

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.^{1,2}

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 recommends routine HIV screening in U.S. health-care settings¹
 2007: WHO/UNAIDS global guidelines recommend routine HIV screening in health-care settings⁵

Testing Recommendations & Requirements

The U.S. Centers for Disease Control and Prevention (CDC) recommends **routine HIV screening in health-care settings** for all adults, aged 13–64, and repeat screening at least annually for those at high risk.¹ HIV testing is recommended for all pregnant women and for any newborn whose mother's HIV status is unknown. 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. 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.⁶

The CDC is expected to release new testing guidelines for non-clinical settings as well. Currently, it is recommended that all those at high risk for HIV, regardless of setting, be tested routinely for HIV infection.¹ Risk behaviors include having:^{7,8}

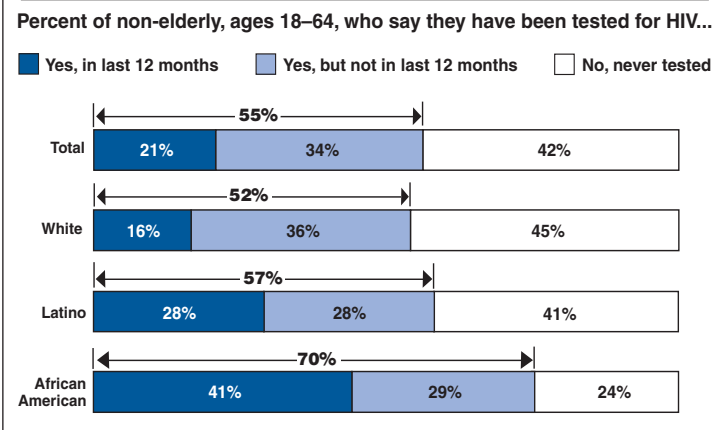
- injected drugs or steroids or shared equipment (such as needles, syringes, works) with others
- had unprotected vaginal, anal, or oral sex with men who have sex with men, multiple partners, or anonymous partners
- exchanged sex for drugs or money
- been diagnosed with or treated for hepatitis, tuberculosis,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

HIV testing is **mandatory** in the U.S. in certain cases, including for: blood and organ donors;⁹ military applicants and active duty personnel;¹⁰ federal and state prison inmates under certain circumstances;^{11,12} newborns in some states;¹³ and immigrants.¹⁴

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.^{6,15}
- HIV testing rates vary by state, age, and race/ethnicity.^{6,15,16,17,18} For example, African Americans and Latinos are significantly more likely to report having been tested for HIV than whites (see Figure).⁶ Forty-one percent of African Americans report being tested in the last year alone.⁶
- Among the more than one million people living with HIV/AIDS in the U.S., however, an estimated 21% do not know they are infected (down from 25% in 2003) and knowledge of HIV status is even lower among some populations.^{2,19,20}
- Many people with HIV are diagnosed late in their illness; in 2005, 38% received an AIDS diagnosis within one year of testing HIV positive.²¹
- A survey of the U.S. public in 2006 found that many people want 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%).⁶ African Americans and Latinos are much more likely than whites to say they need these types of information.⁶

Percent of Non-Elderly Who Report Being Tested for HIV, by Race/Ethnicity, 2006^{6,22}



Testing Sites & Policies

- HIV testing is offered at CDC funded testing sites (accounting for almost 2 million tests) and in other public and private settings, including free-standing HIV counseling and testing centers, health departments, hospitals, private doctors offices, and STD clinics.^{1,23} Most HIV testing is conducted in private doctors' offices.^{6,24}
- Those testing positive for HIV are most likely to have been tested in hospital settings, followed by community clinics and private doctor's offices.²⁴ Those at-risk are most likely to have been tested in private doctor's offices/HMOs or public health clinics.²⁵

As of April 2008, all states/territories had moved to **HIV name reporting** (in addition to reporting AIDS cases) where a person's name is reported to the state if they test HIV positive. The state then reports the number of unique positive HIV tests to CDC (no names

or other personally identifying information is reported to CDC; only clinical and basic demographic information is forwarded).²⁶ Over time, HIV name reporting will provide a better picture of the size of the HIV/AIDS epidemic in the United States (a state must have HIV name reporting in place for four full calendar years to allow for accurate counts to be made by CDC).²¹

HIV Testing & Reporting Policies, as of April 2008²⁶

State/Territory	Confidential/Anonymous	HIV Reporting	Name Reporting Implementation
Alabama	C	Name	1988 January
Alaska	C, A	Name	1999 February
Arizona	C, A	Name	1987 January
Arkansas	C, A	Name	1989 July
California	C, A	Name	2006 April
Colorado	C, A	Name	1985 November
Connecticut	C, A	Name	2005 January
Delaware	C, A	Name	2006 February
District of Columbia	C, A	Name	2006 November
Florida	C, A	Name	1997 July
Georgia	C, A	Name	2003 December
Hawaii	C, A	Name	2008 March
Idaho	C	Name	1986 June
Illinois	C, A	Name	2006 January
Indiana	C, A	Name	1988 July
Iowa	C	Name	1998 July
Kansas	C, A	Name	1999 July
Kentucky	C, A	Name	2004 October
Louisiana	C, A	Name	1993 February
Maine	C, A	Name	2006 January
Maryland	C, A	Name	2007 April
Massachusetts	C, A	Name	2007 January
Michigan	C, A	Name	1992 April
Minnesota	C, A	Name	1985 October
Mississippi	C	Name	1988 August
Missouri	C, A	Name	1987 October
Montana	C, A	Name	2006 September
Nebraska	C, A	Name	1995 September
Nevada	C	Name	1992 February
New Hampshire	C, A	Name	2005 January
New Jersey	C, A	Name	1992 January
New Mexico	C, A	Name	1998 January
New York	C, A	Name	2000 June
North Carolina	C	Name	1990 February
North Dakota	C	Name	1988 January
Ohio	C, A	Name	1990 June
Oklahoma	C, A	Name	1988 June
Oregon	C, A	Name	2006 April
Pennsylvania	C, A	Name	2002 October
Rhode Island	C, A	Name	2006 July
South Carolina	C	Name	1986 February
South Dakota	C	Name	1988 January
Tennessee	C	Name	1992 January
Texas	C, A	Name	1999 January
Utah	C, A	Name	1989 April
Vermont	C, A	Name	2008 April
Virginia	C, A	Name	1989 July
Washington	C, A	Name	2006 March
West Virginia	C, A	Name	1989 January
Wisconsin	C, A	Name	1985 November
Wyoming	C, A	Name	1989 June
American Samoa	C, A	Name	2001 August
Guam	C, A	Name	2000 March
Northern Mariana Islands	C, A	Name	2001 October
Puerto Rico	C, A	Name	2003 January
U.S. Virgin Islands	C	Name	1998 December

- HIV testing may be **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 April 2008, 11 states offered only confidential testing.²⁶

Testing Techniques

HIV tests used for screening detect the presence of antibodies produced by the body to fight HIV infection.²⁷ Detectable antibodies usually develop within 2–8 weeks after infection, but may take longer.⁷ There are several kinds of HIV tests available in the U.S. They differ based on the type of specimen tested (whole blood, serum, or plasma; oral fluid; urine); how the specimen is collected (blood draw/venipuncture; finger prick; oral swab); where the test is done (laboratory, point-of-care site, etc.); and how quickly results are available (conventional or rapid).^{24,28} 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:**^{28,29} Sample collected by health care provider at lab or care site, depending on complexity of rapid test. Results: 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 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 used outside laboratories settings. A recent survey of CDC-funded health departments, conducted by the National Alliance of State and Territorial AIDS Directors (NASTAD), found that rapid tests accounted for an estimated 48% of tests conducted in 2007, expected to rise to 60% this year.³⁰
- Home Tests:** Individual performs the test by pricking 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

- CDC, *MMWR*, Vol. 55, No. RR14; September 2006.
- CDC, *MMWR*, Vol. 52, No. 15; April 2003.
- Kaiser Family Foundation, Global HIV/AIDS Timeline, www.kff.org/hiv/aids/timeline.
- Clinical Laboratory Improvement Amendments (CLIA) Waiver.
- WHO/UNAIDS, www.who.int/mediacentre/news/releases/2007/pr24/en/index.html.
- Kaiser Family Foundation, *Survey of Americans on HIV/AIDS*; March 2006.
- CDC, www.cdc.gov/hiv/topics/testing/qa.htm.
- www.hivtest.org.
- FDA, "Keeping Blood Transfusions Safe: FDA's Multi-layered Protections for Donated Blood," Publication No. FS 02-1; February 2002.
- U.S. DoD, Instruction Number 6485.01; October 17, 2006.
- U.S. Federal Bureau of Prisons, *Legal Resource Guide to the Federal Bureau of Prisons, 2008*.
- U.S. DoJ, Bureau of Justice Statistics, *HIV in Prisons, 2006*; April 2008.
- Kaiser Family Foundation, www.statehealthfacts.org/comparabletable.jsp?ind=563&cat=11.
- USCIS, I-693, Report of Medical Examination and Vaccination Record, www.uscis.gov/i-693.
- CDC, *MMWR*, Vol. 52, No. 23, 2003.
- CDC, Behavioral Risk Factor Surveillance System, www.cdc.gov/brfss/index.htm.
- CDC, *MMWR*, Vol. 50, No. 47, 2001.
- CDC, National Health Interview Survey, 2006. www.cdc.gov/nchs/nhis.htm.
- CDC, *MMWR*, Vol. 57, No. 39; October 2008.
- CDC, *MMWR*, Vol. 54, No. 24; June 2005.
- CDC, *HIV/AIDS Surveillance Report*, Vol. 18, 2008.
- Don't know" responses not shown; not all numbers may add up due to rounding.
- CDC, *HIV Counseling and Testing at CDC-Supported Sites, United States, 1999-2004*; December 2006.
- CDC, Revised Recommendations for HIV Testing in Healthcare Settings in the U.S., Slide Set.
- CDC, "HIV Testing Survey, 2002", *HIV/AIDS Special Surveillance Report* No. 5, 2004.
- CDC, *Current Status of HIV Infection Surveillance*, as of April 2008.
- There are also HIV tests that can detect HIV before the development of antibodies, but these are not used as general screening tools.
- Greenwald JL, et al., A Rapid Review of Rapid HIV Antibody Tests, *Curr Infect Dis Rep*, Vol. 8, No. 2, 2006.
- CDC/HRET, FDA-Approved Rapid HIV Antibody Screening Tests as of February 4, 2008.
- NASTAD, personal communication, April 2008 (note: data are for 31 of 65 health departments responding to survey).

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