

HIV Testing in the United States

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HIV testing is integral to HIV prevention, treatment, and care efforts. Knowledge of one's HIV status is important for preventing the spread of disease. Studies show that those who learn they are HIV positive modify their behavior to reduce the risk of HIV transmission.^{1,2} Early knowledge of HIV status is also important for linking those with HIV to medical care and services that can reduce morbidity and mortality and improve quality of life.^{1,3,4}

Key Dates in History of HIV Testing⁵

1981: First AIDS case reported
1984: Human immunodeficiency Virus (HIV) identified
1985: First test for HIV licensed (ELISA)
1987: First Western Blot blood test kit
1992: First rapid test
1994: First oral fluid test
1996: First home and urine tests
2002: First rapid test using finger prick
2003: Rapid finger prick test granted CLIA⁶ waiver
2004: First rapid oral fluid test (also granted CLIA waiver)
2006: CDC releases new U.S. guidelines recommending routine HIV screening of all adults in health care settings⁴

Testing Recommendations & Requirements

The U.S. Centers for Disease Control and Prevention (CDC) released revised recommendations for HIV testing in health-care settings in 2006,⁴ recommending routine HIV screening for all adults, aged 13–64, and repeat screening at least annually for those at high risk. Screening should be voluntary, but **opt-out**—that is, the patient will be notified that the test will be performed and consent is inferred unless the patient declines (as is the case for most laboratory tests in health-care settings) vs. **opt-in**, where the test is offered to the patient, who must then explicitly consent to an HIV test, often in writing. The CDC is expected to release new testing guidelines for non-clinical settings next year. Currently, the CDC recommends that all persons at high risk for HIV, regardless of setting, be tested routinely for HIV infection.¹ In a recent survey, approximately two-thirds of the U.S. public (65%) supported routine HIV testing; 27% said that HIV testing should be treated differently, including the need for written consent.⁷

HIV testing is mandatory in the U.S. in certain cases, including for: blood and organ donors;⁸ military applicants and active duty personnel;⁹ federal and state prison inmates under certain circumstances;^{10,11} newborns in some states;¹² and immigrants (waivers for HIV positive immigrants and visitors may be granted).¹³

Factors considered to increase risk for HIV include ever having:^{14,15}

- 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/blood clotting factor between 1978 and 1985
- had unprotected sex with anyone who falls into an above category

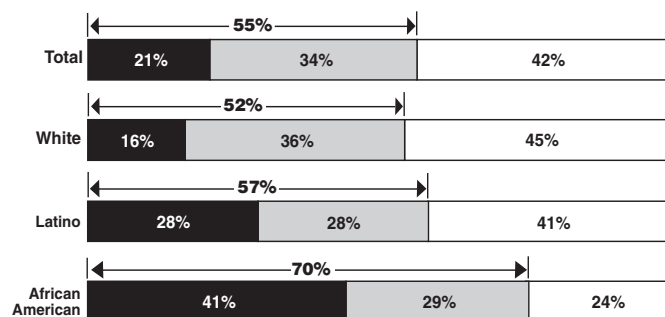
Testing Statistics

- More than half (55%) of U.S. adults, ages 18-64, report ever having been tested for HIV, including 21% who report being tested in the last year. The share of the public saying they have been tested for HIV at some point has increased over time.⁷
- HIV testing rates vary by state, age, and race/ethnicity.^{7,16,17,18} For example, African Americans and Latinos are significantly more likely to report having been tested for HIV than whites (see Figure).⁷ Forty-one percent of African Americans report being tested in the last year alone.⁷
- Among the more than one million¹⁹ people living with HIV/AIDS in the U.S., however, an estimated 25% do not know they are infected and knowledge of HIV status is even lower among some populations.^{1,20}
- Among those who tested positive at CDC-funded sites in 2000, 31% did not return for their test results.¹
- Many people with HIV are diagnosed late in their illness; in 2004, 39% received an AIDS diagnosis within one year of testing HIV positive.²¹
- The public reports wanting more information about HIV testing including: the different types of HIV tests available (44%); how to protect privacy when getting tested (40%); and where to get tested (35%).⁷ African Americans and Latinos are much more likely than whites to say they need these types of information.⁷

Percent Non-Elderly Who Report Being Tested by Race/Ethnicity, 2006

Percent of non-elderly, ages 18-64, who say they have been tested for HIV...

■ Yes, in last 12 months ■ Yes, but not in last 12 months □ No, never tested



Notes: Don't know responses not shown; not all numbers may add up due to rounding.
Source: Kaiser Family Foundation, *Survey of Americans on HIV/AIDS* (conducted March 24–April 18, 2006).

Testing Sites & Policies

- HIV testing is offered at CDC-publicly funded testing sites (approximately 11,600 in the U.S.) and in other public and private settings, including free-standing HIV counseling and testing centers, health departments, hospitals, private doctors' offices, and STD clinics.^{1,22} Most HIV testing is conducted in private doctors' offices.⁷
- Those testing positive for HIV are most likely to have been tested in hospital inpatient settings, followed by private doctor's offices/HMOs and HIV counseling and testing sites.²³ Those at-risk are most likely to have been tested in private doctor's offices/HMOs or public health clinics.²⁴

All states/territories now **report HIV cases** (in addition to already reporting AIDS cases). HIV reporting is done by **name**, **name-to-code**, or **code**. Most states have already moved to name reporting where a person's name is reported to the state if they are HIV positive (no name or other personally identifying information is reported to CDC; only clinical and basic demographic information are forwarded). As of June 2006, 49 jurisdictions had implemented name reporting; 6 used codes; and one used name-to-code.²⁵

HIV Testing & Reporting Policies, June 2006²⁵

State/Territory	Confidential/ Anonymous	HIV Reporting Policy
Alabama	C	Name
Alaska	C, A	Name
Arizona	C, A	Name
Arkansas	C, A	Name
California	C, A	Name
Colorado	C, A	Name
Connecticut	C, A	Name
Delaware	C, A	Name
District of Columbia	C, A	Code
Florida	C, A	Name
Georgia	C, A	Name
Hawaii	C, A	Code
Idaho	C	Name
Illinois	C, A	Name
Indiana	C, A	Name
Iowa	C	Name
Kansas	C, A	Name
Kentucky	C, A	Name
Louisiana	C, A	Name
Maine	C, A	Name
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	Name
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
Pennsylvania	C, A	Name
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
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

- An HIV test is either **confidential** or **anonymous**. With confidential testing, a person's name is recorded with their test result. With anonymous testing, no name is used. All states offer confidential testing but not all offer anonymous testing. As of June 2006, 11 states offered only confidential testing.²⁵ In those states, a person's name will be reported to the state if they test positive.

Testing Techniques

HIV tests used for screening detect the presence of antibodies produced by the body to fight HIV infection.²⁶ Detectable antibodies usually develop within 3 months of infection, but may take longer.^{3,15} There are several kinds of HIV tests available in the U.S. They differ based on the type of specimen tested (e.g., whole blood, serum, or plasma; oral fluid; urine); how the specimen is collected (e.g., blood draw/venipuncture; finger prick; oral swab); where the test is done (e.g., laboratory, point-of-care site); and how quickly results are available (conventional or rapid).^{1,3,27} The main types of tests are:

- **Conventional blood test:** Blood sample drawn by health care provider; tested at lab. Results: a few days to two weeks.
- **Conventional oral fluid test:** Oral fluid sample collected by health care provider, who swabs inside of mouth; tested at lab. Results: a few days to two weeks. *OraSure* is the only FDA-approved HIV oral fluid test.
- **Rapid tests:**²⁷ Sample collected by health care provider at lab or care site, depending on complexity of rapid test. Results: available in as little as 10 minutes. If test is negative, no further testing is needed. If positive, test must be confirmed with a more specific test through conventional method. There are four FDA-approved rapid tests: *OraQuick Advance Rapid HIV-1/2 Antibody Test* (whole blood finger prick or venipuncture; plasma; oral fluid); *Reveal Rapid HIV-1 Antibody Test* (serum; plasma); *Uni-Gold Recombigen HIV Test* (whole blood finger prick or venipuncture; serum; plasma); and *Multispot HIV-1/HIV-2 Rapid Test* (serum; plasma). *OraQuick* and *Uni-Gold* have been granted Clinical Laboratory Improvement Amendments (CLIA) waivers for their whole blood rapid tests, which allow them to be performed by persons without formal laboratory training and outside traditional laboratories. *OraQuick* also has a CLIA-waiver for its oral fluid rapid test. Both *OraQuick* and *UniGold* are pursuing over-the-counter (home use) indication for rapid testing with the FDA.²⁸
- **Home Tests:** Individual performs test by pricking their finger with special device, placing drops of blood on treated card, and mailing to lab for testing. Identification number on card is used when phoning for results; counseling and referral available by phone. Results: in as little as three days. *HomeAccess*, the only home HIV test currently approved by the FDA, may be purchased from many drug stores and online.
- **Urine Test:** Urine sample collected by health care provider; tested at lab. *Calypse* is the only FDA-approved HIV urine test. Results: a few days to two weeks.

References

- 1 CDC, *MMWR*, Vol. 52, No. 15, 2003.
- 2 Marks G, et al., "Meta-analysis of High-Risk Sexual Behavior in Persons Aware and Unaware They are Infected with HIV in the United States: Implications for HIV Prevention Programs." *JAIDS*, Vol. 39, No. 4, 2005.
- 3 CDC, *MMWR*, Vol. 50, No. RR19, 2001.
- 4 CDC, *MMWR*, "Revised Recommendations for HIV Testing of Adults, Adolescents, and Pregnant Women in Health Care Settings," September 2006.
- 5 Kaiser Family Foundation, Global HIV/AIDS Timeline, www.kff.org/hivaids/timeline.
- 6 Clinical Laboratory Improvement Amendments (CLIA) waiver.
- 7 Kaiser Family Foundation, *Survey of Americans on HIV/AIDS*, 2006.
- 8 FDA, "Recommendations for the Prevention of Human Immunodeficiency Virus (HIV) Transmission by Blood and Blood Products," 1992.
- 9 U.S. DoD, May 21, 2004. www.defense.gov/news/May2004/n05212004_200405211.html.
- 10 U.S. Federal Bureau of Prisons, *Legal Resource Guide to the Federal Bureau of Prisons*, 2004.
- 11 DOJ Bureau of Justice Statistics, *HIV in Prisons*, 2000. Revised 2/24/03.
- 12 CDC, *MMWR*, Vol. 51, No. 45, 2002.
- 13 U.S. Citizenship and Immigration Services, http://uscis.gov/graphics/Medical_Exam.htm#needed.
- 14 CDC, *HIV and AIDS: Are You at Risk?*, 2003.
- 15 www.hivtest.org.
- 16 CDC, *MMWR*, Vol. 52, No. 23, 2003.
- 17 CDC, Behavioral Risk Factor Surveillance System, www.cdc.gov/brfss/index.htm.
- 18 CDC, *MMWR*, Vol. 50, No. 47, 2001.
- 19 Glynn K., Rhodes P., "Estimated HIV Prevalence in the United States at the End of 2003," *2005 National HIV Prevention Conference*, June 2005.
- 20 CDC, *MMWR*, Vol. 54, No. 24, 2005.
- 21 CDC, *HIV/AIDS Surveillance Report*, Vol. 16, 2005.
- 22 CDC, *HIV Counseling and Testing in Publicly Funded Sites, Annual Report, 1997 and 1998*, 2001.
- 23 Kates J, et al., Poster TuPeG 5690, XIV International AIDS Conference, 2002.
- 24 CDC, "HIV Testing Survey, 2002," *HIV/AIDS Special Surveillance Report* No. 5, 2004.
- 25 CDC, *Current Status of HIV Infection Surveillance*, as of June 2006.
- 26 There are also HIV tests that can detect HIV before the development of antibodies, but these are not used as general screening tools.
- 27 Greenwald JL, et al., A Rapid Review of Rapid HIV Antibody Tests, *Current Infectious Disease Reports*, Vol. 8, No. 2, 2006.
- 28 FDA, www.fda.gov/oash/aids/advisorycom.html#110305.

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