



# VIRGINIA EPIDEMIOLOGY BULLETIN

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December, 1987

Volume 87, Number 12

## U.S. Public Health Service Guidelines for Counseling and Antibody Testing to Prevent HIV Infection and AIDS

These guidelines are the outgrowth of the 1986 recommendations published in the *MMWR* (1); the report on the February 24-25, 1987, Conference on Counseling and Testing (2); and a series of meetings with representatives from the Association of State and Territorial Health Officials, the Association of State and Territorial Public Health Laboratory Directors, the Council of State and Territorial Epidemiologists, the National Association of County Health Officials, the United States Conference of Local Health Officers, and the National Association of State Alcohol and Drug Abuse Directors.

Human immunodeficiency virus (HIV), the causative agent of acquired immunodeficiency syndrome (AIDS) and related clinical manifestations, has been shown to be spread by sexual contact; by parenteral exposure to blood (most often through intravenous [IV] drug abuse) and, rarely, by other exposures to blood; and from an infected woman to her fetus or infant.

Persons exposed to HIV usually develop detectable levels of antibody against the virus within 6-12 weeks of infection. The presence of antibody indicates current infection, though many infected persons may have minimal or no clinical evidence of disease for years. Counseling and testing persons who are infected or at risk for acquiring HIV infection is an important component of prevention strategy (1). Most of the estimated 1.0 to 1.5 million infected per-

sons in the United States are unaware that they are infected with HIV. The primary public health purposes of counseling and testing are to help uninfected individuals initiate and sustain behavioral changes that reduce their risk of becoming infected and to assist infected individuals in

avoiding infecting others.

Along with the potential personal, medical, and public health benefits of testing for HIV antibody, public health agencies must be concerned about actions that will discourage the use of counseling and testing fa-

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cilities, most notably the unauthorized disclosure of personal information and the possibility of inappropriate discrimination.

Priorities for public health counseling and testing should be based upon providing ready access to persons who are most likely to be infected or who practice high-risk behaviors, thereby helping to reduce further spread of infection. There are other considerations for determining testing priorities, including the likely effectiveness of preventing the spread of infection among persons who would not otherwise realize that they are at risk. Knowledge of the prevalence of HIV infection in different populations is useful in determining the most efficient and effective locations providing such services. For example, programs that offer counseling and testing to homosexual men, IV-drug abusers, persons with hemophilia, sexual and/or needle-sharing partners of these persons, and patients of sexually transmitted disease clinics may be most effective since persons in these groups are at high risk for infection. After counseling and testing are effectively implemented in settings of high and moderate prevalence, consideration should be given to establishing programs in settings of lower prevalence.

#### Interpretation of HIV-Antibody Test Results

A test for HIV antibody is considered positive when a sequence of tests, starting with a repeatedly reactive enzyme immunoassay (EIA) and including an additional, more specific assay, such as a Western blot, are consistently reactive.

The *sensitivity* of the currently licensed EIA test is 99% or greater when performed under optimal laboratory conditions. Given this performance, the probability of a false-negative test result is remote, except during the first weeks after infection, before antibody is detectable.

The *specificity* of the currently licensed EIA tests is approximately 99% when repeatedly reactive tests are considered. Repeat testing of specimens initially reactive by EIA is required to reduce the likelihood of false-positive test results due to laboratory error. To further increase the specificity of the testing process, laboratories must use a supplement-

tal test—most often the Western blot test—to validate repeatedly reactive EIA results. The sensitivity of the licensed Western blot test is comparable to that of the EIA, and it is highly specific when strict criteria are used for interpretation. Under ideal circumstances, the probability that a testing sequence will be falsely positive in a population with a low rate of infection ranges from less than 1 in 100,000 (Minnesota Department of Health, unpublished data) to an estimated 5 in 100,000 (3,4). Laboratories using different Western blot reagents or other tests or using less stringent interpretive criteria may experience higher rates of false-positive results.

Laboratories should carefully guard against human errors, which are likely to be the most common source of false-positive test results. All laboratories should anticipate the need for assuring quality performance of tests for HIV antibody by training personnel, establishing quality controls, and participating in performance evaluation systems. Health department laboratories should facilitate the quality assurance of the performance of laboratories in their jurisdiction.

#### Guidelines for Counseling and Testing for HIV Antibody

These guidelines are based on public health considerations for HIV testing, including the principles of counseling before and after testing, confidentiality of personal information, and the understanding that a person may decline to be tested without being denied health care or

other services, except where testing is required by law (5). Counseling before testing may not be practical when screening for HIV antibody is required. This is true for donors of blood, organs, and tissue; prisoners; and immigrants for whom testing is a Federal requirement as well as for persons admitted to state correctional institutions in states that require testing. When there is no counseling before testing, persons should be informed that testing for HIV antibody will be performed, that individual results will be kept confidential to the extent permitted by law, and that appropriate counseling will be offered. Individual counseling of those who are either HIV-antibody positive or at continuing risk for HIV infection is critical for reducing further transmission and for ensuring timely medical care.

Specific recommendations follow:

1. *Persons who may have sexually transmitted disease.* All persons seeking treatment for a sexually transmitted disease, in all health-care settings including the offices of private physicians, should be routinely\* counseled and tested for HIV antibody.
2. *IV-drug abusers.* All persons seeking treatment for IV-drug abuse or having a history of IV-

\*"Routine counseling and testing" is defined as a policy to provide these services to all clients after informing them that testing will be done. Except where testing is required by law, individuals have the right to decline to be tested without being denied health care or other services.





drug abuse should be routinely counseled and tested for HIV antibody. Medical professionals in all health-care settings, including prison clinics, should seek a history of IV-drug abuse from patients and should be aware of its implications for HIV infection. In addition, state and local health policy makers should address the following issues:

- Treatment programs for IV-drug abusers should be sufficiently available to allow persons seeking assistance to enter promptly and be encouraged to alter the behavior that places them and others at risk for HIV infection.
  - Outreach programs for IV-drug abusers should be undertaken to increase their knowledge of AIDS and of ways to prevent HIV infection, to encourage them to obtain counseling and testing for HIV antibody, and to persuade them to be treated for substance abuse.
3. *Persons who consider themselves at risk.* All persons who consider themselves at risk for HIV infection should be counseled and offered testing for HIV antibody.
  4. *Women of childbearing age.* All women of childbearing age with identifiable risks for HIV infection should be routinely counseled and tested for HIV antibody, regardless of the health-care setting. Each encounter between a health-care provider and a woman at risk and/or her sexual partners is an opportunity to reach them with information and education about AIDS and prevention of HIV infection. Women are at risk for HIV infection if they:
    - Have used IV drugs.
    - Have engaged in prostitution.
    - Have had sexual partners who are infected or are at risk for infection because they are bisexual or are IV-drug abusers or hemophiliacs.
    - Are living in communities or were born in countries where there is a known or suspected high prevalence of infection among women.
    - Received a transfusion before blood was being screened for HIV antibody but after HIV infection occurred in the United

States (e.g., between 1978 and 1985).

Educating and testing these women before they become pregnant allows them to avoid pregnancy and subsequent intrauterine perinatal infection of their infants (30%-50% of the infants born to HIV-infected women will also be infected).

All pregnant women at risk for HIV infection should be routinely counseled and tested for HIV antibody. Identifying pregnant women with HIV infection as early in pregnancy as possible is important for ensuring appropriate medical care for these women; for planning medical care for their infants; and for providing counseling on family planning, future pregnancies, and the



risk of sexual transmission of HIV to others.

All women who seek family planning services and who are at risk for HIV infection should be routinely counseled about AIDS and HIV infection and tested for HIV antibody. Decisions about the need for counseling and testing programs in a community should be based on the best available estimates of the prevalence of HIV infection and the demographic variables of infection.

5. *Persons planning marriage.* All persons considering marriage should be given information about AIDS, HIV infection, and the availability of counseling and testing for HIV antibody. Decisions about instituting routine or mandatory premarital testing for HIV antibody should take into

account the prevalence of HIV infection in the area and/or population group as well as other factors and should be based upon the likely cost-effectiveness of such testing in preventing further spread of infection. Premarital testing in an area with a prevalence of HIV infection as low as 0.1% may be justified if reaching an infected person through testing can prevent subsequent transmission to the spouse or prevent pregnancy in a woman who is infected.

6. *Persons undergoing medical evaluation or treatment.* Testing for HIV antibody is a useful diagnostic tool for evaluating patients with selected clinical signs and symptoms such as generalized lymphadenopathy; unexplained dementia; chronic, unexplained fever or diarrhea; unexplained weight loss; or diseases such as tuberculosis as well as sexually transmitted diseases, generalized herpes, and chronic candidiasis.

Since persons infected with both HIV and the tubercle bacillus are at high risk for severe clinical tuberculosis, all patients with tuberculosis should be routinely counseled and tested for HIV antibody (6). Guidelines for managing patients with both HIV and tuberculous infection have been published (7).

The risk of HIV infection from transfusions of blood or blood components from 1978-1985 was greatest for persons receiving large numbers of units of blood collected from areas with high incidences of AIDS. Persons who have this increased risk should be counseled about the potential risk of HIV infection and should be offered antibody testing (8).

7. *Persons admitted to hospitals.* Hospitals, in conjunction with state and local health departments, should periodically determine the prevalence of HIV infections in the age groups at highest risk for infection. Consideration should be given to routine testing in those age groups deemed to have a high prevalence of HIV infection.
8. *Persons in correctional systems.* Correctional systems should study the best means of imple-

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menting programs for counseling inmates about HIV infection and for testing them for such infection at admission and discharge from the system. In particular, they should examine the usefulness of these programs in preventing further transmission of HIV infection and the impact of the testing programs on both the inmates and the correctional system (9).

9. *Prostitutes.* Male and female prostitutes should be counseled and tested and made aware of the risks of HIV infection to themselves and others. Particularly prostitutes who are HIV-antibody positive should be instructed to discontinue the practice of prostitution. Local or state jurisdictions should adopt procedures to assure that these instructions are followed.

#### **Partner Notification/Contact Tracing**

Sexual partners and those who share needles with HIV-infected persons are at risk for HIV infection and should be routinely counseled and tested for HIV antibody. Persons who are HIV-antibody positive should be instructed in how to notify their partners and to refer them for counseling and testing. If they are unwilling to notify their partners or if it cannot be assured that their partners will seek counseling, physicians or health department personnel should use confidential procedures to assure that the partners are notified.

#### **Confidentiality and Antidiscrimination Considerations**

The ability of health departments, hospitals, and other health-care providers and institutions to assure confidentiality of patient information and the public's confidence in that ability are crucial to efforts to increase the number of persons being counseled and tested for HIV infection. Moreover, to assure broad participation in the counseling and testing programs, it is of equal or greater importance that the public perceive that persons found to be positive will not be subject to inappropriate discrimination.

Every reasonable effort should be made to improve confidentiality of test results. The confidentiality of



related records can be improved by a careful review of actual record-keeping practices and by assessing the degree to which these records can be protected under applicable state laws. State laws should be examined and strengthened when found necessary. Because of the wide scope of "need-to-know" situations, because of the possibility of inappropriate disclosures, and because of established authorization procedures for releasing records, it is recognized that there is no perfect solution to confidentiality problems in all situations. Whether disclosures of HIV-testing information are deliberate, inadvertent, or simply unavoidable, public health policy needs to carefully consider ways to reduce the harmful impact of such disclosures.

Public health prevention policy to reduce the transmission of HIV infection can be furthered by an expanded program of counseling and testing for HIV antibody, but the extent to which these programs are successful depends on the level of participation. Persons are more likely to participate in counseling and testing programs if they believe

that they will not experience negative consequences in areas such as employment, school admission, housing, and medical services should they test positive. There is no known medical reason to avoid an infected person in these and ordinary social situations since the cumulative evidence is strong that HIV infection is not spread through casual contact. It is essential to the success of counseling and testing programs that persons who are tested for HIV are not subjected to inappropriate discrimination.

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Reprinted from *MMWR* 1987;36:509-15.

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## Have an Idea for the *Bulletin*?

The editor welcomes any reports of cases, outbreaks, or public health problems of interest to the *Bulletin's* readers. Such accounts and any other comments or suggestions re-

garding the *Bulletin* should be addressed to: Editor, Epidemiology Bulletin, Office of Epidemiology, Room 700, 109 Governor Street, Richmond, Virginia 23219.

Cases of selected notifiable diseases, Virginia, for the period November 1, through November 30, 1987.

Disease	State					Regions				
	This Month	Last Month	Total to Date		Mean 5 Year To Date	This Month				
			1986	1987		N.W.	N.	S.W.	C.	E.
Measles	0	0	60	1	26	0	0	0	0	0
Mumps	7	4	44	80	37	1	0	1	0	5
Pertussis	3	2	41	52	31	0	0	1	2	0
Rubella	0	0	0	1	3	0	0	0	0	0
Meningitis—Aseptic	19	63	291	260	295	1	5	1	2	10
*Bacterial	10	21	225	158	214	1	2	1	2	4
Hepatitis A (Infectious)	14	24	132	224	138	2	5	5	0	2
B (SERUM)	40	28	497	411	489	9	3	5	9	14
NON-A, NON-B	0	6	70	46	79	0	0	0	0	0
Salmonellosis	101	270	1385	1719	1381	10	22	23	16	30
Shigellosis	23	35	91	214	144	5	5	4	3	6
Campylobacter Infections	74	61	551	590	549	11	12	13	14	24
Tuberculosis	26	44	350	397	437	2	4	3	7	10
Syphilis (Primary & Secondary)	30	51	318	297	421	1	6	0	12	11
Gonorrhea	865	1354	17475	13332	18549	—	—	—	—	—
Rocky Mountain Spotted Fever	2	2	51	21	51	1	0	0	0	1
Rabies in Animals	24	31	189	340	359	12	0	3	6	3
Meningococcal Infections	5	4	71	67	65	0	1	2	1	1
Influenza	3	1	4134	1264	1508	0	0	0	2	1
Toxic Shock Syndrome	0	1	8	1	7	0	0	0	0	0
Reye Syndrome	0	0	2	0	4	0	0	0	0	0
Legionellosis	3	1	25	11	24	0	1	0	2	0
Kawasaki's Disease	4	1	23	25	23	0	0	0	2	2
Acquired Immunodeficiency Syndrome	34	18	158	225	—	2	19	0	6	7

**Counties Reporting Animal Rabies:** Alleghany 1 raccoon; Augusta 1 raccoon, 2 skunks; Chesterfield 2 raccoons; Culpeper 1 raccoon; Giles 1 fox; Henrico 1 skunk; Highland 1 dog, 1 skunk; King William 2 skunks; Madison 1 raccoon; New Kent 1 cat, 1 skunk; Northumberland 1 raccoon; Page 1 skunk; Powhatan 1 raccoon; Rockingham 3 skunks; Shenandoah 1 raccoon; Washington 1 skunk.

**Occupational Illnesses:** Asbestosis 18; Carpal tunnel syndrome 20; Dermatitis 1; Loss of Hearing 9; Mesothelioma 2; Pneumoconioses 33; Silicosis 2.

\*other than meningococcal

Published Monthly by the  
**VIRGINIA HEALTH DEPARTMENT**  
 Office of Epidemiology  
 109 Governor Street  
 Richmond, Virginia 23219

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