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Journal

Nursing Research, 65(1)

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Publication Date

2016

DOI

10.1097/NNR.0000000000000122

Peer reviewed

HHS Public Access

Author manuscript

Nurs Res. Author manuscript; available in PMC 2017 January 01.

Published in final edited form as:

Nurs Res. 2016 ; 65(1): 47–54. doi:10.1097/NNR.0000000000000122.

Nonoccupational Postexposure Human Immunodeficiency Virus Prophylaxis: Acceptance Following Sexual Assault

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Abstract

Background—Nonoccupational postexposure prophylaxis (nPEP) for HIV following sexual assault may decrease the likelihood of HIV transmission.

Objective—The purpose of this exploratory chart review study was to examine factors associated with patients accepting postsexual assault nPEP at three forensic nurse examiner programs in urban settings.

Methods—Forensic nursing charts of patients presenting for acute, sexual assault care were reviewed as part of a mixed-methods study.

Results—Patients assaulted by more than one or an unknown number of assailants were over 12 times more likely to accept the offer of nPEP (a*OR* 12.66; 95%CI [2.77, 57.82]). In cases where no condom was used (a*OR* = 8.57; 95%CI [1.59, 46.10]), or when any injury to the anus or genitalia was noted (a*OR* = 4.10; 95%CI [1.57, 10.75]), patients were more likely to accept nPEP. Patients with any injury to the face or head were less likely to initiate nPEP (a*OR* = 0.32; 95%CI [0.11, 0.97]).

Discussion—This study is an important first step in understanding factors associated with nPEP acceptance after sexual assault.

Keywords

forensic nursing; HIV; postexposure prophylaxis; rape

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The authors have no conflicts of interest to report.

Sexual assault presents a direct pathway for transmission of human immunodeficiency virus (HIV) (Campbell, Lucea, Stockman, & Draughon, 2013; Klot et al., 2012). Although cases of HIV transmission post sexual assault have been documented in the United States, the quantifiable risk of HIV transmission specifically due to sexual assault is not known (Smith et al., 2005). Condom use, genital and/or anal trauma, sexually transmitted infections (STIs) in either the patient or the assailant may all influence HIV transmission risk (Galvin & Cohen, 2004; Sommers, 2007; Welch & Mason, 2007; Weller & Davis-Beaty, 2002). Nonoccupational postexposure prophylaxis (nPEP)—a series of two to three antiretroviral medications initiated within 72 hours and taken for 28 days following the potential exposure—may decrease the likelihood of HIV infection postsexual assault (Smith et al., 2005; Otten et al., 2000).

When a patient presents for care after a sexual assault, they are often referred to a forensic nurse examiner (FNE) or sexual assault nurse examiner (SANE; a specialized forensic nurse)—either inhouse or at a nearby facility. Postassault care may include a medicolegal evidentiary exam to assess and document injuries, as well as evidence collection, pregnancy prevention, and STI prophylaxis, including HIV nPEP (Linden, 2011; Littel, 2013). Typically, prophylaxis is offered at the close of the exam. When patients accept the offer of nPEP, they are given the first dose immediately and often discharged with a three to five day starter pack of medications; however, the amount of medication, cost of the medication regimen, and who pays that cost varies from jurisdiction to jurisdiction, and forensic nursing program to program (Draughon, Anderson, Hansen, & Sheridan, 2014).

Patient decision making is a complex and multifaceted process. The decision to accept or decline nPEP is time-bounded at 72 hours from the time of the assault, and in this population, is further complicated by the recent sexual trauma. To date, there has been limited research examining factors associated with patients accepting or declining the offer of nPEP. Of the extant literature on nPEP, only five studies statistically examined factors associated with nPEP acceptance (Du Mont et al., 2008; Loutfy et al., 2008; Myles, Hirozawa, Katz, Kimmerling, & Bamberger, 2000; Olshen et al., 2006; Wiebe, Comay, McGregor, & Ducceschi, 2000). There appears to be an association between patients accepting nPEP and a high-risk exposure (Du Mont et al., 2008; Loutfy et al., 2008; Olshen et al., 2006; Wiebe et al., 2000) where high risk is defined according to the particular jurisdiction where the study was conducted. In the U.S., the CDC defines a “substantial risk” exposure, as exposure of nonintact skin, or mucous membrane with blood or other potentially infectious material if the source person is known to have HIV (Smith et al., 2005; Myles et al., 2000; Olshen et al., 2006), whereas Canada defines high risk as penetration of any kind, with or without a condom by a high risk assailant—someone living with HIV, an intravenous drug user or a man who has sex with men (Du Mont et al., 2008; Loutfy et al., 2008; Wiebe et al., 2000).

The association between high-risk exposure and accepting nPEP was observed in both adults (Loutfy et al., 2008; Wiebe et al., 2000) and adolescents (Du Mont et al., 2008; Olshen et al., 2006) In addition, homeless women were less likely to initiate nPEP than those who had housing (Myles et al., 2000). Finally, there is some discrepancy regarding the impact of race/ethnicity on accepting nPEP. Olshen and colleagues (2006) found White adolescents

were less likely to accept nPEP than either Black or Hispanic adolescents. Conversely, Myles and colleagues (2000) found that White women were more likely to accept nPEP than non-White women.

The purpose of this exploratory study was to examine factors associated with patients accepting nPEP postsexual assault.

Methods

Parent Study

This analysis represents chart data from a parent mixed-methods study examining adult (age 18 or above) patients' postsexual assault nPEP experiences conducted at three urban hospital-based FNE programs in the Mid-Atlantic region of the U.S. The parent study was a prospective sequential triangulation mixed-methods design consisting of three phases: (a) retrospective chart review; (b) prospective recruitment, chart review, and self-report survey; and (c) a subset of qualitative interviews. The data included in the present analysis consists of both the retrospective and prospective chart review data solely related to factors associated with patients *accepting* nPEP. The study procedures received Institutional Review Board (IRB) approval at all three collection sites and by a university IRB.

Setting

Sites were chosen because they routinely offered nPEP according to site-specific HIV risk assessment algorithms. All sites provide comprehensive forensic nursing care, including medicolegal postsexual assault exams for 100 to 400 adults (Site 3) or adults and adolescents (Sites 1 and 2), annually. All sites offered nPEP within the CDC guidelines (Smith et al., 2005). nPEP was offered for any contact of blood, semen, vaginal secretions, or other potentially infectious material with a mucous membrane, or nonintact skin. Additionally, nPEP was offered to patients who experienced condom-less vaginal or anal penetration at all three sites. Site 1 further stipulated that a break in skin be present in order to recommend nPEP (Wieczorek, 2010). nPEP was to be offered for oral penetration at Site 3, if there was oral penetration with ejaculation at Site 2, or if there was oral penetration was a break in skin integrity at Site 1 (Draughon et al., 2015; Wieczorek, 2010). Despite the differences in site protocols, we hypothesized that site would not have an effect on patients' accepting nPEP.

Retrospective Chart Review

The retrospective chart review data were abstracted from FNE documentation of postsexual assault patients in the year preceding prospective recruitment for the parent study. Retrospective chart review was completed at two of the three recruitment sites (Draughon et al., 2015). Records were abstracted for all adult, sexual assault forensic examinations conducted between January 1, 2011 through December 31, 2011 at Site 1, and from May 19, 2011 through April 30, 2012 at Site 2. Charts meeting inclusion criteria were retained for the analysis (see Table 1).

Recruitment and Enrollment

The prospective chart review data were abstracted from FNE documentation of postsexual assault patients recruited for the parent study. Patient recruitment began February 23, 2012 at Site 1; June 3, 2012 at Site 2; and September 17, 2012 at Site 3. Recruitment closed February 28, 2013. Patients meeting inclusion criteria were recruited for the study either by the nurse who conducted the forensic examination or a trained research assistant (see Table 1). All participants completed a written, informed consent form. Only data from the FNE chart were used in this analysis.

Data Abstraction

All variables were explicitly defined a priori (see Draughon et al., 2015). The same spreadsheet abstraction tool created a priori was used for both retrospective and prospective charts. Since data for both retrospective and prospective charts were abstracted identically, we combined the retrospective and prospective portions to increase sample size and corresponding statistical power. Records were abstracted by a single author (JD), with data cleaning decisions made by two authors (JD and DS).

Measures

Dependent variable—Accepting nPEP consisted of FNE documentation that the patient accepted the offer of nPEP, or inclusion of nPEP prescriptions.

Independent variables—The following variables were abstracted from FNE documentation of the postsexual assault examination as they have been found in previous literature to impact both the forensic nurse offering nPEP, as well as patients accepting nPEP. Please see Draughon et al. (2015) for greater detail regarding the following abstracted variables:

- **Demographic characteristics:** sex/gender, age, and race/ethnicity. Patient race/ethnicity was categorized as “White and non-White” due to low prevalence in the sample of Black, mixed race, Asian, Hispanic, or Middle Eastern ethnicities.
- **Assault characteristics:** whether the assault was reported to police, hours elapsed between assault and exam. As per site-specific protocol, patients had to present for care within 72 hours of the exposure in order to be eligible for nPEP.
- **Assailant characteristics:** number of assailants, sex of assailant, assailant race/ethnicity, assailant relationship to the patient (acquaintance, stranger/known less than 24 hours, current/former intimate partner, or the patient could not recall).
- **Examination findings:** penile penetration—either receptive or insertive based on patient and assailants’ sex (no vaginal or anal penetration, vaginal penetration without anal penetration, anal penetration with or without vaginal penetration, or could not recall)—use of condom (condom used or nonpenetrative assault, no condom used, or could not recall condom use), presence of extragenital injury (to the face and head, neck, trunk, and extremities), as well as anogenital injury. Injuries included abrasions, lacerations, incised wounds (*open* injuries), bruises, erythema, swelling and tenderness or pain (injuries with intact skin). We examined

both specific injury (e.g., open anal injury; head injury), as well as global injury variables (e.g., *any* extragenital injury; *any* anogenital injury).

- **HIV testing:** whether HIV testing was performed. All site protocols required a baseline HIV test once the patient had accepted the offer of nPEP. Since this occurs after the outcome of interest, we will present proportions, but will not examine HIV testing as a factor associated with accepting nPEP.

Analysis

Data were entered into a Microsoft Excel 2011 database (Microsoft Corp. Redmond, WA) and all analyses were conducted using STATA 11 (StataCorp. College Station TX). Bivariate associations were assessed using logistic regression with 95% confidence intervals (CI). Variables with an alpha level of .20 or less were considered for inclusion in a series of exploratory multivariate analyses. For the purposes of analysis, Site 3 was combined with Site 2 due to the small number of participants recruited from Site 3 (n = 7), and since Sites 2 and 3 offered nPEP according to similar HIV risk assessment protocols. The models were built using forward blocked hierarchical regression. Whether a given variable should be included in the final model was assessed using Akaike's Information Criterion (AIC) (Burnham & Anderson, 2002). Variables were retained if their inclusion in the model reduced AIC by at least two points (Burnham & Anderson, 2002). Multivariate analyses were performed using available data with casewise deletion performed on subjects with missing data. A nominal p-value of .05 was used for the final model.

Results

A total of 270 retrospective charts were abstracted. Only 98 retrospective charts met inclusion criteria for this analysis. During the prospective recruitment period, 148 patients were screened for eligibility; 71 met inclusion criteria and 32 consented to participate. Chart review data were abstracted for all 32 recruited participants. A total of 130 charts were retained for analysis.

Acceptance of nPEP

Forty-four percent of patients accepted the offer of nPEP.

Demographic characteristics

The majority (55%) of the sample were between the ages of 18 to 25 years; 29% were between 26 and 35; and the remaining 21% were 36 or older. Only one patient was male. Fifty-nine percent of patients were White, and 41% were of non-White race and/or ethnicity (see Table 2). Twenty percent of charts were from Site 1, 75% from Site 2, and 5% from Site 3.

Assault characteristics

Only 17% of patients did not report their assault to police. Fifty-four percent of patients presented to the FNE program within 12 hours of their assault, 19% between 13 and 24

hours, and 27% within the next two days up to 72 hours. Fifteen percent of patients reported an assault by more than one person or could not recall the number of assailants.

Assailant characteristics

The majority of assaults (94%) were perpetrated by a male. Assailants were 33% White, 29% Black, 27% other (mixed race, Asian, Hispanic, or Middle Eastern ethnicities), and in a further 11%, the patient could not recall or determine the race of the assailant. In almost 50% of cases, the assailant was an acquaintance of the patient; in 28%, the patient had known the assailant for less than 24 hours (including four stranger assaults); in 18%, the assailant was a current or former intimate partner; and in 7%, the patient could not recall.

Examination findings

Less than 10% of assaults did not include vaginal or anal penetration. Over 60% of assaults involved vaginal penetration; 16% involved anal penetration; and in 13%, the patient could not recall whether any penetration occurred. Condoms were used in 12% of assaults; the patient could not recall condom use in 34%; and in 54%, no condom was used. Over half (54%) of patients had some kind of extragenital injury noted on examination. Almost three-quarters (73%) had an anogenital injury.

HIV testing

HIV testing was conducted in 75% of cases.

Bivariate Analysis

Table 3 displays odds ratios (*OR*) and 95% confidence intervals (CI) for bivariate regression analyses of variables with a *p*-value of .20 or less. Patients treated at Sites 2 and 3 were more likely to accept nPEP. Patients assaulted by more than one or an unknown number of assailants were more likely to accept nPEP. Patients who could not recall the assailant's race/ethnicity were also more likely to accept nPEP than patients assaulted by a White person. All variables listed in Table 2 were assessed for inclusion in the multivariate model.

Multivariate Analysis

In addition to treatment site, there were several variables independently associated with accepting the offer of nPEP postsexual assault. Patients assaulted by more than one assailant, or who could not recall the number of assailants, were more likely to accept nPEP than those assaulted by a single person (a*OR* = 12.66; 95% CI [2.77, 57.82]). In condom-less assaults, patients were more likely to accept nPEP than patients whose assailants used a condom (a*OR* = 8.57; 95% CI [1.59, 46.10]). Patients were also more likely to accept nPEP in cases where any anogenital injury was noted versus patients without anogenital injury (a*OR* = 4.10; 95% CI [1.57, 10.75]). Finally, in cases where the patient sustained any injury to the head or face, patients were less likely to accept nPEP than patients without head injury (a*OR* = 0.32; 95% CI [0.11, 0.97]).

Discussion

This is one of the first studies devoted solely to understanding factors associated with patients accepting the offer of nPEP during a postsexual assault exam. In this exploratory study, 44% of patients offered nPEP by the FNE accepted the medication regimen. This is similar to previously reported rates of nPEP acceptance following sexual assault (between 40% and 50%) in studies conducted after the most recent update of the CDC nPEP guidelines in 2005 (Du Mont et al., 2008; Forbes, Day, Vaze, Sampson, & Forster, 2008; Loutfy et al., 2008). It is not surprising that anogenital injury, multiple or unknown numbers of assailants, and condom-less assaults were preliminarily associated with nPEP acceptance. Any of these factors would increase a patient's risk of HIV exposure.

Patients with any type of anogenital injury noted on examination were over four times more likely to accept nPEP. This is in contrast to Loutfy and colleagues' (2008) finding that patients with anogenital injury in the absence of extragenital injury less often accepted nPEP than patients with anogenital injury plus extragenital injury. However, they used the presence of anogenital injury plus extragenital injury as the referent category, while we examined extragenital and anogenital injury separately. Any time there is a break in skin integrity—whether visible to the naked eye, or microtrauma—HIV transmission risk is increased.

Patients who were assaulted by multiple assailants or could not recall the number of assailants were almost 13 times more likely to accept nPEP, which is similar to Loutfy and colleagues' (2008) finding of "two or more" sexual acts increasing the likelihood that a patient would accept nPEP. More than one assailant means accounting for more than one HIV risk profile. Many HIV risk assessment guidelines used in previous studies have included FNE assessment of the risk that the assailant was HIV infected (Loutfy et al., 2008; Wiebe et al., 2000). For example, whether the assailant was from a high-risk group, such as men who have sex with men, intravenous drug users, or coming from or living in an area with a high HIV prevalence rate. In the context of multiple assailants, the risk may be greater. It is possible that any number (or all) of the assailants could be HIV infected. Previous research has also shown that assaults involving more than one assailant often involve more injuries than assaults with a single assailant (Sturgiss, Tyson, & Parekh, 2010). A greater number of injuries also represents a greater number of possible entry points for HIV virions.

In addition, patients were almost nine times more likely to accept nPEP when there was penile penetration and no condom was used. Interestingly, previous researchers, as well as Smith et al. (2005), have categorized this type of exposure as "moderate" or "unknown risk" when the source person's HIV status is not known. No cases examined in this study included documentation of an HIV infected assailant. In contrast, previous studies found that a high-risk exposure or an HIV positive assailant was associated with postsexual assault patients accepting nPEP (Loutfy et al., 2008; Myles et al., 2000; Olshen et al., 2006; Wiebe et al., 2000). That penetration was, in fact, embedded within the condom use variable (the referent category was "yes; a condom was used" *or* a "nonpenetrative assault") may account for excluding penile penetration and retaining condom use in the final multivariate model.

The difficulty in comparison among studies lies in the differences between risk categorization. All seem to agree that a known, HIV-infected assailant constitutes high-risk exposure when vaginal or anal penetration has occurred. However, some disagree on whether condom use should be considered in risk assessment (e.g., Wiebe et al., 2000) or not (e.g., Loutfy et al., 2008). Condom use decreases the risk of HIV transmission by up to 80% in consensual sexual relationships (Weller & Davis-Beaty, 2002). Although there may be concerns about a patient's ability to recall whether a condom was used (34% of our sample could not), it is clear that a patient's risk of HIV is higher when a condom is not used. It is apparent that condom-less assaults were associated with increased likelihood of accepting nPEP; however, being unable to recall whether a condom was used during their assault did not increase patients' likelihood of accepting nPEP. This nonsignificance could be due to the relatively small sample size or to a true lack of relationship, but will require more in-depth examination in future research.

The impact of any injury to the face or head on whether a patient chooses to initiate nPEP has not previously been described. In this sample, patients with a head injury were 68% less likely to accept nPEP. This included any injury to the head, eyes, mouth and face, from abrasions, to headaches, excluding loss of consciousness due to alcohol or drug intoxication. Future research will be necessary to fully understand the impact of these injuries on patients' choices regarding nPEP as the association remained even when removing subjective reports of pain from the analysis.

Finally, we hypothesized that accepting nPEP would be a patient-specific issue and not be impacted as much by the particular treatment site. Yet, patients at Sites 2 and 3 were over five times more likely to accept nPEP than patients at Site 1. As previously discussed, there were differences in HIV-risk assessment and nPEP provision protocols, with Site 1 having a slightly more stringent protocol. It is possible these differences carried through the entire conversation regarding nPEP and, thus, impacted acceptance rates. Additional research to observe and document the HIV-risk assessment and nPEP discussion will be necessary to determine whether this is directly related to the site protocols or other factors.

Interestingly, despite sites' protocols stipulating that HIV testing should only be conducted after patients accept nPEP, a greater proportion of the sample had an HIV test than accepted nPEP (75% vs 44%). There is a possible explanation which would be concerning. HIV testing at the time of postsexual assault examination would only give a baseline—whether the patient had HIV prior to the assault. Although unlikely, it is possible that patients are asking for an HIV test in order to determine if they should take nPEP. These differential rates of testing versus acceptance may also indicate that FNEs are being more liberal with HIV testing than with nPEP, which is in accordance with current CDC HIV testing guidelines as well as recent U.S. Preventive Services Task Force (USPSTF) recommendations (Branson et al., 2006; Moyer, 2013).

Limitations

There were several limitations to this study. The use of a relatively small sample in a single geographic area limits the generalizability of the findings, as does the eligibility criteria of being able to speak and read English for participation in the parent study. The use of chart

review data is limited by specifically what was documented in the chart. There are potential aspects of the FNE–patient conversation regarding HIV risk and nPEP—which would not necessarily be captured in the FNE documentation—and, therefore, we could not assess their impact on nPEP acceptance. Similarly, we were unable to verify the missing completely at random assumption, there are potential biases in this analysis due to patients with incomplete charts possibly being different from those with complete records, or differences in the nurses completing the documentation. Finally, despite statistically significant relationships in both bivariate and multivariate analyses, there is limited precision of the point estimates, as evidenced by the wide confidence intervals. Most likely, our analyses were underpowered and would benefit from future study—or replication with larger samples.

Conclusion

This study is an important first step in understanding the factors associated with patients choosing to accept the offer of nPEP after a sexual assault. Although inconsistent with some of the previous literature, these exploratory findings shed light on areas which require further vigorous examination in the future. Understanding the care cascade from nPEP acceptance to adherence will allow researchers to formulate and implement interventions, which may improve patients' nPEP adherence and follow up, thus overcoming one of the many barriers in the nPEP implementation process.

Acknowledgments

The authors acknowledge some data herein were previously presented in an altered format in the lead author's doctoral dissertation, "HIV non-occupational post-exposure prophylaxis following sexual assault: Program and patient characteristics and protocol adherence" (unpublished dissertation, Johns Hopkins University School of Nursing, 2013).

This study was supported by the National Institutes of Health (NIMH F31 MH088850). JD is supported by NINR (T32 NR007081). The contents of this article are solely the responsibility of the authors and do not necessarily represent the official views of the National Institutes of Health. The authors thank the Biostatistics/Epidemiology Core of the Johns Hopkins University Center for AIDS Research (P30 AI094189) for their assistance.

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TABLE 1

Inclusion and Exclusion Criteria for Retrospective and Prospective Phases

Inclusion		Exclusion
Retrospective[a]	**Prospective**	
•Charts of patients ≥ 18 years of age •Present to SANE/FNE program within 72 hours of assault •Documentation of offer of HIV nPEP •Documentation of response to nPEP offer •Charts abstracted for the 12 months prior to recruitment initiation for the prospective portion of the parent study	•≥ 18 years of age •Present to SANE/FNE program within 72 hours of assault •Offered nPEP using site-specific guidelines •Able to speak and read English[b]	•Healthcare decision made by proxy •Previously diagnosed as HIV positive •Pregnancy

Note. FNE = forensic nurse examiner; HIV = human immunodeficiency virus; nPEP = nonoccupational postexposure prophylaxis; SANE = sexual assault nurse examiner.

[a] Chart review only.

[b] In order to participate in data collection activities for parent study.

TABLE 2

Characteristics of Patients Offered nPEP

		Total		Decline		Accept	
Variable	**Value**	***n***	**(%)**	***n***	**(%)**	***n***	**(%)**
Site	1	26	(20)	21	(81)	5	(19)
	2 and 3	104	(80)	52	(50)	52	(50)
Patient race/ethnicity	White	77	(59)	47	(61)	30	(49)
	Other	53	(41)	26	(49)	27	(51)
Time since assault (hrs)	0-12	71	(55)	42	(59)	29	(41)
	13-24	24	(18)	10	(42)	14	(58)
	25-48	27	(21)	17	(63)	10	(37)
	49-72	8	(6)	4	(50)	4	(50)
Assailants (number)	One	110	(85)	66	(60)	44	(40)
	>1 or could not recall	20	(15)	7	(35)	13	(65)
Assailant race/ethnicity[a]	White	42	(33)	28	(67)	14	(23)
	Black	37	(29)	22	(59)	15	(41)
	Other	34	(27)	19	(56)	15	(44)
	Could not recall	14	(11)	4	(29)	10	(71)
Relationship[b]	Acquaintance/other	61	(47)	33	(54)	28	(46)
	Known < 24 hr	36	(28)	19	(53)	17	(47)
	Current/ex-intimate partner	23	(18)	17	(74)	6	(26)
	Could not recall	9	(7)	3	(33)	6	(67)
Penile penetration	Other	12	(9)	9	(75)	3	(25)
	Vaginal	80	(62)	46	(58)	34	(42)
	Anal	21	(16)	8	(38)	13	(62)
	Could not recall	17	(13)	10	(59)	7	(41)
Condom use[c]	Used or no penetration	14	(12)	10	(71)	4	(29)
	Not used	64	(54)	31	(48)	33	(52)
	Could not recall	41	(34)	24	(58)	17	(42)
Head injury[b]	None	101	(78)	53	(52)	48	(48)
	Present	29	(22)	19	(66)	9	(44)
Extragenital injury[b]	None	60	(47)	29	(48)	31	(52)
	Present	69	(53)	43	(62)	26	(38)
Open anal injury[d]	None	111	(87)	65	(58)	46	(42)
	Present	17	(13)	7	(41)	10	(59)
Anogenital injury[a]	None	34	(27)	24	(71)	10	(29)
	Present	93	(73)	47	(51)	46	(49)

Note: For some variables there were missing values; the corresponding sample sizes are provided."N = 130. nPEP = nonoccupational postexposure prophylaxis

[a] $n = 127$

[b] $n = 129$

[c] $n = 119$

[d] $n = 128$.

TABLE 3

HIV nPEP Acceptance at Post Assault Care among Sexually Assaulted Patients: Final Multivariate Logistic Regression Model

Variable	*OR*	95% CI	*p*	a*OR*	95% CI	*p*
Site						
1	Ref			Ref		
2 and 3	4.20	[1.47, 11.98]	.01	5.43	[1.45, 20.35]	.01
Assailant number						
One	Ref			Ref		
>1 or could not recall	2.78	[1.03, 7.53]	.04	12.66	[2.77, 57.82]	.01
Condom use[a]						
Used or no penetration	Ref			Ref		
Not used	2.66	[.76, 9.37]	.13	8.57	[1.59, 46.10]	.01
Could not recall	1.77	[.48, 6.60]	.40	3.01	[0.58, 15.55]	.19
Head injury[b]						
None	Ref			Ref		
Present	.52	[.22, 1.27]	.15	0.32	[0.11, 0.97]	.04
Anogenital injury[c]						
None	Ref			Ref		
Present	2.35	[1.01, 5.45]	.05	4.10	[1.57, 10.75]	.01

Note: $n = 116$. All values rounded to second decimal point. The sample sizes given in the footnotes refer to the unadjusted *OR*s. a*OR* = adjusted odds ratio; CI = confidence interval; *OR* = unadjusted odds ratio; Ref = reference category.

[a] $n = 119$

[b] $n = 129$

[c] $n = 127$.