

HIV Testing in the United States

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HIV testing is integral to both HIV prevention and care efforts in the United States. Knowledge of one's HIV status is important for preventing the spread of disease, since HIV testing provides an opportunity for people to receive counseling and information about risk reduction. Studies indicate that many who learn they are HIV positive modify their behavior to reduce risk of HIV transmission. Early knowledge of HIV infection is critical for linking people to needed medical care and services that can reduce morbidity and mortality and improve their quality of life.^{1,2}

Although HIV testing is offered at many locations across the country and several different kinds of tests are available, a significant number of people infected with HIV do not know their HIV status. Many people with HIV are not getting tested until late in illness, and a significant proportion of those who do get tested do not return for their results.¹ Continuing HIV-related stigma, not feeling at risk for HIV, and a lack of knowledge about where to go to get tested and the types of tests available limit the scope of testing. The U.S. Centers for Disease Control and Prevention (CDC) recently announced a new U.S. HIV prevention initiative which includes an emphasis on making HIV testing a routine part of medical care, facilitating the diagnosis of HIV infection outside medical settings, and further decreasing perinatal HIV transmission.¹

Testing Recommendations

The CDC recommends that HIV testing be offered to all patients in all high HIV-prevalence clinical settings and to those with risks for HIV in low HIV-prevalence clinical settings. The CDC also recommends routine testing of all pregnant women and of any infant whose mother was not screened.^{1,2} Factors that increase risk for HIV include: ever having³

- had unprotected sex with someone who is infected with HIV
- shared injection drug needles and syringes
- had a sexually transmitted disease, like chlamydia or gonorrhea
- received a blood transfusion or a blood clotting factor between 1978 and 1985
- had unprotected sex with someone who has done any of these things

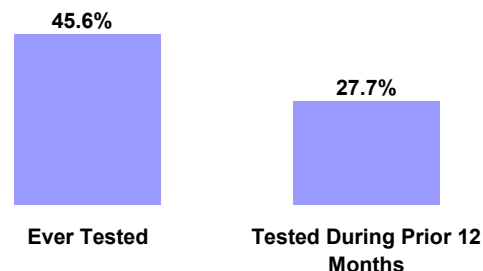
While prevention counseling is recommended for all persons at risk for HIV, CDC is in the process of promoting the adoption of simplified HIV-testing procedures in medical-settings that do not require prevention counseling before testing.¹

Testing Statistics

- In 2001, almost half (46%) of U.S. adults ages 18-64 reported ever having been tested for HIV, including 28% in the prior 12 months (see Figure 1).⁴ The percent of people who have ever been tested has increased over time.^{4,5}
- HIV testing rates vary by state, age, and race/ethnicity.^{4,5,6,7} For example, African Americans are more likely to report being tested for HIV than whites and Latinos.^{5,6,7}
- A significant proportion of people with HIV, however, do not know their infection status. Of the 850,000 to 950,000 people estimated to be living with HIV/AIDS in the U.S., it is estimated that 180,000 to 280,000, or up to a third, do not know they are infected.⁸

- In 2000, approximately two million HIV tests were given at CDC-funded sites. Among those with positive HIV tests, almost one third (31%) did not return for their test results.¹
- Knowledge of one's HIV status appears to be particularly low in some populations. For example, a recent study in 6 major U.S. cities found that more than three-fourths (77%) of young gay and bisexual men infected with HIV, ages 15-29, including 91% of African Americans, did not know they were HIV-positive.⁹
- In addition, a significant proportion of people with HIV are diagnosed late in their illness. Forty-one percent of people diagnosed with HIV between 1994-1999 received an AIDS diagnosis, the most advanced form of HIV infection, within 1 year of their positive HIV test.¹⁰
- People report getting tested for many reasons, including wanting to learn their HIV status, feeling at risk, illness, and because the test was offered.^{1,5,11} The main reason given for not getting tested is not feeling at risk.⁵ A quarter of U.S. adults say they want more information about HIV testing, including the different types of tests available, what test results mean, how much tests cost, and where to get tested.⁵ A recent survey of teens found that over two-thirds would not know for sure where to go to get tested.¹²

Figure 1: Percentage of Persons aged 18-64 Who Reported Being Tested, U.S., 2001



Source: CDC, "HIV Testing-United States, 2001", *MMWR*, Vol. 52, No. 23, 2003.

Testing Sites & Policies

- HIV testing is offered at CDC-publicly funded testing sites (approximately 11,600 in the U.S.) and in private settings. Testing sites include free-standing HIV counseling and testing centers, health departments, hospitals, private doctors offices, and STD clinics.¹³
- Studies indicate that most people with HIV are diagnosed in hospital inpatient settings, followed by private medical doctor's offices/HMOs and HIV counseling and testing sites.¹⁴ At-risk individuals are most likely to be tested in public health clinics followed by private doctors offices/HMOs.¹⁵
- An HIV test is either **confidential** or **anonymous**. With confidential testing, a person's name is used and recorded with test results. Medical personnel and state health departments may have access to the test results. Confidential HIV testing is used by all states and is typically the kind of testing available through private doctor's offices. With anonymous HIV testing, no name is used or connected to test results. As of April 2003, 11 state and territorial jurisdictions had only confidential testing avail-

able; 45 had both confidential and anonymous testing available (see Table 1).^{16,17}

- All states are moving toward **HIV reporting** (in addition to already reporting AIDS cases). HIV reporting is done using names, codes, or name-to-code based systems. As of April 2003, 55 of 56 jurisdictions had HIV reporting using one of these systems, including 40 that used names reporting (see Table 1).^{16,17}

Table 1: HIV Testing & Reporting Policies, April 2003^{16,17}

State	Confidential/ Anonymous Testing	HIV Reporting Policy
Alabama	C	Name
Alaska	C, A	Name
Arizona	C, A	Name
Arkansas	C, A	Name
California	C, A	Code
Colorado	C, A	Name
Connecticut	C, A	Name ¹
Delaware	C, A	Name-to-Code
District of Columbia	C, A	Code
Florida	C, A	Name
Georgia	C, A	Not required
Hawaii	C, A	Code
Idaho	C	Name
Illinois	C, A	Code
Indiana	C, A	Name
Iowa	C	Name
Kansas	C, A	Name
Kentucky	C, A	Code
Louisiana	C, A	Name
Maine	C, A	Name-to-Code
Maryland	C, A	Code
Massachusetts	C, A	Code
Michigan	C, A	Name
Minnesota	C, A	Name
Mississippi	C	Name
Missouri	C, A	Name
Montana	C, A	Name-to-Code
Nebraska	C, A	Name
Nevada	C	Name
New Hampshire	C, A	Other ²
New Jersey	C, A	Name
New Mexico	C, A	Name
New York	C, A	Name
North Carolina	C	Name
North Dakota	C	Name
Ohio	C, A	Name
Oklahoma	C, A	Name
Oregon	C, A	Name-to-Code
Pennsylvania	C, A	Name ³
Rhode Island	C, A	Code
South Carolina	C	Name
South Dakota	C	Name
Tennessee	C	Name
Texas	C, A	Name
Utah	C, A	Name
Vermont	C, A	Code
Virginia	C, A	Name
Washington	C, A	Name-to-Code ⁴
West Virginia	C, A	Name
Wisconsin	C, A	Name
Wyoming	C, A	Name
American Samoa	C, A	Name
Guam	C, A	Name
Northern Mariana Islands	C, A	Name
Puerto Rico	C, A	Name
U.S. Virgin Islands	C	Name

1. Required for pediatric (<13); Name or code for those 13 and older.

2. Reporting with or without name.

3. Outside of Philadelphia only.

4. Requires name-based reports of symptomatic HIV infection and AIDS; name-to-code for asymptomatic HIV cases.

Testing Technologies

HIV tests detect the presence of antibodies produced by the body to fight HIV infection; they do not test for the virus itself.¹⁸ People infected with HIV generally develop detectable antibodies within 3 months after infection, but it can take up to 6 months for antibodies to appear. HIV tests consist of an initial screening with an Enzyme Immune Assay (EIA) [or an enzyme-linked immunosorbent assay (ELISA), a type of EIA]. All "reactive" specimens are retested in duplicate, and if either retest is reactive, must be confirmed using a second, more specific test, usually the Western blot.² The main HIV tests used in the U.S. are^{1,2}:

- **Standard blood test** – this is the most commonly used test for HIV today. A blood (serum/plasma) sample is drawn by a health care provider and, depending on the testing site, results are generally available within a few days to two weeks.
- **Oral HIV tests** – these are alternatives to blood tests, and involve a health care provider swabbing the inside of the mouth to collect a tissue sample. *OraSure* is the only Food and Drug Administration (FDA)-approved HIV oral test, but it is not available at all testing sites.
- **Rapid Tests** – a rapid HIV test can provide results in less than half an hour. Two rapid HIV blood tests have been approved by the FDA for use in the U.S. The *OraQuick Rapid HIV-1 Antibody Test*, approved in November 2002, can detect antibodies to HIV in blood specimens drawn from pricking a finger and provide the results within 20 minutes. *OraQuick* was recently granted a Clinical Laboratory Improvement Amendments (CLIA) waiver to allow it to be used in many more sites across the country. The *Single Use Diagnostic System for HIV-1 (SUDS)* was approved in 1992, and also remains available. *SUDS* uses blood serum or plasma – as opposed to a finger prick – and can produce results in 30 minutes or less. For either test, a positive result must still be confirmed with a more specific test.
- **Home Tests** – a home HIV test first came onto the market in 1997. *HomeAccess*, the only home HIV test currently approved by the FDA, may be purchased from many drug stores and cost around \$45. The testing procedure involves pricking one's finger with a special device, placing drops of blood on a specially treated card, and then mailing the card in to be tested at a licensed laboratory. Customers are given an identification number to use when phoning for the test results, and may receive phone counseling.
- **Urine Test** – a urine test is another alternative to blood tests. The person getting tested provides a urine sample to a health care provider. The sample is screened in a laboratory and results are generally available within a few days to two weeks. Urine tests must be ordered by a physician.

References

- CDC, "Advancing HIV Prevention: New Strategies for a Changing Epidemic – United States, 2003", *MMWR*, Vol. 52, No.15, 2003.
- CDC, "Revised Guidelines for HIV Counseling, Testing, and Referral and Revised Recommendations for HIV Screening of Pregnant Women", *MMWR*, Vol. 50, No. R-19, 2001.
- CDC, *HIV and AIDS: Are You at Risk?*, 2003.
- CDC, "HIV Testing – United States", *MMWR*, Vol. 52, No.23, 2003.
- Kaiser Family Foundation, *The AIDS Epidemic at 20 Years: The View from America*, 2001.
- CDC, Behavioral Risk Factor Surveillance System, www.cdc.gov/brfss/index.htm.
- CDC, "HIV Testing Among Racial/Ethnic Minorities", *MMWR*, Vol. 50, No.47, 2001.
- Fleming, P., et.al., *HIV Prevalence in the United States*, 2000, 9th Conference on Retroviruses and Opportunistic Infections, Abstract #11, Oral Abstract Session 5, 2002.
- Mackellar, D. et al. "Unrecognized HIV Infection, Risk Behavior, and Misperception of Risk among Young MSM – 6 U.S. cities, 1994-2000," Abstract MoPeC4327, XIV International AIDS Conference, 2002.
- Neal, et.al. *Frequency and Predictors of Late HIV Diagnosis in the United States, 1994-1999*, 9th Conference on Retroviruses and Opportunistic Infections, Abstract #474M, 2002
- CDC, Supplement to HIV and AIDS Surveillance Project, June 1997-December 2000.
- Kaiser Family Foundation, *National Survey of Teens on HIV/AIDS*, 2000.
- CDC, *HIV Counseling and Testing in Publicly Funded Sites, Annual Report, 1997 and 1998*, 2001.
- Kates, J. et.al. "Learning More About the HIV-Infected Population Not IN Care in the United States: Using Public Health Surveillance Data to Inform Current Policy Challenges in Enhancing Access", Poster TuPeG 5690, XIV International AIDS Conference, 2002.
- CDC, HITS, 2000 data.
- CDC, *Current Status of HIV Infection Surveillance*, as of April 2003.
- Kaiser Family Foundation, www.statehealthfacts.org.
- There are also HIV tests that can detect HIV before the development of antibodies, but these are not used as general screening tools.