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Sexually Transmitted Disease Testing Protocols, Sexually Transmitted Disease Testing, and Discussion of Sexual Behaviors in HIV Clinics in Los Angeles County

MELANIE M. TAYLOR, MD, MPH[*], **TRACIE MCCLAIN, MD, MPH**[†], **MARJAN JAVANBAKHT, MPH**[†], **BESSIE BROWN**[†], **GETAHUN AYNALEM, MD, MPH**[†], **LISA V. SMITH, DRPH**[†], **PETER R. KERNDT, MD, MPH**[†], **THOMAS A. PETERMAN, MD, MSC**[‡]

[*]CDC/NCHSTP/DSTDP, Arizona Department of Health Services, Office of Infectious Disease Services, Phoenix, Arizona

[†]Los Angeles County STD Program, Los Angeles, California

[‡]Division of STD Prevention, National Center for HIV, STD, and TB Prevention, Centers for Disease Control and Prevention, Atlanta, Georgia

Abstract

Objective/Goal: The objective of this study was to evaluate the use of written protocols for sexually transmitted disease (STD) screening, the frequency and types of STD tests performed, and the occurrence and frequency of obtaining sexual risk assessments among HIV clinics.

Study: A survey was administered to 36 medical directors, clinic directors, and HIV providers representing 48 HIV healthcare clinics in Los Angeles.

Results: The use of a written or electronic protocol for STD testing was reported by 50% of clinics. Clinics with written or electronic STD protocols were significantly more likely to report questioning patients at each visit regarding their sexual practices (prevalence ratio, 2.2; 95% confidence interval, 1.4 –3.4). Clinics with written or electronic protocols were not more likely to report more frequent STD testing.

Conclusions: Written or electronic protocols for STD testing may promote sexual risk assessment questioning among HIV healthcare providers and may help to ensure STD testing per Centers for Disease Control and Prevention/IDSA guidelines for HIV-positive persons at sexual risk.

HUMAN IMMUNODEFICIENCY VIRUS (HIV) diagnoses have increased in 29 states from 1999 to 2002. During this period, significant increases in HIV diagnoses among minority populations were seen and a 17% increase was documented among men who have sex with men (MSM), suggesting a possible resurgence in this at-risk group.[1] There are an estimated 45,000 persons living with HIV and AIDS in Los Angeles County (LAC) who are aware of their status and an additional estimated 9000 persons with HIV who do not know

Correspondence: Melanie M. Taylor, MD, MPH,CDC/NCHSTP/DSTDP, Arizona Department of Health Services, Office of Infectious Disease Services, 150 N. 18th Avenue, Suite 140, Phoenix, AZ 85007-3237. taylorm@azdhs.gov.

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their status. As of June 2003, the epidemic continues to be predominantly among males (89%), people of color (62%), and MSM (70%).[2] A concurrent epidemic of syphilis among MSM has been ongoing in LAC since early 2000. There have been 2230 cases of early syphilis diagnosed in LAC since 2000 with 60% occurring among MSM. HIV-seropositive men make up 60% of the syphilis cases diagnosed among MSM in Los Angeles County.[3]

Reports of increases in unsafe sexual behavior among MSM with and without HIV have been born out by rising sexually transmitted disease (STD) rates in these populations in many other large U.S. cities.[4–8] Ongoing sexual risk behaviors practiced by MSM with and without HIV have been attributed to "AIDS and safe sex burnout" and declines in perceived transmission and acquisition risk with the advent of highly active antiretroviral therapy (HAART).[8–13] High rates of unprotected anal sex between HIV-discordant MSM have been reported from San Francisco[14] and Seattle.[15] Interventions that effect sustainable behavioral change are needed if we are to prevent further increases in HIV rates.

Primary HIV providers have multiple clinical encounters that afford opportunities to discuss HIV risk reduction behaviors and to institute routine screening for STDs. A recent report evaluating discussion of safer sex practices by HIV care providers to their HIV-positive patients demonstrated that 71% of 839 patients reported having this discussion with their provider on at least 1 occasion. MSM were less likely to receive prevention messages on safer sex and disclosure as compared with heterosexual men.[16] In a survey study conducted among physicians in 4 U.S. cities, infectious disease physicians were shown to be less likely to routinely discuss consistent condom use and risk reduction strategies for HIV transmission with HIV-infected patients.[17] Additional research is needed regarding routine STD screening and discussion of sexual risk behaviors with patients by their primary HIV care providers and whether these efforts result in decreased HIV transmission.

Recent attention in the fight against HIV transmission has been directed toward preventing new infections by incorporating risk reduction into the medical care of HIV-positive persons. Specifically, the need to increase the counseling provided to HIV-positive patients regarding disclosure of their HIV status, use of safer sex practices, drug use. and the need to perform routine STD screening in those at sexual risk have been summarized in a recent Centers for Disease Control and Prevention (CDC) publication[18,19] and in guidelines published previously by the California STD Controllers and the Seattle King County STD and HIV Control Programs.[20,21] STD screening among HIV-positive persons is an important element of these guidelines as a result of the known increased risk of onward transmission of HIV when a concurrent STD is present.[22] In addition, STD testing of HIV-positive persons in care has been reported to be cost-effective when the number of possible averted new HIV infections through treatment of STDs is considered.[23]

As a result of the ongoing concerns surrounding the possibility of increased HIV incidence related to the syphilis epidemic and increases in sexual risk-taking behaviors, we evaluated HIV care sites in Los Angeles for the use of STD screening protocols, STD screening practices, and the frequency of obtaining sexual risk assessment information.

Methods

Data Collection

Names and locations of HIV primary care clinics with patient enrollments of greater than 50 were obtained from a resource guide listing 44 clinics for HIV-infected individuals in LAC entitled: HIV LA: A Comprehensive Directory of HIV/AIDS Services in Los Angeles County.[24] Additional HIV clinic names and locations were obtained from the HIV Epidemiology Program of Los Angeles County. Medical directors, physicians, and other healthcare providers from these HIV primary care clinics were administered a phone (92%) or in-person (8%) survey. One medical director or HIV primary care provider per clinic was administered the survey. Medical directors presiding over multiple clinics under the same organization were allowed to answer the survey for their supervisory sites. Per U.S. Department of Health and Human Services guidelines, data collection, evaluation, and analysis are part of ongoing public health surveillance activities and thus are not subject to review by Institutional Review Boards.

HIV care providers participating in the survey were asked a series of questions regarding the frequency of STD testing at their HIV care sites. The frequency of testing for chlamydia and gonorrhea from any anatomic site was collected. The estimated number of providers per clinic, number of enrolled patients, and gender percentages per clinic were collected for each site. Survey participants were asked if a written STD protocol existed for their site. Participants were asked what standard STD tests were obtained at the initial visit. Participants were then questioned in an open-ended format regarding what prompted repeat STD testing after the initial visit, how often STD tests were performed outside of clinical symptoms, whether patients were asked about their sexual practices and if so how often, and if patients were asked and did report unsafe sex, whether these answers prompted STD testing. Participants were questioned about their knowledge of the syphilis rates within LAC and were asked what the LAC rates were compared with the national rates of syphilis. One person administered the survey.

Each of the 48 clinical sites was offered the following: 100 patient information cards written in English and Spanish on various STDs (syphilis, gonorrhea, chlamydia, herpes, genital warts, and hepatitis), the LA County Early Syphilis Surveillance Summary, CA State STD Treatment Guidelines, 2 foldout posters of the symptoms and diagnostic workup of primary and secondary syphilis, 20 copies of the revised LAC STD reporting form, and a copy of the CDC publication “Incorporating HIV Prevention Into the Medical Care of Persons Living With HIV.” The LAC STD director and the medical director included personal letters outlining the need for continued STD screening vigilance.

Statistical Analysis

Data were analyzed using SAS statistical package version 8.0 (SAS Institute, Cary, NC). Comparisons between those HIV clinics that use written or electronic STD testing protocols and those that do not use STD protocols were made using chi-squared statistics to obtain frequencies, prevalence ratios, and confidence intervals. Fisher exact test was used to report all P values resulting from low cell numbers for some variables.

Results

Thirty-six medical directors, HIV clinic care coordinators or practicing HIV care providers representing 48 primary HIV care clinics were surveyed. All clinics that were approached agreed to participate in the survey. The number of represented clinicians was 184; the number of HIV-infected patients represented was 28,119, of which 82% were males (Table 1). The use of a written or electronic protocol for STD testing was reported by 24 (50%) of the clinics. The use of an electronic protocol for sexual risk behavior assessment followed by provider prompting to perform STD was available in 10 of the 24 (42%) clinics using STD testing protocols. Written protocols were used in the remaining 14 (58%).

Screening of HIV-positive patients at the initial visit for syphilis was reported by 100% of respondents and by 67% of respondents for chlamydia and gonorrhea. Subsequent testing for syphilis after the initial visit was reported every 3 months by 60%, every 6 months by 10%, every year by 23%, based on sexual risk by 2%, and only with symptoms by 4% of clinics. Testing for chlamydia and gonorrhea was reported every 3 months by 21%, every 6 months by 6%, yearly by 46%, based on sexual risk by 8%, and only with symptoms by 17%.

Clinics with written or electronic protocols were more likely to report performance of syphilis testing at least every 3 to 6 months, although this difference was not statistically significant (Table 2). There was no difference in frequency of testing for gonorrhea or chlamydia based on use of written or electronic STD protocols. Clinics with written or electronic STD protocols were significantly more likely to report questioning patients at each visit regarding their sexual practices and more likely to report performance of STD testing based on patient reports of unsafe sexual behavior. Written or electronic protocols were more likely to be used in early intervention programs and community-based organizations and less likely to be used in private clinics and clinics operated by health maintenance organizations.

Seventy-seven percent of clinics reported that patients were asked about their sexual behavior by clinicians at their clinic site. The frequency at which this information was gathered was variable by clinic with 73% reporting that patients were asked about their sexual practices at each visit and 2% reporting every 3 months. Thirteen percent reported not obtaining risk assessments routinely and an additional 10% reported not obtaining risk assessments because all patients were assumed to be engaging in unsafe sexual practices. Community-based organizations were more likely to ask patients at every visit about their sexual behavior (partial remission, 1.7; 95% confidence interval, 1.3–2.2); private clinics and clinics operated by health maintenance organizations were less likely to ask about sexual behavior at every visit, although these results were not statistically significant.

The questions used most often when assessing sexual risk were: “Have you engaged in unprotected oral, anal, or vaginal sex or sex without a condom since your last visit?” (54%) and “Do/did you use a condom when you have/had sex?” (23%) (Table 3). STD testing prompted by patient reports of unsafe sex was reported by 86% of clinics reporting obtaining sexual risk information at each visit. The median number of questions used by these clinics was 1 (range, 1–8).

When asked the open-ended question, “What do you know about the syphilis rates in Los Angeles County?” all survey respondents reported that they were higher or increased compared with previous years. When asked how the LAC syphilis rates compared with the national average, 97% replied that they were higher and 1 person did not know.

Discussion

Our results highlight the success of the public health effort to increase awareness among HIV providers regarding the syphilis epidemic and the need for routine screening. Knowledge of the rise in syphilis cases in LAC was reported by 100% of clinic respondents surveyed and was reflected in the syphilis screening practices at the initial and follow-up visits of HIV-positive persons seen in these clinics. Although reported frequency of follow-up STD testing varied, 93% of clinics reported performing syphilis testing and 73% reported performing chlamydia/gonorrhea testing yearly or more regardless of symptoms.

Clinics with written or electronic protocols for STD testing were significantly more likely to report asking patients about unsafe sex. Use of sexual risk assessment questions to define risk behaviors and the need for STD testing was reported frequently among clinics in Los Angeles. Questions used to assess sexual risk varied among clinics. Studies evaluating specific risk assessment questions in predicting the presence of an asymptomatic STD are not available currently. Guidelines formulated from systematic surveys of STD prevalence and sexual behaviors among HIV-positive patients, especially MSM, are available and should be used by HIV clinics and HIV care providers.[18–21] The need for standardization of sexual risk assessments is less important than ensuring the inclusion of any questions regarding sexual risk in the initial and routine medical assessment of an HIV-positive patient. Recent data indicates that HIV-infected patients receiving care in clinics with written procedures were more likely to report receiving HIV prevention counseling in the previous 6 months than were patients in clinics with no standard procedures.[25] HIV clinics should consider the use of a written protocol for STD testing to create a standard clinical practice among the providers at these HIV care sites. Use of recent CDC guidelines should be referenced for this purpose.[18,19]

The need to incorporate counseling about disclosure of HIV status to present and future sexual partners cannot be overstated. Transmission of HIV from known seropositive persons is suggested based on recent trends in STDs occurring among HIV-infected MSM on antiretroviral therapy,[13] reports of increases in unsafe sexual behavior in this group,[14,15,26] and transmission of antiretroviral resistant strains from HIV-infected MSM receiving antiretroviral therapy.[27] Improved efforts to ensure that HIV-infected patients understand the importance of disclosure of their HIV status to future sex partners and the persistent risk of HIV transmission despite treatment with antiretrovirals should be included in initial and subsequent provider encounters. New studies readdressing behavioral change associated with counseling of previously infected HIV-positive persons, especially MSM, regarding HIV disclosure are needed because it is members of this group that contribute data to the growing body of literature describing unsafe sexual practices.[13,28,29]

Public health response to rising STD rates in these patients must include increased awareness of regional and national STD rates by HIV providers, increased STD screening and repeat testing of HIV-infected patients, and ultimately through measures that will effect sustained behavior change. Recent data indicates that brief safer-sex counseling by HIV care providers leads to a significant reduction in the amount of unprotected anal or vaginal intercourse reported by HIV-positive patients.[30] Although evidence supports a decrease in sexual risk behavior among those receiving counseling from clinical and nonclinical counselors,[30,31] the potential degradation of these safer-sex practices suggests the need for repeated discussion of sexual practices with patients with HIV.

Our results indicate that discussion of sexual behavior was reported to occur more consistently in some HIV care settings than others. Private HIV clinics and clinics operated by health maintenance organizations were less likely to use written protocols for STD testing and less likely to report discussion of sexual behavior at each clinic visit. The frequency of this type of discussion may be related to whether a standard STD screening protocol is used and to the type of clinic. Other reasons for these inconsistencies may include perceived time constraints and familiarity with patients.[32] This may explain the decreased frequency of discussion of sexual behavior in private clinics and clinics directed by health maintenance organizations. Difficulty in incorporating discussion of sexual and drug use behaviors and the lack of an optimal standard intervention strategy are other explanations that have been suggested.[28–33] Despite these issues, providers in our survey reported the use of numerous entrée questions in their discussion of sexual risk behaviors.

Our study has strengths and limitations. We were able to include responses from clinics representing the care of over 62% of the HIV-infected persons aware of their serostatus in LAC. Our study evaluated the impact of the use of written or electronic protocols for STD testing in facilitating HIV care provider acquisition of sexual risk behavior in HIV care clinics. We did not survey patients after provider encounters or perform medical chart review and therefore our information does not necessarily reflect actual patient experience. In addition, we did not survey individual HIV care providers and therefore our data may not describe the clinical practice of these providers. Our study design limited our ability to demonstrate associations between responses to individual risk assessment questions and probability of STD testing. We were not able to survey all clinics providing care to HIV-positive patients in Los Angeles and thus cannot generalize our results to these clinical settings. Current recommendations include throat and rectal testing for HIV-infected persons, specifically MSM at sexual risk.[18,19] Data on site-specific gonorrhea and chlamydia testing was not collected in this study.

We were able to demonstrate high knowledge of syphilis rates and reasonably high frequency of testing syphilis and other STDs through the use of STD protocols by Los Angeles HIV care clinics included in this survey. Our results indicate that the use of an STD protocol appears to influence the frequency of obtaining sexual risk information. Additional efforts are needed to increase STD testing among at risk HIV-infected populations and to measure the prevalence of this testing.

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TABLE 1.

Demographics of Surveyed Respondents and Clinics

Clinical Title of Survey Respondents*	**Number (%) (N = 36)**	**Number of Patients Represented (N = 28,119)**
Medical director	11 (31)	13,254 (47)
Clinic director	1 (3)	350 (1)
HIV/AIDS program coordinator	4 (11)	495 (2)
Physician	12 (33)	7023 (25)
Nurse practitioner	6 (17)	6497 (23)
Physician's assistant	1 (3)	400 (1)
Medical assistant	1 (3)	100 (0.4)

Clinic Type	Number (%) (N = 48)	Number of Patients Represented (N = 28,119)
Private clinic	11 (23)	8735 (31)
Health maintenance organization	7 (15)	3373 (12)
Publicly funded clinic	10 (21)	3287 (12)
University or hospital-affiliated HIV care site	5 (10)	4695 (17)
Community-based organization	15 (31)	8029 (29)

*Two medical directors were allowed to complete the questionnaire for the 12 clinics under their direction. One physician was allowed to complete the questionnaire for 3 clinics in which he practiced as the sole HIV care provider. Thus, the number of respondents does not equal the number of clinics.

TABLE 2.

Characteristics of Clinics Reporting Use of Written or Electronic Protocols for Sexually Transmitted Disease (STD) Testing (N = 48)

Variable	Protocol No. (%) (N = 24)	No Protocol No. (%) (N = 24)	Prevalence Ratio (95% CI)	*P* Value
Clinic Practices				
Asymptomatic testing every 3–6 months				
Syphilis	20 (83)	14 (58)	1.4 (1.0–2.1)	0.1
GC/CT	7 (29)	6 (25)	1.2 (0.5–3.0)	1.0
Patients asked about unsafe sex behavior at each visit	24 (100)	11 (46)	2.2 (1.4–3.4)	<0.001
STD testing performed based on patient's answers to sexual risk questions	22 (92)	13 (54)	1.7 (1.1–2.5)	0.008
Clinic type				
Early Intervention Program *	22 (92)	11 (46)	2.0 (1.3–3.1)	0.001
Community-based organization	15 (63)	0 (0)	NA †	<0.001
Health maintenance organization	0 (0)	7 (29)	NA †	0.009
Hospital/university	2 (8)	3 (13)	0.7 (0.1–3.6)	1.0
Private	2 (8)	9 (38)	0.2 (0.05–0.9)	0.04
Public	5 (21)	5 (21)	1.0 (0.3–3.0)	1.0

* Early intervention programs are defined as health clinics that are linked with or offer HIV testing, counseling, and referral services to persons at high risk for HIV infection to identify and/or enroll those patients into primary care services. These programs assure a continuum of care to patients with HIV by providing monitoring and coordinating high-quality comprehensive care.

† Undefined prevalence ratio as a result of 0 numerator or denominator cell count.

GC = gonorrhea; CT = chlamydia.

TABLE 3.

Questions Included in Written, Electronic, and Informal Sexual Risk Assessments Used by Providers in HIV Clinics in Los Angeles County (N = 48 clinics)

Frequently Asked Questions in Sexual Risk Assessments	Number of Clinics (%)
Have you practiced unsafe/unprotected (without a condom) sex since your last visit?	13 (27)
Have you had unprotected oral, anal, or vaginal sex since your last visit?	13 (27)
Do/did you use a condom when you have/had sex?	11 (23)
If unsafe sex, what was the HIV status of your partner(s)?	9 (19)
If unsafe sex, was your partner(s) aware of your HIV status?	9 (19)
Have you used any recreational drugs that were linked to your sexual activity?	9 (19)
Was your sexual interaction with an anonymous partner(s)?	9 (19)
If anonymous, where did the sexual interaction take place? (bathhouse, sex club, through the internet contact, other)	9 (19)
What type of sex practices do/did you engage in?	8 (17)
Who is/are your sex partner(s)?	4 (8)
Have you had sex with men, women, or both?	3 (6)
Are you sexually active?	3 (6)
How many partners have you had in the last 30 days?	2 (4)
Do you practice safe sex?	2 (4)
What type of protection do you use?	2 (4)
Do you have a steady sexual partner?	2 (4)
Do you have sex with indiscriminant partners?	1 (2)
When did you last have sex?	1 (2)
Do you have any new sex partners?	1 (2)
What percent of time do you use condoms?	1 (2)
Have you participated in any sexual activity involving exchange of bodily fluids?	1 (2)
Do you practice oral, anal, or vaginal sex?	1 (2)