The STI and HIV Testing Practices of Primary Care Providers

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Financial support: Dr. Solorio received additional support from the National Institute of Mental Health and the UCLA Pacific AIDS Education and Training Center.

Objectives: To examine the sexually transmitted infection (STI) and HIV testing practices of primary care providers (PCPs) practicing in predominantly Hispanic communities.

Methods: This is a cross-sectional study. PCPs were identified by matching ZIP codes of physician directories with ZIP codes of Los Angeles County areas that have a population that is >50% Hispanic (N=191). PCPs were mailed a survey that assessed their frequencies for asking patients about sexual history, offering STI and safe sex advice, total number of HIV tests ordered in the past six months and their perceived barriers to STI counseling. The survey response rate was 45% (N=85).

Results: Although 73% of PCPs took sexual histories from patients regularly (daily-to-weekly), only 41% offered STI or safe sex advice regularly. PCPs who were white were less likely than those who were Hispanic/Asian/African American/other to take sexual histories from their patients regularly (OR 0.3, 95% CI 0.1–0.9). The total number of HIV tests ordered for patients by PCPs at their practice locations in the past six months were: none (6%), 1–10 tests (27%), 11–20 tests (24%) and >20 tests (36%). Thirty-six percent of PCPs reported ≥1 positive HIV test in the past six months. PCPs' perceived barriers to STI counseling included patient's young age (<16 years), language and presence of patient's relative/partner in consultation room at time of visit.

Conclusion: Our findings suggest a need for interventions with PCPs practicing in predominantly Hispanic communities to improve their STI and HIV practice patterns.

Key words: sexually transmitted diseases ■ HIV/AIDS ■ primary care

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INTRODUCTION

Asymptomatic sexually transmitted infections (STIs), such as human immunodeficiency virus (HIV), are increasing among the Hispanic population of the United States,[1] particularly in states such as California, where one-third of the population is Hispanic.[2] The second largest epicenter of AIDS cases in the United States is in Los Angeles, CA,[1] an area that has a population that is nearly 50% Hispanic.[3] The percentage of new AIDS cases who are Hispanic in Los Angeles County has been increasing every year, from 20% of all new AIDS in the beginning of the epidemic to 43% of all new cases by year 2002.[4] Because of the asymptomatic nature of HIV, primary care providers (PCPs) need to routinely inquire about the sexual risk behaviors of their patients and offer sexually transmitted disease screening and treatment. However, previous studies indicate that PCPs do not routinely question their patients on sexual risk behaviors.[5-7] To date, we were unable to find studies in the literature that examine the STI and HIV testing patterns of providers in predominantly Hispanic communities. Since the incidence of HIV is rising in the Hispanic community, it is essential to investigate the practices of PCPs in terms of HIV screening and safe-sex counseling so that appropriate interventions may be developed, if necessary.

Therefore, the purpose of this study was to examine the STI and HIV practice patterns of PCPs in predominantly Hispanic communities within Los Angeles County. We are especially interested in examining provider practice patterns for sexual history-taking, offering STI advice, offering safe-sex advice, and HIV testing patterns and outcomes, and in assessing PCP-perceived barriers to sexual counseling. An understanding of PCP practice patterns in Hispanic communities would shed some light on the groups of PCPs to target for interventions to improve STI practices for counseling and HIV testing.

METHODOLOGY

Participants

We identified PCPs who practiced in predominantly Hispanic communities in Los Angeles County by using the

names found in the California Medical Board Directory, the California Latino Medical Association Directory and the Hispanic Independent Physician Association Directory for Los Angeles County (all directories include provider

Table 1. Characteristics of primary care providers in Hispanic communities, Los Angeles County, 2004

Characteristics	Number of PCPs (N=85)	%
Gender		
Male	50	59
Female	35	41
Ethnicity		
White, not of Hispanic origin	21	25
Hispanic/Latino/Latina	23	27
Black, not of Hispanic origin	8	9
Asian/Pacific Islander, not of Hispanic origin	28	33
Other	5	6
Medical School Training		
U.S. medical school graduate	59	69
Foreign medical school graduate	26	31
Provider Type		
General practice	9	11
Family practice	32	38
Internal medicine	24	28
Pediatricians	9	11
Osteopathic physician	1	1
Nurse practitioner/physician assistant	8	9
Other	2	1
Board Certification		
Yes	64	75
No	21	25
Type of Practice		
Community clinic—primarily uninsured	13	15
Community clinic—insured/uninsured	12	14
Large managed care group practice	39	46
Private practice (<5 providers)	4	5
Solo practice	9	11
Other	7	8
Years in Practice		
0–5	22	26
5–10	13	15
10–15	14	16
>15	36	42
Average Amount of Time Spent with Each Patient		
<10 minutes	5	6
10–20 minutes	71	84
20–30 minutes	7	8
>30 minutes	2	2
Language Most Frequently Used (No Translation Services)		
>50% English	19	22
>75% English	15	18
>50% Spanish	28	33
>75% Spanish	20	24
Frequency of Taking a Sexual History from Patients		
Daily	50	59
Weekly	12	14
Monthly	14	16
< Monthly	3	4
Frequency of PCP Offering the Following Services in Their Practices		
Safe-Sex Advice		
Daily–weekly	35	41
Monthly–seldom	48	55
STI Advice		
Daily–weekly	31	36
Monthly–seldom	50	59

name/specialty/address/and ZIP code) and matched these PCP ZIP codes to that of the Census 2000 ZIP codes for Los Angeles County areas in which the population was >50% Hispanic.[8] We identified 214 providers practicing in predominantly Hispanic communities of Los Angeles County, but only 191 had a complete address and a specialty code that identified them as PCPs (family physician, internist, general practice, physician assistant, nurse practitioner). All 191 PCPs were targeted for study participation. To encourage participation, 126 surveys were delivered in person and 65 were mailed to PCP offices; the overall response rate was 45% (N=85). No incentives were provided to PCPs for their participation in study. Our response rate is slightly higher than a previous report on physician survey response rates when no incentives are provided (40%).[9] A recent meta-analysis has found a mean response rate of 54% among surveys of physicians published in medical journals; however, this percentage includes surveys with a range of incentive offers.[10]

Procedures

All participants were made aware that study participation was voluntary and that all information provided would be confidential. Consent forms were included in the mailing, and participants provided consent by completing the survey and returning it. The survey was anonymous; no PCP identifiers were included in the survey. The distribution, mailing and collection of surveys were conducted over a three-month period from March to June 2004. This study was approved by the UCLA institutional review board.

Measures

The survey measured PCPs' sociodemographic characteristics and STI and HIV practice patterns. PCPs were asked about personal characteristics (gender, ethnicity, provider type, board certification, U.S. medical graduate versus foreign medical graduate, years in practice, type of practice). In addition, PCPs were asked about their frequency (daily, weekly, monthly and less than monthly) of taking a sexual history from patients and about how often they offered the following health services in their practices (daily, weekly, monthly, seldom, never): safe-sex advice and STI advice. These measures have been previously used to assess PCP practice patterns for sexual history-taking, offering safe-sex and STI advice.[5]

Table 2. Odds ratios from unadjusted bivariate analyses and for logistic regression model assessing the association between PCP characteristics and taking a weekly sexual history from patients (N=85)

	Take Weekly Sexual History			
			Odds Ratios	
Characteristics	n	%	Unadjusted OR (95% CI)	Logistic Regression Model OR (95% CI)
Gender				
Female	29	88	1.0	1.0
Male	33	72	0.4 (0.1–1.2)	0.4 (0.1–1.4)
Ethnicity				
Hispanic, African-American, Asian/ Pacific Islander, other	49	85	1.0	1.0
White, not Hispanic	13	62	0.3 (0.1–0.9)*	0.3 (0.1–0.9)*
Medical School Training				
Foreign medical school graduate	16	70	1.0	1.0
U.S. medical school graduate	46	82	2.0 (0.7–6.2)	1.9 (0.5–7.1)
Provider Type				
Nurse practitioner/physician assistant	6	86	1.0	1.0
Physician	56	78	0.6 (0.1–5.2)	1.6 (0.1–17.3)
Type of Practice				
Other[a]	50	77	1.0	1.0
Community clinic—primarily uninsured	11	84	1.6 (0.3–8.3)	1.4 (0.2–8.3)
Years in Practice				
>5 years	45	77	1.0	1.0
<5 years	17	81	1.3 (0.4–4.3)	0.7 (0.2–3.4)
Average Time Spent with Each Patient				
>10 minutes	57	78	1.0	1.0
<10 minutes	4	80	1.1 (0.1–10.7)	1.6 (0.1–19.9)
Language Most Frequently Used				
Spanish	38	84	1.0	1.0
English	22	69	0.4 (0.1–1.2)	0.5 (0.1–1.6)

* p value <0.05; a: Other type of practice refers to community clinic including insured/uninsured, large managed care group practice, private practice (multiple providers), solo practice, and other.

PCPs were also asked if they ordered any HIV tests in the past six months. If they had, they were then asked about number of HIV tests ordered and the number that had returned positive.

PCPs were surveyed on perceived barriers to sexual history-taking (patient-related barriers, situation-related barriers). For patient-related barriers, providers were asked if they considered the following patient characteristics as barriers to sexual history-taking: language, sexual orientation, age (<16 years, >45 years) and gender. For these patient-related barriers, PCPs were asked, "To what extent do you agree that these items are barriers to your taking a sexual history?" PCPs were asked to rate each barrier on a scale of 1–5 (the range was 1 for strongly agree to 5 strongly disagree). Those who responded 1–2 were categorized as agree, 3 as neutral and 4–5 as disagree. Situation-related barriers were measured by asking providers to what extent they considered the following items barriers to taking a sexual history: the partner of the patient is present, the mother or relative is present, the patient visits for the first time, knowing the patient personally. Providers were asked to rate these barriers as very much, somewhat or not at all. The measures used to assess PCP-perceived barriers to sexual history-taking have been previously used.[5]

Data Analysis

The distributions of PCP characteristics were assessed for gender, ethnicity, location of medical training (U.S. versus foreign medical graduate), provider type, board certification, location of practice and for frequency (daily, weekly, monthly, seldom) of taking sexual history, offering safe-sex advice and STI counseling (Table 1). We then conducted bivariate and multivariate logistic regression analysis to examine the association between PCP characteristics (gender, race/ethnicity, location of medical training, provider type, years in practice, time spent with each patient and language used with patients) and taking a sexual history from patients on a regular basis (frequency daily to weekly, Table 2). For the multivariate logistic regression, variables that were correlated were excluded from the final analysis. Location of training was found to be correlated with board certification; we therefore excluded board certification from the multivariate logistic regression analysis. In addition, we examined the total number of HIV tests ordered by PCPs in the past six months (Table 3). Finally, the perceived PCP barriers to STI counseling were evaluated (Table 4) by examining frequencies by which providers agreed, were neutral, or disagreed with patient-related and situation-related barriers.

RESULTS

Our sample of PCPs was ethnically diverse and included 33% Asians/Pacific Islanders, 27% Hispanics, 25% whites, 9% African Americans and 6% other (Table 1). Fifty-nine percent were male. Sixty-nine percent of the providers were U.S medical graduates. PCP specialty included 38% family medicine, 28% internal medicine, 11% pediatricians, 11% general practice, 9% nurse practitioner/physician assistants and 1% osteopathic practitioners. Seventy-five percent were board certified in their specialty. Fifty-seven percent of providers reported that they used Spanish language with the majority of their patients.

The frequency of PCP sexual history-taking, STI advice and safe-sex advice was assessed. Although 73% of PCPs took sexual histories from patients regularly (daily to weekly), only 41% offered STI or safe-sex

Table 3. Primary care providers' HIV testing patterns*

	N (%)
Number of HIV/AIDS Patients Seen Last Year	
None	32 (38)
1–5	45 (53)
5–10	2 (2)
>10	4 (5)
Number of HIV Tests Ordered by You, Past 6 Months	
None	5 (6)
1–10	23 (27)
11–20	20 (24)
>20	31 (36)
Unknown	3 (4)
Approximate HIV Tests That Were Positive, Past 6 Months	
None	45 (53)
1–5	30 (35)
6–10	1 (1)
>10	0
Unknown	6 (7)

*Data missing for each question: 3-4%

advice regularly (Table 1).

We found that white PCPs were less likely to take regular sexual histories from their patients than Asian/Hispanic/African-American/other PCPs (OR: 0.3, 95% CI: 0.1–0.97) (Table 2). While 87% of PCPs reported having ordered HIV testing for their patients in the past six months, the actual numbers of HIV tests ordered were low: 6% ordered 0 tests, 27% ordered 1–10 tests, 24% ordered 11–20 tests and 36% ordered >20 tests (Table 3). Despite the low number of HIV tests ordered for patients in the past six months, the following percentages of PCPs reported positive HIV results in the past six months: 53% had no positive HIV tests, 35% had 1–5 positive HIV tests, 1% had 6–10 positive HIV tests and 11% didn't know or did not answer the question.

The most common PCP-perceived barriers to STI counseling included language problems (32%) and patient's young age (26%) (Table 4). Only 10% of providers agreed that a patient's sexual orientation (homosexual/lesbian) was a barrier to STI counseling. The most common PCP-situation related barriers to taking a sexual history included the partner of the patient being present (38%) and the mother/relative being present (65%) at time of patient visit.

DISCUSSION

The findings from this study indicate that PCPs practicing in predominantly Hispanic communities tend to offer little STI counseling, safe-sex advice and little HIV testing to their patients. Our findings suggest that PCPs who predominantly care for Hispanic patients may be in need of interventions to increase their safe-sex advice and offering of HIV testing to their patients.

In this study, the percentage of PCPs who took regular sexual histories from their patients appear to be similar to previously published studies of providers who serve other populations.[5-7,11] Despite the low number of HIV tests ordered by PCPs in our study, 36% of PCPs reported to having ≥1 patient test positive for HIV in the past six months. However, the PCP survey did not ask PCPs for reasons for HIV testing and whether patients had presented with HIV symptoms. It appears likely that patients presented with symptoms suggestive of HIV, which in turn led the PCP to HIV testing. According to the Los Angeles Public Health Department, the majority of Hispanics diagnosed with AIDS in the county had tested HIV positive <1 year prior to their AIDS diagnosis.[12] Thus, the challenge for PCPs practicing in predominantly Hispanic communities appears to be early HIV detection. Early HIV detection has individual (decreases morbidity and mortality) as well as societal benefits: 70% of those who learn their HIV serostatus is positive stop having unsafe sex.[13]

The paucity of HIV testing in primary care offices in Hispanic communities may represent missed opportunities. A study has reported that Hispanic patients are

Table 4. Primary care providers' barriers to STI counseling

To what extent do you agree that these patient characteristics are barriers to your taking a sexual history?

	Agree N (%)	Neutral N (%)	Disagree N (%)
Your patient does not speak English.	26 (32)	10 (12)	46 (56)
Patient is from Mexico/Latin America.	15 (18)	16 (20)	51 (62)
Patient is homosexual/lesbian.	8 (10)	11 (14)	61 (76)
There is a large age difference between you and patient.	5 (6)	16 (20)	61 (74)
Patient is <16.	21 (26)	11 (14)	49 (60)
Patients is >45.	6 (8)	13 (17)	58 (75)
Patient is a man.	8 (10)	13 (16)	59 (74)
Patients is a woman.	8 (10)	9 (11)	62 (78)

When you take a sexual history, how often does this happen?

	Often N (%)	Regularly N (%)	Seldom N (%)	Never N (%)
A male patient is embarrassed.	14 (16)	24 (28)	42 (49)	4 (5)
A female patient is embarrassed.	8 (9)	27 (32)	43 (51)	6 (7)
You feel embarrassed.	2 (2)	5 (6)	48 (56)	29 (34)

To what extent do you consider these items barriers to your taking a sexual history?

	Very Much N (%)	Somewhat N (%)	Not at All N (%)
The partner of the patient is present.	32 (38)	41 (48)	10 (12)
The mother or relative is present.	55 (65)	24 (28)	4 (5)
The patient visits for the first time	7 (8)	39 (46)	37 (44)
You know the patient personally.	8 (9)	42 (49)	31 (36)

more likely to undergo HIV testing if a physician recommends it.[14] In addition, the CDC has recently issued new guidelines for HIV testing in healthcare settings; HIV screening is now recommended for patients in all healthcare settings, including primary care, after the patient is notified that testing will be performed, unless the patient declines (opt-out screening).[15] In addition, the CDC recommends that patients at high risk for HIV receive testing at least annually.

Our findings suggest that PCP race/ethnicity may play a role in sexual history-taking in the primary care setting. We found white PCPs to be less likely to take regular sexual histories from their predominantly Hispanic patients than Asian/Hispanic/African-American/other PCPs. We were unable to find studies in the literature that compare sexual history-taking among PCPs from different racial/ethnic groups for a comparison. Potential explanations as to why white PCPs may be less likely to take a sexual history from Hispanic patients may include cultural barriers.

The characteristics of PCPs who participated in our survey are consistent with previous studies describing the type of providers who practice in predominantly Hispanic communities in Los Angeles County in terms of race/ethnicity, gender, U.S. medical graduate versus foreign and board certification.[16,17] The interpretation of findings should take into account the limitations of the study design, a PCP survey on their STI and HIV practice patterns that was not confirmed with actual medical records or with laboratory data. The social desirability of certain responses (for example, taking a sexual history) may lead to bias in reporting and an exaggeration of actual practices. And while almost one-half of PCPs reported offering STI advice, we did not measure the type of advice that was actually provided. As per a previous report, the offering of brief, patient-centered counseling may be most effective in reducing STI risk.[18]

This study is a general PCP quantitative survey to assess current STI counseling practices and HIV testing patterns in Hispanic communities. Our findings indicate that PCPs practicing in predominantly Hispanic communities are in need of interventions to increase their frequencies of offering of STI and safe-sex counseling and to increase their offering of HIV testing. A need exists for qualitative studies among PCPs who practice in Hispanic communities to assess additional domains that may be barriers to STI counseling and HIV testing in the Hispanic population. In addition, since this survey focused on PCPs rather than on actual Hispanic patients, future research needs to focus on interviewing Hispanic patients on their characteristics, including sexual risk behaviors and the outcomes from the medical encounter, and whether these included STI and HIV counseling and testing.

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