



MMWRTM

Morbidity and Mortality Weekly Report

Weekly

June 24, 2005 / Vol. 54 / No. 24

National HIV Testing Day — June 27, 2005

National HIV Testing Day (NHTD) is June 27. NHTD is sponsored by the National Association of People with AIDS to encourage persons at risk to receive voluntary counseling and testing for human immunodeficiency virus (HIV). This year's theme, "Take the Test. Take Control," highlights the need for testing and counseling persons at risk to maintain their health and protect their partners. In addition, this year marks the 20th anniversary of the first commercially available HIV test (1), and NHTD offers an opportunity to recognize how much progress has been made in diagnosing, counseling, treatment, and care since 1985.

Approximately 1 million persons in the United States are HIV positive, and nearly one quarter of those infected are not aware of their infections (2). HIV testing has become easier, more accessible, and less invasive than ever before (3). Persons who know they are infected can benefit from advances in medical care to prolong their lives and can take action to prevent transmission of HIV to others (4).

Additional information about where to get tested for HIV and local events being held to encourage testing among populations at greatest risk (e.g., non-Hispanic blacks, Hispanics, and men who have sex with men) is available at <http://www.hivtest.org>.

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HIV Prevalence, Unrecognized Infection, and HIV Testing Among Men Who Have Sex with Men — Five U.S. Cities, June 2004–April 2005

Well into the third decade of the human immunodeficiency virus (HIV) epidemic, rates of HIV infection remain high, especially among minority populations. Of newly diagnosed HIV infections in the United States during 2003, CDC estimated that approximately 63% were among men who were infected through sexual contact with other men, 50% were among blacks, 32% were among whites, and 16% were among Hispanics (1). Studies of HIV infection among young men who have sex with men (MSM) in the mid to late 1990s revealed high rates of HIV prevalence, incidence, and unrecognized infection, particularly among young black MSM (2–4). To reassess those findings and previous HIV testing behaviors among MSM, CDC analyzed data from five of 17 cities participating in the National HIV Behavioral Surveillance (NHBS) system. This report summarizes preliminary findings from the HIV-testing component of NHBS, which indicated that, of MSM surveyed, 25% were infected with HIV, and 48% of those infected were unaware of their infection. To decrease HIV transmission, MSM should be encouraged to receive an HIV test at least annually, and prevention programs should improve means of reaching persons unaware of their HIV status, especially those in populations disproportionately at risk.

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The *MMWR* series of publications is published by the Coordinating Center for Health Information and Service, Centers for Disease Control and Prevention (CDC), U.S. Department of Health and Human Services, Atlanta, GA 30333.

SUGGESTED CITATION

Centers for Disease Control and Prevention. [Article Title]. *MMWR* 2005;54:[inclusive page numbers].

Centers for Disease Control and Prevention

Julie L. Gerberding, MD, MPH
Director

Dixie E. Snider, MD, MPH
Chief Science Officer

Tanja Popovic, MD, PhD
(Acting) Associate Director for Science

Coordinating Center for Health Information and Service

Blake Caldwell, MD, MPH, and Edward J. Sondik, PhD
(Acting) Directors

National Center for Health Marketing*

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(Acting) Director

Division of Scientific Communications*

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Information Technology Specialists

Notifiable Disease Morbidity and 122 Cities Mortality Data

Patsy A. Hall	Donna Edwards
Deborah A. Adams	Tambra McGee
Felicia J. Connor	Pearl C. Sharp
Rosaline Dhara	

* Proposed.

NHBS is an ongoing behavioral surveillance system that collects cross-sectional data among populations at high risk for acquiring HIV, including MSM, injection-drug users, and heterosexuals at high risk. Men aged ≥ 18 years were sampled systematically from randomly selected venues where MSM congregated (e.g., bars/clubs, organizations, and street locations). Formative research was conducted to identify venues and days and times when MSM frequented these venues (2–4). Men eligible for the survey were aged ≥ 18 years and residents of the metropolitan statistical area (MSA). Using a standardized questionnaire, men were interviewed about their sexual and drug-use behaviors, HIV-testing behavior, and use of HIV-prevention services. During June 2004–April 2005, participants in five NHBS cities (Baltimore, Maryland; Los Angeles, California; Miami, Florida; New York, New York; and San Francisco, California) were also tested for HIV infection after informed consent.

The OraQuick[®] rapid test or an enzyme immunoassay (EIA) was used to screen blood specimens for HIV antibody, and initially reactive specimens were tested by Western blot for confirmation. To estimate HIV incidence, CDC used a serologic testing algorithm for recent HIV seroconversion (STARHS) (5). Specimens that were confirmed positive were tested further with the Vironostika-Less Sensitive (LS) EIA, which detects HIV infection approximately 170 days after initial infection by using a 1.0 standard optical density cutoff (95% confidence interval [CI] = 145–200 days) (6). A specimen confirmed positive by Western blot and nonreactive on the Vironostika-LS assay was categorized as an incident infection. Persons self-reporting a previous positive test result and HIV-positive participants reporting use of antiretroviral therapy were excluded from the incidence estimate.

Participants were asked about the date and result of their most recent HIV test before having their blood drawn as part of NHBS. Men who had not been tested during the preceding year were asked about their reasons for not being tested. MSM with unrecognized infection were defined as those who reported being HIV negative, indeterminate, or not knowing their HIV status, but who tested HIV positive at the time of their interview. Prevalence ratios and 95% CIs were calculated to evaluate characteristics associated with testing during the preceding year. Differences in reasons for not testing between HIV-negative MSM and MSM with unrecognized infection were assessed by using chi-square tests ($p < 0.05$).

In the five cities, 2,261 men sampled from 258 venues participated in NHBS. The participation rate among eligible men was 83% (range by city: 69%–99%). A total of 1,767 (78%) were men who had one or more male sex partners and agreed to the survey, HIV test, and STARHS test (range by city: 222–462). Of these 1,767 participants, the median age was 32 years

(range: 18–81 years); 35% were white, 27% Hispanic, 25% black, 7% multiracial/other, and 6% Asian/Pacific Islander. Participants were recruited at bars (30%), street locations (20%), dance clubs (19%), cafes/retail stores (10%), Gay Pride events (6%), social organizations (5%), gyms (5%), sex establishments (3%), and parks (1%).

Of the 1,767 MSM, 450 (25%) tested positive for HIV (range by city: 18%–40%). HIV prevalence was 46% among blacks, 21% among whites, and 17% among Hispanics. A total of 340 (76%) of those who were HIV positive were aged ≥30 years (Table 1). Of the 449 HIV-antibody–positive specimens tested by Vironostika-LS, 80 were nonreactive; of these, 31 were considered incident infections, and 49 were excluded from the incidence estimate. HIV incidence among MSM by city was as follows: Baltimore, 8.0% (95% CI = 4.2%–11.8%); Los Angeles, 1.4% (95% CI = 0.0%–2.9%); Miami, 2.6% (95% CI = 0.0%–5.6%); New York City, 2.3% (95% CI = 0.28%–4.2%); and San Francisco, 1.2% (95% CI = 0.0%–2.6%).

Of the 450 HIV-infected MSM, 217 (48%) were unaware of their HIV infections. The proportion of unrecognized HIV infection was highest among MSM who were aged <30 years, nonwhite, and surveyed in the four cities other than San Francisco (Table 1). Of the 217 MSM with unrecognized HIV

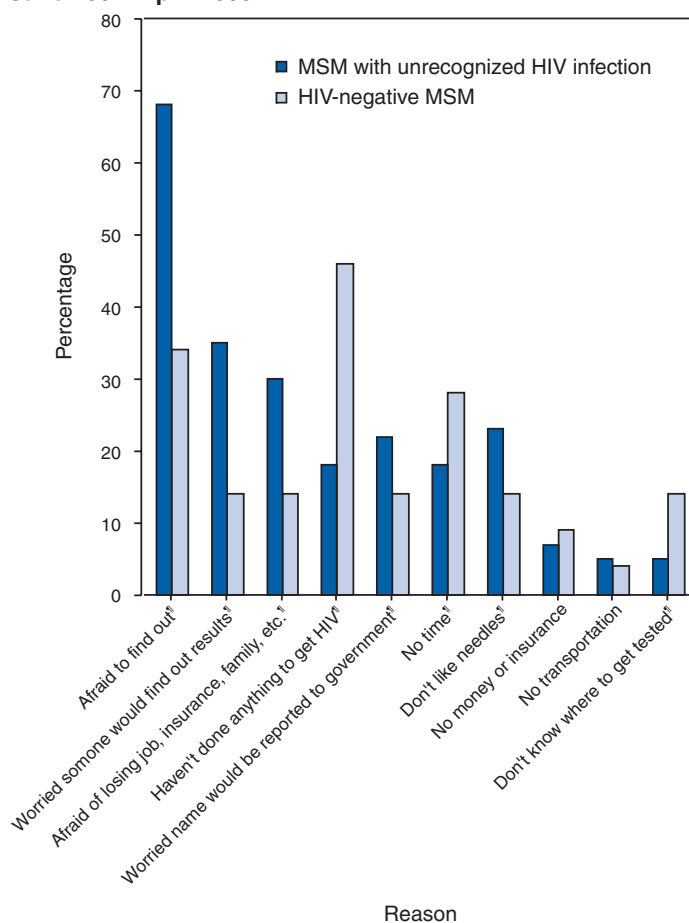
infections, 64% were black, 18% Hispanic, 11% white, and 6% multiracial/other. The majority (184 [84%]) of the 217 MSM with unrecognized HIV infection had previously been tested for HIV; 145 (79%) reported that their most recent test result was negative, 33 (18%) were unknown, and six (3%) were indeterminate. Approximately 58% of MSM with unrecognized infections had not been tested during the preceding year. Compared with MSM who were HIV negative, proportionally more MSM with unrecognized infections had not been tested during the preceding year because they were afraid of learning they had HIV (34% versus 68%; $p < 0.0001$) and were worried others would find out the result (14% versus 35%; $p < 0.0001$) (Figure).

TABLE 1. HIV prevalence and proportion of unrecognized HIV infection among men who have sex with men, by city, age group, and race/ethnicity — five NHBS* cities, June 2004–April 2005

Characteristic	Total tested	HIV prevalence		Unrecognized HIV infection	
		No.	(%)	No.	(%)
City					
Baltimore	462	186	(40)	115	(62)
Los Angeles	382	73	(19)	31	(42)
Miami	222	41	(18)	19	(46)
New York City	336	62	(18)	32	(52)
San Francisco	365	88	(24)	20	(23)
Age group (yrs)					
18–24	410	57	(14)	45	(79)
25–29	303	53	(17)	37	(70)
30–39	585	171	(29)	83	(49)
40–49	367	137	(37)	41	(30)
≥50	102	32	(31)	11	(34)
Race/Ethnicity†					
White, non-Hispanic	616	127	(21)	23	(18)
Black, non-Hispanic	444	206	(46)	139	(67)
Hispanic	466	80	(17)	38	(48)
Multiracial	86	16	(19)	8	(50)
Other‡	139	18	(13)	9	(50)
Total	1,767	450	(25)	217	(48)

* National HIV Behavioral Surveillance.
 † Numbers for HIV prevalence do not add to 450 because of missing data in three records.
 ‡ Because of small sample sizes, category includes Asian/Pacific Islander, Native American/Alaska Native, and other.

FIGURE. Reasons for not having an HIV test during the preceding 12 months among men who have sex with men (MSM), by HIV-infection status* — five NHBS† cities‡, June 2004–April 2005



* HIV-negative MSM (n = 472); MSM with unrecognized infection (n = 119).
 † National HIV Behavioral Surveillance.
 ‡ Baltimore, Maryland; Los Angeles, California; Miami, Florida; New York, New York; and San Francisco, California.
 § $p < 0.05$ by Cochran-Mantel-Haenszel chi-square test.

Nearly all participants (92%) reported previously being tested for HIV, and 64% reported being tested during the preceding year. MSM were more likely to have been tested during the preceding year if they had visited a health-care provider and their provider recommended an HIV test (Table 2). Sexual and drug-use behaviors were not associated with testing during the preceding year.

Reported by: *F Sifakis, PhD, Johns Hopkins Bloomberg School of Public Health, Baltimore; CP Flynn, ScM, Maryland Dept of Health and Mental Hygiene. L Metsch, PhD, Univ of Miami; M LaLota, MPH, Florida Dept of Health. C Murrill, PhD, New York City Dept of Health; BA Koblin, PhD, New York Blood Center, New York. T Bingham, MPH, Los Angeles County Dept of Health Svcs; W McFarland, MD, H Raymond, San Francisco Dept of Public Health, California. S Bebel, MPH, A Lansky, PhD, B Byers, PhD, D MacKellar, MPH, A Drake, MPH, K Gallagher, DSc, Div of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention, CDC.*

Editorial Note: Consistent with previous studies of young MSM conducted in the same cities using similar sampling methods (2–4,7,8), this study revealed that 1) prevalence and incidence of HIV infection in this population were high; 2) many HIV-infected MSM, particularly younger and black MSM, were unaware they were HIV-infected; and 3) among MSM with unrecognized infection, nearly half presumably acquired HIV during the preceding year, and many had not been tested recently because of fears of testing positive. These findings underscore the need to increase testing and improve primary prevention practices for MSM.

Although a majority of MSM had been tested during the preceding year, more than half with unrecognized infections had not had an annual test. The results of this study support CDC guidelines recommending at least annual testing for sexually active MSM (8), especially among younger MSM and minority populations (7).

The findings in this report are subject to at least four limitations. First, the date of a participant's most recent HIV test is self-reported and might be subject to reporting inaccuracies. Second, given the sensitive nature of some questions, HIV status might have been underreported during the interview, thereby inflating estimates of unrecognized infections. Third, these findings are limited to men who frequented MSM-identified venues in the five selected cities during the survey period. Although similar rates of HIV incidence were observed compared with previous surveys (2), the limited number of incident cases prevents comparisons by race and age. Finally, data are preliminary and have not been weighted by venue-selection probability.

TABLE 2. Prevalence of HIV testing during the preceding year among men who have sex with men, by selected characteristics—five NHBS* cities, June 2004–April 2005

Characteristic	Total previously tested	Last HIV test during preceding year		Prevalence	
		No.	(%)	ratio	(95% CI†)
City					
Baltimore	404	260	64	1.00	Referent
Los Angeles	358	231	64	1.00	(0.90–1.11)
Miami	230	136	67	1.04	(0.92–1.17)
New York City	306	202	66	1.03	(0.92–1.14)
San Francisco	351	206	59	0.91	(0.81–1.02)
Age group (yrs)					
18–24	350	285	81	1.00	Referent
25–29	285	200	70	0.86	(0.79–0.94)
30–39	547	330	60	0.74	(0.68–0.81)
40–49	346	180	52	0.64	(0.57–0.72)
≥50	94	40	43	0.52	(0.41–0.66)
Race/Ethnicity					
White, non-Hispanic	589	345	58	1.00	Referent
Black, non-Hispanic	391	254	65	1.11	(1.00–1.23)
Hispanic	422	289	68	1.17	(1.06–1.28)
Asian/Pacific Islander	85	55	65	1.10	(0.93–1.31)
Native American/ Alaska Native	7	6	86	1.46	(1.07–2.00)
Multiracial	79	52	66	1.12	(0.95–1.34)
Other	34	25	74	1.26	(0.36–1.13)
Education					
<High school	142	97	68	1.00	Referent
High school or equivalent	343	227	66	0.97	(0.85–1.11)
>High school	1,135	709	62	0.91	(0.81–1.03)
Sexual identity					
Homosexual	1,256	787	63	1.00	Referent
Bisexual	320	219	68	1.09	(1.00–1.19)
Health-insurance status					
Private physician or HMO§	954	616	65	1.00	Referent
Public	149	91	61	0.95	(0.83–1.08)
None	495	312	63	0.98	(0.90–1.06)
Health-care use					
Visited provider during preceding year					
No	317	156	49	1.00	Referent
Yes	1,305	879	67	1.37	(1.22–1.54)
Provider recommended HIV test¶					
No	809	476	59	1.00	Referent
Yes	496	403	81	1.38	(1.29–1.48)
Most recent HIV test result**					
Negative	1,285	874	68	1.00	Referent
Unknown	95	72	76	0.90	(0.80–1.01)
Total	1,622	1,035	64	—	—

* National HIV Behavioral Surveillance.

† Confidence interval.

§ Health maintenance organization.

¶ Among those who visited a health-care provider during the preceding year.

** Result of last HIV test before participation in NHBS.

The 2004 NHBS system was conducted in 17 MSAs with the highest AIDS prevalence. Although this report focuses on testing results from five selected cities, behavioral data are forthcoming from all participating cities. NHBS is an important tool for monitoring the impact of the HIV epidemic and informing prevention efforts.

HIV incidence and prevalence are high among MSM, and many are unaware they are HIV positive. The high level of unrecognized HIV infections among MSM is a public health concern. Persons aware of their HIV infection often take steps to reduce their risk behaviors, which could reduce HIV transmission (9). To increase the proportion of HIV-positive persons who know they are infected, sexually active MSM should be encouraged to have an HIV test at least annually. Corresponding efforts should be developed to address barriers to testing, particularly those related to fear, and to increase the availability of testing in clinical and nonclinical settings (10). Testing programs should target both younger MSM and black MSM to reach populations disproportionately unaware they are HIV positive.

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Use of Social Networks to Identify Persons with Undiagnosed HIV Infection — Seven U.S. Cities, October 2003–September 2004

An estimated 250,000 persons living with human immunodeficiency virus (HIV) in the United States are not aware of their infections and their risk for transmitting HIV (1). As part of CDC's Advancing HIV Prevention Initiative, identifying persons with undiagnosed HIV infection and linking them to medical care and prevention services is a national priority (2). In 2003, a 2-year demonstration project was begun with nine community-based organizations (CBOs) in seven cities to evaluate the effectiveness of using a social network strategy (3) at multiple sites to identify persons at risk for HIV infection and direct them to HIV counseling, testing, and referral (CTR). In this strategy, HIV-positive persons and HIV-negative persons at high risk (i.e., recruiters) are enlisted to recruit for CTR persons from their social, sexual, and drug-use networks (i.e., network associates [NAs]) believed to be at risk for HIV infection (4). This report summarizes preliminary results from the first year of this 2-year project, which indicated that 133 persons recruited 814 NAs, resulting in 46 newly identified HIV infections (approximately 6% of all persons tested). Health departments and CBOs should consider this strategy as an effective method for recruiting persons for CTR and identifying those with undiagnosed HIV infection.

The nine CBOs participating in the social network project provided HIV-related services in seven cities*. Although details differed among sites (e.g., identification of recruiters or use of incentives), all CBOs used the same basic methods. First, CBO staff members invited clients who were HIV positive to recruit NAs, including sex and needle-sharing partners the recruiters believed did not know their HIV status and might have been at risk for HIV infection. Certain CBOs also received referrals of recruiters from collaborating agencies. Next, recruiters were interviewed to elicit information about their networks and were coached by CBO staff members on strategies for discussing HIV and CTR with NAs. Although CBO interviewers talked with recruiters about their NAs in detail, information on the specific nature of the recruiter-NA relationship (e.g., sex or needle-sharing partners) was not

*San Francisco, California; Washington, DC; Orlando, Florida; Lafayette, Louisiana; Boston, Massachusetts; New York, New York; and Philadelphia, Pennsylvania.