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Improving Sexual Health Risk Assessment in Primary Care

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## Abstract

**Background or Problem/Issue:** Sexual health, an integral component of overarching health, is not frequently assessed. Risky sexual decisions can lead to sexually transmitted infections (STIs) and unplanned pregnancies which can have long-lasting consequences. There were 26 million new STIs in the United States in 2018 and unintended pregnancies accounted for approximately 45% in the U.S. in 2011. Center for Disease Control (CDC) and the United States Preventative Services Task Force (USPSTF) recommendations for sexual health care based on a patient's risk factors, however, the only way to determine who is at risk is to perform a thorough sexual health risk assessment. Guidelines recommend utilizing questions based on the CDC's 5P's model.

**Clinical Question or Purpose:** In a primary care clinic, does implementation of a standardized sexual health risk assessment along with interactive staff education improve staff comfort and adherence with CDC and USPSTF Guidelines?

**Materials and Methods:** Lewin's Change Theory framework was used to create sustainable evidence-based changes in a primary care setting. Educational intervention and implementation of a standardized assessment template were utilized to effect this change. Pre and post-education intervention retrospective chart review and pre and post-educational intervention questionnaires were completed to assess impact.

**Results:** Pre and post-questionnaires were analyzed using Wilcoxin Sign Rank. While most remained unchanged, likely due to high confidence levels pre-intervention, several variables did reach significance, with a p-value of 0.05. Pre- and post-intervention chart audits were analyzed using chi-square, and a p-value of 0.05. Four out of the five 5Ps questions increased with clinical significance post-intervention.

**Conclusion:** The goal of this project was to create a sustainable workflow change that would ensure patients receive appropriate sexual health care based on their individual risk factors. Data analysis showed that the interventions did lead to a statistically significant increase in guideline compliances. More work is needed to improve the workflow and address additional barriers.

## Improving Sexual Health Risk Assessment in Primary Care

### Introduction

Sexual health risk assessments obtain information about a person's sexual history to determine their risk for STIs, unplanned pregnancies, and need for behavioral counseling. Sexually transmitted infections (STIs) and unplanned pregnancies can have long-lasting consequences for those affected. According to the CDC (Centers for Disease Control and Prevention [CDC]), 2021c), 45% of pregnancies in 2011 were unplanned, while in 2018, 26 million new STI cases were reported (CDC, 2021b). Several populations classified as high risk (women under the age of 25 years and pregnant females) receive routine screening (Champion, & Collins, 2012). Other screenings and sexual behavioral counseling recommendations are based on a patient's particular risk factors (United States Preventive Services Task Force [USPSTF], 2020; USPSTF, 2021). Screening for sexually transmitted infections and contraception counseling are recommended for all patients who are at risk, but the only way to determine who is at risk is to perform a thorough sexual health risk assessment (Champion, & Collins, 2012). Patients' sexual health risks should be assessed at least annually and at all applicable visits as recommended by the USPSTF and CDC guidelines.

The guideline recommendations by the USPSTF and CDC both state the necessity of assessing patients' sexual risk through a sexual health history utilizing the 5P's approach. The 5P's include (partners, practices, protection from sexually transmitted infections, past history of sexually transmitted infections, and pregnancy intention) (Workowski et. al., 2021). This approach guides health care providers in obtaining a comprehensive sexual history.

The CDC guidelines also discuss the importance of effective interviewing using the 5P's approach through compassion and respect. CDC has included example scripts to assist in asking

patients about their 5P's. The USPSTF and CDC guideline recommendations for patients' sexual health risks assessments allow providers to implement evidence-based sexual health interventions.

### **Problem Synthesis**

Sexual health can have considerable impacts on individual health outcomes making an appropriate assessment of sexual health risk crucial (CDC, 2021). Guidelines state that all females 25 and younger should be tested for chlamydia annually and receive sexual health counseling if found at increased sexual health risk (USPSTF, 2020; USPSTF, 2021). Any patient with a prior STI, multiple or new partners, less than perfect condom use, or inclusion in a community with high levels of infection should also be considered for sexual counseling and STI screening (CDC, 2021; Champion & Collins, 2012; USPSTF, 2021). Additional recommendations include that men who have sex with men be tested at least annually for a variety of specific STIs and that those with partners with intravenous drug use (IVDU) be tested every three months (CDC, 2021). Learning the mode of sex by utilizing the sexual risk assessment is vital in determining if pharyngeal and rectal screening is needed to assess for gonorrhea and chlamydia (Champion & Collins, 2012). These STI screening and sexual counseling recommendations rely on the completion of a sexual health risk assessment. Not performing an STI risk assessment may result in missed opportunities for prevention.

Despite the USPSTF and CDC guidelines and recommendations, STI rates have increased from 2015 to 2019 (CDC, 2019). Chlamydia saw a 32.1% increase for men and a 10% increase for women under 24 years. Gonorrhea has increased 92% since 2009 and over half of cases are antibiotic-resistant (CDC, 2019). Syphilis rates have also increased every year over the

last two decades with an overall increase of 11.2% in men, a 30% increase in women, and a 291% increase in congenital syphilis since 2015 (CDC, 2019).

Currently, national rates STIs are 552.8 per 100k (chlamydia), approximately 175 per 100k (gonorrhea), and 40 per 100K (syphilis) (CDC, 2021b). Reported rates in the local county of Kitsap are slightly better than the national statistics, with rates of 395.5 per 100k (chlamydia), 71.5 per 100k (gonorrhea), and less than 1 per 100k (syphilis) (Washington State Department of Health, 2014). The local command had 282 cases of chlamydia and 35 cases of gonorrhea in the past year amongst their enrollee population of 28k, putting their rate for chlamydia significantly higher than the national data and on par with rates for gonorrhea (Angelin Manczko, personal communication, July 23, 2021). These rates show that sexual health continues to be a national and local issue.

The increased prevalence of STIs comes at a cost. Chlamydia, gonorrhea, and syphilis have an annual direct national cost of \$16 billion dollars. This national cost does not include treatment for potential sequelae such as chronic pelvic pain or infertility (CDC, 2021c).

Increased sexual health risk equates to an increased risk for untreated STIs. These infections can have lasting complications such as infertility, cancer, lifelong viral infections, and fetal deformities or death (Hull et al., 2017). The CDC reports that women are especially at risk for complications related to untreated STIs. One of these complications, pelvic inflammatory disease (PID), has numerous sequelae, including chronic pelvic pain, infertility, and life-threatening ectopic pregnancies (CDC, 2019). Men can also develop infertility due to testicular infections (CDC, 2019). Both men and women are at risk for genital and oropharyngeal cancers due to STIs (CDC, 2019). Properly assessing all patients' sexual risks can assist in identifying those at risk for STIs allowing for adequate primary prevention and screening.

Unplanned pregnancies are another serious consequence of risky sexual practices. Any pregnancy that occurs when a woman does not want to become pregnant is considered an unplanned pregnancy regardless of her future family plans. A mistimed pregnancy can have emotional, financial, and health impacts on the mother and the family. There were 2.8 million unintended pregnancies in the United States (US) in 2011, a rate of 45%. The national cost associated with unplanned pregnancy was \$22 billion (Guttmacher Institute, 2021). Sexual health risk assessments give providers the information needed to provide sexual health counseling and collaborate with patients on pregnancy prevention.

Assessing sexual health risks is the first step to knowing which patient would benefit from screening. Hull et al. (2017) found that 85% of patients who should receive STI screening based on their sexual health risk factors are not receiving appropriate testing and only 51% of male patients seen for an annual exam receive a comprehensive sexual behavior assessment using the CDC's 5P's model (Hull et al., 2017; Marcell et al., 2017). The exact rationale for these disparities is unclear but various providers' attitudes and beliefs may contribute.

Clinicians may feel uncomfortable discussing the sensitive topic of sexual health (Hull et al., 2017). Providers may consider preventative sexual healthcare unnecessary if the visit was not initiated for that purpose. Additionally, providers may feel a discussion of sexual health may be inappropriate if not initiated by the patient. Many providers also identified time constraints as a barrier to performing a sexual health risk assessment (Hull et al., 2017).

Patients also experience barriers in obtaining a sexual health risk assessment. Many patients fear stigma or judgment; others express concerns about confidentiality (Hull et al., 2017; Normansell et al. 2015). Additionally, patients were unsure if their general practitioner was qualified to provide care for sexual health concerns, and many did not realize STI services were

available in primary care (Normansell et al., 2015). Understanding and acknowledging patient sexual health barriers is essential in patient health promotion.

Multiple governing organizations and changes in guidelines add another potential barrier to completing sexual health risk assessments. Some clinicians found screening recommendations confusing (Hull et al., 2017). Updates and changes in guidelines, such as cervical cancer screening, cause unforeseen consequences. The highest rates of chlamydia are found in females between the ages of 15 to 24. Prior to 2009, patients in this age group were included in Papanicolaou test screening guidelines for cervical cancer, and most chlamydia and gonorrhea screening occurred during these encounters. Following the change in guidelines, the chlamydia and gonorrhea testing for females between 15-21 saw a significant decrease of 25.5% (Naimer, et al., 2017; Ursu, et al., 2015). These factors combine to create a gap in the assessment of sexual health risk assessment in primary care settings.

An informal needs assessment was conducted in the Family Medicine Clinic at Naval Hospital Bremerton which found that clinicians' barriers mirrored those found in the literature. Most staff stated they knew the USPSTF recommendations for screening but stated time constraints made addressing sexual health and risk factors difficult. Both the literature and the needs assessment found if the visit was not for a sexual health-related concern, sexual health risk assessments were not performed as there is no reminder built into the workflow. Staff members also expressed awkwardness in discussing sexual health and concerns with patients. Some providers felt that they had an older population and did not feel that their population was at risk for sexual health issues.

Currently, no known hospital policy, protocol, or standard of care exists related to conducting a risk-based sexual health assessment. Current practice is to obtain a sexual health

history on patients who will be screened for STIs to include women 16-24 years old, patients with a chief complaint related to sexual health, or a high-risk woman identified during a well-women visit. Staff at NMRTC Bremerton are potentially missing at-risk patients by only conducting sexual histories on select populations, which does not align with the recommended guidelines set by national healthcare authorities such as the USPSTF and CDC.

### **Relevance to Military Nursing**

As outlined by the Defense Health Agency (DHA), the goals of military medicine are to improve health, provide exceptional care, ensure readiness, and decrease healthcare costs. All military healthcare staff (active duty and civilian providers, nursing, and support staff) have a responsibility and role to facilitate these goals. This project speaks to each of these goals.

Preventing unnecessary illness in service members and their family is a cornerstone of improving health. Understanding patients' health risks while using shared decision-making to assist in health risk mitigation is proactive, which is more effective and patient-centric than reactive healthcare. Pre-emptive interventions are the key to preventing sexual health issues which can have severe and sometimes irreversible negative impacts on the service member, their family, and the fleet. Recognizing risky sexual behaviors through sexual health risk assessments is crucial to improving the overall health of the community by ensuring exceptional holistic care to service members and beneficiaries.

The military population is at increased sexual health risk which directly impacts service members' readiness. Nationally, nearly half of STI cases occurred in people between 15 and 24 years of age demonstrating a known fact that the younger population has an increased sexual health risk (CDC, 2021b). A large portion of our military is composed of younger individuals with almost half, 45.6%, of our active-duty military being 25 years or younger and 81.3%

younger than 36 years, demonstrating a majority of our armed forces can be considered to be at increased sexual health risk (Department of Defense [DOD], 2018).

Younger age individuals frequently participate in riskier behaviors such as unprotected sex, multiple sexual partners, inconsistent condom use, and binge drinking which are all risk factors for acquiring STIs (Goyal et al., 2012; Stahlman et al., 2015). Syphilis among 20 to 44-year-olds is twice as common as in adolescents (Champion & Collins, 2012). Compared to civilian counterparts, women in the US Military participate in many of those riskier behaviors with the added influence of military culture which places them at increased risk for contracting STIs (Goyal et al., 2012; Stahlman et al., 2015). Given the military's high-risk population, providers at military treatment facilities must be competent in assessing and intervening to reduce sexual health risks.

STIs, such as the human immunodeficiency virus (HIV), can also greatly impact readiness. Approximately 5,227 military members became HIV positive from 1990-2009 (Brundage et al., 2015). Between 2012 and 2017 1,168 active duty service members and 822 reservist and National Guards members were newly diagnosed with HIV (Armed Forces Health Surveillance, 2017). While service members diagnosed may remain in the military if they are able to perform their duties, the need for frequent follow-up limits their deployability (Armed Forces Health Surveillance, 2017). The median duration of service after HIV diagnosis ranged from 2.29 years to 3.65 years (Brundage et al., 2015).

Increased sexual health risk can often lead to unplanned pregnancies. Navy Human Resources (2018) reported that 53% of enlisted pregnancies and 24% of officer pregnancies were unplanned. They also found that 25% of servicewomen were in a deployable unit when pregnancy was discovered, making them non-deployable. Additionally, 45% of military

servicewomen had to be moved to a different job after becoming pregnant (Navy Human Resources, 2018). Unplanned pregnancy in the military population is a problem that could be decreased with adequate primary prevention through sexual health risk assessment.

Lowering sexual health risks is a cost-saving measure. As previously discussed, unplanned pregnancies and STIs place a substantial financial burden on the healthcare system. The cost of a sexual health risk assessment and patient counseling is negotiable compared to the lifetime costs of treating sequelae from STIs and the care needed for pregnancy, delivery, and care of the new dependent.

### **System or Clinical Question**

In a primary care clinic, does implementation of a standardized sexual health risk assessment along with interactive staff education improve staff comfort and adherence with CDC and USPSTF Guidelines?

### **Search Strategy/Results**

The Population, Intervention, Comparison, Outcome (PICO) question was used to direct the search for applicable, evidence-based literature was, “In a primary care clinic, does implementation of a standardized sexual health risk assessment along with interactive staff education improve staff comfort and adherence with CDC and USPSTF Guidelines?” The population consisted of the support staff at NMRTC Bremerton. The intervention was an implementation of a sexual behavior risk assessment and staff education. The comparison was chart audits of risk assessments completed prior to the education and standardized sexual health risk assessment versus post-implementation. The outcome expected was an increase in risk assessments and an increase in staff comfort. The literature search for the project was performed via PubMed and CINAHL. Keywords and search terms can be found in Appendix A. All results

were filtered within the last ten years and only peer-reviewed journals were included. The result was 207 articles with 26 duplicates removed, and 128 were deemed irrelevant after screening titles and abstracts. The full text of 46 articles were reviewed. Articles were excluded if they were outside of the scope of the project, did not address a similar population, or discussed interventions not consistent with the project. While no articles remained from this search for extraction, the search garnered information on the background and scope of the problem and provided recommended solutions in their reference lists. Four other articles for the solution synthesis were derived from a literature review for a prior proposed PrEP/PEP project, and one was found following a review of the reference lists of background articles. The two systematic reviews performed by the USPSTF and found while searching their guidelines were included. A final article was added after an additional search of PubMed with keywords (simulated patients[MeSH Terms]) AND (confidence levels[MeSH Terms]). See Appendix B for the Prism Flow Diagram.

The articles for the solution synthesis were evaluated using the Johns Hopkins Nursing Quality of Evidence-Based Practice Guide (Johns Hopkins University School of Nursing, 2017). The article obtained via reference review of background articles was a level IIA. Of the articles retrieved from a previous proposal's literature review involving PrEP/PEP therapy, one was a level IIIA, two of the articles were level IIIB and one was a level IVB. The two systematic reviews performed by the USPSTF were level IA. The article found in the reference list was level IVB. The final article obtained during the search for simulated patients and confidence was a level I B. Refer to Appendix C for the critical appraisal table. These articles served to provide a background for the problem and to outline a plan for a solution. The literature review strongly indicated that educating healthcare professionals on completing a risk-based sexual health

assessment and implementing a uniform assessment tool in the electronic healthcare record (EHR) would improve screening and acknowledgment of sexually high-risk individuals and that interactive staff education would improve staff confidence.

### **Solution Synthesis**

The USPSTF and CDC guidelines emphasize the importance of obtaining a sexual health risk assessment to identify patients at increased risk. The USPSTF Screening for Chlamydia and Gonorrhea guideline recommends annual testing for chlamydia and gonorrhea for all sexually active females aged 25 years or younger. Additionally, women 25 years or older should also have annual testing if found to have increased sexual health risks (USPSTF, 2021). The USPSTF Behavioral Counseling Interventions to Prevent Sexually Transmitted Infections guideline recommends behavioral counseling for all sexually active adolescents and for adults at increased risk for STIs (USPSTF, 2020). Furthermore, CDC and USPSTF recommend testing men at increased risk for HIV and syphilis (CDC, 2021a; USPSTF, 2021). All these guidelines highlight the importance of conducting a sexual health risk assessment to determine patients' sexual health risks. Implementation of the USPSTF and CDC sexual health risk assessment recommendations at NMRTC Bremerton primary care clinic is an evidence-based approach to determining which patients need to be screened for STIs.

All the above clinical guidelines are currently being utilized by the Navy Sexual Health and Responsibility Program (SHARP), DHA Tri-service HIV working group, and HIV, Hepatitis and Related Conditions Programs in the Office of Specialty Care Service Veterans Health Administration (HHRC) (DHA Tri-service HIV Working Group, 2018; HHRC, 2019; Navy and Marine Corps Public Health Center (NMCPHC), 2012). Additionally, all these organizations

recommend assessment of sexual health risk factors utilizing the CDC Five P's model at least annually (DHA Tri-service HIV Working Group, 2018; HHRC, 2019; NMCPHC, 2012).

Utilization of CDC and USPSTF guidelines and CDC Five P's model can be used to assess and optimize patients' sexual health. Employing the most appropriate intervention method is essential to assist with changing staff behaviors and to ensure compliance with national guidelines. Methods to bring about this change include clarification of clinical practice guidelines, education on the importance of sexual health risk assessments, utilization of the EHR, and provision of feedback on how well the clinic performs with assessments and screenings (Hull et al., 2017).

Educating staff and increasing confidence in obtaining sexual health histories is key to the successful implementation of sexual health risk assessments. Previous studies exploring providers' beliefs, perceptions, and education noted staff education on sexual health is an important component in the identification of sexually high-risk patients (Blumenthal et al., 2015; Harkre et al., 2015; Wilson et al., 2020). Two studies using a population of Navy and Air Force providers, like NMRTC Bremerton's population, concluded that staff education on proper completion of sexual health assessments could increase comfort in asking sexual health questions thereby increasing STI screening (Hakre et al., 2015; Wilson et al., 2020). Phillips et al. (2020) reported an average knowledge score increased from 70.83% to 98.33% after the implementation of a sexual health history education intervention. Sexual health education interventions have been shown to be effective to increase knowledge and confidence levels.

While traditional educational techniques such as lectures should increase knowledge and possibly confidence, complementary techniques can be used to further improve confidence levels. Role-playing as an educational intervention was found to improve confidence during

sexual history taking (Bosse et al., 2012). Support staff education on sexual health risk assessments with the addition of role-playing was utilized to help improve interactions with patients and increase confidence related to obtaining a sexual health history.

A common barrier identified was the lack of risk screening in the workflow along with the lack of standardized screening (Phillips et al., 2020). Embedded EHR risk assessments as well as utilization of checklist formats could provide potential solutions to improve risk assessments (Brook et al., 2013; Phillips et. al., 2020). An EHR checklist format for sexual behaviors assessment has been shown to improve STI screening patients resulting in a doubling of screening tests performed and an increased diagnosis of gonorrhea, chlamydia, and early syphilis (Brook et al., 2013). It is reasonable to infer that a similar standardization of workflow and uniform screening tool would also improve the completion of sexual health risk assessments.

Staff was educated on the 5P's model using the CDC's, "A Guide to Taking a Sexual History." This guide explains the importance of completing a sexual health history. It also presents possible dialogue scripts to assist healthcare personnel in obtaining information regarding a patient's sexual health (CDC, 2021a).

The staff training included the necessary components of a sexual health risk assessment according to guideline recommendations. The educational component of the project's implementation consisted of two, one-hour interactive staff education sessions focused on sexual health risk assessments. These sessions consisted of a PowerPoint presentation on the importance of sexual health risk assessments, CDC's Five P's model, EHR documentation training, and sexual health risk assessment role play. The goal of the educational intervention was to prepare the support staff to utilize the standardized template created for the EHR and improve their confidence when interacting with patients.

**Focus Areas**

There were three main project goals aimed at improving sexual risk health assessments. Increasing patients' ability and opportunity to discuss their sexual health at least annually was the primary focus of this project. Secondly, this project aimed to increase support staff comfort with obtaining and discussing sexual health information. Lastly, the project aimed to increase providers' ability to intervene and form a plan with patients regarding sexual health. All the goals in this project depend on having the appropriate information from sexual health risk assessments.

**Business Case Analysis/Timeline**

Appendix D

**Organizing Framework**

This project utilized Lewin's change theory for an organizing framework. Lewin's change theory has been widely utilized since its conception in 1951. Lewin's framework has been useful in implementing preventative health and disease management projects to generate institutionalized change in actual clinical settings (Manchester et al., 2014). This model was an excellent fit for the implementation of sexual health risk assessment at NMRTC Bremerton.

This model seeks to encourage the sustainability of evidence-based process improvements by focusing on three steps (Shirey, 2013). These three steps include: unfreezing, movement, and refreezing (Shirey, 2013). The unfreezing step starts by identifying and engaging the audience that the project seeks to impact. This stage includes educating the target audience about the upcoming change to gain motivation. The second stage, the movement stage, involves the implementation and accurate utilization of the program by the target population through trial and error. During this phase, the new change will be monitored and evaluated for effectiveness.

The final stage is refreezing and is defined as when the new change becomes embedded in the standard processes of the organization (Manchester et al., 2014).

For this project, the unfreezing step consisted of an educational intervention for support staff who collect healthcare information from the patients during an office visit. Each member of the team has an important role to play in identifying patients at risk who could benefit from a sexual health risk assessment. The effect of this project was determined by retrospective chart audits of sexual risk assessment completion rates and by a questionnaire provided to staff before and after education to assess their attitude and perceptions in regard to sexual health discussion with patients.

The movement stage of the program was encouraged by the educational training as well as by daily check-in with champions and weekly emails to ensure staff members' improvement was acknowledged and their questions and concerns were addressed. Team leaders were identified among the support staff to act as champions. Champions served as liaisons between the project team leads and support staff to address issues as they occurred.

Refreezing encompasses the final stage of Lewin's change theory and often takes multiple reiterations of the first two phases. Following the conclusion of the project, a debriefing occurred with support staff to receive their feedback, final thoughts, and suggestions. Staff feedback, final project statistics, and recommendations for improvement and sustainment were provided to clinic leadership for consideration. Because of the limited timeline of this project, multiple reiterations of Lewin's change theory cycle will likely be required to solidify change.

## **Project Design**

### ***General Approach***

This project utilized an educational intervention aimed at improving staff comfort with discussing sexual health risks. It also evaluated the implementation of a standardized sexual health assessment within primary care to improve alignment with current USPSTF and CDC guidelines.

### ***Setting and Population***

NMRTC Bremerton family medicine clinic is an outpatient clinic within Naval Hospital Bremerton located in Bremerton, WA. The family medicine clinic serves over 9,871 enrollees consisting of active-duty military personnel, dependents, and retirees who reside in the local area and has 53 staff encompassing active duty, government service employees, contract workers, and volunteers. The family medicine clinic is divided into two medical homes consisting of 12 providers.

### ***Participants***

The staff involved in the educational intervention included 14 support staff consisting of corpsmen and one medical assistant. Support staff assigned to the Family Medicine Clinic at Naval Hospital Bremerton were included in this project. To be included, staff were required to be support staff in the primary care clinic, conduct patient intakes and histories, and be able to receive all education and complete pre-post questionnaires. Staff were excluded if they were deployed (not present) or only served in an administrative role.

Patients under the age of 18 were excluded from both the pre and post-sampling retrospective chart reviews. Additionally, one provider and their team declined to participate in the project, so the provider's patients were excluded from the post-intervention retrospective chart audits.

### ***Procedural Steps with Timeline***

Retrospective chart reviews were conducted on all patient encounters in the primary care clinic one month prior to intervention to assess baseline sexual health assessment completion. During this chart review, the patients' records were reviewed for completion of any or all components of sexual health history in the past year. Next, the Sexual Health History Attitudes and Perceptions Questionnaire was given to support staff to measure baseline staff comfort with obtaining sexual health histories. Details of this questionnaire are discussed in the measures section. Refer to Appendix E for the Sexual Health History Attitudes and Perceptions Questionnaire. Following the pre-education assessment, two, one-hour interactive staff education sessions on sexual health risk assessments were conducted, along with a third final session which consisted of a focus group discussion. During the final session, staff was again asked to complete the Sexual Health History Attitudes and Perceptions Questionnaire to assess for changes to their comfort and perception. Following the educational sessions and implementation of a standardized sexual health assessment template, sexual health assessment compliance was again assessed via chart audits.

The first week consisted of two, one-hour-long interactive educational sessions. The first session focused on the importance of obtaining sexual health histories utilizing the 5P's model taught through a PowerPoint presentation. Interactive role-play through patient scenarios was also utilized to assist in improving comfort with sexual health conversations. The second educational session consisted of a PowerPoint presentation on utilizing the standardized sexual

health risk assessment template and EHR documentation. Role-play with standardized scenarios was used to improve staff comfort with sexual health conversations.

The second week consisted of the initial implementation of the assessment template. Implementation began on the Tuesday of the second week due to a federal holiday. During this time, project leads were stationed each day with the support staff to be present for their questions and provide encouragement. Champions were identified in the teams to serve as liaisons. Support staff were asked to verbally review the 5P's questions with each patient while in the exam room during initial intake.

At the end of the week, project leads requested feedback from the teams for any necessary changes. Informal feedback was provided to the project team. Common themes and possible desired changes were identified. Proposed solutions were presented to staff who then voted on the desired process change. The majority choose to add the first two questions to the existing patient intake form and provide a paper questionnaire in the exam room for the remaining five questions. Support staff felt this would better mirror their current intake process and save time. Prior to this recommendation, the support staff verbally asked the patients' the first two questions and then followed on with the additional questions if there was a positive response.

During the third week, the process change described above was implemented. The third session also occurred on Tuesday of this week. It began with the post-educational questionnaire and concluded with a focus group discussion. The aim of the discussion was to gain a better understanding of the support staff's thoughts on how sexual health conversations were going and to gather key takeaways.

Weeks two-five of the project consisted of monitoring intervention implementation. Retrospective chart reviews on utilization of the standardized sexual health risk assessment were completed at the end of each week on all family medicine patient encounters. Project leads communicated daily with project champions to ensure an ongoing open line of communication with the staff was maintained. Emails were also sent to staff at the conclusion of each week following implementation. These emails reported staff utilization of the standardized sexual health assessment during the history intake and highlighted excellent performers. The team members with outstanding contributions each week received a small incentive-themed plush toy along with email recognition.

### ***Measures***

#### **Sexual Health History Attitudes and Perceptions Questionnaire.**

Ariffin et al. (2015) Sexual Health History Attitudes and Perceptions Questionnaire was chosen and minimally modified to meet the participant population for this project's pre/post education assessment. This questionnaire was designed to measure medical student attitudes and perceptions regarding sexual history taking. The medical student population is translatable to the corpsmen/medical assistant population as both populations are in similar early stages of obtaining assessments. Cronbach's alpha for this questionnaire was= 0.73 showing good internal consistency.

The questionnaire from Ariffin et. al. (2015) consists of Part 1 with Sections A (sixteen questions on participants' attitudes toward sexual history taking), Section B (eight questions on participants' perceptions of their skills and training received on sexual history taking, and Section C (participants perceptions of the adequacy of training on sexual history taking received during their specialty posting) and Part 2 (demographics). Part 1 Section C was not applicable to

our participant population and was omitted from this project's questionnaire. Additionally, each question that used the term medical student was replaced with corpsman/medical assistant (MA) (Section A question 1, Section B questions 5, 6, and 8) and questions that used the term medical school were replaced with corps school/MA training (Section B question 4 and 7). Part B demographics section is a multiple-choice section that was modified to include specific demographics deemed applicable to this project. All questions in Part A are measured on a five-point Likert ranging from (1) strongly disagree to (5) strongly agree and (3) neutral.

### **Chart Reviews.**

Retrospective chart reviews were conducted to measure the adherence of staff in the documentation of sexual health risk assessments. The pre-post intervention audits assessed demographic information including age, gender, beneficiary status, and rank if applicable. Each of the 5Ps questions were analyzed independently. The post-intervention audits had two additional sections to assess whether the encounter was virtual or in-person and whether or not the standardized template was utilized.

### **Standardized Sexual Health Risk Assessment.**

The sexual health risk assessment (Table 1) used to obtain the elements of the 5Ps utilized questions modified from the National Coalition for Sexual Health “Sexual Health Questions to Ask All Patients” (2021) and the CDC’s 5P’s model. The first two questions were asked to every patient. If there was one yes, then the full sexual risk-based health assessment was completed with the subsequent questions based on the CDC’s 5P’s. This clinic uses MHS Genesis as an EHR. The sexual health risk assessment was in an “add note” within the EHR. Refer to Table 1 for the questions.

### **Table 1**

*Sexual Health Risk Assessment Questions*

1. Have you been sexually active with a new partner in the last year? YES or NO
2. Has it been more than a year since you have been asked about your sexual health and risk factors? YES or NO
If “yes” to any one of the above questions, complete the following questions.
1. Do you have sex with men, women, or both, and how many partners in the past 12 months?
2. What type of sexual contact do you have or had in the past 12 months and what body parts were used? (i.e. oral, anal, vaginal)
3. What are you doing to prevent pregnancy?
4. What do you do to protect yourself from STIs and HIV?
5. Have you or your partners had an STI?

***Data Analysis Plan***

This project was evaluated using descriptive statistics. Completion rates of sexual health risk assessment for one month prior were compared to one-month post-staff education along with the implementation of standardized sexual health history. Completion rates in pre and post-intervention chart audits were compared using Chi-squared difference testing. Pre-post attitudes and perceptions questionnaires were compared with the Wilcoxon signed-rank test. Refer to Appendix F for the data analysis table.

***Potential Barriers***

Overcoming bias about the population who may benefit from sexual health risk assessment was an overwhelming barrier. We aimed to decrease this barrier with education about the need for and importance of conducting a sexual health risk assessment to determine patients’ individual needs. Many support staff also acknowledged a perception that sexual health risk

assessments should only be performed on patients being seen for a sexual health complaint due to time constraints. The project focused on a standardized workflow mirroring an existing process in order to address this perception.

Buy-in from all members of the clinic was another barrier. The identification and recognition of high-risk individuals rely on a team approach. This approach starts with the support personnel who ask the sexual health risk assessment questions while obtaining the history and screening information. The support personnel then notify the provider of responses that need to be further investigated. The providers should address any high-risk patients that were identified and discuss their behaviors as well as form a plan with that patient. Lack of buy-in by everyone in the clinic on the importance of obtaining a sexual health risk assessment proved to be a difficult barrier to overcome. The project attempted to increase buy-in from support staff through weekly email updates along with staff recognition. Increasing providers' buy-in focused on protecting encounter time. This was accomplished by adapting the sexual health risk assessment to mirror existing intake questions which decreased the time needed to complete the assessment. Debriefing the clinic leadership following the project also assisted with the mitigation of this issue as well as project sustainment.

Currently, the world is amid the SARS-CoV-2 pandemic. This is an unprecedented occurrence in our country that entails various changes to processes both in the medical community and in daily life. The unknown nature and progression of the pandemic along with deployments of staff for pandemic response posed a limitation to staff education on the sexual health risk assessment and added additional workflow challenges. To address this challenge, the project maintained close ties with the clinic leadership and maintained schedule flexibility for the

educational training interventions. By working with the clinic leadership, the educational sessions were able to be provided in a safe and effective manner.

### ***Sustainment and Dissemination Plan***

Following the implementation of the project, the process was assessed and necessary improvements based on staff feedback were identified. All major stakeholders' feedback and project results were briefed to clinic leadership. Presentations were given at the American Academy of Nurse Practitioners 2022 conference, Tri-Service Nursing Research Program Conference 2022, and Uniformed Services University Research Week 2022.

### ***HIPPA Concerns/Ethical Considerations***

To accomplish the project's main objectives and collection of data, no individual patient or protected healthcare information (PHI) was recorded or stored, therefore protecting patient healthcare privacy. Information obtained for this project was stored on a CAC-enabled computer with a password-enabled file. To protect and provide anonymity to patients and providers, no names were used during the chart audits. Additionally, questionnaires from the pre/post education were anonymous with no identifiable information and shredded following data collection. No adverse events were expected. Had a support staff member become overwhelmed or emotionally disturbed about sexual health risk assessment discussion, they would have been referred to the embedded behavioral health counselor. Had a patient become overwhelmed or emotionally disturbed related to sexual health risk assessment discussion, clinic policy protocols would have been followed to include notifying the patient's provider. The project was reviewed through Madigan Army Medical Center's Institutional Review Board Exempt Determination Officer and determined to be "non-research".

## Project Results

This project consisted of two primary arms. The data for each arm were analyzed using IBM SPSS statistics 27 for Windows. The first arm of the study measured support staff attitudes and perceptions and a double-entry method for data entry was utilized. For this arm, a convenience sample of available support staff was utilized. Differences were tested using Wilcoxon Sign Rank. The second arm of the study measured staff documentation of sexual health assessment, pre and post-intervention. For this second arm, convenience sampling consisted of patients seen in the primary care clinic one month prior to the interventions and one month following the interventions. Differences were tested using Chi-Square. A P-value of .05 or less was considered significant for both arms.

### *Demographics*

Out of 22 potential staff, 14 participated. Staff ranged in age from 18-54 with 50% between 18-24, 42.9% between 25-34, and 7.1% 45-54. 71.4% were male, and 28.6% were female. Table 2 contains sample characteristics of support staff that participated in the questionnaire.

**Table 2**

#### *Support Staff Sample Characteristics*

Characteristic	N	%
Age		
18-24	7	50
25-34	6	42.9
35-44	0	0
45-54	1	7.1
Gender		

Male	10	71.4
Female	4	28.6
Non-Binary	0	0
<hr/>		
Ethnicity		
Asian	3	21.4
Pacific Islanders	1	7.1
Black or African American	0	0
White or Caucasian	9	64.3
Multi-racial	0	0
Other	1	7.1
<hr/>		
<b>Rank</b>		
E2	2	14.3
E3	6	42.9
E4	5	35.7
Civilian	1	7.1
<hr/>		

Retrospective chart audits totaled 1,116 pre-intervention samples and 897 post-intervention samples (Table 3). Age ranged from 18-99. For pre-intervention audits, the mean age was 47.68, 36.6% were male and 63.4% female, 13.8% were active-duty, 31 % dependent, and 55.2% were retirees. Post-intervention mean age was 50.3, 43.3% were male, 57.7% were female, 11.6% active duty, 37.1% dependent, and 51.3% retired.

**Table 3**

*Chart Review Sample Characteristics*

Characteristic	Pre Intervention n (%)	Post Intervention n (%)
<hr/>		

Age		
Compressed		
18-29	195 (17.5)	109 (12.2)
30-39	173 (15.5)	107 (11.9)
40-49	181 (16.2)	164 (18.3)
50-59	266 (23.8)	258 (28.8)
60-99	301 (27)	259 (28.9)
Gender		
Male	409 (36.6)	379 (44.3)
Female	707 (63.4)	518 (57.7)
Beneficiary		
Status		
Active Duty	154 (13.8)	104 (11.6)
Dependent	346 (31)	333 (37.1)
Retiree	616 (55.2)	460 (51.3)
Rank		
Compressed		
E1-E5	89 (8)	70 (25.9)
E6-E9	121(10.8)	167 (61.9)
O1-O4	37 (14.3)	21 (7.8)
O5-O7	12 (4.6)	12 (4.4)

### *Attitudes and Perceptions on Taking Sexual Histories*

Staff strongly agreed both pre and post-intervention with questions regarding the importance of sexual history taking, feeling confident in taking a sexual history, the importance of being non-judgmental during sexual history taking, and the necessity of confidentiality. They agreed both pre and post-intervention with questions indicating a high interest in learning more about sexual history taking, patients' comfort in discussing sexual health, comfort with the different genders, marital status, sexual practices, recognition of their limits, and their abilities to put patients at ease. Three of the 24 questions on the attitudes and perceptions questionnaire showed statistical improvement. Wilcoxin Signed Rank test was used to assess for differences in

attitudes and perceptions pre and post-educational intervention. Table 4 contains pre and post-questionnaire results.

**Table 4**

*Attitudes and Perceptions Questionnaire Results*

Question	Change Between Pre and Post	P-value
Interest	0	0.257
Importance History Taking Skills	0	0.739
Nurse Better	0	0.791
No Judgment	0	0.564
Comfort-Patients	0	0.083
Comfort- Adolescents	0	0.915
Comfort-Opp. Gender	0	0.792
Comfort- Unmarried	0	0.564
Comfort-Sexual Orientation	1	0.429
Comfort Sexual Practices	0	0.408
Comfort- Uneasy Patients	0	0.589
Cultural Diff Barrier	-1	0.655
Religion Diff Barrier	-0.5	0.305
Recognize Own Limits	0	0.102
Own Attitudes	0.5	0.096
Confidentiality	0	0.705
Easy Sexual History	1	0.157

Adequate Skills	0.5	0.021*
Patient at Ease	0	0.084
Previous Training Prepared	0	0.046*
Previous Training Prepared	0.5	0.083
Simulated Patient	1	0.018*
Not enough training	0	0.608
Patient Discuss with support staff	0	0.053 <sup>+</sup>

*Note.* \*=0.05 or less, \*\*=0.001 or less, <sup>+</sup> = 0.055 or less

A significantly higher number of staff felt that they had adequate skills to take a sexual history after the intervention ( $p=0.021$ ) and felt that their previous training had prepared them to take a sexual history ( $p=0.046$ ). Additionally, following the intervention, a significant amount of staff felt that they had sufficient training to take a sexual history on a simulated patient ( $p=0.018$ ). The perception that patients would be comfortable discussing their sexual health revealed an increase post-intervention that approached significance ( $p=0.053$ ).

#### ***Retrospective Chart Audits Documentation of Sexual History Adherence***

Retrospective chart audits were performed one-month pre and post interventions. Table 5 displays that 4 out of 5 elements of the 5Ps sexual history saw significant improvement post-intervention (“partners” ( $\chi^2=60.224$ ;  $p<.001$ ), “practices” ( $\chi^2=54.558$ ;  $p<.001$ ), “protection” ( $\chi^2=51.743$ ;  $p<.001$ ), “past STI” ( $\chi^2=30.042$ ;  $p<.001$ )). “Pregnancy intention” saw an increase but did not reach clinical significance ( $\chi^2 =.183$ ;  $p=.677$ ).

**Table 5***Documentation Adherence Pre-Post Intervention*

Independent Variable	$\chi^2$	P-Value
Partners	60.244	<0.001**
Practices	54.588	<0.001**
Protection from STI	51.743	<0.001**
Previous Hx STI	30.042	<0.001**
Pregnancy Intention	0.183	0.677

*Note.* \* = 0.05 or less, \*\* = 0.001 or less

Significant decreases of the disparity between genders (Table 6) were identified in 4 out of 5 5P elements post-intervention compared to pre-intervention (“partners” (pre-intervention p=.008; post intervention p=.211), “practices” (pre-intervention p=.029; post-intervention p=.295), “protection” (pre-intervention p=<.001; post-intervention p=.327), “Past STI” (pre-intervention p=<.001; post-intervention p=.004)). The gender disparity did not decrease significantly for “pregnancy intention” (p=<0.001 pre-intervention and post-intervention).

**Table 6***Documentation Adherence Pre and Post Intervention Amongst Genders*

5Ps	Pre Intervention n (%)	Pre Intervention P Value	Post Intervention n (%)	Post Intervention P Value
Partners				
male	13(3.2)	.008*	54(14.3)	0.211
female	49(6.9)		90(17.4)	
Practices				
male	1(0.2)	.029*	25(6.6)	0.295

female	12(1.7)		44(8.5)	
<hr/>				
Protection from STIs				
male	10(2.4)	<.001**	51(13.5)	0.327
female	50(7.1)		82(15.9)	
<hr/>				
Previous Hx STI				
male	10(2.4)	<.001**	35(9.3)	.004*
female	57(8.1)		82(15.9)	
<hr/>				
Pregnancy Intention				
male	29(7.1)	<.001**	47(12.5)	<.001**
female	388(54.9)		295(57.2)	
<hr/>				

Note. \* = 0.05 or less, \*\* = 0.001 or less

The size of the disparity between various ages with sexual history documentation (Table 7) decreased significantly for all 5 elements of the 5Ps (“partners” (pre-intervention  $p < .001$ ; post-intervention  $p = .059$ ), “practices” (pre-intervention  $p < .003$ ; post-intervention  $p = .075$ ), “protection from STIs” (pre-intervention  $p < .001$ ; post-intervention  $p = .045$ ), “previous STI” (pre-intervention  $p < .001$ ; post-intervention  $p = .039$ ), “pregnancy intention” (pre-intervention  $p < .001$ ; post-intervention  $p = .436$ ).

**Table 7**

*Documentation Adherence Pre and Post Intervention Amongst Age*

Independent Variable	Pre Intervention n (%)	Pre Intervention P-Value	Post Intervention P-Value	Post Intervention P Value
<hr/>				
Partners				

18-29	21(33.9)		17(11.8)	
30-39	18(29)		21(14.6)	
40-49	7(11.3)	<.001**	37(25.5)	0.059
50-59	11(17.7)		35(24.3)	
60-99	5(8.1)		34(23.6)	
<hr/>				
Practices				
18-29	2(15.4)		11(15.9)	
30-39	7(53.8)		13(18.8)	
40-49	0(0)	.003*	16(23.3)	0.075
50-59	1(7.7)		16(23.3)	
60-99	3(23.1)		13(18.8)	
<hr/>				
Protection from STIs				
18-29	27(45)		17(12.8)	
30-39	14(23.3)		17(12.8)	
40-49	7(11.7)	<.001**	36(27.1)	.045*
50-59	7(11.7)		33(24.8)	
60-99	5(8.3)		30(22.6)	
<hr/>				
Previous STI HX				
18-29	25(37.3)		19(16.2)	
30-39	18(26.9)		18(15.4)	
40-49	6(9)	<.001**	28(23.9)	.039*
50-59	10(15.9)		28(23.9)	
60-99	8(11.9)		24(20.5)	

Pregnancy Intention				
18-29	89(21.3)		40(11.7)	
30-39	78(18.7)		40(11.7)	
40-49	42(10.1)	<.001**	54(15.8)	0.436
50-59	97(23.3)		99(20.8)	
60-99	111(26.6)		109(31.9)	

Use of the standardized template significantly increased documentation of each element of the 5Ps (“partners”  $p<.001$ ; “practices”  $p<.001$ ; “protection from STIs”  $p<.001$ ; “previous STIs”  $p<.001$ ; “pregnancy intention”  $p<.001$ ). The highest increase in documentation adherence in all categories was seen in week 2 with documentation of “partners” increasing by 13.4%, “practices” by 10.1%, “protection” by 15.9%, “previous STI” by 16.3%, and “pregnancy intent” by 10.9%.

**Table 8**

*Documentation Adherence Related to Template Use*

Independent Variable	Post Intervention n (%)	Post Intervention P-Value
Partners		
Used	131(91)	<.001**
NOT Used	13(9)	
Practices		
Used	68(98.6)	<.001**
NOT Used	1(1.4)	
Protection from STIs		
Used	121(91)	<.001**
NOT Used	12(9)	

Previous STI HX		
Used	94(80.3)	<.001**
NOT Used	23(19.7)	
Pregnancy Intention		
Used	106(31)	<.001**
NOT Used	236(69)	

*Note:* \* = 0.05 or less, \*\* = 0.001 or less

### **Analysis of the Results**

This project was divided into two interventions aimed at addressing common barriers to obtaining a sexual history. First, an educational intervention was chosen based on several studies which found that increased knowledge was associated with increased rates of sexual history taking and with improved perception of confidence in discussing sexual health (Blumenthal et al., 2015; Hakre et al., 2015; Hull et al., 2017; Phillips et al., 2020; Wilson et al., 2020). The curriculum for the educational training was based on the CDC's 5P.s. This model was chosen because it is recommended and utilized by several military and government organizations (DHA Tri-service HIV Working group, 2018; HHRC, 2019; NMCPHC, 2012). Simulated patient encounters were used to augment the training based on studies that found it may improve comfort in discussing sensitive topics and skills in obtaining health histories (Bosse et al., 2012).

The second intervention was chosen based on findings that a standardized template in an EHR and a standardized workflow may increase rates of sexual history documentation (Brook et al., 2013; Hull et al., 2017; Phillips et al., 2020). Questions for the template were again based on the CDC's 5Ps and were arranged in a format where two baseline questions could be utilized for exclusion. This arrangement was based on the model recommended by the National Coalition for Sexual Health and is the recommended screening by SHARP (CDC, 2021a; NCSH, 2021;

NMCPHC2012). This template was also designed to mimic the current workflow for other intake history and screening questionnaires currently utilized by support staff such as the Patient Health Questionnaire 2 (PHQ2)/PHQ9 system. The standardization of the workflow to include support staff performing the assessment during the intake was based on recommendations by Phillips et al. (2020) for this process based on focus group feedback.

### ***Objective #1***

The first objective of this project was to determine if an educational intervention based on the CDC's 5Ps model and including simulated patient encounters would increase staff attitudes and perceptions regarding sexual history taking.

Three questions that showed significant improvement post-intervention shared themes of perception of adequate skills due to previous training and exposure to take a sexual health history ( $p=.021$ ,  $p=.046$ ,  $p=.018$ ). The fourth question which approached significance indicated an increase in the perception that patients feel comfortable discussing sexual health with support staff ( $p=.053$ ). Several additional questions showed improvement post-intervention but did not approach clinical significance.

Overall, the majority of the 24 questions did not see a significant change pre and post-intervention. This was likely due to factors including small sample size and high initial responses. The staff's high responses reflected initially was unexpected given the project's needs assessment and literature review which seemed to indicate the opposite (Hull et al., 2017). Despite only three questions reaching statistical significance, it is noteworthy that 19 out of the 24 responses either had initially high responses or saw at least some improvement.

## ***Objective #2***

This project's second objective was to see if the implementation of a standardized workflow and EHR template would increase documentation of sexual histories. The use of the standardized template was associated with a significantly higher rate of all 5 elements of the 5Ps ( $p < .001$ ). This is consistent with findings in the literature which show a standardized EHR tool can increase rates of sexual history taking (Brooke et al., 2013; Phillips et al., 2020).

Additionally, a spike was seen in the documentation of all five elements during the second week of implementation. This is significant because a process change was implemented based on staff feedback during that period. Following the first week, the support staff were asked for ideas on how to improve the process. They identified various solutions and voted on the one they preferred. The end result was a change to the process of asking the questions. Prior to the change, support staff had to verbally ask the patients all of the sexual health assessment questions which were different than their normal intake process. The staff voted to have the process mirror their current practice for PHQ screening, where the two disqualifying questions are written on the check-in form, and the remaining questions are given to the patient in the room if applicable. By standardizing the workflow to integrate better with existing processes, documentation was increased which is supported by findings by Phillips et al., (2013). The change is also supported by Lewin's change framework utilized in this project. Adapting the process based on staff feedback is part of the "change" stage and is necessary for long-term success (Manchester et al., 2014; Shirey, 2013). Throughout the course of the project, support staff expressed frustration that there was not a way to chart the assessment in their existing EHR intake document. A system-level change to the EHR is required to make a change to any EHR note. It is possible that the improvement would have been more significant had the assessment

template been integrated into their existing EHR intake document to further mimic their existing process.

### ***Objective #3***

The third objective of this project was to analyze the overall impact of the interventions on adherence to recommended guidelines by measuring the change in the documentation of each element of the CDC's 5Ps.

Overall, four out of five elements of the 5Ps saw a significant increase. The lone exception to this improvement was in "pregnancy intention" which did increase, but not significantly. Several automatic reminder sections in the current EHR section address pregnancy intention. For males, vasectomies are listed in the surgical history. A section in the current intake document asks for a woman's menstrual status. Options there include "not menstruating due to hormonal suppression (birth control IUD)" and "menopausal," which both serve to indicate a female's pregnancy intention. Because of the existing standardization of assessing this factor in the EHR, this element started high prior to intervention and remained high throughout. This finding reinforces findings from Brooks et al. (2013) and Phillips et al. (2020) and further emphasizes the potential benefits of a standardized template.

### **Organizational Impact**

The data from this project indicate that a standardized template in the EHR does impact compliance with preventative health assessments such as sexual health risk assessments. While the template utilized for this project did create a statistically significant improvement in 4 out of 5 recommended elements of a sexual health screening, it is notable that a large portion of patients still did not receive an assessment for the four elements that were not integrated into the intake form and did not show up on the EHR's reminder list. Feedback from support staff reinforced

this challenge and further indicated that having to open a separate note to document the assessment was a workflow barrier due to the increased time involved. EHRs such as Genesis which are used in many military treatment facilities have the potential to be an excellent tool for preventative health services such as sexual health risk assessments. Unfortunately, EHRs can also make these same services more burdensome if the correct tools are not integrated into the system. Integrating this tool into the EHR should improve sexual health risk assessments. Additionally, creating a streamlined process for updating templates could make this and other preventative health services more accessible.

Time constraints were another concern communicated multiple times in the informal needs assessment, implementation, and focus group. The majority of family medicine appointments are 20 minutes. Additionally, many providers' are scheduled several weeks out, contributing to the patients presenting to preventative health appointments with a long list of health concerns. Due to short appointments, patients focus on having their immediate health concerns addressed, leaving less time for discussion on preventative health. Additionally, preventive health services such as sexual health risk assessments are often a low priority. Providing longer appointment times for annual physical exams would allow providers to focus more on preventative health assessments and interventions and hopefully improve access over time by decreasing the need for acute visits to address the issues that were not prevented.

### **Future Directions for Research and Practice**

While there is an abundance of literature on the importance of obtaining a sexual health history and recommendations on how to do so, little data was available on how to successfully implement this screening process when it is not being performed routinely. Several studies looked specifically at improving healthcare providers' comfort levels and identified barriers to

sexual health risk assessments (Hakre et al., 2015; Wilson et al., 2020; Phillips et al.2020). Other studies such as Brooks et al. (2013) looked at the impact of an EHR checklist tool on screening for STIs, but it was performed in an HIV clinic rather than in a primary care population. Projects exploring various implementation strategies in primary care could provide blueprints for implementing sexual health risk assessments in primary care clinics throughout the military and civilian sectors.

Several recommendations for future practice were identified in this project. First, adding a standardized template featuring all five elements of the 5Ps model into the EHR would help to integrate assessment into the workflow. Several support staff voiced this concern both in the focus group and throughout the project's duration. If the note was standardized to mimic other preventative assessments such as the PHQ9, the support staff may be able to integrate it more efficiently into their current workflow rather than having an additional note for each patient, thereby creating an additional process.

Another workflow change in future practice could address provider concerns of potential increased workload for positive screenings. Future process improvement initiatives could focus on a standardized response to a positive assessment. For example, responses indicating unprotected sex with a new partner could trigger a standard order set for assessing patients for STI symptoms, offering patients screening for STIs, and providing standardized counseling. A patient whose responses indicate no pregnancy intention with no protection from pregnancy currently used could prompt the clinic to direct the patient to the command's pregnancy prevention resources. A project that implemented a standardized follow-up with provider oversight could help to decrease provider concerns for increased workload, thereby increasing their buy-in and potentially increasing adherence to guideline recommendations.

## Conclusion

Sexual health risks such as STIs and unplanned pregnancies have a major impact on military missions and members. Providing preventative services such as STI screenings and contraception counseling can reduce service members' risks for these adverse events, reduce costs to the military healthcare system, and improve military readiness, thus meeting the DHA's quadruple aims. Without sexual health risk assessments, however, it is impossible to know which preventative services are needed. This project aimed to introduce simple interventions to improve compliance with guideline recommendations for sexual health risk assessments.

Existing literature indicated that providing staff with education on taking a sexual history and including peer role play could increase confidence and knowledge, likely resulting in an increase in adherence. Literature also indicated that having a standardized template in the EHR would likely increase the completion of sexual health histories. The pre-educational intervention did show some significant improvement in staff members' attitudes and perceptions regarding sexual history taking, and the education and standardized template led to a significant increase in completed sexual health risk assessments. Barriers continue to exist for optimizing the practice of conducting complete sexual health risk assessments in primary care. The lack of a universal standardized template in the existing EHR intake document made the process cumbersome for the support staff. Continued education and reinforcement of the importance of sexual health histories in primary care could also help to increase buy-in and create sustainment.

Frequent reinforcement about the importance of sexual health assessments in primary care is needed to create a cultural change that prioritizes this topic and makes it less taboo. Preventative health often takes a back seat during clinical encounters. Patients and providers prioritize treatment over prevention, because treatment is seen as essential whereas prevention is

seen as optional. This practice of reactionary medicine rather than preventative medicine comes at a high cost to patients and the healthcare system. Most preventative interventions involve education and counseling which is more time-consuming than prescribing a medication to treat an illness. However, it is in the patient's best interest to prevent adverse health outcomes, including STIs and unplanned pregnancies, rather than to address them once they occur. Primary care providers are in a unique position to impact the healthcare culture and increase preventative services such as sexual health risk assessments. By preventing adverse health outcomes before they occur, primary care providers can positively impact patients' health and the healthcare system.

## References

- Arffin, F., Chin, K.L., Ng, C., Miskan, M., Lee, V.K., & Isa, M.R. (2015). Are medical students confident in taking a sexual history? An assessment on attitude and skills from an upper middle income country. *BioMedCentral Research Notes*, 8(248), 1-7.  
<https://doi.org/10.1186/s13104-015-1220-y>
- Armed Forces Health Surveillance. (2017). Update: Routine screening for antibodies to human immunodeficiency virus, civilian applicants for U.S. military service and U.S. Armed Forces, active and reserve components, January 2012-June 2017. *Medical Surveillance Monthly Report*, 24(9), 8-14. <https://www.hsdl.org/?view&did=804733>
- Blumenthal, J., Jain, S., Krakower, D., Sun, X., Young, J., Mayer, K., & Haubrich, R. (2015). Knowledge is power! Increased provider knowledge scores regarding pre-exposure prophylaxis (PrEP) are associated with higher rates of PrEP prescription and future intent to prescribe PrEP. *AIDS Behav*, 19(5), 802-810.  
<http://doi.org/10.1007/s10461-015-0996-z>
- Bosse, H. M., Schultz, J. H., Nickel, M., Lutz, T., Möltner, A., Jünger, J., Huwendiek, S., & Nikendei, C. (2012). The effect of using standardized patients or peer role play on ratings of undergraduate communication training: a randomized controlled trial. *Patient education and counseling*, 87(3), 300–306. <https://doi.org/10.1016/j.pec.2011.10.007>
- Brook, G., McSorley, J., Shaw, A. (2013). Retrospective study of the effect of enhanced systematic sexually transmitted infection screening, facilitated by the use of electronic patient records, in an HIV-infected cohort. *HIV Medicine* 2013(14), 347-353.  
<https://doi.org/10.1111/hiv.12020>

Brundage, J. F., Hunt, D. J., & Clark, L. L. (2015). Durations of military service after diagnoses of HIV-1 infections among active component members of the U.S. Armed Forces, 1990-2013. *MSMR*, 22(8), 9-12.

**[https://www.researchgate.net/publication/281167095\\_Durations\\_of\\_military\\_service\\_after\\_diagnoses\\_of\\_HIV1\\_infections\\_among\\_active\\_component\\_members\\_of\\_the\\_US\\_Armed\\_Forces\\_1990-2013](https://www.researchgate.net/publication/281167095_Durations_of_military_service_after_diagnoses_of_HIV1_infections_among_active_component_members_of_the_US_Armed_Forces_1990-2013)**

Centers for Disease Control and Prevention (2019). *National overview: Sexually transmitted disease surveillance, 2019*. Centers for Disease Control and Prevention.

**<https://www.cdc.gov/std/statistics/2019/overview.htm>**

Centers for Disease Control and Prevention (2021a, July 19). *A guide to taking a sexual history*. Centers for Disease Control and Prevention.

**<https://www.cdc.gov/std/treatment/SexualHistory.htm>**

Centers for Disease Control and Prevention (2021b, June 28). *Reproductive health*. Centers for Disease Control and Prevention.

**<https://www.cdc.gov/reproductivehealth/contraception/unintendedpregnancy/index.htm>**

Centers for Disease Control and Prevention (2021c, January 25). *Sexually transmitted infections prevalence, incidence, and cost estimates in the United States*. Centers for Disease Control and Prevention.

**<https://www.cdc.gov/std/statistics/prevalence-incidence-cost-2020.htm>**

Champion, J. D., & Collins, J. L. (2012). Reducing STIs: Screening, treatment, and counseling. *The Nurse Practitioner* 37(4), 40-46.

**<http://doi.org/10.1097/01.NPR.0000412894.04686.d0>**

Defense Health Agency Tri-Service HIV Working Group. (2018). *HIV Pre-Exposure Prophylaxis (PrEP) Provider Reference Kit*. Retrieved from <https://www.med.navy.mil/sites/nmcphc/>

Department of Defense, Office of the Deputy Assistant Secretary of Defense for Military Community and Family Policy. (2018). *2018 Demographics: Profile of the military community*. <https://www.militaryonesource.mil/data-research-and-statistics/military-community-demographics/2018-demographics-profile>

Garnett, G. P., Krishnaratne, S., Harris, K. L., Hallett, T. B., Santos, M., Enstone, J. E., Hensen, B., Dallabetta, G., Revill, P., Gregson, S. A. J., & Hargreaves, J.R. (2017). Cost-effectiveness of interventions to prevent HIV acquisition. In K. K. Holmes, S. Bertozzi, B. R. Bloom, & P. Jha (Eds.), *Major Infectious Diseases* (3rd ed.) (pp. n.a.). The International Bank for Reconstruction and Development. [https://doi.org/10.1596/978-1-4648-0524-0\\_ch7](https://doi.org/10.1596/978-1-4648-0524-0_ch7)

Goyal, V., Mattocks, K. M., & Sadler, A. G. (2012). High-risk behavior and sexually transmitted infections among U.S. active duty servicewomen and veterans. *Journal Women's Health*, 21(11), 1155-1169. <http://doi.org/10.1089/jwh.2012.3605>

Guttmacher Institute. (2021). *Unintended pregnancy in the United States*. Guttmacher Institute. <https://www.guttmacher.org/fact-sheet/unintended-pregnancy-united-states>.

Hakre, S., Blaylock, J. M., Dawson, P., Beckett, C., Garges, E. C., Michael, N. L., Danaher, P. J., Scott, P. T., & Okulicz, J. F. (2016). Knowledge, attitudes, and beliefs about HIV pre-exposure prophylaxis among US Air Force Health Care Providers. *Medicine (Baltimore)*, 95(32), e4511. <http://doi.org/10.1097/MD.0000000000004511>

HIV, Hepatitis and Related Conditions Programs (HHRC) in the Office of Specialty Care

Services Veterans Health Administration. (2019). Primary care of veterans with HIV.

*PCM-manual*

Hull, S., Kelley, S., Clarke, J. L. (2017). Sexually transmitted infections: Compelling case for an improved screening strategy. *Population Health Management*, 20(1), 3-11.

<https://doi.org/10.1089/pop.2017.0132>

Manchester, J., Gray-Miceli, D.L., Metcalf, J.A., Paolini, C.A., Napier, A.H., Coogle, C.I., & Owens, M.G. (2014). Facilitating Lewin's change model with collaborative evaluation in promoting evidence-based practices of health professionals. *Evaluation and Program Planning*, 47, 82-90.

<http://doi.org/10.1016/j.evalprogplan.2014.08.007>

Marcell, A. V., Gibbs, S. E., Pilgrim, N. A., Page, K. R., Sanders, R., Jennings, J., Loosier, P. S., & Dittus, P. J. (2018). Scope of sexual and reproductive health care receipt among young males aged 15-24. *Journal of Adolescent Health* 62(4), 382-389.

<https://doi.org/10.1016/j.jadohealth.2017.08.016>

Markle, W., Conti, T., Kad, M. (2013). Sexually transmitted diseases. *Primary care clinical office practice* 2013(40), 557-587. <http://doi.org/10.1016/j.pop.2013.05.001>

Naimer, M. S., Kwong, J. C., Bhatia, D., Moineddin, R., Whelan, M., Campitelli, M. A., Macdonald, L., Lofters, A., Tuite, A., Bogler, T., Permaul, J. A., McIsaac, W. J. (2017). The effect of changes in cervical cancer screening guidelines on chlamydia testing. *Annals of Family Medicine* 2017(15), 329-334. <https://doi.org/10.1370/afm.2097>.

Navy and Marine Corps Public Health Center. (2012). Fundamentals of HIV-STI prevention counseling student manual: A training program developed by the Centers for Disease Control and Prevention adapted and implemented by the Sexual Health and

Responsibility Program (SHARP). Retrieved from

**[med.navy.mil/Portals/62/Documents/NMFA/NMCPHC/root/Health%20and%20Wellness/PMT%20Student%20Resources/student-manual-hiv-sti-prevention-counseling.pdf](https://www.med.navy.mil/Portals/62/Documents/NMFA/NMCPHC/root/Health%20and%20Wellness/PMT%20Student%20Resources/student-manual-hiv-sti-prevention-counseling.pdf)**

Navy Human Resources. (2018). 2018 Navy Personal and Professional Choices Survey

Summary. Retrieved from

**<https://www.mynavyhr.navy.mil/Portals/55/Support/21stCenturySailor/Inclusion/2018%20Personal%20and%20Professional%20Choices%20Survey%20Summary.pdf?ver=vMNGIkK0gqdgaoNSIf1Eaw%3D%3D>**

National Coalition for Sexual Health. (2021). Essential questions to ask at least annually. *Sexual Health Questions to Ask Every Patient*.

Normansell, R., Drennan, V. M., Oakeshott, P. (2015). Exploring access and attitudes to regular sexually transmitted infection screening: The views of young, multi-ethnic, inner-city, female students. *Health Expectations*, 19, 322-330. **<https://doi:10.1111/hex.12354/>**

Phillips, A., Harmon, J. L., Bera, J., Ogle, M., Thompson, J. (2020). Integrating Preexposure Prophylaxis (PrEP) into a network of community health centers. *Journal for Nurse Practitioners*, 16(3), 232-235. **<https://doi.org/0.1016/j.nurpra.2019.09.010>**

Shirey, M.R. (2013). Lewin's theory of planned change as a strategic resource. *Strategic Leadership for Organizational Change*, 43(2). 69-72.

**<https://doi:10.1097/NNA.0b013e31827f20a9>**

Stahlman, S., Javanbakht, M., Cochran, S., Shoptaw, S., Hamilton, A., & Gorbach, P. (2015). A comparison of self-reported sexual risk behaviours between US civilian and active duty military women. *Health, Sex* 12(3), 272-275. **<https://doi.org/10.1071/SH14211>**

Tri-Service HIV Working Group. (2018). *HIV Pre-Exposure Prophylaxis (PrEP) Provider Reference Kit*.

**[https://www.med.navy.mil/sites/nmcphc/Documents/health-promotion-wellss/reproductive-and-sexual-health/HIV-PrEP-Provider-Toolkit-v2-May2018-\(REVISED\).pdf](https://www.med.navy.mil/sites/nmcphc/Documents/health-promotion-wellss/reproductive-and-sexual-health/HIV-PrEP-Provider-Toolkit-v2-May2018-(REVISED).pdf)**

Ursu, A., Sen, A., & Ruffin, M. (2015). Impact of cervical cancer screening guidelines on screening for chlamydia. *Annals of Family Medicine* 2015(13), 361-363.

**<http://doi:10.1370/afm.1811>**.

US Preventative Task Force. (2021). *Screening for chlamydia and gonorrhea*.

**<https://www.uspreventiveservicestaskforce.org/uspstf/draft-recommendation/chlamydia-and-gonococcal-infections-screening>**

Washington State Department of Health (2014). Sexually transmitted disease profile: Kitsap county 2014. Retrieved from

**[doh.wa.gov/Portals/1/Documents/Pubs/347-634-kitsap2014.pdf](http://doh.wa.gov/Portals/1/Documents/Pubs/347-634-kitsap2014.pdf)**

Welcome Aboard. (n.d.). *Naval Hospital Bremerton*. Retrieved October 27, 2020 from

**<https://www.med.navy.mil/sites/nhbrem/staff/Pages/welcomeAboard.aspx>**

Wilson, K., Beckett, C, Blaylock, J, Okulicz, J, Scott, P., & Hakre, S. (2020). Provider Knowledge Gaps in HIV PrEP Affect Practice Patterns in the US Navy. *Military Medicine*, 185(1-2), e117-e124. **<http://doi.org/10.1093/milmed/usz131>**

Workowski, K. A., Bolan, G. A., & Centers for Disease Control and Prevention (2015). Sexually transmitted diseases treatment guidelines, 2015. *MMWR Recommendations and reports: Morbidity and Mortality Weekly Report. Recommendations and Reports*, 64(3), 1-137.

**<https://www.cdc.gov/std/treatment-guidelines/STI-Guidelines-2021.pdf>**

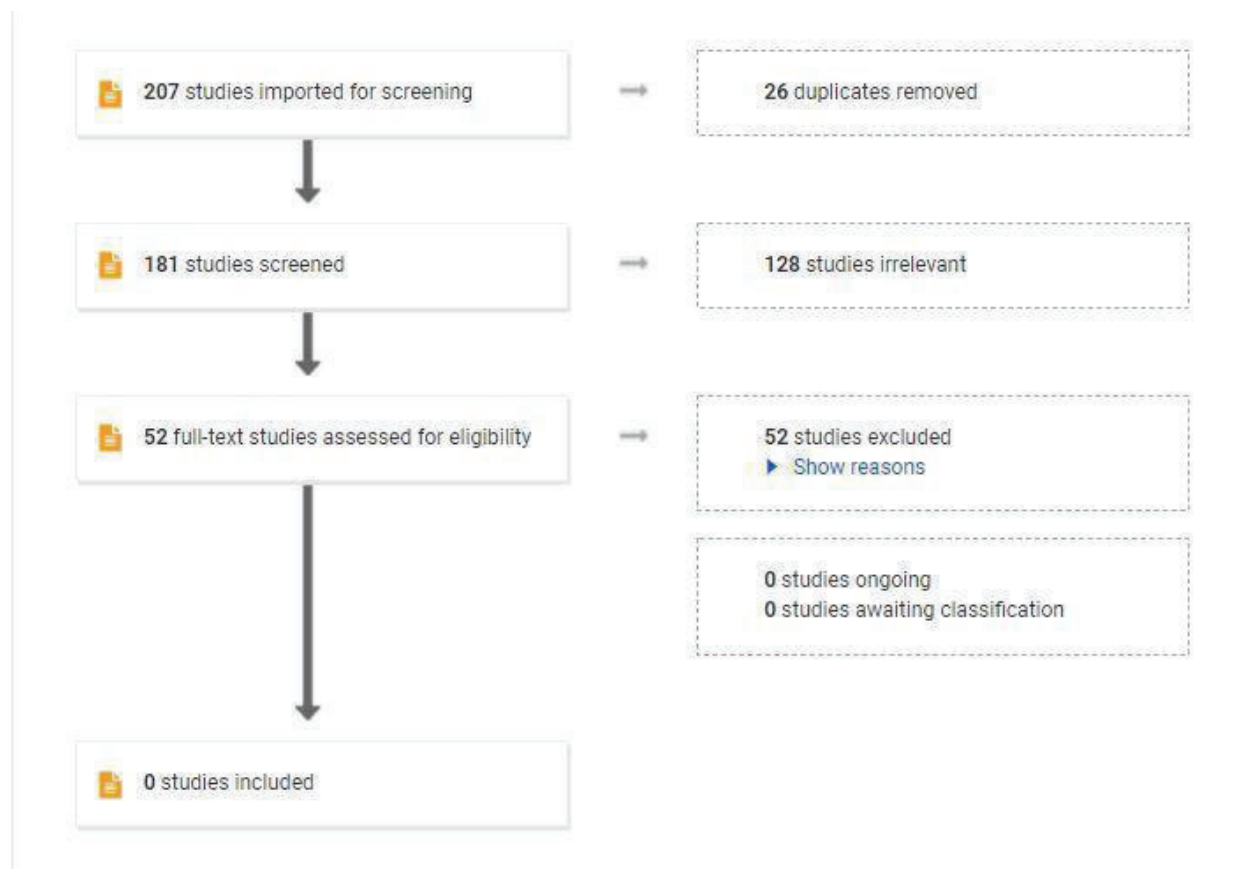
## Appendix A

### Search Terms

Database	Boolean Search Applied	Additional Limits
PubMed	(sexual history screening[MeSH Terms]) AND (primary care[MeSH Terms]) (sexual history screening[MeSH Terms]) AND (best practices[MeSH Terms]) (("primary health care"[MeSH Major Topic] OR "primary health care"[Title] OR "primary care"[Title] OR "ambulatory care facilities"[MeSH Major Topic] OR "outpatient"[Title] AND "clinic"[Title] OR "outpatient clinic"[Title]) AND (("sexual health"[MeSH Major Topic] OR "sexual health"[Title] OR "sexual history"[Title] OR "sexually transmitted diseases"[Title] OR "sexually transmitted infections"[Title] OR "STDs"[Title] OR "STIs"[Title]) AND ("surveys and questionnaires"[MeSH Major Topic] OR "diagnosis"[MeSH Subheading] OR "diagnosis"[Title] OR "assessment*"[Title] OR "questionnaire*"[Title] OR "evaluation*"[Title] OR "checklist*"[Title] OR "screening*"[Title] OR "history"[Title])) AND (alladult[Filter])(("primary health care"[MeSH Major Topic] OR "primary health care"[Title] OR "primary care"[Title] OR "ambulatory care facilities"[MeSH Major Topic] OR "outpatient clinic"[Title]) AND (("sexual health"[MeSH Major Topic] OR "sexual health"[Title] OR "sexual history"[Title] OR "sexually transmitted diseases"[Title] OR "sexually transmitted infections"[Title] OR "STDs"[Title] OR "STIs"[Title]) AND (education[ti] OR training[ti] OR instruction[ti] OR learning[ti] OR "clinical guideline"[ti] OR "practice guideline"[ti] OR "practice recommendation"[ti] OR "best practice"[ti]))	-Peer-reviewed -English Language -Within 10 years
CINAHL	(sexual history screening) AND (primary care) (sexual history screening) AND (barriers or obstacles or challenges) MM "primary health care" OR MM "ambulatory care facilities" OR TI ("primary health care" OR "primary care" OR (outpatient AND clinic) OR "outpatient clinic") AND MM "sexual health" OR TI ("sexual health" OR "sexual history" OR "sexually transmitted diseases" OR "sexually transmitted infections" OR STDs OR STIs) AND MM "surveys and questionnaires" OR DH "diagnosis" OR TI (diagnosis OR assessment OR questionnaire OR evaluation OR checklist OR screening OR history) MM "primary health care" OR MM "ambulatory care facilities" OR TI ("primary health care" OR "primary care" OR (outpatient AND clinic) OR "outpatient clinic") AND MM "sexual health" OR TI ("sexual health" OR "sexual history" OR "sexually transmitted diseases" OR "sexually transmitted infections" OR STDs OR STIs) AND TI (education OR training OR instruction OR learning OR "clinical guideline" OR "practice guideline" OR "practice recommendation" OR "best practice")	-Peer-reviewed -English Language -Within 10 years

## Appendix B

### PRISM Flow



Appendix B. PRISM Flow Diagram

## Appendix C

### Evidence Table

Citation	Relevance to PICOT	Design Type	Sample / Size	Outcome Variables & Definitions	Measures	Analytical Approach	Findings	Limitations	Evidence Rating/ Level of Quality
Blumenthal et al., (2015)	+	Non-experimental cross-sectional survey	N= 233	IV= Survey questions HIV providers vs non-HIV providers DV= survey scores	Nominal, Likert scale- survey based on instrument developed at Fenway institute but modified to specific knowledge-based questions about PrEP	Knowledge scores compared using two-sample t-test between HIV providers and non-HIV providers	PrEP knowledge scores were higher for providers who asked about sex practices (2.8 for those that asked all their patients versus 2.0 for some versus 2.2 for few; p=0.0004)	Potential for selection bias due to convenience sampling. Individuals attending HIV related conferences may be more likely to have higher levels of sexual health knowledge	IIIB
Brook et al., (2020)	+++	Retrospective Quasi Experimental	N= varied over 3 yrs., 900 enrolled	IV= addition of checklist in HER DV= Rate of STIs diagnosed	Ratio-incidence of each STI was calculated as the number of STIs divided by number of HIV positive patients with that sexual orientation in that total cohort	Difference in proportions using X <sup>2</sup> test and with Yate's correction when necessary	Small rise in number of patients with detected STI 2009-2010 but the increase between 2010-2011 and 2011-2012 was almost twofold (P<0.001) and threefold for heterosexual patients (P<0.005)	STIs diagnosed could be underestimated, no discussion on other possible reason that could have contributed to rise in STIs	IVB

<p>Hakre et al., (2016)</p>	<p>++</p>	<p>Non-Experimental cross-sectional survey</p>	<p>N= 404 active duty Air Force providers</p>	<p>IV: 20 multiple choice and short answer questions adapted from Blumenthal DV= Healthcare provider's answers to survey questions</p>	<p>Nominal/ordinal</p>	<p>Univariate analysis using univariate logistic regression for demographic and knowledge/practice scores. Multivariate logistic regression for characteristics associated with high knowledge scores</p>	<p>94% percent did not feel comfortable discussing sexual risk factors with patients, 59% rated knowledge of PrEP as poor, 68% believe their population is at risk for HIV, 74% never prescribed PrEP, 87% feel PrEP should be offered at MTFs, 64% believe PrEP should be handled by infectious disease clinic</p>	<p>Did not include civilian healthcare providers working at MTF's; Survey response rate was less than 39.8%; possible participation bias, possible information bias due to survey fatigue</p>	<p>IIIB</p>
<p>Philips et al., (2020)</p>	<p>+++</p>	<p>Quality Improvement Project</p>	<p>N=12 healthcare providers</p>	<p>IV=educational intervention based on clinical practice guidelines and anticipated barriers DV=Change in provider knowledge pre and post-intervention</p>	<p>Nominal/ordinal</p>	<p>Pre and post-intervention scores measured using paired t-test</p>	<p>Score increased from 70.83% pre intervention to 98.33% post intervention (statistically significant), focus group findings identified lack of well-defined workflow as a barrier and recommended using a standardized CDC risk assessment embedded in EHR to improve workflow. Other finding was to ensure patients that sexual health services are available.</p>	<p>High attrition (41%), semi-structured interview could introduce bias</p>	<p>IIC</p>
<p>USPSTF, (2020)</p>	<p>++++</p>	<p>Systematic Review</p>	<p>N=20 studies</p>	<p>IV= Behavioral Counseling those at increased STI risk DV= STI rates</p>	<p>Ratio- Percent reduction of STI acquisition after behavioral counseling interventions</p>	<p>Meta regression analysis</p>	<p>Behavioral counseling interventions reduced STI acquisition approx. 30%</p>	<p>Most studies identified by USPSTF enrolled heterosexual girls, women, and men at increased risk for STI, few trials incorporated sexual risk assessment performed by Primary care clinicians, trials that follow up participants for longer than 12 months are needed to assess durability of intervention effects</p>	<p>IVB</p>

USPSTF, (2021)	++++	Systematic Review	N= unclear	IV= GC screening DV= Pelvic inflammatory risk, improved outcome during pregnancy	Ratio= Percent reduction in risk of hospital diagnosed PID	Not clear	GC screening was associated with reduced risk of PID vs no screening and treatment of chlamydial infection during pregnancy is associated with improved outcome for infants and mothers, low to no harms in collecting site-specific G/C test overall low false-positive, false-negative, false alarm, and false reassurance rates.	Literature lacks in studies evaluating the effectiveness of screening asymptomatic men and studies needed to better understand the benefits and harms of screening in specific populations at risk such as men who have sex with men, LGBTQ+ members, and nonbinary gender identity	IVC
Wilson et al., 2020	++	Non-experimental Cross-sectional survey	N=432 active duty Navy providers	IV= 20 multiple choice and short answer questions adapted from Blumenthal DV: Healthcare provider's answers to survey questions	Nominal/ordinal	Univariate analysis with Chi-square and logistic regression to describe the relationship of demographic and medical practice characteristics. Knowledge was analyzed using multivariate logistic regression. Attitudes/beliefs/knowledge were compared using Chi-square	Knowledgeable providers were more likely to feel comfortable discussing sexual risk factors vs non-knowledgeable (very comfortable =51% vs 28% p-value <0.001). Frequency of questioning sexual risk factors was also higher in knowledgeable providers (5% vs 1%)	Did not include civilian healthcare providers working at MTF's, Survey response rate was less than 39.8%, possible participation bias, possible information bias due to survey fatigue	IIIB
Worowski, et. al., (2021)	++++	Expert Opinion	unclear	Unclear	Unclear	unclear	Prevention and control STI is based on five major strategies: 1)Accurate risk assessment and education/counseling risk, 2) Pre-exposure vaccination for vaccine preventable STIs, 3)Identification of persons with an asym. infection and persons with symptoms ass. with STI, 4) Effective diagnosis, treatment and counseling of sex partners of persons infected with an STI, 5) Evaluation, treatment, and counseling of sex partners of persons who are infected with an STI	Evidence is only briefly discussed, No evidence citations for STI and HIV infection risk assessment	VD

## Appendix D

### Business Case Analysis

# BUSINESS CASE with VALUE-BASED CARE ASSESSMENT

## Proposed Title for Project/Initiative/Opportunity to Improve

Increase sexual health risk assessment and support staff comfort with conducting sexual risk assessments at NMRTC Bremerton Family Medicine Clinic.

## Opportunity Statement

Sexual health risk assessments are used to obtain information about a person's sexual history to determine their risk for STIs, unplanned pregnancies, or need for behavioral counseling. Sexually transmitted infections (STIs) and unplanned pregnancies can have long-lasting consequences for those affected. There were 26 million new STIs in the United States in 2018 (Centers for Disease Control and Prevention [CDC], 2021c). Unintended pregnancies accounted for approximately 45% of pregnancies in the U.S in 2011 (CDC, 2021b). The military population is at increased sexual health risk which directly impacts troop readiness. Nationally, nearly half of STI cases occurred in people between 15 and 24 years of age (CDC, 2021b). A large portion of our military is composed of younger individuals. Almost half, 45.6%, of our active-duty military are 25 years or younger and 81.3% are younger than 36 years (Department of Defense [DOD], 2018).

## Business Opportunity/Objectives

The goal is to increase support staff comfort and completion of sexual health risk assessments during history intake:

- **Macro Objectives:** Perform sexual health risk assessments on all patients at least once annually.
- **Micro Objectives:** Achievement of our micro objectives will ultimately assist in accomplishing our Macro objective. We aim to increase support staff confidence in discussing and completing sexual health risk assessments and increase opportunities for sexual health counseling and prevention.

## Potential Impact of the Initiative/Project

- This will improve readiness by decreasing the number of non-deployable service members and decrease healthcare
- Costs by decreasing the number of service members and veterans requiring treatments from STI sequela.
- Increased access to sexual health counseling due to increased patient opportunities for sexual health discussion
- Increase in preventive and holistic health care for service members, dependents, and retirees.
- Decrease stigma for patients who are candidates for additional therapies such PrEP/PeP therapy

## Alternatives (courses of action) chosen for Analysis

1. Train only family medicine support staff that are directly involved in obtaining patient histories using interactive sexual health risk assessment training.
2. Train all family medicine staff involved in patient care, including providers, nurses, and techs using interactive sexual health risk assessment training.
3. "Status Quo": No sexual health risk assessment training and continue to only collect sexual histories on select patients based on their chief complaint.

## Analysis of Alternatives

**Alternative 1:** Train only family medicine support staff that are directly involved in obtaining patient histories using interactive sexual health risk assessment training.

Pros	Cons
<ul style="list-style-type: none"> <li>• A smaller number of subjects could allow for more focused training.</li> <li>• Progress could be easier to track and compare with a smaller, more targeted sample size</li> </ul>	<ul style="list-style-type: none"> <li>• If only support staff are educated on sexual health risk assessments, providers may not understand the value and only patients seeking sexual health counseling/treatment will be addressed</li> </ul>

<ul style="list-style-type: none"> <li>This approach will allow for staff to participate which could increase motivation and interaction</li> </ul>	<ul style="list-style-type: none"> <li>The importance of the program is less likely to be evident to those who do not receive the training</li> </ul>
<b>Alternative 2:</b>	Train all family medicine staff involved in patient care, to include providers, nurses, and techs using interactive sexual health risk assessment training.
<b>Pros</b>	<b>Cons</b>
<ul style="list-style-type: none"> <li>Having all members of the healthcare team educated and involved will increase the likelihood of identifying and reaching patients who are candidates for sexual health counseling/screening</li> <li>Educating the whole team will increase buy-in by staff</li> </ul>	<ul style="list-style-type: none"> <li>Educating the entire staff will take more time</li> <li>Naysayers in the group could impede momentum</li> <li>Tracking progress could be more difficult with the broader subject population.</li> </ul>
<b>Alternative 3:</b>	“ <i>Status Quo</i> ”: No sexual health risk assessment training and continue to only collect sexual histories on select patients based on their chief complaint.
<b>Pros</b>	<b>Cons</b>
<ul style="list-style-type: none"> <li>Providers and staff will maintain their comfort level.</li> <li>No time will be taken out of the clinic which could improve access to care.</li> </ul>	<ul style="list-style-type: none"> <li>Patients who are candidates for sexual health counseling and screening will be missed</li> <li>There will continue to be preventable cases of STIs and unplanned pregnancies in the clinic’s population.</li> <li>The staff may continue to stigmatize patients with increased sexual risk</li> </ul>
<b>Assumptions</b>	
<ol style="list-style-type: none"> <li>Support staff comfort regarding sexual health risk assessments will increase after interactive sexual health risk assessment education.</li> <li>Stigma for patients with increased sexual risk will decrease after support staff completion of interactive sexual health risk assessment education</li> <li>Increased STI screening of patients</li> <li>Increase diagnosis of STIs</li> </ol>	
<b>Recommendation and Rationale</b>	
<b>Recommendation</b>	
Our recommendation would be to train only family medicine support staff that are directly involved in obtaining patient histories using interactive sexual health risk assessment training.	
<b>Rationale</b>	
By only involving family medicine support staff that are directly involved in obtaining patient histories using interactive sexual health risk assessment, will increase the identification of at-risk individuals and give providers the necessary patient sexual health information to provide sexual health counseling.	
<b>Value Based Care - Investment Required by the Organization and the Associated "VALUE" or \$ GAINED.</b>	
$\text{Value} = \frac{\text{Quality} + \text{Service}}{\text{Cost}}$	
I. <i>Quality projected based on:</i>	
Patient Safety Benefits	Capture patients at high Sexual health risk

<p>Financial Benefit</p>	<p><i>Decrease in the lifetime cost of HIV therapy (need # of HIV cases Bremerton) approximately \$39,900 dollars cost savings per prevented case (Garnett et al, 2017).</i></p>
<p>Operational Readiness Benefit</p>	<p>Decreased number of non-deployable service members due to unplanned pregnancies and sti sequela</p> <p>Increased military and civilian productivity due to decrease appointments for preventable ailments</p>
<p style="text-align: right;"><i>Total</i></p>	<p>unquantifiable benefits</p>

*II. Service projected based on:*

<p>Environmental Benefit</p>	<p>Less community stis leading to decreased risk transmission in the population</p>
<p>Social Impact/Benefit</p>	<p>Increased support staff comfort and increasing sexual health risk assessments and decreasing stigma for patients engaging in at-risk behaviors</p>
<p>Patient Satisfaction/Benefit</p>	<p>Increased patient satisfaction to more holistic care and better anticipatory guidance regarding sexual health</p>

Provider Satisfaction/Benefit	<i>Increased provider satisfaction due to confidence in providing appropriate treatment without having to refer.</i>
<i>Total</i>	Unquantifiable benefit

*III. Cost projected based on:*

Program Design and Development: Educational format already exists and is free to use.	\$0
Training: Designated clinic training time already present within clinic	\$0
Management: No additional financial cost. Project sustainment after students depart will need to be an assigned collateral involving pulling data approximately once per quarter.	\$0
Marketing: No additional financial costs. Project team will need to interact with staff at onset to monitor for questions or concerns.	\$0
<i>Total</i>	\$0

*PROJECTED VALUE :*

Increase in sexual health risk assessments will increase primary prevention of sexual health-related issues	Cost saving and increases readiness
Increase in patients' opportunity to have access to preventative sexual health resources	Patient-centered care

**Risks and Mitigation Plan**

Risks	Plan
1. Increase in perceived workload due to additional questions	1. Include reinforcement of benefits in training
2. Initial patient discomfort with sexual questions	2. Include screening techniques in training, so questions are asked in a professional manner
3 Sexual risk assessment may lead to increased STI screening and incidental STI findings	3. Continue current clinic protocol for notification and treatment of STIs

**Implementation Plan**

<b>Phase 1:</b>	Facility assessment	
<b>Milestone Description:</b>	Research the current resources at the facility, facility needs and make a plan to address	
<b>Deliverables</b>	<b>Due Date</b>	<b>Accountable Person</b>
-Meet with key stakeholders -Assess facility resources -Assess facility needs (Screener tool, training needs, additional resources)	July-Aug 2021	LCDR's Umpa and Pinkston
<b>Resources Needed</b>		
Time for meetings Contact sources for family medicine clinic manager, preventive medicine, business office		
<b>Expected Level of Benefit</b>		
High. Without this groundwork information, we cannot proceed with the project.		
<b>Phase 2:</b>	Design/Plan	
<b>Milestone Description:</b>	Compile information from phase one to form the project and intervention	
<b>Deliverables</b>	<b>Due Dates</b>	<b>Accountable Person</b>
Literature Review Revision and complete revision of previous project paper Meeting again with key stakeholders Meeting with Madigan IRD EDO Create Training	August-Oct 2021	LCDR's Umpa and Pinkston
<b>Resources Needed</b>		
Time to complete literature review, project write up, and training		
<b>Expected Level of Benefit</b>		
High.		
<b>Phase 3:</b>	Training	
<b>Milestone Description:</b>	Provide training on sexual health risk assessment to support staff directly involved in patient care and history taking	
<b>Deliverables</b>	<b>Due Dates</b>	<b>Accountable Person</b>
Support staff pre-education questionnaire Training sessions with support staff	November 2021	LCDR's Umpa and Pinkston
<b>Resources Needed</b>		
Clinic manager for training time. The Interactive support staff education with include the importance of obtaining sexual health histories utilizing the Five P's model. Education will be taught through a PowerPoint presentation and interactive role playing through patient scenarios will be utilized to assist in improving comfort with sexual health conversations		
<b>Expected Level of Benefit</b>		
High		
<b>Phase 4:</b>	Implementation	
<b>Milestone Description:</b>	Assist and monitor provider's implementation of the above training	

Deliverables	Due Dates	Accountable Person
Chart audits	November-December 2021	LCDR's Umpa and Pinkston
<b>Resources Needed</b>		
EHR access		
<b>Expected Level of Benefit</b>		
High		
<b>Phase 5:</b>	Evaluation/sustainment	
<b>Milestone Description:</b>	Compile data from the previous three months to assess programs efficacy. Determine need for changes or sustainment	
Deliverables	Due Dates	Accountable Person
Data analysis Final report Sustainment plan Dissemination plan	Jan-April 2022	LCDR's Umpa and Pinkston
<b>Resources Needed</b>		
Statistician, SPSS, Designated champion to train to take over sustainment.		
<b>Expected Level of Benefit</b>		
High		

## Appendix E

### Sexual Health History Attitudes and Perceptions Questionnaire

#### PART 1

#### Section A

No.		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	I am interested in learning about sexual health					
2.	I think that it is important for corpsmen/MAs to know how to take a sexual history					
3.	I feel that a nurse can take a better sexual history.					
4.	I think that it is important to be nonjudgmental when taking a sexual history					
5.	I feel comfortable in discussing sexual health problems with patients.					
6.	I feel comfortable discussing sexual health problems with adolescents.					
7.	I feel comfortable discussing sexual health problems with patients of opposite gender.					
8.	I feel comfortable discussing sexual health problems with unmarried but sexually active patients					
9.	I feel comfortable asking patients about their sexual orientation e.g. homosexual					
10.	I feel comfortable asking patients regarding their sexual practices e.g. "Are you sexually active?", "do you practice vaginal sex?"					
11.	I feel comfortable in taking a sexual history from patients who are uneasy in discussing sex					
12.	I feel that cultural differences are a barrier when discussing sexual health problems with patients					
13.	I feel that religious differences are a barrier when discussing sexual health problems with patients.					
14.	I recognize my own limitations in discussing sexual health issues with patients.					
15.	I have thought about my own attitudes, beliefs and values and how they may affect my discussion of sexual health issues with patients.					
16.	I believe that it is important to maintain patient confidentiality					

**Section B**

No.		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	I find taking sexual history easy					
2.	I have adequate skills to take a sexual history					
3.	I have adequate skills to put a patient at ease when discussing their sexual health issues					
4.	The training in my corps/MA school prepares me to take a sexual history					
5.	I have enough exposure as a corpsman/MA to take a sexual history from a real patient					
6.	I have enough exposure as corpsman/MA to take a sexual history from a simulated patient					
7.	I feel that there is not enough training in corps school/MA training on how to discuss sexual health problems with patients.					
8.	I feel that patients would like to discuss their sexual health problems with a corpsman/MA					

**Part B**

**Please select your age.**

- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 64 or Above

**Please indicate your gender.**

- Male
- Female
- Non-Binary

**Please indicate your ethnicity**

- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or Pacific Islander
- White or Caucasian
- Multi-racial
- Other/unknown

**Please indicate your rank.**

- E-1
- E-2
- E-3
- E-4
- E-5
- E-6
- E-7
- E-8
- E-9
- Civilian

## Appendix F Data Analysis

**Table F1**

	Variable Name	Variable Description and type of measure	Data Source	Possible Range of Values	Level of Measurement	Time Frame for Collection	Statistical Test	Decision Rule
<b>Population</b>	Interactive Sexual Health Risk Assessment education administered NMRTC Family Medicine clinic support staff who work patient intake	Interactive Sexual Health Risk Assessment education administered NMRTC Family Medicine clinic support staff Type: Process	NMRTC Bremerston list of clinic support	0= before training 1=after training	nominal	offered over a 2 wk educational period	none	n/a
<b>D V</b>	Support Staff Comfort Score	Score of support staff comfort pre and post-training Type: Outcome	DNP student calculations of Questionnaire using SPSS analysis software	(0-5)	Ordinal or Interval depending on survey used	Reassess support staff comfort 2 weeks post-training	paired T or Wilcoxon's signed rank test depending on survey used, sample, and	We will reject the null if data shows a difference (P<0.05) in the increase of comfort pre and post intervention



## Appendix G

## Team Mentor Agreement Form



Appendix C: Daniel K. Inouye Graduate School of Nursing  
DNP Project Team Mentor (Committee Membership) Agreement Form

**DOCTOR OF NURSING PRACTICE PROJECT**  
**DNP Project Clinical Question and Team Mentor (Committee Membership) Agreement Form**

Graduation Year: 2022 Phase 2 Site(s) Name: Bremerton

Name(s) of DNP Project Student Team:

1. LCDR Lisa Umpa	AGCNS <input type="checkbox"/>	FNP <input checked="" type="checkbox"/>	PMHNP <input type="checkbox"/>	RNA <input type="checkbox"/>	WHNP <input checked="" type="checkbox"/>
2. LCDR Christina Pinkston	AGCNS <input type="checkbox"/>	FNP <input checked="" type="checkbox"/>	PMHNP <input type="checkbox"/>	RNA <input type="checkbox"/>	WHNP <input checked="" type="checkbox"/>
3. _____	AGCNS <input type="checkbox"/>	FNP <input type="checkbox"/>	PMHNP <input type="checkbox"/>	RNA <input type="checkbox"/>	WHNP <input type="checkbox"/>
4. _____	AGCNS <input type="checkbox"/>	FNP <input type="checkbox"/>	PMHNP <input type="checkbox"/>	RNA <input type="checkbox"/>	WHNP <input type="checkbox"/>
5. _____	AGCNS <input type="checkbox"/>	FNP <input type="checkbox"/>	PMHNP <input type="checkbox"/>	RNA <input type="checkbox"/>	WHNP <input type="checkbox"/>
6. _____	AGCNS <input type="checkbox"/>	FNP <input type="checkbox"/>	PMHNP <input type="checkbox"/>	RNA <input type="checkbox"/>	WHNP <input type="checkbox"/>

The tentative title of the DNP Project Proposal for this student group is:

Comprehensive military-focused PrEP/PeP education curriculum for Naval Health Clinic Bremerton

Committee Approved DNP Project Clinical Question:

Will educating all staff and providers on PrEP therapy via a comprehensive military-focused PrEP educational curriculum increase not only provider knowledge but also number of PrEP prescriptions prescribed and completion of a comprehensive sexual history? +

Names of DNP Project Team Mentors (type the name and obtain digital signatures):

I agree to serve as a member of the DNP Project Team (Team Mentors) for the above DNP Student Project Team. As a Project Team Mentor, I agree to the duties and responsibilities outlined within the DNP Project Manual which include but are not limited to the provision of consultation and guidance supporting the entire DNP project journey and to ensure the DNP project is of sufficient rigor and demonstrates doctoral level scholarship to meet the requirements for USUHS GSN graduation.

**NOTE:** You may have 3-4 DNP Team Mentors [committee members including your DNP Senior Mentor (Chair)]. The Phase II Site Director may also be a member of the group, as well as other USUHS faculty or others who may serve as content experts. All non-USUHS faculty selected as a Team Mentor must be approved by the DNP Project Director.

Senior Mentor (Chair):	Dr. Janice Williams	Signature: janice williams	Digitally signed by janice williams Date: 2022.04.20 07:03:36 -04'00'	Date: 12/17/20
Team Mentor (Member):	LCDR Lisa Umpa	Signature: UMPA.LISA.FRANC ES LAHRMER.1297840 645	Digitally signed by UMPA.LISA.FRANC ES LAHRMER.1297840 645 Date: 2020.12.17 10:04:53 -05'00'	Date: 12/17/20
Team Mentor (Member):	LCDR Christina Pinkston <span style="float: right;">+</span>	Signature: PINKSTON.CH RISTINA.LYNN.1294352470	Digitally signed by PINKSTON.CH RISTINA.LYNN.1294352470 Date: 2020.12.17 13:26:04 -05'00'	Date: 12/17/20
Team Mentor (Member):	CDR Rachel Newnam	Signature: NEWNAM.RAC HEL.ELAINE.12 88580657	Digitally signed by NEWNAM.RACHEL.ELAI NE.1288580657 Date: 2022.04.21 12:11:56 -07'00'	Date: 12/17/20

Form Version: 4 December 2020

## Appendix H

### Citi Certificates



Completion Date 30-Mar-2020  
Expiration Date 30-Mar-2023  
Record ID 36107513

This is to certify that:

**Lisa Umpa**

Has completed the following CITI Program course:

**OUSD P&R Human Research** (Curriculum Group)  
**Biomedical Investigators and Research Study Team** (Course Learner Group)  
**1 - Basic Course** (Stage)

Not valid for renewal of certification through CME. Do not use for TransCelerate mutual recognition (see Completion Report).

Under requirements set by:

**Office of the Under Secretary of Defense (Personnel and Readiness)**

**CITI**  
Collaborative Institutional Training Initiative

Verify at [www.citiprogram.org/verify/?wc7085b17-5db1-4e3d-b319-d8dcaa714958-36107513](http://www.citiprogram.org/verify/?wc7085b17-5db1-4e3d-b319-d8dcaa714958-36107513)



Completion Date 01-Apr-2020  
Expiration Date 01-Apr-2023  
Record ID 36110633

This is to certify that:

**Christina Pinkston**

Has completed the following CITI Program course:

**OUSD P&R Human Research** (Curriculum Group)  
**Biomedical Investigators and Research Study Team** (Course Learner Group)  
**1 - Basic Course** (Stage)

Not valid for renewal of certification through CME. Do not use for TransCelerate mutual recognition (see Completion Report).

Under requirements set by:

**Office of the Under Secretary of Defense (Personnel and Readiness)**

**CITI**  
Collaborative Institutional Training Initiative

Verify at [www.citiprogram.org/verify/?w8052f205-49fa-4051-aaff-d88b551dc9f3-36110633](http://www.citiprogram.org/verify/?w8052f205-49fa-4051-aaff-d88b551dc9f3-36110633)

## Appendix I

## USU (VPR) Form 3202N

USUHS FORM 3202N

DANIEL K. INOUE GRADUATE SCHOOL OF NURSING

EVIDENCE-BASED PRACTICE/PERFORMANCE IMPROVEMENT PROPOSAL

VPR Date Stamp

Project Number: GSN-61-12210 (VPR will assign)Project Title: Improving Sexual Health Risk Assessment in Primary Care

SECTION A: STUDENT POC INFORMATION	
1. Name (Last, First, MI): <u>Pinkston, Christina, L.</u>	Student E-mail: <u>christina.pinkston@usuhs.edu</u>
2. Home Address: <u>[REDACTED]</u>	Cell Number: <u>[REDACTED]</u>
SECTION B: COMMITTEE CHAIR / SENIOR MENTOR INFORMATION	
3. Name (Last, First, MI): <u>Williams, Janice</u>	
4. Telephone: <u>3016025352</u> Fax: _____	E-mail: <u>Janice.williams@usuhs.edu</u>
5. USUHS Building/ Room No.: <u>E1052</u>	
SECTION C: PROJECT INFORMATION	
6. Attach the Abstract for the proposal, including the following sections: Site Location of the Project, Title, Authors, Background or Problem/Issue, Clinical Question/Purpose, Project Design, Anticipated Organizational Impact/Implications for Practice and also include the Proposed Timeline. Single space the abstract and use Times New Roman font, size 12.	
7. Is this proposal related to an active research project of the Chair/Senior Mentor identified in Section B? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, complete below; if no, proceed to Part 8. Project Number: _____ Project Title: _____ Project Start Date: _____ Project End Date: _____	
8. Anticipated period of performance: Project Start Date: <u>6/1/2021</u> Project End Date: <u>5/15/2022</u>	
9. Performance Site(s): <u>NMRTC Bremerton</u>	
10. Does this project involve any classified information? (Contact the USUHS Security Office for guidance) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
11. Do you have a funding source for this project? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA If yes, specify the funding agency and the amount provided: _____	
SECTION D: SIGNATURES	
The following signatures attest to the validity of the above information:	
<u>PINKSTON.CHRISTINA.LYNN.12943</u> 52470 Student (Project Point of Contact for the Group)	Digitally signed by PINKSTON.CHRISTINA.LYNN.1294352470 Date: 2021.09.20 09:26:08 -07'00'
<u>JOHNSON.HEATHER.L.107</u> 3935110 Chair/Program Director	Digitally signed by JOHNSON.HEATHER.L.1073935110 Date: 2021.10.04 08:47:09 -04'00'
<u>WASSERMAN.JOAN.E.15510</u> 61066 Associate Dean for Research, GSN	Digitally signed by WASSERMAN.JOAN.E.1551061066 Date: 2021.10.04 10:38:13 -04'00'
<u>WILLIAMS.JANICE.K.15506</u> 40275 Chair/Senior Mentor	Digitally signed by WILLIAMS.JANICE.K.1550640275 Date: 2021.09.27 12:30:31 -04'00'
<u>SEIBERT.DIANE.C.10849322</u> 79 Associate Dean for Academic Affairs, GSN	Digitally signed by SEIBERT.DIANE.C.1084932279 Date: 2021.10.04 10:15:35 -04'00'
<u>ROMANO.CAROLA.1032050294</u> Date: 2021.10.04 11:07:04 -04'00'	Digitally signed by ROMANO.CAROLA.1032050294 Date: 2021.10.04 11:07:04 -04'00'
<u>BOJANOWSKI.LEODAYAN.ARPA.1458235860</u> USUHS Vice President for Research	Digitally signed by BOJANOWSKI.LEODAYAN.ARPA.1458235860 Date: 2021.10.15 08:45:25 -04'00'

## Appendix J

### MTF IRB/PI Letter of Determination



DEPARTMENT OF THE ARMY  
MADIGAN ARMY MEDICAL CENTER  
9040 JACKSON AVENUE  
TACOMA, WA 98431-1100

MCHJ-ISI

26 October 2021

MEMORANDUM FOR LCDR Lisa Umpa, USN, NC, DNP Student, and LCDR Christina Pinkston, USN, NC, DNP Student, USU Class 2022

SUBJECT: Determination of Not Research for "Improving Sexual Health Risk Assessment in Primary Care". Reference # 222015

1. The Madigan Army Medical Center Human Research Protections Office initially received the above-referenced project on 12 October 2021 to review for applicability of human subjects protections regulations. Revisions were required and the application was resubmitted with all required documents on 25 October 2021.
2. This project aims to implement a 7-item Sexual Health Risk Assessment in the Primary Care Clinic setting based on recommendations from the CDC and the US Preventive Services Task Force. The military population is at an increased sexual health risk which directly impacts troop readiness. This is due, in part, to the demographic of the military with almost half, 45.6%, of the active duty force being 25 years old or younger. Nationally, nearly half of sexually transmitted infections (STI) cases occur in young adults between 15 and 24 years old. The project will be guided by the PICO question: *In a primary care clinic, does implementation of a standardized sexual health risk assessment along with interactive staff education improve staff comfort and adherence with CDC and USPSTF Guidelines?* During this project, the Navy Corpsmen who will administer this questionnaire will receive education on how to interview the patient regarding a sensitive health topic. Multiple different platforms will be used for instruction (simulation, role play) and Corpsmen knowledge and comfort level will be assessed before and after the training. Audits of electronic health records will take place to evaluate adoption of the SHR Assessment tool and rates of STI.
3. This study does not constitute research as defined under the human subjects protections regulations, as it is not "a systematic investigation . . . designed to develop or contribute to generalizable knowledge." [32 CFR 219.102(l)] Additionally, per DoD Instruction (DoDI) 3216.02, "activities, including program evaluation, customer satisfaction surveys, user surveys, outcome reviews, and other methods, designed solely to assess the performance of DoD programs where the results of the evaluation are only for the use of Government officials responsible for the operation or oversight of the program being evaluated and are not intended for generalized use beyond such program" are not research involving human subjects, and as such, are not covered under the requirements of DoDI 3216.02.

MCHJ-ISI

SUBJECT: Determination of Not Research for "Improving Sexual Health Risk Assessment in Primary Care". Reference # 222015

4. **This determination should not be construed as approval to conduct this project.** It is your responsibility to identify and obtain any necessary permissions or approvals to conduct the project prior to initiation. This activity may proceed with no further requirement for review by the Madigan Army Medical Center Human Research Protections Office, pending other required approvals.

5. In addition, your project may become research subject to IRB review if it becomes and/or includes a systematic investigation to develop or contribute to generalizable knowledge. In the event there is a change to the above-described project that may affect its determination, please submit a modification form for review and determination. No change to this activity may be implemented until the review is completed and you have been notified that there is no revision to our determination that your activity is still deemed not to be research. A request for our review does not need to be submitted for the following changes to your activity: (1) personnel conducting the activity; (2) location or site at which activities will be conducted; (3) number of respondents; or (4) period of time over which the activity will be conducted. You are not authorized to take project data away from the institution.

6. All publications, presentations or abstracts arising from this work must be cleared through appropriate publication clearance procedures prior to publication IAW your institutions local publication clearance policy. Many journals are interested in publishing projects that are not research. If you do decide to publish your findings, please use paragraph headings such as: "issue," "procedures for collecting and evaluating information," "information found," "lessons learned," etc. and avoid using headings such as "research questions or hypothesis," "methods," "results," "study limitations," etc.

7. The Madigan Army Medical Center Human Research Protections Office point of contact for this review is Dr. Mary S. McCarthy in the Center for Nursing Science & Clinical Inquiry at 253-968-3695.



Exempt Determination Official  
Center for Nursing Science & Clinical Inquiry

## Appendix K

### PAO Clearance/Level of Dissemination Classification

**(Place holder, Bremerton PAO clearance letter)**

Approval request for "Elrod\_Umpa\_USUHS PAO Package.pdf" Inbox x



USU Pub Clearance (via Google Workspace Approvals) <approvals-noreply@google.com>  
to me ▾

Apr 25, 2022, 3:30 AM (2 days ago)

### Approval Complete



USU Pub Clearance ([usupubclearance@usuhs.edu](mailto:usupubclearance@usuhs.edu)) approved the file

 Elrod\_Umpa\_USUHS PAO Package.pdf



Open

## Appendix L

## DNP Project Completion Verification Form



Appendix G: Daniel K. Inouye Graduate School of Nursing  
DNP Project Completion Verification Form

**DOCTOR OF NURSING PRACTICE PROJECT  
Completion Verification Form**

Improving Sexual Health Assessment in Primary Care

The DNP Project titled:

was completed at NMRTC Bremerton by the following student(s):

(Student Name)	(Digital Signature)
LCDR Lisa Umpa	
LCDR Christina Elrod	

The DNP Practice Project Team verifies that the following components of the DNP project, accomplished by the above students, is of sufficient rigor and demonstrates doctoral level scholarship to meet the requirements for USUHS GSN graduation:

- Presentation of DNP project to the leadership/stakeholders at the Phase II Site,
- Abstract/Impact Statement (*Appendix F*), and
- DNP Project written report (*Appendix E*).

Verified by:

(type name)

(Digital Signature)

Janice Williams, DNP, FNP-C

 janice williams

Senior Mentor

Team Mentor

Team Mentor

CDR Rachel Newnam, DNP, FNP-C

 NEWNAM,RACHEL  
ELANE 128820657

Team Mentor  
& Phase II Site Director

**For RNA Students only** - add the following additional signature for final verification of project completion:

RNA Project Director (type name)

(Digital Signature)

Form Version: 4 December 2020