

Increasing STI Risk Assessment in Primary Care

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DNP 690.70 DNP Scholarly Project III

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Abstract

Background: The Centers for Disease Control (CDC) estimates that one in five people in the U.S have a sexually transmitted infection (STI). Studies (Broomeyer, et al., 2021; Barrow, et. al, 2020); have concluded that there is a lack of sexual health screenings done in the primary care setting. The CDC's Five P's Model was created with intentions of helping providers collect a sexual history in order to facilitate the need for screenings and offer appropriate counseling.

Objective: The aim of this quality improvement (QI) project was to develop and utilize a sexual health assessment questionnaire based on the CDC's Five P's Model in order to increase the amount of sexual health risk assessments performed during wellness exam visits. Secondary outcomes were to increase screenings and STI awareness through patient education.

Methods: A sexual health assessment was given to all willing participants aged 15 and above at a family practice in Southwest North Carolina, presenting for an annual physical. Over a three-month period, 69 patients were approached, and 29 patients agreed to participate. Both qualitative and quantitative data was collected. All acute visits were excluded from the study.

Results: Sexual Health histories were more comprehensive following the use of the sexual health assessment questionnaire. There were significant relationships between the responses given in the sexual health assessment and STI screenings and education being provided.

Conclusion: Use of the sexual health assessment questionnaire supported the CDC's guidelines for sexual history taking for STI prevention.

Keywords: Keywords: Sexually transmitted infection (STI), Center for Disease Control (CDC), Sexual Health Assessment, Five P's.

Increasing STI Risk Assessment in Primary Care

Sexually Transmitted Infections (STIs) are a global issue, more than 1 million STIs are acquired every day worldwide (World Health Organization (WHO), 2021). Here in the United States, STIs cost 16 billion dollars in direct medical costs yearly and affect people of all ages (Centers for Disease Control (CDC), 2021c). According to the Centers for Disease Control (CDC) youth aged 15-24 account for almost half of the 26 million new sexually transmitted infections that occurred in 2018 (CDC, 2021d). Over half of the direct medical costs are for persons aged 18 and over (CDC,2021b).

Pediatricians and primary care providers are the first line of defense and are in a great position for screening and providing sexual health education, yet there is a disconnect and these screenings are not being done during routine health visits (Shafii and Leveine, 2020).

Pediatricians spend an average 36 seconds on the topic of sexual health with their adolescent patients, possibly due to privacy issues, or the assumption that isn't needed (Shannon, 2018).

Approximately 11% of new Human Immunodeficiency Virus (HIV) cases occur in adults aged 50 years or older, yet fewer than half of primary care providers report asking adult patients about regular condom usage (Landes, 2020). Such little time is being spent on sexual health yet, 76% of adults have a primary care provider, which means the majority of this at-risk population is being seen at an office (Healthy people 2030, 2021). Due to high transmission, and the lack of sexual health prevention in patients aged 15 and over, a sexual health assessment template would help influence a dialogue between patient and provider to start improving this gap in healthcare (Kilander, et.al, 2022).

Purpose

The purpose of this QI project was to provide a primary care office with a sexual health assessment (SHA) based on the CDC's Five P's (Partners, Practices, Protection from STIs, Past History of STIs, Pregnancy Infection) guide to taking a sexual health history in primary care can promote STI prevention and education. The primary outcome of this QI project was to increase sexual health assessments performed during annual wellness visits. The secondary outcomes were to increase screenings, detection, and patient education of sexual health via office visit discussions with the medical provider and educational pamphlets.

Review of Literature

Sexually Transmitted Infections

Sexually transmitted diseases (STDs) are diseases that are passed from one person to another through sexual contact. These include chlamydia, gonorrhea, genital herpes, human papillomavirus (HPV), syphilis, and HIV (CDC, 2021b). Many of these STDs do not show symptoms for a long time. Even without symptoms, they can still be harmful and passed on during all forms of sex (oral, vaginal, anal) and skin-to-skin contact. While some are curable, others do not go away and cause issues for the entire life span, potentially leaving you at risk for certain cancers (CDC, 2021b).

STI Education

According to a study that was conducted by the CDC in 2021 when reviewing adolescents and young adults, forty percent of high school students admit to being sexually active. However, the National Conference of State Legislature states that only 28 states mandate sex and HIV education in schools. The subject simply is not being breached, and the statistics show that it's not deterring this age group, just causing a higher incidence of a new infection

(Kilander, et.al, 2022). In a survey of 1217 physicians, only 40% reported screening adolescent patients for sexual activity and only 31% reported giving education on STD/HIV transmission (Millstein, et al, 2006). A comprehensive sexuality education program reduce the rates of sexual activity, sexual risk behaviors (eg, number of partners and unprotected intercourse), sexually transmitted infections, and adolescent pregnancy (Haberland, & Rogow, 2015; Breuner, et.al, 2016). In older adults, sexual health education has been shown to be most effective when utilizing the teach back method (Harding & Manry, 2017).

Fort Hayes University conducted a self-assessment survey of primary care providers. Knowledge and practice habits were measured using a 5-point Likert Scale, 58.77% agreed that sexually transmitted infections in aging adults are on the rise; however, only 19.79% report completing continuing education regarding sexual health (Landes, 2020; Harding & Manry, 2017). This lack of education in primary care continues through adulthood. Research shows that lack of knowledge, discomfort with the issue, and lack of time as common issues that prevent providers from discussing sexual health with patients, which then leads to lack of screenings (Harding & Manry, 2017).

STI Screenings

Increasing the proportion of adolescents who speak privately with a provider at a preventative visit, increasing the knowledge of HIV, and increasing the proportion of sexually active female adolescents and young women who get screened for chlamydia are goals set forward by Health People 2030 (Healthy People 2030, 2021).

In a year, there is an average of one billion office visits, 50% of those are primary care (CDC, 2021c). However, in a survey done on physicians in the Midwest, only 28% of the respondents routinely assess the sexual health of adults 50 or over during primary care visits.

(Harding & Manry, 2017). The opportunity for screening in adults is present as 73% of persons aged 57–64 years and 53% of persons aged 65–74 years reported that they were sexually active in the previous year (Ports, et.al, 2014). The same opportunity is present in the adolescent population but on average pediatricians spend only 36 seconds on the topic of sexual health with their adolescent patients (Shannon, 2018). One study done in 2016, developed computer-assisted self-interviews for sexual health surveys and found that 88% of adolescents preferred it to face-to-face interviews and 94% stated that computers were the best way to ask sexual health questions (Goyal, et.al, 2016).

The CDC recommends that all sexually active people 13 to 64 years of age in the US be tested for HIV at least once per year (CDC, 2021c). The frequency of recommended screening depends on the level of patient risk, but as mentioned above, these screenings for risk are not taking place. A survey of 135 primary care physicians found that 60.8% of physicians rarely or never discuss HIV/AIDS with patients over the age of 50 (Ports 2014). Literature shows that although most physicians report feeling comfortable taking sexual histories, it was found that during routine exams, essential portions of sexual history were missed including history of STIs, gender of sexual partners over time, and sexual behaviors (Ports 2014; Harding & Manry 2017; Landes 2020).

STI Prevention

STI transmission is on the rise, with primary and secondary syphilis infections seeing the largest increase, with the total national rates at their highest since 1993 (Shannon & Klausner, 2018). Having mutual monogamy, using latex condoms for vaginal, oral, and anal sex, reducing your number of partners, getting testing before changing partners, being abstinent, and getting vaccinated for HPV and hepatitis B are all ways to prevent being infected or infecting others

with a sexually transmitted infection (CDC, 2021c). As a healthcare provider, obtaining an accurate sexual health history can lead to education, which has been found as the best manner in which to improve adherence in STI prevention in all age groups (CDC, 2021).

Five P's Model

The CDC recommends that a sexual history should be taken as part of routine health care (CDC, 2021). They report that even if the patient reports currently not being active, it is still important to gather a history (CDC,2021a). They created the Five P's model to guide questioning which include the following: "1. Partners; 2. Practices; 3. Protection from STIs; 4. Past History of STI's, and 5. Pregnancy Intention." This model creates a baseline knowledge to prompt further questioning to improve the patients' health and wellness (CDC, 2021a). Asking these questions allows the provider to not make assumptions and can facilitate open discussions and gives the provider an idea of which areas to focus risk reduction education, if needed (CDC, 2021). For the purpose of this QI project, a sexual health assessment questionnaire was created on eight questions within the five categories of the Five P's model in order to prompt further screening, detection, and education.

Theoretical Framework

This project used the RE-AIM framework developed in 1999 centered on reporting issues related to health promotion (Gagilo, et al., 2013). This framework is a part of a growing area of science called dissemination and implementation, which focuses on designing interventions and implementation strategies that work in real life across different populations and settings (Devotta, et.al, 2023). The key concepts of this theory are Reach, Effectiveness, Adoption, Implementation, and Maintenance (Gagilo, et al., 2013). Reach focuses on how many people can be influenced by this program; Effectiveness is the potential impact the implementation has

including potential negative effects if any (Devotta, et.al, 2023). Adoption is the participation rate for the project. Implementation is whether the program was employed as intended, and Maintenance focuses on the long-term effects of the program, if any (Gagilo, et al., 2013).

For the Reach portion of this framework, the target population of the QI project were healthcare providers within a family primary care office in southwestern North Carolina where STI transmissions are high (NCDHHS, 2021). Participation was optional and recruitment took place during an educational luncheon explaining the project and the assessment. One provider in the practice agreed to implement the project.

The effectiveness of the study was determined by the data collected. Retrospective chart auditing was done to see how many sexual health histories had been done on patients aged 15 and over during annual wellness exams 3 months prior to the intervention of the SHA template to determine if the assessment was effective in obtaining sexual histories.

Adoption for this project was be done by a provider at this office who agreed to implement the sexual health assessment (SHA), this was given to all patients over 15 years of age coming in for a wellness visit. The implementation portion did not go as intended. Originally the project was supposed to be placed within the electronic charting system, however this practice still utilizes paper forms to be filled out during the visit, therefore a paper version of the SHA was placed with the other health maintenance paperwork and was filled out while waiting to be seen by the provider. No associated costs were accumulated during the QI project by the provider or practice, the researcher paid all costs associated with the paper and printing out of the SHA. The past portion of the RE- AIM framework is maintenance, which is looking at the data collection and viability of the project by analyzing the three-month usage of this assessment in

the primary care setting and evaluating its effectiveness, and whether or not it is sustainable for long-term implementation, and if not, why.

This theory is relevant to the DNP project because although it is not a program, it is a sexual health assessment questionnaire that helped providers screen, detect, and educate within the primary care setting.

Project Design and Methods

This 3-month, retrospective pre- and post-mixed methods quality improvement project implemented a sexual health assessment questionnaire based on the CDC's Five P's Model by a Doctor of Nursing Practice, Family Nurse Practitioner (DNP, FNP) student, in order to increase sexual health screenings within a primary care office in Southwestern North Carolina.

Population

The participant of this QI project was a primary care provider caring for patients ages 15 and older and their medical office assistant in a primary care practice in southwestern North Carolina. All primary care providers (PCPs) working at the implementation site were eligible and invited to participate in the project. Participation was voluntary and participants had the right to refuse, withdrawal, or discontinue participation without consequence or prejudice at any time prior to submission of their data results. Inclusion criteria was patients over the age of 15 and presenting for an annual wellness visit. Exclusion criteria was patients under the age of 15, and all acute care visits.

Setting

The setting for this QI project was a family practice in the rural region of Southwest North Carolina.

Intervention

The basis for having the SHA incorporated into the annual wellness exams at the primary care office were the CDC's recommendations and their 5 P's model for history taking. The questions in the SHA questionnaire were directly derived from the CDC's model on taking a sexual history for clinicians (CDC, 2021b). Although the rate of comprehensive history taking are low, many primary care offices across the United States use the CDC's 5 P's model as the basis for their lines of questioning, as they are considered a standard (Palaiodimos, 2020; Harding & Manry, 2017; Breuner, et.al, 2016; Goyal, et.al, 2016).

Prior to implementation, there was a luncheon with the participants going over the sexual health assessment (see Appendix A), educational pamphlets (see Appendix B), resource guide (see Appendix C), and also to answer any questions. Patient sick visits were excluded from the sample due to the focused nature of the visits. It was decided that only patients attending their annual wellness visit were allowed to participate, due to the focused nature of acute visits and time constraints. The educational pamphlets provided to the provider were designed by the CDC, and a note was made in the electronic health record (EHR) by the provider if given to the patient (See Appendix B). A resource guide of free STI testing sites in the surrounding area was also given during this luncheon, this could be used by the provider or given to the patient. If these were handed out, they were also noted in the chart and measured as supporting data (See Appendix C). This office uses paper surveys, so the SHA questionnaire was added to the clipboard beneath the PHQ-9 to be filled out by the patient while waiting to be seen by the provider, and was then scanned into the patients chart after being reviewed by the provider. This became standard practice for the office during the implementation phase of this project.

A post implementation chart review was completed on all patients aged 15 and over who came in during the 3-month implementation period for wellness visits to see if sexual histories were increased with the use of the assessment.

Study of the Intervention

The primary objective was implemented by utilizing the sexual health assessment questionnaire, therefore increasing screening, and education of STIs in patients age 15 and older coming in for their annual wellness exam. The secondary objectives of increasing the number of STI screenings, and education were then followed up on if prompted by the answers in the assessment. The primary and secondary project outcome measures were met. At the end of the project the findings were presented to the stakeholder, so that they may continue to sustain the implementation process and comply with guidelines in sexual health history, screening, and education.

Measures

Demographics

The demographics collected both in the pre-and post-implementation phases were age, race, gender, and marital status. For confidentiality, all patient demographics and SHA responses were de-identified and directly stored into a secure password protected laptop. All data was de-identified.

Sexual Health Assessment

Descriptive statistics were performed on data to discover if the SHA questionnaire gathered more sexual history during implementation compared to prior. Chi square tests of independence, and Fisher exact tests were performed on completed assessment data to analyze if there was a relationship between certain questions and prompted STI screenings and education.

STI Screenings

While reviewing patient charts, if the sexual health assessment was used, it was also recorded if an STI screening (test) was ordered and if the provider gave out a STI free testing site resource guide (see Appendix C) during the office visit. Only charts on patients coming in for their wellness visit were reviewed. Patients coming in for acute STI complaints, specific STI screenings, or other sick complaints were excluded.

STI education

Data was collected on whether the SHA prompted education, and if any STI educational handouts were given during the visit.

Data Analysis

Descriptive statistics were used to illustrate the patient demographics and the project's frequency. The sexual health assessment questionnaire was used to facilitate an understanding of the patient's level of risk, identify the need for screenings or vaccinations, and offer appropriate counseling. Data collected was securely entered into Intellectus ® software using inferential statistics. Pre and post implementation data were gathered from the patient's chart to compute the statistics. A statistical analysis was done before implementation and at the end of the allotted 3-month intervention.

A Chi-Square test of Independence was conducted to examine the primary objective and descriptive statistics for the secondary objective measures. The variables were screening and education. The Chi-Square statistical test determined that there was a significant relationship that exists between the variables prompted by the SHA responses in questions four, five, and seven respectively. There was a significant increase in more comprehensive sexual health assessments performed during annual wellness exams.

Ethical Considerations

The QI project was approved by the Institutional Review Board (IRB) at Lenoir-Rhyne University in Hickory, North Carolina. The QI project was completed at a primary care office in southwestern North Carolina. Patients whose charts were reviewed remained anonymous and no identifiable data was released. A non-signature consent form was obtained from all participants (see Appendix D). Health Insurance Portability and Accountability Act (HIPPA) guidelines were abided by during the course of this project. There was no funding for this data collection.

Limitations

Per the guidelines of the health care system, patients had to be notified that the SHA questionnaire was part of a DNP QI project and optional to fill out. Therefore, not all patients that were eligible to be included in the project had sexual history data taken which led to a smaller sample size.

Results

Demographics

The most frequently observed category of Pre- implementation Marital Status was Married (n = 34, 49.28%). The most frequently observed category of Post- implementation Marital Status was Married (n = 45, 65.22%). The most frequently observed category of Pre- implementation Race was White (n = 54, 78.26%). The most frequently observed category of Post-implementation Race was White (n = 57, 82.61%). The most frequently observed category of Pre- implementation Gender was Female (n = 41, 59.42%). The most frequently observed category of Post- implementation Gender was Female (n = 58, 84.06%). Frequencies and percentages are presented in Table 1.

Table 1*Demographics for Pre-and Post- Implementation*

Variable	<i>n</i>	%
Pre-Marital Status		
Married	34	49.28
Single	28	40.58
Single	1	1.45
Post-Race		
White	57	82.61
Black	10	14.49
Hispanic	2	2.90
Pre-Race		
White	54	78.26
Black	8	11.59
Hispanic	1	1.45
Post-Marital Status		
Single	24	34.78
Married	45	65.22
Pre-Gender		
Male	22	31.88
Female	41	59.42
Post-Gender		
Female	58	84.06
Male	11	15.94

Note. *N* = number of participants in each category, with the total number of participants equaling 69. Due to rounding errors, percentages may not equal 100%.

Utilization of Sexual Health Assessments during Annual Wellness

Frequencies and percentages were calculated for completed assessment and declined assessment. There were a total of 69 patients that met the criteria for this project, of that number

31 agreed to fill out the sexual health assessment (SHA) as seen in Table 2. A total of 44.93% of patients participated in filling out the SHA.

Table 2

Frequency of Completed vs. Declined assessments

Variable	<i>n</i>	%
Completed Assessment		
No	38	55.07
Yes	31	44.93
Declined Assessment		
Yes	38	55.07
No	31	44.93

Note. *N* = number of participants in each category, with the total number of participants equaling 69. Due to rounding errors, percentages may not equal 100%.

Comparing Sexual Health Information

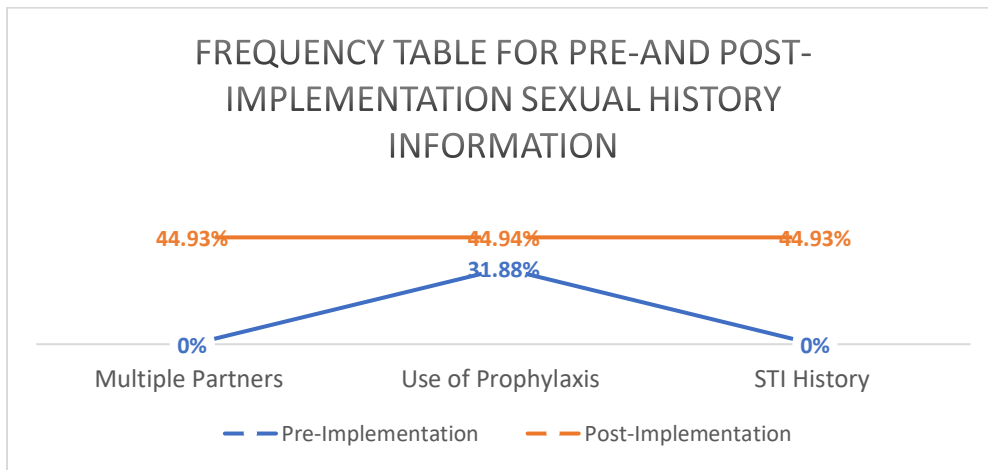
Frequencies and percentages were used to compare sexual health information that was on file prior to implementation, and then post-implementation. Figure 1 analyzes the total study group of 69 patients, looking at Pre-implementation patient history on Multiple Partners, Use of Prophylaxis, and STI History which answers the sexual health assessment (SHA) question four, five, and seven respectively. SHA question four asks about a history of multiple partners; question five asks about prophylaxis use, and question seven asks about the patient and their partner’s history of STIs. The full version of the sexual health assessment questionnaire can be found in Appendix A.

After project implementation, a rise in documentation of multiple sexual partners was noted at 45.33% compared to no information on file for any patient’s pre implementation.

Information on prophylaxis use was 44.94% compared to 31.88% on file pre-implementation. There was no social history recorded for sexually transmitted infections of partners or themselves prior to implementation, post-implementation there was 44.93% documented (See Figure 1). This data, which was ran using descriptive statistics, showed a significant rise in sexual health information gathered with the use of the sexual health assessment questionnaire.

Figure 1

Sexual History Information Recorded in Patients Chart



Note. The pre-implementation data for multiple partners and STI history was not on file, therefore is represented at 0%. Only charts used in this study were recorded for analyzation.

Sexual Health Assessment Results

The data sample of active participants was extracted and analyzed using Chi- Square tests of independence and Fisher exact tests to determine if there was a relationship between the SHA responses and STI screening and education. Overall, from the 31 patients who completed the assessments 32.26% received STI education and 19.35% received STI testing (See Table 3).

Table 3
STI Testing ordered and Education Given

Variable	<i>n</i>	%
STI Education Given		
No	21	67.74
Yes	10	32.26
STI Testing Ordered		
No	25	80.65
Yes	6	19.35

Note. N = number of participants in each category, with the total number of participants equaling 31. These are derived from the number of participants who filled out the assessment. Due to rounding errors, percentages may not equal 100%.

The results of the Chi-square test of independence were significant based on an alpha value of .05, $\chi^2(2) = 13.84$, $p < .001$, suggesting that ordering of STI Testing and SHA question four on multiple sexual partners are related to one another (see Figure 2). The results of the Fisher exact test were also significant based on an alpha value of .05, $p = .027$, suggesting that STI education given and SHA question four on multiple sexual partners are related to one another (see Table 4). Either on question four patients could answer yes, no, or I am not sure. Positive “yes” responses on question four related to a history of multiple partners led to an increase in STI testing and education.

Table 4

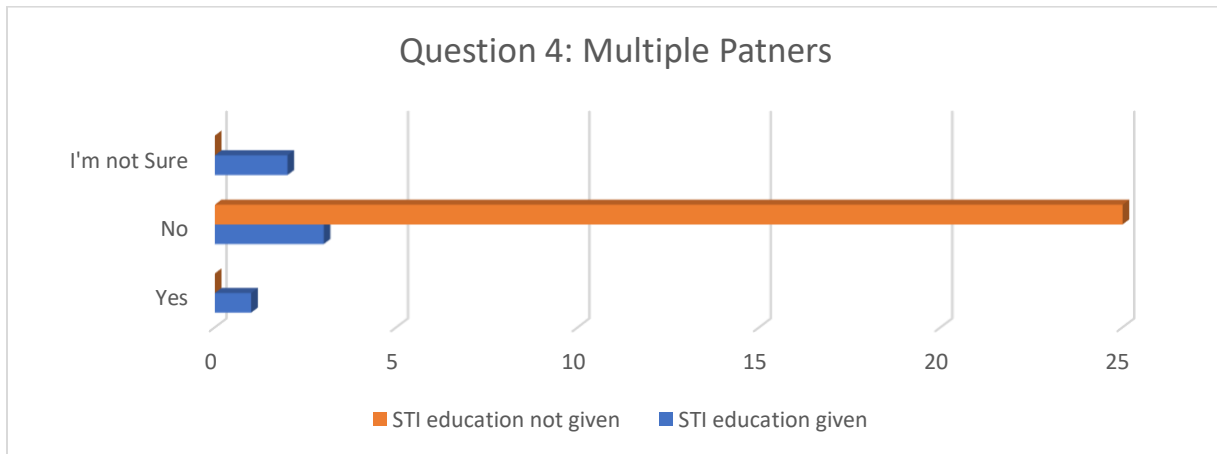
Multiple Sexual Partners by Patient and/or Partner(s) and STI Testing

Multiple partners	STI Testing Ordered		<i>p</i>
	No	Yes	
Yes	0	1	.004
No	25	3	
I'm not sure	0	2	

Note. This table is looking at the relationship between the “Yes” value of STI ordered and the responses given on multiple partners. *p* value is based on Chi Square of independence, with a value greater than .001 showing that the answers to this question were related to STI tests being ordered.

Figure 2

Multiple Sexual Partners by Patient and/or Partner(s)



Note. The X-Axis values represent the number of participants in each category, with the total number of participants equaling 31. These are derived from the number of participants who filled out the assessment.

A Chi-square Test of Independence was conducted to examine whether SHA question five on use of prophylaxis and STI Testing Ordered were independent. The results of the Chi-square test were not significant based on an alpha value of .05, $\chi^2(2) = 5.05$, $p = .080$, suggesting that question five on use of prophylaxis and STI testing ordered could be independent of one another (see Table 5). A Fisher's exact test was conducted to examine whether question five on use of prophylaxis and STI education given were independent. The results of the Fisher exact test were significant based on an alpha value of .05, $p < .001$, suggesting that the patients' lack of prophylaxis use and STI education given are related to one another (See Figure 3). Question five, the use of prophylaxis with regards to condom use, was answered either always, sometimes, rarely, or never. There were not any "rarely" responses noted in the assessments. Positive "never" or "sometimes" responses on prophylaxis use resulted in an increase in STI screening and education.

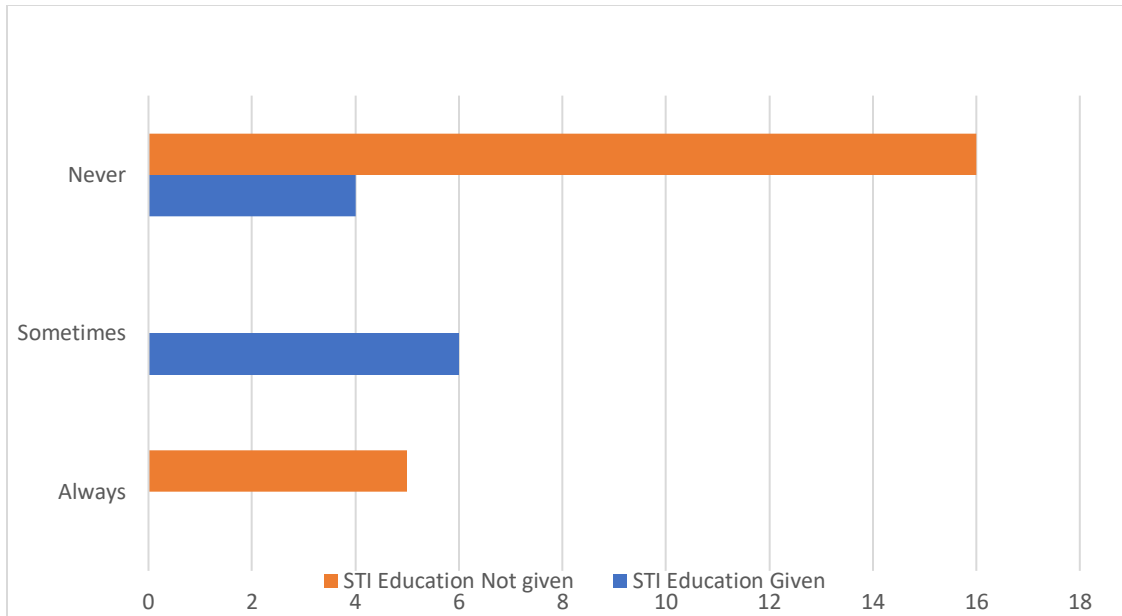
Table 5
Use of Prophylaxis with Condoms by patient and/or partner(s)

Use of Prophylaxis	STI Testing Ordered		χ^2	<i>df</i>	<i>p</i>
	No	Yes			
Always	5	0	5.05	2	.080
Sometimes	3	3			
Never	17	3			

Note. The total number of participants was 31. These are derived from the number of participants who filled out the assessment. This table is looking at the relationship between the "yes" STI ordered value and the responses from "Use of Prophylaxis".

Figure 3

Use of Prophylaxis and STI Education



Note. The X-Axis values represent the number of participants in each category, with the total number of participants equaling 31. These are derived from the number of participants who filled out the assessment.

A Fisher's exact test was conducted to examine whether question seven on history of STI transmission in the patient and/or in current partner(s) and STI Testing Ordered were independent. The results of the Fisher exact test were significant based on an alpha value of .05, $p < .001$, suggesting that question seven on history of STI transmission in the patient and/or in current partner(s) and STI Testing Ordered are related to one another (see Table 6). A Chi-square Test of Independence was conducted to examine whether question seven on history of STIs and STI Education Given were independent. Patients could answer either yes, no, or I am not sure. The findings of these tests could potentially have been affected by the marital status of participants answering the question (see Figures 5 and 6). Positive “yes” and “I’m not sure”

responses on questions regarding past history of STIs resulted in an increase in screening and education (See Table 6 and Figure 4).

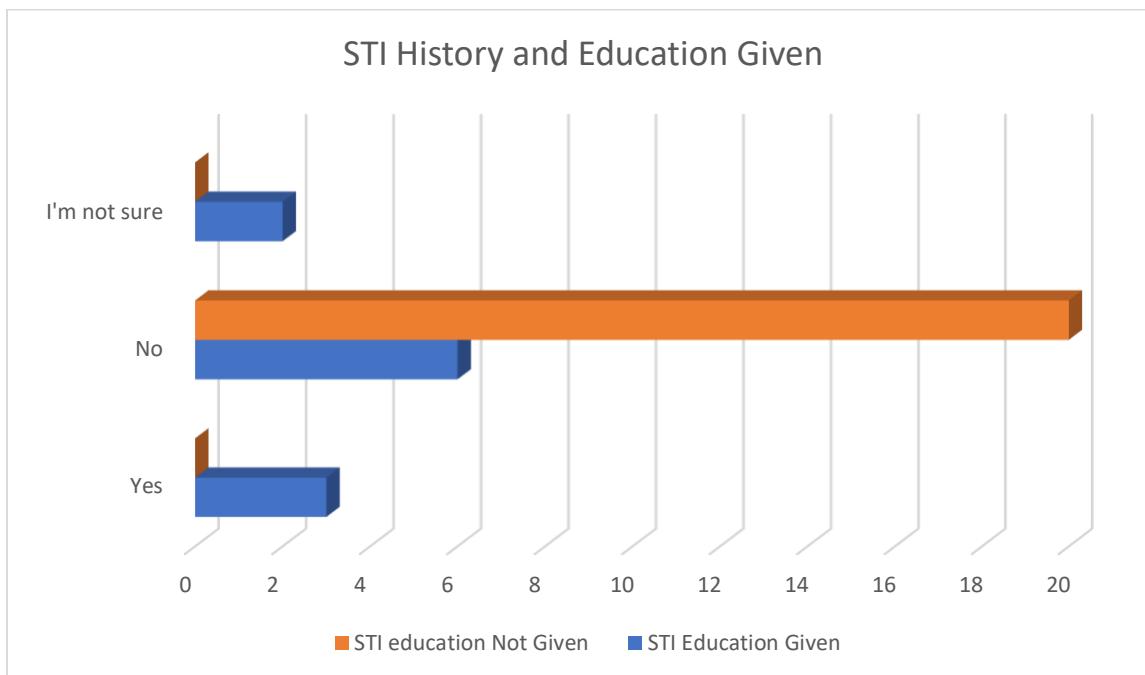
Table 6
History of STI transmission in the patient and/or in current partner(s)

History of STI	STI Testing Ordered		<i>p</i>
	No	Yes	
Yes	0	3	< .001
No	25	2	
I'm not sure	0	1	

Note. This table is looking at the relationship between the “Yes” value of STI ordered and the responses given on history of STI transmission. These responses were analyzed based on the total 31 participants who filled out the assessment.

Figure 4

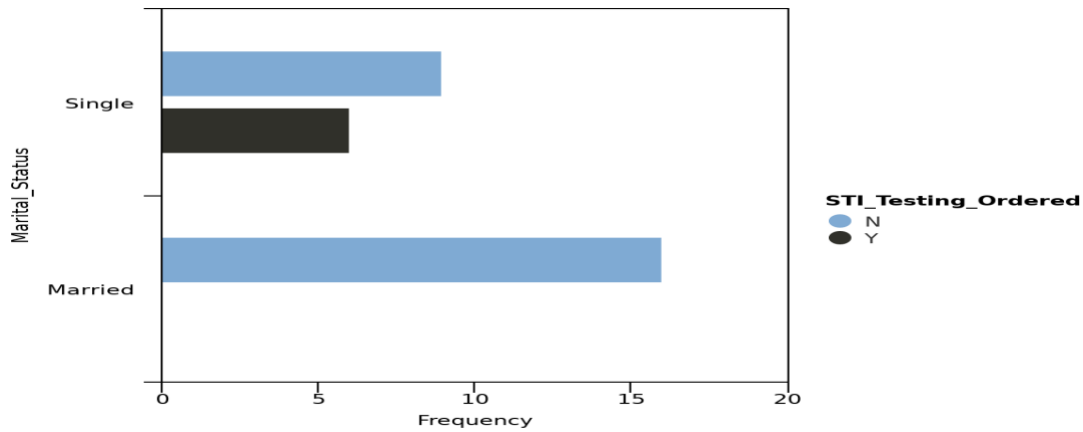
History of STI Transmission in the patient and/or current partner(s) and STI Education Given



Note. The X-Axis values represent the number of participants in each category, with the total number of participants equaling 31. These are derived from the number of participants who filled out the assessment.

Figure 5

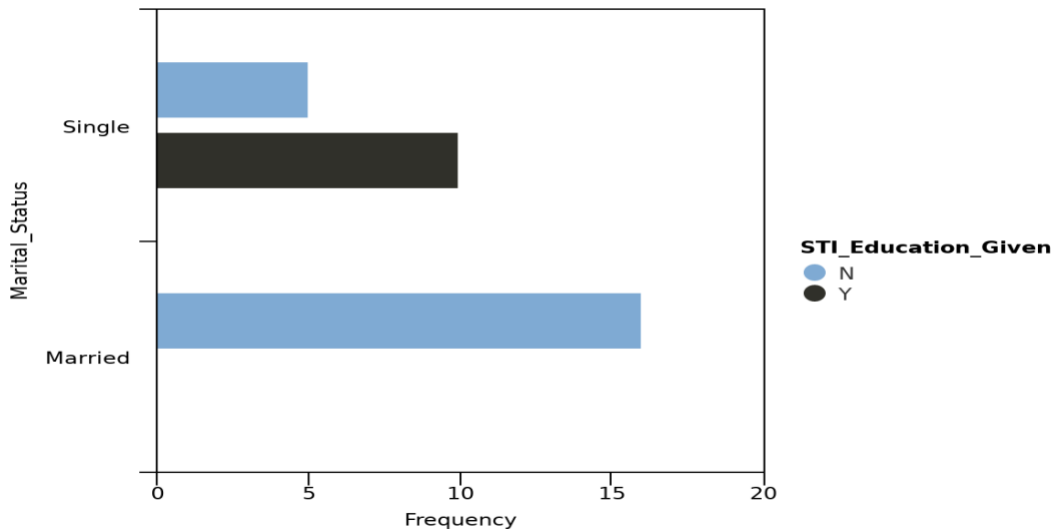
Marital Status and STI Testing Ordered



Note. The X-Axis values represent the number of participants in each category, with the total number of participants equaling 31. These are derived from the number of participants who filled out the assessment. N = No testing ordered, Y= Yes, STI testing was ordered.

Figure 6

Marital Status and STI Education Given



Note. The X-Axis values represent the number of participants in each category, with the total number of participants equaling 31. These are derived from the number of participants who filled out the assessment. N = No education given, Y= Yes, education was given.

Recommendations

In order to gain more comprehensive histories post- implementation, the sexual health assessment (SHA) will need to be incorporated into standard practice by the health care facility. This would make the project sustainable and ensure sexual history taking consistently. The sexual health assessment should also be inserted into the EHR (electronic health record) system, either as a separate template or a dot phrase that can easily be inserted into the chart. This allows either the provider or the medical assistant to gather the information in a timely and efficient manner.

Conclusion

A social determinant of health goal set forth by Healthy People 2030 is to reduce sexually transmitted infections and their complications while improving access to quality STI care (Healthy People, 2023). While this is a sensitive topic, it is also a national health issue that needs to be addressed (CDC, 2021d). Supporting the CDC's guidelines and 5 P model recommendations, the questions asked in the sexual health assessment were proven to lead to more comprehensive sexual history taking, increased STI screening and STI education. The evidence suggests utilization of this sexual health assessment can help reach the STI prevention goals set forth by Healthy People 2030 and the CDC in primary care.

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Appendix A

Sexual Health Assessment

1. Are you currently or have you had sex of any kind? (vaginal, oral , anal)

Yes No

2. What type of sexual activity do you engage in? (select all that apply)

Anal Oral Vaginal

3. What is/are the gender(s) of your partner(s)? select all that apply

Male Female Transgender

4. Do you or your partner(s) currently have other partners?

Yes No I'm not sure

5. How often do you use condoms?

Always Sometimes Rarely Never

6. Have you or your partner(s) ever injected drugs?

Yes No I'm not sure

7. Have you or any of your partner(s) ever had an STI (Sexually Transmitted Infection)?

Yes No I'm not sure

8. How important is it for you to prevent pregnancy for you or your partner(s)?

Extremely Important Moderately Important Not important at all

Am I at risk for a Sexually Transmitted Infection?



Scan the QR code above to learn more

Reference: <https://www.cdc.gov/std/treatment-guidelines/clinical-risk.htm>
<https://www.plannedparenthood.org/learn/stds-hiv-safer-sex>


Appendix B

Educational Pamphlets

THE LOWDOWN ON HOW TO PREVENT SEXUALLY TRANSMITTED DISEASES

Practice Abstinence


The surest way to avoid STDs is to not have sex.



This means not having vaginal, oral, or anal sex.

Have Fewer Partners

Agree to only have sex with one person who agrees to only have sex with you.



Make sure you both get tested to know for sure that neither of you has an STD. This is one of the most reliable ways to avoid STDs.

Talk With Your Partner

Talk with your sex partner(s) about STDs and staying safe before having sex.

Let's both get tested together!


Why take a chance when we can know for sure?

It might be uncomfortable to start the conversation, but protecting your health is your responsibility.

CDC estimates there are **MILLIONS** of new STD infections in the United States each year.

Anyone who is sexually active can get an STD.


Some groups are more affected by STDs and their outcomes




Use Condoms

Using a condom correctly every time you have sex can help you avoid STDs.

Condoms lessen the risk of infection for all STDs. You still can get certain STD infections, like herpes or HPV, from contact with your partner's skin even when using a condom.



Most people say they used a condom the first time they ever had sex, but when asked about the last four weeks, less than a quarter said they used a condom every time.




Get Vaccinated

The most common STD can be prevented by a vaccine.

The HPV vaccine is safe, effective, and can help you avoid HPV-related health problems like genital warts and some cancers.

Who should get the HPV vaccine?




All boys and girls ages 11 to 26, but the vaccine can start at age 9

Everyone through age 45 years, if not vaccinated already

Get Tested

Many STDs don't have symptoms, but they can still cause health problems.



The only way to know for sure if you have an STD is to get tested.

The Good News

STDs **ARE** preventable. There are steps you can take to keep yourself and your partner(s) healthy.

Here's How You Can Avoid Giving or Getting an STD:









View Infographic Online at: www.cdc.gov/std/prevention/lowdown/

If You Test Positive...

Getting an STD is not the end! Many STDs are curable and all are treatable.

If either you or your partner is infected with an STD that can be cured, both of you need to start treatment immediately to avoid getting re-infected.

YOUR GUIDE TO UNDERSTANDING THE MOST COMMON SEXUALLY TRANSMITTED INFECTIONS (STIs)

STI	What's the story with these STIs?	TREATMENT
	<p>BACTERIAL VAGINOSIS</p> <p>Call me BV for short. Although my actual cause is still unknown, an imbalance of vaginal bacteria sometimes brought on by douching, not using condoms during sex, or new or multiple sexual partner(s) can increase your chances of getting me. You can expect me to cause an off-white vaginal discharge with a fishy smell or nothing at all. I increase your risk of getting some other STIs.</p>	 <p>TREATABLE W/ ANTIBIOTICS</p>
	<p>CHLAMYDIA</p> <p>I'm one of the most common STIs and affect people under age 25 at a high rate. Most women and men who catch me don't have symptoms so they don't know they have me and infect other people. I can cause serious problems like pelvic inflammatory disease (PID - read about PID on the next page), infertility and tubal pregnancy. Women under age 25 and men who have sex with men (MSM) should be tested at least yearly for me.</p>	 <p>TREATABLE W/ ANTIBIOTICS</p>
	<p>GENITAL WARTS</p> <p>I'm caused by certain strains of HPV (read about HPV on the next page). I look like small, flesh-colored bumps that cluster together at the opening of the vagina or anus or on the penis and sometimes itch. There is a vaccination available to help prevent me.</p>	<p>Treatable with prescription creams, surgery, laser or freezing procedures.</p>
	<p>GONORRHEA</p> <p>Does the CLAP sound familiar? That's my nickname. Men who have me may have burning when they pee and yellow discharge from their penis. Women usually don't know they have me. Men who have sex with men (MSM) are at high risk of catching me. Women under age 25 and MSM should be tested at least yearly for me. Like Chlamydia, I can cause serious problems, like PID, tubal pregnancy and infertility.</p>	 <p>TREATABLE W/ ANTIBIOTICS</p>
	<p>HERPES SIMPLEX VIRUS (HSV-1 & HSV-2)</p> <p>I can be spread by touching another person who already has me, even if the person has no symptoms; this is called viral shedding. You can also become infected by touching one of my sores or the body fluids of an infected partner. After my first infection, I may come back from time to time in the form of small clusters of sores.</p>	<p>This infection persists for life, BUT antiviral medication is available to help decrease transmission to partner(s) and to treat outbreaks.</p>

PROTECT YOURSELF! These sexually transmitted infections are spread by unprotected oral, vaginal, &/or anal sex; OR contact with skin, bodily fluids, or sores of an infected person.

Appendix C

Free STI Testing Resources

FREE STI TESTING SITES

<p><u>Gaston County</u></p> <p>Gaston County DHHS Adult Health STD/HIV Clinic 991 W Hudson Blvd Gastonia, NC 28052 United States 704-853-5006 STD appointments are available Monday, Wednesday, and Friday 8 - 10:30 and Tuesday and Thursday 1-3:30. Patients will be offered an appointment within ONE workday of their request. Appointment Only</p> <p>Highland Health Center 609 N Highland St, Gastonia, NC 28052 (704) 833-1550 STD appointments are available Monday, Wednesday, and Friday 8 - 10:30 and Tuesday and Thursday 1-3:30. Patients will be offered an appointment within ONE workday of their request. Appointment Only</p> <p>Teen Wellness Center Ages 12-19 Location one: 609 N Highland St, Gastonia, NC 28052 Location Two: 991 W Hudson Blvd Gastonia, NC 28052 Medicaid/insurance/Free/low cost care 704-853-5009 By appointment only</p> <p><u>Lincoln County</u></p> <p>Lincoln County Health Department 200 Gamble Dr Lincolnton, NC 28092 United States (704) 735-3001 By appointment only Closed daily from 11:30am-12:30pm</p>	<p><u>Mecklenburg County</u></p> <p>Mecklenburg County Health Department Northwest Clinic A 2845 Beatties Ford Rd. Charlotte, NC 28216 Mon/Tue/Thu/Fri 8am–11am & 1pm–4pm Wed 10am–1pm & 3pm–6pm Walk ins available Treatment available 704-336-6500</p> <p>StarMed – Eastland 5344 Central Ave Charlotte, NC 28212 3rd Tuesday of the month 10-12pm</p> <p>Atrium Health – Northpark 251 Eastway Drive Charlotte, NC 28213 Tuesdays 6-8pm Walk ins available</p> <p>R.A.I.N. 601 E. 5th St. Suite 470 Charlotte, NC 28216 Wednesdays 5-7pm Walk in Testing available</p> <p>Lake Norman Community Health Clinic 14230 Hunters Road Huntersville, NC 28078 2nd Tuesday of the month 11-12:30pm (704) 316-6611 Appointment only</p> <p>Goodwill CCHC – West 5301 Wilkinson Blvd Charlotte, NC 28208 2nd/4th Friday of the month 1:30-3:30pm (704) 316-6561 Appointment only</p> <p>StarMed – Freemore 4001 Tuckaseegee Rd. Charlotte, NC 28208 1st Tuesday of the month 10-12p</p> <p>Walgreens 1500 3rd St. Charlotte, NC 28204 3rd Thursday of the month 10 – 12 PM Appointment Only (704) 526-4651</p> <p>Mecklenburg County Health Department Southeast Clinic A 249 Billingsley Rd. Charlotte, NC 28211 Mon/Tue/Thu/Fri 8am–11am & 1pm–4pm Wed 10am–1pm & 3pm–6pm Appointments Only Treatment available</p>
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Appendix D

Non-Signature Consent Form

No Signatures
Informed Consent

PI Name: Alyssa Clay
PI Email Address: Alyssa.clay@my.lr.edu
PI Phone Number: (828)550-7319

Faculty Advisor: Dr. Carla Fallas
Phone Number: (980) 429-0627
Email Address: Carla.Fallas@lr.edu

Purpose:

You are invited to participate in a research study. The purpose of the research is to improve adherence to guidelines set by the CDC on sexual health assessment in primary care settings.

Procedures:

If you choose to participate, you will be asked to will utilize the Sexual Health Assessment template that is placed in their Electronic Health Records when doing annual wellness visits with patients aged 15 and over. Educational pamphlets made by the Center for Disease Control will be given to participants, in order to have additional educational materials to hand out if needed. Also a resource guide for free STI testing sites in their area will be given, if patients are unable to afford testing at the primary care practice.

The study in total will last three months.

Risk:

The study involves no foreseeable risks or harm to you beyond those of everyday life.

If your participation in this research has caused you to feel uncomfortable in any way, or if our research prompted you to consider personal matters about which you are concerned, we encourage you to take advantage of the confidential counseling services offered in your area for low-cost. Pathways Mental Health is a low-cost counseling service in Gaston County, to schedule an appointment please call (704) 867-2361.

Benefits:

Benefits for the participant will be having a pre-arranged template they can easily add to their wellness exam charting. Participants will have a constant standard template to help guide their sexual history portion of their wellness exam.

Right to Ask Questions:

You may ask questions about the research or participation at any time. The PI, Alyssa Clay, can be contacted at phone number: (828) 550-7319, and email: alyssa.clay@my.lr.edu, the faculty advisor Dr. Carla Fallas can be reached at phone: (980) 429-0627, and email: Carla.Fallas@lr.edu Should you have questions regarding your rights as a research participant, or wish to obtain information, ask questions, or discuss with someone other than the researcher(s), please contact the Chair of the IRB at Lenoir-Rhyne University, Randy Bergman @ Randall.bergman@lr.edu or 828-328-7788.

Confidentiality:

All information from the project will be stored on a password-protected computer and the paper forms will be shredded if applicable. Data collected during implementation will consist of chart reviews on all patients aged 15 and older seen during project implementation for an annual wellness visit, to measure the implementation of the Sexual Health assessment, and if any educational tools were given. Retrospective chart review will be done three months prior to implementation, and will include demographic data, and whether sexual health assessments were done on patients aged 15 and above during annual wellness visits. Demographic data including age, gender, and race will be collected on all patients, no personal patient or participant information will be used in data reporting. All data collected from the survey will be stored for 3 years and then deleted/destroyed.

Right to Withdrawal:

Your participation in this study is voluntary and you may withdraw at any time prior to submission of your data. You may refuse or discontinue participation at any time without consequence or prejudice.

Consent:

I have read the information describing this study. I understand I am free to withdraw from this study at any time without penalty. By completing this survey am verifying that I am 18 years of age or older and giving my consent to participate in this research.