Complete Summary

GUIDELINE TITLE

Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings.

BIBLIOGRAPHIC SOURCE(S)

Branson BM, Handsfield HH, Lampe MA, Janssen RS, Taylor AW, Lyss SB, Clark JE, Centers for Disease Control and Prevention (CDC). Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings. MMWR Recomm Rep 2006 Sep 22;55(RR-14):1-17; quiz CE1-4. [119 references] PubMed

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates two previous versions:

- Centers for Disease Control and Prevention (CDC). Revised guidelines for HIV counseling, testing, and referral. MMWR Recomm Rep 2001 Nov 9;50(RR-19):1-58. [151 references]
- Revised recommendations for HIV screening of pregnant women. MMWR Recomm Rep 2001 Nov 9;50(RR-19):59-86. [87 references]

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Human immunodeficiency virus (HIV) infection

GUIDELINE CATEGORY

Diagnosis
Prevention
Screening

CLINICAL SPECIALTY

Critical Care
Emergency Medicine
Family Practice
Infectious Diseases
Internal Medicine
Obstetrics and Gynecology
Pediatrics
Preventive Medicine

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Emergency Medical Technicians/Paramedics
Health Care Providers
Hospitals
Nurses
Physician Assistants
Physicians
Public Health Departments
Substance Use Disorders Treatment Providers

GUIDELINE OBJECTIVE(S)

- To update previous recommendations for human immunodeficiency virus (HIV) testing in health-care settings and for screening of pregnant women
- To increase HIV screening of patients, including pregnant women, in health-care settings
- To foster earlier detection of HIV infection
- To identify and counsel persons with unrecognized HIV infection and link them to clinical and prevention services
- To further reduce perinatal transmission of HIV in the United States

Note: The guidelines address HIV testing in health-care settings only; they do not modify existing guidelines concerning HIV counseling, testing, and referral for persons at high risk for HIV who seek or receive HIV testing in nonclinical settings (e.g., community-based organizations, outreach settings, or mobile vans).

TARGET POPULATION

- All patients 13 to 65 years old seen in health-care settings (screening)

- Patients with signs and symptoms consistent with human immunodeficiency virus (HIV) infection or an opportunistic illness characteristic of acquired immune deficiency syndrome (AIDS) (diagnostic testing)
- All pregnant women in the United States
- Infants born to women whose HIV status is unknown (testing)

INTERVENTIONS AND PRACTICES CONSIDERED

Screening

1. Routine screening for human immunodeficiency virus (HIV)
2. Repeat screening as indicated
3. Patient education
4. Special considerations for pregnant women and adolescents

Diagnosis

1. HIV antibody testing
2. Plasma RNA testing as indicated
3. Special considerations for pregnant women and newborns
4. Additional considerations
    - Test results (e.g., communicating and documenting results, rapid HIV tests, and HIV vaccine trials)
5. Referral for treatment including:
    - Partner counseling and referral
    - Antibiotic prophylaxis for HIV-exposed infants (e.g., trimethoprim-sulfamethoxazole)

Prevention

1. Prevention services
2. HIV/acquired immune deficiency syndrome (AIDS) surveillance
3. Monitoring and evaluation

MAJOR OUTCOMES CONSIDERED

- Rates of sexual and perinatal transmission of human immunodeficiency virus (HIV)
- Number of patients tested and percentage of positive tests
- Cost-effectiveness of screening

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

In April 2005, the Centers for Disease Control and Prevention (CDC) initiated a comprehensive review of the literature regarding human immunodeficiency virus (HIV) testing in health-care settings and, on the basis of published evidence and lessons learned from CDC-sponsored demonstration projects of HIV screening in health-care facilities, began to prepare recommendations to implement these strategies.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review
Review of Published Meta-Analyses

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

In March 2004, the Centers for Disease Control and Prevention (CDC) convened a meeting of health-care providers, representatives from professional associations, and local health officials to obtain advice concerning how best to expand human immunodeficiency virus (HIV) testing, especially in high-volume, high-prevalence acute-care settings. Consultants recommended simplifying the HIV screening process to make it more feasible and less costly and advocated more frequent diagnostic testing of patients with symptoms. In April 2005, CDC initiated a comprehensive review of the literature regarding HIV testing in health-care settings and, on the basis of published evidence and lessons learned from CDC-sponsored demonstration projects of HIV screening in health-care facilities, began to prepare recommendations to implement these strategies. In August 2005, CDC invited health-care providers, representatives from public health agencies and community organizations, and persons living with HIV to review an outline of proposed recommendations. In November 2005, CDC convened a meeting of researchers, representatives of professional health-care provider organizations,

clinicians, persons living with HIV, and representatives from community organizations and agencies overseeing care of HIV-infected persons to review CDC's proposed recommendations.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

Cost-Effectiveness of Screening and Testing

- Recent studies demonstrate that voluntary human immunodeficiency virus (HIV) screening is cost-effective even in health-care settings in which HIV prevalence is low. In populations for which prevalence of undiagnosed HIV infection is $\geq$0.1%, HIV screening is as cost-effective as other established screening programs for chronic diseases (e.g., hypertension, colon cancer, and breast cancer). Because of the substantial survival advantage resulting from earlier diagnosis of HIV infection when therapy can be initiated before severe immunologic compromise occurs, screening reaches conventional benchmarks for cost-effectiveness even before including the important public health benefit from reduced transmission to sex partners.
- Linking patients who have received a diagnosis of HIV infection to prevention and care is essential. HIV screening without such linkage confers little or no benefit to the patient. Although moving patients into care incurs substantial costs, it also triggers sufficient survival benefits that justify the additional costs. Even if only a limited fraction of patients who receive HIV-positive results are linked to care, the survival benefits per dollar spent on screening represent good comparative value.
- A second HIV test during the third trimester for women in settings with elevated HIV incidence (>17 cases per 100,000 person-years) is cost-effective and might result in substantial reductions in mother-to-child HIV transmission.

METHOD OF GUIDELINE VALIDATION

External Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Before final revision of these recommendations, the Centers for Disease Control and Prevention (CDC) described the proposals at national meetings of researchers and healthcare providers and, in March 2006, solicited peer review by health-care professionals, in compliance with requirements of the Office of Management and Budget for influential scientific assessments, and invited comment from multiple professional and community organizations. The final recommendations were further refined on the basis of comments from these constituents.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Note from the National Guideline Clearinghouse (NGC) and the Centers from Disease Control and Prevention (CDC)*: These revised recommendations update previous recommendations for human immunodeficiency virus (HIV) testing in health-care settings and for screening of pregnant women (see "Guideline Status" field). Major revisions from previously published guidelines are as follows:*

For patients in all health-care settings

- *HIV screening is recommended for patients in all health-care settings after the patient is notified that testing will be performed unless the patient declines (opt-out screening).*
- *Persons at high risk for HIV infection should be screened for HIV at least annually.*
- *Separate written consent for HIV testing should not be required; general consent for medical care should be considered sufficient to encompass consent for HIV testing.*
- *Prevention counseling should not be required with HIV diagnostic testing or as part of HIV screening programs in health-care settings.*

For pregnant women

- *HIV screening should be included in the routine panel of prenatal screening tests for all pregnant women.*
- *HIV screening is recommended after the patient is notified that testing will be performed unless the patient declines (opt-out screening).*
- *Separate written consent for HIV testing should not be required; general consent for medical care should be considered sufficient to encompass consent for HIV testing.*
- *Repeat screening in the third trimester is recommended in certain jurisdictions with elevated rates of HIV infection among pregnant women.*

See the original guideline document for a full discussion of the similarities and differences between current and previous recommendations.

Recommendations for Adults and Adolescents

The Centers for Disease Control and Prevention (CDC) recommends that diagnostic human immunodeficiency (HIV) testing and opt-out HIV screening be a part of routine clinical care in all health-care settings while also preserving the patient's option to decline HIV testing and ensuring a provider-patient relationship conducive to optimal clinical and preventive care. The recommendations are intended for providers in all health-care settings, including hospital emergency departments (EDs), urgent-care clinics, inpatient services, sexually transmitted disease (STD) clinics or other venues offering clinical STD services, tuberculosis (TB) clinics, substance abuse treatment clinics, other public health clinics, community clinics, correctional health-care facilities, and primary care settings. The guidelines address HIV testing in health-care settings only; they do not modify existing guidelines concerning HIV counseling, testing, and referral for persons at high risk for HIV who seek or receive HIV testing in nonclinical settings (e.g., community-based organizations, outreach settings, or mobile vans).

Screening for HIV Infection

- In all health-care settings, screening for HIV infection should be performed routinely for all patients aged 13 to 64 years. Health-care providers should initiate screening unless prevalence of undiagnosed HIV infection in their patients has been documented to be <0.1%. In the absence of existing data for HIV prevalence, health-care providers should initiate voluntary HIV screening until they establish that the diagnostic yield is <1 per 1,000 patients screened, at which point such screening is no longer warranted.
- All patients initiating treatment for TB should be screened routinely for HIV infection (Taylor, Nolan, & Blumberg, 2005). (Also see the National Guideline Clearinghouse [NGC] summary of the CDC guideline Controlling Tuberculosis in the United States.)
- All patients seeking treatment for STDs, including all patients attending STD clinics, should be screened routinely for HIV during each visit for a new complaint, regardless of whether the patient is known or suspected to have specific behavior risks for HIV infection.

Repeat Screening

- Health-care providers should subsequently test all persons likely to be at high risk for HIV at least annually. Persons likely to be at high risk include injection-drug users and their sex partners, persons who exchange sex for money or drugs, sex partners of HIV-infected persons, and men who have sex with men (MSM) or heterosexual persons who themselves or whose sex partners have had more than one sex partner since their most recent HIV test.
- Health-care providers should encourage patients and their prospective sex partners to be tested before initiating a new sexual relationship.
- Repeat screening of persons not likely to be at high risk for HIV should be performed on the basis of clinical judgment.
- Unless recent HIV test results are immediately available, any person whose blood or body fluid is the source of an occupational exposure for a health-care provider should be informed of the incident and tested for HIV infection at the time the exposure occurs.

Consent and Pretest Information

- Screening should be voluntary and undertaken only with the patient's knowledge and understanding that HIV testing is planned.
- Patients should be informed orally or in writing that HIV testing will be performed unless they decline (opt-out screening). Oral or written information should include an explanation of HIV infection and the meanings of positive and negative test results, and the patient should be offered an opportunity to ask questions and to decline testing. With such notification, consent for HIV screening should be incorporated into the patient's general informed consent for medical care on the same basis as are other screening or diagnostic tests; a separate consent form for HIV testing is not recommended.
- Easily understood informational materials should be made available in the languages of the commonly encountered populations within the service area. The competence of interpreters and bilingual staff to provide language assistance to patients with limited English proficiency must be ensured.

- If a patient declines an HIV test, this decision should be documented in the medical record.

Diagnostic Testing for HIV Infection

- All patients with signs or symptoms consistent with HIV infection or an opportunistic illness characteristic of acquired immune deficiency syndrome (AIDS) should be tested for HIV.
- Clinicians should maintain a high level of suspicion for acute HIV infection in all patients who have a compatible clinical syndrome and who report recent high-risk behavior. When acute retroviral syndrome is a possibility, a plasma RNA test should be used in conjunction with an HIV antibody test to diagnose acute HIV infection (Panel on Clinical Practices for Treatment of HIV Infection, 2006. (Also see NGC summary of DHHS guideline, Guidelines for the Use of Antiretroviral Agents in HIV-1-infected Adults and Adolescents)
- Patients or persons responsible for the patient's care should be notified orally that testing is planned, advised of the indication for testing and the implications of positive and negative test results, and offered an opportunity to ask questions and to decline testing. With such notification, the patient's general consent for medical care is considered sufficient for diagnostic HIV testing.

Recommendations for Pregnant Women

These guidelines reiterate the recommendation for universal HIV screening early in pregnancy but advise simplifying the screening process to maximize opportunities for women to learn their HIV status during pregnancy, preserving the woman's option to decline HIV testing, and ensuring a provider-patient relationship conducive to optimal clinical and preventive care. All women should receive HIV screening consistent with the recommendations for adults and adolescents. HIV screening should be a routine component of preconception care, maximizing opportunities for all women to know their HIV status before conception. In addition, screening early in pregnancy enables HIV-infected women and their infants to benefit from appropriate and timely interventions (e.g., antiretroviral medications, scheduled cesarean delivery, and avoidance of breastfeeding*). These recommendations are intended for clinicians who provide care to pregnant women and newborns and for health policy makers who have responsibility for these populations.

*To eliminate the risk for postnatal transmission, HIV-infected women in the United States should not breastfeed. Support services for use of appropriate breast milk substitutes should be provided when necessary. In international settings, UNAIDS and World Health Organization recommendations for HIV and breastfeeding should be followed.

HIV Screening for Pregnant Women and Their Infants

Universal Opt-Out Screening

- All pregnant women in the United States should be screened for HIV infection.
- Screening should occur after a woman is notified that HIV screening is recommended for all pregnant patients and that she will receive an HIV test

as part of the routine panel of prenatal tests unless she declines (opt-out screening).
- HIV testing must be voluntary and free from coercion. No woman should be tested without her knowledge.
- Pregnant women should receive oral or written information that includes an explanation of HIV infection, a description of interventions that can reduce HIV transmission from mother to infant, and the meanings of positive and negative test results and should be offered an opportunity to ask questions and to decline testing.
- No additional process or written documentation of informed consent beyond what is required for other routine prenatal tests should be required for HIV testing.
- If a patient declines an HIV test, this decision should be documented in the medical record.

Addressing Reasons for Declining Testing

- Providers should discuss and address reasons for declining an HIV test (e.g., lack of perceived risk; fear of the disease; and concerns regarding partner violence or potential stigma or discrimination).
- Women who decline an HIV test because they have had a previous negative test result should be informed of the importance of retesting during each pregnancy.
- Logistical reasons for not testing (e.g., scheduling) should be resolved.
- Certain women who initially decline an HIV test might accept at a later date, especially if their concerns are discussed. Certain women will continue to decline testing, and their decisions should be respected and documented in the medical record.

Timing of HIV Testing

- To promote informed and timely therapeutic decisions, health-care providers should test women for HIV as early as possible during each pregnancy. Women who decline the test early in prenatal care should be encouraged to be tested at a subsequent visit.
- A second HIV test during the third trimester, preferably <36 weeks of gestation, is cost-effective even in areas of low HIV prevalence and may be considered for all pregnant women. A second HIV test during the third trimester is recommended for women who meet one or more of the following criteria:
    - Women who receive health care in jurisdictions with elevated incidence of HIV or AIDS among women aged 15 to 45 years. In 2004, these jurisdictions included Alabama, Connecticut, Delaware, the District of Columbia, Florida, Georgia, Illinois, Louisiana, Maryland, Massachusetts, Mississippi, Nevada, New Jersey, New York, North Carolina, Pennsylvania, Puerto Rico, Rhode Island, South Carolina, Tennessee, Texas, and Virginia.**
    - Women who receive health care in facilities in which prenatal screening identifies at least one HIV-infected pregnant woman per 1,000 women screened.
    - Women who are known to be at high risk for acquiring HIV (e.g., injection-drug users and their sex partners, women who exchange sex

for money or drugs, women who are sex partners of HIV-infected persons, and women who have had a new or more than one sex partner during this pregnancy).
- Women who have signs or symptoms consistent with acute HIV infection. When acute retroviral syndrome is a possibility, a plasma RNA test should be used in conjunction with an HIV antibody test to diagnose acute HIV infection (DHHS, 2006). (Also see NGC summary of DHHS guideline, Guidelines for the Use of Antiretroviral Agents in HIV-1-infected Adults and Adolescents.)

** A second HIV test in the third trimester is as cost-effective as other common health interventions when HIV incidence among women of childbearing age is ≥17 HIV cases per 100,000 person-years. In 2004, in jurisdictions with available data on HIV case rates, a rate of 17 new HIV diagnoses per year per 100,000 women aged 15 to 45 years was associated with an AIDS case rate of at least nine AIDS diagnoses per year per 100,000 women aged 15 to 45 years. As of 2004, the jurisdictions listed above exceeded these thresholds. The list of specific jurisdictions where a second test in the third trimester is recommended will be updated periodically based on surveillance data.

Rapid Testing During Labor

- Any woman with undocumented HIV status at the time of labor should be screened with a rapid HIV test unless she declines (opt-out screening).
- Reasons for declining a rapid test should be explored (see "Addressing Reasons for Declining Testing," above).
- Immediate initiation of appropriate antiretroviral prophylaxis should be recommended to women on the basis of a reactive rapid test result without waiting for the result of a confirmatory test (Perinatal HIV Guidelines Working Group, 2006). (Also see NGC summary of Public Health Service Task Force Recommendations for Use of Antiretroviral Drugs in Pregnant HIV-1-infected Women for Maternal Health and Interventions to Reduce Perinatal HIV-1 Transmission in the United States.)

Postpartum/Newborn Testing

- When a woman's HIV status is still unknown at the time of delivery, she should be screened immediately postpartum with a rapid HIV test unless she declines (opt-out screening).
- When the mother's HIV status is unknown postpartum, rapid testing of the newborn as soon as possible after birth is recommended so antiretroviral prophylaxis can be offered to HIV-exposed infants. Women should be informed that identifying HIV antibodies in the newborn indicates that the mother is infected.
- For infants whose HIV exposure status is unknown and who are in foster care, the person legally authorized to provide consent should be informed that rapid HIV testing is recommended for infants whose biologic mothers have not been tested.
- The benefits of neonatal antiretroviral prophylaxis are best realized when it is initiated ≤12 hours after birth (Wade et al., 1998).

Confirmatory Testing

- Whenever possible, uncertainties regarding laboratory test results indicating HIV infection status should be resolved before final decisions are made regarding reproductive options, antiretroviral therapy, cesarean delivery, or other interventions.
- If the confirmatory test result is not available before delivery, immediate initiation of appropriate antiretroviral prophylaxis should be recommended to any pregnant patient whose HIV screening test result is reactive to reduce the risk for perinatal transmission (USPHS, 2006). (Also see NGC summary of Public Health Service Task Force Recommendations for Use of Antiretroviral Drugs in Pregnant HIV-1-infected Women for Maternal Health and Interventions to Reduce Perinatal HIV-1 Transmission in the United States.)

Additional Considerations for HIV Screening

Test Results

- *Communicating test results*. The central goal of HIV screening in health-care settings is to maximize the number of persons who are aware of their HIV infection and receive care and prevention services. Definitive mechanisms should be established to inform patients of their test results. HIV-negative test results may be conveyed without direct personal contact between the patient and the health-care provider. Persons known to be at high risk for HIV infection also should be advised of the need for periodic retesting and should be offered prevention counseling or referred for prevention counseling. HIV-positive test results should be communicated confidentially through personal contact by a clinician, nurse, mid-level practitioner, counselor, or other skilled staff. Because of the risk of stigma and discrimination, family or friends should not be used as interpreters to disclose HIV-positive test results to patients with limited English proficiency. Active efforts are essential to ensure that HIV-infected patients receive their positive test results and linkage to clinical care, counseling, support, and prevention services. If the necessary expertise is not available in the health-care venue in which screening is performed, arrangements should be made to obtain necessary services from another clinical provider, local health department, or community-based organization. Health-care providers should be aware that the Privacy Rule under the Health Insurance Portability and Accountability Act of 1996 (HIPAA) prohibits use or disclosure of a patient's health information, including HIV status, without the patient's permission.
- *Rapid HIV tests*. Because of the time that elapses before results of conventional HIV tests are available, providing patients with their test results can be resource intensive and challenging for screening programs, especially in episodic care settings (e.g., EDs, urgent-care clinics, and STD clinics) in which continuing relationships with patients typically do not exist. The use of rapid HIV tests can substantially decrease the number of persons who fail to learn their test results and reduce the resources expended to locate persons identified as HIV infected. Positive rapid HIV test results are preliminary and must be confirmed before the diagnosis of HIV infection is established.
- *Participants in HIV vaccine trials*. Recipients of preventive HIV vaccines might have vaccine-induced antibodies that are detectable by HIV antibody tests. Persons whose test results are HIV positive and who are identified as vaccine trial participants might not be infected with HIV and should be encouraged to

contact or return to their trial site or an associated trial site for the confirmatory testing necessary to determine their HIV status.

- *Documenting HIV test results*. Positive or negative HIV test results should be documented in the patient's confidential medical record and should be readily available to all health-care providers involved in the patient's clinical management. The HIV test result of a pregnant woman also should be documented in the medical record of her infant. If the mother's HIV test result is positive, maternal health-care providers should, after obtaining consent from the mother, notify pediatric care providers of the impending birth of an HIV-exposed infant and of any anticipated complications. If HIV is diagnosed in the infant first, health-care providers should discuss the implications for the mother's health and help her to obtain care.

Clinical Care for HIV-Infected Persons

Persons with a diagnosis of HIV infection need a thorough evaluation of their clinical status and immune function to determine their need for antiretroviral treatment or other therapy. HIV-infected persons should receive or be referred for clinical care promptly, consistent with DHHS and USPHS guidelines for management of HIV-infected persons. (See NGC summary of DHHS guideline, Guidelines for the Use of Antiretroviral Agents in HIV-1-infected Adults and Adolescents.) HIV-exposed infants should receive appropriate antiretroviral prophylaxis to prevent perinatal HIV transmission as soon as possible after birth (See NGC summary of Public Health Service Task Force Recommendations for Use of Antiretroviral Drugs in Pregnant HIV-1-infected Women for Maternal Health and Interventions to Reduce Perinatal HIV-1 Transmission in the United States.) and begin trimethoprim-sulfamethoxazole prophylaxis at age 4-6 weeks to prevent *Pneumocystis* pneumonia. They should receive subsequent clinical monitoring and diagnostic testing to determine their HIV infection status (See NGC summary of DHHS Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection).

Partner Counseling and Referral

When HIV infection is diagnosed, health-care providers should strongly encourage patients to disclose their HIV status to their spouses, current sex partners, and previous sex partners and recommend that these partners be tested for HIV infection. Health departments can assist patients by notifying, counseling, and providing HIV testing for partners without disclosing the patient's identity. Providers should inform patients who receive a new diagnosis of HIV infection that they might be contacted by health department staff for a voluntary interview to discuss notification of their partners.

Special Considerations for Screening Adolescents

Although parental involvement in an adolescent's health care is usually desirable, it typically is not required when the adolescent consents to HIV testing. However, laws concerning consent and confidentiality for HIV care differ among states. Public health statutes and legal precedents allow for evaluation and treatment of minors for STDs without parental knowledge or consent, but not every state has defined HIV infection explicitly as a condition for which testing or treatment may proceed without parental consent. Health-care providers should endeavor to respect an adolescent's request for privacy. HIV screening should be discussed

with all adolescents and encouraged for those who are sexually active. Providing information regarding HIV infection, HIV testing, HIV transmission, and implications of infection should be regarded as an essential component of the anticipatory guidance provided to all adolescents as part of primary care. (See the NGC summary of the American Academy of Pediatrics guideline Adolescents and Human Immunodeficiency Virus Infection: The Role of the Pediatrician in Prevention and Intervention.)

Prevention Services for HIV-Negative Persons

- *Risk screening*. HIV screening should not be contingent on an assessment of patients' behavioral risks. However, assessment of risk for infection with HIV and other STDs and provision of prevention information should be incorporated into routine primary care of all sexually active persons when doing so does not pose a barrier to HIV testing. Even when risk information is not sought, notifying a patient that routine HIV testing will be performed might result in acknowledgement of risk behaviors and offers an opportunity to discuss HIV infection and how it can be prevented. Patients found to have risk behaviors (e.g., MSM or heterosexuals who have multiple sex partners, persons who have received a recent diagnosis of an STD, persons who exchange sex for money or drugs, or persons who engage in substance abuse) and those who want assistance with changing behaviors should be provided with or referred to HIV risk-reduction services (e.g., drug treatment, STD treatment, and prevention counseling).
- *Prevention counseling*. In health-care settings, prevention counseling need not be linked explicitly to HIV testing. However, because certain patients might be more likely to think about HIV and consider their risks at the time of HIV testing, testing might present an ideal opportunity to provide or arrange for prevention counseling to assist with behavior changes that can reduce risks for acquiring HIV infection. Prevention counseling should be offered or made available through referral in all health-care facilities serving patients at high risk for HIV and at facilities (e.g., STD clinics) in which information on HIV risk behaviors is elicited routinely.

HIV/AIDS Surveillance

- *Risk-factor ascertainment for HIV-infected persons*. CDC recommends that providers ascertain and document all known HIV risk factors. Health-care providers can obtain tools and materials to assist with ascertainment and receive guidance on risk factors as defined for surveillance purposes from HIV/AIDS surveillance professionals in their state or local health jurisdiction. This risk-factor information is important for guiding public health decisions, especially for prevention and care, at clinical, local, state, and national levels.
- *HIV/AIDS case reporting*. All states require that health-care providers report AIDS cases and persons with a diagnosis of HIV infection to the state or local health department. Case report forms are available from the state or local health jurisdiction.
- *Pediatric exposure reporting*. CDC and the Council for State and Territorial Epidemiologists recommend that all states and territories conduct surveillance for perinatal HIV exposure and contact providers after receiving reports of exposed infants to determine the infant's HIV-infection status. Information concerning dates of maternal HIV tests, receipt of prenatal care, maternal and

neonatal receipt of antiretroviral drugs, mode of delivery, and breastfeeding is collected on the pediatric HIV/AIDS case report form.

Monitoring and Evaluation

Recommended thresholds for screening are based on estimates of the prevalence of undiagnosed HIV infection in U.S. health-care settings, for which no accurate recent data exist. The optimal frequency for retesting is not yet known. Cost-effectiveness parameters for HIV screening were based on existing program models, all of which include a substantial counseling component, and did not consistently consider secondary infections averted as a benefit of screening. To assess the need for revised thresholds for screening adults and adolescents or repeat screening of pregnant women and to confirm their continued effectiveness, screening programs should monitor the yield of new diagnoses of HIV infection, monitor costs, and evaluate whether patients with a diagnosis of HIV infection are linked to and remain engaged in care. With minor modifications, laboratory information systems might provide a practical alternative for clinicians to use in determining HIV prevalence among their patients who are screened for HIV.

Refer to the original guideline document for discussion of primary prevention and HIV testing in nonclinical settings, regulatory and legal considerations, and issues addressed by other guidelines.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

REFERENCES SUPPORTING THE RECOMMENDATIONS

References open in a new window

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of evidence supporting the recommendations is not specifically stated.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

- Appropriate screening for human immunodeficiency virus (HIV)
- Earlier detection of HIV infection
- Appropriate identification and counseling of persons with unrecognized HIV infection
- Linking of persons infected with HIV to appropriate clinical and prevention services
- Reduction of perinatal transmission of HIV

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

These public health recommendations are based on best practices and are intended to comply fully with the ethical principles of informed consent. Legislation related to human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS) has been enacted in every state and the District of Columbia, and specific requirements related to informed consent and pretest counseling differ among states. Certain states, local jurisdictions, or agencies might have statutory or other regulatory impediments to opt-out screening, or they might impose other specific requirements for counseling, written consent, confirmatory testing, or communicating HIV test results that conflict with these recommendations. Where such policies exist, jurisdictions should consider strategies to best implement these recommendations within current parameters and consider steps to resolve conflicts with these recommendations.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

IMPLEMENTATION TOOLS

Staff Training/Competency Material

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness
Timeliness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Branson BM, Handsfield HH, Lampe MA, Janssen RS, Taylor AW, Lyss SB, Clark JE, Centers for Disease Control and Prevention (CDC). Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings. MMWR Recomm Rep 2006 Sep 22;55(RR-14):1-17; quiz CE1-4. [119 references] PubMed

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2001 Nov 9 (revised 2006 Sep 22)

GUIDELINE DEVELOPER(S)

Centers for Disease Control and Prevention - Federal Government Agency [U.S.]

SOURCE(S) OF FUNDING

United States Government

GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Consultants, Membership List, November 2005

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GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates two previous versions:

- Centers for Disease Control and Prevention (CDC). Revised guidelines for HIV counseling, testing, and referral. MMWR Recomm Rep 2001 Nov 9;50(RR-19):1-58. [151 references]
- Revised recommendations for HIV screening of pregnant women. MMWR Recomm Rep 2001 Nov 9;50(RR-19):59-86. [87 references]

GUIDELINE AVAILABILITY

Electronic copies: Available from the Centers for Disease Control and Prevention (CDC) Web site:

- HTML Format
- Portable Document Format (PDF)

Print copies: Available from the Centers for Disease Control and Prevention, MMWR, Atlanta, GA 30333. Additional copies can be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402-9325; (202) 783-3238.

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- A continuing education activity is available in the appendix to the original guideline document.
- A comprehensive Spanish-language Web site featuring information about HIV treatment and clinical trials is available at http://aidsinfo.nih.gov/infoSIDA/.

PATIENT RESOURCES

None available

NGC STATUS

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