-wide implementation.

Setting and Resources

This pilot project was implemented in a family practice medical group located in the metropolitan area of Oklahoma. The participants were a board-certified physician with over 30 years of experience, a board-certified advanced practice registered nurse with over 12 years of experience in family practice, and clinic staff. This clinic serves all ages, including older adults, and averages approximately 10,000 patient visits yearly. Resources for the project included the CDC *Pocket Guide to Taking a Sexual History* and the *Syphilis Pocket Guide for Providers*, a modified sexual history assessment form, a free mobile app provided by the CDC and available for download on Apple and Android devices, an algorithm for taking a sexual history, a list of ICD codes to ensure proper billing, and a list of additional resources for providers.

Population Impacted by Project

Participants directly affected by the project included the primary care providers and office staff. Clinical staff were tasked with distributing the sexual health assessment to the patients and answering any questions about the assessment. Primary care providers addressed the results of the assessment during the visit. They evaluated the patient for STI risk and any other sexual health concerns. Based on the results of the assessment, the provider provided education, made recommendations for lifestyle changes or possible STI testing. Indirect participants of the project included clinic patients 55 years of age and older who completed the sexual health assessments. The inclusion criteria for the project included primary care providers within the clinic and all adult patients 55 years of age and older, except those diagnosed with severe cognitive impairment or those

unwilling to complete the sexual health assessment. Sexual partners of patients may also have been indirectly affected by the project. The ideal outcome would be an improvement in patient/provider relationships and increased satisfaction and knowledge regarding sexual health.

Sources of Data

The pre-implementation survey provided data on the current practice within the clinic. A tracking tool was employed to keep a record of the total number of patients 55 years of age and older seen within the clinic over the course of the project (see Appendix H). Of those patients 55 years of age and older, the tracking tool was used for recording how many were sexually active, previous HIV testing status, other sexual health concerns, and patients recommended for HIV or STI testing based upon the sexual health assessment. The post-implementation survey evaluated the comfort level of providers in performing sexual health assessments and using the screening tool, plans for continued routine sexual health assessments, and any other recommendations for project improvement.

Pre-Implementation Survey

A pre-implementation survey in the form of a 5-point Likert Scale, one indicating strong disagreement and five indicating strong agreement, was completed by the nurse practitioner and physician prior to the educational presentation. Both primary care providers agreed that sexual health assessments are not a priority in older adults. The physician disagreed that his patients would feel uncomfortable talking about sexual health and the nurse practitioner was neutral. Both providers disagreed that they would be uncomfortable initiating sexual health discussions with older patients, and both

providers disagreed that they routinely complete sexual health assessments on older adults. Neither primary care provider used an evidence-based screening tool during sexual health assessments.

Quality

All data was kept in a locked file cabinet during the project to prevent any alteration or tampering. This project was reliant upon the diligence and willingness of staff members to administer the screening tool. The educational presentation before project implementation, in addition to providing information regarding the alarming rates of STIs in older adults, encouraged providers and staff to reflect on any conscious or unconscious biases they may harbor. Acknowledging and working through those biases allowed the providers and staff to provide quality care to older patients without discrimination.

Ethics and Human Subjects Protection

The Oklahoma City University Institutional Review Board (IRB) reviewed this proposal to ensure ethics and human subjects protection is maintained (see Appendix I). The National Institutes of Health (NIH) web-based training course, "Protecting Human Research Participants" was completed by the director (see Appendix J). The project co-director completed the web-based training course "Human Subjects" provided by the University of New Hampshire (see Appendix K). Project participants completed informed consent prior to project implementation (see Appendix L). Assessment forms did not have any patient identifiers, were kept in a locked cabinet, and shredded upon completion of the project.

The primary ethical considerations were related to how the implementation may have affected the patients. Operating within an ethical framework requires consideration of respect, beneficence, nonmaleficence, justice, and integrity (White, Dudley-Brown, & Terhaar, 2016). Some considerations for maintaining respect for the patient included autonomy, privacy, possible embarrassment, and cultural or religious concerns (Shirmohammadi, Kohan, Shamsi-Gooshki, & Shahiari, 2018). There was potential for damaging established patient-provider relationship by introducing topics that may have made the patient uncomfortable. The dynamic of the patient-provider relationship had the potential to be positively or negatively impacted depending on the presentation and delivery of the sexual health assessment.

Timeline

IRB approval was received in November 2019 with the presentation of education and resources to the clinic staff completed in early December 2019. Project implementation began following IRB approval and the project was completed within eight weeks. Data was collected, analyzed and disseminated upon completion of the implementation.

Budget

All project costs were the responsibility of the project co-director. The implementation out of pocket expense for this project were minimal. The CDC provides a limited number of free pocket guides and cards for providers. These were requested and received without cost. The CDC also offers downloadable material from the website as an alternative to free printed resources. The only printing associated costs were for the assessment tool, surveys, and printed resources. This cost amounted to less than $20.00.

ICD codes were provided so that proper billing would reimburse the clinic for the time required to perform a sexual health assessment, provide counseling, or order further testing. Lunch was provided during the presentation to the providers and clinic staff with a cost of less than $60.00. Twice weekly visits to the clinic over the course of the project required a small investment by co-director and did not exceed $25.00. Completion of the evidence-based screening tool and intervention were anticipated to take approximately ten minutes. Based upon estimated provider salaries, the cost associated with physician time spent on project was approximately $15.00 per patient, and $10.00 per patient for the nurse practitioner. Assuming four patients per day per provider met the criteria the daily cost would be $100.00. The relatively small number of positive screenings equaled very little time spent by providers and zero cost to the clinic. ICD-10 codes were provided to address scenarios including encounters for sexual health counseling, screening and HIV, and high-risk sexual behavior, among others. Out of pocket expense for the co-director was $105.00.

This clinic employs electronic charting and has the ability to incorporate sexual health assessments into routine care. This would have negated any costs associated with printing. For the purposes of this pilot project the screening tool was printed and copies were provided as needed. If this project were to be implemented on a larger scale then existing sexual health assessments available within the electronic health record could be utilized.

Evaluation of Project Post Implementation

The purpose of this evidence-based project was to improve the sexual health of older adults by identifying STI risk and knowledge deficit through routine sexual health

assessments. Educating providers and clinic staff on current STI rates and trends among older adults through a short presentation completed the first objective of the project. The staff were then educated on the use of the evidence-based screening tool provided for implementation completing the second and third objectives. Resources were provided, including an evidence-based screening tool, pocket cards, an algorithm for completing sexual health assessments, STI treatment guidelines, and ICD-10 diagnosis codes completing the fourth objective. Evaluation of the implementation process, screening tool, and resources meets the final project objective.

Data collection began in December 2019 and was completed in January 2020. Providers completed pre-implementation surveys in December 2019 prior to the educational presentation. Post-implementation data in the form of completed evidence-based screening tools were collected on a weekly basis through mid-February 2020. The screening tool was to be completed on all patients 55 years of age and older. There were days when screenings were not completed resulting in missed opportunity for data collection. These missed opportunities could be attributed to an influx of patients on particular days or a choice made by the intake staff. No reasons were given when inquiries were made and staff resumed completing surveys with reminders and encouragement from project co-director. The evidence-based screening tool was designed to identify STI risk or other sexual health concerns that should be addressed with the primary care provider. If the patient had not been sexually active in one year and had no concerns then no additional questions were indicated. If the patient was in a long-term monogamous relationship with a single partner and they had no health concerns then no further questions were indicated. If the patient had been sexually active

within the last year, had multiple partners, or any concerns regarding past partners then further questions were indicated to evaluate history of STI or HIV testing. Based on the results of the initial questions the provider offered additional counseling on sexual health or STI risk, order testing, refer to gynecology, urology, or other; or initiate hormone or PDE-5 inhibitor therapy.

Data for Evaluation

At the completion of the project, the primary care providers were given a post-implementation survey that included the following statements: 1) The educational materials provided have increased my awareness of STI risk in older adults, 2) The screening tool was easy to use, 3) The screening tool was helpful, 4) I feel confident assessing STI risk in older adults and 5) I plan to continue routine sexual health assessments of my older patients. The providers ranked each statement on a five-point Likert scale expressing level of agreement or disagreement with the statements. Additional open-ended questions included: 1) What would make it easier to consistently and routinely address the sexual health of older patients? and 2) Do you have any recommendations for the improvement of this project? The pre- and post-implementation surveys provided both quantitative and qualitative data. Quantitative data collected from the modified screening tool include age, current sexual activity status, number of partners, history of STI testing, method of STI protection, and any sexual health concerns. Provider interventions, if any, including STI risk counseling, STI testing, HIV testing, sexual dysfunction counseling, and/or medication for sexual dysfunction, were monitored with a tracking tool. All quantitative and qualitative data

was collated and evaluated to determine effectiveness of intervention and success of DNP project implementation.

Quantitative Results

A total of 42 evidence-based screening tools were completed on patients 55 years of age and older (see appendix M). Of the respondents, nineteen (45%) were between 55 and 65 years of age, fourteen (33%) were between 65 and 75 years of age, six (14%) were between 75 and 85 years of age, and three (7%) were over 85 years of age. Of the patients between 55 and 65 years of age, eleven (57%) have been sexually active in the past year and eight (42%) have not been sexually active in the past year. Among the sexually active patients in this age group, eight (72%) are in monogamous relationship with a long-term partner, two (18%) have multiple partners, and one (9%) have a new partner. None of the patients in this age group who were questioned have even been tested for HIV. Two of the three patients in this age group with new or multiple partners report a history of previous STI testing. Three patients (10%) within this age group had sexual function or sexual satisfaction concerns. Provider interventions within this age group included HIV testing (10%), counseling (10%), hormone therapy (5%), and urology (5%). Approximately 68% of the patients between 55 and 65 years of age were marked as having no identified need for risk-reduction counseling.

Of the participating patients between 65 to 75 years of age, six (43%) have been sexually active in the past year and eight (57%) have not been sexually active in the past year. None of the patients within this age group reported having a new partner or multiple partners and ten (71%) reported being in a long-term monogamous relationship. No sexual function or sexual satisfaction needs were identified within this age group and

no interventions were initiated by the provider. Within the age group of 75 to 85 years of age, two (33%) reported being sexually active within the past year, and four (66%) reported not being sexually active in the past year. None of the patients in this age group were identified as high-risk. Hormone therapy was provided to the one patient (16%) who expressed concerns with sexual function or satisfaction. Of the three patients 85 years of age and older none were sexually active or had any concerns with sexual function or satisfaction (See Appendix O).

Qualitative Results

The post-implementation survey was formatted as a 5-point Likert Scale and also included open-ended questions for provider feedback, including any recommendations for improvements to the project. One provider stated that it would be easier to consistently and routinely address the sexual health of older patients if it was part of the initial paperwork. This would identify issues early and establish the routine of discussing sexual health. One provider commented that it may be difficult to suddenly start asking patients about sex if you have seen them for years and never mentioned sexual activity at any other visit. Both providers agreed that the tool was easy to use and they both agreed that they plan to continue to complete routine sexual health assessments on older adults, but they did not 'strongly' agree that they would do so. The nurse practitioner reported that completing the sexual health assessments prompted several interesting conversations with her patients, even if they had no sexual health concerns. Neither provider felt that completing the assessments had a negative effect on any patient-provider relationships.

Strengths and Weaknesses

Strengths of this project included that it is evidence-based, and there is a clear gap in practice. The providers are experienced and appeared supportive and committed to the success of the project. It had the potential to strengthen provider-patient relationships and elevate the level of patient care. Anticipated and actual weaknesses included the relatively small sample size of patients and the brief duration of the project. There was the potential for bias among the clinic workers and the providers, but all staff appeared comfortable discussing sexual health and bias was not identified as an issue during the post-implementation evaluation. It is unclear if patients were comfortable discussing sexual health. It is possible that some patients may have skewed their responses to the screening tool in an effort to avoid the conversation entirely.

One of the LPNs in the clinic had prior experience in a health department and felt very comfortable discussing sexual activity with the patients. She was definitely an asset to the project. Another unexpected asset was a nurse practitioner student who began her clinical rotation mid-way through the project. She was present at a follow-up lunch and was agreeable to reminding the physician to complete the assessments.

The primary care physician was only in the clinic three days a week which reduced the number of screenings completed. It is impossible to determine if all patients meeting criteria were screened as there was no process in place to gather this data. The project was completed during flu season, so there is a possibility that screenings were missed due to the increased demand on the staffs time.

Unintended Consequences

An unintended consequence of the project was revealed in the comments made by patients. One patient commented that he did not know how to initiate sex. Just as there is no pre-determined age when sexual intimacy ceases, there is no set age when sexual intimacy begins. Whether this patient was struggling with intimacy in a long-relationship or had never had sex before is not indicated on the screening tool. Regardless of the reason for his concerns, it is clear that assumptions cannot be made based upon age, including the need for counseling and education.

Recommendations

The screening tool could be improved to clarify the age ranges, instead of 55 to 65 years of age and 65 to 75 years of age it should be 66 to 75 years of age and 76 to 85 years of age and 86 years of age and older. The screening tool could include the gender of the patient to better evaluate risk factors. While this is not needed by the provider in the clinic, it would be helpful when evaluating the data. In order to better capture the percentage of completed screening tools a screening tool could be part of every patient encounter. It could be dated and left blank for patients when it did not apply. This would better reflect the demographics within the clinic and hopefully increase the number of appropriately completed screenings.

Some of the screening tools were filled out incorrectly. Additional review of the screening tool and algorithm may be helpful in future projects. This project may be more successful if implemented in a larger clinic with multiple providers over a longer time frame. This would allow for more data collection to compare with national and local trends. While sexual health assessments in older adults in critical to identifying risks and

sexual health concerns, another topic to consider for future projects would be a sexual health education program focused on sexuality and intimacy in later life.

Conclusion

Older adults value sexual intimacy as much as their younger counterparts, and they should be recognized as sexual beings. Shame, stereotypes, and ageist attitudes are perpetuating the ever-increasing rates of HIV and STIs in this age group. Primary care providers are perfectly poised to intervene and validate the sexuality of older adult patients while simultaneously screening for at-risk behaviors, providing education and counseling, and addressing any other sexual health concerns. Health promotion and disease prevention is the credo of nurse practitioners and addressing the sexual health of this rapidly increasing older population exemplifies the very tenets of holistic patient care.

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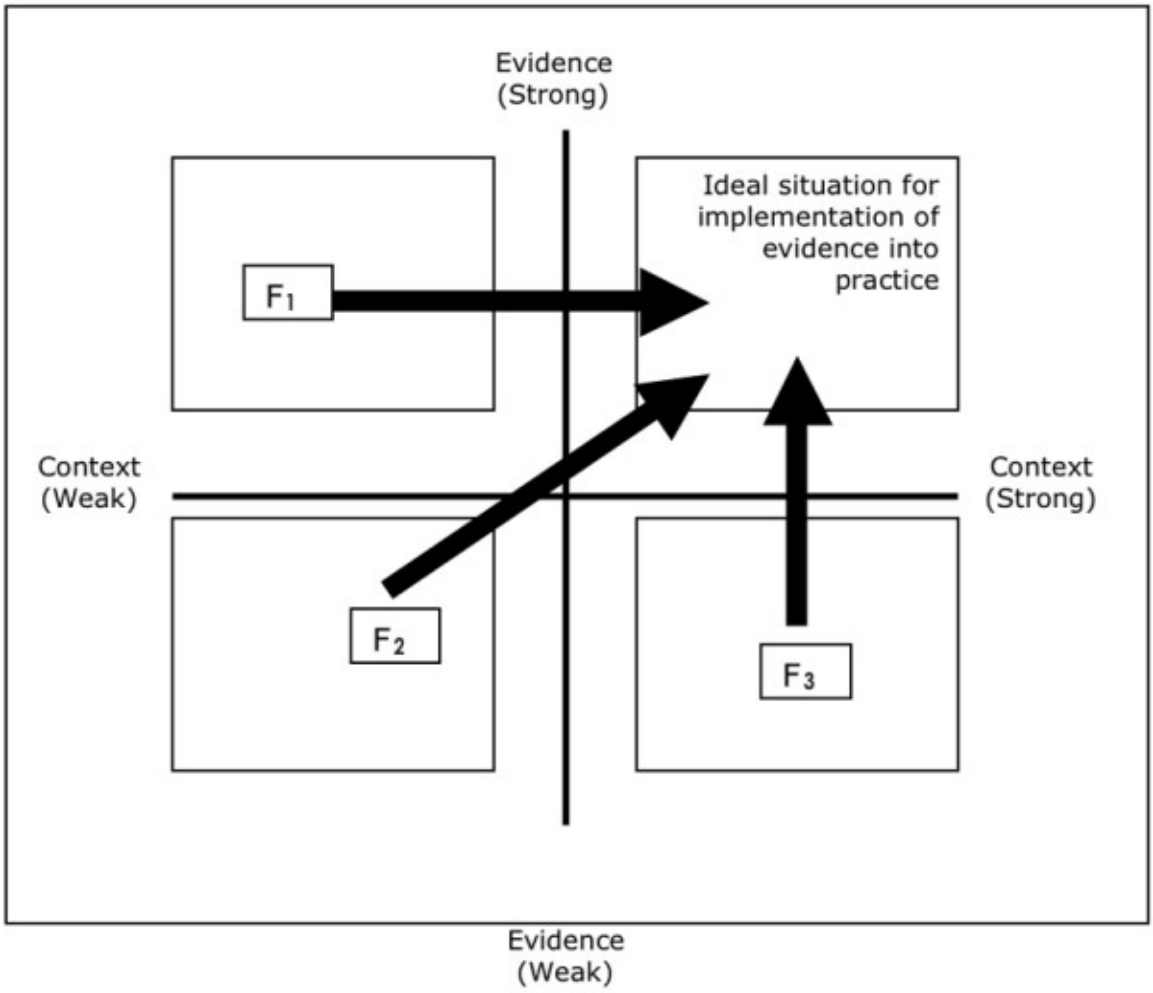
Appendix A

PARiHS Framework



Kitson, Harvey, & McCormack (1998)

Appendix B
Pre-Implementation Survey

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I feel that sexual health assessments are not a priority in older adults	1	2	3	4	5
I feel that my older patients would be uncomfortable talking about sexual health	1	2	3	4	5
I feel uncomfortable initiating sexual health discussions with my older patients	1	2	3	4	5
I routinely complete sexual health assessments on older adults	1	2	3	4	5
I use an evidence-based screening tool during sexual health assessments	1	2	3	4	5

Appendix C

SEXUAL HEALTH SCREENING TOOL

(1st section to be completed by MA, LPN, RN)

AGE: 55-65___ 65-75___ 75-85___ 85 and older ___

In the past year have you been sexually active? Yes ☐ No ☐

Do you have sex with: Men ☐ Women ☐ Both ☐
If yes, have you had sex with:
Long-Term/One partner only ☐ New partner ☐ Multiple partners ☐

Not Sexually Active	**Long-term/One Partner**	**New Partner/Multiple Partners**
Any concerns about past partners? Yes ☐ No ☐ Any sexual health concerns you would like to discuss with your provider? Yes ☐ No ☐	Any issues with sexual function or satisfaction you would like to discuss with your provider? Yes ☐ No ☐	Have you ever been tested for HIV? Yes ☐ No ☐ Have you ever been tested for STIs? Yes ☐ No ☐ Any issues with sexual function or satisfaction you would like to discuss with your provider? Yes ☐ No ☐

(this section to be completed by provider)

PLEASE MARK ANY INTERVENTION PROVIDED
Long-term monogamous relationship, no identified need for risk-reduction counseling ☐

STI behavior risk counseling ☐

STI testing ☐

HIV testing ☐
Sexual function intervention

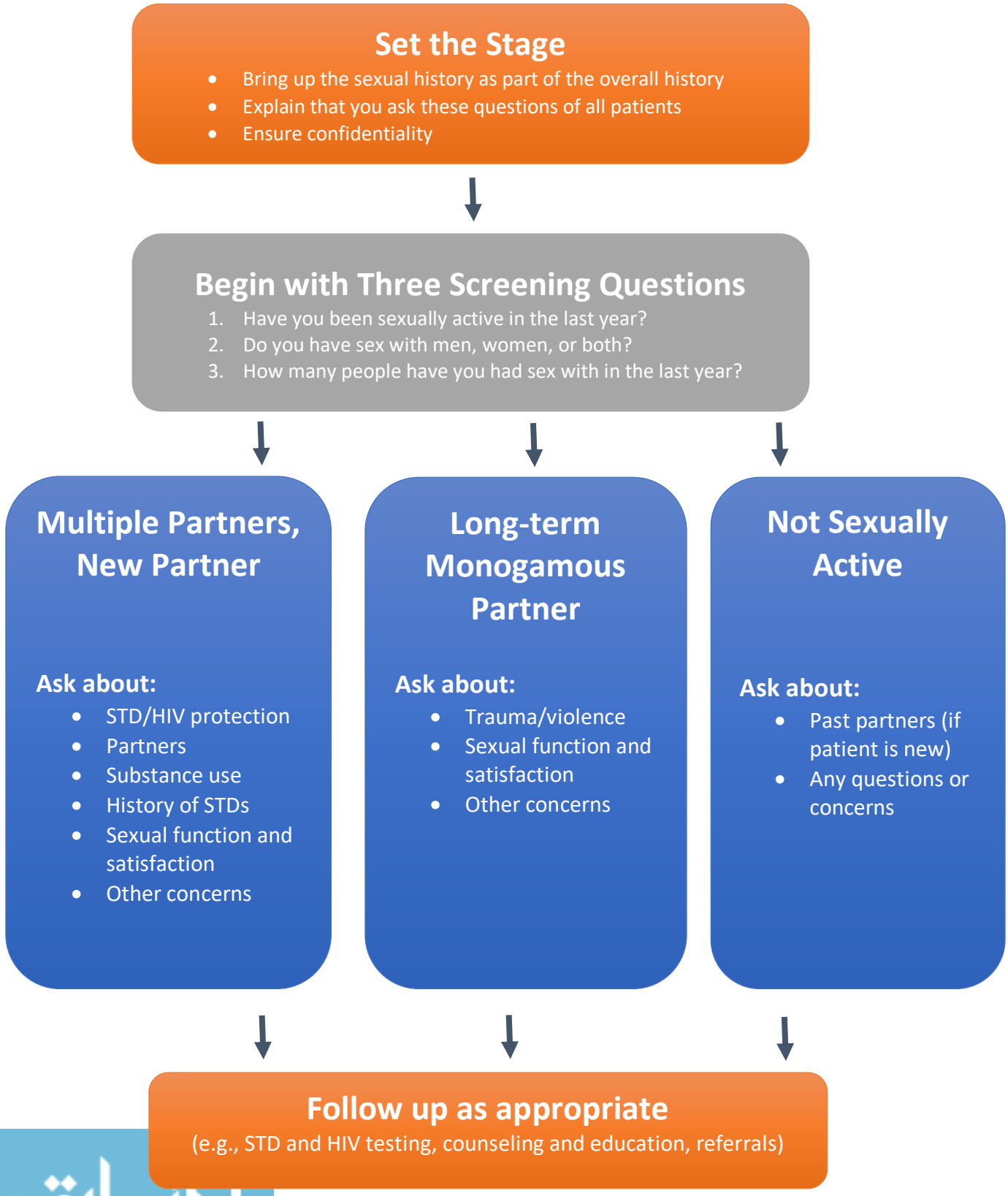
Counseling ☐ Hormone Therapy ☐ PDE-5 inhibitors ☐

Referral GYN ☐ Urology ☐ Other ☐

Adapted from LGBT *Sexual History Toolkit* (2015) and the US DHHS CDC *A Guide to Taking a Sexual History* (n.d)

Appendix D

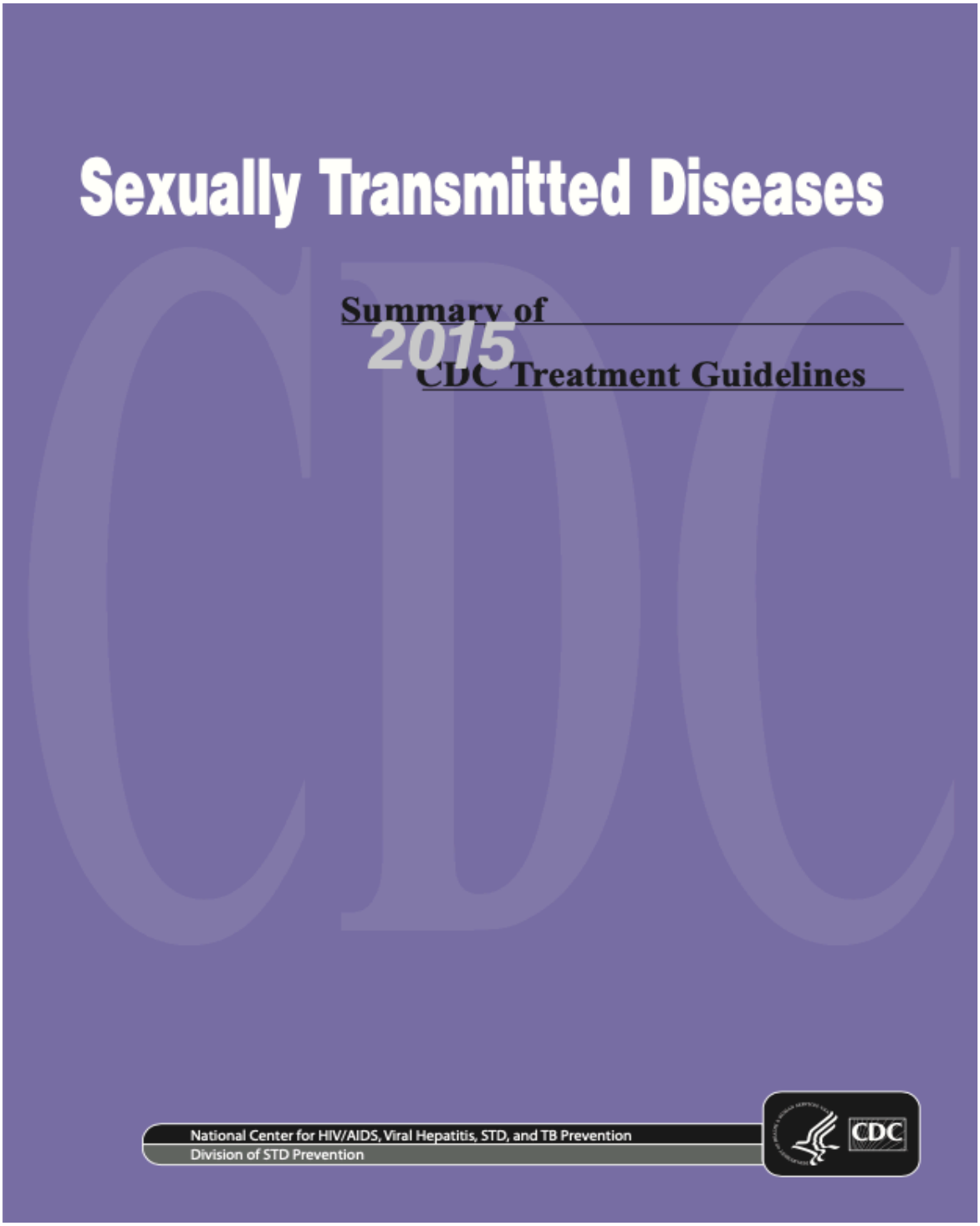
Algorithm for Taking Sexual Histories

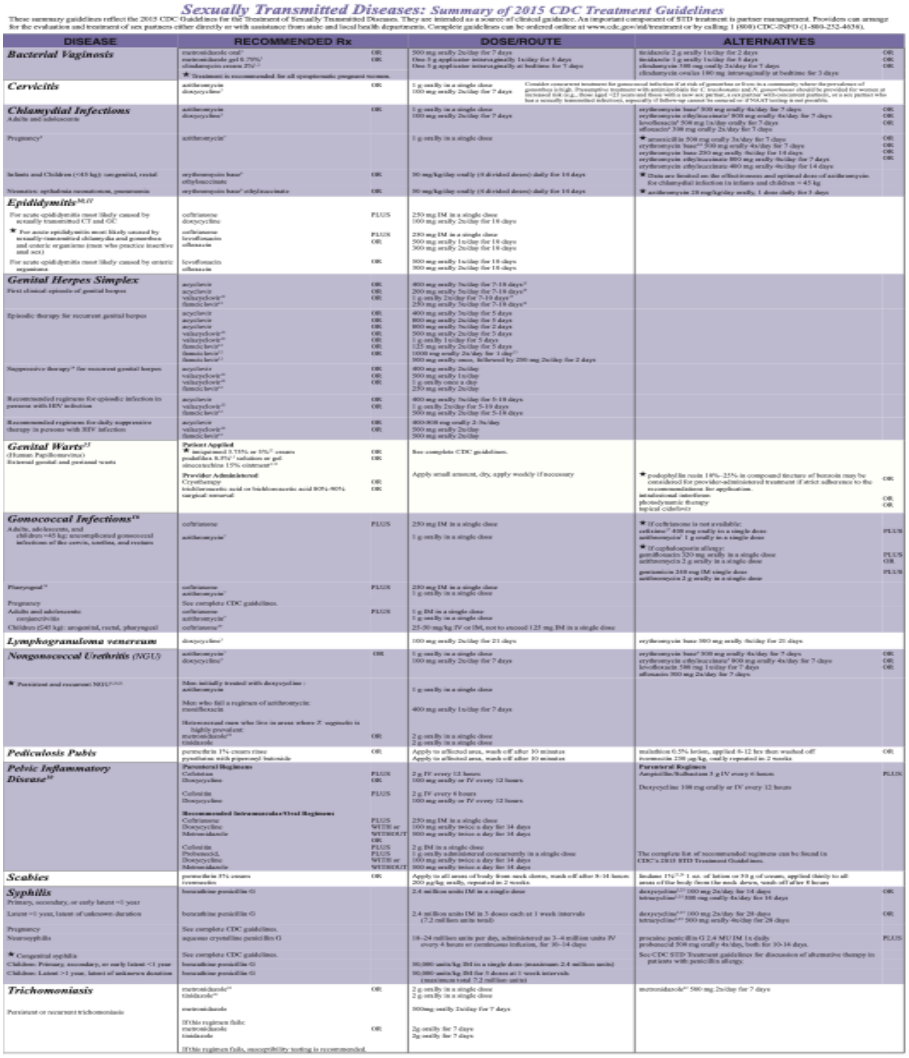


Adapted from the LGBT Health Education Tool Kit (2015)

Appendix E

2015 CDC STD Treatment Guidelines





Sexually Transmitted Diseases: Summary of 2015 CDC Treatment Guidelines

These summary guidelines reflect the 2015 CDC Guidelines for the Treatment of Sexually Transmitted Diseases. They are intended as a source of clinical guidance. An important component of STD treatment is partner management. Providers can arrange for the evaluation and treatment of sex partners either directly or with assistance from state and local health departments. Complete guidelines can be ordered online at www.cdc.gov/std/treatment or by calling 1 (800) CDC-INFO (1-800-232-4636).

DISEASE	RECOMMENDED Rx		DOSE/ROUTE	ALTERNATIVES
Bacterial Vaginosis	metronidazole oral[1]	OR	500 mg orally 2x/day for 7 days	tinidazole 2 g orally 1x/day for 2 days OR
	metronidazole gel 0.75%[1]	OR	One 5 g applicator intravaginally 1x/day for 5 days	tinidazole 1 g orally 1x/day for 5 days OR
	clindamycin cream 2%[1]		One 5 g applicator intravaginally at bedtime for 7 days	clindamycin 300 mg orally 2x/day for 7 days OR
	★ Treatment is recommended for all symptomatic pregnant women.			clindamycin ovules 100 mg intravaginally at bedtime for 3 days
Cervicitis	azithromycin	OR	1 g orally in a single dose	Consider concurrent treatment for gonococcal infection if at risk of gonorrhea or if we live in a community where the prevalence of gonorrhea is high. Presumptive treatment with antimicrobials for C. trachomatis and N. gonorrhoeae should be provided for women at increased risk (e.g., those aged <25 years and those with a new sex partner, a sex partner with mucopurulent cervicitis, or a sex partner who has a sexually transmitted infection), especially if follow-up cannot be ensured or, if NAAT testing is not possible.
	doxycycline[2]		100 mg orally 2x/day for 7 days	
Chlamydial Infections	azithromycin	OR	1 g orally in a single dose	erythromycin base[3] 500 mg orally 4x/day for 7 days OR
Adults and adolescents	doxycycline[2]		100 mg orally 2x/day for 7 days	erythromycin ethylsuccinate[3] 800 mg orally 4x/day for 7 days OR
				levofloxacin[4] 500 mg 1x/day orally for 7 days OR
				ofloxacin[4] 300 mg orally 2x/day for 7 days
Pregnancy[5]	azithromycin[6]		1 g orally in a single dose	★ amoxicillin 500 mg orally 3x/day for 7 days OR
				erythromycin base[3] 500 mg orally 4x/day for 7 days OR
				erythromycin base 250 mg orally 4x/day for 14 days OR
				erythromycin ethylsuccinate 800 mg orally 4x/day for 7 days OR
				erythromycin ethylsuccinate 400 mg orally 4x/day for 14 days
Infants and Children (<45 kg): urogenital, rectal	erythromycin base[3]	OR	50 mg/kg/day orally (4 divided doses) daily for 14 days	★ Data are limited on the effectiveness and optimal dose of azithromycin for chlamydial infection in infants and children < 45 kg
	ethylsuccinate			
Neonates: epidermis, nasopharynx, pneumonia	erythromycin base[3] ethylsuccinate	OR	50 mg/kg/day orally (4 divided doses) daily for 14 days	★ azithromycin 20 mg/kg/day orally, 1 dose daily for 3 days
Epididymitis[16,17]				
For acute epididymitis most likely caused by sexually transmitted CT and GC	ceftriaxone	PLUS	250 mg IM in a single dose	
	doxycycline		100 mg orally 2x/day for 14 days	
★ For acute epididymitis most likely caused by sexually transmitted chlamydia and gonorrhea and enteric organisms (men who practice insertive anal sex)	ceftriaxone	PLUS	250 mg IM in a single dose	
	levofloxacin	OR	500 mg orally 1x/day for 14 days	
	ofloxacin		300 mg orally 2x/day for 14 days	
For acute epididymitis most likely caused by enteric organisms	levofloxacin	OR	500 mg orally 1x/day for 14 days	
	ofloxacin		300 mg orally 2x/day for 14 days	
Genital Herpes Simplex	acyclovir	OR	400 mg orally 3x/day for 7-10 days[7]	
First clinical episode of genital herpes	acyclovir	OR	200 mg orally 5x/day for 7-10 days[8]	
	valacyclovir[9]	OR	1 g orally 2x/day for 7-10 days	
	famciclovir[9]		250 mg orally 3x/day for 7-10 days[8]	
Episodic therapy for recurrent genital herpes	acyclovir	OR	400 mg orally 3x/day for 5 days	
	acyclovir	OR	800 mg orally 2x/day for 5 days	
	acyclovir	OR	800 mg orally 3x/day for 2 days	
	valacyclovir[9]	OR	500 mg orally 2x/day for 3 days	
	valacyclovir[9]	OR	1 g orally 1x/day for 5 days	
	famciclovir[9]	OR	125 mg orally 2x/day for 5 days	
	famciclovir[9]	OR	1000 mg orally once, followed by 250 mg 2x/day for 2 days	
	famciclovir[9]		1000 mg orally once daily for 1 day[10]	
Suppressive therapy[11] for recurrent genital herpes	acyclovir	OR	400 mg orally 2x/day	
	valacyclovir[9]	OR	500 mg orally 1x/day	
	valacyclovir[9]	OR	1 g orally once a day	
	famciclovir[9]		250 mg orally 2x/day	
Recommended regimens for episodic infection in persons with HIV infection	acyclovir	OR	400 mg orally 3x/day for 5-10 days	
	valacyclovir[12]	OR	1 g orally 2x/day for 5-10 days	
	famciclovir[12]		500 mg orally 2x/day for 5-10 days	
Recommended regimens for daily suppressive therapy in persons with HIV infection	acyclovir	OR	400-800 mg orally 2-3x/day	
	valacyclovir[9]	OR	500 mg orally 2x/day	
	famciclovir[9]		500 mg orally 2x/day	
Genital Warts[13] (Human Papillomavirus) External genital and perianal warts	**Patient Applied** ★ imiquimod 3.75% or 5%[14] cream	OR	See complete CDC guidelines.	
	podofilox 0.5%[14] solution or gel	OR		
	sinecatechins 15% ointment[14]		Apply small amount, dry, apply weekly if necessary	★ podophyllin resin 10%–25% in compound tincture of benzoin may be considered for provider-administered treatment if strict adherence to the recommendations for application.
	Provider Administered			
	Cryotherapy	OR		intralesional interferon OR
	trichloroacetic acid or bichloroacetic acid 80%–90%	OR		photodynamic therapy OR
	surgical removal			topical cidofovir
Gonococcal Infections[15]				
Adults, adolescents, and children >45 kg: uncomplicated gonococcal infections of the cervix, urethra, and rectum	ceftriaxone	PLUS	250 mg IM in a single dose	★ If ceftriaxone is not available:
	azithromycin[1]		1 g orally in a single dose	cefixime[17] 400 mg orally in a single dose PLUS
				azithromycin[1] 1 g orally in a single dose
				★ If cephalosporin allergy:
				gemifloxacin 320 mg orally in a single dose PLUS
				azithromycin 2 g orally in a single dose OR
				gentamicin 240 mg IM single dose PLUS
				azithromycin 2 g orally in a single dose
Pharyngeal[18]	ceftriaxone	PLUS	250 mg IM in a single dose	
	azithromycin[1]		1 g orally in a single dose	
Pregnancy	See complete CDC guidelines.			
Adults and adolescents: conjunctivitis	ceftriaxone	PLUS	1 g IM in a single dose	
	azithromycin[1]		1 g orally in a single dose	
Children (≤45 kg): urogenital, rectal, pharyngeal	ceftriaxone[19]		25-50 mg/kg IV or IM, not to exceed 125 mg IM in a single dose	
Lymphogranuloma venereum	doxycycline[2]		100 mg orally 2x/day for 21 days	erythromycin base 500 mg orally 4x/day for 21 days
Nongonococcal Urethritis (NGU)	azithromycin	OR	1 g orally in a single dose	erythromycin base[3] 500 mg orally 4x/day for 7 days OR
	doxycycline[2]		100 mg orally 2x/day for 7 days	erythromycin ethylsuccinate[3] 800 mg orally 4x/day for 7 days OR
				levofloxacin 500 mg 1x/day for 7 days OR
				ofloxacin 300 mg 2x/day for 7 days
★ Persistent and recurrent NGU[20,21]	Men initially treated with doxycycline: azithromycin		1 g orally in a single dose	
	Men who fail a regimen of azithromycin: moxifloxacin		400 mg orally 1x/day for 7 days	
	Heterosexual men who live in areas where *T. vaginalis* is highly prevalent: metronidazole[22]	OR	2 g orally in a single dose	
	tinidazole[22]	OR	2 g orally in a single dose	
Pediculosis Pubis	permethrin 1% cream rinse	OR	Apply to affected area, wash off after 10 minutes	malathion 0.5% lotion, applied 8–12 hrs then washed off OR
	pyrethrins with piperonyl butoxide		Apply to affected area, wash off after 10 minutes	ivermectin 250 µg/kg, oral; repeated in 2 weeks
Pelvic Inflammatory Disease[23]	**Parenteral Regimen**			**Parenteral Regimen**
	Cefotetan	PLUS	2 g IV every 12 hours	Ampicillin/Sulbactam 3 g IV every 6 hours PLUS
	Doxycycline	OR	100 mg orally or IV every 12 hours	
	Cefoxitin	PLUS	2 g IV every 6 hours	Doxycycline 100 mg orally or IV every 12 hours
	Doxycycline		100 mg orally or IV every 12 hours	
	Recommended Intramuscular/Oral Regimen			
	Ceftriaxone	PLUS	250 mg IM in a single dose	
	Doxycycline	WITH or WITHOUT	100 mg orally twice a day for 14 days	
	Metronidazole		500 mg orally twice a day for 14 days	
		OR		
	Cefoxitin	PLUS	2 g IM in a single dose	
	Probenecid,	PLUS	1 g orally administered concurrently in a single dose	The complete list of recommended regimens can be found in CDC's 2015 STD Treatment Guidelines.
	Doxycycline	WITH or WITHOUT	100 mg orally twice a day for 14 days	
	Metronidazole		500 mg orally twice a day for 14 days	
Scabies	permethrin 5% cream	OR	Apply to all areas of body from neck down, wash off after 8–14 hours	Ivermectin 1%[24,25] 1 tab. of lotion or 30 g of cream, applied thinly to all areas of the body from the neck down, wash off after 8 hours
	crotamiton		200 µg/kg, orally, repeated in 2 weeks	
Syphilis	benzathine penicillin G		2.4 million units IM in a single dose	doxycycline[2,26] 100 mg 2x/day for 14 days OR
Primary, secondary, or early latent <1 year				tetracycline[2,26] 500 mg orally 4x/day for 14 days
Latent >1 year, latent of unknown duration	benzathine penicillin G		2.4 million units IM in 3 doses each at 1 week intervals (7.2 million units total)	doxycycline[2,26] 100 mg 2x/day for 28 days OR
				tetracycline[2,26] 500 mg orally 4x/day for 28 days
Pregnancy	See complete CDC guidelines.			
Neurosyphilis	aqueous crystalline penicillin G		18–24 million units per day, administered as 3–4 million units IV every 4 hours or continuous infusion, for 10–14 days	procaine penicillin G 2.4 MU IM 1x daily probenecid 500 mg orally 4x/day, both for 10-14 days. PLUS
★ Congenital syphilis	See complete CDC guidelines.			See CDC STD Treatment guidelines for discussion of alternative therapy in patients with penicillin allergy.
Children: Primary, secondary, or early latent <1 year	benzathine penicillin G		50,000 units/kg IM in a single dose (maximum: 2.4 million units)	
Children: Latent >1 year, latent of unknown duration	benzathine penicillin G		50,000 units/kg IM for 3 doses at 1 week intervals (maximum total: 7.2 million units)	
Trichomoniasis	metronidazole[27]	OR	2 g orally in a single dose	metronidazole[27] 500 mg 2x/day for 7 days
	tinidazole[27]		2 g orally in a single dose	
Persistent or recurrent trichomoniasis	metronidazole		1000mg orally 2x/day for 7 days	
	If this regimen fails: metronidazole	OR	2g orally for 7 days	
	tinidazole		2g orally for 7 days	
	If this regimen fails, susceptibility testing is recommended.			

1. The recommended regimens are equally efficacious.
2. These creams are oil-based and may weaken latex condoms and diaphragms. Refer to product labeling for further information.
3. Should not be administered during pregnancy, lactation, or to children <8 years of age.
4. If patient cannot tolerate high-dose erythromycin base schedules, change to 250 mg 4x/day for 14 days.
5. If patient cannot tolerate high-dose erythromycin ethylsuccinate schedules, change to 400 mg orally 4 times a day for 14 days.
6. Contraindicated for pregnant or lactating women.
7. Clinical experience and published studies suggest that azithromycin is safe and effective.
8. Erythromycin estolate is contraindicated during pregnancy.
9. Effectiveness of erythromycin treatment is approximately 80%; a second course of therapy may be required.
10. Patients who do not respond to therapy (within 72 hours) should be re-evaluated.
11. For patients with suspected sexually transmitted epididymitis, close follow-up is essential.
12. No definitive information available on prenatal exposure.
13. Treatment may be extended if healing is incomplete after 10 days of therapy.
14. Consider discontinuation of treatment after one year to assess frequency of recurrence.
15. Vaginal, cervical, urethral meatal, and anal warts may require referral to an appropriate specialist.
16. CDC recommends that treatment for uncomplicated gonococcal infections of the cervix, urethra, and/or rectum should include dual therapy, i.e., both a cephalosporin (e.g., ceftriaxone) plus azithromycin.
17. CDC recommends that cefixime in combination with azithromycin or doxycycline be used as an alternative when ceftriaxone is not available.
18. Only ceftriaxone is recommended for the treatment of pharyngeal infection. Providers should inquire about oral sexual exposure.
19. Use with caution in hyperbilirubinemic infants, especially those born prematurely.
20. MSM are unlikely to benefit from the addition of nitroimidazoles.
21. Moxifloxacin 400mg orally 1x/day for 7 days is effective against *Mycoplasma genitalium*.
22. Pregnant patients can be treated with 2 g single dose.
23. Contraindicated for pregnant or lactating women, or children <2 years of age.
24. Do not use after a bath; should not be used by persons who have extensive dermatitis.
25. Pregnant patients allergic to penicillin should be treated with penicillin after desensitization.
26. Randomized controlled trials comparing single 2 g doses of metronidazole and tinidazole suggest that tinidazole is equivalent to, or superior to, metronidazole in achieving parasitologic cure and resolution of symptoms.

★ Indicates update from the 2010 CDC Guidelines for the Treatment of Sexually Transmitted Diseases.

Reviewed by the CDC 6/2015

CDC (2015)

Appendix F

Resources

ICD 10 Codes

Z11.3	Encounter for screening for infections with predominantly sexual mode of transmission (excludes HPV and HIV)
Z11.4	Encounter for screening for HIV
Z11.59	Screening for other viral diseases
Z20.6	Contact or exposure to other viral diseases (HIV)
Z20.828	Contact with or exposure to other viral communicable diseases
Z71.89	Counseling on other sexually transmitted diseases
Z72.51	High-risk sexual behavior
A64	Unspecified sexually transmitted diseases
A59.9	Trichomoniasis
B20	HIV
N34.1	Nonspecific and nongonococcal urethritis
A51	Early syphilis
A51.0	Primary genital syphilis
A51.1	Primary anal syphilis
A51.2	Primary syphilis of other sites
A51.3	Secondary syphilis of skin and mucous membranes
A54	Gonococcal infection
A54.4	Gonococcal infection of musculoskeletal system
A56	Other sexually transmitted chlamydial diseases
A57	Chancroid
A60	Anogenital herpes simplex infections
Z21	HIV status

The National Center for Health Statistics (2019)

STD Prevention Resources

For Healthcare Providers

The 2015 STD Treatment Guidelines – CDC's current clinical guidance on STD prevention, diagnosis, and treatment. Visit the site to access:

- The Guidelines, a wall chart and pocket guide available for download and free ordering.
- A free mobile app available for Apple and Android devices.
- Q & A from clinical and CDC experts about the Guidelines.
- In-depth screening recommendations for healthcare providers.

A Guide to Taking a Sexual History Booklet – Assists providers in starting an open conversation with their patients and delivering risk-reduction counseling.

Syphilis Pocket Guide for Providers – Need-to-know details on the diagnosis, treatment, and prevention of syphilis.

CDC STD Videos and Podcasts – A collection of brief videos and audio podcasts featuring CDC staff. Visit the site to watch videos such as *"Reducing Rising Syphilis Rates: A Healthcare Provider's Role."*

The National Network of STD Clinical Prevention Training Centers (NNPTC) – Provides health professionals with state-of-the-art educational opportunities, including experiential learning with an emphasis on prevention. Visit the site to access:

- **STD Clinical Consultation Network (STDCCN)** – A free STD consultation service for healthcare providers provided by the NNPTC.
- **National STD Curriculum** – A free online modular learning experience that helps users learn how to manage STDs. CME/CNE available.

CDC's collection of Expert Medscape Commentaries – Delivers CDC's guidance to healthcare professionals. Search the site for videos such as Dr. Gail Bolan's *"Emerging Drug-Resistant Gonorrhea: What's New and What Now?"*

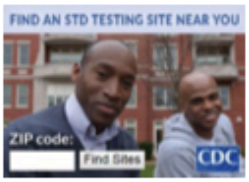
For Individuals

CDC STD Fact Sheets – Available in two disease-specific versions; basic fact sheets are in multiple languages and detailed fact sheets provide more in-depth information.

KABI Chronicles: The Edge Motion Comic Series – Comic-based, serial drama following the lives of nine fictional high school and college friends as they navigate young adulthood, while also educating viewers about HIV and STDs.

National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
Centers for Disease Control and Prevention

STD Prevention Resources



CDC STD Prevention page – Information about STD prevention, testing, and resources. Visit site to access:

- **The Lowdown on How to Prevent STDs** – A web-based infographic that provides readers with basic information about STD prevention.
- **The Right Way to Use a Male Condom** – An illustrated page demonstrating the correct way to put on and take off a male condom.
- **CONDOM DOs & DON'Ts** – A condom fact sheet that also provides information about dual protection for pregnancy prevention.
- **GetTested** – A national STD, HIV, and hepatitis testing locator to find nearby free or low-cost testing.

Just Diagnosed? Fact Sheet – Provides the three steps a person can take if they were recently diagnosed with gonorrhea or chlamydia, including resources to help them talk to their partner.

The Facts Brochures – Plain language STD brochures that are available for download in English and Spanish.

For STD Programs and Community-Based Organizations

STD Prevention Banners and Buttons – Can be added to any web site to promote STD awareness.

STD Webinars – A collection of web-based seminars for clinicians, physicians, and public health practitioners that cover the latest research in the fields of STD/HIV and program innovations.

CDC STD Videos and Podcasts – Brief videos and audio podcasts featuring CDC staff. Visit the site for videos such as *"Drug-Resistant Gonorrhea: An Urgent Public Health Issue."*

STD Program Evaluation Tools & Trainings (STD PETT) – Six online training modules and 21 downloadable resources providing step-by-step guidance to enhance STD program evaluation capacity.

CDC STD Program Management & Evaluation Tools - Webpages include a collection of resources designed for STD programs. Visit the site to access:

- **STD Preventive Services Gap Assessment Toolkit** – A resource for health departments, community-based organizations (CBOs) and others that provide STD-related services to uncover the scope and distribution of STD prevention and care services in a given area, for a defined population, or some combination of both.
- **Practical Use of Program Evaluation among STD Programs** – Guidance on how to design and implement program evaluation. Short guides are available for several sections of the manual.
- **Partner Services** - Webpages provide resources to help STD program staff work with patients and their sexual partners.

GYT: Get Yourself Tested posters – Can be ordered for free through CDC-INFO on Demand.

Appendix G

Post Implementation Survey

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
The educational materials provided have increased my awareness of STI risk in older adults	1	2	3	4	5
The screening tool was easy to use	1	2	3	4	5
The screening tool was helpful	1	2	3	4	5
I feel confident assessing STI risk in older adults	1	2	3	4	5
I plan to continue routine sexual health assessments of my older patients.	1	2	3	4	5

1. What would make it easier to consistently and routinely address the sexual health of older patients?

2. Do you have any recommendations for improvement of this project?

Appendix H

Tracking Tool

	55-65	65-75	75-85	85 and older
Sexually active in past year	11	6	2	0
not sexually active in past year	8	8	4	3
Monogamous/Long-Term	8	10	4	3
New partner	1	0	0	
Multiple partners	2	0	0	
Sex with men	4	7	4	
Sex with women	8	4	1	
Sex with both	0	0	0	
History of HIV testing	0			
-no history of HIV testing	2			
History of STI testing	2			
-no history of STI testing	1			
Sexual function/satisfaction concerns	3	0	1	
-no sexual function/satisfaction concerns	15	14	5	3

Provider Intervention

	55-65	65-75	75-85	85 and older
STI behavior risk counseling	1	0		
STI testing	1	0		
HIV testing	1	0		
Sexual function counseling	2	0		
Sexual function hormone therapy	1	0	1	
Sexual function PDE-5 inhibitor	0	0		

Referral GYN				
Referral Urology	1			
Referral other				

Appendix I

IRB Approval

Proposal Number
_DW111618_____
Mark one:
_x_First year proposal
___Periodic Progress Report (PPR), specify phase:

Effective January 26, 2005, Reviewed July 15,2018

Oklahoma City University

Institutional Review Board (IRB)
Approval Form

Title of Proposal: *Increasing Primary Care Provider Sexual Health Assessments in Older Adults*
Director: Dr. Dana Weathers
Co-Director: Calli Landes, MSN
Date of Application: 11/16/19

Step 1. Initial review by the Chairperson of the IRB.

Mark one:

_x_Exempt status. Approved without further action.
___Exempt status. Disapproved for the following reasons:
___Expedited review. Approved without further action.
___Expedited review. Disapproved for the following reasons:
___Full IRB review required (proceed to Step 2 below)

_Linda Cook_____ _11/18/19_____
Signature of IRB Chairperson/Designee Date

Step 2. Decision by the IRB, if required.

Mark one:

___Approval
___Approval contingent upon changes or clarifications
___Deferral with the protocol and/or consent form needing significant revision before submission can be reviewed again by the IRB
___Disapproval

_____ _____
Signature of IRB Chairperson Date

Expiration date: _11/18/20_____

PPR (continuation or final) due date: _11/18/20___

CC: Project Director
Dean
Grants Officer/VPAA

Appendix J

Protecting Human Subjects

Certificate of Completion

University of New Hampshire acknowledges that

DANNA WEATHERS

has successfully completed

Human Subjects

on November 1st, 2019

University of New Hampshire

Certificate #107875

Appendix K

Protecting Human Subjects

Certificate of Completion

University of New Hampshire acknowledges that

Calli Landes

has successfully completed

Human Subjects

on August 24th, 2019

University of New Hampshire

Certificate #100920

Appendix L

Informed Consent Cover Letter

Oklahoma City University
Increasing Primary Care Provider Sexual Health Assessments in Older Adults

You are being asked to participate in a doctoral scholarly project. Before you give your consent to volunteer, it is important that you read the following information to be sure you understand what you will be asked to do.

Calli Landes, MSN, APRN, CNP, a Doctor of Nursing Practice student at Oklahoma City University is directing a project to increase routine sexual health assessment by primary care providers of older adults. Danna Weathers, DNP, APRN, FNP-C, GNP-C is the chair of the project committee and project director. Contact information is as follows:

Project Director	Co-Project Director
Danna Weathers, DNP, APRN, CNP Oklahoma City University 2501 N. Blackwelder Avenue Oklahoma City, OK 73106 405-406-1331 drweathers@okcu.edu	Calli Landes, MSN, APRN, CNP 7021 Oak Leaf Road Edmond, OK 73013 (405)922-9219 clandes@okcu.edu

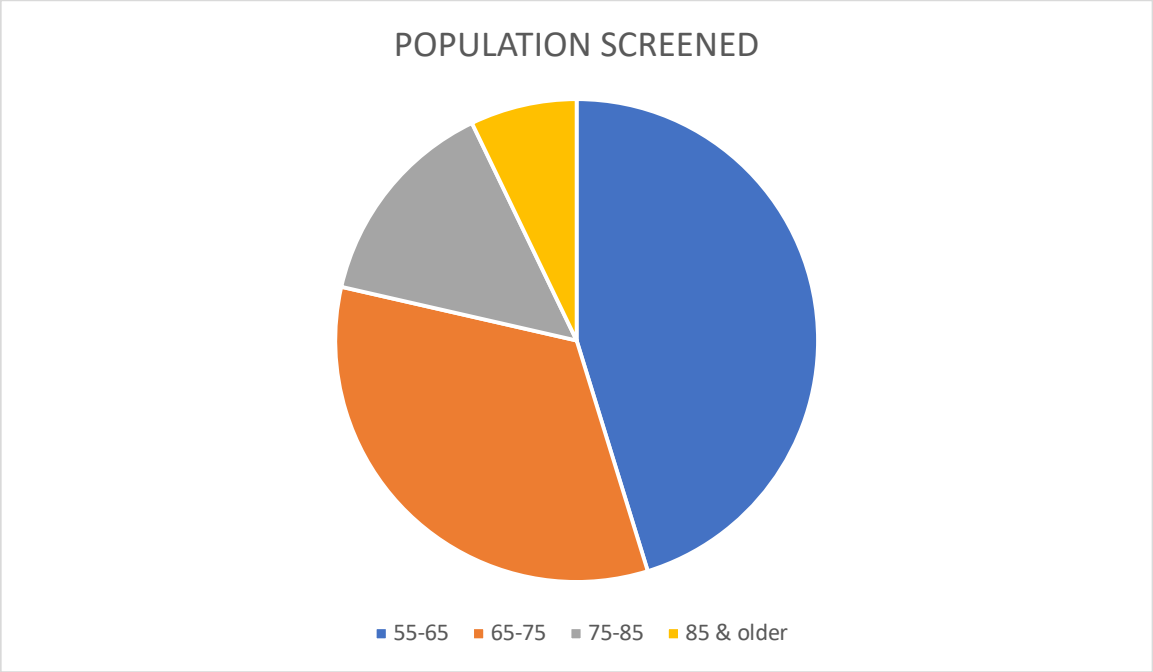
The purpose of this evidence-based project is to improve the sexual health of older adults by identifying STI risk and knowledge deficit with the use of a modified screening tool during routine during primary care visits. Measurable and responsive data will be collected during two meetings with the project director. Data collected will be utilized within the project and may be used in publication. Personal information will remain confidential. Hard copy data will be locked in a file cabinet. Electronic data will be password protected. All data will be deleted/destroyed at project completion.

The total time commitment will be approximately twelve hours within an eight-week time frame. There is no cost associated with participation. Benefits of participation include the potential for improved patient outcomes and improved patient/provider relationships. Risks are minimal due to the nature of the project.

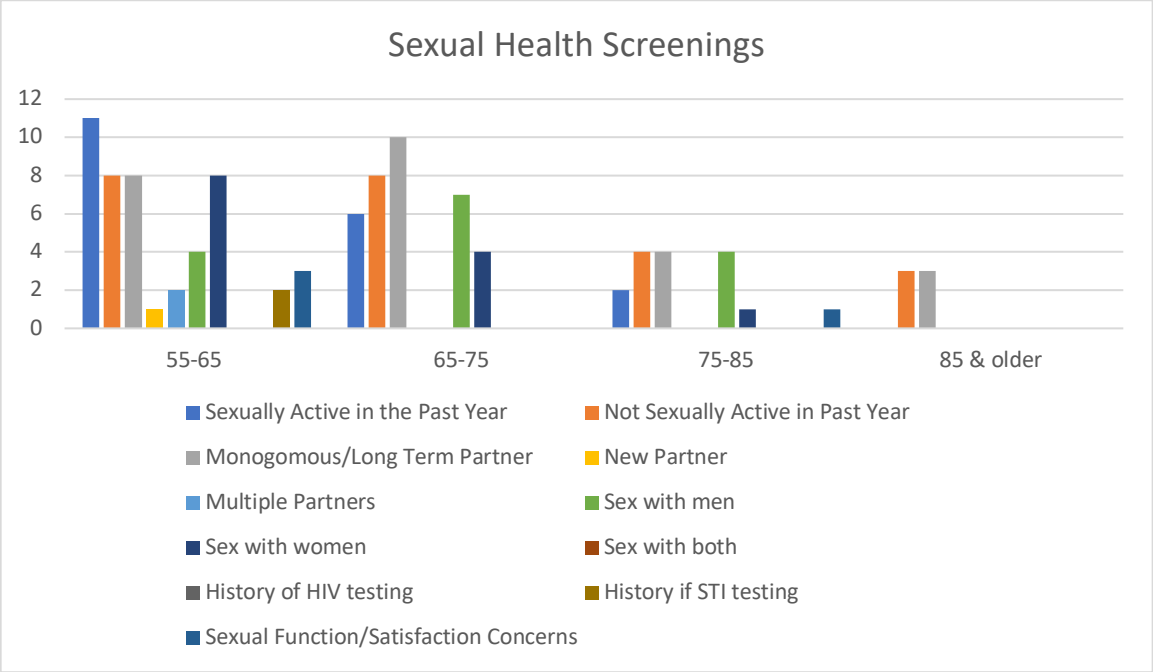
I have read the information provided above. I understand that by returning a completed questionnaire or by agreeing to be interviewed, it is implied that I have received informed consent and am agreeing to participate in the afore-mentioned project.

Participant Signature **Date** **Co-Project Director Signature** **Date**

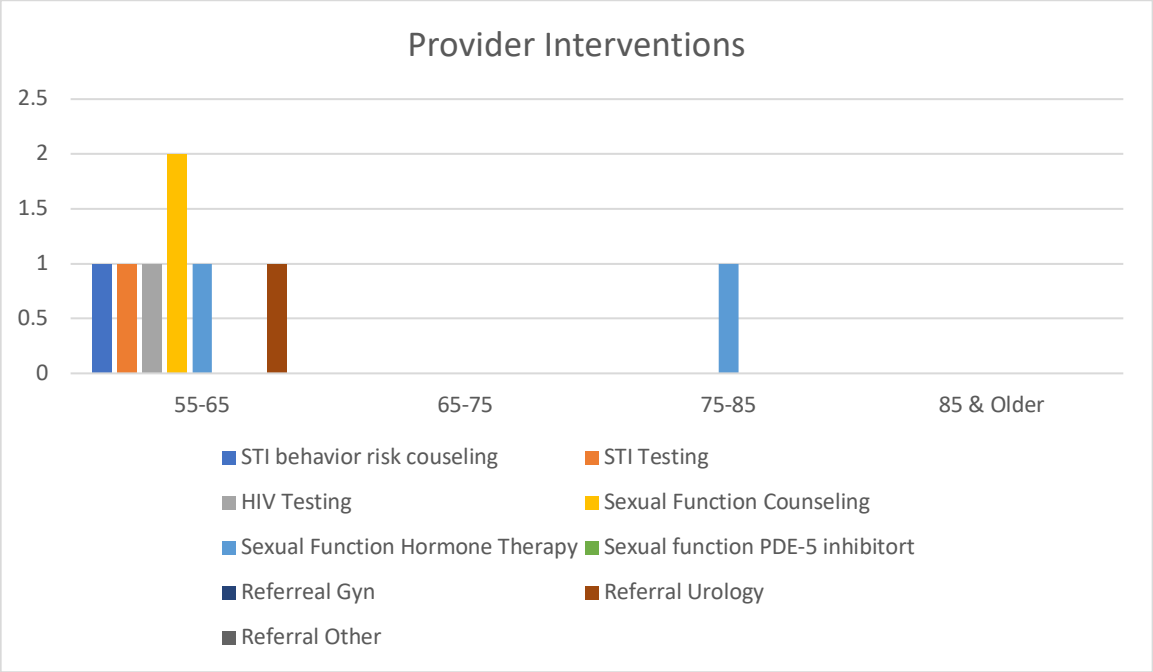
Appendix M



Appendix N



Appendix O



Appendix P

Attainment of Doctor of Nursing Practice Goals

The Doctor of Nursing Practice (DNP) project is the culmination of an arduous journey requiring personal sacrifice and a commitment to the pursuit of the highest standards of nursing practice. It would be impossible to reach successful project completion without attaining each of the six DNP outcome goals. The Kramer School of Nursing DNP Completion Program is designed to challenge each candidate by guiding them through the evolution from practitioner to expert. Just as the way of thinking shifts when first entering the field of nursing and again when becoming a nurse practitioner, there is a new perspective and level of professional and ethical responsibility that accompanies the title of DNP.

Overview and Reflection

Progression through the DNP program requires self-reflection of cultural competencies, knowledge of global health, and evaluation of the intricacies of health care policy. These are all steps in working towards theory development. The candidate must think beyond clinical practice and ascertain the legal and ethical implications of the proposed practice change. Elevating the project from theory to application requires a level of professionalism and collaboration that reflects the extensive education and preparation of the DNP candidate.

Comprehensive review of literature allows the candidate to identify gaps in current practice. Effective practice change requires knowledge of cultural context, organizational structures, and individual preferences. The extensive education received in the program allows the candidate to apply the concepts and create an educational

presentation to convince the potential participants of the value the project could bring to the practice setting and to the providers. It is important to demonstrate that the practice change not only promotes health, but is in line with clinical practice guidelines. Utilizing a conceptual framework to implement practice change provides a structure to develop the DNP project and evaluate post-implementation to identify areas for improvement.

Integrating the scholarship of nursing through the promotion of physical, mental, social, and spiritual health across the life span within diverse cultures is achieved through consideration of how the project will affect participants and the clinical practice. Both positive and negative outcomes should be considered prior to implementation and in the post-implementation evaluation. Cultural context can have a significant impact on how well a practice change may be received. Social and spiritual connotations should always be considered when addressing subjects that could be perceived as taboo or sensitive. It is important to promote the benefits to physical and mental health and well-being to the patient and the provider.

Providing education that inspires collaboration requires a level of professionalism that motivates individuals to not only accept practice change, but to enthusiastically participate in the change. Throughout the program candidates are accountable to one another through required group projects and the development of joint presentations. Transformational leadership requires the candidate to inspire rather than instruct. Exemplifying acceptance, respect, and empathy can be challenging when under stress. Learning to exude caring behaviors regardless of personal stressors is the hallmark of professionalism in nursing.

Personal and professional development achieved over the course of the DNP program has allowed this Nurse Practitioner to develop a level of confidence that will elevate my ability to guide and mentor my students. I feel that I will be able to be more confidently involved in activities to effect policy change within my current position. With the title of DNP comes a level of responsibility and accountability to the profession. I feel honor bound to elevate the perception of Nurse Practitioners and advocate on behalf of the field.

Conclusion

The level of difficulty and stress is in direct proportion to the satisfaction felt upon completion. Much like childbirth, it is difficult to explain the simultaneous pain and joy experienced upon seeing the face of your child. I will say that it has all been worth it. The pride of completion is well worth the journey.