
Where Injecting Drug Users Receive HIV Counseling and Testing

RONALD O. VALDISERRI, MD, MPH
T. STEPHEN JONES, MD
GARY R. WEST, MPA
CARL H. CAMPBELL, JR., MPA
P. IMANI THOMPSON, MCP, EdM

The authors are associated with the Public Health Service's Centers for Disease Control and Prevention (CDC). Four authors are with CDC's National Center for Prevention Services (NCPS), where Dr. Valdiserri is Deputy Director (HIV); Mr. West is Assistant Deputy Director (HIV); Mr. Campbell is Chief of the Program Development and Technical Support Section, Division of Sexually Transmitted Diseases and HIV Prevention; and Ms. Thompson is a Health Education Specialist, Office of the Deputy Director (HIV). Dr. Jones is Assistant Director for Substance Abuse and HIV Prevention, Office of HIV/AIDS, CDC. Kimberly Todd, Rose Horsley, Dr. Melinda Moore, and Kathy Cahill, currently or formerly with NCPS, helped to develop and implement the client record data base.

Tearsheet requests to Ronald O. Valdiserri, MD; CDC, NCPS, MS E07, Atlanta, GA 30333; tel. (404) 639-1480, fax (404) 639-1459.

Synopsis

In 1990, nearly 1.5 million human immunodeficiency virus (HIV) antibody tests were performed at publicly funded sites. Eight percent of those tests were performed for self-identified illegal injecting drug users (IDU). The authors examined data from 28 project areas using a client record data base that permitted an analysis of self-reported risk behavior by type of service delivery site. Among self-identified IDUs, 68 percent of those tested and 82 percent of those found to be seropositive had obtained HIV counseling and testing services in settings other than drug treatment centers.

The findings indicate that HIV-prevention programs for IDUs need to be available in various service delivery settings, not just in drug treatment programs. Strong links and cooperation between sites offering HIV counseling and testing and sites providing drug treatment programs are important to preventing HIV transmission to and from IDUs.

THE RELATIONSHIP between illegal injecting drug use and human immunodeficiency virus (HIV) infection has been extensively documented. Cumulative statistics through December 1990 indicate that an estimated 32 percent (51,075 reported cases) of all reported cases of acquired immunodeficiency syndrome (AIDS) have been associated either directly or indirectly with the injection of drugs. Included in the estimate are heterosexual and homosexual injecting drug users (IDUs), sex partners of IDUs, children of IDU mothers, and children of mothers reporting sex with IDUs (1).

If HIV transmission between IDUs and their sex and needle sharing partners is to be interrupted, IDUs need to know their HIV serostatus and need to modify their risky sex and drug using practices. Publicly funded HIV counseling and testing programs supported by the Centers for Disease Control and Prevention (CDC) have been implemented in drug treatment centers in efforts to achieve that goal. But it is necessary as well to address the needs of drug users who are not in drug abuse treatment or who are seen in other service settings. We review where self-identified IDUs received pub-

licly funded HIV counseling and testing in 1990 and discuss the HIV-prevention implications of those findings.

Methods

Publicly funded HIV counseling and testing is provided at a variety of sites in 65 project areas; basic demographic information on clients is collected at all sites. The project areas include the health departments of 50 States, 6 cities, 7 territories, the District of Columbia, and Puerto Rico. In addition to that aggregate data, called the summary record data base, 28 of the 65 project areas have elected to collect more detailed, client-level data, called the client record data base, to permit more specific analysis.

In 1990, those 28 project areas performed about 45 percent of all publicly funded HIV counseling and testing. Data from the client record data base can be cross-tabulated to answer questions about where people who report various behaviors that place them at risk for HIV infection go to receive HIV counseling and testing.

Results

In 1990, the 65 project areas funded by CDC performed 1,491,715 HIV tests. Of those tests, 119,115 (8 percent) were performed on self-identified IDUs. Overall, 3.8 percent of all publicly funded HIV-antibody tests were positive. Among those clients who reported injecting drugs, 10 percent of the tests were positive.

The more detailed information collected by the 28 project areas contributing to the client record data base permits self-reported risk behavior to be analyzed by the type of site providing HIV counseling and testing services (see table). In the 28 project areas, 676,604 tests were performed during 1990, 45 percent of the total number of publicly funded HIV tests.

The table shows that 72,010 clients, 11 percent of the total seen in the 28 project areas, identified themselves as IDUs. Self-identified IDUs were seen at every site where publicly funded HIV counseling and testing was provided. The largest number of self-identified IDUs (23,483) was seen in free-standing HIV counseling and testing centers, followed by drug treatment centers (23,071), sexually transmitted disease (STD) clinics (14,586), and prisons (4,559).

The sites with the largest proportions of IDUs among those tested at that site were drug treatment centers (53 percent) and prisons (43 percent). IDUs accounted for a small percentage of the clients tested at colleges (2 percent), prenatal and obstetrical clinics (2 percent), and family planning clinics (3 percent).

The HIV seropositivity rates of IDUs tested varied by type of site. The highest rate, 29 percent, was noted among IDUs being counseled and tested by private physicians. Relatively high rates of HIV seropositivity among IDUs were observed at HIV counseling and testing centers (16 percent), prisons (15 percent), STD clinics (13 percent), and tuberculosis (TB) clinics (13 percent).

Relatively low rates of HIV seropositivity were seen among IDUs counseled and tested at drug treatment programs (6 percent), family-planning clinics (3 percent), and colleges (4 percent).

Discussion

Estimates of the current number of IDUs vary and range from 1,100,000 (2) to 1,644,290 (3). Most sources agree that the majority of IDUs are not enrolled in drug treatment programs (2, 4). In terms of configuring HIV-prevention programs,

Publicly funded HIV tests of self-identified IDUs, percent of IDUs among persons tested at that site, and positive tests of IDUs, by type of site of service, 28 project areas, 1990

Site	Number of tests of IDUs	Percent IDUs at site	IDU positives	
			Number	Percent
HIV counseling and testing center	23,483	10	3,652	16
Drug treatment center ..	23,071	53	1,510	6
STD clinic	14,586	6	1,936	13
Prison	4,559	43	702	15
Family planning clinic...	1,640	3	55	3
Other health department	1,334	9	115	9
Prenatal and obstetric clinic	887	2	53	6
Private physician	496	11	143	29
Tuberculosis clinic.....	337	6	43	13
College	45	2	2	4
Other or unknown	1,572	7	405	26
Total	72,010	11	8,616	12

NOTE: IDU = injecting drug user.

this means that HIV-prevention services for IDUs must be made available in a wide variety of settings, both clinic and community based.

Reviewing 1990 data from publicly funded HIV counseling and testing sites confirmed that IDUs are encountered in a wide variety of service settings. In the 28 project areas collecting client-level data, 11 percent of the 676,604 clients who were counseled and tested for HIV identified themselves as IDUs, and this number is almost certainly underestimated. Among IDUs, 68 percent of those tested and 82 percent of those who were found to be seropositive received HIV counseling and testing services in sites other than drug treatment centers, findings previously documented by Jones and co-workers (5, 6).

The geographic variability of HIV seroprevalence among IDUs in drug treatment programs is well documented (7). We noted that HIV seropositivity rates among IDUs receiving HIV counseling and testing also varied by type of site. The high rate of infected IDUs seen by private physicians (29 percent) probably reflects clients who are seeking care for symptomatic HIV disease. Other researchers have shown that among HIV-infected IDUs, the presence of symptoms is the most significant predictor of health care utilization (8).

Relatively low rates of HIV infection (6 percent on average) were noted among IDUs enrolled in drug treatment programs. This is consistent with the finding that entry into drug treatment is associated with significant reduction in the rate of

HIV Testing of Self-reporting Injecting Drug Users at Publicly Funded Testing Sites in 1990

65	publicly funded project areas provided HIV counseling and testing, collected basic demographic information on clients, and contributed to the CDC summary record data base.
1,491,715	HIV tests were performed by the 65 project areas. Of those, 3.8 percent were positive.
119,115	of the tests, 8 percent, were performed on self-identified injecting drug users (IDUs). Among them, 10 percent of the tests were positive.
28	of the 65 publicly funded project areas collected more detailed, client-level data, and contributed to the client record data base.
676,604	HIV tests were performed by the 28 project areas, 45 percent of the total number of publicly funded HIV tests.
72,010	clients of the 28 project areas identified themselves as IDUs, 11 percent of the total persons tested in the 28 project areas.
23,483	of the IDUs, 33 percent, were tested in free-standing HIV counseling and testing centers and had an HIV-seropositivity rate of 16 percent.
23,071	of the IDUs, 32 percent, were tested in drug treatment centers and had an HIV-seropositivity rate of 6 percent.
14,586	of the IDUs, or 20 percent, were tested in STD clinics, were 6 percent of all those tested in STD clinics, and had an HIV-seropositivity rate of 13 percent.
4,559	of the IDUs, or 6 percent, were tested in prisons, were 43 percent of all those tested in prisons, and had an HIV-seropositivity rate of 15 percent.
1,640	of the IDUs, or 2 percent, were tested at family planning clinics and had an HIV-seropositivity rate of 3 percent.
887	of the IDUs, or 1 percent, were tested at prenatal or obstetrical clinics and had an HIV-seropositivity rate of 6 percent.
337	of the IDUs, or less than 1 percent, were tested in TB clinics, were 6 percent of all those tested in TB clinics, and had an HIV-seropositivity rate of 13 percent.
496	of the IDUs were tested by private physicians and had an HIV-seropositivity rate of 29 percent.
45	of the IDUs, or less than 1 percent, were tested at colleges and had an HIV-seropositivity rate of 4 percent.

injecting drug use (9) and with less risky injection practices (10). Other studies have shown that HIV seroprevalence rates are lower for IDUs who have been in treatment for a long period, compared to those in treatment for a short period (11).

As noted, HIV seropositivity rates for IDUs receiving HIV counseling and testing in free-standing HIV counseling and testing sites, prisons, STD clinics, and TB clinics were higher than the rates for IDU clients receiving HIV counseling and testing in drug treatment centers. That finding is consistent with research that has shown a higher rate of HIV seropositivity among "community-recruited" IDUs than among those found in drug treatment settings (12).

The data have some methodologic limitations. First, the data presented are a subset (about 45 percent) of all publicly funded tests. Because the data are recorded as tests performed, rather than persons tested, they contain repeat tests on the same client. Although the current data base permits the identification of persons who receive repeated counseling and testing, that refinement was not available at the time the data for our study were collected. In 1990, based on information from four publicly funded programs, we estimated that between 12 and 30 percent of all publicly funded HIV-antibody tests were performed on persons who had been previously tested (13). The methodologic limitation imposed by repeat testers would result in increased estimates of the number of IDUs receiving counseling and testing at publicly funded sites; the fact that history of injecting drug use was self-reported probably would result in lower estimates.

The findings have several important program implications. First, limiting HIV-prevention services, including HIV counseling and testing, solely to drug treatment centers would miss an important opportunity to interrupt further HIV transmission. In our analysis, 16 percent of IDUs counseled and tested in free-standing sites and 13 percent counseled and tested in STD clinics were infected with HIV, and thus they were capable of transmitting the virus to sex partners and needle sharing partners. Referring those infected drug users into drug treatment and an ongoing system of primary care for their HIV disease will improve not only their own health status, but will provide repeated opportunities to deliver risk reduction messages and prevention counseling.

Second, identifying HIV seropositive injecting drug users through HIV counseling and testing programs provides an important opportunity to

reach their sex partners with needed HIV-prevention services. We know from other studies that noninjecting sex partners of IDUs are at risk for HIV infection (if their partners are infected) because of unsafe sex practices. For example, 63 percent of female sex partners of male IDUs reported that their partners never used condoms during vaginal intercourse (14). Posttest counseling for seropositive IDUs provides a window of opportunity to reach their sex partners and needle sharing partners.

Since they remain at ongoing risk for HIV infection, the large number of seronegative IDUs who receive services in sites other than drug treatment programs are another important target for HIV prevention activities. Many of those clients, and their partners, are at high risk for HIV infection because of continued drug use and unsafe sex practices (15). HIV counselors need to view their interactions with seronegative IDUs as opportunities to provide basic information, to make an accurate assessment of clients' HIV-prevention needs, to identify barriers to the achievement of safer behaviors, and to facilitate referrals to needed prevention services that are not available onsite. When counseling injecting drug users, efforts can be taken to reinforce the importance of terminating drug use and to facilitate referral into drug treatment. For those IDUs who are unwilling or unable to enter drug treatment, counselors should provide information on needle hygiene and stress the importance of not sharing needles.

Another important need is for injecting drug users and their partners to adopt safer sex behaviors. In addition to HIV infection, injecting drug users are at risk for other sexually acquired infections, like syphilis, genital herpes, and gonorrhea (16). All sexually active persons at risk for HIV infection need basic information that will enable them to modify their risky behaviors, such as by adopting consistent condom use.

However, because a single counseling session is unlikely to result in complete and permanent behavior change (17, 18), those clients may need to be referred to community-based services where they can receive specialized forms of counseling and support, such as peer-led counseling and skills training (19).

These findings underscore the importance of maintaining strong linkages among the various publicly funded HIV-counseling and testing sites and drug treatment programs. Clients who are willing to share personal information about their injecting drug use behavior may be more amenable

to terminating drug use. In order to capitalize on this prevention opportunity, HIV counselors need training in substance abuse issues and need to be aware of drug treatment and specialized counseling services available in their communities. Linkages between HIV counseling and testing sites and drug treatment programs are essential to achievement of the Year 2000 objective that calls for a 50-percent increase in the number of IDUs who enter treatment (20).

Facilitating referrals to drug treatment programs as well as to community-based providers of peer-led counseling and skills training will support HIV-prevention efforts, decreasing HIV infection through a key transmission route.

References.....

1. Centers for Disease Control: HIV/AIDS surveillance report. Atlanta, GA, 1991, pp. 1—22.
2. Human immunodeficiency virus infection in the United States: a review of current knowledge. MMWR Morb Mortal Wkly Rep 36 (Suppl. No. 6-S): 1S—48S, Dec. 18, 1987.
3. Butynski, W., et al.: State resources and services related to alcohol and other drug abuse problems, fiscal year 1990. National Association of State Alcohol and Drug Abuse Directors, Washington, DC, 1991.
4. Risk behaviors for HIV transmission among intravenous-drug users not in treatment—United States, 1987—1989. MMWR Morb Mortal Wkly Rep 39: 273—276, Apr. 27, 1990.
5. Jones, T. S., et al.: HIV antibody counseling and testing (CT) for intravenous drug users and their sexual partners, 1988—1989, United States. Poster presentation at VI International Conference on AIDS, San Francisco, June 20—24, 1990.
6. Jones, T. S., Moore, M., and Cahill, K.: Injecting drug users (IDUs) who receive HIV counseling and testing (CT) in drug treatment centers and other CT sites, 1989—1990, United States. Poster presentation, VII International Conference on AIDS, Florence, June 16—21, 1991.
7. Centers for Disease Control: National HIV serosurveillance summary: results through 1990. Publication No. HIV/NCID/11-91/011. Atlanta, GA, 1991, pp. 8—11.
8. Solomon, L., Frank, R., Vlahov, D., and Astemborski, J.: Utilization of health services in a cohort of intravenous drug users with known HIV-1 serostatus. Am J Public Health 81: 1285—1290 (1991).
9. Des Jarlais, D. C., and Friedman, S. R.: HIV infection among intravenous drug users: epidemiology and risk reduction. AIDS 1: 67—76 (1987).
10. McCusker, J., Koblin, B., Lewis, B. F., and Sullivan, J.: Demographic characteristics, risk behaviors, and HIV seroprevalence among intravenous drug users by site of contact: results from a community-wide HIV surveillance project. Am J Public Health 80: 1062—1067 (1990).
11. Brown, L. S., Burkett, W., and Primm, B. J.: Drug treatment and HIV seropositivity. N Y State J Med 88: 156 (1988).

12. Lampinen, T. M., et al.: HIV seropositivity in community-recruited and drug treatment samples of injecting drug users. *AIDS* 6: 123–126 (1992).
13. Publicly funded HIV counseling and testing—United States, 1990. *MMWR Morb Mortal Wkly Rep* 40: 666–675, Oct. 4, 1991.
14. Drug use and sexual behaviors among sex partners of injecting-drug users—United States, 1988–1990. *MWWR Morb Mortal Wkly Rep* 40: 855–860, Dec. 13, 1991.
15. Battjes, R. J., Pickens, R. W., and Amsel, Z.: HIV infection and AIDS risk behaviors among intravenous drug users entering methadone treatment in selected cities. *J Acquir Immune Defic Syndr* 4: 1148–1154 (1991).
16. Nelson, K. E., et al.: Sexually transmitted diseases in a population of intravenous drug users: association with seropositivity to the human immunodeficiency virus (HIV). *J Infect Dis* 164: 457–463 (1991).
17. Leviton, L. C.: Theoretical foundations of AIDS-prevention programs. *In Preventing AIDS: the design of effective programs*, edited by R.O. Valdiserri. Rutgers University Press, New Brunswick, NJ, 1989, pp. 42–90.
18. Calsyn, D. A., et al.: Ineffectiveness of AIDS education and HIV antibody testing in reducing high-risk behaviors among injection drug users. *Am J Public Health* 82: 573–575 (1992).
19. Valdiserri, R. O., et al.: Structuring HIV prevention service delivery systems on the basis of social science theory. *J Community Health* 17: 259–269 (1992).
20. Public Health Service: Healthy people 2000: national health promotion and disease prevention objectives. DHHS Publication No. (PHS) 91-50212. Office of the Assistant Secretary for Health, Office of Disease Prevention and Health Promotion. U.S. Government Printing Office, Washington, DC, 1990.

Directions for AIDS Education for Hispanic Women Based on Analyses of Survey Findings

JACQUELYN H. FLASKERUD, RN, PhD
 GWEN UMAN, RN, PhD

Dr. Flaskerud is Professor and Associate Dean for Academic Affairs, School of Nursing, University of California at Los Angeles. Dr. Uman is Assistant Clinical Professor of the School of Nursing and Chief Statistician, Comp U Stat, Los Angeles.

This study was supported by grant No. AI 15332 from the National Institute of Allergy and Infectious Diseases, National Institutes of Health, Public Health Service.

Tearsheet requests to Jacquelyn H. Flaskerud, PhD, UCLA School of Nursing, 10833 Le Conte Ave., Los Angeles, CA 90024-1702, tel. 213-825-8405.

Synopsis

In 1988 and again in 1990, the National Center for Health Statistics conducted a survey of the AIDS related knowledge and beliefs of Hispanic and non-Hispanic adults in the United States. A

survey of Los Angeles Hispanic women was conducted in 1990, using the 1988 survey instrument. This study is an examination of the trends in knowledge and beliefs by comparing those of Hispanic Los Angeles women in 1990 to Hispanic and non-Hispanic female respondents in the 1988 national sample. Despite intense public health, local community, and media efforts to educate the public about AIDS, the women in the Los Angeles sample did not show appreciable differences in knowledge and beliefs compared with the 1988 national sample, and in many areas they were less knowledgeable. These results may be related to differing education and acculturation levels as well as possible differences in ethnicity. Hispanic groups will need focused prevention efforts which take into account specific areas of knowledge, educational level of information, adherence to traditional beliefs and practices, and ethnicity of the targeted community.

IN 1988 THE NATIONAL CENTER for Health Statistics conducted a survey of the AIDS related knowledge, attitudes, and behaviors of adults in the United States (1), and a similar survey was conducted in 1990 (2). The AIDS Knowledge and Awareness Survey was a supplement to the National Health Interview Survey (NHIS). AIDS knowledge and awareness of Hispanic and non-Hispanic populations were compared. Findings of

the NHIS have been supported by the findings of many other investigators in more geographically limited surveys.

Hispanics' AIDS knowledge and awareness regarding six areas can be compared with findings for non-Hispanics.

1. In all studies, general knowledge of the virus, immunity, and the major transmission routes of