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Sexual Assault Program HIV Non-occupational Post-Exposure Prophylaxis Practices: A Survey of Sexual Assault and Forensic Nurse Examiner Program Coordinators

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Abstract

This cross-sectional study describes Sexual Assault Nurse Examiner (SANE)/Forensic Nurse Examiner (FNE) program practices related to HIV testing, non-occupational post-exposure prophylaxis (nPEP), and common barriers to offering HIV testing and nPEP. A convenience sample of 174 SANE/FNE programs in the United States and Canada was drawn from the International Association of Forensic Nurses database, and program coordinators completed web-based surveys. Three quarters of programs had nPEP policies, 31% provided HIV testing; and 63% offered nPEP routinely or upon request. Using Chi-square and Fishers' exact tests a greater proportion of Canadian programs had an nPEP protocol (p = .010), provided HIV testing (p = .004), and offered nPEP (p = .0001) than U.S.-based programs. Program coordinators rated providing pre-/post-counseling and follow-up as the most important barrier to HIV testing and medication costs as the most important barrier to providing nPEP. Our results indicate HIV-related services are offered inconsistently across SANE/FNE programs.

Keywords

forensic nursing; HIV post-exposure prophylaxis; non-occupational post-exposure prophylaxis; rape; sexual assault

One in five women in the United States reports being raped during her lifetime (Black et al., 2011). In 2009, more than 125,000 sexual assaults occurred in the United States, with more than 500,000 in Canada in 2004 (Brennan & Taylor-Butts, 2008; Truman & Rand, 2010). In 2010, more than 2,000 persons received sexual assault-related assistance in Canada on a single day (Ford, 2012). Sexual Assault Nurse Examiner (SANE) programs and Forensic

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Nurse Examiner (FNE) programs were created to provide appropriate evidence-based care to patients disclosing a sexual assault. Individual programs often serve patients ages 13 and older, a pediatric only population, or a combination of the two. Currently, there are more than 700 SANE/FNE programs in the United States and Canada (International Associaton of Forensic Nurses [IAFN], 2013).

In 2004, the U.S. Department of Justice published a national protocol for SANE/FNE medical forensic examinations (Littel, 2004). The U.S. Department of Justice protocol was also endorsed by the International Association of Forensic Nursing (IAFN) as part of the training needed for certification as a SANE. The protocol states that post-sexual assault care includes obtaining a forensic history, evaluation for and documentation of traumatic injuries, evidence collection, and provision of pregnancy and sexually transmitted infection (STI) prophylaxis (Linden, 2011; Littel, 2004).

There is evidence that non-occupational post-exposure prophylaxis for HIV (nPEP) may reduce the risk of HIV infection after an exposure by decreasing the amount of HIV in the bloodstream and possibly interrupting infection at the exposure site (Centers for Disease Control and Prevention, [CDC], 2005; Otten et al., 2000). In 2009, more than 50,000 new HIV infections occurred in the United States and Canada (Prejean et al., 2011; Public Health Agency of Canada, 2010). HIV transmission by *consensual* sex in discordant partners has been estimated to be between 0.001% and 0.3% depending on the sex act, as well as individual partner characteristics and stage of HIV infection (De Vincenzi, 1994; Gray et al., 2001). The number of HIV infections resulting from sexual assault is unknown, although cases have been documented in the United States (CDC, 2005). HIV transmission risk specific to sexual assault has not been measured. Similarly, to date, there have been no estimates of the magnitude of decreased risk of HIV infection following nPEP in people who have been sexually assaulted.

The CDC recommends provision of nPEP to patients meeting criteria for a high-risk exposure. High-risk sexual assault exposure is defined as mucous membrane contact with potentially infectious material (e.g., blood, semen) from an assailant *known* to be infected with HIV (CDC, 2005). Guidelines for nPEP following sexual assault vary from province to province in Canada, but nPEP is often recommended following either a high-risk exposure or a moderate-risk exposure (e.g., British Columbia Centre for Excellence in HIV/AIDS, 2009; Government of Alberta, 2008). Moderate-risk exposure occurs when the HIV status of the assailant is unknown. In the United States, the U.S. Department of Justice national protocol has stated that HIV risk should be discussed with all sexually assaulted patients and that offering nPEP should meet or exceed the CDC recommendations (CDC, 2005; Littel, 2004). Currently, there is no system for regulatory oversight of this protocol, including regulation of nPEP following sexual assault.

Through ongoing networking with SANE/FNE program coordinators in the United States and Canada, we have been told that many programs do not offer HIV-related services to sexually assaulted patients for various reasons. Prior surveys of SANE/FNE program coordinators have indicated that approximately 40% of U.S.-based programs offer HIV testing and prophylaxis (Campbell et al., 2006; Ciancone, Wilson, Collette, & Gerson, 2000). However, these data have not been updated in more than a decade and were confined to U.S.-based programs only.

The purpose of our study was to determine the percentage of SANE/FNE programs in the IAFN database that provide services related to HIV testing and offer nPEP to eligible patients. An additional aim was to ask program coordinators to identify and prioritize the barriers to offering HIV testing and nPEP.

Methods

A cross-sectional convenience sample of SANE/FNE program coordinators listed in the IAFN database was electronically surveyed. The IAFN has more than 3,000 members in 22 countries. While most members are registered nurses, associate members are from many related disciplines. In August 2011, the IAFN provided the study team with contact information for more than 500 programs: approximately 85% U.S.-based, 8% Canada-based, and one program each in Australia, England, and Puerto Rico. Seven percent of the programs on the contact list did not identify a location. Program coordinator email addresses were available for all programs.

The program coordinators were emailed and asked to go to a Web link to complete an 18-item online survey (see Table 1); they were informed that completion of the survey would serve as consent to participate. Five persons who received the initial email voluntarily informed the study team they were no longer the program coordinator. Two informed the study team that their SANE/FNE programs had closed. Four former program coordinators sent the study team contact information for the current coordinator. A statewide SANE/FNE coordinator who received the initial study link voluntarily provided the study team with email contacts for 31 individual program coordinators in that state. The study team subsequently sent the survey to these additional coordinators. A total of 537 email addresses were sent the survey link. Of those, 29 addresses bounced back and 5 had blocked receipt of electronic surveys. A total of 503 valid email addresses received the survey.

The survey was open for 6 weeks and weekly email reminders were sent to those who had not yet completed the survey. While the IAFN database listed program coordinator names, responses to the survey could be submitted anonymously. To decrease social desirability bias, program coordinators were instructed that all answers were confidential and not linked to any particular program. The university institutional review board approved our study.

All four authors developed the survey: one content and practice area expert (JD) and three practice experts (DS, BH, JA). Questions were based on anecdotal evidence, as well as prior surveys of SANE program coordinators (Campbell et al., 2006). Utilizing survey skip logic, program coordinators were asked to respond anonymously to a series of up to16 questions about their SANE/FNE programs. Questions 17 and 18 were optional (see Table 1). Program descriptors (Items 1–5) were collected from all participants. Program managers were asked if their programs offered HIV testing, had an nPEP protocol in place, and offered nPEP. The survey was not designed to compare SANE/FNE programs in the United States and Canada. Chisquare analyses and Fisher's exact tests were used to analyze associations between program characteristics and offering nPEP-related services. For the chi-square analysis of questions 6 and 11, the responses *Yes-routinely* and *Yes-upon patient request* were collapsed into a single category of providing the service. Respondents were allowed to skip any question they wished; therefore, not all surveys were returned complete. For any given question, fewer than 10% of responses were missing. All calculations were performed using available data without correction for missing responses.

For questions 8 and 16, program coordinators were asked to rank from *least important* to *most important* barriers to HIV testing and barriers to offering nPEP. The barriers listed in the questions were identified by the study team from prior research (Campbell et al., 2006) and anecdotal evidence. As an exploratory survey, respondents were also given a field to describe other barriers not listed by the study team. This resulted in a number of unique written responses described in the results section.

The volume of qualitative data was unanticipated, necessitating a post-hoc qualitative thematic analysis (Aronson, 1994; Braun & Clarke, 2006) in which all four authors participated. Written responses were first examined to determine whether they fit into a pre-existing category (Aronson, 1994). The remaining written responses were inductively placed into themes (Braun & Clarke, 2006). Each author individually coded the written responses, and then the group reviewed all coding to finalize the decisions.

Results

The survey was sent to 503 valid email addresses; 174 coordinators completed the survey, a 35% response rate. Eighty-seven percent of the responding programs were from the United States and 13% were from Canada. A greater proportion of Canadian-based programs responded to the survey than U.S.-based programs (55% vs. 35%, $p < .05$). When examining program data included in the IAFN database there were no significant differences between responders and non-responders on program setting (e.g., hospital-based programs) or average number of exams performed annually. More than half of the programs (57%; $n = 99$) served both adult/adolescent (older than 13 years of age) and pediatric (younger than 13 years of age) populations. Four percent ($n = 7$) of the programs only served pediatric patients while 39% ($n = 68$) only served adults/adolescents (see Table 2). Locations of the programs were 45% urban ($n = 77$), 28% suburban ($n = 48$), and 27% rural ($n = 47$). Most programs were housed in not-for-profit agencies (89%). The approximate number of sexual assault forensic exams conducted annually ranged from 1 to 1,500 per program, with a mean of 163 ($SD = 216.72$). Using IAFN program categories, 29% of responding programs performed less than 50 exams per year; 26% performed between 51 and 100 exams per year; 24% performed between 101 and 200 exams per year; and 21% performed greater than 200 exams per year.

HIV Testing

More than two thirds (69%) of SANE/FNE programs reported they did not offer HIV testing, 19% reported routinely doing baseline HIV testing on all sexually assaulted patients, and 12% offered HIV testing only upon patient request. Of programs offering HIV testing, a larger proportion was Canadian (see Table 2). Providing HIV testing was associated with offering nPEP ($p < .001$). There were no other significant associations between program characteristics and HIV testing. The majority of programs performing HIV testing post-sexual assault used a serum HIV test (77%) versus a rapid test (4%); 19% offered both serum and rapid testing.

Program coordinators were asked to rank common barriers to testing sexual assault patients for HIV from *most important* to *least important* (see Table 3). The barrier most often listed as *most important* was providing pre- and post-testing counseling and follow-up. This was followed by (a) cost, (b) inability to do onsite rapid HIV testing, and (c) obtaining appropriate consent. Respondents were also given the option of choosing “other” and giving a written response.

The largest proportion of written responses to this question (#8, see Table 1) described concerns regarding the theme of risk assessment (see Table 3). For example, patients with high-risk exposures (and hence eligible for nPEP) received HIV testing while those at lower-risk did not. Additionally, one respondent wrote that her program gave nPEP without baseline testing because the test would only provide information about HIV infection pre-sexual assault. This practice is contrary to recommended CDC best practices (CDC, 2005). Another respondent wrote that HIV testing was not indicated in an acute sexual assault. Again, this practice is contrary to CDC recommendations (CDC, 2005). These concerning

responses will be discussed later in the paper. Three respondents did not feel that any of the given response options in the survey were barriers to HIV testing.

nPEP Protocol

Seventy-four percent (n = 125) of SANE/FNE programs reported having an existing protocol for post-sexual assault nPEP. All but one (96%; n = 22) of the responding Canadian programs reported having an nPEP protocol compared to 69% (n = 103) of responding U.S. programs (p = .01). Additionally, having an nPEP protocol was associated with offering nPEP (p < .001). No other significant associations were found between program characteristics and having an nPEP protocol (see Table 2). Of the 44 programs without a protocol, 40% (n = 18) stated their programs were developing one. Twenty-seven programs (16% of total sample or 60% of those without a protocol) reported they did not have and were not creating an nPEP protocol.

nPEP Provision

Of the 174 responding SANE/FNE program coordinators, 63% (n = 106) reported their programs offered nPEP, 40% (n = 67) routinely, and 23% (n = 39) only upon patient request. Thirty-seven percent (n = 63) of programs did not offer post-sexual assault nPEP. Ninety-six percent (n = 22) of responding programs in Canada reported providing post-sexual assault nPEP compared to 58% (n = 83) of responding programs in the U.S. (p = .001). As stated in previous sections, having an nPEP protocol, and providing HIV testing were both independently associated with offering nPEP after a sexual assault. There were no other significant associations between program characteristics and offering nPEP (see Table 2).

Most commonly, programs provided patients with one of the two CDC recommended (70%; n = 67) or alternative (6%; n = 6) nPEP medication combinations (CDC, 2005). Of programs that did not specify an accepted CDC regimen, 12% (n = 11) consulted with someone outside for medication management (a physician or the National PEP hotline). Four percent (n = 4) of programs reported having different regimens based on the determined level of risk of the patients' exposure, with 7% (n = 7) of programs using another medication regimen (see Table 4).

Forty-six percent (n = 45) of SANE/FNE programs offering nPEP reported providing sexually assaulted patients with 3–5 days of medications at the time of the forensic exam; 4% (n = 4) gave less than 3 days of medications, and 12% (n = 12) gave the first week of medications (see Table 4). Sixteen percent (n = 16) of programs provided patients with the full 28-day regimen of nPEP. Conversely, 15% (n = 15) of the programs gave no medications but provided patients with a prescription for the medications. Three percent (n = 3) did not provide any medications and another 3% (n = 3) offered patients alternate starter-packs depending on patient circumstances.

Of programs not providing nPEP, 95% (n = 61) referred patients elsewhere for HIV testing and prophylaxis. Most frequently, patients were referred to the local health department or family planning clinic (33%; n = 20) or an HIV clinic (30%; n = 18). Twenty-two percent (n = 13) of programs referred patients to their primary care providers, 7% (n = 4) to the emergency department (ED), and 7% (n = 4) to an infectious disease specialist (see Table 4).

When asked to rank common barriers to routinely offering nPEP, *cost of the medications* was ranked as most important (see Table 3) by almost 50% of SANE/FNE program coordinators (n = 52). *Availability of similar services at the local health department* was the barrier second most frequently ranked as most important by 24% of program coordinators (n

= 25). The remaining 5 barriers were ranked as most important by 5% or less of SANE/FNE program coordinators (see Table 3).

Themes from responses listed as "other" (see Table 3) included: (a) lack of follow-up resources, (b) risk assessment, and (c) provider bias. For example, one respondent wrote, "Patients don't, won't, or can't follow up as needed." Program coordinators also listed as important barriers: "patients' ability to complete regimen" and "our docs don't feel that the ED is the proper place to receive follow-up." Of the six respondents providing a written response coded as provider bias, five provided nPEP (three routinely, two upon patient request); one provided HIV testing, and three did not have a protocol and were not in the process of creating an nPEP protocol (categories not mutually exclusive). Eleven respondents did not rank any of the listed options as important and wrote that none of the listed options were barriers to offering nPEP.

Discussion

While most SANE/FNE programs in our sample stated they had a protocol for post-sexual assault nPEP, we found that less than one third reported HIV testing as standard care and only 40% routinely offered nPEP. Furthermore, although there was no association between programs providing HIV testing and having an nPEP protocol, both were independently associated with offering nPEP. Respondents ranked a list of barriers to offering and providing post-sexual assault nPEP. *Cost of the medications* was cited most often as the most important barrier to offering nPEP.

Canadian programs offered post-sexual assault nPEP more often than U.S.-based programs. In the United States, the cost of the medications – between $600 and $1,200 for 4 weeks (CDC, 2005) – and who would pay that cost varied widely. It was possible that Canadian-based programs had greater access to funding that paid for the medication (e.g., British Columbia Centre for Excellence in HIV/AIDS, 2009; Government of Alberta, 2008). However, in a recent Canadian-based study exploring the sustainability of offering nPEP, program coordinators cited *inadequate funds* as a barrier to providing nPEP (Du Mont, Macdonald, Myhr, & Loutfy, 2011).

The next barrier most frequently ranked as most important was the availability of similar services in community-based clinics. These two barriers, cost and local availability, echoed findings from a 2005 survey of U.S.-based SANE programs where "refer to health department" and "too costly for program to offer" were the two most frequent reasons given for not providing post-sexual assault nPEP (Campbell et al., 2006, p. 387).

Qualitative responses in the survey suggested that many programs assessed the HIV risk associated with a particular exposure and provided care accordingly. While this process is recommended by the CDC (2005), some responses to this question raised concerns about health care provider bias. Several program coordinators' written responses indicated common misconceptions or bias regarding patients' abilities to manage their own health choices in regard to nPEP following sexual assault. For example, as a barrier to routinely offering nPEP, multiple coordinators stated their patients had poor compliance with nPEP and follow-up. This finding was particularly interesting in light of two recent literature reviews that found, on average, 30%–40% of sexually assaulted patients completed the nPEP regimen (Chacko, Ford, Sbaiti, & Siddiqui, 2012; Draughon & Sheridan, 2012). The rates of patients completing nPEP were similar to rates of other patients completing occupational PEP (Luque et al., 2007). Additionally, although we did not ask whether programs performed follow-up with their patients, anecdotally many SANE/FNE programs did not coordinate ongoing follow-up care and, therefore, would not be privy to whether the

patient completed the medication regimen and follow-up HIV testing schedule. Clinician perceptions of HIV risk and patient compliance may have an effect on the SANE/FNE program's nPEP practices, especially if program coordinators perceived poor patient follow-up as a *programmatic* barrier. This raises concerns that patients reporting sexual assault are not given the option to make informed decisions about their health care.

It is possible that patients who have been sexually assaulted are not being made aware of the risk of HIV transmission post-sexual assault. In a Kenyan interview study with key community members, as well as police officers, religious leaders, and health care providers, participants did not know, for example, what nPEP was or its availability post-sexual assault (Kilonzo et al., 2008). Per the U.S. Department of Justice national protocol (Littel, 2004), HIV risk should be discussed with all patients. When 16% of SANE/FNE programs do not have an nPEP protocol and are not planning to create one, and when 5% of the SANE/FNE programs that do not provide nPEP also do not refer patients elsewhere, it is possible that patients being treated in these programs are not being fully informed of available treatment. Our survey did not assess specifically whether or not nPEP was being discussed with each patient in every program.

More than two thirds of the surveyed SANE/FNE programs did not offer HIV testing during the post-sexual assault forensic exam. This was similar to findings from the nationally representative survey of sexual assault program coordinators, which found that 62% of programs rarely or never provided HIV testing (Campbell et al., 2006). The CDC has recommended that patients who initiate nPEP after an exposure get tested for HIV at baseline, with repeat testing at 3 and 6 months post exposure (CDC, 2005). Coordinators most frequently ranked the ability to provide HIV-related pre- and post-test counseling, as well as follow-up as the *most important* barrier to HIV testing. This was followed by cost and the inability to do rapid testing on site. The cost of an oral or serum rapid HIV test is relatively inexpensive ranging from approximately $8 to $25, not including the cost of the control packs (CDC, 2008). While use of rapid HIV testing is increasing (Thornton, Delpech, Kall, & Nardone, 2012), limited availability of rapid HIV testing for sexual assault survivors continues in the United States (Bogart et al., 2008) and for any population in Canada (Lee, Plitt, Fenton, Preiksaitis, & Singh, 2011; Thornton et al., 2012).

We have highlighted statements regarding HIV testing that revealed a lack of knowledge of the U.S. Department of Justice national protocol (Littel, 2004) and standards of care when providing nPEP (CDC, 2005), including statements such as, "HIV testing is not indicated as part of acute post-assault care." Program coordinators should be familiar with the nPEP recommendations for their areas of practice, as well as with the U.S. Department of Justice national protocol (CDC, 2005; Littel, 2004), and may benefit from education programs and/or interventions to increase knowledge of the standards of care. For example, a baseline HIV test is standard care for offering nPEP. Any patient already infected with HIV at baseline needs to be immediately connected to appropriate infectious disease care (CDC, 2005) for ongoing, long-term medication management and not given a 28-day supply of nPEP.

Despite barriers to offering nPEP and performing HIV testing, the majority of SANE/FNE programs in this study reported having an nPEP protocol in place. Assessing whether programs have an nPEP protocol has not previously been reported in the literature. It is encouraging that 74% of programs had nPEP protocols and implied that HIV risk following sexual assault exposure was discussed with patients, consistent with the U.S. Department of Justice protocol (Littel, 2004).

Study Limitations

A major limitation to our study was the use of a convenience sample. The database used to obtain our sample is a voluntary database in which program coordinators enter information about individual programs. Although the IAFN (2013) website stated there were more than 700 programs in the United States, Canada, and Australia, we only had access to information from a little more than 500. We had an acceptable response rate (35%), but a greater proportion of Canadian-based programs responded than U.S.-based programs. In addition, the tool was not piloted prior to study commencement. The large number and diversity of the written "other" responses to questions regarding barriers suggested we did not include important barriers such as risk assessment as response options. In addition, for some programs, what we assumed were barriers were not. Furthermore, although cost of medications was endorsed as the most important barrier to offering nPEP, our survey did not determine whether it was cost to the patient, to the program, or to both that was considered to be a barrier.

The CDC (2005) recommends an HIV risk assessment be performed with all patients. We did not ask program coordinators if their protocols included an HIV risk assessment. While we did not ask specifically if programs discussed HIV risk with their patients, having a protocol in place was an important first step to improving nPEP-associated care following sexual assault.

The survey contained a few terms that may have been interpreted differently by different responders. For example, the "referral" could have been interpreted as providing a formal written referral to an outside medical provider or simply as telling the patient to go to a local health department for HIV-related follow-up care. Other terms that could have been more specific in the survey were what would qualify as an "appropriate consent," as well as the words "barriers" and "importance."

These limitations need to be addressed to more fully understand the study aims. Specifically, in the future, researchers must also examine the context regarding barriers to HIV testing and prophylaxis following sexual assault, including reasons for poor patient follow-up and compliance.

Conclusion

Responding SANE/FNE program coordinators were aware of HIV-related services post-sexual assault, but these services were not being offered consistently across programs. SANE/FNE programs in both the United States and Canada faced a variety of challenges related to nPEP services, from training staff to provide pre- and post-HIV test counseling and follow-up to the cost of the nPEP medications. Despite these challenges, more than 60% offered nPEP either routinely, or upon patient request, and the majority of the responding coordinators reported their SANE/FNE program either had or was developing an nPEP protocol. Unfortunately, some SANE/FNE programs still do not provide any HIV related care even though both the United States and Canada have published guidelines regarding HIV and nPEP post-sexual assault (British Columbia Centre for Excellence in HIV/AIDS, 2009; CDC, 2005; Government of Alberta, 2008; Littel, 2004).

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Clinical Considerations

- nPEP should be offered to sexually assaulted patients with high-risk exposures. Case-by-case risk assessment is recommended for patients with moderate-risk exposures, or exposure to a source with unknown HIV infection status.
- A sexually assaulted person might not be aware that s/he could have been exposed to HIV.
- HIV risk appraisal is an important component of sexual assault care. Assessment of HIV transmission risk after an exposure as well as the treatment option of nPEP should be discussed with all sexually assaulted patients.
- Programs should consider developing a protocol and/or algorithm to assist clinicians and patients in making the determination to pursue nPEP.
- If your facility does not offer HIV testing and nPEP, you should know where patients could be referred after an exposure.

Table 1

Survey Questions

Item[a]	Question
1	In what province or state is your program located?
2	What patient population does your program serve?
3	In what kind of community is your program located?
4	Approximately how many sexual assault exams does your program conduct annually?
5	Is your program [hospital or institution] for-profit, or non-profit?
6	Does your program routinely test all sexual assault patients for HIV?[b]
7	What kind of HIV test does your program provide?
8	What are the major barriers preventing you from testing sexual assault patients for HIV? Please rank the following potential obstacles in order from greatest importance to least importance.[c]
9	Does your program have a protocol regarding HIV post-exposure prophylaxis for sexual assault patients?[d]
10	Is your program in the process of creating a protocol regarding HIV post-exposure prophylaxis for sexual assault patients?
11	Does your program offer HIV prophylaxis following sexual assault?[e]
12	From the following regimens suggested by the CDC, which best fits with your current protocol regimen?
13	How many days' supply of HIV PEP do you supply?[f]
14	Do you refer the patient elsewhere for further HIV PEP care?[g]
15	Where is the patient referred?
16	What are the barriers to offering HIV nPEP routinely? Please rank the following potential obstacles in order from greatest importance to least importance.[h]
17	Would you like the results of this survey?[i]
18	Please provide the following: Name, Institution, and email address.

Note. CDC = Centers for Disease Control and Prevention; PEP = post exposure prophylaxis; nPEP = non-occupational post exposure prophylaxis

[a] All questions were asked in numerical order except where skip pattern is noted.

[b] Response options: *yes-routinely*, *yes-upon patient request*, and *no*. If responded *no*, then to question 8

[c] Please see Table 3 for response options

[d] If responded *yes*, then to question 11

[e] Response options: *yes-routinely*, *yes-upon patient request*, and *no*. If responded *no*, then to question 14

[f] Continue to question 16

[g] If responded *no*, then to question 16

[h] Please see Table 3 for response options

[i] If responded *no*, then exits the survey

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Table 2

Associations Between Program Characteristics and HIV Testing, Protocols, and Prophylaxis (N=174)[a]

	Sample *n*(%)	**HIV testing *n* = 172 (%)**	***p***	**nPEP Protocol *n* = 169 (%)**	***p***	**Offer nPEP *n* = 169 (%)**	***p***
Total		53 (31)		125 (74)		106 (63)	
Provide HIV testing							
Yes	53 (31)	-		41 (33)	.320	45 (42)	.000[b]
No	119 (69)	-		83 (67)		61 (58)	
Type of HIV test[c]							
Rapid (oral) test	2 (4)	-		1 (2)	.298[b]	2 (5)	1.00[b]
Serum test	40 (77)	-		33 (80)		33 (75)	
Both	10 (19)	-		7 (17)		9 (20)	
nPEP Protocol							
Yes	125 (74)	11 (21)	.320	-		92 (88)	.000[b]
No	44 (26)	41 (79)		-		12 (12)	
Developing Protocol[d]							
Yes	18 (40)	5 (42)	1.00[b]	-		6 (46)	.739[b]
No	27 (60)	7 (58)		-		7 (54)	
Offer nPEP							
Yes	106 (63)	45 (86)	.000[b]	92 (75)	.000[b]	-	
No	63 (37)	7 (14)		31(25)		-	
Country *n* = 172							
United States	149 (87)	39 (75)	.004	103 (82)	.010[b]	83 (79)	.000[b]
Canada	23 (13)	13 (25)		22 (18)		22 (21)	
Patient Population							
A/A	68 (39)	20 (38)	.827	49 (39)	.842	41 (39)	.897
A/A & Pediatric and Pediatric only	106 (61)	33 (62)		76 (61)		65 (61)	

	Sample *n*(%)	HIV testing *n* = 172 (%)	*p*	nPEP Protocol *n* = 169 (%)	*p*	Offer nPEP *n* = 169 (%)	*p*
Community *n* = 172							
Urban	77 (45)	23 (44)	.254	62 (50)	.153	51 (48)	.468
Suburban	48 (28)	11 (21)		32 (26)		27 (26)	
Rural	47 (27)	18 (35)		31 (25)		28 (26)	
Corporate Status *n* = 170							
For-Profit	18 (11)	7 (13)	.431[b]	16 (13)	.159[b]	12 (12)	.799[b]
Non-profit	152 (89)	45 (86)		105 (87)		90 (88)	
# Sexual Assault Exams Annually							
< 50	50 (29)	15 (28)	.059[b]	32 (26)	.103[b]	27 (25)	.709
51–100	46 (26)	21 (40)		29 (23)		29 (27)	
101–200	41 (24)	9 (17)		34 (27)		27 (25)	
> 200	37 (21)	8 (15)		30 (24)		23 (22)	

Note. nPEP = non-occupational post exposure prophylaxis; A/A= Adult/Adolescent

[a] All values computed with available data. For all categories with missing responses the total *n* is given. If no *n* is given then all 174 responses were present.

[b] Fisher's exact

[c] Asked of those responding they provide HIV testing, or skipped question 6 (*n* = 53)

[d] Asked of those responding they did not have an nPEP protocol, or skipped question 9 (*n* = 45)

Table 3

Frequency of Barriers to HIV Testing and Prophylaxis Ranked as Most Important by SANE/FNE Program Coordinators

Response Category	Frequency *n* (%)	Exemplar
Barriers to HIV testing (*n* = 127)		
Providing pre-test/post-test counseling and follow-up	41 (32)	
Cost	24 (19)	
Inability to do onsite rapid HIV testing	29 (23)	
Obtaining appropriate consent	10 (8)	
Qualitative themes		
Risk Assessment	12 (9)	“We will offer the test if patient requests or falls into a moderate-to-high-risk group”
Confidentiality	3 (2)	“protecting patient privacy”
Other	8 (6)	“Medical Director choice to not test”
Barriers to nPEP (*n* = 105)		
Cost of the medications	52 (49)	
Availability of similar services at the local health department	25 (24)	
Inability to bill patient’s insurance	5 (5)	
Discomfort with when to offer HIV PEP	4 (4)	
Concerns about legal implications of documenting patients’ HIV status	3 (3)	
Concerns over whether the patient will face social stigma related to taking HIV medications	1 (1)	
Reluctance to bill patient’s insurance due to concerns over losing coverage	0 (0)	
Qualitative themes		
Provider bias	6 (6)	“Patients routinely quit taking HIV PEP”
Risk assessment	4 (4)	“Risk benefit of exposure and HIV PEP”
Lack of follow-up resources	2 (2)	“Referrals for ongoing follow-up/ monitoring”
Other	3 (3)	“Do not have a license to dispense medication”

Note. nPEP = non-occupational post exposure prophylaxis; PEP = post exposure prophylaxis; SANE = Sexual Assault Nurse Examiner; FNE = Forensic Nurse Examiner

Table 4

HIV Prophylaxis Characteristics of Responding SANE/FNE Programs

Characteristic	*N*	%
Programs offering nPEP	106	63
Medication regimens		
Efavirenz plus (lamivudine or emtricitabine) plus (zidovudine or tenofovir)	26	27
Lopinavir/ritonavir plus (lamivudine or emtricitabine) plus zidovudine	41	43
Other CDC regimen	6	6
Consult a specialist	11	12
Risk-determined regimen (e.g., high-risk exposure receives 3 medications versus 2)	4	4
Other medication regimen	7	7
Days of nPEP Supplied		
< 3 days	4	4
3–5 days	45	46
1st week	12	12
28 days	16	16
prescription only	15	15
no meds or alternate methods of provision	6	6
Programs not offering nPEP	63	37
Patient referred elsewhere for HIV related care		
Yes	61	95
No	3	5
Patient referred to:		
Health Department/Free Clinic	20	33
HIV Clinic	18	30
Primary Care Physician	13	22
Emergency Department	4	7
Infectious Disease Specialist	4	7
Other	1	2

Note. nPEP = non-occupational post exposure prophylaxis; SANE = Sexual Assault Nurse Examiner; FNE = Forensic Nurse Examiner; CDC = Centers for Disease Control and Prevention