Sexual Health History Screening Implementation for Providing Quality Clinical Services in Primary Care: A Quality Improvement Project

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INTRODUCTION

For the past six years, the US national incidence rates of STI/HIV have continuously surpassed the all-time high reached the previous year (CDC, 2021b). While the CDC recommends obtaining a sexual health history at initial visits, routine preventive examinations, and acute visits with suspected reproductive, genital, or urologic issues, primary care providers rarely prioritize sexual health and high-risk behavior assessments among recent sexually active people. Sexual health history and high-risk behavior assessment completion rates averaged 23-47% during a review of EMR recent healthcare visits (Fredericksen et al., 2018; CDC, 2021).

Due to the medical center's location in the southeastern region of the United States, the demographics served, and its association with a substance use disorder (SUD) treatment center, the private primary care practice's (PPCP) patient population bears a disproportionately higher STI/HIV burden. Currently, the PPCP lacks a standardized sexual health history-taking tool, a clinical standard of practice policy, or any similar screening process for addressing sexual health and STI/HIV concerns, in addition to the limited existence of clinical guideline recommendations—all impeding the PPCP from fulfilling quality preventative care measures of reproductive and sexual health.

SIGNIFICANCE

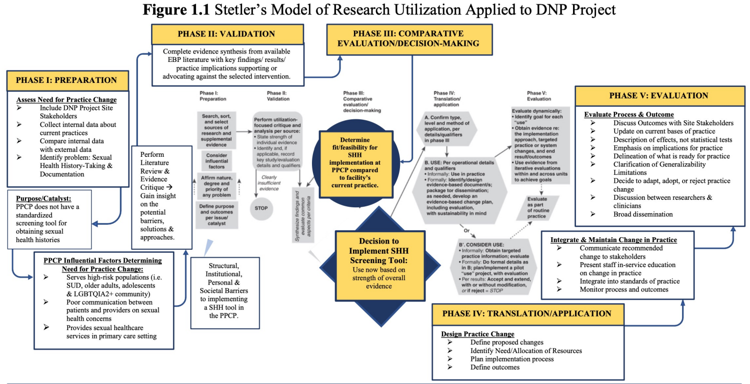
Purpose: With the US reporting 20 million newly diagnosed STI/HIV cases annually, clinical guideline compliance and EBP recommendation implementation necessitate provider practice changes for high-quality routine sexual and reproductive health services. The quality improvement (QI) project's purpose was to improve sexual health history-taking (SHH) and documentation in a private primary care practice (PPCP) serving high-risk populations.

PROBLEM STATEMENT

Aims: The DNP project aims to determine the effect of conducting a 30-minute educational session and implementing the CDC's 5Ps (Partners, Practices, Protection, Past History of STIs, and Prevention of Pregnancy) on a primary care provider's (PCP) clinical guideline adherence to SHH recommendations and documentation with patients presenting for annual wellness exams, well-woman exams, family/contraceptive counseling, or acute urogenital complaints in an urban, southeastern PPCP.

METHODOLOGY

Figure 1.1 Stetler's Model of Research Utilization Applied to DNP Project


PHASE I: PREPARATION
Assess Need for Practice Change
Include DNP Project Site Stakeholders
Collect internal data about current practices
Compare internal data with external data
Identify problem: Sexual Health History-Taking & Documentation
Purpose/Catalyst:
PPCP does not have a standardized screening tool for obtaining sexual health histories
PPCP Influential Factors Determining Need for Practice Change:
Serves high-risk populations (i.e. SUD, older adults, adolescents & LGBTQIA2+ community)
Poor communication between patients and providers on sexual health concerns
Provides sexual healthcare services in primary care setting
Perform Literature Review & Evidence Critique → Gain insight on the potential barriers, solutions & approaches.
Structural, Institutional, Personal & Societal Barriers to implementing a SHH tool in the PPCP.
PHASE II: VALIDATION
Complete evidence synthesis from available EBP literature with key findings/ results/ practice implications supporting or advocating against the selected intervention.
PHASE III: COMPARATIVE EVALUATION/DECISION-MAKING
Determine fit/feasibility for SHH implementation at PPCP compared to facility's current practice.
Decision to Implement SHH Screening Tool:
Use now based on strength of overall evidence
PHASE IV: TRANSLATION/APPLICATION
Design Practice Change
Define proposed changes
Identify Need/Allocation of Resources
Plan implementation process
Define outcomes
Integrate & Maintain Change in Practice
Communicate recommended change to stakeholders
Present staff in-service education on change in practice
Integrate into standards of practice
Monitor process and outcomes
PHASE V: EVALUATION
Evaluate Process & Outcome
Discuss Outcomes with Site Stakeholders
Update on current bases of practice
Description of effects, not statistical tests
Emphasis on implications for practice
Delineation of what is ready for practice
Clarification of Generalizability Limitations
Decide to adapt, adopt, or reject practice change
Discussion between researchers & clinicians
Broad dissemination
Phase I: Preparation
Phase II: Validation
Phase III: Comparative evaluation/ decision-making
Phase IV: Translation/ application
Phase V: Evaluation
Search, sort, and select sources of research and supplemental evidence
Consider influential factors
Affirm nature, degree and priority of any problem
Define purpose and outcomes per issue/ catalyst
Perform utilization-focused critique and analysis per source:
• State strength of individual evidence
• Identify and, if applicable, record key study/evaluation details and qualifiers
Clearly insufficient evidence
STOP
Synthesize findings and evaluate common aspects per criteria
A. Confirm type, level and method of application, per details/qualifiers in phase III
B. USE: Per operational details and qualifiers
• Informally: Use in practice
• Formally: Identify/design evidence-based document/s; package for dissemination; as needed, develop an evidence-based change plan, including evaluation, with sustainability in mind
Or
B'. CONSIDER USE:
• Informally: Obtain targeted practice information; evaluate
• Formally: Do formal details as in B; plan/implement a pilot "use" project, with evaluation
• Per results: Accept and extend, with or without modification, or if reject = STOP
Evaluate dynamically:
• Identify goal for each "use"
• Obtain evidence re: the implementation approach, targeted practice or system changes, and end result/outcomes
• Use evidence from iterative evaluations within and across units to achieve goals
Evaluate as part of routine practice

The quality improvement (QI) project implemented a standardized clinical practice change using the Stetler model's practitioner-oriented knowledge translation design. PPCP-employed NPs (n = 3) completed anonymous pre-/post-implementation surveys using SurveyMonkey, received educational resources, and implemented the CDC's 5Ps SHH tool for clinically appropriate patient encounters identified by eligible ICD-10 codes. Athena's Report Builder compiled data on SHH completion/EMR documentation and providers' intervention compliance from 2-weeks before and 2-weeks after implementation.

MEASUREABLE OUTCOMES

- Analysis of the anonymous SurveyMonkey pre-/post-implementation provider survey results to determine any statistically significant differences.
- Comparison between the compiled EMR data of the 2-week period before and the 2-week period after implementation of the SHH tool for any statistically significant difference in provider compliance with SHH completion and EMR documentation for ICD-10 Codes identifying eligible patient encounters.

RESULTS

The pre-implementation provider survey results indicated inconsistent SHH, SHH documentation, and general discomfort with asking patients to discuss sexual health history information. Additionally, the pre-implementation provider survey results demonstrated an unfamiliarity in most providers regarding the use of SHH tools.

The post-implementation survey results indicated providers routinely asked individuals for sexual history information and documented sexual histories more frequently when using the SHH tool. Furthermore, providers felt more comfortable discussing sexual health history information when using the SHH tool's prompted questions. Overall, the survey results indicated providers support implementing the CDC'S 5Ps SHH tool and felt a greater likelihood exists for providers to complete and document sexual health histories in the EMR than without using the CDC'S 5Ps SHH tool.

Table 3.0 Providers' Pre-Implementation & Post-Implementation Survey Results

Question	Response Options	Pre-Intervention (n = 3, %)	Post-Intervention (n = 3, %)
(1) "I feel that sexual health history-taking is not a priority in primary care practice."	Strongly disagree Disagree Neither agree nor disagree Agree Strongly agree	0 1 (33%) 1 (33%) 1 (33%) 0	0 2 (66.7%) 1 (33%) 0 0
(2) "I feel uncomfortable initiating sexual health history discussions with my patients."	Strongly disagree Disagree Neither agree nor disagree Agree Strongly agree	0 2 (66.7%) 0 1 (33%) 0	0 3 (100%) 0 0 0
(3) "I document the patient's sexual health history results in the electronic medical record (EMR)."	Never Rarely Sometimes Usually Always	0 2 (66.7%) 1 (33%) 0 0	0 0 0 3 (100%) 0
(4) "I think using the sexual health history-taking tool will be/was beneficial to my clinical practice and helped guide my diagnosis and treatment of STI/HIV."	Strongly disagree Disagree Neither agree nor disagree Agree Strongly agree	0 1 (33%) 1 (33%) 1 (33%) 0	0 0 0 3 (100%) 0
(5) A. "I already feel confident using sexual health history-taking tools." B. "I felt prepared to use the sexual health history-taking tool after attending the educational session."	Strongly disagree Disagree Neither agree nor disagree Agree Strongly agree	0 2 (66.7%) 1 (33%) 0 0	0 0 0 3 (100%) 0
(6) "The sexual health history-taking tool will be/was helpful in my clinical practice and identify patients' sexual behaviors/risk factors."	Strongly disagree Disagree Neither agree nor disagree Agree Strongly agree	0 0 0 2 (66.7%) 1 (33%)	0 0 0 0 3 (100%)
(7) A. "I will remember to use the sexual health history-taking tool during patient encounters." B. "I will likely keep using the sexual health history-taking tool in my clinical practice."	Strongly disagree Disagree Neither agree nor disagree Agree Strongly agree	0 1 (33%) 1 (33%) 1 (33%) 0	0 0 0 2 (66.7%) 1 (33%)
(8) "Using the sexual health history-taking tool will take/took up too much time during the patient encounter."	Strongly disagree Disagree Neither agree nor disagree Agree Strongly agree	0 0 0 2 (66.7%) 1 (33%)	0 2 (66.7%) 1 (33%) 0 0
(9) What would make it easier to address sexual health consistently and routinely with patients?		1. "Having clear screening guidelines available." 2. "Being more comfortable with discussing sexual histories with patients." 3. "Longer patient encounters."	1. "The CDC's 5Ps helped clarify screening expectations." 2. "No change recommended." 3. "The CDC's 5Ps tool actually sped up encounters while still getting a full sexual history."
(10) What suggestions or comments do you have regarding routine sexual health history-taking in a primary care setting?		1. "It's hard to fit into the short visits." 2. "No suggestions." 3. "No suggestions."	1. "Hard to fit into visits but it does help to have screening guidelines available." 2. "No suggestions." 3. "Keep using the CDC's 5Ps tool."

*EACH PROVIDERS' ANSWER FOR QUESTIONS 9 & 10 IS PAIRED BASED ON THE LIST NUMBER OF PRE-/POST-IMPLEMENTATION SURVEY ANSWER.

Table 1.0 Pre-Implementation & Post-Implementation EMR Review of Sexual Health History Documentation Completion

Eligible ICD-10 Codes for EMR SHH Documentation Review (n = pre-; post-)	Row Totals	Pre-Implementation EMR Review of SHH Documentation (n = 513)		Post-Implementation EMR Review of SHH Documentation (n = 518)	
		YES	NO	YES	NO
ALL Annual Wellness Exam ICD-10 Codes: (n = 108; 120) Z00.0; Z00.0; Z00.00; Z00.01; Z00.12; Z00.121; Z00.129; Z00.8	228	47	61	98	22
ALL Well-Woman Exam ICD-10 Codes: (n = 52; 48) **Cervical** C53.9; D26.0; D06.9; N86; N88.0; N84.1; N88.8; N87.9; N87.0; N87.1; N93.9; R87.619; Z91.89; Z12.4; Z12.72 **Ovary & Adnexa** C56.1; C56.2; N83.0; N83.1; N83.20; N83.29; N83.51; N83.52; N83.53; N83.9 **Menopause** N92.4; N95.0; N95.1; N95.2; N95.8; N95.9	100	6	46	39	9
ALL Family/Contraceptive Counseling ICD-10 Codes: (n = 34; 30) Z30; Z30.0; Z30.01; Z30.09; Z30.011; Z30.012; Z30.013; Z30.014; Z30.015; Z30.016; Z30.017; Z30.018; Z30.019; Z30.02; Z30.09; Z30.4; Z30.40; Z30.41; Z30.42; Z30.43; Z30.430; Z30.431; Z30.432; Z30.433; Z30.44; Z30.45; Z30.46; Z30.49; Z30.8; Z30.9; Z31.5; Z31.6; Z32; Z32.02; Z32.3; Z33; Z33.1; Z70; Z71	64	15	19	22	8
ALL Acute Urogenital Complaint ICD-10 Codes: (n = 259; 264) **Urinary** N30.10; N30.11; N34.3; N39.3; N39.41; N39.46; R30.0; R32; R35.0; R35.8; R39.11; R39.14; R39.15; R39.16; N39.0; N30.01; R31.0; N30.00; N20.0; R82.90; N40.1; N40.0; Z12.5; N52.9 **Pain Syndromes** N94. (4/5/6); N94.0; N94.1; N94.2; N94.810; N94.819; R10.10; R10.2; R10.30; R10.32; R10.33; R51	523	85	174	221	43
ALL STI Exposure/Screening ICD-10 Codes: (n = 60; 56) Z11.3; Z11.4; Z11.59; Z20; Z20.2; Z20.5; Z20.6; Z20.7; Z20.8; Z20.81; Z20.818; Z20.82; Z20.821; Z20.828; Z20.89; Z20.9; Z71.89; Z72.51; A64; A59.9; B20; N34.1; A51; A51.0; A51.1; A51.2; A51.3; A54; A54.4; A56; A57; A60; Z21	116	39	21	46	10
Column Totals	1031	192	321	426	92

Over the four-week project period, a total of n = 1,031 EMR charts [pre-implementation (n = 513)/ post-implementation (n = 518)] were reviewed for SHH completion/EMR documentation. Analysis of eligible encounters' charts showed significant improvement in post-implementation SHH completion/EMR documentation rates (37% in pre-intervention; 82% in post-intervention). The chi-square test findings [X2 (1, N = 1031) = 43.637, p < .01] displayed a significant relation between the variables, indicating an increased likelihood of sexual health history EMR documentation by implementing the CDC'S 5Ps SHH tool.

LIMITATIONS

The following limit the study's generalizability: (a) PPCP's sample size (n = 3); (b) geographical location; (c) demographics served; and (d) association with a SUD treatment center.

IMPLICATIONS FOR PRACTICE

The CDC's 5Ps availability for clinically relevant encounters increased PPCP providers' completion and frequency of sexual health history EMR documentation compared to the pre-implementation documentation rates while promoting the expansion of high-quality sexual health services—decreasing the likelihood of adverse outcomes. With further research and SHH tool implementation, sexual health information acquisition can become a joint effort to improve sexual and reproductive healthcare services while reducing STI/HIV incidence through clinician-patient collaboration. The CDC's 5Ps offer a simple, cost-effective SHH tool for providing a patient-centered approach to delivering positive, nonjudgmental sexual healthcare services. By utilizing a brief, clinically relevant measure for evaluating sexual health risks and behaviors, providers can better facilitate difficult conversations with patients, promote sexual health awareness, and improve STI/HIV screening/treatment rates in a private primary care practice setting.

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PROCESS

STEP 1

After receiving the SurveyMonkey platform's link to the pre-survey via secure email address, the NPs completed a pre-/post-implementation survey, received a 30-minute educational session with additional resources, and implemented the CDC's 5Ps SHH tool for clinically appropriate patient encounters over the DNP project's two-week implementation period. The pre-implementation provider survey consisted of 10 items: eight questions using the 5-point Likert design and two free-response questions. All responses remained anonymous by each provider choosing a three-number sequence to identify themselves by on the free response questions and using that same identifier for both surveys.

STEP 2

The EMR's Athena Report Builder function compiled the project data, including the ICD-10 Codes for eligible patient encounters, SHH completion with EMR documentation, and each provider's compliance with the intervention for both the 2-week period before and the 2-week period after implementation of the SHH tool. The documented ICD-10 codes distinguished the number of screened eligible patients from screened individuals presenting for visits with chief complaints other than annual wellness exams, well-woman exams, family/contraceptive counseling, or acute urogenital complaints. All data on the providers' compliance remained anonymous by the DNP project site champion (Edward Thompson, FNP) providing the data labeled only by each provider's three-number sequence selected to identify themselves by on the free-response questions, as well as compiling the Athena Report Builder EMR data without patient identifiers.

STEP 3

The data collected from the EMR's Athena Report Builder included the visit's chief complaint/visit type, whether the sexual health history was completed/updated, and if it was documented in the EMR. Charts with positive findings (i.e., those with complete/updated/documented sexual health histories) were identified as "yes" on the data collection tool to indicate the provider completed these tasks. The findings were also considered "positive" if the patient chose not to provide a response or stated a preference not to answer a question and labeled "yes" on the data collection tool. Charts with negative findings (i.e., those without complete/updated/documented sexual health histories) were identified as "no" on the data collection tool to indicate the provider did not complete these tasks.

STEP 4

At the end of the two-week implementation period, the NPs were sent the link to the post-survey via email using SurveyMonkey as the survey platform. The post-implementation provider survey consisted of 10 items: eight questions using the 5-point Likert design and two free-response questions. All responses remained anonymous by each providers' three-number sequence (selected to identify themselves by on the free-response questions of the pre-survey) being used on free-response questions as their identifier for both surveys. The subsequent data collected and reported by SurveyMonkey anonymously was analyzed to determine any statistically significant difference between the pre-/post-implementation survey results. Additionally, the EMR's compiled data containing the ICD-10 Codes for eligible patient encounters, SHH completion with EMR documentation, and providers' compliance with the intervention for both the 2-week period before and the 2-week period after implementation of the SHH tool were evaluated for any statistically significant difference in provider compliance.