

# Prevalence of HIV Infection and Related Risk Behaviors Among Young Latino Men Who Have Sex with Men: *San Diego - Tijuana Border Region*

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## TABLE OF CONTENTS

Executive Summary .....	i
Introduction .....	1
Methods .....	2
Results .....	4
Discussion.....	9
References.....	12

## LIST OF TABLES

- 1: Sample Characteristics
- 2: Health Care and Medical History by Study Site
- 3.1: HIV/AIDS Information
- 3.2: Comfort with Source of HIV Information
- 4.1: Lifetime Sex with Males by Study Site
- 4.2: Sex with Males During Previous Four Months by Study Site
- 4.3: Lifetime Sex with Females by Study Site
- 4.4: Sex with Females During Previous Four Months by Study Site
- 4.5: Lifetime Sexual Behavior with Partners from Across the Border by Study Site
- 5.1: Stimulant Use by Study Site
- 5.2: Stimulant Use During Sex by Study Site
- 5.3: Non-Stimulant Use by Study Site
- 5.4: Non-Stimulant Use During Sex by Study Site
- 5.5: Injection Drug Use and Needle Sharing by Study Site
- 6.1: HIV Seroprevalence by Study Site
- 6.2: Reported Previous HIV Testing by HIV Status and Study Site
- 6.3: Previous HIV Test Result Reported by HIV-Positive Individuals and Study Site
- 6.4: History of Sexually Transmitted Disease (STD) Among HIV-Positive Individuals by Study Site
- 6.5: CD4+ Results by Study Site
- 6.6: Viral Load Results by Study Site
- 6.7: Detuned Assay Results by Study Site
- 7.1: HIV Seroprevalence by Socio-Demographic Characteristics and Study Site
- 7.2: HIV Seroprevalence by Sex Behavior and Study Site
- 7.3: HIV Seroprevalence by Drug-Using Behaviors and Study Site
- 8.1: Correlates of Insertive Unprotected Anal Intercourse (UAI) with Males During Previous Four Months by Study Site
- 8.2: Correlates of Receptive Unprotected Anal Intercourse (UAI) with Males During Previous Four Months by Study Site
- 8.3: Correlates of Recent Unprotected Anal Intercourse with Females During Previous Four Months by Study Site
- 8.4: Correlates of Recent Unprotected Vaginal Intercourse During Previous Four Months by Study Site

## EXECUTIVE SUMMARY

### Background

Every year since 1984, representation of Latinos among new Acquired Immunodeficiency Syndrome (AIDS) cases has increased in California. The Human Immunodeficiency Virus (HIV)/AIDS epidemic among Latinos in California remains concentrated among men who have sex with men (MSM). Of the cumulative adult Latino AIDS cases in California, approximately 63.0 percent were exposed to HIV through homosexual contact. Of these, 22.9 percent were diagnosed between the ages of 20 and 29 years. A significant percentage of these Latinos are of Mexican descent. The impact of HIV among MSM on the California-Mexico border is not fully understood. The purpose of this study was to target young Latino MSM living in this border region to participate in a risk-assessment and HIV seroprevalence survey.

The primary objectives of this study were to:

- Estimate the prevalence of HIV;
- Determine HIV genetic subtype, CD4+ count, and viral load for seropositive specimens;
- Assess the prevalence of drug and sexual risk behaviors; and
- Identify correlates of HIV infection and risk behaviors among young Latino MSM in the San Diego, California-Tijuana, Mexico, border region.

### Methods

Between November 1999 and November 2001, an anonymous, cross-sectional survey was conducted among young Latino MSM living in the San Diego-Tijuana border region. Using convenience sampling, 374 MSM were recruited from a target population consisting of Latinos aged 18 to 29 years. Local residency and sexual orientation were not considered criteria for inclusion in the survey. Using a structured, standardized questionnaire, trained community health outreach workers recorded participants' demographic characteristics, history of HIV testing, drug use, sexual behavior, and knowledge, attitudes, and beliefs about HIV transmission and prevention. The interview was administered in either English or Spanish. Two blood samples were drawn from each participant. All blood specimens were tested for HIV. HIV-positive specimens were tested for CD4+ count and viral load, and detuned assays were conducted to assess recency of HIV infection.

### Results

Forty-two and two-tenths percent of the sample from Tijuana and 64.7 percent of men from San Diego were between 26 and 29 years of age. Most were of Mexican descent (98.4 percent from Tijuana and 85.8 percent from San Diego). About one-third (33.7

percent) of men from Tijuana and 4.9 percent from San Diego had less than a high school education. Fifty-one percent of the Tijuana sample had a history of incarceration and 8.3 percent of the San Diego MSM had ever been in a prison. Most survey participants from San Diego (67.3 percent) indicated previously testing for HIV compared with 46.2 percent of men from Tijuana. While 45.9 percent of San Diego participants reported 26 or more lifetime male sex partners, 13.3 percent of the Tijuana sample indicated that their lifetime male sexual partners exceeded 26. History of unprotected insertive anal sex was relatively common among participants from both study sites (72.7 percent of men from Tijuana and 78.8 percent of men from San Diego), unprotected receptive anal sex was not as common among Tijuana participants (29.0 percent versus 77.5 percent). Approximately 40.0 percent of the Tijuana MSM indicated injecting drugs and 25.4 percent had injected during the past four months. Injecting behaviors occurred much less frequently among men from San Diego. The reported rate of needle sharing among men from Tijuana who injected in the past four months was 93.7 percent. Thirty-five percent of the San Diego sample and 20.1 percent of the Tijuana sample was found to be infected with HIV.

## **Conclusion**

This study provides information about HIV-related risk behaviors and prevalence of HIV among the Latino MSM population in the San Diego-Tijuana border region. The results of this study indicate that community-based interventions among this border population are warranted. There is a need for increased HIV/AIDS and sexually transmitted disease education and prevention measures targeting this population. These efforts should be culturally and linguistically appropriate in order to effectively address specific needs of Latino MSM and encourage them to access HIV testing and treatment programs and to participate in safer sexual and drug use behaviors.

## INTRODUCTION

Nationwide, Latinos accounted for 18.6 percent of cumulative Acquired Immunodeficiency Syndrome (AIDS) cases reported to the Centers for Disease Control and Prevention through December 2004.<sup>1</sup> In California, Latinos make up a larger proportion of AIDS cases. As of September 2006, 22.7 percent of the cumulative AIDS cases in California were Latino.<sup>2</sup>

In California and Mexico, the majority of reported AIDS cases occur among men who have sex with men (MSM): 65.1 percent in California<sup>3</sup> and 58.7 percent in Mexico.<sup>4</sup> Recent evidence suggests that HIV prevalence is increasing among younger cohorts of Latino MSM in California.<sup>5-8</sup> The Young Men's Survey, conducted in seven major urban areas in the United States from 1994 to 1998, found HIV prevalence to be 6.9 percent among young Latino MSM aged 15 to 22 years.<sup>10</sup> A similar study of Latino MSM in the same cities conducted from 1998 to 2000 estimated a 3.5 percent HIV incidence rate among 23 to 29 year olds.<sup>10</sup>

HIV risk behaviors appear to be high among younger MSM.<sup>7,8,11</sup> MSM exhibit high rates of unprotected anal intercourse (UAI).<sup>7,8,10,11</sup> Estimates for history of UAI among young MSM range from 24.0 percent to 46.0 percent.<sup>7,10</sup> Studies in California show that young Latino MSM have the highest rate of UAI, compared with other racial/ethnic groups.<sup>5,6</sup>

Sexual risk-taking among young MSM has been associated with a number of different factors, including depression and/or increased stress level,<sup>12-14</sup> peer norms regarding safe sex,<sup>6,7,15</sup> lifetime history of forced sex,<sup>6</sup> low self-esteem,<sup>13</sup> and a stable relationship.<sup>6,7,16,17</sup> A study of Latino MSM in three major United States cities found that participants who had engaged in recent UAI with a non-monogamous partner had experienced greater homophobia and racism.<sup>18</sup> Another study of young MSM in California found low levels of communication in sexual situations to be predictive of UAI.<sup>19</sup>

Empirical evidence suggests that drugs and alcohol are strong contributors to unsafe sexual behaviors and the spread of HIV among young MSM.<sup>20-22</sup> Use of cocaine and nitrite inhalants ("poppers") in particular have been found to be positively correlated with high-risk sexual practices.<sup>6,22,23,24</sup> A few studies have examined drug use during sex, a more direct measure of the potential influence of drugs on sexual practices. Findings have shown alcohol and/or marijuana use during sex inhibit use of condoms.<sup>6,25,26</sup>

Researchers attending the National Latino HIV/AIDS Research Conference in 1994 stressed the need to better understand risk-taking behaviors among Latinos and for greater collaboration between researchers in Latin America and the United States.<sup>27</sup> Information on risk behaviors, sexual attitudes, and HIV status among high-risk subgroups of Latinos, such as young MSM, has increased since 1994, but research specific to HIV/AIDS along the United States-Mexico border remains limited. In the United States, border communities tend to be younger and poorer than the nation as a whole, and have higher incidence of hepatitis A, tuberculosis, measles, and AIDS.<sup>28</sup>

San Diego, California and Tijuana, Mexico are geographically close, but have vastly different economic, social, and cultural structures. Assessment of HIV prevalence and sexual behaviors among MSM in this border region is needed to adequately describe the current and potential impact of HIV in California and assist in the development of effective, culturally-sensitive prevention interventions.

A survey of young Latino MSM along the San Diego-Tijuana border region was developed to address the following objectives:

- Estimate HIV prevalence;
- Determine HIV genetic subtype, CD4+ count, and viral load for seropositive specimens;
- Assess the prevalence of drug and sexual risk behaviors; and
- Identify correlates of HIV infection and risk behaviors.

## **METHODS**

### **Study Design and Target Population**

An anonymous, cross-sectional survey was conducted between November 1999 and November 2001, using convenience sampling. The target population was Latino males aged 18 to 29 years of age in the San Diego-Tijuana border region. Local residency and sexual orientation were not criteria for inclusion in the survey. Subjects had to be fluent in English and/or Spanish. The study protocol was reviewed, approved, and monitored by the State of California, Health and Human Services Agency, Committee for the Protection of Human Subjects and the Ethics Committee of the Instituto de la Secretaria de Salud in Baja California Norte, Mexico.

### **Recruitment**

Formative research was conducted to identify appropriate venues for recruitment of members of the target population. Recruitment venues were defined as either “mainstream” venues (gay bars, discos, and other gay-identified venues) or “street-based” venues (cruising sites where prostitution may occur). The enrollment goal was 250 men from San Diego and 250 men from Tijuana. Recruitment was conducted by a survey team of community health outreach workers (CHOWs) trained to conduct interviews and HIV pre- and post-test counseling in either English or Spanish.

### **Field Methods**

Eligible men were invited to participate in the survey and could enroll immediately or schedule the interview on an alternative date. After obtaining informed consent, CHOWs conducted face-to-face interviews in a confidential setting. Using a structured, standardized questionnaire, CHOWs recorded information including demographic

characteristics, history of HIV testing, drug use, and sexual behavior. The interview was conducted in either English or Spanish and took 30 to 40 minutes to complete.

After the interview, CHOWs conducted a client-centered risk assessment session, per the requirements of obtaining an HIV test in California. Two blood samples (obtained via venipuncture) were then drawn (by a nurse in Tijuana and by a licensed phlebotomist in San Diego). The first blood specimen was used to test for HIV antibodies; the second was used for viral load, CD4+ count, and detuned assay testing of HIV-positive specimens. To preserve confidentiality, both blood specimens were submitted to the laboratory without names but with a unique study identification number linkable to each questionnaire. CHOWs scheduled a follow-up appointment for the purpose of informing each participant of his HIV status. Participants received \$15 in cash as a reimbursement for their time for participating in the study.

### **Laboratory Methods**

The presence of HIV antibodies was demonstrated by enzyme immunoassay (Vironostika HIV-1 Microelisa System; Biomerieux Inc., Durham, NC) and positive results were confirmed by immunofluorescent antibody (Fluorognost HIV-1 IFA; Waldheim Pharmazeutika GmbH, Vienna, Austria) and resolved, in the event of any discrepancy, by Western blot (Cambridge Biotech Corporation, Rockville, MD). The San Diego County Public Health Laboratory performed all HIV-antibody testing.

HIV seropositive specimens were sent to the California Department of Health Services (CDHS), Viral and Rickettsial Disease Laboratory (VRDL) in Richmond, California, for further testing. Viral load was determined using the Roche Monitor assay, which is approved by the Food and Drug Administration to measure the number of copies of HIV-1 ribonucleic acid per mL of plasma. CD4+ determinations were calculated using flow cytometry. Detuned serologic assay was performed using a sensitive/less sensitive enzyme immunoassay testing strategy as described by Janssen et al. 1998<sup>29</sup> using the Vironostika HIV-1 Microelisa System (Organon Teknika, Durham, NC).

### **Data Management and Analyses**

Site coordinators submitted copies of the completed questionnaires and HIV test results to the Office of AIDS (OA). VRDL provided CD4+ and viral load test results. The questionnaire data were imported into Stata and merged with HIV test results using the unique study identification number. Statistical analyses were conducted using Stata-PC and Stata-MAC version 7.0. Records that did not meet the age eligibility criteria were excluded from the analyses.

When calculating point estimates for sexual behaviors and risk, including sexual behaviors while under the influence of drugs, and needle sharing, only those who reported sex partners, using drugs, or injecting drugs, respectively, were considered. For example, the rate for recent unprotected vaginal intercourse (UVI) was calculated only among men who indicated recent sex with women. Prevalence of risk behaviors

was calculated in this manner, instead of among the entire sample, as the latter can be calculated by dividing the frequency of the risk behavior by the total sample. In this way, overall risk prevalence, in addition to the level of risk for restricted samples, can be derived from the data.

Frequency distributions were compared by each study site using chi-square tests for independent samples. Distributions were calculated excluding missing values. When cell sizes were less than five, Fisher's exact limits were obtained. Differences found to be statistically significant at the alpha .05 and .01 levels were noted. Odds ratios (OR) and corresponding 95.0 percent confidence intervals (CI) for correlates of HIV infection and recent risk behavior were calculated for each study site using logistic regression.

## **RESULTS**

### **Sample Characteristics**

Interviews were conducted with 371 young Latino MSM. Table 1 presents the breakdown of age, education, ethnicity, living arrangement, history of imprisonment, and history of homelessness by each study site. MSM aged 26 to 29 years made up 42.2 percent of the Tijuana sample and 64.7 percent of the San Diego sample. The MSM from San Diego had received a more formal education than those from Tijuana. The majority of MSM in both study sites were of Mexican descent. The most common living arrangement among MSM from San Diego was living with friends (33.9 percent), while the most common arrangement for the MSM from Tijuana was living with parents (28.0 percent). Over half of Tijuana MSM indicated having been in prison for more than one day and 68.0 percent indicated having been homeless at some point.

### **Health Care and Medical History**

As seen in Table 2, the most common source of health care among participants from both study sites was a clinic (61.8 percent of the Tijuana sample and 37.9 percent of the San Diego sample). One-fifth of participants from Tijuana (20.3 percent) and one-fourth from San Diego (27.8 percent) indicated not accessing or having access to health care. Health maintenance organization (HMO) was listed as the major source of health care by only 1.2 percent of Tijuana participants, compared with 20.4 percent among the San Diego sample.

Among Tijuana participants, 37.0 percent perceived the risk of HIV infection as likely and 18.5 percent responded that it was very likely that they would become infected with HIV. A similar percentage of San Diego participants (19.8 percent) indicated that it was very likely that they would become HIV infected, but fewer MSM from San Diego judged their risk as likely.

Nearly 30 percent of participants from both study sites indicated having had a previously diagnosis of a sexually transmitted disease (STD).

A large percentage of the San Diego sample (83.6 percent) indicated knowing someone with HIV and 70.6 percent knew someone who died from HIV. Approximately 60.0 percent of men from Tijuana knew someone with HIV and half knew someone who had died from HIV.

Most (67.3 percent) men from San Diego indicated having previously tested for HIV, 12.0 percent of these men received a positive test. Less than half (46.2 percent) of Tijuana participants indicated ever testing for HIV, 21.6 percent tested positive. Of those with a positive test result, 66.7 percent of men from both study sites had received some treatment for HIV.

### **HIV/AIDS Information**

Table 3.1 presents findings related to whether and when participants had received HIV/AIDS prevention information, the perceived effectiveness of this information, and opinions as to which age individuals should receive related information. Most men from both study sites indicated having had received information about HIV/AIDS, though the rate was much higher among the San Diego sample (78.7 percent versus 56.6 percent). A larger percentage of Tijuana participants indicated that the information they had received was very effective (76.1 percent versus 55.5 percent). For both study samples, the mean age for receiving this information was approximately 19 years, and the mean for the recommended age when individuals should receive HIV prevention information was slightly over 12 years.

Participants were asked whether they would be comfortable receiving HIV/AIDS prevention information from various sources. Similarities were observed among the San Diego and Tijuana participants (Table 3.2). Participants from both study sites indicated they were comfortable receiving information at school (92.0 percent for Tijuana and 85.1 percent for San Diego). The least preferred source was bar/club. Comfort with receiving information from medical clinic workshops varied between the study sites. Nearly ninety percent of participants from Tijuana indicated that they were comfortable receiving information at a medical clinic workshop open to everyone, but only 59.0 percent indicated that they would feel comfortable getting this information at a clinic for gay/bisexual men. Conversely, 84.4 percent of San Diego participants indicated that they would feel comfortable receiving information at a medical clinic workshop specifically for gay/bisexual men, and 71.3 percent indicated comfort with getting such information from a workshop “open to everyone.”

### **Sexual Behavior**

Data on sexual behavior are presented in Tables 4.1 through 4.5. Sexual behavior was assessed in terms of lifetime and recent behaviors with male and female partners, and

by the country of origin of sexual partners. For these tables “exchange sex” is defined as having given or received money, food, drugs, or shelter in exchange for sex.

Table 4.1 presents data on lifetime sexual behavior with males. Almost half (45.9 percent) of San Diego participants reported 26 or more lifetime male sex partners. Exchange sex was more common among the Tijuana participants, 60.7 percent compared with 23.1 percent among San Diego participants. Lifetime insertive UAI was relatively common among participants from both study sites (72.7 percent, Tijuana; 78.8 percent, San Diego), receptive UAI was not as common among Tijuana participants (29.0 percent versus 77.5 percent reported among San Diego men).

San Diego survey participants were more likely to report over two male sex partners in the previous four months; 42.3 percent of Tijuana participants indicated not having recent sex with a male (Table 4.2). Slightly over half (52.9 percent) of Tijuana survey participants who indicated having had a recent male sex partner reported exchange sex, compared with 9.9 percent of participants from San Diego. Insertive and receptive UAI was more common among San Diego participants.

Tables 4.3 and 4.4 present data on lifetime and recent sexual behaviors with females. The prevalence of lifetime and recent sex with females was considerably higher among the Tijuana MSM compared with the San Diego sample. Among men who reported ever having sex with females, a higher prevalence of exchange sex and UAI with females was found among Tijuana MSM compared to those from San Diego. Lifetime and recent UVI among MSM did not vary significantly by study site (Table 4.4).

Table 4.5 presents data on the country of origin of partners with whom the MSM had sex with during their lifetime. As seen in this table, 75.2 percent and 46.1 percent of MSM in San Diego and Tijuana, respectively, reported sex partners from the opposite side of the border. In both samples roughly half of those who had sex with women reported at least one female sex partner from the other side of the border.

## **History of Drug Use**

History of speed/methamphetamine, cocaine, and crack use was more common among Tijuana men (Table 5.1). Two-thirds (66.9 percent) of the MSM from Tijuana had used cocaine and over half (52.6 percent) had used speed/methamphetamine. Use of nitrite inhalants (47.2 percent) and crack (48.6 percent) was reported by nearly half of Tijuana MSM. The most common stimulant ever used among the San Diego MSM was cocaine (36.9 percent). Prevalence of recent use of cocaine and speed/methamphetamine were both roughly 25.0 percent for the Tijuana sample. Recent use of these drugs was less common among the MSM in the San Diego sample compared with those from Tijuana. Table 5.2 suggests that sexual behaviors and use of stimulants often occur simultaneously among MSM who use stimulants.

Tables 5.3 and 5.4 present data on lifetime and recent use of non-stimulant drugs by study site. The majority of men from both study sites had used alcohol and over half

reported alcohol use in the past four months. Levels of use of marijuana, downers/barbiturates, and heroin were greater among Tijuana MSM. Marijuana was the most frequent non-stimulant drug used during sex by MSM from Tijuana, and represents the only drug with a level of use during sex that significantly differed between study sites.

Table 5.5 presents rates of injection drug use and needle sharing among the Tijuana and San Diego MSM. Among Tijuana MSM, 41.5 percent ever injected drugs and 25.4 percent had injected drugs in the past four months. Among the San Diego sample, these rates were significantly lower at 7.4 percent and 3.3 percent, respectively. Over 90.0 percent of the Tijuana MSM who ever injected drugs indicated having shared needles. Among the 59 Tijuana MSM who injected drugs in the past four months, 93.7 percent reported sharing needles.

### **Outcome of HIV Test Results and Awareness of Infection**

HIV seroprevalence was 20.1 percent in the Tijuana sample and 35.2 percent in the San Diego sample (Table 6.1). Table 6.2 presents data on self-reported history of HIV testing. Over half of the Tijuana sample indicated never having tested for HIV, and 30.6 percent found to be HIV positive reported never having been tested for HIV. Among San Diego participants found to be HIV positive, 48.5 percent reported never having previously tested for HIV. Table 6.3 takes into account the data presented in Table 6.2 as well as outcome of one's previous HIV test (including not receiving the result) to determine the percent of HIV-infected men who were unaware of their positive serostatus. Three-quarters (75.8 percent) of HIV-positive San Diego participants and over half (55.1 percent) of the Tijuana participants were unaware of their HIV status.

Table 6.4 presents data on previously reported STD infection by HIV status. Forty percent of HIV-positive men from Tijuana and 47.4 percent of those from San Diego indicated having previously been diagnosed with an STD.

Tables 6.5 and 6.6 present CD4+ and viral load information for individuals testing HIV positive in the study. The median CD4+ count was lower for HIV-positive individuals from Tijuana than from San Diego (242 cells/mm<sup>3</sup> versus 323 cells/mm<sup>3</sup>, respectively) and median viral load was higher for these individuals compared with HIV-positive individuals in the San Diego sample (13,112 copies/mL versus 574 copies/mL, respectively).

Detuned assay results for 32 out of the 50 HIV-positive Tijuana participants and 13 out of the 43 HIV-positive San Diego sample appear in Table 6.7. The estimated HIV incidence during the four-month window period had lower bounds for 2/249, or 0.8 percent, for Tijuana and 3/125, or 2.4 percent, from San Diego. Combined, these data indicate that while the majority of HIV cases in both study sites were not recent infections, HIV was present for a longer period of time among the Tijuana participants.

## **Correlates of HIV Infection**

Table 7.1 presents HIV seroprevalence by age, education, living arrangement, history of incarceration, history of homelessness, source of health care, and measures of experience with HIV.

Among Tijuana MSM, individuals between the ages of 26 and 29 years were more likely than individuals between 18 and 25 to be infected with HIV (OR: 3.65; 95.0 percent CI: 1.44, 10.47). Among the San Diego sample, individuals who received health care from an HMO/private physician were more likely to be HIV infected compared to individuals who indicated no regular source of health care (OR: 2.89; 95.0 percent CI: 1.04, 7.96). Among both study samples, HIV seroprevalence varied by experience with HIV. Tijuana participants who knew someone with HIV were significantly more likely to be infected compared with individuals who did not know someone with HIV (OR: 5.39; 95.0 percent CI: 2.25, 14.81). Knowing someone who died of HIV/AIDS was also related to HIV seroprevalence. Twenty-seven percent of the MSM from Tijuana who knew someone who died from HIV were HIV positive, compared with 12.8 percent of those who did not know someone who died from HIV (OR: 2.57; 95.0 percent CI: 1.28, 5.32). A significant relationship for knowledge of someone who died from HIV and HIV-positive serostatus was also found among the MSM from San Diego (OR: 3.00; 95.0 percent CI: 1.11, 8.99).

MSM who engaged in receptive UAI were more likely to be HIV infected than those who did not report receptive UAI (in Tijuana, OR: 3.83; 95.0 percent CI: 1.89, 7.75; in San Diego, OR: 3.97; 95.0 percent CI: 1.21, 16.91; Table 7.3). San Diego MSM who had engaged in insertive UAI were significantly more likely to be infected with HIV compared with those who had not (OR: 3.63; 95.0 percent CI: 1.09, 15.55). Finally, UAI with female partners was negatively associated with HIV infection among men from Tijuana (OR: 0.46; 95.0 percent CI: 0.21, 0.94).

Table 7.3 presents HIV seroprevalence by injection drug use, needle sharing, and drug use during sex among both study groups. MSM in Tijuana who reported having ever shared needles were less likely to be infected than those who reported not sharing needles (OR: 0.41; 95.0 percent CI: 0.18, 0.87).

## **Correlates of Recent Unprotected Sexual Behavior**

Insertive UAI was found to vary significantly by education among San Diego MSM, with those more educated more likely to report insertive UAI (Table 8.1). Tijuana participants who indicated exchange sex with males were significantly more likely to report recent insertive UAI compared to those who did not recently give or receive something in exchange for sex (OR: 2.54, 95.0 percent CI: 1.20, 5.41). MSM who reported recent receptive UAI were more likely to engage in insertive UAI with males (in Tijuana, OR: 4.77; 95.0 percent CI: 1.72, 14.44; in San Diego, OR: 8.23; 95.0 percent CI: 3.08, 22.91).

Table 8.2 presents correlates of recent receptive UAI. Recent receptive UAI was more common among MSM in Tijuana who had an education beyond high school compared to those who had not finished high school (OR: 3.45; 95.0 percent CI: 1.03, 13.06). For both sites, MSM who reported recent insertive UAI were also more likely to report recent receptive UAI (in Tijuana, OR: 4.77; 95.0 percent CI: 1.72, 14.44; in San Diego, OR: 8.23; 95.0 percent CI: 3.08, 22.91).

Table 8.3 and Table 8.4 present the relationships between recent unprotected anal and vaginal intercourse with females for MSM from Tijuana; ORs are not presented for the San Diego sample due to the few men who reported sex with women. MSM who completed more than a high school degree were three and a half times more likely than MSM with less than a high school degree to engage in UVI in the past four months (OR: 3.49; 95.0 percent CI: 1.06, 13.34). Compared to MSM who did not report exchange sex with females, MSM who indicated doing so were over four times more likely to report recent UAI with females (OR: 4.61; 95.0 percent CI: 1.68, 12.80), and more than five times more likely to report recent UVI (OR: 5.14; 95.0 percent CI: 1.15, 23.07). MSM with three or more partners in the last four months were five times more likely to have recent UAI compared to those with who reported only having one female partner in the past four months (OR: 5.29; 95.0 percent CI: 1.70, 19.36). MSM with two recent female partners were four times more likely than those with just one partner to have recently engaged in UAI (OR: 4.18; 95.0 percent CI: 1.18, 16.72). The data presented in Table 8.3 and Table 8.4 also show that MSM who engage in UVI are likely to also engage in UAI with females, and visa versa.

## DISCUSSION

This HIV seroprevalence survey of Latino MSM aged 18 to 29 years from the border region found HIV-infection rates of 35.2 percent among men from San Diego and 20.1 percent among men from Tijuana. Almost half of men living with HIV from San Diego and three-in-ten of those with HIV from Tijuana had never been tested for HIV. When considering these data and the outcome of survey respondents' previous HIV test, we found that three-fourths of HIV-infected men from San Diego and over half of men living with HIV from Tijuana were unaware of their HIV-positive status. The extent to which men participating in this survey reported sexual relations with men and women from across the border emphasizes that an interrelated epidemic surrounding the California-Tijuana border region is placing both women and young men at risk for HIV. Limiting the impact of HIV in California requires coordinated and extensive HIV prevention activities, including available testing services and the communication of messages to address unrealistic perceptions of risk for HIV, in Tijuana as well as the San Diego border region. Data represented in this report related to receptivity to HIV prevention information from different sources, as well as the suggested age that peers should receive such information, may be useful for developing effective HIV prevention interventions.

A greater proportion of MSM from Tijuana than San Diego reported lifetime and recent sexual relations with female partners. These findings may be due to an over-sampling of bisexual men from Tijuana. Alternatively, men from Tijuana may have been more likely to have had sex with women in response to cultural inhibitors of public identification as gay.<sup>30</sup> A third explanation for these findings may be due to the increased level of exchange sex with male partners among men from Tijuana. In other words, an increased need for basic necessities – money, food, shelter, or drugs – among men from Tijuana may have played a greater role in sexual relations with men than sexual preference. Although no direct measure of income was recorded in the survey, 68.0 percent of the Tijuana men (compared with 20.0 percent of men from San Diego) reported a history of homelessness. Higher levels of reported exchange sex among Tijuana men may in part be due to recruitment bias – the majority of Tijuana participants were primarily recruited from “street-based” areas (cruising sites where prostitution may be more common) versus “venue-based” areas, such as gay bars and clubs, where most San Diego men eligible for this survey were identified.

Men from San Diego were more likely to report sex with men during the previous four months than men from Tijuana. Among those involved in recent sexual relations with men, roughly half of men from both study sites reported insertive UAI. Receptive UAI was more common among San Diego survey participants (45.0 percent versus 18.7 percent) but among both samples this behavior was related to a four-fold increased likelihood of testing positive for HIV. Among those reporting sexual encounters with men across the border, over half of men from San Diego, and over one-third of men from Tijuana, reported receptive and insertive UAI.

Tijuana participants reported more drug use than San Diego participants, particularly use of stimulants and heroin. More than 40.0 percent of Tijuana MSM reported a history of injecting drugs, hormones, or vitamins, and one-fourth had participated in injecting behaviors within the previous four months. Moreover, needle sharing among injectors from Tijuana appears to be extremely common. Over 90.0 percent of men who ever or recently injected also reported sharing needles with other injectors.

As previously noted, recruitment sites varied by study location: the majority of Tijuana participants were from “street-based” areas and San Diego men were from gay bars and clubs. This difference in recruitment has implications for interpreting the results of this survey. “Street-based” sites may attract men who seek sexual relations with other men primarily for the purpose of receiving compensation and/or men who do not personally or publicly identify as gay. As such, this population of MSM is likely different from the population that frequents gay bars and clubs. In turn, the observed differences between samples, such as history of exchange sex, may reflect the extent to which “street-based” versus “venue-based” MSM differ rather than differences between MSM from Tijuana and San Diego. Convenience sampling was the method used to recruit all men for this survey; therefore one must be cautious when generalizing the study site, or overall results.

Prevalence of HIV Infection and Related Risk Behaviors Among  
Young Latino Men Who Have Sex with Men:  
San Diego-Tijuana Border Region

As with all cross-sectional studies, it is difficult to determine the temporality of observed associations. Furthermore, data about other risk factors, such as frequency of unprotected sex and number of partners with whom participants had engaged in unprotected sexual behavior, was not recorded. This information would allow for a more thorough examination of risk behaviors and their associations with HIV infection. Sample size, especially for the San Diego sample, as well as low frequency of certain risk behaviors, limited analyses of certain data. The interpretation of several analyses is questionable, given the very large confidence intervals surrounding certain point estimates.

In conclusion, this serosurvey provides compelling evidence that control of the HIV epidemic in California must include primary and secondary HIV prevention efforts directed at young Latino MSM living in the San Diego-Tijuana border region. Community-level interventions must include increased access to HIV testing coupled with effective linkages to care and treatment services for those receiving a positive result. Individual-level interventions should include assessment of perceived risk, identification of potential contributing factors to risk behaviors (e.g., stimulant use), and appraisal of basic or immediate needs such as access to food, shelter, and other necessities that may be exchanged for sex. Finally, interventions targeting MSM from Tijuana must focus on injection drug use behaviors as well as sexual risk.

## REFERENCES

1. Centers for Disease Control and Prevention. Cases of HIV Infection and AIDS in the United States, 2004. Available at: [www.cdc.gov/hiv/topics/surveillance/resources/reports/2004report/default.htm](http://www.cdc.gov/hiv/topics/surveillance/resources/reports/2004report/default.htm).
2. CHDS/OA, California AIDS Surveillance Report, Cumulative Cases as of September 30, 2006. Available at: [www.dhs.ca.gov/AIDS/Statistics/pdf/Stats2006/Sep06AIDSMerged.pdf](http://www.dhs.ca.gov/AIDS/Statistics/pdf/Stats2006/Sep06AIDSMerged.pdf).
3. Facer M, Jungkeit M, Chen M. HIV/AIDS Among Racial/Ethnic Groups in California, 1999 Edition. CDHS/OA; April 2000.
4. Ramirez J, Suarez E, de la Rosa G, et al. AIDS knowledge and sexual behavior among Mexican gay and bisexual men. *AIDS Educ Prev* 1994;6(2): 163-174.
5. Ruiz JD, Facer MR, Sun RK. Risk factors for human immunodeficiency virus infection and unprotected anal intercourse among young men who have sex with men. *Sex Transm Dis* 1998;25:100-107.
6. Lemp GF, Hirozawa AM, Givertz D, et al. Seroprevalence of HIV and risk behaviors among young homosexual and bisexual men: The San Francisco/Berkeley young men's survey. *JAMA* 1994;272:449-454.
7. Stall R, Barrett D, Bye L, et al. A comparison of younger and older gay men's HIV risk-taking behaviors: The Communication Technologies 1989 cross-sectional survey. *J Acquir Immune Defic Syndr* 1992;5:682-687.
8. Greenland S, Leib L, Simon P, et al. Evidence for recent growth of the HIV epidemic among African American men and younger male cohorts in Los Angeles County. *J Acquir Immune Defic Syndr* 1996;11:401-409.
9. Valleroy LA, Mackellar DA, Karon JM, et al. HIV prevalence and associated risks in young men who have sex with men. *JAMA* 2000;284:198-204.
10. Centers for Disease Control and Prevention. HIV incidence among young men who have sex with men – seven U.S. cities, 1994-2000. *MMWR* 2001;50:440-444.
11. Ekstrand ML, Coates TJ. Maintenance of safer sexual behavior and predictors of risky sex: the San Francisco Men's Health Study. *Am J Public Health* 1990;80:973-977.
12. Gold RS, Skinner MJ. Situational factors and thought processes associated with unprotected intercourse in young gay men. *AIDS* 1992;6:1021-1030.

Prevalence of HIV Infection and Related Risk Behaviors Among  
Young Latino Men Who Have Sex with Men:  
San Diego-Tijuana Border Region

13. Rotheram-Borus MJ, Rosario M, Reid H, et al. Predicting patterns of sexual acts among homosexual and bisexual youths. *Am J Psychiatry* 1995;152:588-595.
14. Meyer IH, Dean L. Patterns of sexual behavior and risk-taking among young New York City gay men. *AIDS Educ Prev* 1995 (supp);24:13-23.
15. Walter HJ, Vaughan RD, Gladis MM, et al. Factors associated with AIDS risk behaviors among high school students in an AIDS epicenter. *Am J Public Health* 1992;82:528-532.
16. Osmond DH, Page K, Wiley J, et al. HIV infection in homosexual and bisexual men 18 to 29 years of age: The San Francisco Young Men's Health Study. *Am J Public Health* 1994;84:1933-1937.
17. De Wit JBF, Hospers HJ, Janssen M, et al. Risk for HIV infection among young gay men: sexual relations, high-risk behaviors, and protection motivation. XI International Conference on AIDS, Vancouver, Canada; 1996 July 7-12; 11(2):142 (Abstract We. C. 3486).
18. Diaz RM, Ayala G. The Policy Institute of the National Gay and Lesbian Task Force. Social Discrimination and Health: The Case of Latino Gay Men and HIV Risk. New York, NY: The Policy Institute; July 2001.
19. Molitor F, Facer M, Ruiz JD. Safer sex communication and unsafe sexual behavior among young men who have sex with men in California, USA. *Arch Sex Behav* 1999; 28(4):335-343.
20. McCusker J, Westenhouse J, Stoddard AM, et al. Use of drugs and alcohol by homosexually active men in relation to sexual practices. *J Acquir Immune Defic Syndr* 1990;3:729-736.
21. Leigh BC. Alcohol and unsafe sex: an overview of research and theory. In: Semnara D, Watson RR, Pawlowski A, eds. Alcohol, Immunomodulation, and AIDS. New York: Alan R. Liss.
22. Seage III GR, Mayer KH, Hosburgh Jr. CF, et al. The relation between nitrite inhalants, unprotected receptive anal intercourse, and the risk of human immunodeficiency virus. *Am J Epidemiol* 1992;135:1-11.
23. Ostrow DG, DiFrancisco WJ, Chmiel JS, et al. A case control study of human immunodeficiency virus type 1 seroconversion and risk-related behaviors in the Chicago MACS/CCS cohort, 1984-1992. *Am J Epidemiol* 1995;142:875-883.
24. Ekstrand ML, Stall RD, Paul JP, et al. Gay men report high rates of unprotected anal sex with partners of unknown or discordant HIV status. *AIDS* 1999;13(12):1525-1533.

Prevalence of HIV Infection and Related Risk Behaviors Among  
Young Latino Men Who Have Sex with Men:  
San Diego-Tijuana Border Region

25. Koblin BA, McCusker J, Lewis BF, et al. Racial/ethnic differences in HIV-1 seroprevalence and risky behaviors among intravenous drug users in a multisite study. *Am J Epidemiol* 1990;132:837-846.
26. Trocki KF, Leigh BC. Alcohol consumption and unsafe sex: A comparison of heterosexuals and homosexual men. *J Acquir Immune Defic Syndr* 1991;4:981-986.
27. Brooks RA, Solis B, Hayes-Bautista DE, eds. Defining the path for future research: proceedings of the National Latino HIV/AIDS Research Conference. Los Angeles, California; April 23-24, 1994. Regents of the University of California, 1995.
28. Health Resources and Services Administration. Border health demographics and statistics are available at: [bphc.hrsa.gov/bphc/borderhealth/region.htm](http://bphc.hrsa.gov/bphc/borderhealth/region.htm).
29. Janssen RS, Satten GA, Stramer SL, et al. New testing strategy to detect early HIV-1 infection for use in incidence estimates and for clinical and prevention purposes. *JAMA* 1998;280:42-48.
30. Williams JK, Wyatt GE, Resell J, et al. Psychosocial issues among gay- and non-gay-identifying HIV-seropositive African American and Latino MSM. *Cultur Divers Ethnic Minor Psychol* 2004;10(3):268-286.

Prevalence of HIV Infection and Related Risk Behaviors Among  
 Young Latino Men Who Have Sex with Men:  
 San Diego-Tijuana Border Region

Table 1  
 SAMPLE CHARACTERISTICS

	<b>Tijuana</b>		<b>San Diego</b>	
	<b>N</b>	<b>(%)</b>	<b>N</b>	<b>(%)</b>
<b>Age (years)*</b>				
18-21	71	(28.5)	13	(10.7)
22-25	73	(29.3)	30	(24.6)
26-29	105	(42.2)	79	(64.7)
<b>Total</b>	<b>249</b>	<b>(100.0)</b>	<b>122</b>	<b>(100.0)</b>
<b>Education*</b>				
Never attended school	10	(4.0)	0	(0.0)
Less than high school	74	(29.7)	6	(4.9)
High school	89	(35.8)	30	(24.6)
Technical/vocational	56	(22.5)	22	(18.0)
Some college	14	(5.6)	34	(27.9)
College	5	(2.0)	21	(17.2)
Some graduate	1	(0.4)	6	(4.9)
Graduate	0	(0.0)	3	(2.5)
-----	-----		-----	
Less than high school	84	(33.7)	6	(5.0)
High school	89	(35.7)	30	(25.2)
More than high school	76	(30.5)	83	(69.8)
<b>Total</b>	<b>249</b>	<b>(100.0)</b>	<b>119</b>	<b>(100.0)</b>
<b>Latino Ethnicity*</b>				
Mexican	244	(98.4)	103	(85.8)
Central American	2	(0.8)	5	(4.2)
South American	1	(0.4)	4	(3.3)
Other	1	(0.4)	8	(6.7)
<b>Total</b>	<b>248</b>	<b>(100.0)</b>	<b>120</b>	<b>(100.0)</b>
<b>Living Arrangement *</b>				
Alone	54	(22.0)	38	(32.2)
Parents	69	(28.0)	25	(21.2)
Friends	45	(18.3)	40	(33.9)
Partner/lover	40	(16.3)	12	(10.2)
Homeless	38	(15.4)	3	(2.5)
-----	-----		-----	
Not with partner/Lover	206	(83.7)	106	(89.8)
With partner/Lover	40	(16.3)	12	(10.2)
<b>Total</b>	<b>246</b>	<b>(100.0)</b>	<b>118</b>	<b>(100.0)</b>
<b>Ever been in prison*</b>				
Yes	127	(51.4)	10	(8.3)
No	120	(48.6)	111	(91.7)
<b>Total</b>	<b>247</b>	<b>(100.0)</b>	<b>121</b>	<b>(100.0)</b>
<b>Homeless*</b>				
Yes	168	(68.0)	26	(20.8)
No	79	(32.0)	96	(79.2)
<b>Total</b>	<b>247</b>	<b>(100.0)</b>	<b>122</b>	<b>(100.0)</b>

\*p-value <0.01.

Source: CDHS/OA.

Prevalence of HIV Infection and Related Risk Behaviors Among  
 Young Latino Men Who Have Sex with Men:  
 San Diego-Tijuana Border Region

Table 2  
 HEALTH CARE AND MEDICAL HISTORY BY STUDY SITE

	Tijuana		San Diego	
	N	(%)	N	(%)
<b>Health Care Source</b>				
Clinic	149	(61.8)	41	(37.9)
HMO	3	(1.2)	22	(20.4)
Private	40	(16.6)	15	(13.9)
None	49	(20.3)	30	(27.8)
Total	241	(100.0)	108	(100.0)
<b>Perceived Risk of HIV Infection**</b>				
Very likely (75-100% chance)	46	(18.5)	24	(19.8)
Likely (25-74% chance)	92	(37.0)	26	(21.5)
Unlikely (1-24% chance)	67	(26.9)	40	(33.1)
Not possible (0% Chance)	16	(6.4)	9	(7.4)
Don't Know	28	(11.2)	22	(18.2)
-----	-----	-----	-----	-----
Likely	138	(62.4)	50	(50.5)
Unlikely/Not Possible	83	(37.6)	49	(49.5)
Total	249	(100.0)	121	(100.0)
<b>Sexually Transmitted Disease</b>				
Yes	72	(28.9)	33	(28.7)
No	177	(71.1)	82	(71.3)
Total	249	(100.0)	115	(100.0)
<b>Know Someone with HIV*</b>				
Yes	149	(59.8)	102	(83.6)
No	100	(40.2)	20	(16.4)
Total	249	(100.0)	122	(100.0)
<b>Know Someone Who Died from HIV*</b>				
Yes	124	(49.8)	84	(70.6)
No	125	(50.2)	35	(29.4)
Total	249	(100.0)	119	(100.0)
<b>Previous HIV Test*</b>				
Yes	115	(46.2)	76	(67.3)
No	134	(53.8)	37	(32.7)
Total	249	(100.0)	113	(100.0)
<b>Results of Last HIV Test</b>				
Positive	24	(21.6)	9	(12.0)
Negative	79	(71.2)	59	(78.7)
Don't know	8	(7.2)	6	(8.0)
Refused	0	(0.0)	1	(1.3)
Total	111	(100.0)	75	(100.0)
<b>Received Treatment for HIV</b>				
Yes	16	(66.7)	6	(66.7)
No	8	(33.3)	3	(33.3)
Total	24	(100.0)	9	(100.0)

\*p-value <0.01.

\*\*p-value <0.05.

Source: CDHS/OA.

Prevalence of HIV Infection and Related Risk Behaviors Among  
 Young Latino Men Who Have Sex with Men:  
 San Diego-Tijuana Border Region

Table 3.1  
 HIV/AIDS INFORMATION

	<b>Tijuana</b>		<b>San Diego</b>	
	<b>N</b>	<b>(%)</b>	<b>N</b>	<b>(%)</b>
<b>Received HIV/AIDS Prevention Information</b>				
Yes	141	(56.6)	96	(78.7)
No	108	(43.4)	26	(21.3)
Total	249	(100.0)	122	(100.0)
<b>Perceived Effectiveness of Information*</b>				
Very	105	(76.1)	50	(55.5)
Mildly	17	(12.3)	33	(36.7)
Not	16	(11.6)	7	(7.8)
Total	138	(100.0)	90	(100.0)
<b>Mean Age First Received HIV Information</b>	19.31		19.06	
Number	138		96	
<b>Mean Age Believe People Should Receive HIV Information</b>	12.10		12.25	
Number	235		120	

\*p-value <0.01.

Source: CDHS/OA.

Prevalence of HIV Infection and Related Risk Behaviors Among  
 Young Latino Men Who Have Sex with Men:  
 San Diego-Tijuana Border Region

Table 3.2  
 COMFORT WITH SOURCE OF HIV INFORMATION

	<b>Tijuana</b> (N=249)		<b>San Diego</b> (N=122)	
	<b>N</b>	<b>(%)</b>	<b>N</b>	<b>(%)</b>
<b>Medical Clinic Workshop, for Gay/Bisexual Men Only*</b>				
Comfortable	147	(59.0)	103	(84.4)
Uncomfortable	71	(25.5)	10	(8.2)
No opinion	31	(12.5)	9	(7.4)
<b>Medical Clinic Workshop, Open to Everyone*</b>				
Comfortable	223	(89.6)	87	(71.3)
Uncomfortable	18	(7.2)	20	(16.4)
No opinion	8	(3.2)	15	(12.3)
<b>Videotape You Could Watch at Home</b>				
Comfortable	218	(87.6)	99	(81.2)
Uncomfortable	18	(7.2)	14	(10.7)
No opinion	13	(5.2)	10	(8.2)
<b>Mobile Outreach*</b>				
Comfortable	177	(71.1)	64	(52.5)
Uncomfortable	59	(23.7)	43	(35.2)
No opinion	13	(5.2)	15	(12.3)
<b>Bar/Club*</b>				
Comfortable	139	(55.8)	56	(45.9)
Uncomfortable	98	(39.4)	48	(39.3)
No opinion	12	(4.8)	18	(14.8)
<b>Cruising Site**</b>				
Comfortable	147	(59.1)	56	(45.9)
Uncomfortable	77	(30.9)	44	(36.1)
No opinion	25	(10.0)	22	(18.0)
<b>Schools</b>				
Comfortable	229	(92.0)	103	(85.1)
Uncomfortable	12	(4.8)	12	(9.9)
No opinion	8	(3.2)	6	(5.0)

\*p-value <0.01.  
 \*\*p-value <0.05.

Source: CDHS/OA.

Prevalence of HIV Infection and Related Risk Behaviors Among  
 Young Latino Men Who Have Sex with Men:  
 San Diego-Tijuana Border Region

Table 4.1  
 LIFETIME SEX WITH MALES BY STUDY SITE

	Tijuana		San Diego	
	N	(%)	N	(%)
<b>Number of Male Sex Partners*</b>				
0	1	(0.4)	0	(0.0)
1	46	(18.5)	4	(3.3)
2-5	84	(33.7)	21	(17.2)
6-10	48	(19.3)	15	(12.3)
11-25	34	(13.6)	17	(13.9)
26+	33	(13.3)	56	(45.9)
Missing	3	(1.2)	9	(7.4)
<b>Total</b>	<b>249</b>	<b>(100.0)</b>	<b>122</b>	<b>(100.0)</b>
<b>Anal Sex with a Male</b>				
Yes	240	(97.6)	116	(95.1)
No	6	(2.4)	6	(4.9)
<b>Total</b>	<b>246</b>	<b>(100.0)</b>	<b>122</b>	<b>(100.0)</b>
<b>Exchange Sex with a Male*</b>				
Yes	150	(60.7)	28	(23.1)
No	97	(39.3)	93	(76.9)
<b>Total</b>	<b>247</b>	<b>(100.0)</b>	<b>121</b>	<b>(100.0)</b>
<b>Insertive UAI with a Male</b>				
Yes	176	(72.7)	93	(78.8)
No	66	(27.3)	25	(21.2)
<b>Total</b>	<b>242</b>	<b>(100.0)</b>	<b>118</b>	<b>(100.0)</b>
<b>Receptive UAI with a Male*</b>				
Yes	70	(29.0)	93	(77.5)
No	171	(71.0)	27	(22.5)
<b>Total</b>	<b>241</b>	<b>(100.0)</b>	<b>120</b>	<b>(100.0)</b>

\*p-value <0.01.

Missing = Number of partners not specified.

UAI = Unprotected Anal Intercourse.

Source: CDHS/OA.

Prevalence of HIV Infection and Related Risk Behaviors Among  
 Young Latino Men Who Have Sex with Men:  
 San Diego-Tijuana Border Region

Table 4.2  
 SEX WITH MALES DURING PREVIOUS FOUR MONTHS BY STUDY SITE

	Tijuana		San Diego	
	N	(%)	N	(%)
<b>Number of Male Sex Partners*</b>				
0	105	(42.3)	8	(6.7)
1	58	(23.4)	31	(25.8)
2-3	42	(16.9)	30	(25.0)
4-5	19	(7.7)	13	(10.8)
6+	21	(8.5)	29	(24.2)
Missing	3	(1.2)	9	(7.5)
Total	248	(100.0)	120	(100.0)
<b>Exchange Sex with a Male *</b>				
Yes	74	(52.9)	11	(9.9)
No	66	(47.1)	100	(90.1)
Total	140	(100.0)	108	(100.0)
<b>Insertive UAI with a Male</b>				
Yes	61	(43.6)	59	(54.6)
No	79	(56.4)	49	(45.4)
Total	140	(100.0)	108	(100.0)
<b>Receptive UAI with a Male*</b>				
Yes	26	(18.7)	49	(45.0)
No	113	(81.3)	60	(55.0)
Total	139	(100.0)	109	(100.0)

\*p-value <0.01 Missing = Number of partners not specified.  
 UAI = Unprotected Anal Intercourse.

Source: CDHS/OA.

Prevalence of HIV Infection and Related Risk Behaviors Among  
 Young Latino Men Who Have Sex with Men:  
 San Diego-Tijuana Border Region

Table 4.3  
 LIFETIME SEX WITH FEMALES BY STUDY SITE

	Tijuana		San Diego	
	N	(%)	N	(%)
<b>Number of Female Sex Partners*</b>				
0	33	(13.3)	65	(53.3)
1	15	(6.0)	10	(8.2)
2-5	59	(23.7)	24	(19.7)
6-10	52	(20.9)	10	(8.2)
11+	88	(35.3)	7	(5.7)
Missing	2	(0.8)	6	(4.9)
Total	249	(100.0)	122	(100.0)
<b>Exchange Sex with a Female*</b>				
Yes	82	(38.3)	7	(12.5)
No	132	(61.7)	49	(87.5)
Total	214	(100.0)	56	(100.0)
<b>Unprotected Anal Intercourse with a Female*</b>				
Yes	107	(49.8)	16	(28.6)
No	108	(50.2)	40	(71.4)
Total	215	(100.0)	56	(100.0)
<b>Unprotected Vaginal Intercourse</b>				
Yes	193	(89.4)	44	(80.0)
No	23	(10.6)	11	(20.0)
Total	216	(100.0)	55	(100.0)

\*p-value <0.01.

Missing = Number of partners not specified.

Source: CDHS/OA.

Prevalence of HIV Infection and Related Risk Behaviors Among  
 Young Latino Men Who Have Sex with Men:  
 San Diego-Tijuana Border Region

Table 4.4  
 SEX WITH FEMALES DURING PREVIOUS FOUR MONTHS BY STUDY SITE

	Tijuana		San Diego	
	N	(%)	N	(%)
<b>Number of Female Sex Partners*</b>				
0	107	(43.5)	105	(90.5)
1	42	(17.1)	6	(5.2)
2	36	(14.6)	2	(1.7)
3+	61	(24.8)	3	(2.6)
Missing	0	(0.0)	0	(0.0)
<b>Total</b>	<b>246</b>	<b>(100.0)</b>	<b>116</b>	<b>(100.0)</b>
<b>Exchange Sex with a Female</b>				
Yes	25	(18.4)	1	(9.1)
No	111	(81.6)	10	(90.9)
<b>Total</b>	<b>136</b>	<b>(100.0)</b>	<b>11</b>	<b>(100.0)</b>
<b>Unprotected Anal Intercourse with a Female</b>				
Yes	43	(31.2)	3	(27.3)
No	95	(68.8)	8	(72.7)
<b>Total</b>	<b>138</b>	<b>(100.0)</b>	<b>11</b>	<b>(100.0)</b>
<b>Unprotected Vaginal Intercourse</b>				
Yes	101	(73.2)	8	(72.7)
No	37	(26.8)	3	(27.3)
<b>Total</b>	<b>138</b>	<b>(100.0)</b>	<b>11</b>	<b>(100.0)</b>

\*p-value <0.01.

Missing = Number of partners not specified.

Source: CDHS/OA.

Prevalence of HIV Infection and Related Risk Behaviors Among  
 Young Latino Men Who Have Sex with Men:  
 San Diego-Tijuana Border Region

Table 4.5  
 LIFETIME SEXUAL BEHAVIOR WITH PARTNERS FROM ACROSS THE BORDER BY  
 STUDY SITE

	Tijuana		San Diego	
	N	(%)	N	(%)
<b>Male Sex Partners From Across Border</b>				
Yes	113	(46.1)	91	(75.2)
No	132	(53.9)	30	(24.8)
Total	245	(100.0)	121	(100.0)
<b>Female Sex Partners From Across Border</b>				
Yes	98	(46.9)	32	(57.1)
No	111	(53.1)	24	(42.9)
Total	209	(100.0)	56	(100.0)
<b>Insertive UAI with a Male From Across Border **</b>				
Yes	65	(37.4)	48	(53.3)
No	109	(62.6)	42	(46.7)
Total	174	(100.0)	90	(100.0)
<b>Receptive UAI with a Male From Across Border</b>				
Yes	26	(37.7)	49	(52.7)
No	43	(62.3)	44	(47.3)
Total	69	(100.0)	93	(100.0)
<b>UAI with a Female From Across Border</b>				
Yes	39	(36.4)	8	(53.3)
No	68	(63.6)	7	(46.7)
Total	107	(100.0)	15	(100.0)
<b>UVI with a Female From Across Border</b>				
Yes	69	(35.8)	19	(45.2)
No	124	(64.3)	23	(54.8)
Total	193	(100.0)	42	(100.0)

\*p-value <0.01; \*\*p-value <0.05.

UAI = Unprotected Anal Intercourse.

UVI = Unprotected Vaginal Intercourse.

Source: CDHS/OA.

Prevalence of HIV Infection and Related Risk Behaviors Among  
 Young Latino Men Who Have Sex with Men:  
 San Diego-Tijuana Border Region

Table 5.1  
 STIMULANT USE BY STUDY SITE

LIFETIME USE		Tijuana		San Diego	
		N	(%)	N	(%)
Nitrite Inhalants, Rush*	Yes	117	(47.2)	32	(26.5)
	No	131	(52.8)	89	(73.5)
	Total	248	(100.0)	121	(100.0)
Ecstasy/XTC	Yes	31	(12.5)	21	(17.5)
	No	216	(87.5)	99	(82.5)
	Total	247	(100.0)	120	(100.0)
Speed/Methamphetamine*	Yes	130	(52.6)	31	(25.4)
	No	117	(47.4)	91	(74.6)
	Total	247	(100.0)	122	(100.0)
Cocaine*	Yes	166	(66.9)	45	(36.9)
	No	82	(33.1)	77	(63.1)
	Total	248	(100.0)	122	(100.0)
Crack*	Yes	120	(48.6)	14	(11.7)
	No	127	(51.4)	106	(88.3)
	Total	247	(100.0)	120	(100.0)
USE DURING PAST FOUR MONTHS		N	(%)	N	(%)
Nitrite Inhalants, Rush	Yes	31	(12.5)	8	(7.0)
	No	216	(87.5)	107	(93.2)
	Total	247	(100.0)	115	(100.0)
Ecstasy/XTC	Yes	12	(4.9)	3	(2.6)
	No	233	(95.1)	111	(97.4)
	Total	245	(100.0)	116	(100.0)
Speed/Methamphetamine *	Yes	64	(26.1)	8	(6.9)
	No	181	(73.9)	108	(93.1)
	Total	245	(100.0)	116	(100.0)
Cocaine*	Yes	56	(22.9)	6	(5.4)
	No	188	(77.1)	104	(94.6)
	Total	244	(100.0)	110	(100.0)
Crack*	Yes	55	(22.5)	4	(3.4)
	No	189	(77.5)	112	(96.6)
	Total	244	(100.0)	116	(100.0)

\*p-value <0.01.

Source: CDHS/OA.

Prevalence of HIV Infection and Related Risk Behaviors Among  
 Young Latino Men Who Have Sex with Men:  
 San Diego-Tijuana Border Region

Table 5.2  
 STIMULANT USE DURING SEX BY STUDY SITE

LIFETIME USE		Tijuana		San Diego	
		N	(%)	N	(%)
<b>Nitrite Inhalants, Rush**</b>	Yes	52	(45.6)	20	(74.1)
	No	62	(54.4)	7	(25.9)
	Total	114	(100.0)	27	(100.0)
<b>Ecstasy/XTC**</b>	Yes	23	(76.7)	8	(42.1)
	No	7	(23.3)	11	(57.9)
	Total	30	(100.0)	19	(100.0)
<b>Speed/Methamphetamine</b>	Yes	76	(59.8)	16	(55.2)
	No	51	(40.2)	13	(44.8)
	Total	127	(100.0)	29	(100.0)
<b>Cocaine</b>	Yes	88	(54.7)	17	(43.6)
	No	73	(45.3)	22	(56.4)
	Total	161	(100.0)	39	(100.0)
<b>Crack</b>	Yes	67	(57.8)	7	(63.6)
	No	49	(42.2)	4	(36.4)
	Total	116	(100.0)	11	(100.0)
<b>USE DURING PAST FOUR MONTHS</b>		N	(%)	N	(%)
<b>Pop, Nitrite Inhalants, Rush</b>	Yes	13	(50.0)	7	(87.5)
	No	13	(50.0)	1	(12.5)
	Total	26	(100.0)	8	(100.0)
<b>Ecstasy/XTC</b>	Yes	10	(90.9)	2	(33.3)
	No	1	(9.1)	1	(66.7)
	Total	11	(100.0)	3	(100.0)
<b>Speed/Methamphetamine</b>	Yes	37	(66.1)	5	(62.5)
	No	19	(33.9)	3	(37.5)
	Total	56	(100.0)	8	(100.0)
<b>Cocaine</b>	Yes	32	(62.8)	4	(66.7)
	No	19	(37.3)	2	(33.3)
	Total	51	(100.0)	6	(100.0)
<b>Crack</b>	Yes	35	(71.4)	4	(100.0)
	No	14	(28.6)	0	(0.0)
	Total	49	(100.0)	4	(100.0)

\*\*p-value <0.05.

Source: CDHS/OA.

Prevalence of HIV Infection and Related Risk Behaviors Among  
 Young Latino Men Who Have Sex with Men:  
 San Diego-Tijuana Border Region

Table 5.3  
 NON-STIMULANT USE BY STUDY SITE

LIFETIME USE		Tijuana		San Diego	
		N	(%)	N	(%)
Alcohol	Yes	240	(96.8)	118	(96.7)
	No	8	(3.2)	4	(3.3)
	Total	248	(100.0)	122	(100.0)
Marijuana*	Yes	185	(74.9)	62	(50.8)
	No	62	(25.0)	60	(49.2)
	Total	247	(100.0)	122	(100.0)
Downers/Barbiturates*	Yes	113	(45.7)	13	(10.8)
	No	135	(54.3)	107	(89.2)
	Total	247	(100.0)	120	(100.0)
LSD/Mushrooms	Yes	34	(13.8)	16	(13.4)
	No	213	(86.2)	103	(86.6)
	Total	247	(100.0)	119	(100.0)
Heroin*	Yes	108	(43.7)	7	(5.8)
	No	139	(56.3)	144	(94.2)
	Total	247	(100.0)	121	(100.0)
USE DURING PAST FOUR MONTHS		N	(%)	N	(%)
Alcohol	Yes	144	(58.3)	66	(57.4)
	No	103	(41.7)	49	(42.6)
	Total	247	(100.0)	115	(100.0)
Marijuana*	Yes	93	(37.5)	21	(18.6)
	No	155	(62.5)	92	(81.4)
	Total	248	(100.0)	113	(100.0)
Downers/Barbiturates*	Yes	55	(22.4)	3	(2.5)
	No	191	(77.6)	116	(97.5)
	Total	246	(100.0)	119	(100.0)
LSD/Mushrooms	Yes	7	(2.9)	0	(0.0)
	No	238	(97.1)	115	(100.0)
	Total	245	(100.0)	115	(100.0)
Heroin*	Yes	63	(25.2)	2	(1.7)
	No	184	(74.8)	119	(98.4)
	Total	246	(100.0)	121	(100.0)

\*p-value <0.01.

Source: CDHS/OA.

Prevalence of HIV Infection and Related Risk Behaviors Among  
 Young Latino Men Who Have Sex with Men:  
 San Diego-Tijuana Border Region

Table 5.4  
 NON-STIMULANT USE DURING SEX BY STUDY SITE

LIFETIME USE		Tijuana		San Diego	
		N	(%)	N	(%)
Alcohol	Yes	168	(70.9)	72	(61.0)
	No	69	(29.1)	46	(39.0)
	Total	237	(100.0)	118	(100.0)
Marijuana*	Yes	131	(71.6)	26	(45.6)
	No	52	(28.4)	31	(54.4)
	Total	183	(100.0)	57	(100.0)
Downers/Barbiturates	Yes	57	(51.8)	4	(33.3)
	No	53	(48.2)	8	(66.7)
	Total	110	(100.0)	12	(100.0)
LSD/Mushrooms	Yes	19	(59.4)	5	(41.7)
	No	13	(40.6)	7	(58.3)
	Total	32	(100.0)	12	(100.0)
Heroin	Yes	70	(66.7)	3	(42.9)
	No	35	(33.3)	4	(57.1)
	Total	105	(100.0)	7	(100.0)
USE DURING PAST FOUR MONTHS		N	(%)	N	(%)
Alcohol	Yes	84	(65.6)	34	(36.1)
	No	44	(34.4)	30	(63.9)
	Total	128	(100.0)	64	(100.0)
Marijuana	Yes	59	(74.7)	11	(55.0)
	No	20	(25.3)	9	(45.0)
	Total	79	(100.0)	20	(100.0)
Downers/Barbiturates	Yes	28	(57.1)	0	(0.0)
	No	21	(42.9)	3	(100.0)
	Total	49	(100.0)	3	(100.0)
LSD/Mushrooms	Yes	5	(83.3)	0	(0.0)
	No	1	(16.7)	0	(0.0)
	Total	6	(100.0)	0	(0.0)
Heroin	Yes	0	(0.0)	0	(0.0)
	No	6	(100.0)	6	(100.0)
	Total	6	(100.0)	6	(100.0)

\*p-value <0.01.

Source: CDHS/OA.

Prevalence of HIV Infection and Related Risk Behaviors Among  
 Young Latino Men Who Have Sex with Men:  
 San Diego-Tijuana Border Region

Table 5.5  
 INJECTION DRUG USE AND NEEDLE SHARING BY STUDY SITE

USE		Tijuana		San Diego	
		N	(%)	N	(%)
<b>Lifetime Use*</b>	Yes	103	(41.5)	9	(7.4)
	No	145	(58.5)	112	(92.6)
	Total	48	(100.0)	121	(100.0)
<b>Use During the Past Four Months*</b>	Yes	63	(25.4)	4	(3.3)
	No	185	(74.6)	117	(96.7)
	Total	248	(100.0)	121	(100.0)
<b>NEEDLE SHARING</b>					
<b>Lifetime*</b>	Yes	93	(90.3)	5	(55.6)
	No	10	(9.7)	4	(44.4)
	Total	103	(100.0)	9	(100.0)
<b>Use During the Past Four Months</b>	Yes	59	(93.7)	3	(75.0)
	No	4	(6.3)	1	(25.0)
	Total	63	(100.0)	4	(100.0)

\*p-value <0.01.

Source: CDHS/OA.

Prevalence of HIV Infection and Related Risk Behaviors Among  
Young Latino Men Who Have Sex with Men:  
San Diego-Tijuana Border Region

Table 6.1  
HIV SEROPREVALENCE BY STUDY SITE

	Tijuana		San Diego	
	N	(%)	N	(%)
<b>HIV Status*</b>				
Positive	50	(20.1)	43	(35.2)
Negative	199	(79.9)	79	(64.8)
Total	249	(100.0)	122	(100.0)

\*p-value <0.01.

Source: CDHS/OA.

Table 6.2  
REPORTED PREVIOUS HIV TESTING BY HIV STATUS AND STUDY SITE

	HIV Status	HIV-positive		HIV-negative		Overall	
		N	(%)	N	(%)	N	(%)
<b>Tijuana (N=245)</b>	<b>Tested</b>	34	(69.4)	77	(39.3)	111	(45.3)
	<b>Never Tested</b>	15	(30.6)	119	(60.7)	134	(54.7)
	<b>Total</b>	49	(100.0)	196	(100.0)	245	(100.0)
<b>San Diego (N=111)</b>	<b>Tested</b>	17	(51.5)	57	(73.1)	74	(66.7)
	<b>Never Tested</b>	16	(48.5)	21	(29.1)	37	(33.3)
	<b>Total</b>	33	(100.0)	78	(100.0)	111	(100.0)

Source: CDHS/OA.

Table 6.3  
PREVIOUS HIV TEST RESULT REPORTED BY HIV POSITIVE INDIVIDUALS AND STUDY SITE

	Tijuana (N=49)*		San Diego (N=33)**	
	N	(%)	N	(%)
<b>Previous Test Result Reported</b>				
Positive	22	(44.9)	8	(24.2)
Negative	6	(12.2)	5	(15.2)
No result obtained	6	(12.2)	4	(12.1)
Never tested	15	(30.6)	16	(48.5)
<b>Awareness of HIV Status</b>				
Aware	22	(44.9)	8	(24.2)
Unaware	27	(55.1)	25	(75.8)

\* 2 percent (1) Missing

\*\* 23.8 percent (10) Missing

Source: CDHS/OA.

Prevalence of HIV Infection and Related Risk Behaviors Among  
Young Latino Men Who Have Sex with Men:  
San Diego-Tijuana Border Region

Table 6.4  
HISTORY OF SEXUALLY TRANSMITTED DISEASE (STD) AMONG HIV-POSITIVE  
INDIVIDUALS BY STUDY SITE

	<b>Tijuana (N=47)</b>		<b>San Diego (N=42)</b>	
	<b>N</b>	<b>(%)</b>	<b>N</b>	<b>(%)</b>
<b>History of STD*</b>				
Yes	20	(40.0)	18	(47.4)
No	30	(60.0)	20	(52.6)

\*p-value <0.05.

Source: CDHS/OA.

Table 6.5  
CD4+ RESULTS BY STUDY SITE

	<b>Tijuana (N=42)</b>		<b>San Diego (N=42)</b>	
	<b>N</b>	<b>(%)</b>	<b>N</b>	<b>(%)</b>
<b>Range CD4 (cells/mm<sup>3</sup>)</b>				
1-199	17	(40.5)	11	(26.2)
200-399	19	(45.2)	19	(45.2)
400+	6	(14.3)	12	(28.6)
<b>Median CD4*</b>	<b>242</b>		<b>323</b>	

\*p-value <0.05.

Source: CDHS/OA.

Table 6.6  
VIRAL LOAD RESULTS BY STUDY SITE

	<b>Tijuana (N=49)</b>		<b>San Diego (N=43)</b>	
	<b>N</b>	<b>(%)</b>	<b>N</b>	<b>(%)</b>
<b>Range Viral Load (copies/ml)</b>				
1-200	6	(12.2)	20	(46.5)
201-10,000	15	(30.6)	7	(16.3)
10,001-60,000	18	(36.7)	10	(23.3)
60,000+	10	(20.4)	6	(14.0)
<b>Median Viral Load</b>	<b>13,112</b>		<b>574</b>	

Source: CDHS/OA.

Prevalence of HIV Infection and Related Risk Behaviors Among  
 Young Latino Men Who Have Sex with Men:  
 San Diego-Tijuana Border Region

Table 6.7  
 DETUNED ASSAY RESULTS BY STUDY SITE

	<b>Tijuana (N=32)</b>		<b>San Diego (N=13)</b>	
	<b>N</b>	<b>(%)</b>	<b>N</b>	<b>(%)</b>
<b>Recent Infection</b>				
Yes	2	(6.2)	3	(23.1)
No	30	(93.8)	10	(76.9)

Source: CDHS/OA.

**Note:** Detuned assay results for 36 percent of the positive specimens in Tijuana and 70 percent of those in San Diego are not available.

Prevalence of HIV Infection and Related Risk Behaviors Among  
 Young Latino Men Who Have Sex with Men:  
 San Diego-Tijuana Border Region

Table 7.1  
 HIV SEROPREVALENCE BY SOCIO-DEMOGRAPHIC CHARACTERISTICS AND  
 STUDY SITE

	Tijuana		San Diego	
	Row % (N)	OR** (CI)	Row % (N)	OR** (CI)
<b>Age (years)</b>				
18-21	9.9 (7)	1.00	15.4 (2)	1.00
22-25	17.8 (13)	1.98 (0.68, 6.25)	20.0 (6)	1.38 (0.20, 15.94)
26-29	28.6 (30)	3.65 (1.44, 10.47)*	44.3 (35)	4.38 (0.66, 42.60)
Overall	20.1 (50)		35.3 (43)	
<b>Education</b>				
Less than high	19.1 (16)	1.00	33.3 (2)	1.00
High school	19.1 (17)	1.00 (0.44, 2.31)	43.3 (13)	1.53 (0.18, 19.16)
More than high school	22.4 (17)	1.22 (0.53, 2.84)	32.5 (27)	0.96 (0.13, 11.29)
Overall	20.1 (50)		35.3 (42)	
<b>Living Arrangement</b>				
Alone	22.2 (12)	1.00	34.2 (13)	1.00
Parents	15.9 (11)	0.66 (0.24, 1.83)	24.0 (6)	0.61 (0.16, 2.13)
Friends	22.2 (10)	1.00 (0.34, 2.87)	42.5 (17)	1.42 (0.52, 3.95)
Partner/lover	22.5 (9)	1.02 (0.33, 3.01)	25.0 (3)	0.64 (0.10, 3.22)
Homeless	15.8 (6)	0.66 (0.18, 2.15)	100.0 (3)	-----
-----	-----	-----	-----	-----
Not with partner/lover	22.4 (39)	1.00	36.8 (39)	1.00
With partner/lover	22.2 (9)	1.24 (0.48, 2.95)	25.0 (3)	0.57 (0.09, 2.49)
Overall	19.5 (48)		35.6 (42)	
<b>Ever Been in Prison</b>				
No	25.8 (31)	1.00	36.0 (40)	1.00
Yes	15.0 (19)	0.51 (0.27, 1.00)	20.0 (2)	0.44 (0.04, 2.38)
Overall	20.2 (50)		34.7 (42)	
<b>Ever Homeless</b>				
No	22.8 (18)	1.00	33.3 (32)	1.00
Yes	19.1 (32)	0.80 (0.40, 1.63)	42.3 (11)	1.47 (0.54, 3.87)
Overall	20.2 (50)		35.3 (43)	
<b>Health Care Source</b>				
None	12.2 (6)	1.00	26.7 (8)	1.00
Clinic	22.8 (34)	1.90 (0.61, 5.85)	51.2 (21)	0.88 (0.29, 2.67)
HMO/Private	20.9 (9)	2.12 (0.83, 5.40)	24.3 (9)	2.89 (1.04, 7.96)*
Overall	20.3 (49)		35.2 (38)	
<b>Knew with HIV</b>				
No	7.0 (7)	1.00	5.0 (1)	1.00
Yes	28.9 (43)	5.39 (2.25, 14.81)*	41.2 (42)	---
Overall	20.1 (50)		35.3 (43)	
<b>Knew Someone Who Died from HIV</b>				
No	12.8 (16)	1.00	20.0 (7)	1.00
Yes	27.4 (34)	2.57 (1.28, 5.32)*	42.9 (36)	3.00 (1.11, 8.99)*
Overall	20.1 (50)		36.1 (43)	

\*p-value <0.05.

\*\* Reference category is indicated by an OR of 1.00.

Source: CDHS/OA.

Prevalence of HIV Infection and Related Risk Behaviors Among  
Young Latino Men Who Have Sex with Men:  
San Diego-Tijuana Border Region

Table 7.2  
HIV SEROPREVALENCE BY SEX BEHAVIOR AND STUDY SITE

Lifetime Sex Behavior	Tijuana		San Diego	
	Row % (N)	OR** (CI)	Row % (N)	OR** (CI)
<b>Number of Male Partners</b>				
0	0.0 (0)	----	0.0 (0)	----
1	13.0 (6)	1.00	25.0 (1)	1.00
2-5	16.7 (14)	1.33 (0.44, 4.57)	14.3 (3)	0.50 (0.02, 34.90)
6+	25.2 (29)	2.25 (0.82, 7.12)	39.8 (35)	2.08 (0.16, 112.00)
NS, >0	33.3 (1)	3.33 (0.05, 71.38)	33.3 (3)	1.50 (0.07, 104.64)
Overall	20.1 (50)		35.3 (43)	
<b>Number of Female Partners</b>				
0	36.4 (12)	1.57 (0.35, 8.22)	41.5 (27)	1.89 (0.40, 12.00)
1	26.7 (4)	1.00	27.3 (3)	1.00
2-5	25.4 (15)	0.94 (0.23, 4.65)	25.9 (7)	0.93 (0.16, 7.01)
6+	12.9 (18)	0.41 (0.11, 1.95)	23.5 (4)	0.82 (0.11, 7.17)
NS, >0	50.0 (1)	2.75 (0.03, 235.09)	100.0 (2)	----
Overall	20.1 (50)		35.3 (43)	
<b>Receptive UAI</b>				
No	13.4 (23)	1.00	14.8 (4)	1.00
Yes	37.4 (26)	3.83 (1.89, 7.75)*	40.9 (38)	3.97 (1.21, 16.91)*
Overall	20.3 (49)		35.0 (42)	
<b>Insertive UAI with a Male</b>				
No	11.9 (8)	1.00	16.0 (4)	1.00
Yes	23.9 (42)	2.31 (0.99, 6.04)	40.9 (38)	3.63 (1.09, 15.55)*
Overall	20.6 (50)		35.6 (42)	
<b>UAI with a Female</b>				
No	24.8 (35)	1.00	39.1 (41)	1.00
Yes	13.1 (14)	0.46 (0.21, 0.94)*	12.5 (2)	0.32 (0.02, 1.06)
Overall	19.8 (49)		35.5 (43)	
<b>UVI</b>				
No	28.6 (16)	1.00	40.8 (31)	1.00
Yes	17.6 (34)	0.53 (0.26, 1.15)	25.0 (11)	0.48 (0.19, 1.17)
Overall	20.1 (50)		35.0 (42)	
<b>Exchange Sex with a Male</b>				
No	23.5 (23)	1.00	32.3 (30)	1.00
Yes	18.0 (27)	0.71 (0.37, 1.41)	42.9 (12)	1.58 (0.60, 4.06)
Overall	20.2 (50)		34.7 (42)	
<b>Exchange Sex with a Female</b>				
No	20.0 (33)	1.00	36.0 (41)	1.00
Yes	19.5 (16)	0.97 (0.46, 1.97)	28.6 (2)	0.71 (0.07, 4.60)
Overall	19.8 (49)		35.5 (43)	

\*p-value <0.05.

\*\* Reference category is indicated by an OR of 1.00.

UAI = Unprotected Anal Intercourse.

UVI = Unprotected Vaginal Intercourse.

Source: CDHS/OA.

Prevalence of HIV Infection and Related Risk Behaviors Among  
 Young Latino Men Who Have Sex with Men:  
 San Diego-Tijuana Border Region

Table 7.3  
 HIV SEROPREVALENCE BY DRUG-USING BEHAVIORS AND STUDY SITE

Lifetime Drug-Related Behaviors	Tijuana		San Diego	
	Row % (N)	OR** (CI)	Row % (N)	OR** (CI)
<b>Injection Drug Use</b>				
No	24.1 (35)	1.00	33.9 (38)	1.00
Yes	13.6 (14)	0.49 (0.23, 1.01)	44.4 (4)	1.56 (0.29, 7.68)
Overall	19.8 (49)		34.7 (42)	
<b>Needle Sharing</b>				
No	24.5 (38)	1.00	33.6 (39)	1.00
Yes	11.8 (11)	0.41 (0.18, 0.87)*	60.0 (3)	2.96 (0.32, 36.47)
Overall	19.8 (49)		34.7 (42)	
<b>Alcohol During Sex</b>				
No	16.9 (13)	1.00	34.0 (17)	1.00
Yes	21.3 (36)	1.33 (0.64, 2.93)	36.1 (26)	1.10 (0.51, 2.52)
Overall	19.9 (49)		35.2 (43)	
<b>Marijuana During Sex</b>				
No	18.3 (21)	1.00	37.4 (34)	1.00
Yes	19.9 (26)	1.04 (0.53, 2.04)	34.6 (9)	0.89 (0.27, 3.11)
Overall	20.0 (49)		36.8 (43)	
<b>Cocaine During Sex</b>				
No	20.7 (32)	1.00	36.4 (36)	1.00
Yes	19.1 (17)	0.91 (0.44, 1.83)	35.3 (6)	0.95 (0.27, 3.14)
Overall	20.1 (49)		36.2 (42)	
<b>Speed During Sex</b>				
No	23.1 (39)	1.00	34.6 (36)	1.00
Yes	13.2 (10)	0.51 (0.21, 1.11)	37.5 (6)	1.13 (0.31, 3.77)
Overall	20.0 (49)		35.0 (42)	
<b>Heroin During Sex</b>				
No	20.7 (36)	1.00	35.6 (42)	1.00
Yes	18.6 (13)	0.87 (0.40, 1.84)	33.3 (1)	0.90 (0.02, 17.87)
Overall	20.1 (46)		34.7 (43)	

\*p-value <0.05.

\*\* Reference category is indicated by an OR of 1.00.

Source: CDHS/OA.

Prevalence of HIV Infection and Related Risk Behaviors Among  
Young Latino Men Who Have Sex with Men:  
San Diego-Tijuana Border Region

Table 8.1  
CORRELATES OF INSERTIVE UNPROTECTED ANAL INTERCOURSE (UAI) WITH MALES  
DURING PREVIOUS FOUR MONTHS BY STUDY SITE

	Tijuana		San Diego	
	Row % (N)	OR** (CI)	Row % (N)	OR** (CI)
<b>Age (years)</b>				
18-21	45.8 (22)	1.00	46.2 (6)	1.00
22-25	44.1 (15)	0.93 (0.35, 2.47)	38.5 (10)	0.73 (0.16, 3.50)
26-29	41.4 (24)	0.83 (0.36, 1.94)	62.3 (43)	1.93 (0.49, 7.72)
Overall	43.6 (61)		54.6 (59)	
<b>Education</b>				
Less than high	55.3 (26)	1.00	100.0 (5)	
High school	35.6 (16)	0.45 (0.18, 1.12)	55.2 (16)	p-value = .06***
More than high school	39.6 (19)	0.53 (0.26, 1.29)	50.7 (37)	p-value = .03***
Overall	43.6 (61)		54.2 (58)	
<b>Living Arrangement</b>				
Alone	44.4 (12)	1.00	45.5 (15)	1.00
Parents	41.3 (19)	0.88 (0.30, 2.57)	52.4 (11)	1.32 (0.38, 4.56)
Friends	28.6 (8)	0.50 (0.14, 1.75)	54.3 (19)	1.43 (0.49, 4.13)
Partner/lover	60.0 (12)	1.88 (0.50, 7.17)	75.0 (9)	3.60 (0.70, 23.74)
Homeless	52.6 (10)	1.39 (0.67, 5.29)	66.7 (2)	---
-----				
Not with partner/lover	40.8 (49)	1.00	51.1 (47)	1.00
With partner/lover	60.0 (12)	2.17 (0.75, 6.58)	75.0 (9)	2.87 (0.65, 17.37)
Overall	43.6 (61)		53.9 (56)	
<b>Knew someone with HIV</b>				
No	39.7 (23)	1.00	50.0 (11)	1.00
Yes	46.3 (38)	1.31 (0.63, 2.76)	57.5 (48)	0.73 (0.22, 2.28)
Overall	43.6 (61)		54.6 (59)	
<b>Knew someone who died from HIV</b>				
No	41.4 (29)	1.00	43.3 (16)	1.00
Yes	45.7 (32)	1.19 (0.58, 2.45)	54.3 (42)	1.35 (0.54, 3.39)
Overall	54.6 (61)		55.2 (58)	
<b>Exchange Sex with a Male****</b>				
No	32.3 (21)	1.00	53.1 (51)	1.00
Yes	54.8 (40)	2.54 (1.20, 5.41)*	72.7 (8)	2.35 (0.52, 14.49)
Overall	44.2 (61)		55.1 (59)	
<b>Number of Male Sex Partners****</b>				
0	0.0 (0)	--	0.0 (0)	--
1	36.8 (21)	1.00	56.7 (17)	1.00
2-3	42.5 (17)	1.27 (0.51, 3.13)	42.9 (12)	.57 (0.18, 1.83)
4-5	63.2 (12)	2.94 (0.89, 10.16)	53.9 (7)	.89 (0.20, 4.09)
6+	52.4 (11)	1.89 (0.61, 5.86)	69.0 (20)	1.70 (0.52, 5.70)
Overall	43.6 (61)		53.3 (56)	
<b>Receptive UAI with a Male****</b>				
No	36.3 (41)	1.00	34.5 (20)	1.00
Yes	73.1 (19)	4.77 (1.72, 14.44)*	81.3 (39)	8.23 (3.08, 22.91)*
Overall	43.2 (60)		55.7 (59)	

\*p-value <0.05.

\*\* Reference category is indicated by an OR of 1.00.

\*\*\* Reference category = 100 percent.

\*\*\*\* Past four months.

Source: CDHS/OA.

Prevalence of HIV Infection and Related Risk Behaviors Among  
 Young Latino Men Who Have Sex with Men:  
 San Diego-Tijuana Border Region

Table 8.2  
 CORRELATES OF RECEPTIVE UNPROTECTED ANAL INTERCOURSE (UAI) WITH MALES  
 DURING PREVIOUS FOUR MONTHS BY STUDY SITE

	Tijuana		San Diego	
	Row % (N)	OR** (CI)	Row % (N)	OR** (CI)
<b>Age (years)</b>				
18-21	22.9 (11)	1.00	53.9 (7)	1.00
22-25	20.6 (7)	0.87 (0.25, 2.85)	50.0 (13)	0.86 (0.18, 3.96)
26-29	14.0 (8)	0.55 (0.17, 1.68)	58.6 (29)	0.61 (0.15, 2.37)
Overall	18.7 (26)		45.0 (49)	
<b>Education</b>				
Less than high	10.6 (5)	1.00	40.0 (2)	1.00
High school	15.9 (7)	1.59 (0.39, 6.89)	50.0 (14)	1.50 (0.15, 20.33)
More than high school	29.2 (14)	3.45 (1.03, 13.06)*	44.0 (33)	1.18 (0.13, 14.85)
Overall	18.7 (26)		45.4 (49)	
<b>Living Arrangement</b>				
Alone	15.4 (4)	1.00	33.3 (11)	1.00
Parents	21.7 (10)	1.53 (0.38, 7.46)	50.0 (11)	2.00 (0.58, 6.95)
Friends	17.9 (5)	1.20 (0.22, 6.84)	45.7 (16)	1.68 (0.57, 5.07)
Partner/lover	30.0 (6)	2.36 (0.45, 13.28)	58.3 (7)	2.80 (0.59, 13.76)
Homeless	5.3 (1)	0.31 (0.01, 3.54)	66.7 (2)	-----
-----				
Not with partner/lover	16.8 (20)	1.00	43.0 (40)	1.00
With partner/lover	30.0 (6)	2.12 (0.59, 6.76)	58.3 (7)	1.86 (0.46, 7.94)
Overall	18.7 (26)		44.8 (47)	
<b>Knew someone with HIV</b>				
No	10.5 (6)	1.00	47.4 (9)	1.00
Yes	24.4 (20)	2.74 (0.96, 8.92)	44.4 (40)	0.89 (0.29, 2.74)
Overall	18.7 (26)		45.0 (49)	
<b>Knew someone who died from HIV</b>				
No	12.9 (9)	1.00	40.6 (13)	1.00
Yes	24.6 (17)	2.22 (0.84, 6.11)	48.7 (36)	1.38 (0.55, 3.52)
Overall	18.7 (26)		46.2 (49)	
<b>Exchange Sex with a Male***</b>				
No	26.2 (17)	1.00	44.9 (44)	1.00
Yes	12.5 (9)	0.40 (0.15, 1.06)	45.5 (5)	1.02 (0.23, 4.32)
Overall	19.0 (26)		45.0 (49)	
<b>Number of Male Partners***</b>				
0	0.0 (0)	--	0.0 (0)	--
1	16.1 (9)	1.00	50.0 (15)	1.00
2-3	15.0 (6)	0.92 (0.25, 3.23)	37.9 (11)	0.61 (0.19, 1.94)
4-5	26.3 (5)	1.87 (0.42, 7.44)	16.7 (2)	0.20 (0.02, 1.22)
6+	28.6 (6)	2.09 (0.52, 7.84)	65.5 (19)	1.90 (0.59, 6.20)
Overall	18.7 (26)		43.9 (47)	
<b>Insertive UAI with a Male***</b>				
No	8.9 (7)	1.00	19.2 (9)	1.00
Yes	31.7 (19)	4.77 (1.72, 14.44)*	66.1 (39)	8.23 (3.08, 22.91)*
Overall	18.7 (26)		45.3 (48)	

\*p-value <0.05.

\*\* Reference category is indicated by an OR of 1.00.

\*\*\* Past four months.

Source: CDHS/OA.

Prevalence of HIV Infection and Related Risk Behaviors Among  
 Young Latino Men Who Have Sex with Men:  
 San Diego-Tijuana Border Region

Table 8.3  
 CORRELATES OF UNPROTECTED ANAL INTERCOURSE WITH FEMALES DURING  
 PREVIOUS FOUR MONTHS BY STUDY SITE

	Tijuana		San Diego	
	Row % (N)	OR** (CI)	Row % (N)	OR** (CI)
<b>Age (years)</b>				
18-21	31.7 (13)	1.00	0.0 (0)	--
22-25	29.7 (11)	0.91 (0.31, 2.66)	0.0 (0)	--
26-29	31.7 (19)	1.00 (0.39, 2.58)	30.0 (3)	--
Overall	31.2 (43)		27.3 (3)	
<b>Education</b>				
Less than high	26.0 (13)	1.00	0.0 (0)	--
High school	35.3 (18)	1.55 (0.61, 4.00)	0.0 (0)	--
More than high school	32.4 (12)	1.37 (0.48, 3.85)	42.9 (3)	--
Overall	31.2 (43)		30.0 (3)	
<b>Living Arrangement</b>				
Alone	32.4 (11)	1.00	25.0 (1)	--
Parents	32.4 (11)	1.00 (0.32, 3.12)	33.3 (1)	--
Friends	23.8 (5)	0.65 (0.15, 2.57)	33.3 (1)	--
Partner/lover	24.0 (6)	0.66 (0.17, 2.41)	0.0 (0)	--
Homeless	43.5 (10)	1.61 (0.47, 5.49)	0.0 (0)	--
-----				
Not with partner/lover	33.0 (37)	1.00	30.0 (3)	--
With partner/lover	24.0 (6)	0.64 (0.19, 1.86)	0.0 (0)	--
Overall	31.4 (43)		30.0 (3)	
<b>Knew someone with HIV</b>				
No	23.3 (14)	1.00	0.0 (0)	--
Yes	37.2 (29)	1.94 (0.86, 4.49)	37.5 (3)	--
Overall	31.2 (43)		30.0 (3)	
<b>Knew someone who died from HIV</b>				
No	23.3 (17)	1.00	0.0 (0)	--
Yes	40.0 (26)	2.20 (0.99, 4.91)	14.8 (3)	--
Overall	31.2 (43)		10.3 (3)	
<b>Exchange Sex with Female***</b>				
No	24.6 (27)	1.00	20.0 (2)	--
Yes	60.0 (15)	4.61 (1.68, 12.80)*	100.0 (1)	--
Overall	31.1 (42)		27.3 (3)	
<b>Number of Female Partners***</b>				
0	0.0 (0)	--	0.0 (0)	--
1	11.9 (5)	1.00	33.3 (2)	--
2	36.1 (13)	4.18 (1.18, 16.72)*	0.0 (0)	--
3+	41.7 (25)	5.29 (1.70, 19.36)*	33.3 (1)	--
Overall	34.2 (43)		27.3 (3)	
<b>Unprotected Vaginal Intercourse***</b>				
No	13.5 (5)	1.00	0.0 (0)	--
Yes	37.0 (37)	3.76 (1.28, 13.33)*	37.5 (3)	--
Overall	30.7 (42)		27.3 (3)	

\*p-value <0.05.

Source: CDHS/OA.

\*\* Reference category is indicated by an OR of 1.00.

\*\*\* Past four months.

Prevalence of HIV Infection and Related Risk Behaviors Among  
 Young Latino Men Who Have Sex with Men:  
 San Diego-Tijuana Border Region

Table 8.4  
 CORRELATES OF UNPROTECTED VAGINAL INTERCOURSE DURING PREVIOUS FOUR  
 MONTHS BY STUDY SITE

	Tijuana		San Diego	
	Row % (N)	OR** (CI)	Row % (N)	OR** (CI)
<b>Age (years)</b>				
18-21	76.6 (31)	1.00	100.0 (7)	--
22-25	81.1 (30)	1.38 (0.41, 4.87)	0.0 (0)	--
26-29	66.7 (40)	0.65 (0.23, 1.70)	70.0 (1)	--
Overall	73.2 (101)		72.7 (8)	
<b>Education</b>				
Less than high school	64.0 (32)	1.00	0.0 (0)	--
High school	73.1 (38)	1.53 (0.61, 3.87)	50.0 (1)	--
More than high school	86.1 (31)	3.49 (1.06, 13.34)*	100.0 (7)	--
Overall	73.2 (101)		80.0 (8)	
<b>Living Arrangement</b>				
Alone	64.7 (22)	1.00	50.0 (2)	--
Parents	79.4 (27)	2.10 (0.63, 7.39)	100.0 (3)	--
Friends	81.0 (17)	2.32 (0.56, 11.48)	66.7 (2)	---
Partner/lover	72.0 (18)	1.40 (0.40, 5.12)	0.0 (0)	--
Homeless	73.9 (17)	1.55 (0.42, 6.07)	0.0 (0)	--
-----				
Not with partner/lover	74.1 (83)	1.00	70.0 (7)	--
With partner/lover	72.0 (18)	0.90 (0.32, 2.81)	0.0 (0)	--
Overall	73.7 (101)		70.0 (8)	
<b>Knew someone with HIV</b>				
No	70.0 (42)	1.00	66.7 (2)	--
Yes	75.6 (59)	1.33 (0.58, 3.03)	75.0 (6)	--
Overall	73.2 (101)		72.7 (8)	
<b>Knew someone who died from HIV</b>				
No	65.3 (47)	1.00	66.7 (2)	--
Yes	81.8 (54)	2.39 (1.01, 5.81)	85.7 (6)	--
Overall	73.2 (101)		80.0 (8)	
<b>Exchange Sex with Female***</b>				
No	69.1 (76)	1.00	70.0 (7)	--
Yes	92.0 (23)	5.14 (1.15, 23.07)*	100.0 (1)	--
Overall	73.3 (99)		72.7 (8)	
<b>Number of Female Partners***</b>				
0	0.0 (0)	--	0.0 (0)	--
1	64.3 (27)	1.00	83.3 (5)	--
2	75.0 (27)	1.67 (0.56, 5.09)	33.3 (1)	--
3+	78.3 (47)	2.01 (0.76, 5.33)	66.7 (2)	--
Overall	73.2 (101)		72.7 (8)	
<b>UAI with Female***</b>				
No	66.3 (63)	1.00	62.5 (5)	--
Yes	88.1 (37)	3.76 (1.28, 13.33)*	100.0 (3)	--
Overall	73.0 (100)		72.7 (8)	

\*p-value <0.05.

\*\* Reference category is indicated by an OR of 1.00.

\*\*\* Past four months.

UAI = Unprotected Anal Intercourse.

Source: CDHS/OA.



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