PLEASE NOTE:

THIS ACTIVITY HAS EXPIRED.

CME CREDIT IS NO LONGER AVAILABLE

The following content is provided for informational purposes only.
Prevention with Positives in HIV Medical Care

Todd Levin, DO, Kelly Rand, MA and Dafne Armstrong, MSW

THE PREVALENCE OF HIV in the United States is less than 1%, which is much less than many African nations. However, the prevalence in some US populations does compare to the African epidemic. A recent study estimated the prevalence of HIV in Washington, DC to be at least 3% among all persons aged over 12 years, and 6.5% in Black men. Previous studies estimated the incidence of new HIV infections in the United States was thought to be approximately 40,000 per year, with little change over the last several years. However, new assays allowing the differentiation of recent versus long standing HIV infections have led to the revised estimate that approximately 56,300 persons became infected with HIV in 2006.

Traditionally, prevention strategies have focused on preventing HIV negative persons from acquiring the virus. With the increasing prevalence and incidence of HIV, public health personnel have been focusing on prevention with positives or secondary prevention to decrease the transmission of HIV.

This article will focus on the principles of prevention with positives, specifically relating to the sexual and drug-related transmission of HIV.

Upon completion of this activity, participants should be able to:

1. Conduct sexual risk assessment with HIV-positive patients.
2. Test HIV patients for syphilis, chlamydia and gonorrhea at least once every 12 months.
3. Conduct substance use assessment and counseling for all HIV patients at least once every 12 months.

To obtain continuing education credit, complete the quiz, registration, and evaluation on the following pages, or go to: www.umdnj.edu/ccoe/aids

Todd Levin, DO, is an Infectious Disease Specialist with Garden State Infectious Diseases Associates, PA, in Voorhees, NJ.

Kelly Rand, MA, is Clinical Training Coordinator for Garden State Infectious Disease Associates, PA, in Voorhees, NJ, which is the Southern New Jersey Local Performance Site of the NY/NJ AIDS Education and Training Center.

Dafne Armstrong, MSW, is Case Management Supervisor with Garden State Infectious Diseases Associates, PA in Voorhees, NJ.

Sponsored by the University of Medicine & Dentistry of New Jersey (UMDNJ), Center for Continuing & Outreach Education. This activity is supported by an educational grant from NJDHSS Division of HIV/AIDS Services through a MOA titled “Education and Training for Physicians and other Healthcare Professionals in the Diagnosis and Treatment of HIV/AIDS.”
Prevention with Positives in HIV Medical Care

Release Date: June 1, 2009 • Expiration Date: May 30, 2011 • Course Code: 11HC06-DE01
Nursing Credit for this activity will be provided through May 30, 2011.

Learning Objectives
Upon the completion of this activity, participants should be able to:
1) Conduct sexual risk assessment with HIV-positive individuals and groups. 
2) Test HIV patients for syphilis, chlamydia and gonorrhea at least once every 12 months. 
3) Conduct substance use assessment and counseling for all HIV patients at least once every 12 months.

Faculty
• Todd Levin, DO, is an Infectious Disease Specialist with Garden State Infectious Diseases Associates, PA (GSIDA), in Voorhees, NJ. 
• Kelly Rand, MA, is Clinical Training Coordinator for GSIDA, the Southern New Jersey Local Performance Site of the NY/NJ AIDS Education & Training Center. 
• Dafne Armstrong, MSW, is Case Management Supervisor with GSIDA.

Activity Director(s)/CME Academic Advisor(s)
• Patricia Kloser, MD, MPH, UMDNJ-NJ Medical School

Planning Committee
• Linda Berenzy, RN, BA, New Jersey Dept. of Health and Senior Services 
• Brenda Christian, Med, PA-C, UMDNJ-CCOE 
• Debbie Y. Mohammed, MS, MPH, APRN-BC, UMDNJ-University Hospital 
• Kimi Nakata, MSW, MPH, UMDNJ-CCOE 
• Sindy Paul, MD, MPH, FACP, New Jersey Dept. of Health and Senior Services

Method of Instruction
Participants should read the learning objectives and review the activity in its entirety. After reviewing the material, complete the self-assessment test which consists of a series of multiple-choice questions. Upon completing this activity as designed and achieving a passing score of 70% or more on the self-assessment test, participants will receive a credit letter and the test answer key four (4) weeks after receipt of the self-assessment test, registration, and evaluation materials; or may complete the activity on the internet at www.umdnj.edu/ccoe. Estimated time to complete this activity as designed is 1.0 hours.

Accreditation
Physicians: UMDNJ-Center for Continuing and Outreach Education is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians. UMDNJ-Center for Continuing and Outreach Education designates this educational activity for a maximum of 1.0 AMA PRA Category 1 Credits™. Physicians should only claim credit commensurate with the extent of their participation in the activity.
Nurses: The University of Medicine and Dentistry of New Jersey-Continuing Education and Outreach Education is an approved provider of continuing nursing education by the New Jersey State Nurses Association, Provider Number P173-10/06-09. New Jersey State Nurses Association is accredited by the American Nurses Credentialing Center’s Commission on Accreditation.

This activity is awarded 1.0 contact hours.

UMDNJ-Center for Continuing and Outreach Education is an approved provider of continuing education by the California Board of Registered Nursing, Provider Number CEP 13780 for a maximum of 1.0 contact hours for this activity.

Review: This activity was peer reviewed for relevance, accuracy of content, and balance of presentation by Patricia Kloser, MD, MPH; and Brenda Christian, Med, PA-C; and pilot tested for relevance and time required for participation by Kinshasa Morton, MD; Bonnie Abedini, RN, MSN; Mary C. Krug, RN, MSN, APN; and Kara Winslow, BSN, RN.

Faculty Disclosure Declarations
Todd Levin, DO is on the speakers’ bureaus of Gilead Sciences. Debbie Mohammed is on the speakers’ bureaus of BMS and Gilead. Conflicts of interest were resolved by review by Activity Director Patricia Kloser, MD, MPH. 
The following have no relevant financial relationships to disclose: Authors Kelly Rand, MA, and Dafne Armstrong, MSW; Activity Director Patricia Kloser, MD, MPH; Planning committee members Sindy M. Paul, MD, MPH, FACPM; Linda Berezny, RN, BA; and Kimi Nakata, MSW, MPH (editor); content reviewer Brenda Christian, Med, PA-C; and field testers: Kinshasa Morton, MD; Bonnie Abedini, MSN, RN; Mary C. Krug, RN, MSN, APN; and Kara Winslow, BSN, RN.

Off-Label Usage Disclosure
This activity does not contain information of commercial products/devices that are unlabeled for use or investigational uses of products not yet approved.

Disclaimer
The views expressed in this activity are those of the faculty. It should not be inferred or assumed that they are expressing the views of NJHSS-Division of HIV/AIDS Services, UMDNJ, or any manufacturer of pharmaceuticals. It should be noted that the recommendations made herein with regard to the use of therapeutic agents, varying disease states, and assessments of risk, are based upon a combination of clinical trials, current guidelines, and the clinical practice experience of the participating presenters. The drug selection and dosage information presented in this activity are believed to be accurate. However, participants are urged to consult the full prescribing information on any agent(s) presented in this activity for recommended dosage, indications, contraindications, warnings, precautions, and adverse effects before prescribing any medication.

Copyright © 2009 UMDNJ-Center for Continuing and Outreach Education. All rights reserved including translation into other languages. No part of this activity may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information storage and retrieval systems, without permission in writing from UMDNJ-Center for Continuing and Outreach Education. Please direct CME related questions to UMDNJ at 973-972-4267 or email ccoe@umdnj.edu.
BACKGROUND:

- The Centers for Disease Control and Prevention (CDC) has estimated that 21% of people living with HIV infection have not yet been diagnosed.3
- The first step in prevention with positives is to identify all those who have HIV.
- The CDC recently recommended routine yearly HIV screening of all persons ages 13 to 64 in all healthcare settings.4
- According to the CDC, HIV testing based on risk behavior fails to identify many persons infected with HIV who are unaware they are at risk for infection or who do not report risk behavior.
- The expanded screening protocol is also an effort to destigmatize the act of requesting an HIV test.
- People are more likely to be cautious and use protection if they realize that there is a risk of transmitting the virus to others. Those who are HIV positive must know their status.
- Previously, HIV testing required returning to the testing center a week or two after the test to receive the results, and approximately 31% of those who were positive never returned to obtain the results.5
- Now with the advent of rapid HIV testing, a definitive negative and a preliminary positive result can be obtained within minutes of test taking.
- In New Jersey, the percentage of clients receiving their result in publicly funded sites has risen to 98.91% since the state began funding rapid testing.6 Hopefully, these efforts will uncover previously unknown HIV positive persons.

50% of infections are transmitted in the first two to four weeks following infection.

Acute HIV Infection

It is also important to recognize the SIGNS and SYMPTOMS of Acute HIV Infection (AHI), also known as Primary HIV infection, which occurs in the first two to four weeks following infection. Some estimate that as many as 50% of infections are transmitted during this period. This is because initial viral loads are usually very high, sometimes greater than 750,000 copies/ml.7

Higher serum viral loads correlate to increased transmission of HIV. A study of serodiscordant couples in Uganda noted a significantly higher serum viral load among HIV positive subjects whose partners seroconverted than those who did not seroconvert, and there were no seroconversions among partners of subjects with HIV RNA levels less than 1,500 copies/ml.8

People rarely realize they are HIV positive during Acute HIV Infection and may not be as likely to use clean needles or to wear condoms. Health care workers need to be cognizant of the signs and symptoms of AHI including fever, chills, myalgias, sore throat, rash, headache, and swollen glands. These symptoms are quite common and can masquerade as the common cold, influenza or Group A streptococcal pharyngitis. Please see Table 1. The astute provider will obtain an HIV antibody test along with a test that can diagnose the virus during the window period, such as an HIV viral load.

<table>
<thead>
<tr>
<th>TABLE 1.</th>
<th>Signs and Symptoms of Acute HIV Infections</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever</td>
<td>90%</td>
<td></td>
</tr>
<tr>
<td>Morbilliform Rash</td>
<td>40-80%</td>
<td></td>
</tr>
<tr>
<td>Pharyngitis</td>
<td>50-70%</td>
<td></td>
</tr>
<tr>
<td>Lymphadenopathy</td>
<td>40-70%</td>
<td></td>
</tr>
<tr>
<td>Headache + meningitis</td>
<td>24-70%</td>
<td></td>
</tr>
<tr>
<td>Mucocutaneous ulcers</td>
<td>5-20%</td>
<td></td>
</tr>
<tr>
<td>Thrombocytopenia</td>
<td>45%</td>
<td></td>
</tr>
<tr>
<td>Leukopenia</td>
<td>40%</td>
<td></td>
</tr>
<tr>
<td>Transaminase elevations</td>
<td>20%</td>
<td></td>
</tr>
</tbody>
</table>

Source: www.hivguidelines.org
Antiretroviral Therapy (ART) and Prevention

Over the years the RECOMMENDATIONS HAVE CHANGED regarding when to start antiretroviral therapy. The most recent recommendations state that treatment of asymptomatic patients should be initiated when the CD4+ cell count is <350 cells/mm³. However, the pendulum seems to be swinging back to starting antiretroviral therapy earlier for many reasons including simpler drug regimens, fewer medication adverse effects, and most recently improved survival. Starting antiretroviral treatment earlier can also impact secondary prevention efforts. If patients are started on antiretroviral treatment earlier, then they may have lower levels of the virus in their serum and genital secretions, which would lead to fewer transmissions.

Treatment Adherence and Psychosocial Factors

Medication adherence is EXTREMELY IMPORTANT IN CONTROLLING THE VIRUS and preventing the progression of HIV disease. With poor adherence, HIV mutations can develop, resulting in virologic failure and elevated viral loads. These higher viral loads result in increased HIV replication and transmission of resistant virus. Several types of interventions have been shown to improve adherence and improve virologic control. These interventions may involve many members of the multidisciplinary team including nurses, case managers, and pharmacists. Medication adherence also has been associated with decreased sexual risk behavior. A study in California of 874 sexually active patients found that adherence ≥95% and an undetectable viral load was associated with decreased odds of unprotected anal or vaginal sex.

The MULTIDISCIPLINARY TEAM APPROACH provides the optimum level of care for an HIV+ patient. There are many aspects other than medical care that are needed to help a patient cope with HIV disease. Patients need support in ALL AREAS OF THEIR LIVES in order to allow adherence with their medical care.

- Support services facilitate referring to treatment for mental illness, providing stable housing, and providing support and intervention to prevent domestic or partner violence.
- Social services also can aid in partner notification which can uncover other HIV positive persons and subsequently reduce transmission, while linking them to medical care to improve their health.

Tertiary prevention is designed to improve the quality of life for people with existing diseases and disabilities. Treatment and disease management can limit disease progression and functional impairment, and provide rehabilitation. For people with HIV/AIDS, ART limits disease progression and can prevent opportunistic infections. Both ART andOI prophylaxis are tertiary prevention.

Case #1

An example of how a patient’s psychosocial needs play a relevant role in improving overall health can be seen in the case of GN.

A 33-year-old Hispanic woman, GN presented at a local health department for HIV testing after release from 12 years of incarceration. She is hepatitis C positive and has a long history of social and mental health problems. GN is bipolar but has discontinued her psychotropic medication. She has a history of substance use, sex work, sexual abuse and rape. She has a fifth grade education and low reading comprehension. Her primary language is Spanish.

Primary

Primary prevention measures are designed to protect against disease and disability. These measures include but are not limited to immunizations, prenatal care, and ensuring safe drinking water.

Secondary

The goal of secondary prevention is to identify and treat disease as early as possible, ideally before symptoms develop. Screening for cancers and heart disease are targeted to those considered to be at risk. Early diagnosis and treatment is often associated with better outcomes including higher rates of cure, or slower disease progression, prevention or minimizing of complications, and lower rates of disabilities. HIV/AIDS is not curable, but antiretroviral treatment is readily available to reduce viral reproduction and its impact on the immune system.

Secondary prevention also aims to prevent the spread of communicable diseases. Individuals who know of their HIV infection have been shown to reduce HIV transmission to their sexual and injection partners.
GN has an initial intake in the infectious disease clinic with a nurse, case manager and a physician. She also is linked to mental health services. GN has two HIV negative male partners. She admits to a high sex drive and poor impulse control. GN understands her HIV diagnosis but has difficulty comprehending and implementing risk reduction strategies. The team met with and tested both the husband and boyfriend separately, and counseled each about safer sex practices. At each doctor’s visit, the physician counseled the patient on risk reduction, and the case manager spoke to GN every three days. The case manager found the messages had the most effect when they were clear, intensive, short and repetitious. Some of the methods used to convey prevention messages included using visual aids, condom demonstrations, the teach-back method, reading prevention literature together and then discussing and asking questions.

Along with an intensive focus on prevention strategies, the team focused on treatment adherence. The team encouraged GN to attend monthly visits. They worked with the pharmacy to ensure she was refilling her medications and to remind the pharmacy to provide her with prescription directions in Spanish. The case manager also called GN after each refill to ask if she had any questions about her medications. During this time, GN’s CD4+ count rose from 176 to 336 and her viral load suppressed to <48.

### TABLE 2. Risk of HIV Infection by Route of Exposure

<table>
<thead>
<tr>
<th>Risk factor</th>
<th>Risk of HIV infection of acquiring HIV infection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex act</strong></td>
<td></td>
</tr>
<tr>
<td>Insertive fellatio</td>
<td>1</td>
</tr>
<tr>
<td>Receptive fellatio</td>
<td>2</td>
</tr>
<tr>
<td>Insertive vaginal sex</td>
<td>10</td>
</tr>
<tr>
<td>Receptive vaginal sex</td>
<td>20</td>
</tr>
<tr>
<td>Insertive anal sex</td>
<td>13</td>
</tr>
<tr>
<td>Receptive anal sex</td>
<td>100</td>
</tr>
<tr>
<td><strong>Condom use</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>No</td>
<td>20</td>
</tr>
</tbody>
</table>

Adapted from CDC. *This describes the relative risk of HIV infection using the activity with the lowest risk, insertive fellatio, as the base (1). Thus, relative risk of receptive vaginal sex is 10 times higher, and the relative risk of receptive anal sex is 100 times higher. Condom use is 1, and the relative risk of any act without a condom is 20 times higher, a multiplicative factor.*

### Sexual dysfunction and treatment

Sexual dysfunction is common in the general population and in HIV positive persons. Gay and bisexual men with erectile dysfunction have higher rates of unprotected intercourse. This is hypothesized to occur out of concern of decreased sensation with condom use that could make it more difficult to obtain and sustain an erection. Concerns about sexual dysfunction offer an opportunity for prevention with positives. Frequently men will request medications to treat erectile dysfunction, such as sildenafil (Viagra), tadalaflil (Cialis), and vardenafil (Levitra). These medications have their own side effects and interactions with HIV medications, and must be considered with the patient’s overall treatment protocol and cardiac risk. A workup should begin to look for other causes of erectile dysfunction which, when treated, can result in more consistent condom use. Also, erectile dysfunction medications, whether prescribed or obtained illicitly, sometimes are used as recreational drugs because they can enhance sexual experience or performance. Viagra use has been associated with the use of drugs such as Rohypnol, ecstasy, ketamine, amphetamines, and crack cocaine. The request for erectile dysfunction medications should prompt a discussion about the possible use of illicit or “club drugs,” to identify additional opportunities for discussion and interventions to reduce or prevent unsafe sex.
Why address Prevention with Positives with all patients?

Addressing prevention with positives presents some challenges. Patients may find it difficult to understand why the health care worker is spending so much time and effort in preventing the spread of HIV. They may feel that you are trying to help others instead of themselves. In these situations, it is helpful to focus on the consequences for the patient of risky sexual behavior and acquiring sexually transmitted infections. There is obvious physical discomfort associated with STIs. The discomfort due to some infections such as herpes can be more severe or prolonged with underlying HIV. Also, as immunosuppression increases with advancing HIV/AIDS, herpes outbreaks can become more frequent and almost continuous. Mortality also may be affected by co-infection with HIV and other sexually transmitted viruses such as hepatitis B (HBV). Individuals co-infected with both HIV and HBV are at increased risk for liver related mortality compared to those infected with either virus alone.17

Many clinicians may not feel comfortable with having extended discussions about their patients’ sex lives. Patients also may feel uncomfortable discussing intimate topics. Again, the multidisciplinary approach offers patients a choice of the team member with whom they feel most comfortable disclosing personal information, and different theoretical backgrounds provide different approaches to beginning and maintaining this important dialogue.

One example of a successful dialogue regarding sexual practices and prevention is TJ, Case #2.

Case #2

TJ, a 36-year-old man of Middle Eastern descent, presents to the HIV clinic after a positive rapid test. A Western blot confirms his diagnosis and he is scheduled for an intake with a nurse, a case manager and a physician.

DURING THE INITIAL INTAKE the patient shares that he had a positive test three years ago in Guyana where he formerly lived. After several weeks of treatment, he had an undetectable viral load and believed he was cured. Because he believed he was cured, he discontinued treatment and has continued to have unprotected sex with his wife. He also shares that his wife is currently pregnant. His initial labs revealed a CD4+ count of 213 and a viral load of 39,983.

The case manager conducted an 8 question understanding of risk transmission survey. TJ showed little understanding of HIV and the risk of transmitting the disease to his wife and their unborn child. Cultural beliefs also influenced TJ’s willingness to use condoms.

TJ was put on Atripla and responded well to the treatment. His viral load dropped to <400 in the first two months and <50 after four months on treatment. His wife was tested and was negative. However, TJ and his wife continued to have sex without condoms. The team formulated an intensive risk reduction strategy. The case manager called weekly to have prevention and risk reduction talks with the couple. The physician met with TJ and his wife monthly and at each appointment tested the wife to show that ongoing risky behavior results in ongoing risk of transmission.

The couple mistakenly believed oral sex did not require barrier protection. However, TJ had open ulcers in his mouth. At this time, the team intensified risk reduction with the wife to help her have an impact in the sexual practices. The team continued to work with the couple for eight months until the couple began picking up and using condoms from the office. The wife had a healthy baby and remained HIV negative. Prevention and sexual health conversations remain ongoing with the couple.

While TJ was literate and comprehended general health information well, he believed two prevalent misconceptions about HIV transmission. He believed an undetectable viral load meant he was not able to transmit HIV to another person and he believed oral sex presented a low HIV transmission risk. By using the risk survey and encouraging active discussion regarding sexual health the team was able to identify these misconceptions and help the patient learn more about the real risks of transmission. The education and counseling interventions were brief, non-judgmental, collaborative and repeated, with attention to TJ’s identification with protection of the well-being of his wife and family.

Two of the key elements of any effective behavioral change in the primary care setting are a supportive, non-judgmental environment and a multidisciplinary team approach. In Case #2, the patient would tell each team member a different story. Only through a collaborative approach was the team able to identify real problem areas and help facilitate safer sex practices.
Sexual Risk Assessment

Important questions to ask in a sexual history.

- How old were you when you started having sex?
- Have you ever had an STI? If so, when? How was it treated?
- Have you ever been afraid in a sexual interaction?
- Are you or your partner planning on getting pregnant?

Ask for an explanation.

- When you say you had sex, what exactly did you mean?
- Tell me what you mean when you say you are always ‘the top.’
- How do you protect yourself from sexually transmitted diseases?
- What did you mean when you said you had ‘the drip’?

Direct and non-judgmental questions are best.

- Do you have oral sex? Vaginal sex? Anal sex?
- What do you know about your partner(s)’ past sexual activities?
- When was the last time you had unprotected sex?
- Tell me about how and when you use condoms.
- Have you ever had sex with someone you didn’t know or just met?
- Have you noticed any STI-type symptoms in your partner(s)?

Educational Interventions

Risk reduction interventions should be tailored to the individual’s understanding of HIV disease and treatment, transmission, risk reduction methods, and current risk behavior.

- HIV care providers should explore referral linkages with community-based Prevention with Positives programs sponsored by the New Jersey Department of Health and Senior Services-Division of HIV/AIDS Services (NJDHSS-DHAS), that may be helpful to eligible patients. See listings in the Resources sections.

- In the context of medical care, each site and team must devise workable approaches to risk reduction.

- Providers can interview patients about current and past sexual behavior, to obtain a fuller understanding of the patient’s history and risks.

- HIV knowledge surveys may also be used to identify areas of misinformation, and guide educational discussions with patients.

UNDERSTANDING TRANSMISSION RISK SURVEY FOR HIV-POSITIVE CLIENTS

For brief interventions to identify areas of misconceptions

<table>
<thead>
<tr>
<th>QUESTIONS</th>
<th>True / False / Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There is a cure for HIV/AIDS.</td>
<td></td>
</tr>
<tr>
<td>2. I don’t have to worry about HIV/AIDS transmission.</td>
<td></td>
</tr>
<tr>
<td>3. STIs are not transmitted the same way as HIV.</td>
<td></td>
</tr>
<tr>
<td>5. If two women have sex, one could get HIV from the other.</td>
<td></td>
</tr>
<tr>
<td>6. If my friend and I pierce each other, it is not risky.</td>
<td></td>
</tr>
<tr>
<td>7. Condoms don’t protect me from STIs.</td>
<td></td>
</tr>
<tr>
<td>8. Female condoms can be used more than once.</td>
<td></td>
</tr>
</tbody>
</table>

The first step in prevention with positives is to identify higher viral loads resulting in increased HIV replication and transmission of resistant virus.
Partnership for Health (PfH)

Partnership for Health (PfH) is a brief intensive risk reduction intervention program for HIV care settings that uses message framing, repetition, and reinforcement during patient visits to increase HIV positive patients’ knowledge, skills, and motivations to practice safer sex. The program is designed to improve patient-provider communication about safer sex, disclosure of HIV serostatus, and HIV prevention. Implementation of PfH includes development of clinic and staff “buy-in” and training. The CDC has adopted PfH as part of their Compendium of HIV Prevention Interventions with Evidence of Effectiveness. [www.usc.edu/partnershipforhealth](http://www.usc.edu/partnershipforhealth)

PfH Core Elements

- Have providers deliver the intervention to HIV+ patients in HIV outpatient clinics.
- Have the clinic adopt prevention as an essential component of patient care.
- Training of all clinic staff to facilitate integration of the prevention counseling intervention into standard practice.
- At routine visits, have the provider initiate a 3 to 5 minute safer-sex discussion with patient focusing on self-protection, partner-protection and disclosure.
- Ask questions about sexual behaviors and disclosure.
- Having the provider use good communication techniques and consequences-frame messages for patients engaged in high risk sexual behavior.
- Discuss messages based on individual sexual behaviors and disclosure (i.e., abstinence vs. sexually active).
  - Number of sex partners.
  - Type of sex partners (main, casual).
  - HIV status of sex partners.
  - Safer and unsafe sexual behaviors.
  - Importance of patient self-protective and partner-protective sexual behavior.
  - Importance of disclosure.

Transmission Related To Drug and Alcohol Abuse

Drug use is another common way that HIV is transmitted. The influence of drug use on transmission can occur indirectly or directly. Indirectly, drug use can result in making poor decisions such as risky or unprotected sexual encounters. Directly, injection drug use, specifically sharing needles and drug paraphernalia, can lead to HIV transmission.

AS WITH THE LINK from risky sexual behavior to poor health consequences, risky injection practices pose a risk to general health. Cellulitis, soft tissue abscesses, and necrotizing soft tissue infections can result from injection drug use. In California, from December 1999 to April 2000, there was an outbreak of necrotizing fasciitis in nine black tar heroin injection drug users. This resulted in four deaths, and *Clostridium sordellii* was isolated from six specimens. Osteomyelitis and septic arthritis can occur in any bone or joint in injection drug users. Infective endocarditis frequently results from bacteremia, and is responsible for 5% to 8% of hospital admissions among injection drug users. Opiate use in injection drug users is associated with increased prevalence and severity of bacterial and viral infections, resulting in increased morbidity and mortality.

The prevalence of hepatitis C (HCV) co-infection in HIV infected persons can be as high as 70 to 90% in some cohorts. The rate of co-infection is higher in cohorts with a greater proportion of patients who acquired HIV from illicit drug use. The progression of liver disease from HCV is accelerated in patients co-infected with HIV. The progression of chronic HCV to cirrhosis in monoinfected patients is highly variable, usually occurring in 20 to 30 years. However, in co-infected patients, symptomatic cirrhosis can develop within three years of the onset of hepatitis.

HIV-HCV co-infected patients have shorter durations of survival from the date of HIV diagnosis compared to those only infected with HIV. Disease progression also can be accelerated by an older age at infection, male sex, and alcohol intake. Specifically, drinking more than 50 grams of alcohol daily is associated with an increase in the progression of fibrosis. This offers the opportunity for a targeted intervention to decrease alcohol consumption, which can slow the progression of liver disease.
Substance Abuse Screening

USDHHS-HRSA has set an HIV Clinical Performance Measure of a substance abuse screening every 12 months for all adult and adolescent HIV patients.\textsuperscript{15}

THE MULTIDISCIPLINARY team is extremely important in screening for substance abuse and referring to treatment programs. Every member of the health care team, including physicians, nurses, case managers, and pharmacists, can screen for substance abuse, utilizing tools such as the CAGE questionnaire\textsuperscript{27} to identify patient use of alcohol, illicit drugs, and recreational use of prescription medications. After identification of substance abuse, appropriate referrals can be made for treatment.

Within the treatment team, this information should inform a harm reduction approach to keeping the patient in care without requiring addiction treatment or abstinence.

**Despite identification and referrals, changing patterns of substance use can be one of the most difficult behavior changes.**

Reducing sexual risk generally requires that patients modify their sexual practices. However, reducing the risk of drug-related behaviors generally requires significant revisions in an activity that is pleasurable, and which is driven by physical dependence. This behavior change can only occur when the patient chooses change.

### CAGE QUESTIONNAIRE

The CAGE questionnaire was developed by Dr. John Ewing, founding director of the Bowles Center for Alcohol Studies, University of North Carolina at Chapel Hill. CAGE is an internationally used assessment instrument for identifying problems with alcohol. ‘CAGE’ is an mnemonic devise formed from the italicized letters in the questionnaire (cut-annoyed-guilty-eye).

1. Have you ever felt you should cut down on your drinking?
2. Have people annoyed you by criticizing your drinking?
3. Have you ever felt bad or guilty about your drinking?
4. Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover (eye-opener)?

Answering YES to 2 to 3 questions provides strong indication for substance abuse or dependency.

Answering YES to 4 questions confirms the likelihood of substance abuse or dependency.

### Case #3

**An example of a difficult case can be seen with ND.**

ND is an attractive 47-year-old African American man diagnosed with HIV in 1986, and with the infectious disease practice for almost a decade. He is college educated and has held a number of professional jobs including working as a HIV prevention counselor for several agencies. ND has never taken ART and his numbers have remained stable with CD4\(^+\) counts in the 800 to 900s and a viral load <10,000. However, in the past three years ND’s CD4\(^+\) has begun a slow decline to 617 and about three months ago ND’s viral load increased to 80,000. He has become symptomatic and has been hospitalized several times this year.

ND has always been open that he dabbles in marijuana and uses cocaine socially. However, about three years ago he began binging on meth. During these episodes, he admits to going to the nearby city and picking up 18 and 19-year-old men at bars and having unprotected sex. ND also has ceased to work and now is on Medicaid. His life now has become centered on his sexual behavior. He does not want to stop taking drugs because the drugs make him happy and boost his self-confidence.

Because of ND’s high level of prevention knowledge, case management has tried working with him in different ways.

His case manager has shared professional journal articles with him. She has tried to relate his behavior to criminal charges. ND was briefly incarcerated for solicitation and does not want to repeat the experience. She continues to link his drug-using behavior with his recent physical ailments. She also has referred him to mental health services. The psychiatrist assessed ND and says he displays narcissistic behavior, substance abuse dependence and bipolar disorder.

ND currently has no intention of quitting his drug use and his drug binges are always associated with risky behavior. Case management continues to reach out to ND every two weeks and tries to get him in for an appointment with the physician every month. ND will come into appointments when he needs his Androgel (testosterone) and he continues to keep an open dialogue with his providers. Case management is occasionally able to persuade him to provide names to refer out to National Assistance Program (NAP), and they always offer him condoms.

**While this case is not a success, the important point to understand is that a dialogue remains open.** ND is honestly keeping his providers apprised of his activities and he is still engaged in care.
Improving the Effectiveness of Patient-Provider Communication

PATIENT AND HEALTH CARE PROVIDER COMMUNICATION can be difficult in the best circumstances. Health literacy and language barriers further complicate communication.

Studies have shown that patients recall only 30-40% of information given. Half of the information they believe they remember is incorrect, and the way information is presented makes a large impact. The more information given, the less the patient remembers. If the information is given verbally, the patient has less chance of remembering it than if the information is presented in a verbal and visual manner. Finally, information given at the beginning of the intervention and information which is specific rather than general is perceived as more important and remembered with better accuracy.

Studies indicate that learning is dependent on the similarity between the physical and psychological state during the learning and recall phase. Because prevention messages are often initially given when the patient is in a stressful situation, the messages are more difficult to remember in the more relaxed home environment. This phenomenon helps explain why repeated messages in different environments (i.e., calls home, home visits or group modalities) may be more effective.

TO IMPROVE COMMUNICATION, the U.S. Department of Health and Human Services suggests the following methods:

- Use simple language, short sentences and define technical terms.
- Supplement instruction with appropriate materials (videos, models, pictures, etc.) in the client’s primary language.
- Ask clients to explain instructions or demonstrate procedure.

IN CONCLUSION, HIV medical care providers can play a critical role in halting the growth of the HIV/AIDS epidemic. As more HIV-positive people achieve stable health through effective treatment, they live longer, and also are active enough to transmit HIV to others through sexual activity and injection drug use. Thus the total number of persons living with HIV/AIDS continues to grow substantially each year. The existing prevention messages, for both HIV-infected and uninfected individuals, have not led to adequate behavior change to reduce new HIV infections, or sexually transmitted infections including syphilis, which has re-emerged as a significant public health concern.

The HIV treatment team has invaluable opportunities and resources to educate, support, and intervene with patients to understand their own role in reducing HIV transmission. They should discuss prevention and risk reduction with every patient at least twice per year, and ideally on every visit. HIV care providers should conduct sexual risk assessment of all patients, and tailor prevention messages to the specific behaviors of each patient. STI testing should be routinely included in laboratory panels, to assure that any infections are identified and treated as soon as possible. Substance use assessment is also a part of patient care for all HIV patients, and should be incorporated in discussions of maintaining optimal health including management of co-infections such as hepatitis B and C. Patients or providers are often uncomfortable with discussions of risky behaviors and risk reduction, but making prevention a routine part of HIV care is essential to the health of all HIV patients and to the larger community.

The incidence of HIV has increased in the United States over the last few years. Prevention strategies have previously focused on preventing those uninfected from becoming infected. More recently prevention efforts have targeted the behaviors of those who already have HIV/AIDS, also known as secondary prevention. This article has discussed prevention methods related to the two major modes of HIV transmission: sexual and drug-related, and utilized specific case examples to illustrate how a multidisciplinary team can work together to both help the patient and to prevent further HIV transmission.
REFERENCES


2008 Estimation of HIV Incidence in the United States based on new technology.


Prevention with Positives in HIV Medical Care

RESOURCES: Compendium of Evidence-based HIV Prevention Interventions Developed by the CDC

Resources for Prevention with Positives

Incorporating HIV Prevention into the Medical Care of Persons Living with HIV:
The original ground-breaking policy report from the Centers for Disease Control and Prevention:
http://www.cdc.gov/mmwr/PDF/rr/rr5212.pdf

The Advancing HIV Prevention: New Strategies for a Changing Epidemic initiative aims to reduce barriers to early diagnosis of HIV infection and increase access to quality medical care, treatment, and ongoing prevention services for those living with HIV:
http://www.cdc.gov/hiv/topics/prev_prog/AHP/default.htm

Diffusion of Effective Behavioral Interventions (DEBI)

The DEBI project began in 1999 when the Centers for Disease Control and Prevention (CDC) published a Compendium of HIV Prevention Interventions with Evidence of Effectiveness to respond to prevention service providers who requested science-based interventions that work. HIV prevention technology transfer is a process by which these interventions are disseminated for implementation through provision of training and technical assistance. In 2008, CDC released the online Compendium of Evidence-based HIV Prevention Interventions to include 8 additional evidence-based behavioral interventions (EBI) that have been scientifically proven to significantly reduce HIV risk; bringing the total to 57 EBIs identified and included in the 2008 Compendium. http://www.caps.ucsf.edu/projects/EPPEC/index.php

USDHSS: The HIV/AIDS Program:
Special Projects of National Significance (SPNS)
Prevention with HIV-Infected Persons Seen In Primary Care Settings
http://www.effectiveinterventions.org

Brief Safer-Sex Intervention in HIV Clinics

Partnership for Health (PfH) uses message framing, repetition, and reinforcement during patient visits to increase HIV positive patients' knowledge, skills, and motivations to practice safer sex. The program is designed to improve patient-provider communication about safer sex, disclosure of HIV serostatus, and HIV prevention. Implementation of PfH includes development of clinic and staff “buy-in” and training.
http://www.effectiveinterventions.org/go/interventions/partnership-for-health

Community-Based Group Interventions

Interventions designed for work with HIV-infected individuals to reduce the risk of HIV transmission include:

- **Healthy Relationships:**
  A five-session, small-group intervention for men and women living with HIV/AIDS. It is based on Social Cognitive Theory and focuses on developing skills and building self-efficacy and positive expectations about new behaviors through modeling behaviors and practicing new skills.

- **Many Men Many Voices:**
  A 7-session, group-level intervention program to prevent HIV and sexually transmitted diseases among black men who have sex with men (MSM) who may or may not identify themselves as gay. The intervention addresses factors that influence the behavior of black MSM: cultural, social, and religious norms; interactions between HIV and other sexually transmitted diseases; sexual relationship dynamics; and the social influences that racism and homophobia have on HIV risk behaviors.

- **Safety Counts**
  An HIV prevention intervention for out-of-treatment active injection and non-injection drug users aimed at reducing both high-risk drug use and sexual behaviors. It is a behaviorally focused, seven-session intervention, which includes both structured and unstructured psycho-educational activities in group and individual settings.

- **SISTA: Sisters Informing Sisters on Topics about AIDS.**
  This group-level, gender- and culturally-relevant intervention, is designed to increase condom use with African American women. Five peer-led group sessions are conducted that focus on ethnic and gender pride, HIV knowledge, and skills training around sexual risk reduction behaviors and decision making. The intervention is based on Social Learning theory as well as the theory of Gender and Power.

- **Holistic Health Recovery Program (HHRP)**
  A 12-session, manual-guided, group-level program for HIV-positive and HIV negative injection drug users.

Information on these and other interventions in the CDC Compendium of Evidence-based HIV Prevention Intervention:
http://www.cdc.gov/hiv/resources/reports/hiv_compendium/index.htm

Prevention with Positives Programs in New Jersey

**CAPCO**
Paterson: 973-742-6742

**Hyacinth AIDS Foundation**
Jersey City: 201-432-1134
Paterson: 973-278-7636
North Plainfield: 908-755-0021
New Brunswick: 732-246-0204
Newark: 973-565-0300

**North Jersey AIDS Alliance (NJCRI)**
Newark: 973-483-3444

**Visiting Nurse Association of Central Jersey**
Asbury Park: 732-502-5100

**PROCEED, Inc.**
Elizabeth: 908-321-7727

**Camden Area Health Education Center**
Camden: 856-963-2432

**Hispanic Family Center**
Camden: 856-963-0270

**Atlantic City Department Of Health**
Atlantic City: 609-347-6458

**Integrity Inc.**
Newark: 973-623-7082

**Liberation In Truth Unity Fellowship Church**
Newark: 973-424-9555

**New Jersey Women and AIDS Network**
New Brunswick: 732-846-4462

**Raritan Bay Medical Center**
Perth Amboy: 732-324-6064

**South Jersey AIDS Alliance**
Bridgeport: 856-455-6164
Atlantic City: 609-572-1929
Questions refer to the content of the article and the notes that follow. To receive CME/CE/CEU credit: complete exam, registration, and evaluation forms on-line at www.umdnj.edu/ccoe/aids or fill in the forms on the following pages, and mail or fax to UMDNJ-CCOE (see Registration Form).

1. The following symptoms commonly occur in Acute HIV Infection **EXCEPT**:
   A. Thrush
   B. Fever
   C. Sore throat
   D. Swollen glands

2. The type of prevention that focuses on decreasing risky behaviors of those already positive in order to prevent HIV transmission is:
   A. Primary
   B. Secondary
   C. Tertiary
   D. Quaternary

3. Among the sexual acts listed below, the one most likely to result in HIV transmission is:
   A. Receptive vaginal sex
   B. Insertive anal sex
   C. Receptive fellatio
   D. Insertive vaginal intercourse

4. The incidence of new HIV infections in the United States was recently estimated to be higher than previously thought.
   A. True
   B. False

5. The following medical complications can result from injection drug use.
   A. Necrotizing fasciitis
   B. Septic arthritis
   C. Endocarditis
   D. All of the above

6. In the United States, among people who have HIV infection, the estimated percent who have not yet been diagnosed is:
   A. 11%
   B. 21%
   C. 31%
   D. 41%

---

Case: A 34-year-old ART-naïve HIV positive man with a stable CD4+ in the 600 to 700 range and an HIV RNA of 40,000 presents to your clinic for a routine visit. He is in a long-term monogamous relationship with a male partner who is HIV negative. Despite frequent counseling, he does not typically use condoms.

7. Which of the following would be the LEAST effective secondary prevention or harm reduction method?
   A. Starting the patient on ART with the idea that a reduced viral load would decrease the risk of transmission to the patient’s partner while continuing on-going risk-reduction counseling with patient.
   B. Offering the patient’s partner the opportunity to participate in couples-based risk-reduction sessions and open dialogue about condoms.
   C. Address the benefits of condom use with the patient and then discontinue the discussion. The patient will bring the topic up when he is ready.
   D. As a team, assess the patient’s knowledge of risky behaviors and the consequences. Meet or speak on the phone with the patient on a weekly basis during which time you help and support the patient as he sets his own short-term risk reduction goals.

8. One of your case managers invites the patient to a men’s support group on sexual health. He attends and at the meeting, it is evident he has several misconceptions about condom use and the risks of not using a condom. The case manager proposes the following plan to the team, and you veto one intervention as ineffective. Which one do you reject?
   A. Assess his knowledge of HIV transmission and safe-sex practices with a short test that uses simple language, short sentences and defined terms.
   B. Show the client how to use a condom with a model and then ask him to explain the process and show you on the model proper procedure. Offer the patient free condoms.
   C. Offer to show a video on safe-sex and condom use to the patient and his partner, discuss the video and their thoughts and questions and offer free condoms.
   D. Give him a brochure with correct information. The patient needs reinforcement of the facts and should pass a quiz before he returns to the group so he does not contribute more misinformation.
Questions refer to the content of the article and the notes that follow. To receive CME/CE/CEU credit: complete exam, registration, and evaluation forms on-line at www.umdnj.edu/ccoe/aids or fill in the forms on the following pages, and mail or fax to UMDNJ-CCOE (see Registration Form).

**Case:** A 56-year-old woman with a one year history of AIDS transfers to your clinic. She has been on ART since her diagnosis. Her HIV is now well-controlled and she is tolerating her regimen well. However, she has uncontrolled hypertension and type 2 diabetes. She tells the intake nurse that after receiving her HIV diagnosis, she has decided she will never have sex again.

9. Which of the following statements is TRUE regarding discussing prevention issues with this patient?
   
   A. Fewer than 25% of people who receive an HIV diagnosis remain sexually active.
   
   B. While the patient’s diabetes and hypertension need to be addressed, the initial meeting with the patient is an important opportunity to begin an open conversation about prevention topics. Despite her initial reaction to her diagnosis, sexuality is a normal and healthy response in all people and it is important to prepare for a time when she will be sexually active.
   
   C. The patient’s uncontrolled hypertension and type 2 diabetes are the team’s primary concern, and prevention messages and discussions can wait until those medical issues are controlled.
   
   D. Because she is a woman in her late 50’s, she will feel embarrassed talking about her sex life to her much younger health providers. The team can offer her a referral to a counseling service for older adults that will be more comfortable for her.

10. The 57-year-old woman has now been in your practice for a year. She has told you that she has begun dating again and also has become sexually active in the last six months. When you consider screening for sexually transmitted infections, which is the best approach?
    
    A. The patient should be questioned and examined for symptoms, and have STI screening if she is symptomatic.
    
    B. As a sexually-active HIV patient, she should be tested for syphilis and gonorrhea, but genital chlamydia screening is not necessary because she is over 35.
    
    C. Screening for syphilis, Neisseria gonorrhoeae and Chlamydia trachomatis should occur annually for all sexually-active patients. A clinic might use a birthday or enrollment anniversary as the annual screening date.
    
    D. Patients should be asked about their sexual activity and number of partners. Men who have sex with men and sex workers should be routinely screened for STIs.
In order to obtain continuing education credit, participants are required to:

1. Read the learning objectives, and review the activity, and complete the post-test.
2. Complete this registration form and the activity evaluation form on the next page, and record your test answers below.
3. Send the registration and evaluation forms to: UMDNJ-Center for Continuing and Outreach Education
   • VIA MAIL: PO Box 1709, Newark, NJ 07101-1709 • VIA FAX: (973) 972-7128
4. Retain a copy of your test answers. Your answer sheet will be graded and if you achieve a passing score of 70% or more, a credit letter awarding 1.0 AMA PRA Category 1 Credit(s)™ or 1.0 contact hours or 0.1 continuing education units, and the test answer key will be mailed to you within four (4) weeks.

Individuals who fail to attain a passing score will be notified and offered the opportunity to complete the activity again.

Online option: This activity will be posted at www.umdnj.edu/ccoe/aids where you will be able to submit your registration, quiz, and evaluation, and print your own credit letter.

Please note: CE credit letters and long-term credit retention information will only be issued upon receipt of completed evaluation form.

## POST-TEST
Circle the best answer for each question.

<p>| | | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>

**Release date:** June 1, 2009 • **Expiration date:** Credit for this activity will be provided through May 30, 2011.

**Nursing Credit for this activity will be provided through May 30, 2011.**

UMDNJ-Center for Continuing & Outreach Education
PO Box 1709, Newark, New Jersey 07101-1709
Phone: 973-972-4267 or 1-800-227-4852 • Fax: 973-972-7128
The planning and execution of useful and educationally sound continuing education activities are guided in large part by input from participants. To assist us in evaluating the effectiveness of this activity and to make recommendations for future educational offerings, please take a few moments to complete this evaluation form. Your response will help ensure that future programs are informative and meet the educational needs of all participants.

_Please note: CE credit letters and long-term credit retention information will only be issued upon receipt of completed evaluation form._

### PROGRAM OBJECTIVES:

<table>
<thead>
<tr>
<th>Objective</th>
<th>Strongly Agree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective 1: Conduct sexual risk assessment with HIV-positive patients.</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Objective 2: Test HIV patients for syphilis, chlamydia, gonorrhea every 12 months.</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Objective 3: Conduct substance use assessment and counseling for all HIV patients every 12 months</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

### OVERALL EVALUATION:

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The information presented increased my awareness/understanding of the subject.</td>
<td>5</td>
</tr>
<tr>
<td>The information presented will influence how I practice.</td>
<td>5</td>
</tr>
<tr>
<td>The information presented will help me improve patient care.</td>
<td>5</td>
</tr>
<tr>
<td>The faculty demonstrated current knowledge of the subject.</td>
<td>5</td>
</tr>
<tr>
<td>The program was educationally sound and scientifically balanced.</td>
<td>5</td>
</tr>
<tr>
<td>The program avoided commercial bias or influence.</td>
<td>5</td>
</tr>
<tr>
<td>Overall, the program met my expectations.</td>
<td>5</td>
</tr>
<tr>
<td>I would recommend this program to my colleagues.</td>
<td>5</td>
</tr>
</tbody>
</table>

Based on the content of the activity, what will you do differently in the care of your patients? *(check one)*

- □ Implement a change in my practice.
- □ Do nothing differently as the content was not convincing.
- □ Seek additional information on this topic.
- □ Do nothing differently. System barriers prevent change.
- □ Not applicable. I do not see patients in my current position.

If you anticipate changing one or more aspects of your practice as a result of your participation in this activity, please provide us with a brief description of how you plan to do so.

__________________________________________________________________________________________________________________________________________________________________________________________________________________________

May we contact you in two months to see how you are progressing on the changes indicated above?

- □ Yes. Please provide your email address. __________________________
- □ No. I do not wish to participate in the follow-up assessment.

If you are not able to effectively implement what you learned at this activity, please tell us what the system barriers are (e.g., reimbursement issues, managed care rules, formulary decisions, countervailing practice guidelines, etc).

__________________________________________________________________________________________________________________________________________________________________________________________________________________________

Please list any topics that you would like addressed in future educational activities.

__________________________________________________________________________________________________________________________________________________________________________________________________________________________

---

**CE Activity Code:** 11HC06-DE01  
This form may be photocopied.