

eroprevalance
sero incidence
WOMAN born male
22% HIV

The Los Angeles Transgender Health Study: Community Report

need resources now
discrimination

Cathy J. Reback, Ph.D.
Paul A. Simon, M.D., M.P.H.
Cathleen C. Bemis, M.S.
Bobby Gatson

sexual transition
gender risk abuse
May 2001

behaved
no health insurance

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One is not born, but rather becomes, a woman.

Simone de Beauvoir
The Second Sex

Holly came from Miami, FLA,
Hitch-hiked her way across the USA,
Plucked her eyebrows on the way,
Shaved her legs and then he was a she,
She said, "Hey Babe, take a walk on the wild side."
Said, "Hey honey, take a walk on the wild side."

Lou Reed
Walk on the Wild Side

Cover design by Diana Aikas.

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TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
LIST OF TABLES AND FIGURES.....	5
INTRODUCTION.....	7
Study Objectives	8
Study Design and Methods	9
RESULTS	13
Sociodemographics	13
Gender and Sexual Identity.....	15
Health Care Access and Medical History	15
Sexual Risk Behavior.....	18
Alcohol and Drug Use	20
Psychosocial and Legal Issues	21
HIV Prevention	23
HIV Seroprevalence and Seroincidence	25
DISCUSSION, LIMITATIONS, AND RECOMMENDATIONS	29
Discussion	29
Limitations	31
Recommendations.....	32
NOTES AND REFERENCES	35

EXECUTIVE SUMMARY

This study was a research and community collaboration; three community-based organizations (Asian Pacific AIDS Intervention Team, Bienestar, and Van Ness Recovery House) and the Los Angeles County HIV Epidemiology Program came together to create the Los Angeles Transgender Health Study.

- Study objectives:
 - 1) to assess the sociodemographic characteristics and HIV-risk behaviors in the male-to-female (MTF) transgender population served by the three CBOs and to assess the relative importance of various risk factors for HIV infection;
 - 2) to determine HIV seroprevalence and seroincidence in this population; and
 - 3) to evaluate the impact of current HIV prevention services and linkages to services for MTF transgenders.

- Eligibility:
 - Los Angeles County resident
 - At least 18 years of age
 - Identified as a woman or MTF transgender or transsexual who was born male

- Methods:
 - Questionnaire modules included screening, demographic and socioeconomic, health care access and medical history, sexual behavior, alcohol and drug use, psychosocial and legal issues, HIV prevention knowledge, oral fluid-based HIV-1 antibody test (Orasure) and counseling session
 - Baseline interview and HIV test (N=244) from February 1998 to January 1999
 - Follow-up interview and HIV test, 90% (N=219), 6 to 12 months after baseline

- Summary of Key Findings:
 - HIV seroprevalence of 22%; is among the highest of any group reported in Los Angeles county
 - Many were socioeconomically disadvantaged; 50% reported sex work as their main source of income
 - High-risk sexual behaviors reported with main, casual, and exchange partners
 - Alcohol and non-injection drug use was frequently reported and many reported being “high or buzzed” during sex
 - Sixty-four percent reported no current health insurance
 - Forty-four percent were currently injecting hormones and, of those, 72% obtain their needles from a non-medical source
 - Thirty-three percent injected substance other than hormones, such as silicone or oil, to enhance their gender presentation

- Eighty percent reported a history of verbal abuse due to their gender identity or presentation, 47% reported physical abuse due to their gender identity or presentation
- Fifty-eight percent reported a history of incarceration

- Recommendations:
 - HIV prevention interventions must be tailored to MTF transgenders
 - Transgendered persons must have access to health care services that are sensitive to the medical and psychological issues related to gender transition
 - HIV prevention interventions should include alcohol and drug assessments and, when necessary, referrals to transgender-sensitive drug treatment services
 - Job training should be incorporated into HIV intervention programs
 - Sexual risk reduction messages should target exchange, casual, and main partners
 - Additional resources are urgently needed for HIV prevention and treatment services targeting transgenders

LIST OF TABLES AND FIGURES

TABLES

Table 1:	Gender and Sexual Identity of Study Participants.....	15
Table 2:	Current Health Insurance and Source of Health Care of Study Participants.....	16
Table 3:	Sexual Risk Behaviors of Study Participants in the Previous Six Months.....	19
Table 4:	Knowledge of HIV Transmission and Prevention.....	24
Table 5:	HIV Testing and Self-Perceived HIV Risk	26
Table 6:	HIV Seroprevalence by Sociodemographic Characteristics of Study Participants.....	27

FIGURES

Figure 1:	Race/Ethnicity	13
Figure 2:	Age and Education	13
Figure 3:	Annual Income	14
Figure 4:	Sources of Income in the Previous Six Months	14
Figure 5:	Current Living Situation.....	14
Figure 6:	STD History	16
Figure 7:	Past Surgeries for Gender Presentation.....	17
Figure 8:	Planned Surgeries for Gender Presentation.....	17
Figure 9:	Unprotected Sex in the Previous Six Months by Behavior and Type of Sex Partner.....	19
Figure 10:	Gender(s) of Sex Partners.....	19
Figure 11:	Drug and Alcohol Use, Ever and in the Previous Six Months	20
Figure 12:	Perceived History of Discrimination.....	21

Figure 13: History of Verbal Abuse..... 22

Figure 14: History of Physical Abuse..... 22

Figure 15: Sources of HIV Information..... 24

Figure 16: Main Sources of HIV Information 24

Figure 17: HIV Seroprevalence 25

INTRODUCTION

Los Angeles County is home to a large and heterogeneous transgender population, ranging from homeless sex workers to those who are married, living in traditional households and completely assimilated. To date there has been very little information available on the prevalence of HIV risk behaviors, HIV seroprevalence and seroincidence, or the impact of HIV prevention efforts in this population. HIV-related research studies and HIV/AIDS surveillance activities have not routinely included the "transgender" designation in their data collection instruments. For example, the 1998 HIV Counseling and Testing Report Form (OMB no. 0920-0208) created by the U.S. Government Printing Office for the purpose of collecting demographic data on utilization of publicly-funded counseling and testing services has no transgender designation and collects no information on HIV risk behaviors among transgenders. Despite the limited data, several published reports from other locales^{1,2,3,4}, limited unpublished data from Los Angeles County⁵, and anecdotal reports suggest that many in the transgender population in general, and the male-to-female (MTF) population more specifically, are at greatly increased risk for HIV infection.

This study was designed as a research and community collaboration for the specific purpose of collecting epidemiological and behavioral data on this greatly overlooked population. The project was represented by two principal investigators, one from the community (Dr. Cathy Reback) and one from a research institution (Dr. Paul Simon). In addition, three community-based organizations (CBOs) that provide HIV prevention services to transgendered persons collaborated in the study. Thus, to address the need for HIV-related epidemiologic and behavioral information on the local transgender population, three CBOs and the Los Angeles

County HIV Epidemiology Program came together in a research/community collaboration to form the Los Angeles Transgender Health Study.

This study focuses on MTF transgenders for two crucial reasons: 1) although female-to-male (FTM) transgenders may also be at risk for HIV infection, it was felt that this group would be very difficult to identify and recruit given that nearly all transgender clients at the three CBOs were MTF. In addition, it was not possible to expand outreach to recruit FTM transgenders given the limited available funding.

STUDY OBJECTIVES

To better understand the impact of HIV in the Los Angeles MTF transgender population, the study had three goals: 1) to assess the sociodemographic characteristics and HIV-risk behaviors in the transgender population served by the three CBOs and to assess the relative importance of various risk factors for HIV infection, 2) to determine HIV seroprevalence and seroincidence in this population, and 3) to evaluate the impact of current HIV prevention services and linkages to services for transgenders. By bringing together three agencies that provide HIV prevention services to transgendered individuals in the county – each of which offer services in different geographic areas and work with specific ethnic/cultural populations – it was hoped that the study group would represent the diversity of this population. However, an important limitation of the study is that it did not collect data on those outside the catchment areas of the three CBOs and those within these areas that were not receiving services.

This study required the collaboration of researchers, community-based HIV prevention service providers, and members of the transgender community. The three participating CBOs included the Asian Pacific AIDS Intervention Team in Downtown Los Angeles, the Bienestar

Latino AIDS Project in Central Los Angeles, and the Van Ness Recovery House in Hollywood.⁶ These CBOs provide outreach and HIV education and prevention services specifically targeted to transgenders and, in addition, serve geographically distinct transgender populations in the county. Two of the three agencies serve specific racial and ethnic populations (Asian and Latino) while the third serves a racially and ethnically mixed clientele.

STUDY DESIGN AND METHODS

Persons were eligible to participate in the study if they: 1) were 18 years of age or older, 2) lived in Los Angeles County, and 3) identified as MTF transgender or transsexual, or identified as a woman who was born male. These eligibility criteria were designed to capture the full range of MTF transgenders, regardless of stage of transition, and to exclude other groups of individuals that are often confused with transgenders and sometimes participate in transgender support groups, such as cross-dressers, transvestites, and drag queens. Persons in these latter groups differ from transgenders in that they are not in the process of changing their gender nor do they believe the sex of their body is in conflict with their gender identity.⁷ Four interviewers were hired for the study, all of whom identified as MTF transgenders and were ethnically mixed to reflect the demographic profile of the clients served by the collaborating CBOs. All interviewers were trained on interviewing techniques and were certified as pre- and post-test HIV counselors. There was unanimous agreement between the community representatives and the researchers that MTF transgenders should be hired as the study interviewers. Transgender interviewers were viewed as an important ingredient in building trust and rapport with the participants as well as to increase participation in the study.

Subjects were recruited for the study by prevention staff from the three participating CBOs during their routine outreach and/or prevention activities. In most situations, the interviewers accompanied the CBO staff during their intervention efforts and participants were then recruited for interviews at that time. Enrollment in the study occurred from February 1998 to January 1999.

After recruitment, potential participants were given an overview of the study and then screened for eligibility. Informed consent forms were then given to those who were eligible and interested in participating in the study. Participants who provided informed consent received a baseline interview. A follow-up interview was also scheduled 6 to 12 months later. The baseline and follow-up interviews were each approximately 45 minutes in duration and were administered by the trained interviewers in either English, Spanish, or Tagalog. Participants received \$15 after the baseline interview to compensate them for their time and to encourage completion of the follow-up interview. After each interview, all participants received an oral fluid-based HIV-1 antibody test (Orasure) and a counseling session. The specimen was sent without personally identifying information to the health department laboratory for analysis. A coded identifier linked the test result to the participant for those who chose to receive their result. All specimens found to be positive by enzyme immunoassay (EIA) were confirmed with a Western blot assay.

Interviews were conducted in a variety of venues such as the interviewer's car, cafes, on the streets, in the agencies. The transgender population presents unique challenges in attempting to conduct follow-up given that some live in unstable environments and, additionally, many change their names and other identifying information as they cross gender lines. To maximize participation in the follow-up component of the study, a variety of methods were employed to track hard-to-find participants including reminder postcards and an increased monetary

compensation of up to \$40. Additionally, interviewers traveled from one city to another within Los Angeles County to find participants for their follow-up interview. As a result of these efforts, 90% of participants were located and received a follow-up interview.

The development of a culturally-appropriate questionnaire was one of the greatest challenges of implementing the study and required six months to complete. The questionnaire needed to be designed in a way that addressed the complexities of the transgender experience. For example, to ensure that questions related to sexual risk behavior were consistent with the participant's anatomy, separate color-coded sexual behavior modules were required for those who had undergone genital reconstruction surgery, those who had not had such surgery, and those who had this surgery during the study's 6-12 month follow-up period. Wording of questions were carefully crafted to be understandable and transgender sensitive. Gender-specific language needed to be consistent with gender identity. To meet these challenges, substantial input was required of the community collaborators to ensure that these standards were met. The process was greatly facilitated by the willingness of researchers in San Francisco to share a transgender questionnaire they had developed (personal communication: Kristen Clements).

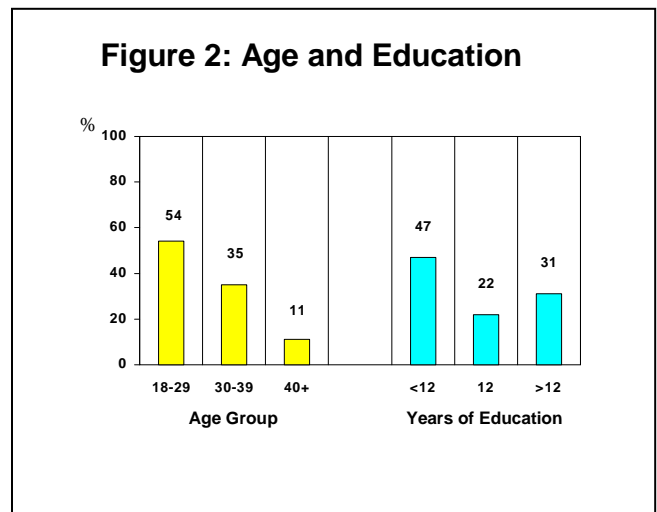
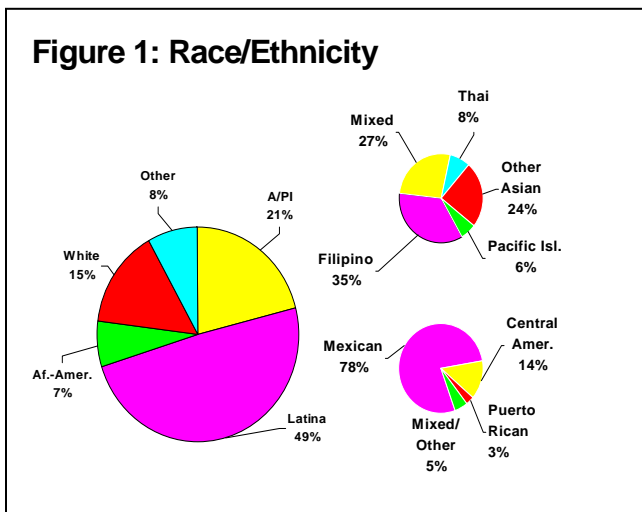
Both the principal investigators and the community-based collaborators agreed that the questionnaire needed to go beyond specific assessment of HIV risk behavior. Because the study offered an opportunity to collect vital information on this marginalized and underserved population, the research team felt a responsibility to gather as much information as possible. Therefore, in addition to collecting detailed information on sexual and drug-using behaviors, HIV/AIDS-related knowledge attitudes and perception of risk, and knowledge of HIV serostatus, the questionnaire also solicited information on sociodemographics, living situation, use of health care and drug treatment services, stage of gender transition, legal issues related to gender

transition, history of incarceration, experiences with discrimination and violence, and psychosocial issues and social support.

RESULTS

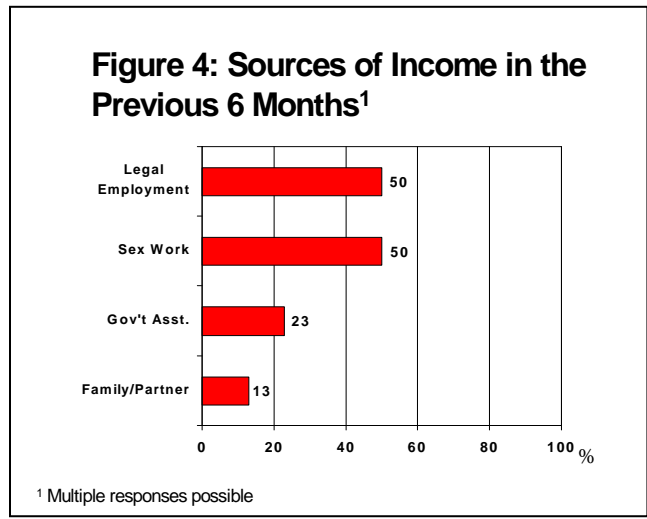
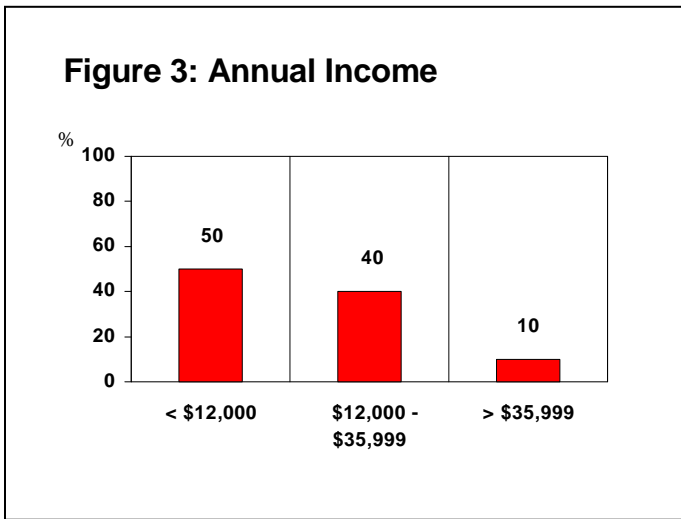
SOCIODEMOGRAPHICS

Of the 244 transgenders who were enrolled in the study, 49% were Hispanic/Latina, 21% Asian/Pacific Islander, 15% Caucasian/white, 7% African-American/black, and 8% mixed race/ethnicity or other. Hispanic/Latinas and Asian/Pacific Islanders were the two largest racial and ethnic groups represented in the study because two of the three collaborating CBOs serve these specific populations. Among the Asian/Pacific Islander participants, 35% were Filipino, 27% mixed, 24% from other Asian countries, 8% Thai, and 6% Pacific Islanders. Among the Hispanic/Latina participants, 78% were Mexican, 14% from countries in Central America, 3% Puerto Rican, and 5% mixed or other. (See Figure 1.)

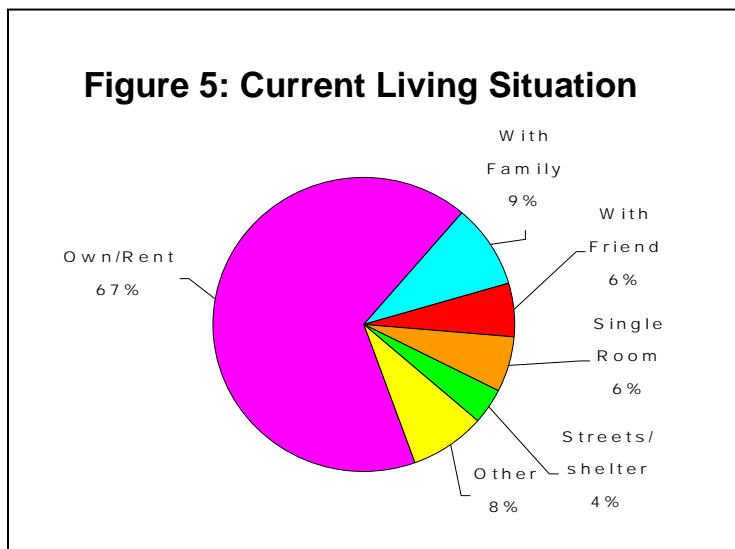


Fifty-four percent of the participants were less than 30 years of age and only 11% were 40 years and older. Forty-seven percent had less than 12 years of formal education and 31% had more than 12 years of formal education. (See Figure 2).

Ninety percent reported an annual household income of less than \$36,000, including 50% that reported less than \$12,000. (See Figure 3.) Fifty percent indicated that sex work was a major source of income in the previous six months. Fifty percent also reported legal employment as a major source of income in the previous six months, followed by Government Assistance (23%) and family and/or partner (13%). (See Figure 4.)



When asked about their current living situation, 67% reported that they lived in a house or an apartment that they owned or rented. (See Figure 5.)



GENDER AND SEXUAL IDENTITY

Fifty-six percent identified their gender as female or woman, 20% as transgender, and 18% transsexual. Seventy-seven percent identified their sexual identity as heterosexual (or "straight"), 7% as gay, and 6% as bisexual. (See Table 1.)

Variable	N	%
Gender Identity		
Female or Woman	136	(56)
Transgender	50	(20)
Transsexual	44	(18)
Cross Dresser	5	(2)
Drag Queen	2	(1)
Other or Don't Know	7	(3)
Sexual Identity		
Heterosexual	187	(77)
Gay	18	(7)
Bisexual	14	(6)
Pansexual	6	(3)
Asexual	5	(2)
Lesbian	4	(2)
Other or Don't Know	10	(3)

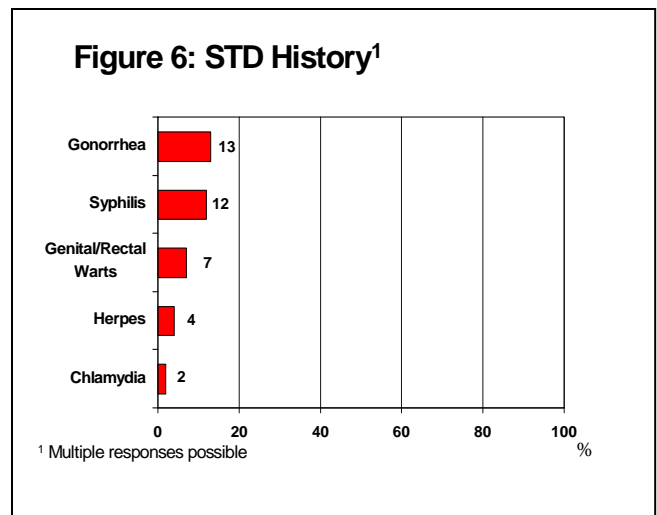
HEALTH CARE ACCESS AND MEDICAL HISTORY

Nearly two-thirds (64%) reported no health insurance coverage. Eighteen percent reported being covered by MediCal, Medicare or Medicaid and 17% by private insurance or an HMO. When asked to identify their regular health care provider, 24% reported that they do not seek health care and an additional 8% reported that they do not have a regular source of health care. (See Table 2.)

Table 2. Current Health Insurance and Source of Health Care of Study Participants

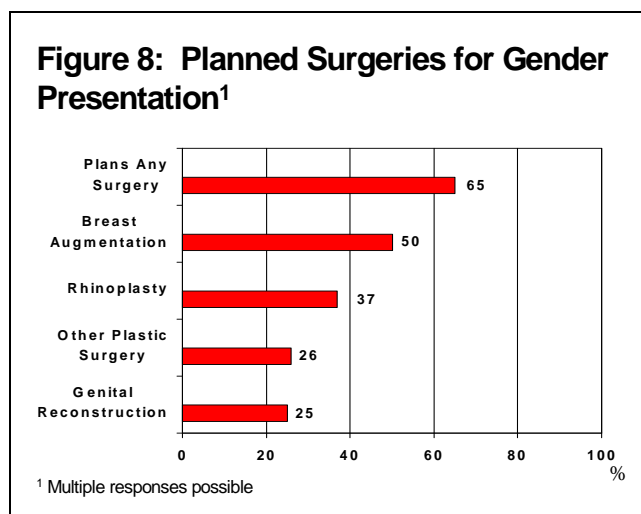
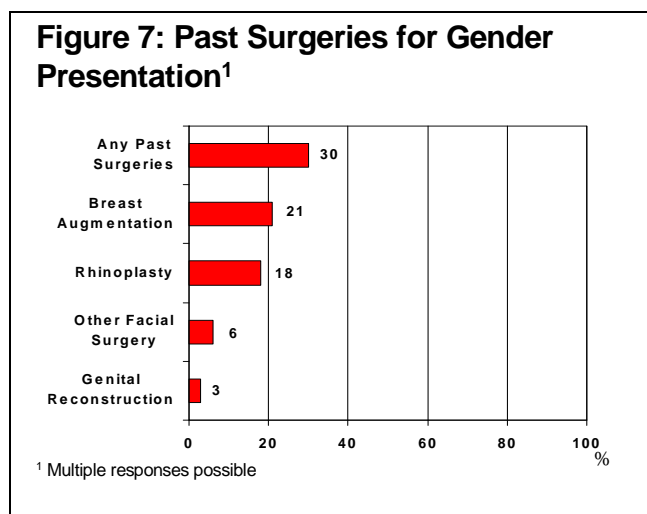
Variable	N	%
Current Health Insurance		
No health insurance coverage	156	(64)
MediCal/Medicare/Medicaid	43	(18)
Private or work insurance or HMO	42	(17)
Don't Know or Refused	3	(1)
Source of Health Care		
Private or HMO	71	(29)
Don't seek health care	58	(24)
County clinic	46	(19)
Community-based clinic	31	(13)
Don't have regular source of health care	19	(8)
School/college clinic	5	(2)
Emergency room	5	(2)
Other	9	(3)

Twenty-three percent reported that they are in excellent health, 22% in very good health, 35% in good health, 18% in fair health, and 2% in poor health. When asked about past sexually transmitted diseases (STDs), 13% reported they had ever had gonorrhea, 12% syphilis, 7% genital or rectal warts, 4% genital or rectal herpes, 2% chlamydia, and 3% reported an other



STD. (See Figure 6.) These reports very likely underrepresent the true magnitude of STDs among this transgender population as many persons with STDs are undiagnosed.

Seventy-eight percent reported ever using hormones for either gender reassignment or to enhance their gender presentation. Fifty-eight percent (n=142) reported hormone use in the previous six months. Among those who used hormones in the previous six months, 51% obtained hormones off the streets, 21% from a private doctor, 17% from a county clinic or health center, 6% from a friend, and 5% from other sources. Sixty-nine percent of the participants reported ever injecting hormones. Forty-four percent reported injecting hormones in the previous six months. Among those who injected hormones in the previous six months (n=108), 72% reported obtaining their needles “off the streets” or from some other non-medical source. Thirty-three percent reported injecting one or more substances other than hormones, such as silicone or oil, to enhance their gender presentation.



Although 30% reported prior surgery to enhance their gender presentation, only 7 (3%) had undergone genital reconstruction surgery (vaginoplasty). (See Figure 7.) The most frequently reported surgical procedures to enhance gender presentation included breast augmentation (21%), rhinoplasty (18%), other facial surgery (6%), tracheal shave (5%), and

hip enlargement (4%). Twenty-eight percent had undergone electrolysis to enhance their gender presentation. Sixty-five percent reported that they definitely planned future gender-related surgeries, and 16% responded “maybe” or “don’t know.” Fifty percent planned breast augmentation, 37% rhinoplasty, 26% other facial surgery, and 25% genital reconstruction surgery. (See Figure 8.)

SEXUAL RISK BEHAVIOR

A substantial percentage of respondents reported sexual risk behavior in the previous six months. Fifty-eight percent reported commercial sex work in the previous six months. One hundred six (43%) reported receptive anal intercourse with a main sex partner, defined as a partner with whom they had a close, intimate relationship. Of those who reported receptive anal sex with a main partner, 64% did not always use a condom. One hundred twenty-four (51%) reported receptive anal sex with a casual partner in the past six months. Of these, 39% did not always use a condom with this activity. One hundred eighteen (48%) reported receptive anal sex in the past six months with an exchange partner, defined as a partner with whom they traded sex for money, drugs, shelter, food or other tangible things they needed. Of those that reported receptive anal sex with an exchange partner, 29% did not always use a condom. Condoms were less frequently used during oral sex with main, casual, and exchange partners and more frequently used during insertive anal sex. (See Table 3 and Figure 9.)

Table 3. Sexual Risk Behaviors of Study Participants in the Previous Six Months

Variable	N	%
Receptive anal sex:		
with main partner	106	(43)
did not always use condom		↘ 68/106 (64)
with casual partner	124	(51)
did not always use condom		↘ 48/124 (39)
with exchange partner	118	(48)
did not always use condom		↘ 34/118 (29)

Overall, 47% of respondents reported more than 10 sex partners in the previous six months. However, the reported number of partners varied substantially by sex worker status. Among those who reported sex work as a main source of income (n=121), 69% reported more than 25 partners in the previous six months. Among those who did not report sex work as a main source of income (n=123), 63% reported two or less partners during this time frame.

Most participants (85%) reported having one or more male sex partners in the previous

Figure 9: Unprotected Sex in the Previous Six Months by Behavior and Type of Partner

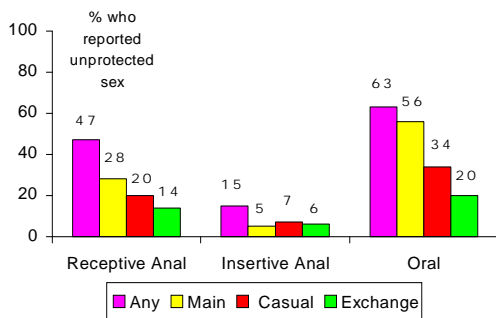
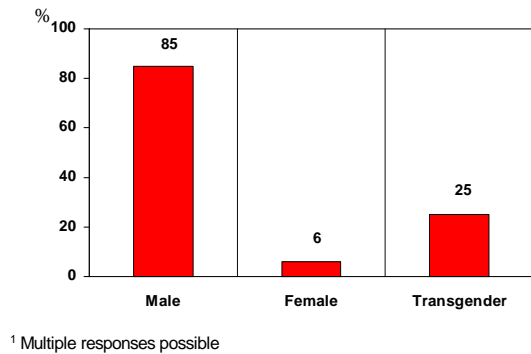


Figure 10: Gender(s) of Sex Partners¹

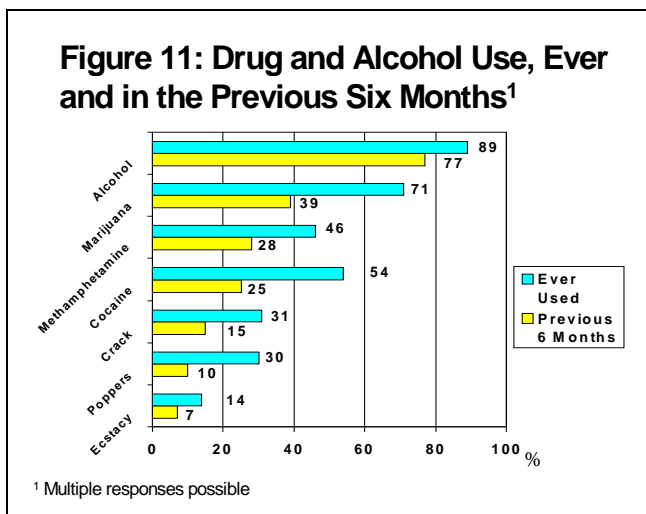


six months. One-quarter (25%) reported one or more transgender (either MTF or FTM) sex partners and 6% reported one or more female sex partners during the past six months. (See Figure 10.)

ALCOHOL AND DRUG USE

Injection drug use (“for the purpose of getting high”) in the previous six months was reported by 8% of the participants. Non-injection drug use in the previous six months was reported by most, with the most frequently used substances being alcohol (77%), marijuana (39%), “crystal” methamphetamine (28%), powder cocaine (25%), crack (15%), amyl nitrate or “poppers” (10%), and ecstasy (7%). (See Figure 11.)

Participants were asked to report the frequency of alcohol and/or drug use with the following response: “never,” “once a month or less,” “several times a month,” “once a week,” “several times a week,” “once a day,” “greater than once a day.” Of those who used marijuana



in the previous six months (n=95), 46% used it at least several times a month. Of those who used

“crystal” methamphetamine in the previous six

months (n=69), 51% used at least several times a

month. Of those who used powder cocaine in the previous six months (n=60), 43% used the drug at

least several times a month. Of those who used

crack in the previous six months (n=36), 56% used

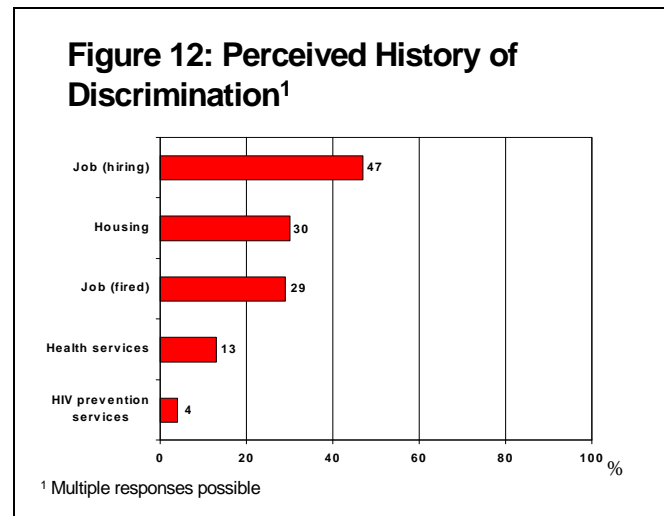
it at least several times a month. Of those who used amyl nitrate or “poppers” in the previous six months (n=24), 25% used the drug at least several times a month. Of those who used ecstasy in

the previous six months (n=18), 17% used at least several times a month. Of those that used alcohol in the previous 6 months (n=187), 24% consumed alcohol at least several times a week.

Fifty-three percent reported they had been high on alcohol and/or drugs while engaged in sexual activities in the previous six months. Of those who reported being high on alcohol or drugs in the previous six months (n=129), 81% were high on alcohol, 39% on “crystal” methamphetamine, 37% on powder cocaine, 34% on marijuana, 16% on crack, 12% on amyl nitrate or “poppers”, and 9% on ecstasy. Fourteen percent reported a previous experience in a drug treatment program.

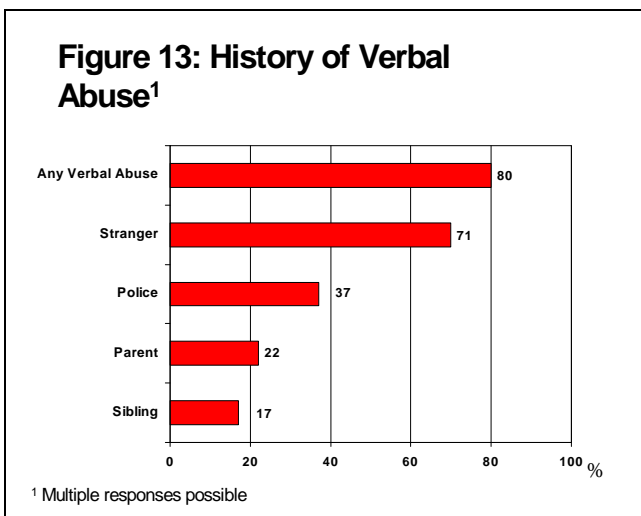
PSYCHOSOCIAL AND LEGAL ISSUES

Many transgenders in this study reported a history of discrimination, verbal abuse and/or physical abuse. Forty-seven percent reported experiencing problems obtaining a job due to their gender identity or gender presentation, and 29% believed they had lost a job due to their transgender identity

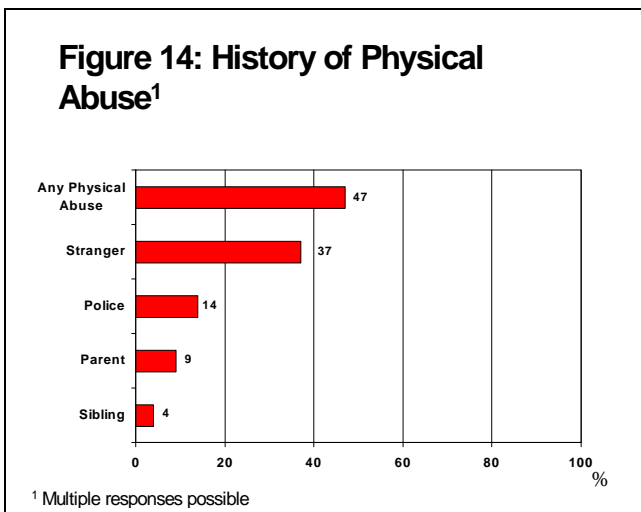


and/or presentation. (See Figure 12.) Thirty percent reported that they had either been denied housing or had lost housing as a result of their gender identity and/or presentation. Thirteen percent reported difficulty obtaining health or medical services and 4% reported problems getting services from an HIV prevention program because of their gender identity or presentation.

Most (80%) of the participants reported being verbally abused or harassed because of their gender identity or presentation. In most cases, verbal abuse was reported to be by a stranger (71%). However, 37% reported verbal abuse or harassment from a police officer. Others identified as perpetrators of verbal abuse or harassment were parents (22%), neighbors (21%), siblings (17%), friends (16%), and relatives outside the immediate family (14%). (See Figure 13.) Nearly half (47%) of the participants reported they had been physically abused or



beaten because of their gender identity or presentation. Again, in most cases the physical abuse was reported to have been perpetrated by a stranger (37%), followed by police (14%), a parent (9%), sibling (4%), neighbor (4%), other relative (3%), or friend (3%). (See Figure 14.)



More than half (58%) reported a history of incarceration in a jail or prison. Fifteen percent reported unprotected sex while incarcerated and 2% reported injection drug use while incarcerated.

The participants in the study were at various stages of their transition process. Most (88%) had “come out” to a family member about their transgender identity and 67% had stopped

using the name given to them at birth and had started using a female name. Far fewer (27%) had changed their name on their driver’s license (a relatively simple process that costs only \$12 in

California); 18% had changed their sex on their driver's license (complete gender reassignment surgery is not required to change either name or sex on a driver's license). Only 5% had legally changed their name, a much more costly (approximately \$300 in California) and time-consuming process than a driver's license change, and 2% had changed their birth certificate. (One's sex can be changed on a California birth certificate; however, in some other states a birth certificate cannot be changed.)

HIV PREVENTION

Eight “yes”/“no” questions were asked to assess knowledge of how HIV is transmitted and ways to prevent infection. Most participants (93%) knew that condoms are an important means of preventing transmission and all but one participant (99%) knew that HIV can be transmitted through sharing hormone injection needles. Overall, participants demonstrated a high knowledge of HIV transmission routes as well as prevention strategies. However, a higher percentage incorrectly answered questions about their risks associated with blood donations and oil-based lubricants. (See Table 4.)

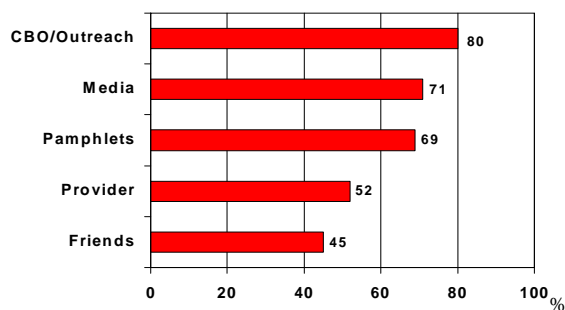
Eighty percent of the participants reported they get their HIV information from a community agency or outreach worker and 39% stated that the community agency or outreach worker was their most important source of HIV information. (See Figures 15 and 16.) This finding is not surprising given that most participants were recruited through collaborating CBOs.

Seventy-four percent of the participants reported that condoms are always easy to get, 14% that condoms are sometimes easy to get, 5% that condoms are neither easy or hard to obtain, and 7% that condoms are difficult to get. Although most participants were recruited from county-funded HIV prevention programs, only 14% reported they get their condoms from an

Table 4. Knowledge of HIV Transmission and Prevention

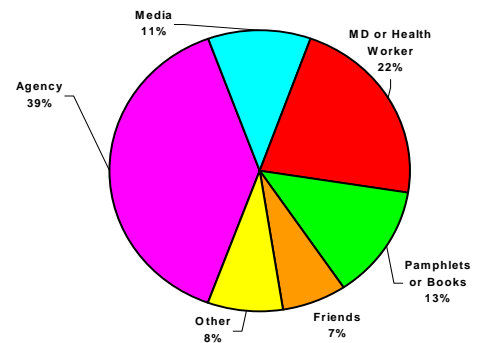
Variable	Yes %	No %	Don't Know %
Can the use of a latex condom during sexual activity protect a person from getting infected with HIV?	93	7	
Can a person get infected with HIV by giving a blood donation?	29	68	3
Can a person get infected with HIV by drinking from the same glass as someone who has HIV?	1.5	97	1.5
Can a person get infected with HIV by sharing needles for hormone injections with someone who has HIV?	99	1	
Are oil-based lubricants as safe to use with condoms as water-based lubricants?	10	78	12
Can a person get infected with HIV if they are coughed on by someone with HIV/AIDS?	2.5	95	2.5
Can a person with HIV look healthy and still be able to give HIV to someone else?	99	1	
Does a positive HIV-antibody test mean a person has AIDS?	17	77	6

Figure 15: Sources of HIV Information¹



¹ Multiple responses possible

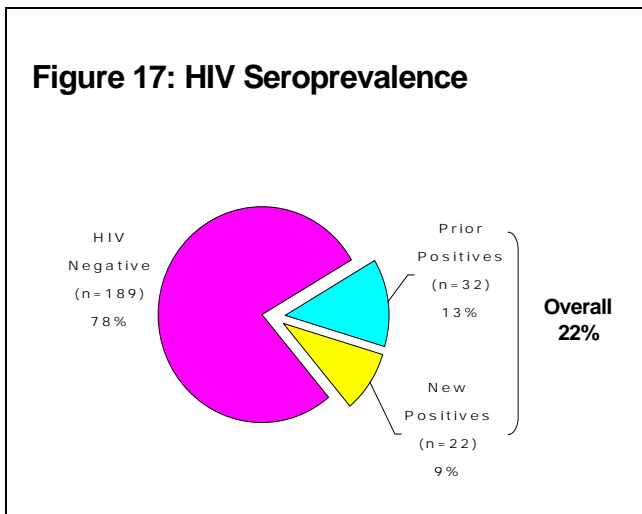
Figure 16: Main Source of HIV Information



outreach worker and another 26% get their condoms from an agency. Thirty-one percent reported buying their condoms at a store. Sixty-two percent of the participants had a condom in their possession at the time of the interview.

HIV SEROPREVALENCE AND SEROINCIDENCE

Eighty-six percent of respondents indicated they had previously been tested for HIV and 32 (13%) had previously tested HIV-positive. (See Figure 17.) Persons who had not previously tested HIV-positive (n=212) were asked the likelihood that they were HIV-infected. Forty-seven percent indicated that it was somewhat to very unlikely they were infected and 22% that there was no chance they were infected. (See Table 5.)



All respondents, regardless of self-reported HIV serostatus, received an HIV test at baseline. Fifty-four (22%) of the respondents tested HIV-positive. Seroprevalence was higher among those 30-39 years of age (40%), those with annual incomes <\$12,000 (31%), and those sex work as a main source of income and 18% among all others (p=.11). (See Table 6).

Although there was substantial variation in seroprevalence by race/ethnicity, these results may have been influenced by the outreach venues and strategies of the collaborating agencies. For example, outreach at the agency serving largely at-risk Hispanics occurred primarily in settings where Hispanics likely to engage in HIV-risk behaviors took place. Additionally, African-

Table 5. HIV Testing and Self-Perceived HIV Risk

Variable	N	%
Ever tested for HIV	209	(86)
How likely HIV positive (n=210):*		
very likely/likely	5	(2)
somewhat likely	24	(11)
somewhat unlikely	15	(7)
unlikely/very unlikely	85	(40)
no chance	46	(22)
don't know	35	(17)

*Two respondents with missing information

American were underrepresented in the study. Therefore, for all of these reasons we suggest caution when interpreting findings by race/ethnicity.

Among those who had reported a low likelihood (no chance or somewhat to very unlikely) of being HIV-infected (n=146), the seroprevalence was 8%. Among those who thought they were at low risk of HIV infection (reported unlikely or no chance) or didn't know, 68% were actually at significant risk based on reported unprotected sex, reported shared needles, and reported sex while high on drugs and/or alcohol.

Table 6. HIV Seroprevalence by Sociodemographic Characteristics of Study Participants

Variable	No. Tested	No. Positive	Seroprevalence %	p-value
Age				
18-29	132	136	14	.53
30-39	86	34	40	<.01
≥40	26	2	8	----
Race/Ethnicity				
African-American/black	18	6	16	----
Asian/Pacific Islander	50	2	4	.06
Caucasian/white	37	6	16	----
Hispanic/Latina	120	31	26	.23
Multiracial/other	19	7	37	.10
Income*				
<\$12,000	121	37	31	<.01
≥\$12,000	121	17	14	----
Education				
<12	115	33	29	<.01
12	53	12	23	.10
>12	76	9	12	----
Sex work as a main source of income				
Yes	121	32	26	.11
No	123	22	18	----

*Two respondents with missing information

Follow-up information was obtained on 219 (90%) persons. The analysis of HIV seroincidence was restricted to those in this group who were HIV-seronegative at baseline (n=171). Follow-up intervals for these persons ranged from 5-17 months (mean = 8 months), producing a total of 117.0 years of person-time follow-up. Four seroconversions were identified in the group, an incidence rate of 3.4 infections per 100 person-years.

DISCUSSION, LIMITATIONS, AND RECOMMENDATIONS

DISCUSSION

The findings in this report indicate that many in the Los Angeles transgender population are HIV-infected and many others are at very high risk of infection. With the exception of gay and bisexual men in selected high-risk groups, such as those receiving services in public sexually transmitted disease clinics and gay and bisexual men who enter drug treatment for methamphetamine abuse,⁸ the observed HIV seroprevalence of 22% is higher than in any other group in the county for which data have been reported.⁹ The high seroprevalence is consistent with the general impression among many in the prevention community that a substantial segment of the transgender population is at extremely high risk of infection.

The findings highlight the heterogeneity of the MTF transgender population. Although all in this population by definition experience some degree of discordance between their biological sex and their gender identity, the manifestations of this state vary tremendously.¹⁰ As suggested by our data, some identify as transgender or transsexual, others as woman. Although many in our study group identified as heterosexual, others reported a gay or bisexual identity, highlighting that sexual identity and gender identity are separate domains. While many transgenders inject hormones and have surgery to enhance their gender presentation,¹⁰ few in our study group had previously had genital surgery for gender reassignment and less than half indicated future plans to have such surgery. Many in our study group reported injecting hormones and obtaining their needles on the streets, highlighting the urgent need for improved access to health care services that are sensitive to the needs of the transgender populations and effectively address the medical and psychological issues related to gender transition.

Less than 10% of the study group reported other (non-hormone) injection drug use in the previous six months. However, non-injection drug use was much more frequently reported, and more than half (53%) indicated they had been high on alcohol and/or drugs while having sex in the recent past. Of particular concern is the 39% who reported they were high on “crystal” methamphetamine in the previous six months, a “party” drug used to increase and intensify sexual activities.¹¹ As in other populations, these findings suggest that alcohol and drug use may contribute to unsafe sexual practices in the transgender population, and that HIV prevention programs should include substance abuse screening protocols and linkages to drug treatment services when indicated.^{12,13}

It is our hope that these data will play an important role in informing the process of developing more effective HIV prevention services for the transgender population in the county. Local community-based organizations that provide prevention services to transgenders will be able to use the data to better define the needs of this group and to better tailor interventions to meet these needs. For example, the survey results indicate that nearly all respondents have anatomically male genitalia yet many have had sexual contact with men and self-identify as heterosexual. In addition, a high percentage of transgenders report risky sexual behavior while engaged in commercial sex work, highlighting the importance of investing in interventions that promote alternative employment opportunities, including skills-building, job training, and job referrals.¹⁴ The high prevalence of sexual risk behavior among non-exchange partners (i.e., main and casual partners) also underscores the need for prevention interventions that address sexual risk behavior in these social contexts as well.

To date, very little has been published on HIV prevention interventions tailored to the transgender population.^{14,15,16} Our findings suggest that such interventions are urgently needed

and that these interventions must address the unique and varied circumstances of transgendered persons and the complex psychological and social factors that may contribute to ongoing risk behavior. We hope the results of this study will be useful for informing the general HIV service community and policymaking groups of the unique circumstances and needs of the transgender population. Increasingly, epidemiologic data have been used to drive decision-making regarding allocation of resources for HIV prevention services for various at-risk subpopulations. The results of the study can assist advocates for the transgender population to lobby for public and community resources to support the HIV prevention and treatment needs of this population. In addition, this data can educate local service providers to the needs of the transgender population and increase the likelihood that services are better designed to meet these needs.

LIMITATIONS

The study had several important limitations. Our data were collected using a convenience sample. Participants were recruited by the prevention staff from the three collaborating CBOs during their routine outreach and/or prevention activities. Therefore, our findings may not be generalizable to other MTF transgender populations, particularly those that are more affluent and assimilated. The results may not be representative of transgendered persons not receiving prevention services or those who do not live in or frequent the neighborhoods served by the three participating agencies.

Given the sensitivity of many questions in the survey, some respondents may have underreported certain risk behaviors. We tried to minimize this limitation by recruiting our interviewers from the MTF transgender communities, thereby, fostering the development of trust

and rapport between the participant and the interviewer. Nevertheless, there is always a degree of misrepresentation with self-reported data.

Finally, due to the populations served by the participating CBOs, African-Americans are underrepresented in the study. Therefore, findings that focus on race/ethnicity of the participants should be interpreted with caution.

RECOMMENDATIONS

- In the transgender population, the degree of transition from one's physical sex to chosen gender varies tremendously. HIV prevention programs should be cognizant of these variations, defining "transgender" inclusively rather than exclusively. Additionally, HIV interventions tailored to the transgender population should consider sexual identity (e.g., heterosexuality, bisexuality, gay, lesbian) and gender identity (transgender, woman, man) as separate domains.

- Sixty-four percent of our participants reported no current health insurance, 24% do not seek health care, and 8% do not have a main source of health care. Yet, 44% reported injecting hormones in the previous six months and, among those, 72% obtained their needles "off the streets" or from some other non-medical source. Thirty-three percent injected one or more substances other than hormones to enhance their gender presentation. Forty-seven percent were physically abused or beaten as a result of their gender presentation. It is vitally important that transgendered persons have access to health care services that are sensitive to the medical and psychological issues related to gender transition.

- Alcohol and non-injection drug use was frequently reported among participants and many reported using alcohol and/or drugs during sexual activities. HIV prevention interventions should include substance abuse screening and, as needed, referrals to transgender-sensitive drug treatment services.
- Fifty percent of the participants reported sex work as a main source of income. Forty-seven percent reported experiencing problems getting a job due to their gender presentation and 29% reported they lost a job and thought it was due to their gender presentation. These findings highlight the necessity of incorporating job training and skills building into HIV intervention programs.
- High-risk sexual behaviors were reported with all partners (i.e., main, casual, and exchange sexual partners). Therefore, HIV risk reduction messages should not only focus on exchange partners and sex work activities but should incorporate the social contexts of more intimate sexual relationships.
- The HIV seroprevalence rate of 22% is among the highest of any group reported in the county. The epidemiological data presented in this report should be utilized by local community-based organizations, members of the HIV service community, policymakers, committees, and task forces to drive decision-making allocation of resources for HIV prevention and treatment services. These results indicate that additional resources are urgently needed for HIV prevention and treatment services for transgender population.

- A much larger study of MTF transgenders living in Los Angeles is needed, as well as a study of FTM transgenders.

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