

HIV Testing in the United States

June 2007

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.^{1,2}

Key Dates in History of HIV Testing³

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 CLIA⁴ 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 settings¹

Testing Recommendations & Requirements

The U.S. Centers for Disease Control and Prevention (CDC) released revised recommendations for HIV testing in health-care settings in 2006,¹ 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.⁵

HIV testing is mandatory in the U.S. in certain cases, including for: blood and organ donors;⁶ military applicants and active duty personnel;⁷ federal and state prison inmates under certain circumstances;^{8,9} newborns in some states;^{10,11} and immigrants.¹²

CDC recommends HIV testing for those who have engaged in the following behaviors that increase risk of HIV transmission:^{13,14}

- injected drugs or steroids or shared equipment (such as needles, syringes, works) with others
- had unprotected vaginal, anal, or oral sex with men who have sex with men, multiple partners, or anonymous partners
- exchanged sex for drugs or money
- been diagnosed with or treated for hepatitis, tuberculosis, or a sexually transmitted disease (STD), like syphilis
- had unprotected sex with anyone who falls into an above category, or with someone whose history is unknown.

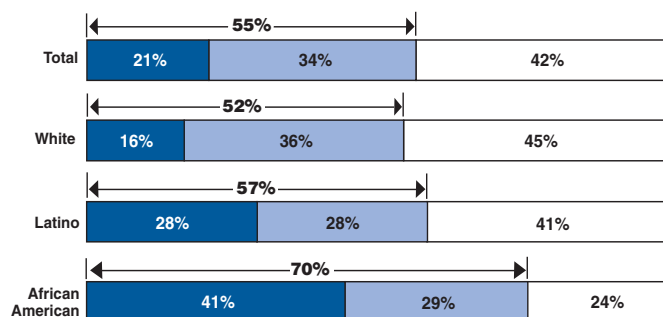
Testing Statistics

- More than half (55%) of U.S. adults, aged 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.^{5,15}
- HIV testing rates vary by state, age, and race/ethnicity.^{5,15,16,17} For example, African Americans and Latinos are significantly more likely to report having been tested for HIV than whites (see Figure).⁵ Forty-one percent of African Americans report being tested in the last year alone.⁵
- Among the more than one million¹⁸ 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.^{1,19}
- Among those who tested positive at CDC-funded sites in 2000, 31% did not return for their test results.²
- Many people with HIV are diagnosed late in their illness; in 2004, 40% received an AIDS diagnosis within one year of testing HIV positive.²⁰
- 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%).⁵ African Americans and Latinos are much more likely than whites to say they need these types of information.⁵

Percent of Non-Elderly Who Report Being Tested for HIV, by Race/Ethnicity, 2006^{5,21}

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



Testing Sites & Policies

- HIV testing is offered in public and private settings throughout the country, including free-standing HIV counseling and testing centers, health departments, hospitals, private doctors' offices, and STD clinics. The CDC supports HIV testing at many sites, accounting for almost 2 million tests each year.^{1,22} Most HIV testing is conducted in private doctors' offices.⁵
- Those testing positive for HIV are most likely to have been tested in hospital settings, followed by community clinics and private doctors' offices.²³ Those at-risk are most likely to have been tested in private doctors' offices/HMOs or public health clinics.²⁴

All states/territories now **report HIV cases** (in addition to already reporting AIDS cases). All states are moving to HIV **name** reporting where a person's name is reported to the state if they test HIV positive (no name or other personally identifying information is reported to CDC; only clinical and basic demographic information are forwarded). As of May 2007, 54 jurisdictions had implemented name reporting and 2 used codes (with no name).²⁵

HIV Testing & Reporting Policies, May 2007²⁵

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	Name
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	Name
Massachusetts	C, A	Name
Michigan	C, A	Name
Minnesota	C, A	Name
Mississippi	C	Name
Missouri	C, A	Name
Montana	C, A	Name
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	Name
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 May 2007, 11 states offered only confidential testing.²⁵

Testing Techniques

Tests used for HIV screening look for the presence of antibodies produced by the body to fight HIV infection.²⁶ Detectable antibodies usually develop within 3 months after infection, but may take longer.¹³ 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).^{23,27} 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:**^{27,28} Sample collected by health-care provider at lab or care site, depending on complexity of rapid test. Results: available in as little as 20 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 six 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); *Multispot HIV-1/HIV-2 Rapid Test* (serum; plasma); and two *Clearview* tests—*Clearview HIV 1/2 Stat Pak*, *Clearview Complete HIV 1/2* (whole blood; serum; plasma). Some rapid tests have been granted CLIA waivers which allow them to be performed by persons without formal laboratory training and outside traditional laboratories. The makers of *OraQuick* and *Uni-Gold* are pursuing over-the-counter (home use) indications for rapid testing with the FDA.²⁹
- **Home Tests:** Individual performs the 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 HIV-1 Test System*, 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. *Calypte* is the only FDA-approved HIV urine test. Results: a few days to two weeks.

References

- 1 CDC, *MMWR*, Vol. 55, No. RR14; September 2006.
- 2 CDC, *MMWR*, Vol. 52, No. 15; April 2003.
- 3 Kaiser Family Foundation, Global HIV/AIDS Timeline, www.kff.org/hiv/aids/timeline.
- 4 Clinical Laboratory Improvement Amendments (CLIA) Waiver.
- 5 Kaiser Family Foundation, *Survey of Americans on HIV/AIDS*; March 2006.
- 6 FDA, "Keeping Blood Transfusions Safe: FDA's Multi-layered Protections for Donated Blood," Publication No. FS 02-1; February 2002.
- 7 U.S. DoD, Instruction Number 6485.01; October 17, 2006.
- 8 U.S. Federal Bureau of Prisons, *Legal Resource Guide to the Federal Bureau of Prisons, 2004*.
- 9 U.S. DoJ, Bureau of Justice Statistics, *HIV in Prisons, 2004*. Revised March 1, 2007.
- 10 CDC, *MMWR*, Vol. 51, No. 45; November 2002.
- 11 Illinois Public Act 94-0910; June 2006.
- 12 USCIS, Immigration Medical Exams, Form I-693, www.uscis.gov/civilsurgeons.
- 13 CDC, www.cdc.gov/hiv/topics/testing/ga.htm.
- 14 www.hivtest.org.
- 15 CDC, *MMWR*, Vol. 52, No. 23; June 2003.
- 16 CDC, Behavioral Risk Factor Surveillance System, www.cdc.gov/brfss/index.htm.
- 17 CDC, *MMWR*, Vol. 50, No. 47; November 2001.
- 18 Glynn K., Rhodes P., "Estimated HIV Prevalence in the United States at the End of 2003," National HIV Prevention Conference, Abstract T1-B1101; June 2005.
- 19 CDC, *MMWR*, Vol. 54, No. 24; June 2005.
- 20 CDC, *HIV/AIDS Surveillance Report, 2005*, Vol. 17; 2006.
- 21 "Don't know" responses not shown; not all numbers may add up due to rounding.
- 22 CDC, *HIV Counseling and Testing at CDC-Supported Sites, United States, 1999–2004*; December 2006.
- 23 CDC, Revised Recommendations for HIV Testing in Healthcare Settings in the U.S., Slide Set.
- 24 CDC, "HIV Testing Survey, 2002," *HIV/AIDS Special Surveillance Report*, No. 5; 2004.
- 25 CDC, *Current Status of HIV Infection Surveillance*; as of May 2007.
- 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 CDC, www.cdc.gov/hiv/topics/testing/resources/factsheets/rt-lab.htm.
- 29 www.fda.gov.

The Kaiser Family Foundation is a non-profit, private operating foundation dedicated to providing information and analysis on health care issues to policymakers, the media, the health care community and the general public. The Foundation is not associated with Kaiser Permanente or Kaiser Industries.

Additional copies of this publication (#6094-06) are available on the Kaiser Family Foundation's website at www.kff.org.