

# SELECTED REFERENCES

## HIV CARE GUIDELINES

---

DHHS Panel on Antiretroviral Guidelines for Adults and Adolescents – A Working Group of the Office of AIDS Research Advisory Council (OARAC). “Guidelines for the Use of Antiretroviral Agents in HIV-1-Infected Adults and Adolescents.” October 10, 2006. Accessed from the web Jan 8, 2007: [aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf](http://aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf)

Antiretroviral therapy for treatment of Human Immunodeficiency Virus type 1 (HIV-1) infection has improved steadily since the advent of combination therapy in 1996. More recently, new drugs have been approved, offering added dosing convenience and improved safety profiles, while some previously popular drugs are being used less often as their drawbacks become better defined. Resistance testing is used more commonly in clinical practice, and interactions among antiretroviral agents and other drugs have become more complex. The Department of Health and Human Services (DHHS) Panel on Antiretroviral Guidelines for Adults and Adolescents (the Panel), a working group of the Office of AIDS Research Advisory Council, develops these guidelines, which outline current understanding of how clinicians should use antiretroviral drugs to treat adults and adolescents with HIV infection. The Panel considers new evidence and adjusts recommendations accordingly. The primary areas of attention and revision have included when to initiate therapy, which drug combinations are preferred and which drugs or combinations should be avoided, and means to continue clinical benefit in the face of antiretroviral drug resistance. In contrast, some aspects of therapy, such as medication adherence, although important, have seen less rapid data evolution and thus fewer changes. Yet other topics, such as the treatment of HIV during pregnancy, have warranted more in-depth attention by separate guidelines groups.

## RISK AND RISK REDUCTION

---

Brewer, D. D., M. R. Golden, et al. (2006). “Unsafe sexual behavior and correlates of risk in a probability sample of men who have sex with men in the era of highly active antiretroviral therapy.” *Sex Transm Dis* 33(4): 250-5.

**OBJECTIVE:** To assess the levels and correlates of potential exposure to and transmission of HIV in a contemporary, community-based probability sample of men who have sex with men (MSM).

**METHODS:** In 2003, 311 sexually active MSM participated in a random-digit dial telephone survey in Seattle neighborhoods with a high prevalence of MSM. The primary outcomes were potential exposure to and transmission of HIV, defined as unprotected anal intercourse with a man of opposite or unknown HIV status in the preceding 12 months.

**RESULTS:** Fourteen percent of respondents reported being HIV-positive, 77% reported being HIV-negative, and 8% had not been tested. Of 241 HIV-negative MSM, 25 (10%; 95% confidence interval [CI], 7-15%) were potentially exposed to HIV; among 45 HIV-positive MSM, 14 (31%; 95% CI, 20-46%) were potential HIV-transmitters. Among HIV-negative men, the strongest bivariate correlates of potential exposure to HIV were recent bacterial sexually transmitted disease (odds ratio [OR], 5.8), number of recent male sexual partners (OR, 1.01 per partner), recent sex at a bathhouse (OR, 9.1), and recent use of sildenafil (OR, 4.4), amyl nitrite (OR, 6.2), and methamphetamine (OR, 8.0). Among HIV-infected men, the strongest correlates of potential HIV transmission were recent use of amyl nitrite (OR, 3.1), number of recent male sex partners (OR, 1.07 per partner), and having a male spouse or domestic partner (OR, 0.3).

**CONCLUSIONS:** Most MSM knew their HIV status and adopted safer sexual behaviors to reduce their risk of HIV acquisition or transmission. However, 10% of HIV-negative MSM and 31% of HIV-positive MSM recently engaged in behaviors that placed them at high risk for acquiring or transmitting HIV.

Reitmeijer, C.A. (2006). "Risk Reduction Counseling for STI Prevention – How it Works and How to Make it Work." *Sex. Transm. Inf.* Published online at [www.bmjournals.com](http://www.bmjournals.com).

Prevention research in the past decade has demonstrated the efficacy of risk reduction counseling in reducing the risks for sexually transmitted infections (STI). The question currently facing providers of STI services is therefore not so much whether counseling should be part of the standard of STI care, but rather how this intervention can be implemented given the logistical and resource constraints of a busy practice setting. Following a brief historical introduction and an overview of risk reduction counseling models and their theoretical and scientific underpinnings, the focus of this paper will be on the extent to which individual prevention models have been adopted in different clinical settings, the impediments to implementation, and suggestions for improvement.

Steward, W. T., K. A. Koester, et al. (2006). "Provider fatalism reduces the likelihood of HIV-prevention counseling in primary care settings." *AIDS Behav* 10(1): 3-12.

We examined the relationship between provider fatalism, a belief that behavior change among HIV-infected patients is unlikely, and HIV-prevention counseling in 16 publicly funded clinics. HIV-seropositive patients (N = 618) completed surveys assessing prevention counseling in the past 6 months. Additionally, 144 interviews were conducted with providers, administrators, and patients to examine beliefs about prevention counseling. We summed the number of fatalistic comments made by providers and administrators in each clinic, and assigned these counts as clinic-level fatalism scores to survey participants. Patients in high fatalism clinics were less likely to report prevention counseling than patients in low fatalism clinics. This difference remained significant even after controlling for clinic characteristics or patients' sexual risk and health status. However, clients in high fatalism clinics were more likely to be White, gay, educated, and older. Provider fatalism is a barrier that must be addressed when implementing HIV-prevention counseling in primary care settings.

## EPIDEMIOLOGIC BACKGROUND

---

Chesson, H. W., J. D. Heffelfinger, et al. (2005). "Estimates of primary and secondary Syphilis rates in persons with HIV in the United States, 2002." *Sex Transm Dis* 32(5): 265-9.

**BACKGROUND:** In the United States, there is a high rate of HIV coinfection in persons with Syphilis.

**GOAL:** The goal of this study was to estimate the rate of primary and secondary (P&S) Syphilis in persons living with HIV in the United States in 2002.

**STUDY:** We approximated the number of new cases of P&S Syphilis in HIV-infected persons and divided this by the estimated number of persons living with HIV. Values for the calculations were obtained from national Syphilis and HIV/AIDS surveillance reports and other published sources.

**RESULTS:** We estimated the rate of new cases of P&S Syphilis at 186 per 100,000 persons living with HIV in 2002, 25 per 100,000 HIV-infected women, 60 per 100,000 HIV-infected men who have sex with women only, and 336 per 100,000 HIV-infected men who have sex with men. Of the 6862 reported cases of P&S Syphilis in 2002, an estimated 1718 (25%) occurred in persons coinfecting with HIV.

**CONCLUSIONS:** The estimated rate of P&S Syphilis in persons with HIV is considerably higher than that of the general population. These findings highlight the importance of providing sexually transmitted disease prevention and control services to HIV-infected persons.

Kent, C. K., J. K. Chaw, et al. (2005). "Prevalence of rectal, urethral, and pharyngeal Chlamydia and Gonorrhea detected in 2 clinical settings among men who have sex with men: San Francisco, California, 2003." *Clin Infect Dis* 41(1): 67-74.

**BACKGROUND:** The Centers for Disease Control and Prevention developed screening and diagnostic testing guidelines for Chlamydia and Gonorrhea at urethral, rectal, and pharyngeal sites for men who have sex with men (MSM). However, in most clinical settings, rectal Chlamydial testing is not performed for MSM, and primarily sexually transmitted disease (STD) clinics alone perform routine rectal and pharyngeal Gonorrhea screening for asymptomatic men.

**METHODS:** We evaluated the prevalence of rectal, urethral, and pharyngeal Chlamydial and gonococcal infections among MSM seen at the municipal STD clinic and the gay men's community health center. We also determined the proportion of asymptomatic rectal infections, described the patterns of single and multiple anatomic sites of infection, and evaluated the proportion of Chlamydial infections that would be missed and not treated if MSM were not routinely tested for Chlamydia. We tested specimens using previously validated nucleic acid amplification tests (NAATs).

**RESULTS:** The prevalence of infection varied by anatomic site (Chlamydia: rectal, 7.9%; urethral, 5.2%; and pharyngeal, 1.4%; for Gonorrhea, rectal, 6.9%; urethral, 6.0%; and pharyngeal, 9.2%). Approximately 85% of rectal infections were asymptomatic supporting the need for routine screening. Because 53% of Chlamydial infections and 64% of gonococcal infections were at nonurethral sites, these infections would be missed and not treated if only urethral screening was performed. In addition, >70% of Chlamydial infections would be missed and not treated if MSM were tested only for Gonorrhea.

**CONCLUSIONS:** Because these infections enhance both HIV transmission and susceptibility, clinical settings serving MSM should evaluate the prevalence of Chlamydial and gonococcal infections by anatomic site using validated NAATs.

Xia, Q. et al. (2006). "HIV Prevalence and Sexual Risk Behaviors Among Men Who Have Sex With Men: Results from a Statewide Population-Based Survey in California. *JAIDS*. 41(42): 238-245.

**OBJECTIVES:** To investigate HIV prevalence, sexual risk behaviors, and HIV testing among men who have sex with men (MSM) between 18 and 64 years old living in California.

**DESIGN:** Cross-sectional study of a statewide population-based sample of MSM.

**METHODS:** Using data from the 2001 California Health Interview Survey (CHIS 2001), 398 men who self-identified as gay or bisexual were recontacted and interviewed by telephone for a follow-up study in 2002. Study participants were interviewed regarding their demographic characteristics and sexual behavior, HIV testing history, and HIV infection status. Those who self-reported as HIV-negative or of unknown status were offered an HIV test using a home urine specimen collection kit.

**RESULTS:** HIV prevalence among MSM in California was 19.1% (95% confidence interval [CI]: 12.8% to 25.3%) with higher rates seen among the following subgroups: high school or less education (40.4%), annual income less than \$20,000 (35.0%), or history of ever injecting recreational drugs (40.3%). Young age and Hispanic or African-American race/ethnicity were associated with higher proportions of risky sexual behavior and lower HIV testing rates.

**CONCLUSIONS:** HIV prevalence among MSM living in California continues to be high across the whole state, and population-based studies are needed periodically to complement findings from surveys using other sampling designs.

## HEPATITIS C

---

Clarke, A. and R. Kulasegaram (2006). "Hepatitis C transmission — where are we now?" *Int J STD AIDS* 17(2): 74-80. Since the discovery of Hepatitis C virus (HCV) in 1989, there has been much debate regarding its potential modes of transmission particularly as only about half of the reported cases of acute HCV have a defined parenteral exposure. It has been clearly established that blood-blood contact is important in its transmission, but the question of sexual transmission has caused more controversy with studies producing conflicting evidence. The objective of this review was to examine the current evidence on all reported routes of transmission of Hepatitis C with particular attention to sexual transmission in men having sex with men (MSM) and HIV-positive individuals. We conducted PubMed searches using keywords Hepatitis C, transmission, sexual, HIV, MSM, mother to child, haemophilia, intravenous drug use, tattooing and skin piercing. The bibliographies in articles identified were also searched.

Mohsen, A. H., S. Murad, et al. (2005). "Prevalence of Hepatitis C in an ethnically diverse HIV-1-infected cohort in south London." *HIV Med* 6(3): 206-15.

**OBJECTIVES:** There is limited information on the prevalence of and risk factors for Hepatitis C virus (HCV) infection among HIV-1-infected patients in the UK. Our objective was to determine the prevalence of HCV infection among an ethnically diverse cohort of HIV-infected patients in south London, and to extrapolate from these data the number of co-infected patients in the UK.

**METHODS:** A total of 1017 HIV-1-infected patients who had attended King's College Hospital HIV clinic between September 2000 and August 2002 were screened for HCV antibody using a commercial enzyme-linked immunosorbent assay (ELISA). Positive results were confirmed by polymerase chain reaction (PCR) or recombinant immunoblot assay. Demographic, clinical and laboratory data were obtained from the local computerized database and medical records. We applied our HCV prevalence rates in the different HIV transmission groups to the estimated number of HIV-infected persons in these groups in the UK, to obtain a national estimate of the level of HIV-HCV co-infection.

**RESULTS:** Of the 1017 HIV-1-infected patients, 407 (40%) were white men, 158 (15.5%) were black African men, 268 (26.3%) were black African women, and 61 (6%) and 26 (2.6%) were black Caribbean men and women, respectively. Heterosexual exposure was the most common route of HIV acquisition (53.5%), followed by men having sex with men (36.9%), and current or previous injecting drug use (IDU) (7.2%). The overall prevalence of HCV co-infection was 90/1017 (8.9%), but this varied substantially according to route of transmission, from 82.2% among those with a history of IDU (which accounted for 67% of all HCV infections), to 31.8% in those who had received blood products, to 3.5% and 1.8% in those with homosexually and heterosexually acquired infection, respectively. Multivariate logistic regression analysis identified several independent risk factors for HCV infection: a history of IDU [odds ratio (OR) = 107.2; 95% confidence interval (CI) = 38.5-298.4], having received blood products (OR = 16.5; 95% CI = 5.1-53.7), and either being from a white ethnic group (OR = 4.3; 95% CI = 1.5-12.0) or being born in Southern Europe (OR = 6.7; 95% CI = 1.5-30.7). Based on the 35,473 known HIV-1-infected persons in the UK and the 10 997 estimated to be unaware of their status, we projected that there are at least 4136 HIV-HCV co-infected individuals in the UK and 979 who are unaware of their status.

**CONCLUSIONS:** Overall, 9% of our cohort was HIV-HCV co-infected. The prevalence was highest among intravenous drug users (82%), who accounted for most of our HCV cases, and lowest among heterosexual men and women from sub-Saharan Africa and the Caribbean [ $< 2\%$ ]. Our estimate that a significant number of co-infected persons may be unaware of their HIV and HCV status, highlights an urgent need to increase the uptake of HCV and HIV testing, particularly among injecting drug users, to reduce the risk of onward transmission.

**Terrault, N. A. (2005). "Sex and Hepatitis C." Am J Gastroenterol 100(4): 825-6.**

While there is sufficient evidence to support the conclusion that sexual transmission of Hepatitis C virus (HCV) occurs, quantifying the magnitude of an individual's risk of HCV acquisition by sexual contact has been more challenging. The available data suggest the efficiency of transmission by the sexual route is low. Nonetheless, since sex is a common behavior and the reservoir of HCV-infected individuals is substantial, sexual contact likely contributes to the total burden of HCV infection in the United States. However, for individuals in long-term monogamous relationships, <3% of sexual partners are found to be HCV-infected and, in prospective studies, the incidence is reported to be <0.1% per year. The current study confirms these prior prevalence and incidence estimates. This low frequency of HCV in the steady sexual partners of HCV-infected individuals is what underlies the recommendation that these couples need not change their sexual practices.

## **THE CLINICAL ENVIRONMENT**

---

**Makadon, H. J. (2006). "Improving health care for the lesbian and gay communities." N Engl J Med 354(9): 895-7.**

In this eye-opening Perspectives article published in the New England Journal of Medicine, a physician delves into both personal history and a command of epidemiology and medicine in discussing the role clinicians must play in opening the health care system to all of their patients, regardless of sexual activity or orientation.