



Advancing HIV Prevention

New Strategies for a Changing Epidemic

Advancing HIV Prevention: Interim Technical Guidance for Selected Interventions

DEPARTMENT OF HEALTH AND HUMAN SERVICES
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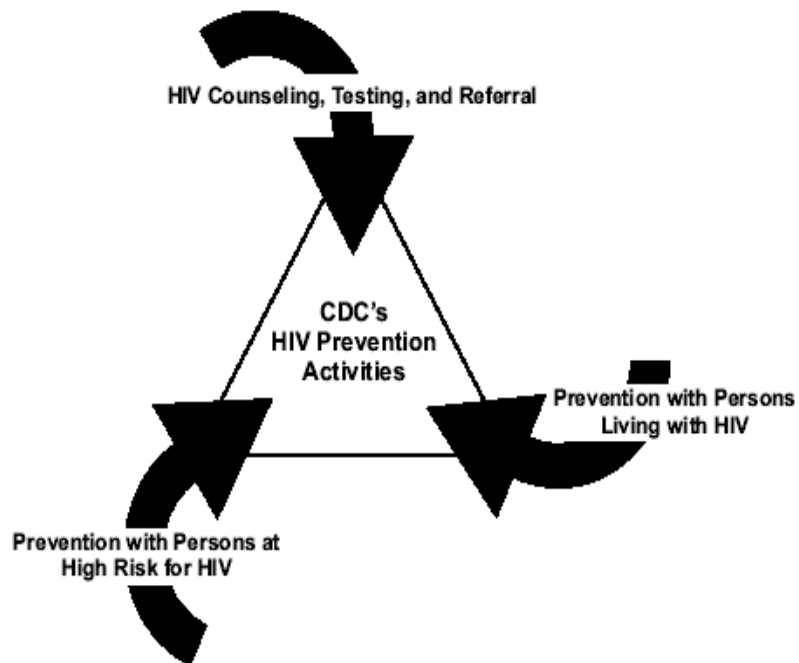
Introduction

Since the first cases of HIV/AIDS were recognized in 1981, the Centers for Disease Control and Prevention (CDC) and its partners have worked to combat the epidemic. Our goal has always been to stop transmission and reduce the burden of HIV/AIDS. The new initiative, *Advancing HIV Prevention: New Strategies for a Changing Epidemic* (MMWR April 18, 2003; 52:329-356), supports the prevention work of the past two decades and expands and strengthens our efforts by modeling new strategies on proven approaches that have been used successfully in preventing other infectious diseases.

Stable HIV-associated morbidity and mortality, concerns about possible increases in HIV incidence, and the recent availability of a simple, rapid HIV test combined with strong prevention collaborations among communities heavily affected by HIV support the need to reassess and refocus some of CDC's HIV-prevention activities. An emphasis on greater access to testing and on providing prevention and care services for persons living with HIV can reduce new infections and lead to reductions in HIV-associated morbidity and mortality. In addition, simplifying prenatal and other testing procedures can lead to more effective use of resources that CDC provides to prevent perinatal and other HIV transmission.

CDC's HIV prevention activities over the past two decades have focused on helping uninfected persons at high-risk for acquiring HIV change and maintain behaviors to keep them uninfected. Despite the success of these efforts in reducing HIV incidence in the late 1980's and early 1990's, the number of new HIV infections is estimated to have remained stable around 40,000 per year since the early 1990's and the number of persons living with HIV continues to increase. The next decade promises new hope as three primary areas of HIV prevention are emphasized: early detection of persons who are HIV positive and referral to treatment and care services, prevention for persons living with HIV, and prevention for persons who are at high risk for HIV infection. The new initiative emphasizes the first two of these three areas, broadening our prevention activities to strengthen our fight against HIV.

CDC, other federal agencies, and the HIV prevention community will continue their work to help ensure



prevention efforts in these three areas are sustained and re-energized as an integrated approach. This broad scope will bring the best prevention science to the fight against HIV/AIDS to reduce HIV transmission, including mother-to-child transmission.

Collaboration

The new initiative will require new partnerships with extensive involvement and coordination between CDC, the public health community, and the medical care community. With the support of the federal Department of Health and Human Services, CDC and its partners, including other federal agencies, state and local health departments, community-based organizations, non-governmental providers, and professional organizations, will implement this new initiative and energize our efforts to meet the challenges of this changing epidemic.

CDC is expanding its collaboration with the Health Resources and Services Administration, the American Hospital Association, and private health care providers to coordinate the implementation of this initiative. Partners in implementation include Ryan White Care funded programs, community health centers, hospitals, and private medical plans. CDC is also working with professional medical and nursing organizations, including the American Medical Association, the National Medical Association, the American College of Obstetrics and Gynecology, the American Nursing Association, the HIV Medicine Association of the Infectious Diseases Society of America (IDSA), and the Association of Nurses in AIDS Care to solicit their collaboration and support in the development of practice recommendations, policy statements, and dissemination of the activities of the initiative.

Current Status of HIV/AIDS in the United States

From 1995 through 1998, the annual number of new AIDS cases declined 38% from 69,242 to 42,832, and deaths from AIDS declined 63% from 51,670 to 18,823. Since 1998, the decline has stabilized at approximately 40,000 incident AIDS cases and 16,000 deaths. The number of perinatal AIDS cases has declined 89% from 954 in 1992 to 101 in 2001, however approximately 300 infants are infected through mother-to-child transmission each year.

CDC estimates that 850,000 to 950,000 persons in the United States are living with HIV; of those, an estimated 25% are unaware of their infection. Evidence suggests that as many as two-thirds of the estimated 40,000 new HIV infections each year occur through transmission from persons who are unaware of their HIV-positive status. Many persons receive the diagnosis late in the course of the disease. As many as 40%-45% of persons testing positive for HIV received their first positive test results less than a year before AIDS was diagnosed. With an average of 10 years between HIV infection and an AIDS diagnosis, this suggests that people are living with HIV for many years before they are aware of their infection.

The New Initiative

This new initiative emphasizes the need for HIV testing and prevention efforts in both clinical and non-clinical settings to help increase the number of infected persons who

learn their status and are successfully referred into treatment and prevention services as early as possible. An important strategy is to incorporate HIV screening into medical care services on the same voluntary basis as other medical tests in order to increase the number of persons living with HIV who are aware of their infection.

Testing in non-clinical settings is another area of focus because it is more likely to reach members of racial and ethnic minorities and persons who are at high risk for HIV. Routine testing in correctional facilities, where the prevalence of AIDS among prison populations is 5 times higher than that in the general U.S. population, will help to increase the number of persons who know their HIV status and who get the services they need while in prison and after release.

Partner counseling and referral services (PCRS) can help to ensure early diagnosis and linkage to medical, prevention and other services. In studies of HIV PCRS, 8% to 39% of partners tested had previously undiagnosed HIV infection. A range of available prevention interventions for persons living with HIV offers greater opportunity to meet the prevention needs of persons with HIV infection. These interventions range in intensity from group level interventions for persons with fewer prevention needs to intensive prevention case management for persons with multiple medical and psychosocial challenges.

Although significant reductions have been made in perinatal transmission, 6,000 to 7,000 HIV-infected women gave birth in the United States during 2000, resulting in 280-370 HIV-infected infants. For about 40% of these perinatal transmissions, health care providers were unaware of the mother's HIV infection before delivery.

CDC is aware that increasing the focus on prevention for HIV positive individuals has the potential to be construed as stigmatizing to people with HIV/AIDS. CDC will be conducting a national consultation on HIV/AIDS Stigma in 2003 to discuss strategies to address this problem and to identify specific actions CDC and its partners can take to alleviate the potential for exacerbating the stigma already felt by those living with this disease.

The Strategies

The primary goal of the new initiative—to reduce HIV transmission—is not new. The four strategies identified to help achieve this goal focus directly on reducing barriers to early diagnosis; improving referral to state-of-the-art prevention services, medical care, and treatment; and ensuring that prevention programs are in place to assist people living with HIV. The HIV prevention initiative emphasizes the use of proven public health approaches to reduce incidence and the spread of disease. The initiative consists of four priority strategies:

Strategy 1: Make voluntary testing a routine part of medical care.

Strategy 2: Implement new models for diagnosing HIV infections.

Strategy 3: Prevent new infections by working with persons diagnosed with HIV.

Strategy 4: Further decrease perinatal HIV transmission.

Interim Technical Guidance

As one of the first steps of the new initiative, CDC has drafted this interim technical guidance for HIV prevention grantees. This guidance is just that – information to assist in your efforts to conduct HIV prevention activities. The information in this document is not a dictated set of activities. These are guiding principles, not policies, and we fully expect local experts to modify these interventions to meet the needs of the community served.

This guidance outlines 7 activities to assist with the implementation and achievement of the strategies listed above. We hope that the guidance will enhance your activity-planning efforts and, if appropriate, help spark new ideas and new directions for your current prevention activities. The guidance should also help you plan for related training needs.

The 7 activities described in the guidance are

- Routinely Recommended HIV Testing as Part of Regular Medical Care Services [Strategy 1]
- Rapid Testing in Non-Clinical Settings [Strategy 2]
- Routine Voluntary HIV Testing of Inmates in Correctional Facilities [Strategy 2]
- HIV Partner Counseling and Referral Services [Strategies 2 and 3]
- Risk Reduction for Persons Living with HIV [Strategy 3]
- Prevention in Medical Care Settings [Strategy 3]
- Achieving Universal HIV Testing of Pregnant Women [Strategy 4]

Each section of this document provides detailed background information and current knowledge on the topic; objectives; procedures for implementing strategies; how to work with partners, including overcoming barriers to implementation; a real-life example (vignette) of a current program that uses some or all of the elements in the guidance; and requirements for monitoring and evaluating activities. Each section also includes references to help you find supportive and more in-depth information on each topic, as well as resources for assistance in understanding and implementing programs. CDC is also planning demonstration projects to be conducted in 2003-2005. From these projects and from our experience implementing the interim guidance, a revised guidance will be developed for distribution at a later date.

CDC will provide training and technical assistance to its grantees to ensure that health departments and community-based organizations are equipped to provide the most effective prevention interventions to persons at highest risk for transmitting or acquiring HIV. CDC will provide guidance on implementation of these activities and will continue to improve the procedures based on your feedback and data collected over the coming year. We look forward to continuing our strong partnerships with state and local agencies in the field to implement state-of-the-art prevention interventions in order to reduce the number of new HIV infections.

More people than ever before in the course of the epidemic in the United States are living with HIV. Advances in treatment have made it possible for HIV-infected persons to live longer, healthier lives. CDC sees these persons as essential partners in HIV prevention. This new initiative is designed to give persons easier access to testing to learn their HIV status, receive appropriate treatment and prevention services, and to help protect other at-

risk persons from becoming infected. We see this guidance as a first step in the new initiative to build stronger, more effective programs based on proven public health strategies. These efforts and those to come will help us realize new successes in our fight against this disease and help to build the necessary foundation to effectively target proven interventions and reduce transmission of HIV.

Resources

CDC. Advancing HIV Prevention: New strategies for a changing epidemic. MMWR 2003;52:329-332. Available at: <http://www.cdc.gov/mmwr/PDF/wk/mm5215.pdf>

Advancing HIV Prevention website: <http://www.cdc.gov/hiv/partners/ahp.htm>

State Policy Profiles developed by the Infectious Disease Society of America (IDSA) for the Health Resources and Services Administration (HRSA):

<http://www.hivma.org/HIV/CEN/ToC.htm>

The U.S. Department of Health and Human Services: <http://www.hhs.gov.htm>

Health Resources and Services Administration (HRSA): <http://www.hrsa.gov.htm>

AIDS Education and Training Centers (AETC) National Resource Center (NRC) Web site: <http://www.aids-ed.org>

Routinely Recommended HIV Testing as Part of Regular Medical Care Services

Current Knowledge

In 1987 the Public Health Service recommended that testing for HIV infection be conducted when requested by a patient or recommended by a health care provider on the basis of behavioral risks or clinical symptoms. Despite the number of persons tested on these grounds, many HIV-positive persons have not been diagnosed or have received a diagnosis late in the course of their disease: among persons reported with AIDS, 45% received their first positive HIV test result less than 1 year before AIDS was diagnosed.¹ Thus, many persons, unaware of their HIV infection, are unable to benefit from prevention and care services that can reduce the morbidity and mortality from HIV disease. In addition, they may unwittingly contribute to the continued transmission of HIV infection.

Incorporating HIV screening into routine medical care services in facilities with high HIV prevalence is a promising complementary strategy for increasing the number of HIV-infected individuals who become aware of their infection.² Until now, *testing*, performing a test because of a person's clinical symptoms or behavioral risk factors, has been the predominant paradigm for diagnosing HIV. *Screening*, or performing a test for all persons in a defined population, is a basic, effective public health tool used to identify an unrecognized condition so that treatment can be offered before symptoms develop.³ HIV screening meets all of the generally accepted principles that apply to screening⁴:

- HIV is a serious disease that can be detected before symptoms develop by using a screening test that is reliable, inexpensive, acceptable, and non-invasive.
- Treatment given before symptoms develop, rather than after symptoms develop, is more beneficial for reducing morbidity and mortality.
- Costs in relation to the anticipated benefits are reasonable.

HIV infection in clinics and facilities where the population served has a high prevalence of HIV is comparable to other infectious diseases such as syphilis, tuberculosis, and human papillomavirus, for which screening programs have substantially reduced disease burden and improved health. In low-prevalence facilities, HIV counseling, testing, and referral should continue to be offered to clients based on risk screening.⁵

HIV screening in high prevalence settings makes sense because testing solely on the basis of risks fails to identify many HIV-infected persons.^{6,7,8} Persons with AIDS make multiple visits to hospitals, acute care clinics, and managed-care organizations before their AIDS diagnosis, but are never tested for HIV.⁶ Many providers are uncomfortable discussing risk behavior with their patients,⁹ and many persons may be unaware of, or do not disclose, their own or their partner's risk behaviors.^{10,11} Routine voluntary HIV screening presents an opportunity to reduce the stigma related to HIV testing.^{3,12} Patients are not offended when testing is presented as a policy that applies to all patients because they do not feel singled out as "at-risk."³ More patients accept HIV testing when it is offered routinely than when it is based upon risk assessments.^{11, 12}

Patients' attitudes seem to support routine voluntary HIV screening. Focus groups indicate that many patients, especially those who have been tested for other sexually transmitted diseases (STDs), assume they have been tested for HIV, whether or not such testing was performed. In some communities where HIV infection is common, being screened for HIV is perceived as a part of routine care, similar to regular mammograms and blood pressure checks.¹³

Since 1993, CDC has recommended offering HIV testing routinely to all patients in acute care settings in areas of high HIV prevalence.^{5,14,15} When HIV testing has been offered routinely in high-prevalence, high-volume health care facilities, the proportion of HIV-positive tests (2% to 7% in hospitals and emergency rooms)^{15,16} is similar to or exceeds that observed nationally in publicly funded HIV counseling and testing sites (2.0%) and STD clinics (1.5%).¹⁷

Alternative strategies are necessary to help identify the estimated 25% of persons living with HIV who have not been diagnosed through existing efforts. Incorporating voluntary HIV screening into routine medical care represents a logical step toward achieving this goal.

Objectives

The purpose of this document is to provide guidance for state and local health departments to

- Identify health care facilities that serve populations in which HIV prevalence is high and where routine HIV screening should be instituted
- Design and promote simplified HIV screening procedures to make routine screening feasible in high-volume, high-prevalence health care settings, which may reduce the stigma associated with HIV testing
- Increase the number of persons who undergo HIV screening in medical care facilities, the proportion of persons who receive their HIV test results, and the proportion of HIV-infected persons who receive care

Procedures

Steps for health departments

1. Work with community planning groups to identify health care facilities serving populations in which HIV prevalence is high. Several criteria may be used to guide selection:
 - a) Prevalence data, when available, demonstrating HIV prevalence $\geq 1\%$ among patients served by the facility
 - b) AIDS diagnosis rate of ≥ 1 per 1,000 discharges from hospitals, and in health centers and clinics in the hospital's referral network
 - c) Receipt of funds under Title I or II of the Ryan White Care Act
 - d) Comparison data demonstrating that the facility's patient population is similar to that of other medical care facilities where HIV/AIDS prevalence is high (e.g., demographics, high STD rates).

2. Promote routine HIV screening in the health care facilities through mechanisms such as assessments, social marketing, incentives, assistance with reimbursement, or availability for consultations and support services.
3. Collaborate with CDC and national medical and provider organizations to promote routine HIV screening in medical facilities serving populations in which HIV prevalence is high.
4. Develop guidelines for HIV screening with simplified procedures for risk screening and prevention counseling, when appropriate. Risk screening and prevention counseling may not be appropriate or feasible during episodic or acute care visits and should not become barriers to HIV testing. Medical visits in which prevention counseling is most appropriate are those in which HIV screening and counseling are consistent with the context of the health care visit, including
 - a) In response to patient request
 - b) When the reason for the visit is related to a behavioral or clinical risk, such as substance abuse or symptoms of an STD
 - c) When other health promotion services are usually offered (e.g., as part of comprehensive health assessments, reproductive health care, or family planning)

Collaboration between the health department and the health care facility

Each health care facility where HIV prevalence is high will need to develop an individual plan for implementing routine HIV screening. Health departments should provide consultation and assistance to accomplish the following:

1. Establish the facility's policy for routine HIV screening
2. Operationalize the plan for routine HIV screening:
 - a) Assess patient flow to identify opportunities during the patient visit for incorporating routine HIV screening (e.g., after triage, during waiting periods, or when vital signs are measured).
 - b) Specify which staff will recommend HIV testing (e.g., clinicians, nurses, or both)
 - c) Specify which staff will obtain informed consent. During the visit
 - i. Patients should be given written, culturally appropriate information about HIV infection, testing, and prevention.
 - ii. Patients should be told that HIV testing is routine and is recommended for all patients.
 - iii. Patients should be told that HIV testing is voluntary and that they have the right to refuse testing.
 - d) Determine the HIV testing process best suited for the facility and the patients. The following factors should be considered:
 - i. Type of HIV test (serum test, oral fluid, or rapid test). This may be influenced by whether phlebotomy is readily available, the likelihood that patients will return for results, and the usual duration of patient visits.
 - ii. Location where specimens will be collected or testing performed.
 - iii. Specific staff members who will collect the specimen and/or perform the test.
 - iv. Appropriate communication and documentation of HIV test results.
 - v. Training required for facility staff who will be involved.
 - vi. Maintenance of confidentiality.

3. Promote routine screening to health care providers through informational sessions and by providing tools such as revised patient encounter forms.
4. Promote routine voluntary screening to patients through informational brochures, posters, and waiting room videos, among other communication tools.
5. Promote stepwise integration of routine screening: initially, financial support or health department personnel may be needed to initiate the process and demonstrate the acceptability, feasibility, and effectiveness of routine screening. CDC is funding demonstration projects that will help determine how best to integrate HIV screening into routine care.
6. Establish follow-up procedures for patients who test positive for HIV, including counseling consistent with CDC guidelines and appointment or referral procedures for prevention and care services. Recommendations for counseling and successful referral are outlined in the Appendix. On-site resources (e.g., through facility social workers) should be available for any patient who may require immediate counseling or support.
7. Establish procedures and responsibilities for reporting HIV cases to the health department and for requesting assistance with partner counseling and referral services where appropriate.
8. Establish mechanisms to monitor implementation of routine HIV screening, including the collection of information about the number of patients who are seen in the facility, are offered HIV testing, are tested, and receive their test results.
9. Establish mechanisms for monitoring maintenance of routine HIV screening, including tracking the proportion of patients tested per month.
10. Establish mechanisms to monitor outcomes of this strategy in the facility, including the number of newly diagnosed HIV infections, the proportion of patients who receive their confirmed HIV-positive test results, and the proportion of newly diagnosed patients who enter care and at what stage of disease.
11. Anticipate a decrease in the proportion of HIV positive tests when a facility transitions from risk-based testing to screening.

Working with Partners and Integration into Existing Services

To integrate HIV screening into routine medical care, health departments must rely on medical facilities and community partners. Health departments can facilitate this collaboration by

1. Coordinating activities with programs funded by the Health Resources and Services Administration, including Ryan White Planning Councils and other HIV service delivery organizations, state primary care associations, community and migrant health centers, health care for the homeless, and public housing primary care clinics
2. Coordinating training efforts with AIDS Education and Training Centers
3. Developing a strategy for promoting the support of advocacy groups and community leaders for routine voluntary HIV screening
4. Obtaining endorsements from local medical societies, health care facility administrators, and managed care organizations
5. Supporting implementation through allocation of health department HIV counseling and testing resources.

Programmatic Considerations

Before establishing routine HIV screening, health departments and medical care facilities must consider how to address policy, financial, and resource barriers.

1. Legal, regulatory, and logistical barriers, such as separate informed consent for HIV testing, may challenge the integration of HIV screening into routine medical care in some areas.
2. Individual insurance plans will have different reimbursement policies for HIV tests performed under various International Classification of Disease (ICD) and Current Procedural Terminology (CPT) codes. Some insured patients may prefer not to submit claims for HIV testing. Resources must be identified for patients who do not have the financial resources to pay for the HIV test.
3. Linkages and resources for HIV care need to be in place. HIV care includes prevention and treatment services for persons who test HIV-positive and prevention services for high-risk persons who test HIV-negative.
4. Health departments, medical institutions, and other community agencies must consider how to allocate the resources necessary to appropriately implement HIV screening.

Vignette

In 2000, health care providers at Grady Memorial Hospital in Atlanta, Georgia, recommended voluntary HIV screening for all patients aged 18 to 65 years who were not known to be HIV-positive or who had not been tested during the preceding 6 months.¹⁵ Information brochures and posters encouraging HIV testing were used to promote the new policy. Patients who accepted HIV testing signed a consent form and were tested with either a rapid or a standard enzyme immunoassay (EIA) test. Patients were not charged for the tests. Clinicians, counselors, or trained research staff delivered test results. A physician's assistant contacted HIV-positive persons who had not returned for their test results. Approximately 20,000 clinic visits occurred during both the study period and during the same period in the preceding year when HIV testing had been risk- and symptom-based. During the study period 1,687 more patients were tested during the study period, 27 more HIV infections were diagnosed, and 27 more patients were informed of their HIV-positive test result. Twice as many HIV-positive patients (26 versus 13) entered care, and a higher proportion were tested earlier in the course of infection (based on CD4 T cell counts of >200 cells/ml).

Monitoring Implementation

CDC grantees receiving HIV prevention funds will be required to routinely report the following indicators to monitor their HIV testing programs in medical care facilities.

CDC's HIV Prevention Program Performance Indicators*:

1. Number and percent of newly diagnosed HIV infections in high prevalence settings implementing routine HIV screening (B.1)
2. Percent of newly identified, confirmed HIV-positive test results returned to patients tested (B.2)

Other program measures:

3. Percent of newly identified HIV-positive patients who enter into care, as documented by either a CD4 count or a visit to an HIV-care clinic
4. Stage of infection at time of diagnosis as indicated by CD4 count or presence of AIDS-defining clinical criteria
5. Summary data on the comparison between the performance indicators collected in routine medical care settings to the same performance indicators for all tests reported by CDC-funded HIV counseling, testing, and referral sites in the jurisdiction

* The CDC Technical Assistance Guidelines for Health Department HIV Prevention Program Performance Indicators provides information on setting baseline, target, and indicator specification including appropriate data sources, calculations and reporting issues. Note: Performance indicators may have been modified to reflect specific population or setting characteristics.

References

1. CDC. Late versus early testing of HIV—6 Sites, United States, 2000-2003. *MMWR* 2003; 52:581-6.
2. Freedberg KA, Samet JH. Think HIV: Why physicians should lower their threshold for HIV testing. *Arch Intern Med* 1999;159:1994-2000.
3. Institute of Medicine, National Research Council. Reducing the odds: Preventing perinatal transmission of HIV in the United States. Washington, DC: National Academy Press, 1999.
4. Wilson JM, Junger CT. Principles and practice of screening for disease. *World Health Organization Public Health Paper* 34; 1968.
5. CDC. Revised guidelines for HIV counseling, testing, and referral. *MMWR* 2001;50(No RR-19);1-58. <http://www.cdc.gov/mmwr/PDF/rr/rr5019.pdf>
6. Klein D, Hurley LB, Merrill D, Quesenberry Jr CP. Review of medical encounters in the 5 years before a diagnosis of HIV-1 infection: Implications for early detection. *JAIDS* 2003;32:143-152.
7. Chen Z, Branson B, Ballenger A, Peterman TA. Risk assessment to improve targeting of HIV counseling and testing services for STD clinic patients. *Sex Transm Dis* 1998;25:539-543.
8. Alpert PL, Shuter J, DeShaw MG, Webber MP, Klein RS. Factors associated with unrecognized HIV-1 infection in an inner-city emergency department. *Ann Emerg Med* 1996;28:159-164.
9. Epstein RM, Morse DS, Frankel RM, Frarey L, Anderson K, Beckman HB. Awkward moments in patient-physician communication about HIV risk. *Annals of Internal Medicine* 1998;128(6):435-442.
10. Kellerman SE, Lehman JS, Lansky A, Stevens MR, Hecht FM, Bindman AB, Wortley PM. HIV testing within at-risk populations in the United States and the reasons for seeking or avoiding HIV testing. *JAIDS* 2002;31(2), 202-10.
11. Walensky RP, Losina E, Steger-Craven KA, Freedberg KA. Identifying undiagnosed human immunodeficiency virus: The yield of routine, voluntary inpatient testing. *Arch Intern Med* 2002;162:887-892.

12. Irwin KL, Valdiserri RO, Holmberg SD. The acceptability of voluntary HIV antibody testing in the United States: A decade of lessons learned. *AIDS* 1996;10(14):1707-17.
13. Vernon KA, Mulia N, Downing M, Knight K, Riess T. "I don't know when it might pop up": Understanding repeat HIV testing and perceptions of HIV among drug users. *Journal of Substance Abuse* 2001;13:215-27.
14. CDC. Recommendations for HIV testing services for inpatients and outpatients in acute-care hospital settings. *MMWR* 1993;42(No. RR-2):1-6.
<http://www.cdc.gov/mmwr/PDF/rr/rr4202.pdf>
15. CDC. Routinely recommended HIV testing at an urban urgent-care clinic – Atlanta, Georgia, 2000. *MMWR* 2001;50:538-541.
<http://www.cdc.gov/mmwr/PDF/wk/mm5025.pdf>
16. Kelen GD, Shahan JB, Quinn TC. Emergency department-based HIV screening and counseling: experience with rapid and standard serologic testing. *Ann Emerg Med* 1999;33:147-155.
17. CDC. Anonymous or confidential HIV counseling and voluntary testing in federally funded testing sites – United States, 1995-1997. *MMWR* 1999;48(24):509-13.
<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4824a1.htm>.

Resources

Patient Flow Analysis (PFA). http://www.cdc.gov/nccdphp/drh/sata_pfa_ssd_new.htm

Recommendations for HIV testing services for inpatients and outpatients in acute-care hospital settings. *MMWR* 1993;42(no. RR-2).
<http://www.cdc.gov/mmwr/PDF/rr/rr4202.pdf>

Revised Guidelines for HIV Counseling, Testing, and Referral. *MMWR* 2001: 50(No. RR-19);1-58. <http://www.cdc.gov/mmwr/PDF/rr/rr5019.pdf>

Routinely recommended HIV testing at an urban urgent-care clinic – Atlanta, Georgia, 2000. *MMWR* 2001;50:538-541. <http://www.cdc.gov/mmwr/PDF/wk/mm5025.pdf>

CDC. Technical Assistance Guidelines for CDC's HIV Prevention Program Performance Indicators. <http://www.cdc.gov/hiv/dhap.htm>

Rapid HIV Testing in Non-Clinical Settings

Current Knowledge

Outreach efforts for HIV prevention activities provide access to hard-to-reach populations at high risk for HIV. Numerous jurisdictions offer counseling and testing for HIV in non-clinical settings, often through the use of mobile vans. The U.S. Food and Drug Administration's (FDA's) approval of oral fluid HIV testing in 1994 greatly expanded opportunities for offering HIV testing in settings that were not suitable for drawing, handling, and storing blood specimens.

Testing programs in non-clinical venues are more likely to reach members of some racial and ethnic minorities and persons at increased risk for HIV. Compared with persons tested at conventional testing sites, those tested at non-clinical sites were twice as likely to report high-risk heterosexual contacts and 3 to 4 times as likely to report injection drug use or male-to-male sex.¹ A California outreach program called Neighborhood Interventions Geared to High-risk Testing (NIGHT) offers street outreach, HIV counseling and testing, and referrals through the use of mobile vans. NIGHT was the source of more than 104,000 tests during 1997 and 2001. Compared with other testing sources, NIGHT reached a higher proportion of African Americans (28% versus 13%), injection drug users (23% versus 11%), stimulant drug users (45% versus 25%), and commercial sex workers (12% versus 5%).²

The rate of HIV-positive tests in non-clinical settings is generally high and consistently higher than at conventional testing sites.¹ In Wisconsin, persons tested in outreach were 23% more likely to test HIV-positive than those tested in clinics.³ Of the 597 persons tested in mobile vans and street outreach in a 1999 initiative to enhance prevention efforts in African American and Latino communities in 4 U.S. cities, 8.7% were HIV-positive.⁴ In South Carolina, 54% of men approached in a gay bar agreed to oral fluid testing; although 78% had been tested before, 6% were newly diagnosed with HIV.⁵ In CDC's Young Men's Survey in 7 cities, a total of 3,592 15-to-22-year-old men who have sex with men approached in 194 non-clinical testing settings (public venues) consented to HIV testing. Overall prevalence was 7.2%. Although 79% of the men had been tested previously, 203 (82%) of the 249 HIV-positive men did not know that they were currently HIV-positive.⁶

Unfortunately, many persons tested in non-clinical settings do not return for their test results. CDC's national data from 2000 indicate that results from nearly half of the HIV-positive tests performed in non-clinical settings were never received. In California's NIGHT program, mobile testing clients were three times less likely to receive their test results than clients tested at conventional sites. In contrast, limited experience to date with rapid testing in outreach programs is encouraging. In a Minnesota program, an outreach worker regularly visited community-based organizations (CBOs), homeless shelters, chemical dependency programs, and needle exchange programs to offer rapid HIV testing. When results were provided the same day, 99.9% of those tested received their HIV test results.⁷

Interviews of persons at non-clinical settings reveal features important to the success of this type of testing. For high-risk persons at a needle exchange program and gay bath houses, 36% of those who had never been tested and 28% of those who had delayed testing gave “not wanting to go to a clinic” as their reason.⁸ Participants in other testing initiatives cite a desire to receive HIV results immediately and a need for testing during expanded hours as important reasons to increase alternative testing opportunities.⁹

The recent FDA approval of the OraQuick Rapid HIV-1 Antibody Test, which can be suitable for use in selected non-clinical settings and can provide results in 20 minutes, offers an opportunity to take advantage of the benefits of outreach testing and ensure that tested persons receive their results.

Objectives

The purpose of this document is to provide guidance for state and local health departments* and collaborating CBOs to

- Select appropriate non-clinical settings where persons at risk for HIV infection can receive rapid HIV testing
- Build capacity in organizations serving high-risk populations in these settings to conduct HIV counseling, testing, and referral using rapid HIV tests
- Implement rapid HIV testing programs in these settings among populations at high risk to identify persons whose HIV infection has not been diagnosed

*Although the testing sites will be in CBOs or other non-clinical venues, the linkages and medical technology transfer to implement these programs will require facilitation by health departments or other medical and laboratory partners. Thus, the information presented here focuses both on health departments and non-clinical providers.

Procedures

Steps for health departments

1. Collaborate with community planning groups, community-based service-providers, and representatives of populations at high risk for HIV to develop an epidemiologic profile of populations in their communities in which HIV infection is likely to be under-diagnosed because people (a) do not recognize they are at risk for HIV infection and/or (b) do not use traditional HIV counseling, testing, and referral services.
2. Seek input to identify venues where high-risk persons who are likely to benefit from intervention programs are known to spend time and where rapid HIV testing could be provided without appointments, with little waiting time, and with no barriers such as transportation. In communities where the HIV Testing Survey (HITS) has been conducted, those data may be helpful in selecting appropriate venues (See Attachment).
3. Solicit suggestions from community groups and members of high-risk populations about organizations that have demonstrated access to and established trust among these populations. Health departments should identify CBOs and other non-clinical settings where these populations can receive HIV rapid testing, counseling, and referral.

4. Establish partnerships with other organizations that have contact with high-risk populations. An incremental approach will be important, beginning with a small group of identified organizations in a limited number of non-clinical venues to work on the initial development and implementation process (steps 5 and 6). Then, using an iterative process, successful programs can continue while lessons learned from successful and unsuccessful programs can improve procedures that will be used in initiating additional groups of programs.
5. Hold meetings with the first (or next) group of potential partner organizations to explain the need for rapid HIV testing in non-clinical settings and gain their support and suggestions on how to implement this activity.
6. Implement and evaluate testing programs, a few sites at a time, to learn what works, what is needed to support a successful program, and what other types of venues would support testing. As lessons are learned, begin a new wave of counseling and testing programs in non-clinical settings (step 4).

Steps for CBOs

1. Determine the feasibility of implementing rapid HIV testing by assessing the following: does the setting have acceptable lighting, temperature control, and private space for providing test results? Is a suitable location that is convenient to the venue available (e.g., if offering testing to clients of a needle exchange program)? Do members of the priority population remain at the venue long enough to receive counseling, testing, and results?
2. Establish a written agreement between the CBO and the health department and/or a laboratory to ensure compliance with the Clinical Laboratory Improvement Amendments (CLIA) and state and local regulations and policies. A clear supervisory structure should be delineated to ensure responsibility for training and guidance, oversight for testing procedures, and coordination.
3. Establish linkages with a laboratory for confirmatory testing of preliminary positive rapid test specimens. This relationship should be formalized with appropriate documentation.
4. Arrange linkages between organizations at different testing venues and appropriate medical and social referrals (e.g., housing, Medicaid, partner counseling and referral services) for comprehensive follow-up care of persons who have HIV infection.
5. Establish procedures and responsibilities for reporting HIV cases to the health department.
6. Collaborate with CDC to develop, implement, and monitor training programs to train non-clinical providers to perform rapid HIV testing. Essential training elements include how to
 - a) Perform the test, including procedures performed before, during, and after testing
 - b) Integrate testing into the overall counseling and testing program
 - c) Develop and implement a quality assurance (QA) program
 - d) Collect and transport specimens for confirmatory testing
 - e) Document and deliver confirmatory testing results to persons whose rapid test results had been preliminary positive
 - f) Comply with universal and biohazard safety precautions
 - g) Ensure confidentiality and data security

- h) Ensure compliance with relevant state or local regulations
7. Evaluate readiness to perform rapid HIV testing.
8. Establish a system to document consent for testing and test results, and to track specimens sent for confirmatory testing. A central record keeping system could be established for multiple testing sites working under the umbrella of one health department or CBO.
9. Obtain detailed locating information on clients whose test results are preliminary positive so that they can be contacted and encouraged to come in for care if they fail to return for their follow-up appointment. The health department and the testing program should specify who is responsible for follow-up if clients fail to return for confirmatory test results.
10. Assemble the testing supplies for easy storage and transportation to each testing site. Individually packaged rapid test kits include all the supplies and materials necessary to facilitate single client testing in non-clinical settings.
11. Provide routine QA monitoring at non-clinical testing sites, especially the appropriate handling of infectious waste, compliance with the regulations of the Occupational Safety and Health Administration, and an exposure control plan for potential occupational exposures.

Working with Partners and Integration into Existing Services

1. Providing HIV testing in non-clinical settings such as bars, bathhouses, and needle exchange programs may pose risks to staff safety. Safety training should be included in the development of testing programs, and appropriate precautions (e.g., working in teams) should be specified. Agreements with law enforcement, owners of social venues such as bathhouses or sex clubs, neighborhood associations, and other key partners should be established before testing activities begin.
2. Clients offered HIV testing at non-clinical venues may be under the influence of alcohol or drugs or have chronic mental health conditions, any of which may interfere with their ability to provide informed consent for voluntary HIV testing, or to understand test results. The CBO and the health department should work with community mental health providers to establish guidelines and define sobriety standards for counselors to use to determine when clients are not competent to provide consent. These guidelines should be unambiguous and easy to implement.
3. After preliminary positive rapid test results have been provided, follow-up procedures should be in place to facilitate entry to care. For example, consideration should be given to scheduling a specific appointment at the referral medical center where confirmatory test results will be provided. HIV counselors from the non-clinical site may accompany clients to the medical center to provide support and ensure continuity of care.
4. After confirmed HIV-positive results have been delivered, it may be appropriate for counselors who have established good relationships with their clients to begin eliciting information about partners or to link clients to the partner, counseling, and referral services of their health department partner.

Programmatic Considerations

1. Legal and regulatory barriers, such as state prohibitions, health department policies, or state laboratory regulations against giving preliminary HIV test results may challenge the implementation of rapid HIV testing in non-clinical settings. Consideration should be given, where appropriate, to eliminating such barriers.
2. To provide accountability and continuity in collaborations, a key contact should be identified at the health department and at each testing site and community-based program conducting rapid HIV testing.
3. Linkages and resources for HIV care that are population specific must be identified and made available to non-clinical personnel who are providing HIV test results. These resources include treatment, prevention, and social services for persons who test HIV-positive and prevention services for high-risk persons who test HIV-negative.
4. For all HIV testing, specific written policies and procedures for ensuring confidentiality must be in place.

Vignette

In 2002, an HIV testing program using OraQuick HIV-1 test kits was implemented in Minneapolis, Minnesota. By working with various CBOs, the program was able to focus on specific geographic areas, ethnic groups, and persons who engaged in high-risk behaviors (e.g., injection drug users) and who had been identified as priority populations within the community. Before conducting testing at a given CBO, the testing team did an initial planning visit. They met with the staff and learned about their program. Asking: How can HIV counseling and testing best fit into their schedule? Are there times when they are already talking about HIV prevention, so that HIV testing might be more readily accepted? At this planning visit the CBO staff members learned about the testing program, including information about the OraQuick test, patterns of client referral, and the need for client confidentiality.

Also at this visit, the team evaluated the physical space of the facility. Most CBOs had an adequate meeting area that could be used as a pretest counseling room for groups. Finding rooms for individual testing and posttest counseling posed a greater challenge. The team asked about time constraints. What will the clients do while they are waiting to be tested and waiting for test results?

The CBOs determined how much client education was necessary. Some programs had a very structured HIV prevention class, where testing was planned immediately after the HIV prevention session. Other CBOs, such as homeless shelters, typically did not have structured health talks, so the HIV information provided had to be more complete.

After group pretest counseling, the team members adjourned to the space for individual testing. They enlisted a CBO staff member to direct and maintain a steady, efficient flow of clients through the process. They performed the OraQuick testing procedure as described in the package insert, using what is called the one-worker approach. After setting up the necessary supplies, the worker performed the test with Client A, set timer A for 20 minutes, and recorded the start time for Client A's test. Client B came in as

Client A left. The worker then set out the supplies for the next test and followed the same procedure as before. Just as Client B was leaving, the timer went off for Client A. The worker read and recorded the test results and then conducted posttest counseling with Client A. An advantage of the one-worker approach is that one person can be efficient. The continuity for the client is good because the same worker does pretest counseling, testing, and posttest counseling. A disadvantage of this approach is that workers can get “assembly line fatigue,” and special procedures may be needed if a test result is positive and more complex posttest counseling is necessary. Multitasking skills are needed. At large venues, as many as four workers have conducted testing at one time.

Monitoring Implementation

CDC grantees receiving HIV prevention funds will be required to routinely report the following indicators to monitor their HIV testing programs in non-clinical settings.

CDC’s HIV Prevention Program Performance Indicators* :

1. Number and percent of newly diagnosed HIV infections in non-clinical settings (B.1)
2. Percent of newly identified, confirmed HIV-positive test results returned to clients tested in non-clinical settings (B.2)
3. Percent of facilities reporting a prevalence of HIV-positive tests equal to or greater than the jurisdiction’s target set in B.1 (B.3)

Other program measures:

4. Percent of newly identified HIV-positive patients who enter care services and whose medical records contain documentation such as a CD4 count or a visit to an HIV care clinic, if feasible to ascertain
6. Summary data on the comparison between the performance indicators collected in non-clinical settings to the same performance indicators for all tests reported by CDC-funded HIV counseling, testing, and referral sites in the jurisdiction

* The CDC Technical Assistance Guidelines for Health Department HIV Prevention Program Performance Indicators provides information on setting baseline, target, and indicator specification including appropriate data sources, calculations and reporting issues. Note: Performance indicators may have been modified to reflect specific population or setting characteristics.

References

1. Greby S, Frey B, Royalty J, et al. Use of simple oral fluid HIV-tests in CDC-funded facilities. In: Program and abstracts of the XIV International Conference on AIDS; July 2002; Barcelona, Spain. Abstract TuPeD4991.
2. Rasmussen H, Chen M, Myrick R, Truax S. An evaluation of California’s neighborhood interventions geared to high-risk testing (NIGHT) outreach program. In: Program and abstracts of the XIV International Conference on AIDS; July 2002; Barcelona, Spain. Abstract ThOrD1401.
3. DiFrancesco W, Holtgrave DR, Hoxie N, et al. HIV seropositivity rates in outreach-based counseling and testing services: program evaluation. *J Acquir Immune Defic Syndr* 1998;19:282-288.

4. Dean HD, Gates CH. Conducting HIV counseling, testing and referral within the context of rapid assessment, response and evaluation in crisis response team cities. In: Program and abstracts of the XIV International Conference on AIDS; July 2002; Barcelona, Spain. Abstract MoPeF3980.
5. Sy FS, Rhodes SD, Choi ST, et al. The acceptability of oral fluid testing for HIV antibodies: a pilot study in gay bars in a predominantly rural state. *Sex Transm Dis* 1998; 25:211-215.
6. Valleroy LA, MacKellar DA, Karon JM, et al. HIV prevalence and associated risks in young men who have sex with men. *JAMA* 2000;284:198-204.
7. Keenan PA, Keenan JM. Rapid HIV testing in urban outreach: a strategy for improving posttest counseling rates. *AIDS Educ Prev* 2001;13:541-550.
8. Molitor F, Bell RA, Truax SR, et al. Predictors of failure to return for HIV test result and counseling by test site type. *AIDS Educ Prev* 1999;11:1-13.
9. Spielberg F, Branson BM, Goldbaum GM, et al. Overcoming barriers to HIV testing: preferences for new strategies among clients of a needle exchange, a sexually transmitted disease clinic, and sex venues for men who have sex with men. *J Acquir Immune Defic Syndr* 2003;32:318-328.

Resources

CDC. Revised Guidelines for HIV Counseling, Testing, and Referral.
<http://www.cdc.gov/mmwr/PDF/rr/rr5019.pdf>

CLIA application and requirements: www.cms.hhs.gov/clia

NASTAD Primer on implementing rapid HIV testing:
<http://www.nastad.org/PDF/RAPIDIPRIMER.PDF>

Product information, OraQuick Rapid HIV-1 Antibody Test:
<http://www.orasure.com/products/>

Quality Assurance Guidelines for Testing Using the Oraquick Rapid HIV-1 Antibody Test: http://www.cdc.gov/hiv/rapid_testing/materials/QA_Guidelines_OraQuick.pdf

Rapid HIV Testing: www.cdc.gov/hiv/rapid_testing

CDC. Technical Assistance Guidelines for CDC's HIV Prevention Program Performance Indicators. <http://www.cdc.gov/hiv/dhap>

Attachment 1 – Rapid Testing in Non-Clinical Settings

HIV Testing Survey

Overview

The HIV Testing Survey (HITS) was funded by CDC in various sites from 1996-2002 through HIV/AIDS Surveillance cooperative agreement funds. HITS monitored HIV testing patterns by assessing reasons for seeking or avoiding testing, examining knowledge of state policies for HIV surveillance, and assessing HIV testing patterns among persons at high risk for HIV. In addition, HITS collected behavioral risk information from persons at high risk for infection.

HITS was anonymous and cross-sectional and surveyed populations at high risk for HIV infection. The core populations included men who have sex with men (MSM), injection drug users (IDUs), and heterosexual adults at high risk. Areas had the option of sampling a population of local interest. To recruit HITS participants, the study was conducted in several cities within a state (generally) at 3 venues: gay bars, street locations in areas of heavy drug use, and sexually transmitted disease (STD) clinics. At least 100 persons in each population group were interviewed. This number meant that each participating state had a minimum sample of 300 persons. Persons who had not been tested or who did not report that they had tested HIV-positive were interviewed. Persons who reported they were HIV-negative were interviewed as well.

Population

Regardless of the venue, persons who were at least 18 years of age, who were able to give informed consent, and had resided in the state for at least 1 year were eligible for an interview. In addition, the following behavioral criteria applied for each risk group: men at MSM venues (e.g., gay bars) if they had had sex with a man within the past 12 months; IDUs if they had injected drugs within the past 12 months; and heterosexual adults at high risk who had come to an STD clinic because of a suspected STD, had not been treated during the past 90 days, were not at the clinic because of referral or follow-up, and had not had homosexual sex within the past 12 months.

Location of HITS and year(s) of survey

HITS-I (1996): Arizona, Colorado, Maryland, Missouri, Mississippi, New Mexico, North Carolina, Oregon, Texas. HITS-II (1998): Arizona, Colorado, Missouri, Mississippi, New Mexico, Oregon, Texas. HITS-2000: Florida, Illinois, Kansas, Nevada, New York, Texas, Washington, and New York City. HITS-2001: California, Louisiana, Vermont, and Philadelphia. HITS-2002: Florida, Illinois, Michigan, New Jersey, Washington, and Houston, Los Angeles County, New York City, and Philadelphia. Asian/Pacific Islander HITS (2002): Seattle/King County, Washington. Migrant Farm Worker HITS (2002): California. Native American HITS: Portland, Oregon (2001, 2002), and Houston (2002). Transgender HITS (2002): San Francisco.

Contact Person(s)

State or local health department, HIV/AIDS surveillance coordinator or HITS site coordinator. CDC, Division of HIV/AIDS Prevention, Behavioral and Clinical Surveillance Branch.

Routine HIV Testing of Inmates in Correctional Facilities

Current Knowledge

In the United States, approximately 2 million people are currently incarcerated.¹ An additional 4 million individuals are on parole or probation.² Men represent the overwhelming majority of the incarcerated population (92%); however, the proportion of women has been steadily increasing in recent years.² Minority populations are disproportionately represented among people incarcerated, with recent estimates indicating that 12% of African-American males and 4% of Hispanic males in their twenties and early thirties are incarcerated.²

Prisons generally house individuals with sentences of 1 year or longer,³ and there are currently 1.3 million inmates housed in state and federal prisons.¹ Jails currently house roughly 600,000 inmates.² Jails are operated by a city or county and house people awaiting hearings, trials, transfer to prison, or misdemeanor convictions. People detained in jails usually serve less than 1 year. The majority serve less than two weeks.³ Most inmates are eventually released, but many are re-incarcerated within six months.⁴ This results in 7.5 million people released annually.⁵

Many individuals entering correctional facilities have a history of high-risk sexual behaviors, substance abuse, or both. As a result, high rates of HIV and sexually transmitted diseases (STDs) have been documented among persons entering the correctional system.⁵ In 1999, there were more than 25,000 (2.0%) federal and state prison inmates, and more than 8,600 jail inmates (1.7%) known to be HIV-positive.⁶ In addition, the prevalence of AIDS among prison populations is 5 times higher than that in the general U.S. population (0.60% versus 0.12%).⁶ Recent estimates suggest that nearly 25% of people living with HIV pass through the correctional system.⁷ Currently, less than half of the prison systems and few jails routinely provide HIV testing on entry.⁸ Therefore, many individuals who may be infected are not routinely offered HIV testing. Correctional systems should routinely offer HIV testing as a component of the standard medical intake evaluation for all inmates. Routine HIV testing could either be in the form of standard enzyme immunoassay (EIA) and Western Blot testing or rapid HIV testing with appropriate confirmation testing. Health departments should initiate partner counseling and referral services (PCRS) for contacts of these HIV infected persons.

Persons incarcerated for less than 30 days may not receive traditional HIV counseling and testing (C&T), and, if they do, they are likely to be released before their test results are available. Use of rapid HIV testing could help ensure this population receives their test results. The RESPECT 2 study showed that HIV C&T that used a rapid HIV-screening test was as effective as traditional HIV C&T.⁹ Therefore, routinely providing rapid HIV C&T services for this population can greatly increase the proportion of persons tested and notified of their test results prior to release. Persons infected with HIV and persons at high risk for infection should be identified and referred to care, treatment, and prevention services in the correctional facility. For infected persons being released, referral and linkage to these services in the community is essential.

Objectives

The purpose of this document is to provide guidance to state and local health departments and correctional facilities to achieve

- Routine HIV testing during intake medical evaluation to identify new infections among inmates whose HIV status is unknown or has been negative on previous tests
- Routine HIV testing during intake medical evaluation to confirm HIV positivity for inmates who report that they are infected
- Confidential notification to all tested inmates of their HIV test results
- Referral of HIV-infected persons to appropriate antiretroviral care, treatment, and prevention services. If available, referrals should be made to programs and services in the correctional facility, the community, or both
- Referral of persons at high-risk of acquiring HIV to prevention services. Referrals include linkages to available programs and services both in the correctional facility and the community

Procedures

Steps for health departments

1. Work with state and local justice and corrections departments to develop policies and procedures for routinely offering HIV testing to all inmates during intake medical evaluation. Testing procedures should include standard EIA followed by Western Blot testing, rapid HIV testing, or both. The inmates projected length of incarceration should determine whether an EIA test or a rapid test is offered to the inmate.
2. Provide training to personnel from the correctional facility, the health department, or community-based organizations (CBOs) working in correctional facilities on the following:
 - a) Confidentiality and data security issues related to HIV testing
 - b) Routinely offering HIV testing, including rapid HIV testing, as part of the medical evaluation at intake
 - c) Documenting test results and refusals of testing
 - d) Understanding the meaning of test results, especially those from rapid HIV testing
 - e) Providing inmates confidential notification of their HIV test results
 - f) Conducting confirmatory HIV testing for inmates with a positive rapid test result
 - g) Identifying care, treatment, and referral services in the correctional facility and the community for inmates who test positive for HIV
 - h) Referring all persons with a positive test result and persons at high-risk for infection to care, treatment or prevention services
 - i) Conducting partner, counseling, and referral services
3. Distribute to correctional facilities in their jurisdiction, an inmate information sheet on HIV testing and forms for documenting HIV test results or refusals to test.

Steps for correctional facilities

1. Provide HIV information sheets to all inmates arriving at the facility.
2. Routinely offer HIV testing to all inmates during the medical evaluation at intake into the correctional facility
3. Routinely offer prevention counseling in accordance with the CDC counseling, testing, and referral guidelines

4. Routinely provide confidential notification of HIV test results to all inmates tested
5. Establish a system to document consent for testing and test results, and to track specimens sent for confirmatory testing.
6. Notify all inmates whose rapid HIV test result is positive that the result indicates a preliminary positive result and that a confirmatory test needs to be performed. A blood specimen should be obtained from the inmate and confirmatory testing initiated.
7. Establish procedures and responsibilities for reporting HIV cases to the health department and requesting assistance with partner counseling and referral services
8. Each correctional facility must specify written policies and procedures to
 - a) Determine eligibility for EIA HIV testing and rapid HIV testing. In general, inmates who are likely to be released before results from EIA testing are available should be offered rapid testing during their medical evaluation.
 - b) Ensure care and treatment is provided, based on the inmate's projected length of incarceration.
 - c) Ensure confidentiality and security of data related to HIV testing.
9. Initiate the referral process for all HIV-infected inmates and those at high risk of acquiring HIV infection by making the first appointment with an appropriate care provider, CBO, or both. Whenever possible, the initial appointment should occur while the inmate is in the correctional facility. If this is not possible, health department or CBO personnel should obtain contact information from the correctional personnel, initiate contact with the individual, and accompany the released inmate to appointments, if appropriate.
10. Work with participating CBOs to establish procedures and responsibilities for referral services for inmates as part of release planning.

Programmatic Considerations

Health departments should initiate discussions with correctional systems that do not routinely offer HIV testing to inmates during the intake medical evaluation to determine their willingness to implement routine HIV testing. Before establishing routine, HIV testing, health departments, correctional facilities, and CBOs must consider how to address relevant policy, financial, and resource barriers.

1. In circumstances where rapid testing is used in HIV screening in correctional facilities, legal and regulatory barriers, such as state prohibitions or health department policies on giving preliminary results, may challenge implementation. Consideration should be given to revising these prohibitions, where appropriate.
2. Linkages and resources for HIV care need to be in place for persons detained in the correctional facility and those released to the community.
3. A key contact should be identified at the health department and at each correctional facility and CBO to provide accountability and continuity in the collaboration.

Working with Partners and Integration into Existing Services

1. Collaboration between the health department, correctional facility, and CBO personnel is critical to the successful training and implementation of routine HIV screening and prevention services in correctional facilities and in the community. If facilities conclude that rapid testing is to be a part of routine screening in the

correctional institution, specific training in rapid HIV testing must occur and collaboration with a laboratory must be in place.

2. Partnerships should be developed among health departments, correctional facilities, and CBOs so that individuals can be linked to care, treatment, and prevention services in correctional facilities and in the community. These relationships should be negotiated and formally documented in writing, e.g., a letter of cooperation, memoranda of agreement or understanding.
3. Additional partners with whom to collaborate may include state, county, and local police and sheriff departments.

Vignette

Individuals admitted to the Adult Correctional Institute in Rhode Island through intake undergo a medical evaluation.¹⁰ During this evaluation, inmates give a brief medical history, receive a brief physical examination, and undergo mandatory serum syphilis testing. Medical personnel answer questions related to HIV testing and encourage all inmates to routinely accept HIV testing during the intake process. Testing is not based on risk perception and is offered in a manner in which inmates have the opportunity to refuse HIV testing. Inmates are provided a standard written consent form before HIV testing. Although counseling before the test is not routinely provided at intake, over 90% of inmates are routinely tested for HIV. Test results are provided in a one on one session, by an HIV trained counselor. Through a demonstration project, Project Bridge,¹¹ HIV-positive inmates are provided assistance with accessing medical and social services in the community. Enrollment occurs one to three months before release, and plans are made to obtain concrete services after release. Support is provided for 18 months after release. All health care information, including HIV test results, is kept secure at the medical clinic in the correctional facility. All participants sign consent and release forms granting permission to be participant in Project Bridge.

Monitoring Implementation

CDC grantees receiving HIV prevention funds will be required to routinely report the following indicators to monitor their HIV testing programs in correctional facilities.

CDC's HIV Prevention Program Performance Indicators* :

1. Number and percent of newly diagnosed HIV infections in correctional facilities (B.1)
2. Number and percent of newly identified, confirmed HIV-positive test results returned to inmates (B.2)

Other program measures:

3. Number of persons with HIV who are referred for services during incarceration
4. Number of persons with HIV who use the services to which they are referred while incarcerated
5. Number of persons at high risk for acquiring HIV who are referred for services during incarceration
6. Number of persons at high risk for HIV who use the services to which they are referred while incarcerated
7. Number of persons who are retested for HIV due to reincarceration

8. Collection of HIV transmission risk data in accordance with CTR Guidelines

* The CDC Technical Assistance Guidelines for Health Department HIV Prevention Program Performance Indicators provides information on setting baseline, target, and indicator specification including appropriate data sources, calculations and reporting issues. Note: Performance indicators may have been modified to reflect specific population or setting characteristics.

References

1. Harrison P, Beck A. Prisoners in 2001. Bureau of Justice statistics bulletin, U.S. Dept of Justice, Office of Justice Programs. 2002;1-16.
2. Beck A, Karberg J, Harrison P. Prison and jail inmates at midyear 2001. Bureau of Justice statistics bulletin. Washington D.C.: U.S. Department of Justice, Office of Justice Programs. 2002;1-16.
3. Polonsky S, Kerr S, Harris B, Gaiter J, Fichtner RR, Kennedy MG. HIV prevention in prisons and jails: Obstacles and opportunities. Public Health Reports. 1994;109(5):615-625.
4. Petersilia J. When prisoners return to the community: Political, economic, and social consequences. Sentencing & Corrections. Issues for the 21st Century. U.S. Department of Justice, Office of Justice Programs, National Institute of Justice. 2000;No. 9.
5. Hammett TM, Harmon P, Rhodes W. The burden of infectious disease among inmates of and releasees from U.S. correctional facilities, 1997. Am J Public Health. 2002;92(11):1789-1794.
6. Maruschak L. HIV in prisons and jails, 1999. Bureau of Justice Statistics Bulletin, Office of Justice Programs, U.S. Department of Justice. 2001;1-11.
7. Spaulding A, Stephenson B, Macalino G, Ruby W, Clarke JG, Flanigan TP. Human immunodeficiency virus in correctional facilities: A review. Clinical Infectious Diseases. 2002;35:305-312.
8. Hammett TM, Harmon P, Maruschak LM. 1996-1997 update: HIV/AIDS, STDs, and TB in correctional facilities. Washington, D.C.: U.S. Department of Justice, National Institute of Justice. July 1999.
9. Metcalf CA, Cross H, Dillon BA, et al. Randomized controlled trial of HIV counseling with rapid and standard HIV tests (RESPECT-2). XIV International AIDS Conference: Barcelona, Spain. July 7-12, 2002.
10. Desai AA, Latta TE, Spaulding A, Rich JD, Flanigan TP. The importance of routine HIV testing in the incarcerated population: The Rhode Island experience. AIDS Education and Prevention. 2002;14(Supplement B):45-52.
11. Rich JD, Holmes L, Salas C, et al. Successful linkage of medical care and community services for HIV-positive offenders being released from prison. Journal of Urban Health: Bulletin of the New York Academy of Medicine. 2001;78(2):279-289.

Resources

AIDS Education and Training Centers: <http://hab.hrsa.gov/educating.htm>

Bureau of Justice Statistics: <http://www.ojp.usdoj.gov/bjs/>

CDC. Revised Guidelines for HIV Counseling, Testing, and Referral.
<http://www.cdc.gov/mmwr/PDF/rr/rr5019.pdf>

National Commission on Correctional Health Care: <http://www.ncchc.org>

Public Health and Corrections Collaboration: <http://www.ncjrs.org/pdffiles/169590.pdf>

Rapid testing: http://www.cdc.gov/hiv/rapid_testing/

CDC. Technical Assistance Guidelines for CDC's HIV Prevention Program Performance Indicators: <http://www.cdc.gov/hiv/dhap>

HIV Partner Counseling and Referral Services

Current Knowledge

Evidence suggests that most new HIV infections originate from HIV-infected persons not yet aware of their infection.¹ This emphasizes the need to identify HIV-infected persons and link them to medical, prevention and other services as soon as possible after they become infected. One strategy for accomplishing this is voluntary partner counseling and referral services (PCRS), including partner notification (PN).^{2,3,4}

PCRS assists HIV-infected persons with notifying their partners of their exposure to HIV. Notified partners, who may not have suspected their risk, can then choose whether to be tested for HIV, enabling those who test HIV positive to receive early medical evaluation, treatment, and prevention services, including risk-reduction counseling. A key element of PCRS is informing current and past partners that a person who is HIV-infected has identified them as a sex or injection-drug-paraphernalia-sharing partner and advising them to have HIV counseling and testing. Among sex partners, close partners and those with whom contact has been recent, frequent, or of longer duration are more likely to be notified^{5,6,7,8}; however, PCRS should include casual partners (or contacts), as well. Informing partners of their exposure to HIV is *confidential*, in that partners are not told who reported their name or when the reported exposure occurred, nor is information about the partners reported back to the original HIV-infected person. It is *voluntary* in that the infected person decides which names to reveal to the interviewer.

PCRS can be an effective tool for reaching persons at very high risk for HIV infection: in studies of HIV PCRS, 8%-39 % of partners tested were found to have previously undiagnosed HIV infection.⁹ However, a recent survey of health department staff in U.S. areas with high reported rates of HIV found that, in areas with mandatory HIV reporting, only 52% of persons infected with HIV were interviewed for PCRS.¹⁰ PCRS has been found to be cost-effective.^{11,12,13} Acceptability of PCRS has been indicated in surveys of individuals seeking HIV testing, HIV-infected persons, and notified partners, in which the majority of respondents have indicated support for PN.^{14,15,16}

HIV PCRS includes several elements: identifying, locating, and interviewing HIV-infected persons (index patients) to offer PCRS and elicit names of partners; locating partners and notifying them of their exposure to HIV; and providing HIV counseling, testing, and referral services to the partners. PCRS is usually done by health departments. In some areas, community-based organizations (CBOs) or other agencies perform at least some parts of PCRS (e.g., interviewing index patients to elicit partner names); however, state or local laws and regulations may limit or prohibit PCRS being done outside the health department.

There are 3 main strategies for reaching and informing partners of their exposure. In *provider referral*, the clinical care provider or health department staff, with permission from the HIV-infected client, informs the partner and refers him or her to counseling, testing, and other support services. Although some clinicians may wish to take on the responsibility for informing partners, one observational study suggested that health

department specialists were more successful than physicians in interviewing patients and locating partners.¹⁷ In *patient or client referral*, the HIV-infected person accepts full responsibility for informing his or her partners of their possible exposure to HIV and for referring them to HIV counseling and testing services. Although some persons initially prefer to inform their partners themselves, many clients often find this more difficult than anticipated. Furthermore, notification by health department staff seems to be substantially more effective than notification by the infected person.¹⁸ In *contract referral*, the infected person has a few days to notify his or her partners. If, by the contract date, the partners have not come for counseling and testing, they are contacted by the health department. In a variation, *dual referral*, the HIV-infected client and the provider inform the partner together. Some reports of partner violence after notification suggest a need for caution, but violence seems to be rare.^{19,20}

Many states and some cities or localities have laws and regulations about informing partners of their exposure to HIV. Some health departments require that even if a patient refuses to report a partner, the clinician must report to the health department any partner of whom he or she is aware. Some states also have laws regarding disclosure by clinicians to third parties known to be at significant risk for future HIV transmission from patients known to be infected. This is called duty to warn.²¹ The Ryan White CARE Reauthorization Act requires that health departments receiving Ryan White funds show “good faith” efforts to notify marriage partners of HIV-infected patients.

Objectives

The purpose of this document is to provide guidance to state and local health departments to achieve the following:

- Routine provision of PCRS, in public and private settings, to persons with newly diagnosed HIV
- Ongoing provision of PCRS to HIV-infected persons who remain sexually active or continue to inject drugs
- Effective linkage of persons diagnosed with HIV through PCRS to medical evaluation, treatment, prevention, and other appropriate services

Other agencies and providers doing PCRS must work closely with their respective health departments and adhere to all applicable laws and regulations.

Procedures

Steps for health departments

1. Develop and implement programs to provide PCRS in public and private sectors to all persons newly diagnosed with HIV. These programs should address all steps of PCRS, including
 - a) Contacting persons newly diagnosed with HIV to offer them PCRS
 - b) Interviewing persons who accept PCRS to elicit names of and locating information for sex and injection-drug-paraphernalia-sharing partners
 - c) Locating, notifying, counseling, testing, and providing test results to partners
 - d) Linking partners, especially those who test positive, to appropriate medical evaluation, treatment, prevention, and other services

2. Ensure that PCRS is
 - a) Confidential in all aspects
 - b) Available with both confidential and anonymous counseling and testing
 - c) Culturally sensitive and acceptable to the affected population
 - d) Timely (i.e., locating and notifying activities are initiated and completed promptly)
3. Ensure that information about how to access PCRS services is easily accessible by health care providers in the public and private sectors, CBOs, and other agencies diagnosing or providing services to HIV-infected persons.
4. Encourage providers, CBOs, and other agencies providing services to HIV-infected persons to routinely screen clients for ongoing sexual and injection-drug-use activities and to provide PCRS, directly or through referral, for new partners who may have been exposed to HIV.
5. Ensure that providers, CBOs, and other agencies diagnosing or providing services to HIV-infected persons are aware of all laws and regulations relevant to PCRS in their respective jurisdictions.
6. Ensure that all clients receiving PCRS are assessed for the possibility of partner violence and, when indicated, are referred to agencies with expertise in this area.
7. Ensure that all staff members doing PCRS receive initial and ongoing training in PCRS methods and receive close supervision and routine, periodic performance evaluation. Training curricula for PCRS and PN are available from CDC, and many courses are available from health departments and the National Network of STD/HIV Prevention Training Centers
8. Work with health care providers, CBOs, and other organizations serving or representing HIV-infected persons to educate them about the potential benefits of PCRS for HIV-infected persons, their partners, and the community and to develop community support for these services.
9. Work closely with non-health department agencies (e.g., CBOs) that are considering providing PCRS services to assist in planning their programs, including identifying which elements of PCRS the agency should conduct, how the agency's PCRS activities will be coordinated with health department PCRS activities, how appropriate reporting to the health department will be ensured, and what laws and regulations may be applicable to the program.

Working with Partners and Integration into Existing Services

1. PCRS is part of a comprehensive array of services needed by HIV-infected persons and their partners. It should be fully integrated with those services, beginning when a client first receives HIV counseling and testing and continuing after the client enters care and treatment services.
2. PCRS cannot function as an isolated activity in the health department. Health departments should work closely with private sector and other providers (including Ryan White Care funded programs) to help them develop strategies for integrating PCRS into their services (e.g., routinely screening HIV-positive clients for behavioral and clinical risks for HIV transmission to identify those who should be offered PCRS).

3. Whether HIV PCRS is conducted by HIV/AIDS program staff or by disease intervention specialists (DIS) in sexually transmitted disease (STD) programs, where PN for other STDs is also conducted, HIV/AIDS and STD programs should collaborate to provide the most effective services and to use resources effectively.

Programmatic Considerations

1. Some PCRS programs focus primarily on patients diagnosed in the public sector, especially STD clinics; however, most persons with HIV are diagnosed in the private sector. Health departments should work with private sector health care providers (including programs funded under the Ryan White Care Act) to help foster understanding of and support for providing PCRS to HIV-infected persons diagnosed in the private sector.
2. PCRS may place a substantial burden on health department resources. Managers may need to prioritize PCRS activities, such as the order in which HIV-infected persons are offered PCRS or the order in which partners are located and offered PCRS.
3. Concerns often voiced regarding HIV PCRS include potential violations of confidentiality, the stigma associated with HIV, and the potential for partner violence associated with PCRS. It is critical that all PCRS programs include strict procedures for ensuring privacy, confidentiality, and security of data, as well as screening for and addressing potential partner violence.
4. Some states have laws and regulations that limit partner notification activities. Amendment of these laws should be considered, where appropriate, in order for PCRS to be successfully implemented.
5. In some instances, HIV-positive clients may have sex or may share injection equipment with persons they do not know. In these circumstances, general information obtained through PCRS can be used to identify high-risk areas and venues where PCRS programs can provide or arrange for outreach services. A more recent phenomenon is use of the Internet for finding sex partners; strategies for PCRS in this situation need to be explored.
6. In some circumstances, ensuring confidentiality may be difficult. For example, if an HIV-positive client (index patient) has a spouse or other partner who is known to have had no other partner, the PCRS provider and index patient should fully discuss all available options for notifying the partner and together formulate the most appropriate plan. For example, a dual-referral approach, in which the HIV-infected client informs the partner of his or her HIV status in the presence of the PCRS provider, might be appropriate in this situation. By having a professional counselor present, this approach supports the client and may reduce other potential risks. If there is any concern about possible partner violence, assistance should be sought from persons with expertise in violence prevention.
7. Unlike bacterial STDs, HIV is not curable; therefore, PCRS should be an ongoing process for clients who have new sex or injection-drug-paraphernalia-sharing partners. Clients who remain sexually active or continue to use injection drugs should be counseled regarding self-disclosure of HIV status and provided opportunities to develop their self-disclosure skills.
8. Many questions remain regarding the best approaches for conducting PCRS (e.g., best methods for interviewing and eliciting partner names, optimal length of time period

used for interviewing, tailoring elicitation and notification procedures to specific populations, potential roles of agencies other than health departments). These questions should be addressed through evaluation of existing programs and by conducting operational research.

Vignette

Since 1989, North Carolina has offered HIV PCRS to persons who test positive for HIV. PCRS is done by DIS. DIS are specially trained health professionals who attempt to locate HIV-infected patients and their exposed partners and ensure that both are referred to HIV and syphilis evaluation, treatment, and prevention services. When a positive HIV test result is reported to the local health department by a medical care provider or clinical laboratory, a DIS is assigned to the investigation. After verifying that the person has not been previously reported as HIV positive, the DIS contacts the patient's medical provider to initiate PCRS. The DIS reviews medical records to obtain demographic and clinical information about the reported patient (i.e., index patient); attempts to contact the index patient; conducts a voluntary, confidential, in-depth interview with the index patient, requesting information on all sex and injection-drug-paraphernalia-sharing partners within the past year; and assesses the potential for partner violence. The DIS ensures that all HIV-infected clients have received HIV prevention counseling, are informed about measures for reducing or preventing HIV transmission, and, if needed, receive referrals to HIV care and case management.

After obtaining partner information, the DIS searches regional records to determine whether named partners have already been reported as HIV infected. The DIS then offers index patients the options of provider referral or contract referral to assist in notifying partners, not already known to be HIV positive, of their possible exposure to HIV. When located, partners are informed that they may have been exposed to HIV and are either referred to HIV counseling and testing clinic services or are provided these services on-site.

In North Carolina in 2001, there were 1,603 newly diagnosed HIV and AIDS cases; 166 (10%) were diagnosed because of PCRS. Through PCRS, 1,532 sex or needle-sharing partners were notified; of those, 404 (26%) had previously tested HIV positive. Of 1,128 not previously known to be HIV-positive, 610 (64%) were notified, counseled, and tested for HIV; 125 (20%) of these were newly diagnosed with HIV infection. Of the 1,532 partners interviewed, half had not been tested previously; 488 (64%) of these were tested through PCRS, and 108 (22%) were found to be positive for HIV. Of 188 partners who had previously tested negative, 122 (65%) were retested through PCRS; of those, 17 (14%) were newly diagnosed with HIV infection.

Monitoring Implementation

CDC grantees receiving HIV prevention funds will be required to routinely report the following indicators to monitor their HIV partner counseling and referral services.

CDC's HIV Prevention Program Performance Indicators* :

1. Number and percent of contacts with unknown or previously negative HIV serostatus receiving an HIV test after PCRS notification (C.1)
2. Number and percent of contacts with a newly identified, confirmed positive HIV test among all contacts tested (C.2)
3. Number and percent of contacts with a previously known, confirmed positive HIV test among all contacts (C.3)

Other program measures:

4. Number of persons newly diagnosed and reported with HIV (index patients)
5. Collection of HIV transmission risk data in accordance with CTR Guidelines
6. Number of index patients located, offered, and who accepted PCRS
7. Demographics of index patients and contacts (e.g., race/ethnicity, gender, socioeconomic status)
8. Number of named contacts
 - a) For each index patient accepting PCRS
 - b) Located, offered, and who accepted PCRS
 - c) With a positive test result who are successfully linked to medical evaluation, treatment, and prevention services

* The CDC Technical Assistance Guidelines for Health Department HIV Prevention Program Performance Indicators provides information on setting baseline, target, and indicator specification including appropriate data sources, calculations and reporting issues. Note: Performance indicators may have been modified to reflect specific population or setting characteristics.

References

1. Marks GS, Senterfitt W, Crepaz N. Relative contribution of HIV-positive persons aware and unaware of their serostatus to sexual HIV exposure in the United States: Findings from a meta-analytic review. In press.
2. Macke BA, Maher JE. Partner notification in the United States: An evidence-based review. *Am J Prev Med* 1999;17:230-242.
3. West GR, Stark KA. Partner notification for HIV prevention: A critical reexamination. *AIDS Education and Prevention: HIV Counseling and Testing*. 1997;9(Suppl. B):68-78.
4. Fenton K, Peterman TA. HIV partner notification: Taking a new look. *AIDS* 1997;11:1535-1546.
5. Perry SW, Card CA, Moffatt M, et al. Self-disclosure of HIV infection to sexual partners after repeated counseling. *AIDS Educ Prev* 1994;6:403-11.
6. van Duynhoven YT, Schop WA, van der Meijden WI, van de Laar MJ. Patient referral outcome in gonorrhea and chlamydial infections. *Sex Transm Infect* 1998;74:323-330.
7. Kissinger PJ, Niccolai LM, Mangus M, et al. Partner notification for HIV and syphilis: effects on sexual behaviors and relationship stability. *Sex Transm Dis* 2003; 30(1):75-82.

8. Hoxworth T, Spencer N, Peterman TA, Craig T, Johnson S, Maher JE. Changes in partnerships and HIV risk behavior after partner notification. *Sex Transm Dis* 2003;30(1):83-8.
9. Golden MR. HIV partner notification: A neglected prevention intervention [editorial]. *Sex Transm Dis* 2002;29:472-475.
10. Golden MR, Hogben M, Handsfield HH, et al. Partner notification for HIV and STD in the United States: low coverage for gonorrhea, chlamydial infection, and HIV. *Sex Transm Dis* 2003;30:490-496.
11. Holtgrave DR, Valdiserri RO, Gerber AR, Hinman AR. Human immunodeficiency virus counseling, testing, referral, and partner notification services. A cost-benefit analysis. *Arch Intern Med* 1993;153:1225-1230.
12. Toomey KE, Peterman TA, Dicker LW, et al. Human immunodeficiency virus partner notification: cost and effectiveness data from an attempted randomized controlled trial. *Sex Transm Dis* 1998;25:310-316.
13. Varghese B, Peterman TA, Holtgrave DR. Cost-effectiveness of counseling and testing and partner notification: a decision analysis. *AIDS* 1999;13:1745-1751.
14. Jones JL, Wykoff RF, Hollis SL, et al. Partner acceptance of health department notification of HIV exposure, South Carolina. *JAMA* 1990;264:1284-1286.
15. Carballo-Diéguez A, Remien RH, Benson DA, et al. Intention to notify sexual partners about HIV exposure among New York City STD clinics' clients. *Sex Transm Dis* 2002;29:465-471.
16. Golden MR, Hopkins SG, Morris M, Holmes KK, Handsfield HH. Support among persons infected with HIV for routine health department contact for HIV partner notification. *J Acquir Immune Defic Syndr* 2003;32:196-202.
17. Giesecke J, Ramstedt K, Granath F, Ripa T, Rado G, Westrell M. Efficacy of partner notification for HIV infection. *Lancet* 1991;338:1096-100.
18. Landis SE, Schoenbach VJ, Weber DJ, et al. Results of a randomized trial of partner notification in cases of HIV infection in North Carolina. *New Engl J Med* 1992;326:101-106.
19. Rothenberg KH, Paskey SJ. The risk of domestic violence and women with HIV infection: implications for partner notification, public policy, and the law. *Am J Public Health* 1995; 85:1569-76.
20. Maher JE, Peterson J, Hastings K, et al. Partner violence, partner notification, and women's decisions to have an HIV test. *J Acquir Immune Defic Syndr* 2000;25:276-82.
21. Gostin LO, Webber DW. HIV infection and AIDS in the public health and health care systems: the role of law and litigation. *JAMA* 1998;279:1108-13.

Resources

Guidelines and Recommendations

CDC. Program operations. Guidelines for STD prevention. Partner services

<http://www.cdc.gov/std/program/partners.pdf>

CDC. Revised Guidelines for HIV Counseling, Testing, and Referral.

<http://www.cdc.gov/mmwr/PDF/rr/rr5019.pdf>

CDC. HIV partner counseling and referral services. Guidance. December 1998
<http://www.cdc.gov/hiv/pubs/pdrs.htm>

CDC. Technical Assistance Guidelines for CDC's HIV Prevention Program Performance Indicators. <http://www.cdc.gov/hiv/dhap.htm>

Training

National Network of STD/HIV Prevention Training Centers
<http://depts.washington.edu/nnptc/>

State or local health department HIV/AIDS prevention programs. State AIDS Directors and contact information from the National Alliance of State and Territorial AIDS Directors (NASTAD) <http://www.nastad.org>

Prevention Interventions with Persons Living with HIV

Current Knowledge

Because of the use of newer and more effective treatments, increasing numbers of persons living with HIV in the United States are living longer. CDC estimates that 850,000 to 950,000 persons in the United States are living with HIV, and that 25% of these individuals are unaware of their serostatus.^{1,2} Although numerous effective prevention interventions have concentrated on HIV-negative populations, to date only a small number have focused on HIV-positive persons.³⁻⁵

Most people who find out that they are HIV-positive reduce their sexual and drug-use behaviors⁵. However, some HIV-positive persons have intermittent or ongoing difficulties with changing their behaviors and focusing on HIV prevention. For some people, a relatively less intensive intervention (e.g., a support group or structured risk-reduction, skills-building group) will be sufficient to lead to significant change in behavior. Other HIV-positive persons may need more intensive prevention services (e.g., a couples or individual-level approach) or may benefit from a combination of prevention services.

Often people who require more intensive services are struggling with other psychosocial factors (e.g., mental illness, substance abuse, domestic violence, homelessness, and economic stressors) that affect their risk behaviors. The presence of psychosocial challenges may adversely affect HIV-positive persons, decreasing their ability to obtain and adhere to proper medical care or to reduce their HIV risk behaviors. Integrating consideration of these issues into prevention programs for HIV-positive persons is crucial. Agencies should 1) provide or have access to referrals for a range of services of different intensities, including psychosocial services and medical care; and 2) screen HIV-positive persons and refer them to the needed level of services.

Initially, it is important that persons who are newly diagnosed with HIV are enrolled into medical care. Helping HIV-infected persons enter into medical care so they can receive treatment, e.g., combination antiretroviral therapy can help suppress viral loads to very low levels and slow disease progression. HIV-infected persons who are receiving medical care may also benefit from prophylaxis for opportunistic infections and receive treatment for other health problems. Recent data from the Antiretroviral Treatment Access Studies (ARTAS) found that newly diagnosed persons or those otherwise not in medical care were more likely to get into care if they had a case manager to help them compared to those persons who were provided with passive referrals to care.⁶ In the ARTAS study, the case managers helped clients find a provider and then assisted with insurance, transportation, childcare, and other issues. This emphasizes the role for Ryan White Case Managers (RWCMS), funded by the Health Resources and Services Administration (HRSA) through their numerous grantees. These case managers actively link their clients with HIV/AIDS primary care and help them to overcome other barriers to supportive services. The work of the case managers usually results in more clients actually becoming a part of the HIV primary care system. A similar system tested in a statewide program in

Minnesota used disease intervention specialists (DIS) to actively and successfully link HIV-positive youth, ages 13-22 years, to medical care and other relevant services.⁷

Agencies helping HIV-positive persons enter into medical care and providing a broad range of other services, either directly or through actively linked referrals, could have a significant effect on reducing the toll of the HIV epidemic in the United States. Important ancillary services for HIV-positive persons may include

- Behavioral interventions to reduce risk behavior
- Interventions to improve adherence to complex medication schedules
- Substance abuse treatment
- Mental health treatment
- Domestic violence prevention
- Benefits counseling
- Family planning services
- Housing

Many of these services may be obtained through referrals from a HRSA-funded RWCM. The Ryan White CARE Act is the purchaser of HIV care and services for persons without insurance or eligibility for other programs.⁸ The RWCMs attempt to link HIV-positive persons to care and other services through benefits counseling and referrals. While the RWCMs are permitted to discuss HIV risk reduction with clients, this is not the focus of their work, and they usually are not trained to do risk-reduction counseling.

Agencies that choose to focus on prevention interventions for persons living with HIV may be challenged by the newness of prevention activities for this target population and the small number of programs that have been evaluated for effectiveness. Several programs do exist for HIV-positive persons that range from less intensive, group-based interventions, to intensive, individualized interventions. These established interventions give agencies a range of prevention options to offer to HIV-positive persons. More than 10 other interventions are now being tested by researchers. Those found to be effective should be available for wider use in the next few years.

While the number of existing, effective interventions is limited, a recent review examined the correlates of sexual risk among HIV-positive persons.⁹ This article provides some guidance for agencies developing programs by highlighting what is known to be and not to be associated with sexual risk among HIV-positive persons. In addition, it is likely (but not known) that existing interventions for HIV-negative persons could be adapted for HIV-positive populations. Messages in adapted interventions should reflect the needs of HIV-positive persons to protect their partners as well as themselves.

This document provides a brief overview of interventions with a range of intensities from the less intensive group-level interventions to the most intensive risk-reduction intervention for persons with HIV, prevention case management.

Group-Level Interventions for HIV-Positive Persons

Since the beginning of the AIDS epidemic, many of the interventions designed for HIV-positive persons were used in support groups or in structured group programs in which

the focus of the program and the outcomes of interest were improving mental health, social support, or coping rather than decreasing risk behavior.¹⁰⁻¹⁵ Some of these programs did measure changes in risk behaviors, and some have found that a focus on coping or mental health is related to decreased risk behaviors.¹⁶ After 1996, when new, more successful HIV medications began to be used, risk reduction interventions for HIV-positive persons became a major focus of research and programmatic interest. More studies of HIV risk-reduction programs for HIV-positive persons have been conducted in the past few years, although the results are available for only three studies.

All three studies that have evaluated group-level interventions designed to reduce HIV risk behaviors among HIV-infected persons have found that the participants receiving the intervention reduced their HIV risk behaviors more than the comparison group(s) on at least one measure of risk behavior.^{3,4,17} In one study, small groups of HIV-infected men and HIV-infected women attended a 5-session intervention based on social-cognitive theory or a 5-session health maintenance support group.³ The intervention condition focused on strategies for practicing safer sexual behaviors; developing coping skills; enhancing decision-making skills for disclosure of HIV status to families, friends, and sex partners; and developing skills to maintain safer sex. Those who received the intervention reported less unprotected intercourse and greater condom use 6 months after the intervention ended than did the participants in the comparison groups.

In another study, participants were HIV-positive persons who inject drugs and who were entering a methadone maintenance program.⁴ For 6 months, participants received one of two interventions:

1. Comparison intervention, which included daily methadone, weekly individual substance abuse counseling, case management, and a 6-session HIV risk-reduction intervention
2. Harm-reduction intervention, which included everything in the comparison condition plus manual-guided group psychotherapy sessions two times a week.

At follow-up, people assigned to the harm-reduction intervention reported lower addiction severity scores, and they were less likely to engage in high-risk sex- and drug-related behaviors

Finally, in the study by Rotheram-Borus and her colleagues, HIV-positive youth were provided with 1 or 2 different modules (Stay Healthy, a 12-session group, and Act Safe, an 11-session group).¹⁷ Those who participated in the first module had increased coping in various domains, while participants in the second module had fewer unprotected sexual acts, fewer sex partners, fewer HIV-negative sex partners, and less substance use. This intervention was tested prior to HAART and has now been updated and is named “CLEAR: Choosing Life: Empowerment, Action, Results Intervention for youth living with HIV.” (The manuals for the updated intervention for youth and for other interventions by that research group are available online. The website is included in the Resources section below.)

Two of the three effective group interventions are targeted to particular HIV-positive populations (i.e., persons entering a methadone program⁴ or youth¹⁷). Agencies working

with these populations should review the intervention materials available and use these interventions with the identified populations when possible. Agencies working with a more general population of HIV-positive persons should consider adopting the intervention by Kalichman and his colleagues for persons more suited for a group-level intervention.³

Two other studies highlight promising interventions for men with haemophilia and their partners and men being released from prison.^{18,19} In both studies, however, the research or evaluation design was inadequate to measure the effect on behavior change. Agencies working with men with haemophilia or men about to be released from prison should review these interventions and talk to the authors about more recent information they might have about these programs.

Individual-Level Interventions for HIV-Positive Persons

Individual-level interventions may be appropriate for persons for whom group-level interventions are inappropriate or are not effective in accomplishing reductions in risk behavior. Studies that have evaluated the effectiveness of individual-level interventions have reported mixed results.

The study with the most successful outcome focused on HIV-positive women and found that peer support and services, including a component that is similar to peer-based case management, were effective in reducing risk behavior.²⁰ In this study, HIV-positive women were randomized to one of two 6-month interventions. The interventions included a comparison condition, which provided comprehensive reproductive health services including health education and counseling on relevant topics, or the enhanced condition, which included comprehensive reproductive health services plus peer advocate services. HIV-positive peer advocates worked with the women individually or in groups to share information on condom use with the primary and secondary partners. The peer advocate also provided information on contraceptive use. Optional support groups met weekly while individual sessions occurred on an as-needed basis. Three types of individual sessions were held:

1. Warm-up encounters to help develop rapport
2. Stage-of-change encounters in which peers counseled the participants on specific target behaviors using stage-appropriate messages
3. Other encounters in which the peers addressed other urgent needs, such as housing or child custody. This last type of encounter appears similar to peer case management.

At follow-up, the researchers found that women who were in the enhanced intervention had improved consistency in condom use, perceived condoms as more advantageous, and increased their level of self-efficacy for condom use. The researchers cited four reasons for the intervention's success:

1. Use of HIV-positive peers, which, during formative research, the women said they preferred,
2. Close collaboration with case managers and community referral agencies due to the high unmet needs of participants,

3. Tailoring of the behavior change message to address current motivations, intentions, and partner characteristics, and
4. Reinforcement of intervention messages for women in primary care settings because most were receiving medical care.

Two studies of individual-level interventions for HIV-positive persons found no differences in risk-reduction behaviors between the intervention group(s) and the comparison group.^{21, 22} In the study that found no differences in risk reduction between peer-based case management and usual care,²² the authors proposed that their findings may have been due to the brevity of contact between the peer case managers and the participants, or to the extensive services for HIV-positive persons available in the study city (San Francisco) which may have made it harder for their intervention to make a difference in the risk behavior of the participants.

Prevention Case Management

A more intensive intervention may be necessary to meet the specialized needs of HIV-positive persons with multiple medical, social, and economic challenges. Prevention case management (PCM) is an intensive intervention that combines individual HIV risk-reduction with case management to provide intensive on-going support.²³⁻²⁴ The intervention is intended for persons having or likely to have difficulty initiating or sustaining practices to reduce or prevent HIV transmission.²³

As defined by CDC's PCM Guidance, PCM consists of the following components:

1. Identifying, recruiting into the program, and engaging clients with the greatest need
2. Screening and assessment to determine a client's risk behavior and psychosocial needs
3. Developing a client-centered plan for reducing risk behaviors
4. Conducting multiple sessions of HIV risk-reduction counseling to maintain preventive behaviors
5. Coordinating services with follow-up regarding success of referrals and need for additional services including coordinating with other types of case managers such as Ryan White funded case managers, Medicaid case managers, or other case managers, if appropriate.
6. Monitoring and reassessment of clients' needs, risks, and progress
7. Discharging from PCM upon attainment of risk-reduction goals

PCM guidelines also indicate that the following are essential:

1. Small client load (12–20 clients) to allow intensive case management
2. Integrated services and coordination of community and other service providers
3. Well-defined evaluation plan

Objective

The purpose of this document is to encourage and guide health departments and community-based organizations in providing specialized assistance through PCM to HIV-positive persons with multiple and complex HIV risk-reduction needs.

Procedures

1. Identify potential clients and collaborate with community-based organizations (CBOs), health departments, sexually transmitted disease (STD) clinics, HIV clinics, hospitals, clients, and others to refer high-risk HIV-infected clients to PCM. The PCM approach is based on the premise that some people may not be able to give high priority to HIV prevention when faced with problems that they view as being more important or more immediate. PCM should be reserved for persons willing to discuss intimate sexual and drug-use behaviors. Eligibility for PCM should be prioritized to include clients presenting with multiple risk factors, such as a recently acquired STD, multiple sex or needle-sharing partners in the past 3 months whose HIV status is unknown or negative, and psychosocial issues that impact these risk factors (e.g., mental illness, substance abuse, homelessness, and violence/coercion).
2. Engage in PCM with HIV-infected persons who report high-risk behaviors for HIV transmission. Because the clients who need PCM have multiple risk factors, substantial resources may be needed to identify, engage, and recruit them.
3. PCM should be conducted by professional counselors and social workers with experience working with high-risk clients (e.g., licensed social workers). Client case loads should remain small (12–20 per prevention case manager). If a jurisdiction has ample case management resources, the prevention case manager may perform fewer case management tasks and more risk-reduction activities. In such a case, the case load may be slightly larger for the prevention case manager.
4. Develop screening and assessment instruments customized to the target population, including some or all of the following topic areas: health, adherence to treatment, incidence of STD, substance/alcohol use, history of incarceration, mental health, sexual history, social support, skills to reduce transmission, barriers to safer behavior, strengths and competencies, and demographic information. Develop guidelines for data collection and performance evaluation measures. These data are crucial for determining referral and client needs and providing effective PCM.
5. At the time of initial assessment, case managers must provide clients with a voluntary informed consent document to be signed that assures confidentiality for the activities related to PCM. Communication with other providers or referral sources about a particular client requires obtaining written, informed consent from that client to allow for sharing relevant information. All information about clients should be securely stored in locked cabinets, and this should be communicated to clients. Providing these safeguards is one of the first steps to building a trusting relationship with PCM clients and engaging them in the process.
6. Prevention case managers, in collaboration with individual clients, should develop a client-centered prevention plan with measurable behavioral outcomes for reducing high-risk behaviors and maintaining low-risk behaviors. Risk-reduction activities should include an individualized risk-reduction session and may be supplemented by counseling for couples or groups. Risk-reduction activities should be theory-based and tailored to a person's life circumstances. Clients must be provided education about the increased risk of HIV transmission associated with having other STDs. In addition, clients must be provided with partner counseling and referral services (PCRS) so that partner may be confidentially notified of their potential exposure to HIV.

7. Prevention case managers should provide active coordination of and linking to supportive services such as medical services, psychological treatment, substance abuse treatment, STD treatment, various social services, and other HIV prevention services. Agreements should be established to ensure availability and access to key service referrals for the target population. A standardized referral process should be developed including a referral tracking system,
8. Prevention case managers should meet with clients regularly so that they can provide monitoring and reassessment of the clients' needs, risks. At regularly designated times the case manager and the client should revise the Prevention Plan and accompanying activities as appropriate.
9. Prevention case managers should establish a time frame for discharge from PCM after the client meets his or her risk-reduction goals or if the client is no longer participating in the program.
10. Incentives may be considered for use any time during PCM from engagement until discharge, if the jurisdiction and the funding source approve of their use. Appropriate incentives may include transportation cards or tokens, vouchers for food or other necessities, or in some cases, cash. The use of cash and non-cash incentives should not be excessive so as to be coercive.
11. Prevention programs should provide a well-defined evaluation plan.

Working with Partners and Integration into Existing Services

1. Clients may be identified and referred to PCM through a variety of sources including HIV testing facilities, such as public clinics and primary care facilities. Agencies that currently serve HIV-infected persons in an integrated setting (e.g., a setting where numerous services related to HIV are available, such as medical and pharmacy services and psychosocial support resources) or CBOs that are closely linked to these services, in a way that makes them highly accessible, are most appropriate for PCM programs. Clients who are referred to PCM but are not eligible should be referred to other appropriate services.
2. In some PCM settings, clients may already have a Ryan White or other case manager. The PCM Guidance provided two standards that should be followed in all jurisdictions:
 - a) Explicit protocol in place for structuring the relationship with Ryan White CARE Act case management providers or other case management providers must be established and should detail how to transfer and/or share clients
 - b) No duplication of Ryan White or other case management for persons living with HIV, but PCM may be integrated into these services.

In practice this means that jurisdictions should work together to coordinate services between these two programs. Generally, Ryan White-funded case management is intended to ensure coordination and continuity of needed entitlements, medical care and treatment, housing, and other social services. They are allowed to discuss risk-reduction behaviors with clients, but they often do not have the time or the training in behavioral theory to do so in an effective manner. PCM is first and foremost an HIV-prevention activity to reduce the transmission of HIV infection. The integration of these two services is affected by the services available in the community and the eligibility requirements for the various programs.

Programmatic Considerations

1. Risk reduction needs vary across persons and time. Agencies working with HIV-infected clients should avoid a one-size-fits-all approach to helping clients reduce their risk, but they should focus their PCM efforts on those with the greatest prevention need (e.g., those who are most likely to transmit HIV to their sexual or drug using partners).
2. Intervention science has not developed to the point where there is an easy formula to match clients to interventions. But given scarce resources, agencies should focus on the most effective interventions for clients who are at greatest risk for transmitting the HIV virus.

Vignette

In May 2000, the Kansas City Free Clinic, an AIDS service organization offering a broad range of services to HIV-positive persons, established a PCM program for high-risk HIV-negative persons and newly diagnosed HIV-positive persons who were not already connected with the community's system of care and support. Clients are referred into PCM services through a variety of clinic programs including HIV counseling and testing, HIV primary care, Ryan White HIV-funded case management, and prevention education, as well as from a variety of providers in the community. Once they are eligible, the prevention case manager initially meets weekly with participants and has telephone contact between visits as needed. The content of a typical case management session includes the review of the risk-reduction plan, follow-up on community referrals, and utilization of behavior change techniques such as motivational interviewing. Disclosure of HIV status is addressed in the ongoing risk reduction counseling. Incentives such as bus passes, movie passes, gift certificates, and safer sex supplies are utilized as funding permits.

PCM is integrated into the clinic through staff training, development, joint client case conferencing, and client service delivery protocols. The prevention case managers coordinate prevention services with the Ryan White-funded case managers, HIV primary care providers, and the peer-to-peer treatment adherence program. Prevention case managers have completed training in HIV/AIDS/STD knowledge, prevention counseling, CDC PCM Guidance, and prevention with HIV-positive persons, and they receive ongoing training. Case managers each have between 30-60 individuals on their caseloads each month, they meet with 40% of their clients monthly for risk reduction counseling services, and in each quarter, about 5 clients are discharged from PCM. The clinic employs a variety of quality assurance and evaluation methods for the staff and the program. For example, in December 2002, the PCM staff conducted a focus group with their HIV-positive clients, who were primarily MSM, to educate staff about the prevention needs of MSM and strengthen the clinic's PCM program. The staff found that clients needed: 1) more support and information on substance abuse, 2) flexible times to meet with PCM staff, and 3) more information about topics such as daily struggles, medications, HIV health conditions, and general health issues.

Monitoring Implementation

CDC grantees receiving HIV prevention funds will be required to routinely report the following indicators to monitor their HIV prevention interventions with persons living with HIV, including prevention case management programs.

CDC's HIV Prevention Program Performance Indicators* :

1. Proportion of HIV infected persons who completed the intended number of sessions in PCM (I.1)
2. Proportion of the intended number of HIV infected individuals to be reached who were actually reached (H.2)
3. The mean number of outreach contacts required to get one HIV infected person to access prevention case management services (H.3)
4. Percentage of HIV infected persons who, after a specific period of participation in a prevention case management program, report a reduction in sexual or drug using risk behaviors or maintain protective behaviors with seronegative partners or with partners of unknown status (I.2)

Other program measures:

5. Number of persons receiving prevention interventions that are diagnosed with a new STDs, indicating transmission risk behavior
7. Demographics of persons receiving prevention interventions and overall HIV-infected persons in the community (e.g., race/ethnicity, gender, socioeconomic status)
8. Collection of HIV transmission risk data in accordance with CTR Guidelines

* The CDC Technical Assistance Guidelines for Health Department HIV Prevention Program Performance Indicators provides information on setting baseline, target, and indicator specification including appropriate data sources, calculations and reporting issues. Note: Performance indicators may have been modified to reflect specific population or setting characteristics.

References

1. Centers for Disease Control and Prevention. (2003). Advancing HIV Prevention: New Strategies for a Changing Epidemic—United States, 2003. *MMWR*, 52, 329-332.
2. Centers for Disease Control and Prevention. (2002). Update: AIDS—United States, 2000. *MMWR*, 51, 592-5.
3. Kalichman SC, Rompa D, Cage M, DiFonzo K, Simpson D, Austin J, Buckles J, Kyomugisha F, Benotsch E, Pinkerton S, Graham J. (2001). Effectiveness of an intervention to reduce HIV transmission risks in HIV-Positive people. *American Journal of Preventive Medicine*, 21(2):84-92.
4. Margolin A, Avants SK, Warburton LA, Hawkins A, Shi J. (2003). A randomized clinical trial of a manual-guided risk reduction intervention for HIV-Positive injection drug users. *Health Psychology*, 22(2):223-8.
5. Marks G, Burris S, Peterman TA. (1999). Reducing sexual transmission of HIV from those who know they are infected: The need for personal and collective responsibility. *AIDS*, 13, 297-306.

6. Gardner L, Metsch L, Loughlin A, Mahoney P, Del Rio C, Strathdee S, Gaul Z, Greenberg AE, Holmberg S, for the ARTAS Study Group (July 2003). *Initial results of the Antiretroviral Treatment Access Studies (ARTAS): Efficacy of the case management trial*. Presentation at the 2003 National HIV Prevention Conference, Atlanta, GA.
7. Remafedi G. (1998). The University of Minnesota Youth and AIDS Projects' Adolescent Early Intervention Program: A model to link HIV-seropositive youth with care. *Journal of Adolescent Health, 23*, 115-121.
8. Parham D, Conviser R. (2002). A brief history of the Ryan White CARE Act in the USA and its implications for other countries. *AIDS Care, 14* (suppl 1), S3-S6.
9. Crepaz N, Marks G. (2002). Towards an understanding of sexual risk behavior in people living with HIV: a review of social, psychological, and medical findings. *AIDS, 16*, 135-149.
10. Blanch J, Rousaud A, Hautzinger M, Martinez E, Peri J, Andres S, Cirera E, Gatell J, Gasto C. I (2002). Assessment of the efficacy of a cognitive-behavioural group psychotherapy programme for HIV-infected patients referred to a consultation-liaison psychiatry department. *Psychotherapy and Psychosomatics, 71*, 77-84.
11. Coates TJ, McKusick L, Kuno R, Stites DP. (1989). Stress reduction training changed number of sexual partners but not immune function in men with HIV. *American Journal of Public Health, 79*, 885-887.
12. Lechner SC, Antoni M H, Lydston D, LaPerriere A, Ishii M, Devieux J, Stanley H, Ironson G, Schneiderman N, Brondolo E, Tobin JN, Weiss S. (2003). Cognitive-behavioral interventions improve quality of life in women with AIDS. *Journal of Psychosomatic Research, 54*, 253-261.
13. Perry S, Fishman B, Jacobsberg L, Young J, Frances A. (1991). Effectiveness of psychoeducational interventions in reducing emotional distress after human immunodeficiency virus antibody testing. *Archives of General Psychiatry, 48*, 143-147.
14. Rotheram-Borus MJ, Murphy DA, Wight RG, Lee MB, Lightfoot M, Swendeman D, Birnbaum JM, Wright W. (2001). Improving the quality of life among young people living with HIV. *Evaluation and Program Planning, 24*, 227-237.
15. Rotheram-Borus MJ, Lee MB, Gwadz M, Draimin B. (2001). An intervention for parents with AIDS and their adolescent children. *American Journal of Public Health, 91*, 1294-1302.
16. Kelly JA, Murphy DA, Bahr G R, Kalichman SC, Morgan MG, Stevenson Y, Koob JJ, Brasfield TL, Bernstein BM. (1993). Outcome of cognitive-behavioral and support group brief therapies for depressed, HIV-infected persons. *American Journal of Psychiatry, 150*, 1679-1686.
17. Rotheram-Borus MJ, Lee MB, Murphy DA, Futterman D, Duan N, Birnbaum JM, Lightfoot M. (2001). Efficacy of a preventive intervention for youths living with HIV. *American Journal of Public Health, 91*, 400-405.
18. Parsons JT, Huszti HC, Crudder SO, Rich L, Mendoza J. (2000). Maintenance of safer sexual behaviors: Evaluation of a theory-based intervention for HIV seropositive men with haemophilia and their female partners. *Haemophilia, 6*, 181-190.

19. Grinstead O, Zack B, Faigles B. (2001). Reducing postrelease risk behavior among HIV seropositive prison inmates: The health promotion program. *AIDS Education and Prevention*, 13, 109-119.
20. Fogarty LA, Heilig CM, Armstrong K, Cabral R, Galavotti C, Gielen AC, Green BM. (2001). Long-term effectiveness of a peer-based intervention to promote condom and contraceptive use among HIV-positive and at-risk women. *Public Health Reports*, 116, 103-119.
21. Patterson TL, Shaw WS, Semple SJ. (2003). Reducing the sexual risk behaviors of HIV+ individuals: Outcome of a randomized controlled trial. *Annals of Behavioral Medicine*, 25, 137-145.
22. Sorensen JL, Dilley J, London J, Okin RL, Delucchi KL, Phibbs CS. (2003). Case management for substance abusers with HIV/AIDS: A randomized controlled trial. *American Journal of Drug and Alcohol Abuse*, 29, 133-150.
23. Purcell DW, DeGroff AS, Wolitski R J. (1998). HIV prevention case management: Current practice and future directions. *Health & Social Work*, 23:282-9.

Resources

CDC. HIV prevention case management: Guidance. (1997).

<http://www.cdc.gov/hiv/pubs/hivpcmg.htm>

CDC. HIV prevention case management: Literature review and current practice. (1997).

<http://www.cdc.gov/hiv/pubs/pcml/pcml-toc.htm>

Interventions developed by Mary Jane Rotheram-Borus, Ph.D. and her research team at UCLA. <http://chipts.ucla.edu>

San Francisco Department of Public Health. (2000). *HIV prevention case management: Standards and guidelines for the delivery of services in San Francisco*. Available from: Project Director, Prevention Case Management Standardization and Evaluation Project, AIDS Office, San Francisco Department of Public Health, 25 Van Ness Ave. Suite 500, San Francisco, CA 94102, (415) 554-9031.

CDC. Technical Assistance Guidelines for CDC's HIV Prevention Program Performance Indicators. <http://www.cdc.gov/hiv/dhap.htm>

UCSF, AIDS Policy Research Center, Prevention with Positives Resources

<http://ari.ucsf.edu/policy/pwp.htm>

Prevention in Medical Care Settings

Current Knowledge

Despite significant advances in the treatment of HIV infection, the estimated number of annual new HIV infections in the United States has remained at 40,000 for nearly 10 years.¹ Historically, HIV prevention in this country has generally focused on persons who are not HIV-infected, to help them avoid becoming infected. However, further reduction of HIV transmission will require new strategies, including an increased emphasis on preventing transmission by HIV-infected persons aware of their status.^{2,3} This may be a highly cost-effective strategy in that prevention is targeted directly to potential sources of new infections. After testing positive for HIV, many people reduce behaviors that may transmit HIV to others.^{4,5} However, recent studies suggest that such behavioral changes are not maintained by all HIV-infected persons and that some continue to engage in behaviors that place others at risk for HIV infection.^{6,7}

Routine HIV prevention programs and support are needed to help HIV-infected persons reduce behavioral risks and maintain safer behavior in the years after the diagnosis of HIV infection. Studies have tested interventions in this population and have demonstrated significant reductions in risky sexual and drug-use behaviors. For example, in a study at public HIV clinics of HIV-infected persons who had multiple sex partners at baseline, the prevalence of unprotected anal and vaginal intercourse was reduced 38% after brief, ongoing prevention counseling from primary care providers.⁸ Successful risk-reduction interventions for HIV-infected persons have also been conducted in group settings.⁹ Further, interventions for HIV-infected persons who inject illicit drugs have reduced illicit drug use and unsafe sex in this population.^{10,11} A number of studies have demonstrated the beneficial effect of substance abuse treatment, particularly methadone maintenance treatment, on HIV risk behaviors among injection drug users (IDUs).¹² Taken as a whole, the findings strongly suggest that a concerted, sustained effort to provide prevention counseling and appropriate referral to services can greatly benefit HIV-infected persons and help them maintain safer behaviors that prevent others from becoming infected with HIV. However, recent studies suggest the need for targeted physician training on the importance of HIV transmission prevention counseling.¹³

Objectives

The purpose of this document is to assist HIV medical providers, health departments, and community-based organizations (CBOs) to enhance HIV prevention services for HIV-infected persons by

- Increasing the number of positive persons who have information about transmission risks and regularly receive counseling about ways to reduce the risk of transmitting HIV to others
- Increasing the number of sexually active HIV-infected persons who are screened and tested for sexually transmitted diseases (STDs)
- Enhancing the capacity and ability to conduct effective prevention counseling and referral for services (e.g., social, mental health, drug treatment, partner notification)
- Strengthening the linkages among health departments, CBOs, and providers of HIV care to facilitate the referral of HIV-infected persons to needed services

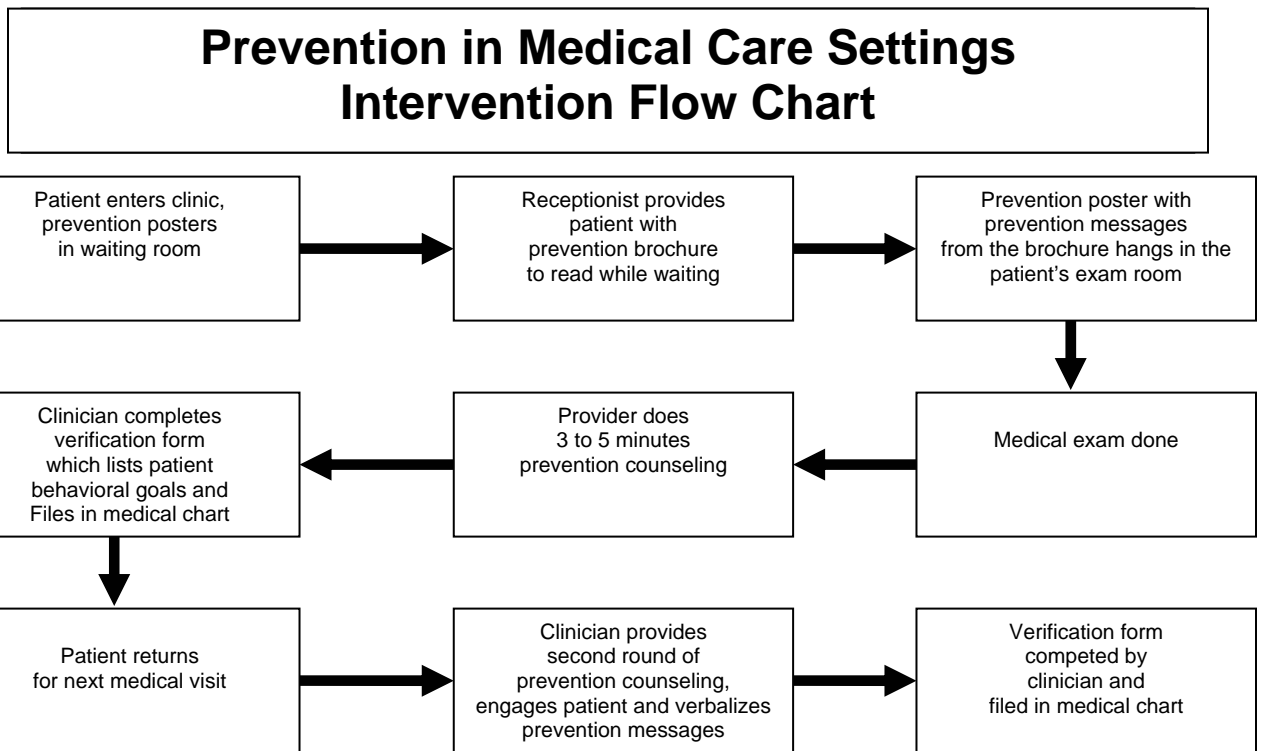
Procedures

Steps for HIV care providers

1. HIV prevention counseling should become a standard in the care for persons infected with HIV who continue to engage in behaviors that lead to HIV transmission. Providers of HIV care should assess the current level and characteristics of their prevention efforts, including allocation of resources, staffing, materials, and time devoted to this activity. The assessment should be used to guide planning and training needed to meet the diverse prevention needs of HIV-infected men and women.
2. HIV clinics should display in waiting and exam rooms prevention posters and other printed materials (e.g., brochures describing partner counseling and referral services and other prevention behaviors) that convey the importance of safer sex and safer substance-use behaviors. Prevention materials should emphasize the importance of abstinence, safer sex behaviors, and reducing or abstaining from drug use to protect partners as well as one's own health. Examples of prevention messages and ways to reduce risk are presented in Attachment 1.
3. HIV care programs should provide patients with written information (e.g., brochures or brief pamphlets) about:
 - a) Behaviors that increase and behaviors that decrease transmission risks
 - b) Role of STDs in increasing HIV transmission and the need to be tested and treated for STDs at the first sign or suspicion of infection
 - c) Importance of disclosing one's HIV infection status to sex partners
 - d) Viral load and transmission risk emphasizing that having an undetectable or low viral load does not mean that one cannot transmit HIV
 - e) Drug use and its potential role in increasing sexual risk behaviors
4. At each visit, health care providers should ask patients about behaviors associated with HIV transmission using a straightforward, nonjudgmental approach. At the initial clinic visit, patients should be questioned about symptoms and screened for laboratory evidence of STDs. Decisions about subsequent testing should be guided by behavioral screening and the patient's symptoms manifestations. See Attachments 2 and 3 for tests for detecting asymptomatic STDs.
5. The primary care provider (e.g., physician, physician assistant, nurse practitioner) should conduct a 3-5 minute counseling session each time a patient is seen. Providers should have a one-page sheet for personal use that outlines the intervention process (see intervention schematic below) that can be referred to as a tool and reminder for delivering the intervention. Providers are encouraged to emphasize a partnership or team approach. Providers could say the following: "The health care providers here are dedicated to helping our patients stay as healthy as possible. We must work as a team to do this; this means that you and I make a commitment to do all we can to keep you well and stop the spread of this disease. My role is to give you expert medical care, support you in making choices about your care and answer your questions. But your health really depends most on your own actions and behaviors. The two of us have to work together as a team to keep you as healthy as possible."
6. The primary care provider should verbally state prevention messages to the patient (see Attachment 1) and initiate a discussion of behavioral goals. For some patients, the goal will be to continue to be abstinent, for other patients the goal will be to continue to practice safer sex. For other patients, the goal(s) will be to reduce risk behavior(s) (e.g.,

always using a condom, reducing number of sex partners). The goals should be recorded in the patient’s medical chart on a form designed to track the prevention intervention. This form should include a place for the provider to indicate that counseling was given on a specific date.

7. Prevention messages can be reinforced at subsequent visits by other care providers, social workers or health educators; patients may be more receptive to the messages if they are conveyed by more than one person.
8. At the next visit, the provider should inquire about progress toward goals and again convey prevention messages orally to the patient. The provider should reinforce (i.e., praise) healthy behavior and, if needed, discuss new ways to overcome barriers. The provider and patient should reset goals for next visit.
9. During a counseling session it may become apparent that a patient needs more intensive counseling or needs a referral to address a personal issue that cannot be handled by the medical provider (e.g., substance use, domestic violence, depression, needs for housing or shelter). Each provider should have on hand a list of referral resources (including addresses, telephone numbers, and names of contact persons) in the clinic, medical center, and community. In making a referral, the provider (or other clinic staff) should attempt to link a patient immediately by helping schedule an appointment before the patient leaves the clinic.



10. Providers should prepare for making patient referrals by
 - a) Learning about local HIV prevention and supportive social services, including those funded by the Ryan White CARE Act
 - b) Learning about available resources and having a referral guide listing such resources

- c) Contacting staff in local programs to facilitate other referrals. Referral guides and other information can usually be obtained from local and state health department HIV/AIDS prevention and care programs

A brief summary for effective referral is attached in the Appendix.

Steps for health departments and CBOs

The following recommendations are offered to help refine and expand services for HIV-infected persons in health departments and CBOs. Some of the preceding recommendations for HIV care providers are also applicable to health departments and CBOs, such as displaying posters and providing printed materials to cue patients to the importance of safer sex (item 2 above), providing risk-reduction information (item 3 above) and prevention messages (Attachment 1), and refining referral mechanisms (items 8, 9 above).

1. Health departments in collaboration with the Health Resources and Services Administration's (HRSA) AIDS Education and Training Centers (AETC) or the STD/HIV Prevention Training Centers funded by CDC should facilitate the training of, and support for, HIV primary care providers to conduct HIV prevention counseling with patients during routine medical examinations.
2. Directors of HIV/AIDS prevention programs at health departments should establish or confirm already established working relationships with CBOs and with medical directors of public and private HIV clinics. These relationships should be formalized in a written agreement. Each party should have a working knowledge of the services provided by the other. This relationship will facilitate coordinated efforts to provide prevention services, referral mechanisms, and medical care to HIV-infected persons. It is important that health departments and CBOs strive to link HIV-infected persons to medical care if they are not already in care, and that providers of HIV care should strive to make prompt and appropriate referrals for prevention or social services that cannot be provided at the clinic.
3. Health departments and CBOs should also provide an array of services for HIV-infected persons. Health departments and particularly CBOs should offer prevention case management (PCM), which includes client-centered prevention counseling to help people adopt and maintain risk-reduction behaviors and access needed medical, psychological, and social services.¹⁴ Needs may include treatment for drug or alcohol abuse; mental health services; intervention for sexual or physical abuse (victim or perpetrator); housing or transportation; nutritional, financial, and legal matters; and insurance coverage. Health departments should have staff and procedures for conducting partner notification services. All HIV-infected persons seen at health departments and CBOs should receive information on ways to reduce HIV transmission and receive prevention messages (Attachment 1).

Working with Partners and Integration into Existing Services

1. Health departments and medical directors at HIV clinics should consult with HRSA and local HIV/STD Prevention Training Centers to arrange assistance for training clinic medical staff to assess transmission risk and do prevention counseling.
2. HIV clinics, health departments, and CBOs should work with local community planning groups to design, implement, and evaluate interventions that address the local needs determined by the community planning group.

3. Successful referral should be confirmed by contacting the referred person and the agency to which the referral was made. This includes linking HIV-infected persons to prevention and social services as well as to medical care. See Appendix for further guidance on the referral process.

Programmatic Considerations

1. Staff at HIV clinics, health departments, and CBOs should meet within their respective settings to discuss ways to integrate prevention into their services for persons who are HIV positive. These services must be offered and advertised in a way that does not stigmatize persons who are HIV positive or single out any particular group as responsible for new infections.
2. It is important that all interventions, including behavioral and STD screening, discussions of sexual and drug-use behaviors, and referrals, be conducted with cultural sensitivity.

Vignette

The Partnership for Health (PfH) intervention, conducted at six public HIV clinics in California, is an example of a successful behavioral intervention.⁸ The intervention was conducted mostly by primary care providers at the clinic after relatively brief training. The theme conveyed the importance of a patient-provider team approach in addressing the medical and behavioral dimensions of care to help HIV-infected patients stay as healthy as possible. The intervention included the following: (a) Printed information (brochure) introduced the partnership theme, stated messages emphasizing the importance of safer sex, and gave examples of specific risk-reducing behaviors. At later clinic visits, patients received flyers containing prevention information. (b) Posters in the clinic waiting room conveyed the PfH theme, and posters in each exam room emphasized a specific prevention message. (c) Brief (3-5 minutes) counseling was conducted by the primary care provider who stated the importance of the partnership, communicated prevention messages, and discussed behavioral goals with patients (e.g., risk reduction, maintaining safer behaviors). Results indicated that the intervention significantly reduced sexual risk behavior among patients whose profiles at baseline indicated risky behavior patterns.

Monitoring Implementation

CDC grantees receiving HIV prevention funds that work with HIV care providers to incorporate prevention in medical settings will be required to routinely report the following indicators to monitor implementation.

CDC's HIV Prevention Program Performance Indicators*:

1. Percentage of the intended number of HIV infected individuals to be reached who were actually reached with a prevention message (H.2)
2. Percentage of HIV infected persons who, after a specific period of participation in prevention counseling, report a reduction in sexual or drug using risk behaviors or maintain protective behaviors with seronegative partners or with partners of unknown status (I.2)

Other program measures that will require collaboration with health care providers providing prevention in care settings:

3. Number of persons with HIV who are referred for further prevention services, including partner counseling and referral services (PCRS) and prevention interventions for persons living with HIV.
4. Number of persons with HIV who use the prevention services to which they are referred
5. Number of persons with HIV who have a new STD diagnosis in a specified period
6. Collection of HIV transmission risk data in accordance with CTR Guidelines
7. Brief surveys of providers in HIV clinics before and after training to demonstrate the extent to which providers feel more prepared to conduct prevention counseling with patients
8. Brief surveys of patients at HIV clinics to assess the proportion that received prevention messages, how the messages are being received, the proportion that received prevention counseling, how prevention counseling is perceived, and whether changes in risk behavior are reported.

* The CDC Technical Assistance Guidelines for Health Department HIV Prevention Program Performance Indicators provides information on setting baseline, target, and indicator specification including appropriate data sources, calculations and reporting issues. Note: Performance indicators may have been modified to reflect specific population or setting characteristics.

References

1. Centers for Disease Control and Prevention. Guidelines for national human immunodeficiency virus case surveillance, including monitoring for human immunodeficiency virus infection and acquired immunodeficiency syndrome. *MMWR* 1999;48(RR-13):1-29.
2. Janssen RS, Holtgrave DR, Valdiserri RO, Shepherd M, Gayle HD. The serostatus approach to fighting the HIV epidemic: Prevention strategies for infected individuals. *Am J Public Health* 2001;91:1019-24.
3. Institute of Medicine/Committee on HIV Prevention Strategies in the United States. No time to lose: Getting more from HIV prevention. Ruiz MS, Gable AR, Kaplan EH, Stoto MA, Fineberg HV, Trussell J, editors. 2001. National Academy Press, Washington, D.C.
4. Valleroy LA, MacKellar DA, Karon JM, Rosen DH, McFarland W, Shehan DA, Stoyanoff SR, LaLota M, Celentano DD, Koblin BA, Thiede H, Katz MH, Torian LV, Janssen RS. HIV prevalence and associated risk in young men who have sex with men. *JAMA* 2000;284:198-204.
5. Allen S, Serufilira A, Bogaerts J, Van de Perre P, Nsengumuremyi F, Lindan C, Carael M, Wolf W, Coates T, Hulley S. Confidential HIV testing and condom promotion in Africa: Impact on HIV and gonorrhea rates. *JAMA* 1992;268:3338-43.
6. Centers for Disease Control and Prevention. Resurgent bacterial sexually transmitted disease among men who have sex with men — King County, Washington, 1997 – 1999. *MMWR* 1999;48:773-7.
7. Crepaz N, Marks G. Towards an understanding of sexual risk behavior in people living with HIV: A review of social, psychological, and medical findings. *AIDS* 2002;16:135-49.

8. Richardson JL, Milam J, McCutchan A, Stoyanoff S, Bolan R, Weiss J, Kemper C, Larsen RA, Hollander H, Weismuller P, Marks G. Effect of brief provider safer-sex counseling of HIV-1 positive patients: A multi-clinic assessment. Under review.
9. Kalichman SC, Rompa D, Cage M, DiFonzo K, Simpson D, Austin J, Luke W, Buckles J, Kyomugisha F, Benotsch E, Pinkerton S, Graham J. Effectiveness of an intervention to reduce HIV transmission risks in HIV-positive people. *Am J Prev Med* 2001;21:84-94.
10. Sorensen JL, Copeland AL. Drug abuse treatment as an HIV prevention strategy: A review. *Drug and Alcohol Dependency* 2000; 59:17-31.
11. Margolis AM, Avants SK, Warburton LA, Hawkins KA, Shi J. A randomized clinical trial of a manual-guided risk reduction intervention for HIV-positive injection drug users. *Health Psychology* 2003; 22:223-8.
12. Gibson DR, Flynn NM, McCarthy JJ. Effectiveness of methadone treatment in reducing HIV risk behavior and HIV seroconversion among injecting drug users [editorial review]. *AIDS* 1999;13:1807-18.
13. Duffas WA, Barragan L, Metsch CS, et.al. Effect of physician specialty on counseling practices and medical referral pattern among physicians caring for disadvantaged human immunodeficiency virus-infected populations. *Clinical Infectious Diseases* 2003; 36:1577-84
14. Centers for Disease Control and Prevention. HIV prevention case management guidance. U.S. Department of Health and Human Resources, September 1997.
15. Centers for Disease Control and Prevention. Sexually transmitted diseases treatment guidelines 2002. *MMWR* 2002;51(No. RR-6):1-82.
16. Centers for Disease Control and Prevention. HIV prevention through early detection and treatment of other sexually transmitted diseases – United States recommendations of the Advisory Committee for HIV and STD prevention. *MMWR* 1998;47(RR-12):1-24.
17. Collis TK, Celum CL. The clinical manifestations and treatment of sexually transmitted diseases in human immunodeficiency virus-positive men. *Clin Infect Dis* 2001;32:611-22.

Resources

AIDS Education and Training Centers (AETCs; <http://www.aids-ed.org>)

CDC/HRSA/HIVMA IDSA recommendations: Incorporating HIV prevention into the medical care of persons living with HIV (<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5212a1.htm>)

National Alliance of State and Territorial AIDS Directors (NASTAD; <http://www.nastad.org>)

National Prevention Information Network (NPIN; 1-800-458-5231; <http://www.cdcnpin.org>)

STD/HIV Prevention Training Centers (PTCs; <http://depts.washington.edu/nnptc>)

CDC. Technical Assistance Guidelines for CDC's HIV Prevention Program Performance Indicators. <http://www.cdc.gov/hiv/dhap.htm>

CDC. Sexually Transmitted Diseases Treatment Guidelines 2002. <http://www.cdc.gov/std/treatment/default.htm>

Attachment 1 – Prevention in Medical Care Settings

Examples of Prevention Messages

1. Unsafe sex may make it harder for you to keep yourself healthy
2. Unsafe sex also exposes other people to HIV infection
3. Unsafe sex may expose you to sexually transmitted diseases (STDs) (such as syphilis or gonorrhea) or strains of HIV that are not easily treated
4. Not having sex will prevent any possibility of infecting another person
5. Injecting illicit drugs or taking them orally puts your health at risk
6. Sharing injection needles with others exposes other people to HIV infection and may expose you to diseases such as hepatitis

7. If you and a sex partner don't use latex condoms or latex barriers while having sex
 - You do not show that your own health and the health of your partner come first
 - You are more likely to get STDs that may be difficult for us to treat
 - You may get other strains of HIV that may be difficult to treat
 - You make it harder for your medical provider to care for you
 - You may worry about infecting your partner and feel guilty after having sex

8. There are a variety of ways to reduce risks to yourself and a sex partner. Many people with HIV use one or more of the following strategies
 - Choose not to have sex at all
 - Choose safer behaviors, such as mutual masturbation
 - Choose to have sex with a partner who is HIV-infected and to use protection (a condom) with this partner
 - Choose less risky behaviors such as oral sex, and use latex barriers during oral sex
 - Choose to have anal or vaginal sex, but always use a condom to reduce the risk of transmission
 - Choose to limit the number of people with whom you have sex
 - Choose to stop using alcohol and other drugs because being under the influence of drugs may lead to unsafe sex

Attachment 2 - Prevention in Medical Care Settings

Examples of Laboratory Tests to Detect Asymptomatic Sexually Transmitted Diseases in Persons Who Are Asymptomatic

These recommendations apply to persons without symptoms or signs of STDs. Patients with symptoms (e.g., urethral or vaginal discharge; dysuria; intermenstrual bleeding; genital or anal lesions; anal pruritus, burning, or discharge; and lower abdominal pain with or without fever) or known exposure should have appropriate diagnostic testing regardless of reported sexual behavior or other risk factors.

First Visit

For all patients

- Test for syphilis: Nontreponemal serologic test, such as rapid plasma reagin (RPR) or Venereal Disease Research Laboratory (VDRL) test
- Test for urogenital gonorrhea: urethral (men) or cervical (women) specimen for culture; or urethral/cervical specimen or first-catch urine nucleic acid amplification test (NAAT) for *Neisseria gonorrhoeae*
- Test for urogenital chlamydial infection: urethral (men) cervical (women) specimen or first-catch urine (i.e., the first 10-30 cc of urine voided after initiating the stream should be used; men and women) specimen for NAAT for *Chlamydia trachomatis*

For women

- Test for trichomoniasis: wet mount examination or culture of vaginal secretions for *Trichomonas vaginalis*
- Test for urogenital chlamydia: cervical specimen for NAAT for *Chlamydia trachomatis* should be performed for all sexually active women 25 years of age or younger, and other women at increased risk, even if asymptomatic.

For patients who report receptive anal sex

- Test for rectal gonorrhea: anal swab culture for *Neisseria gonorrhoeae*
- Test for rectal chlamydia: anal swab culture for *Chlamydia trachomatis*, if available

For patients who report receptive oral sex

- Test for pharyngeal gonococcal infection: culture for *Neisseria gonorrhoeae*

NOTE: The yield of testing for *N. gonorrhoeae* and *C. trachomatis* is likely to vary, and screening for these pathogens should be based on consideration of patient's risk behaviors, local epidemiology of these infections, availability of tests (e.g., culture for *C. trachomatis*), and cost.

Later Routine Visits

- The tests listed above should be repeated periodically (i.e., at least annually) for all patients who are sexually active or who inject drugs. More frequent testing (e.g., every 3 months or 6 months) may be indicated for asymptomatic persons at higher risk. The presence of any of the following may indicate the need for testing more than once a year:

- Multiple or anonymous sex partners
- Past history of any STD
- Identification of other behaviors associated with the transmission of HIV or other STDs
- Sex or needle-sharing partner(s) with any of the above risks
- Life changes that may lead to an increase in risky behaviors (e.g., dissolution of a relationship)
- High prevalence of STDs in the area or in the patient population.

NOTE: Testing or vaccination for hepatitis, pneumococcal disease, influenza, and other infectious diseases (e.g., screening pregnant women for syphilis, gonorrhea, chlamydia, and hepatitis B surface antigen) should be incorporated into the routine care of HIV-infected persons as recommended elsewhere.^{15,16,17}

NOTE: Symptomatic and asymptomatic herpes simplex virus (HSV) infection, especially with HSV type 2, is prevalent among HIV-infected persons and may increase the risk of transmitting and acquiring HIV. Therefore, some experts recommend routine, type-specific serological testing for HSV-2. Patients with positive results should be informed of the increased risk of transmitting HIV and counseled regarding recognition of associated symptoms.¹⁷ Only tests for detection of HSV glycoprotein G are truly type-specific and suitable for HSV-2 serologic screening.

NOTE: Local and state health departments have reporting requirements for HIV and other STDs, which vary among states. Information on reporting requirements can be obtained from health departments. Clinicians need to be aware of and comply with requirements for the area in which they practice.

Attachment 3 - Prevention in Medical Care Settings

Available Diagnostic Testing for Detection of Sexually Transmitted Diseases

Diagnostic tests are listed in order of preference for recommendation, with most highly recommended test listed first. Alternative tests should be performed if specimen cannot be obtained or if preferred test is not available.

Syphilis

- Darkfield examination or direct fluorescent antibody (DFA) of exudate of lesion
- Serum nontreponemal tests, rapid plasma reagin (RPR), or Venereal Disease Research Laboratory (VDRL) for screening followed by serum treponemal tests such as fluorescent treponemal antibody absorbed (FTA-ABS) or *Treponema pallidum* particle agglutination (TP-PA)

Trichomoniasis

- Microscopic examination of wet mount or culture of vaginal secretions

Herpes

- Viral culture of genital or other mucocutaneous ulcers

Gonorrhea

Female Genitourinary (GU) tract

- Culture of endocervical swab specimen
- Nucleic acid amplification tests (NAAT) of endocervical swab specimen
- NAAT of urine

Male GU tract

- Culture of intraurethral swab
- NAAT of intraurethral swab
- NAAT of urine

Rectum/pharynx medium specimen

- Culture of rectal or pharyngeal swab specimen with selective

Chlamydia

- NAAT of endocervical swab specimen

Female GU tract

- NAAT of urine
- Unamplified nucleic acid hybridization test, enzyme immunoassay, or direct fluorescent antibody test of endocervical swab specimen
- Culture of endocervical swab specimen

Male GU tract

- NAAT of intraurethral swab specimen
- NAAT of urine
- Non-NAAT or culture of intraurethral swab specimen

Rectum/pharynx

- Culture of rectal or pharyngeal swab specimen

- Direct fluorescent antibody test performed on rectal or pharyngeal swab specimen)

NOTE: NAAT of urine is less sensitive than that of an endocervical or intraurethral swab specimen. *Chlamydia trachomatis*-major outer membrane protein (MOMP)-specific stain should be used.

Achieving Universal HIV Testing of Pregnant Women

Current Knowledge

Since the first pediatric case of HIV infection was documented in 1984, tremendous medical and public health achievements have been made in preventing mother-to-child transmission of HIV. A key step toward ensuring that the perinatal HIV interventions offered are effective is to make sure that care providers know the HIV status of the pregnant women in their care. When a woman is identified as HIV infected during pregnancy, antiretroviral and obstetrical interventions can reduce the risk of having an infected baby to $\leq 2\%$. When preventive anti-retroviral treatment is not initiated until labor or birth of the newborn, the risk of for transmission is 9% to 13%.¹⁻³ Without intervention, the risk for transmission is approximately 25% in the United States.⁴

Maximal reduction of perinatal HIV transmission in the United States depends on ensuring

- Pregnant women receive prenatal care
- Routine HIV screening of all pregnant women
- Recommended antiretroviral regimens are used during the prenatal, intrapartum and postpartum periods for HIV-infected women and their infants, as well as obstetrical interventions for women during labor and delivery
- Routine screening of women during labor and delivery or of the newborn when the mother's HIV status has not been determined previously⁵

Approximately 6,000 to 7,000 HIV-infected women gave birth in the United States in 2000, resulting in an estimated 280 to 370 HIV-infected infants. In about 40% of the perinatal transmissions, health care providers were unaware of the mother's HIV status before delivery. Additionally, in the November 15, 2002, issue of the *Morbidity and Mortality Weekly Report*, CDC published information on the most recently available prenatal HIV testing rates for the United States and Canada.⁶ The report includes a comparison of the HIV prenatal testing rates associated with different testing approaches. In *opt-out*, pregnant women are notified that an HIV test will be included in the standard battery of prenatal tests and procedures and that they may decline testing. In the more commonly used *opt-in* approach, pregnant women are given pretest counseling and must specifically consent, usually in writing, to an HIV test.

Among states using the *opt-in* approach and in which data were collected from medical records during 1998-1999, testing rates ranged from 25% to 69%. Population-based data from Canada showed testing rates in three *opt-in* provinces of 54% to 83%. In contrast, medical record data from Tennessee, which uses the *opt-out* approach, revealed a testing rate of 85%. Data from Canadian provinces using *opt-out* approaches showed a 98% testing rate in Alberta and a 94% testing rate in Newfoundland and Labrador. At the University of Alabama's 8 prenatal clinics, HIV testing rates rose from 75% to 88% after the *opt-out* approach was implemented.⁷

In an April 22, 2003 Dear Colleague letter to health departments, community-based organizations, and health care providers, CDC recommended that clinicians routinely

screen all pregnant women for HIV infection, using an opt-out approach, and that jurisdictions with statutory barriers to such routine prenatal screening consider revising them.⁸ For women whose HIV status is unknown when labor begins, CDC recommended routine rapid testing.⁹ CDC also encouraged clinicians to test any newborn for HIV whose mother's HIV status is unknown.

Objectives

The purpose of this document is to provide guidance for state health departments to achieve

- Universal routine prenatal HIV testing in order to minimize perinatal HIV transmission in the United States
- Routine rapid HIV testing during labor and delivery for women whose HIV status is still unknown
- Rapid HIV testing post partum for women of unknown HIV status or their neonates, when rapid testing at labor and delivery is not possible or been previously declined
- Appropriate antiretroviral treatment and comprehensive follow-up care for HIV-infected pregnant women and their infants

Procedures

During prenatal care

1. Health departments in collaboration with the AIDS Education and Training Centers (AETC) of the Health Resources and Services Administration's (HRSA), medical organizations, and other partners, should facilitate the training of prenatal care providers in use of the opt-out approach, including documenting in a woman's medical chart her HIV test results or that she declined testing.
2. Training should include the following key elements of the opt-out approach:
 - a) At the first prenatal visit, women should be given information, which can be written (such as a brochure or pamphlet) or shown in a video, about perinatal HIV transmission, testing, and prevention.
 - b) Women should be told that HIV testing will be included in the standard battery of prenatal tests and procedures. This information may be included in a consent form that women sign for all prenatal care and services. Specific procedures regarding consent will depend on state and local laws, regulations, and policies.
 - c) Women should be told that they have the right to decline testing.
 - d) HIV test results or the refusal to be tested should be documented in the woman's medical chart.
3. Health departments should distribute materials, which are being or have been developed by the American College of Obstetricians and Gynecologists (ACOG), including a fact sheet on HIV testing for providers, an information sheet for women on HIV and other prenatal tests, and forms for documenting HIV test results or decline of testing.
4. Health departments should encourage prenatal care providers who work in areas of high HIV prevalence to rescreen women for HIV during the third trimester.
5. For pregnant women who test positive for HIV, health departments should facilitate access to appropriate obstetric, medical, and social services for prevention, care, and treatment.

During labor and delivery

Health departments should work with AETCs, medical organizations and other partners to provide training to hospital staffs on procedures for offering rapid testing during labor and delivery to pregnant women whose HIV status is unknown. Training should emphasize the need to document test results or refusals. The following are additional key points:

1. Women in labor whose HIV status is unknown should be informed that rapid HIV testing will be done routinely to help protect her baby's health unless she declines testing.
2. Women should be informed that a negative rapid test result means that she is not HIV infected; a preliminary positive rapid test result means that she probably is HIV infected.
3. If a woman tests positive, she should be informed that medicines can be given to her during labor and to her newborn based on the preliminary test result to reduce the chance that the baby will become HIV infected.
4. Confirmatory testing will need to be done if she has a positive rapid HIV test result.

After birth

Health departments should work with medical organizations and other partners to train hospital staff to screen the mother or the infant or both with a rapid HIV test as soon as possible if the mother's HIV status remains unknown. Some states mandate newborn screening in this circumstance.

Working with Partners and Integration into Existing Services

1. State AIDS directors should arrange training in the opt-out approach and in rapid testing with
 - State and local medical organizations
 - Maternal and child health (MCH) programs
 - AIDS Education and Training Centers
 - Hospitals offering obstetrical services
 - Other venues such as family planning clinics and drug treatment centers serving pregnant women.They should ensure that training is provided in prenatal clinics funded by MCH programs.
2. Working with ACOG and other partners, CDC has developed a model protocol for implementing rapid HIV testing in labor and delivery settings. The protocol should be disseminated to providers of obstetric services.

Programmatic Considerations

1. Implementing the opt-out approach into HIV screening of pregnant women may require changes in state laws to streamline pretest counseling and consent requirements and documentation of test results or decline of testing.
2. State health departments should provide information about the expected public health benefits of the opt-out approach to local representatives of national health care provider organizations, community groups that focus on maternal and child health issues, and state and local government officials.

Vignette

In 1995, the state of Texas passed a law to permit the opt-out approach to prenatal HIV testing. Prenatal care providers in Texas distribute to pregnant women brochures obtained from the state health department describing prenatal tests, including those for HIV. Most providers obtain a general written consent for the standard battery of prenatal tests, which includes a test for HIV. Decline of the HIV test must be documented in the medical record.

Monitoring Implementation

CDC grantees receiving HIV prevention funds will be required to routinely report the following indicators to monitor their HIV testing of pregnant women.

CDC's HIV Prevention Program Performance Indicators* :

1. Proportion of women who receive an HIV test during pregnancy (D.1)
2. Proportion of HIV-infected pregnant women who receive appropriate interventions to prevent perinatal transmission (D.2)
3. Proportion of HIV-infected pregnant women whose infants are perinatally infected (D.3)

Other program measures:

4. Statewide perinatal testing rates, possibly using PRAMS data (see Resources for the PRAMS website)
5. Hospital specific perinatal testing rates
6. States with low prevalence of HIV among women of childbearing age or who have low cumulative numbers of perinatal HIV infection, and who adopt the chart review method to obtain this indicator, may choose to sample only among hospital(s) with the largest proportion of deliveries in the state
7. Description of state laws related to perinatal HIV testing, including prenatal HIV testing and documentation, testing at labor and delivery, testing of the newborn and the use of rapid HIV testing.
8. Description of state efforts to monitor perinatal HIV testing rates.
9. Description of state efforts to promote routine prenatal HIV testing, including, for example:
 - a) Number and location of provider trainings.
 - b) Number and occupation of participants attending provider trainings
 - c) Topics covered during training (e.g., the number, type, and destination of materials distributed)

* The CDC Technical Assistance Guidelines for Health Department HIV Prevention Program Performance Indicators provides information on setting baseline, target, and indicator specification including appropriate data sources, calculations and reporting issues. Note: Performance indicators may have been modified to reflect specific population or setting characteristics.

References

1. Dorenbaum A, Cunningham CK, Gelber RD, et al. Two-dose intrapartum/newborn nevirapine and standard antiretroviral therapy to reduce perinatal HIV transmission: A randomized trial. *JAMA* 2002;288:189-198.
2. Guay LA, Musoke P, Fleming T, et al. Intrapartum and neonatal single-dose nevirapine compared with zidovudine for prevention of mother-to-child transmission of HIV-1 in Kampala, Uganda: HIVNET 012 randomised trial. *Lancet* 1999;354:795-802.
3. Wade NA, Birkhead GS, Warren BL et al. Abbreviated regimen of zidovudine prophylaxis and perinatal transmission of the human immunodeficiency virus. *N Engl J Med* 1998;339:1409-1414.
4. Connor EM, Sperling RS, Gelber R, et al. Reduction of maternal-infant transmission of human immunodeficiency virus type 1 with zidovudine treatment. *N Engl J Med* 1994; 331:1173-1180.
5. Centers for Disease Control and Prevention (CDC). Revised recommendations for HIV screening of pregnant women. *MMWR* 2001; 50 (RR 19: 50-86).
6. CDC. HIV testing among pregnant women – United States and Canada, 1998-2001. *MMWR* 2003;51:1013-1016.
7. Stringer EM, Stringer JS, Cliver SP, Goldenberg RL, Goepfert AR. Evaluation of a new testing policy for human immunodeficiency virus to improve screening rates. *Obstetrics & Gynecology* 2001;98(6):1104-1108.
8. CDC. Dear Colleague letter. April 22, 2003. Available at: <http://www.cdc.gov/hiv/partners/ahp.htm>
9. Cohen M et al., Rapid point-of-care testing for HIV-1 in labor and delivery: Chicago, 2002. In preparation for *MMWR*.

Resources

ACOG: <http://www.acog.org/>

AIDS Education and Training Centers: <http://hab.hrsa.gov/educating.htm>

CDC perinatal HIV prevention website: <http://www.cdc.gov/hiv/projects/perinatal>

PRAMS website: http://www.cdc.gov/nccdphp/drh/srv_prams.htm

Rapid testing: http://www.cdc.gov/hiv/rapid_testing/

CDC. Technical Assistance Guidelines for CDC's HIV Prevention Program Performance Indicators. <http://www.cdc.gov/hiv/dhap.htm>

Appendix

Guidelines for Counseling and Referral for Persons with Newly Identified HIV Infection

This appendix summarizes key points for counseling and referring to services persons with newly diagnosed HIV infection, as outlined in the *Revised Guidelines for HIV Counseling, Testing, and Referral* (CDC. MMWR 2001;50(No. RR-19):1-54.). Please see <http://www.cdc.gov/mmwr/PDF/rr/rr5019.pdf> for a detailed outline of the recommendations.

Basic information and support

- Ensure that the client receives and understands the meaning of the test result.
- Provide psychological support and make referral for additional psychological support if indicated.
- Ensure that the client knows where and how to obtain further information and services.

Medical assessment and care

- Provide, or make referral for, medical evaluation, care, and treatment (including sexually transmitted disease [STD] screening and care, screening and treatment or vaccination for viral hepatitis, and reproductive health services).

Prevention

- Advise client to refrain from donating blood, plasma, or organs.
- Ensure that the client has sufficient accurate information about how HIV is transmitted and how transmission can be prevented.
- Explicitly point out and explain misconceptions regarding HIV transmission risk associated with specific sexual behaviors or the sharing of drug-use equipment.
- For sexually active clients, address strategies for preventing other STDs or bloodborne infections (e.g., gonorrhea, syphilis, hepatitis B virus, hepatitis C virus).
- Provide, or make referral for, HIV prevention counseling that focuses on the client's personal circumstances and risk and helps the client set and reach explicit behavior-change goals to reduce the chance of transmitting HIV.
- Assess need for, and provide, or make referral for, other HIV prevention services (e.g., individual or group prevention counseling, prevention case management).
- Provide, or make referral for, partner counseling and referral services, in accordance with all applicable laws and regulations.

Special issues for pregnant women

- Provide information regarding the risk for perinatal HIV transmission, ways to reduce this risk, and the prognosis for infants who become infected.
- Provide, or make referral for, specialty care from providers who are knowledgeable about perinatal HIV prevention.

- Provide, or make referral for, nondirective counseling regarding all reproductive options.

Other support needs

- Assess need for, and provide, or make referral for, other support services (e.g., drug or alcohol prevention and treatment; mental health services; legal services; assistance with housing, food, employment, transportation, and child care; and domestic or partner violence services).

Follow-up

- Consider scheduling a follow-up appointment 3 to 6 months after diagnosis to assess whether clients were able to initiate medical care, minimize transmission risk to uninfected partners, and access other needed services (e.g., partner counseling and referral services).

Strategies for making effective referrals

- Consult with the client to identify essential factors that (a) are likely to influence the client's ability to adopt or sustain behaviors to reduce risk for HIV transmission or (b) promote health and prevent disease progression.
- Match service referrals to the client's self-identified needs and priorities.
- In consultation with the client, assess and address any factors that make completing the referral difficult (e.g., lack of transportation or child care, work schedule, cost).
- Provide information necessary to access the referral service (e.g., contact name, eligibility requirements, location, hours of operation, telephone number).
- Provide or arrange assistance when indicated (e.g., schedule the appointment, address transportation needs).
- Obtain the client's consent to share identifying information to help complete and verify the referral.
- Document referrals made, the status of those referrals (i.e., whether the referral service was accessed), reasons referrals were not accessed, and the client's satisfaction with the referrals.

Glossary

AIDS: Acquired immunodeficiency syndrome. AIDS can affect the immune and central nervous systems and can result in neurological problems, infections, or cancers. It is caused by human immunodeficiency virus (HIV).

Anonymous: In anonymous testing, client identifying information is not linked to testing information, including the request for tests or test results.

Antiretroviral therapy: Treatment with drugs designed to prevent HIV from replicating in HIV-infected persons. Highly active antiretroviral therapy (HAART) is an antiretroviral regimen that includes multiple classifications of antiretroviral drugs.

Capacity building: Activities that strengthen the core competencies of an organization and contribute to its ability to develop and implement an effective HIV prevention intervention and sustain the infrastructure and resource base necessary to support and maintain the intervention.

Client-centered HIV prevention counseling: An interactive risk-reduction counseling model usually conducted with HIV testing, in which the counselor helps the client identify and acknowledge personal HIV risk behaviors and commit to a single, achievable behavior change step that could reduce the client's HIV risk.

Collaboration: Working with another person, organization, or group for mutual benefit by exchanging information, sharing resources, or enhancing the other's capacity, often to achieve a common goal or purpose.

Community Planning Group: The official HIV prevention planning body that follows the HIV Prevention Community Planning Guidance to develop a comprehensive HIV prevention plan for a project area.

Confidentiality: Pertains to the disclosure of personal information in a relationship of trust and with the expectation that it will not be divulged to others in ways that are inconsistent with the original disclosure. Confidentiality must be maintained for persons who are recommended and/or who receive HIV counseling, testing, and referral (CTR) services.

Confidential HIV test: An HIV test for which a record of the test and the test results are recorded in the client's chart.

Confirmatory test: A highly specific test designed to confirm the results of an earlier (screening) test. For HIV testing, a Western blot or, less commonly, an immunofluorescence assay (IFA) is used as a confirmatory test.

Culturally Appropriate: Conforming to a culture's acceptable expressions and standards of behavior and thoughts. Interventions and educational materials are more

likely to be culturally appropriate when representatives of the intended target audience are involved in planning, developing, and pilot testing them.

Demographics: The statistical characteristics of human populations such as age, race, ethnicity, sex, and size.

Duty to Warn: A legal concept indicating that a health care provider who learns that an HIV-infected client is likely to transmit the virus to another identifiable person must take steps to warn that person; state laws determine what actually constitutes a "duty to warn."

EIA: Enzyme immunoassay. Sometimes referred to as ELISA (see next definition). A commonly used screening test to detect antibodies to HIV.

ELISA: Enzyme-linked immunosorbent assay. A type of EIA (see previous definition). A commonly used screening test to detect antibodies to HIV.

Evaluation: A process for determining how well health systems, either public or private, deliver or improve services and for demonstrating the results of resource investments.

Evidence-based: Behavioral, social, and structural interventions that are relevant to HIV risk reduction, have been tested using a methodologically rigorous design, and have been shown to be effective in a research setting. These evidence- or science-based interventions have been evaluated using behavioral or health outcomes; have been compared to a control/comparison group(s) (or pre-post data without a comparison group if a policy study); had no apparent bias when assigning persons to intervention or control groups or were adjusted for any apparent assignment bias; and, produced significantly greater positive results when compared to the control/comparison group(s), while not producing negative results.

Freestanding HIV test site: A site that provides only HIV services. Sometimes referred to as alternate test site or anonymous test site. Change term use definition

Group-level interventions: Health education and risk-reduction counseling that shifts the delivery of service from the individual to groups of varying sizes. Group-level interventions use peer and non-peer models involving a range of skills, information, education, and support.

Guidance: Information to assist in efforts to conduct HIV prevention activities; guiding principles.

Guidelines: A dictated set of activities; policies.

HIV: Human immunodeficiency virus, which causes AIDS. Several types of HIV exist, with HIV-1 being the most common in the United States.

HIV test: More correctly referred to as an HIV antibody test, the HIV test is a laboratory procedure that detects antibodies to HIV, rather than the virus itself.

HIV prevention counseling: An interactive process between client and counselor aimed at reducing risky sex and needle-sharing behaviors related to HIV acquisition (for HIV-uninfected clients) or transmission (for HIV-infected clients). See also client-centered HIV prevention counseling.

Incidence: In epidemiology, the number of new cases of infection or disease that occur in a defined population within a specified time.

Individual-level interventions: Health education and risk-reduction counseling provided for one individual at a time. ILIs help clients make plans for behavior change and ongoing appraisals of their own behavior and include skills-building activities. These interventions also facilitate linkages to services in both clinic and community settings (for example, substance abuse treatment settings) in support of behaviors and practices that prevent transmission of HIV, and help clients make plans to obtain these services.

Informed consent: The legally effective permission of a client or legally authorized representative (e.g., parent or legal guardian of a minor child) to undergo a medical test or procedure.

Injection drug user: Someone who uses a needle to inject drugs into his or her body.

Jurisdiction: An area or region that is the responsibility of a particular governmental agency. This term usually refers to an area where a state or local health department monitors HIV prevention activities. (For example, Jonestown is within the jurisdiction of the Jones County Health Department.)

Oral fluid test: A test using oral mucosal transudate, a serous fluid. To differentiate this fluid from saliva, an absorbent material is left in the mouth for several minutes. In an HIV-infected person, oral mucosal transudate is likely to contain HIV antibodies.

Outcome Monitoring: Efforts to track the progress of clients or a program based upon outcome measures set forth in program goals. These measurements assess the effects of interventions on client outcomes such as knowledge, attitudes, beliefs, and behavior. Monitoring allows the identification of changes that occurred, but the intervention may not have been responsible for the change. This would take a more rigorous approach (see Outcome evaluation).

Outcome evaluation: Outcome evaluation involves the assessment of the immediate or direct effects of a program on the program participants; for example, the degree to which the program increased knowledge of HIV/AIDS, perceived risk of infection, and/or decreased intent of engaging in risk behaviors related to HIV transmission.

Outcome evaluation also assesses the extent to which a program attains its objectives related to intended short- and long-term change for a target population.

Partner counseling and referral services (PCRS): A prevention activity that aims to a) provide services to HIV-infected persons and their sex and needle-sharing partners so they can reduce their risk for infection or, if already infected, can prevent transmission to others and b) help partners gain earlier access to individualized counseling, HIV testing, medical evaluation, treatment, and other prevention and support services.

Perinatal HIV transmission: Transmission of HIV from the mother to the fetus or infant during pregnancy, delivery, or breast-feeding.

Positive test: For HIV, a specimen sample that is reactive on an initial ELISA test, repeatedly reactive on a second ELISA run on the same specimen, and confirmed positive on Western blot or other supplemental test indicates that the client is infected.

Preliminary Positive: For HIV, a specimen that is reactive on an initial EIA or rapid test. A preliminary HIV positive test result must be confirmed by a reactive test result using Western blot or another supplemental test indicating that the client is infected.

Prevalence: The number or percentage of persons in a given population with a disease or condition at a given point in time.

Prevention case management (PCM): A client-centered HIV prevention activity that promotes adoption of HIV risk-reduction behaviors by clients with multiple, complex problems and risk-reduction needs. PCM is a hybrid of HIV prevention counseling and traditional case management that provides intensive, on-going, individualized prevention counseling, support, and referral to other needed services.

Prevention counseling: An interactive process between client and counselor aimed at reducing risky sex and needle-sharing behaviors related to HIV acquisition (for HIV uninfected clients) or transmission (for HIV-infected clients). See also client-centered HIV prevention counseling and HIV prevention counseling.

Quality assurance: An ongoing process for ensuring that the CTR program effectively delivers a consistently high level of service to the clients.

Rapid HIV test: A test to detect antibodies to HIV that can be collected and processed within a short interval of time (e.g., approximately 10-60 minutes).

Referral: The process through which a client is connected with services to address prevention needs (medical, prevention, and psychosocial support). There are four types of referral: **Provider Referral:** The provider informs the partner and refers him or her to counseling, testing, and other support services; **Patient or Client Referral:** The HIV-infected client takes full responsibility to inform his or her partners of their possible exposure to HIV and refers them to counseling, testing, and other support services;

Contract Referral: If the HIV-infected client is unable to inform a partner within an agreed-upon time (e.g., 3 days), the provider has the permission and information necessary to do so; **Dual Referral:** The HIV-infected client and the provider inform the partner(s) together.

Risk assessment: Risk assessment is a fundamental part of a client-centered HIV prevention counseling session in which the client is encouraged to identify, acknowledge, and discuss in detail his or her personal risk for acquiring or transmitting HIV.

Risk factor or behavior: Behavior or other factor that places a person at risk for disease. For example, drug use is a factor that increases risk of acquiring HIV infection; and factors such as sharing injection drug use equipment, unprotected anal or vaginal sexual contact, and commercial unprotected sex increase the risk of acquiring and transmitting HIV.

Risk screening: A brief evaluation of HIV risk factors, both behavioral and clinical, used for decisions about who should be recommended HIV counseling and testing. Risk screening is different from risk assessment.

Screening: Performing a test for all persons in a defined population, is a basic, effective public health tool used to identify an unrecognized condition so that treatment can be offered before symptoms develop.

Sensitivity: The probability that a test will be positive when infection or condition is present.

Seroconversion: Initial development of detectable antibodies specific to a particular antigen; the change of a serologic test result from negative to positive as a result of antibodies induced by the introduction of antigens or microorganisms into the host.

Specificity: The probability that a test will be negative when the infection or condition is not present.

Testing: Performing a test because of a person's clinical symptoms or behavioral risk factors, has been the predominant paradigm for diagnosing HIV.

Voluntary HIV testing: HIV testing that is offered free of coercion. With voluntary HIV testing, participants have the opportunity to accept or refuse HIV testing.

Western blot: A laboratory test that detects specific antibodies to components of a virus. Chiefly used as a confirmatory test following repeatedly reactive EIA tests or rapid tests.
