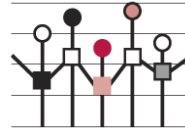




University of Wisconsin  
**SCHOOL OF MEDICINE  
AND PUBLIC HEALTH**



**Population  
Health  
Sciences**

## **PHS 904 Special Topics in Epidemiology: HIV/AIDS (1 credit)**

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### **COURSE DESCRIPTION and OBJECTIVES**

This course provides an overview of the HIV/AIDS pandemic. Topics covered include a review of the epidemiology of HIV/AIDS, the natural history of HIV disease, strategies for prevention and treatment, and local and global health impact with a focus on historically significant milestones as well as promising current and future research.

The objectives of the course are:

1. To describe the changing epidemiology and impact of HIV/AIDS in the U.S. and worldwide
2. To identify co-factors of and strategies to prevent HIV transmission
3. To understand how HIV progresses to AIDS and strategies to manage HIV disease
4. To examine current and future areas of research that aim to prevent transmission of HIV

### **COURSE ORGANIZATION**

Course Director: Ajay K. Sethi, PhD, MHS  
Assistant Professor  
Department of Population Health Sciences  
587 WARF  
608-263-1756  
aksethi@wisc.edu

Office Hours: Please email or phone me for an appointment

Meeting times and place:

Date: August 8-12, 2011  
Time: MTuWThF 9:00-12:00 PM  
Place: HSLC 1222

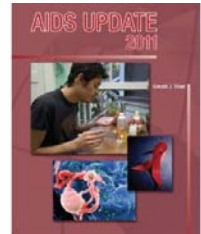
## Reading:

Reading for this course will be published manuscripts and Internet-based resources. These can be found in and after the course schedule and on the course website. Please read the material and links provided to maximize your learning in class and to promote a didactic learning environment.

Although a textbook is not required for this course, there are several texts available for your personal library depending on your individual needs and interests:

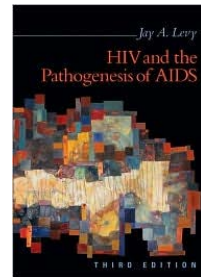
1. Stine GJ. *AIDS Update 2011*, 19<sup>th</sup> edition. McGraw-Hill/Dushkin; ISBN: 978-0073527635.

This text is published annually and presents a balanced review of current research and information on HIV infection, HIV disease, and AIDS. Information is presented within biological, medical, and social frameworks.



2. Levy JA. *HIV and the Pathogenesis of AIDS*, 3<sup>rd</sup> edition. ASM Press, Herndon, VA, 2007. ISBN: 13 978-1-5558-1292-2.

This monograph provides a comprehensive summary of the virology of and immunology of HIV. It is a basic science text and useful reference for HIV/AIDS researchers. A review of this book can be found on the course website.



3. Libman H and Makadon H. *HIV*, 3<sup>rd</sup> edition. American College of Physicians, Philadelphia PA, 2007. ISBN: 978-1930513730.

This textbook is a comprehensive guide for physicians who care for HIV-infected patients.



## Learn@UW:

The course is administered through Learn@UW (<https://learnuw.wisc.edu/>). Copies of the readings and links to websites are available on the course website.

Handouts for individual lectures may or may not be available online prior to class. If the handout is unavailable online the day before class, a hardcopy will be provided for you in class.

## Student Evaluation:

You will be evaluated on your participation, attendance, and a daily quiz based on the readings assigned for that day. The total grade will be determined based on the following breakdown:

- 20% Class participation
- 40% Take-home quiz
- 40% In-class quiz

Out of respect to lecturers and your fellow students who are contributing their time and expertise to the success of the course, all students are expected to attend class. Class attendance is also

a prerequisite for class participation and completion of the in-class quiz. If you are absolutely unable to attend class, please notify the Course Director in advance of class to document your absence and reason.

In fairness to students who turn in their assignment on time, a late assignment will be reduced one grade level (10%) for each day it is late. This can be waived in advance for valid reasons. Please email the Course Director to document your request. Given the short length of the course, if you are aware in advance of the start of the course that you are unable to attend class, consider taking the course when it is more convenient for you.

### **NON-DISCRIMINATION POLICY**

The UW-Madison is committed to creating a dynamic, diverse and welcoming learning environment for all students and has a non-discrimination policy that reflects this philosophy. Disrespectful behaviors or comments addressed towards any group or individual, regardless of race/ethnicity, sexuality, gender, religion, ability, or any other difference is deemed unacceptable in this class, and will be addressed publicly by the professor.

## COURSE SCHEDULE

August 8, 2011

09:00 – 09:50 AM	Introduction to the Epidemiology of HIV/AIDS (Sethi)  <u>Reading:</u>  Gallo RC and Montagnier L. The discovery of HIV as the cause of AIDS. <i>New England Journal of Medicine</i> . 2003; 349:2283-2285.  Fauci AS. 25 years of HIV. <i>Nature</i> . 2008 May 15;453(7193):289-90.
09:50 – 10:00 AM	Break and Q&A
10:00 – 10:50 AM	<u>Lecture:</u> Pathophysiology of HIV Disease (Cohen)  <u>Reading:</u>  Nelson KE, Chitale R, Celentano DD. Human Immunodeficiency Virus Infections and the Acquired Immune Deficiency Syndrome. In <i>Infectious Disease Epidemiology: Theory and Practice</i> 2006; pages 789-893.  <u>Website:</u> HIVInSite ( <a href="http://hivinsite.ucsf.edu">http://hivinsite.ucsf.edu</a> )
10:50 – 11:00 AM	Break and Q&A
11:00 – 11:50 AM	<u>Lecture:</u> Clinical Management of HIV Infection (Cohen)  <u>Reading:</u>  Thompson MA, Aberg JA, Cahn P, Montaner JS, Rizzardini G, Telenti A, Gatell JM, Günthard HF, Hammer SM, Hirsch MS, Jacobsen DM, Reiss P, Richman DD, Volberding PA, Yeni P, Schooley RT; International AIDS Society-USA. Antiretroviral treatment of adult HIV infection: 2010 recommendations of the IAS-USA panel. <i>JAMA</i> . 2010 Jul 21;304(3):321-33.  <u>Website:</u> AIDSinfo ( <a href="http://www.aidsinfo.nih.gov/">http://www.aidsinfo.nih.gov/</a> )
11:50 – 12:00 PM	Q&A

**August 9, 2011**

09:00 – 09:50 AM	<p><u>Lecture:</u> Sexual Transmission of HIV I (Sethi)</p> <p><u>Reading:</u></p> <p>Fox J, Fidler S. Sexual transmission of HIV-1. <i>Antiviral Research</i>. 2010 Jan;85(1):276-85.</p> <p>Dosekun O, Fox J. An overview of the relative risks of different sexual behaviours on HIV transmission. <i>Current Opinion in HIV and AIDS</i>. 2010 Jul;5(4):291-7.</p>
09:50 – 10:00 AM	<b>Break and Q&amp;A</b>
10:00 – 10:50 AM	<p><u>Lecture:</u> Sexual Transmission of HIV II (Sethi)</p> <p>Kelesidis T, Landovitz RJ. Preexposure prophylaxis for HIV prevention. <i>Current HIV/AIDS Reports</i>. 2011 Jun;8(2):94-103.</p> <p>Veronese F, Anton P, Fletcher CV, DeGruttola V, McGowan I, Becker S, Zwierski S, Burns D; Workshop Organizing Committee. Implications of HIV PrEP trials results. <i>AIDS Res Hum Retroviruses</i>. 2011 Jan;27(1):81-90. Epub 2010 Dec 12.</p>
10:50 – 11:00 AM	<b>Break and Q&amp;A</b>
11:00 – 11:50 AM	<p><u>Lecture:</u> HIV Vaccines (O'Connor)</p> <p><u>Reading:</u></p> <p>McKinnon, L. R., and C. M. Card. 2010. HIV vaccine efficacy trials: A brief history, and options for going forward. <i>AIDS Rev</i> 12(4):209-217.</p> <p>Padian, N. S., S. I. McCoy, S. S. Karim, N. Hasen, J. Kim, M. Bartos, E. Katabira, S. M. Bertozzi, B. Schwartlander, and M. S. Cohen. 2011. HIV prevention transformed: the new prevention research agenda. <i>Lancet</i> 378(9787):269-278.</p>
11:50 – 12:00 PM	<b>Q&amp;A</b>

**August 10, 2011**

09:00 – 9:50 AM	<p><u>Lecture:</u> Parenteral Transmission of HIV I (Sethi)</p> <p><u>Reading:</u></p> <p>Des Jarlais DC, Arasteh K, Semaan S, Wood E. HIV among injecting drug users: current epidemiology, biologic markers, respondent-driven sampling, and supervised-injection facilities. <i>Current Opinion in HIV and AIDS</i>. 2009 Jul;4(4):308-13.</p> <p>Wodak A, Cooney A. Do needle syringe programs reduce HIV infection among injecting drug users: a comprehensive review of the international evidence. <i>Substance Use and Misuse</i>. 2006;41(6-7):777-813.</p>
09:50 – 10:00 AM	Break and Q&A
10:00 – 10:50 AM	<p><u>Lecture:</u> Parenteral Transmission of HIV II (Sethi)</p>
10:50 – 11:00 AM	Break and Q&A
11:00 – 11:50 AM	<p><u>Discussion:</u> Socio-behavioral Approaches to HIV Prevention (Martinez-Donate)</p> <p><u>Articles:</u></p> <p>Magis-Rodríguez C, Lemp G, Hernandez MT, Sanchez MA, Estrada F, Bravo-García E. Going North: Mexican migrants and their vulnerability to HIV. <i>JAIDS</i>. 2009 May 1;51 Suppl 1:S21-5.</p> <p>Rhodes SD, Hergenrather KC, Bloom FR, Leichliter JS, Montaña J. Outcomes from a community-based, participatory lay health adviser HIV/STD prevention intervention for recently arrived immigrant Latino men in rural North Carolina. <i>AIDS Education and Prevention</i>. 2009 Oct;21(5 Suppl):103-8.</p>
11:50 – 12:00 PM	Q&A

**August 11, 2011**

09:00 – 09:50 AM	<p><u>Lecture:</u> Wisconsin's Approach to the HIV Epidemic (Vergeront)</p> <p><u>Website:</u> Wisconsin Department of Health Services (<a href="http://dhs.wisconsin.gov/aids-hiv/index.htm">http://dhs.wisconsin.gov/aids-hiv/index.htm</a>)</p>
09:50 – 10:00 AM	<b>Break and Q&amp;A</b>
10:00 – 10:50 AM	<p><u>Lecture:</u> Woman and HIV (Sethi)</p> <p><u>Reading:</u></p> <p>Gray GE, McIntyre JA. Effect of HIV on women. <i>AIDS Reader</i>. 2006 Jul;16(7):365-8, 373-7.</p> <p>Abdool Karim Q, Sibeko S, Baxter C. Preventing HIV infection in women: a global health imperative. <i>Clinical Infectious Diseases</i>. 2010 May 15;50 Suppl 3:S122-9.</p> <p>Coovadia H. Current issues in prevention of mother-to-child transmission of HIV-1. <i>Current Opinions on HIV/AIDS</i>. 2009 Jul;4(4):319-24.</p>
10:50 – 11:00 AM	<b>Break and Q&amp;A</b>
11:00 – 11:50 AM	<p><u>Lecture:</u> HIV and Incarceration and Barriers to Care in US/Vulnerable Populations (Sossman)</p> <p><u>Reading:</u></p> <p>Wohl DA, Rosen D, Kaplan AH. HIV and incarceration: dual epidemics. <i>AIDS Reader</i>. 2006 May;16(5):247-50, 257-60.</p> <p>Higgins JA, Hoffman S, Dworkin SL. Rethinking gender, heterosexual men, and women's vulnerability to HIV/AIDS. <i>American Journal of Public Health</i>. 2010 Mar;100(3):435-45. Epub 2010 Jan 14.</p>
11:50 – 12:00 PM	<b>Q&amp;A</b>

**August 12, 2011**

<b>Take-home quiz due at beginning of class</b>	
09:00 – 09:50 AM Sethi	<p>HIV/AIDS in Resource-limited Settings I (Sethi)</p> <p><u>Reading:</u></p> <p>Bassett IV, Walensky RP. Integrating HIV screening into routine health care in resource-limited settings. <i>Clinical Infectious Diseases</i>. 2010 May 15;50 Suppl 3:S77-84.</p> <p>Mofenson LM. Prevention in neglected subpopulations: prevention of mother-to-child transmission of HIV infection. <i>Clinical Infectious Diseases</i>. 2010 May 15;50 Suppl 3:S130-48.</p> <p>Vlahov D, Robertson AM, Strathdee SA. Prevention of HIV infection among injection drug users in resource-limited settings. <i>Clinical Infectious Diseases</i>. 2010 May 15;50 Suppl 3:S114-21.</p> <p><u>Website:</u> AVERT (<a href="http://www.avert.org/">http://www.avert.org/</a>)</p>
09:50 – 10:00 AM	<b>Break and Q&amp;A</b>
10:00 – 10:50 AM	<p>HIV/AIDS in Resource-limited Settings II (Sethi)</p> <p>Laurent, C. (2011). Scaling up HIV treatment in resource-limited countries: The challenge of staff shortages. <i>Journal of Public Health Policy</i>, 2011 May;32(2):211-8. Epub 2011 Feb 24.</p> <p>Sanne, I., Orrell, C., Fox, M.P., Conradie, F, Ive, P. et al. (2010). Nurse versus doctor management of HIV-infected patients receiving antiretroviral therapy (CIPRA-SA): A randomized non-inferiority trial. <i>The Lancet</i>, 376, 33-40.</p>
10:50 – 11:00 AM	<b>Break and Q&amp;A</b>
11:00 – 11:15 AM	Course wrap-up and discussion
11:15 – 12:00 PM	In-class Quiz

## OTHER READING

The following references are not required reading. They are listed for your reference and addition to collection of articles pertaining to HIV/AIDS.

### Identification of the HIV epidemic

1. Gottlieb MS, Schroff R, Schanker HM, Weisman JD, Fan PT, Wolf RA, Saxon A. Pneumocystis carinii pneumonia and mucosal candidiasis in previously healthy homosexual men: evidence of a new acquired cellular immunodeficiency. *New England Journal of Medicine*. 1981; 305:1425-1431.
2. Masur H, Michelis MA, Greene JB, Onorato I, Stouwe RA, Holzman RS, Wormser G, Brettman L, Lange M, Murray HW, Cunningham-Rundles S. An outbreak of community-acquired Pneumocystis carinii pneumonia: initial manifestation of cellular immune dysfunction. *New England Journal of Medicine*. 1981; 305:1431-1438.
3. Siegal FP, Lopez C, Hammer GS, Brown AE, Kornfeld SJ, Gold J, Hassett J, Hirschman SZ, Cunningham-Rundles C, Adelsberg BR, et al. Severe acquired immunodeficiency in male homosexuals, manifested by chronic perianal ulcerative herpes simplex lesions. *New England Journal of Medicine*. 1981; 305:1439-1444.
4. Durack DT. Opportunistic infections and Kaposi's sarcoma in homosexual men. *New England Journal of Medicine*. 1981; 305:1465-1467.
5. Goedert JJ and Gallo RC. Epidemiological evidence that HTLV-III is the AIDS agent. *European Journal of Epidemiology*. 1985; 1:155-159.
6. Greene WC. A History of AIDS: Looking back to see ahead. *European Journal of Immunology*. 2007; 37:S94-102.

### Major U.S. cohort studies

7. Kaslow RA, Ostrow DG, Detels R, Phair JP, Polk BF, Rinaldo CR Jr. The Multicenter AIDS Cohort Study: rationale, organization, and selected characteristics of the participants. *American Journal of Epidemiology*. 1987;126:310-318.
8. Vlahov D, Anthony JC, Munoz A, Margolick J, Nelson KE, Celentano DD, Solomon L, Polk BF. The ALIVE study, a longitudinal study of HIV-1 infection in intravenous drug users: description of methods and characteristics of participants. *The Journal of Drug Issues*. 1991; 21:759-776.
9. Barkan SE, Melnick SL, Preston-Martin S, Weber K, Kalish LA, Miotti P, Young M, reenblatt R, Sacks H, Feldman J. The Women's Interagency HIV Study. WIHS Collaborative Study Group. *Epidemiology*. 1998; 9:117-125.

### Pathophysiology of HIV Disease

1. Polk BF, Fox R, Brookmeyer R, Kanchanaraksa S, Kaslow R, Visscher B, Rinaldo C, Phair J. Predictors of the acquired immunodeficiency syndrome developing in a cohort of seropositive homosexual men. *New England Journal of Medicine*. 1987; 316:61-66.

2. Farzadegan H, Hoover DR, Astemborski J, Lyles CM, Margolick JB, Markham RB, Quinn TC, Vlahov D. Sex differences in HIV-1 viral load and progression to AIDS. *Lancet*. 1998; 352:1510-1514.
3. Anastos K, Gange SJ, Lau B, Weiser B, Detels R, Giorgi JV, Margolick JB, Cohen M, Phair J, Melnick S, Rinaldo CR, Kovacs A, Levine A, Landesman S, Young M, Munoz A, Greenblatt RM. Association of race and gender with HIV-1 RNA levels and immunologic progression. *Journal Acquired Immune Deficiency Syndrome*. 2000; 24:218-226.
4. Vlahov D, Graham N, Hoover D, Flynn C, Bartlett JG, Margolick JB, Lyles CM, Nelson KE, Smith D, Holmberg S, Farzadegan H. Prognostic indicators for AIDS and infectious disease death in HIV-infected injection drug users: plasma viral load and CD4+ cell count. *Journal of the American Medical Association*. 1998 Jan 7;279:35-40.

### **Incubation period of HIV**

5. Muñoz A, Wang MC, Bass S, Taylor JM, Kingsley LA, Chmiel JS, Polk BF. Acquired immunodeficiency syndrome (AIDS)-free time after human immunodeficiency virus type 1 (HIV-1) seroconversion in homosexual men. Multicenter AIDS Cohort Study Group. *American Journal of Epidemiology*. 1989;130:530-539.
6. Muñoz A, Sabin CA, Phillips AN. The incubation period of AIDS. *AIDS*. 1997;11(Suppl A):S69-76.

### **Genetics of HIV transmission**

7. Zimmerman PA, Buckler-White A, Alkhatib G, *et al.*, 1997. Inherited resistance to HIV-1 conferred by an inactivating mutation in CC chemokine receptor 5: studies in populations with contrasting clinical phenotypes, defined racial background, and quantified risk. *Mol Med* 3: 23-36.
8. McDermott DH, Zimmerman PA, Guignard F, *et al.*, 1998. CCR5 promoter polymorphism and HIV-1 disease progression. Multicenter AIDS Cohort Study (MACS). *Lancet* 352: 866-70.

### **Plasma HIV RNA as a prognostic indicator of CD4 decline**

9. Mellors JW, Muñoz A, Giorgi JV, Margolick JB, Tassoni CJ, Gupta P, Kingsley LA, Todd JA, Saah AJ, Detels R, Phair JP, Rinaldo CR Jr. Plasma viral load and CD4+ lymphocytes as prognostic markers of HIV-1 infection. *Annals of Internal Medicine*. 1997; 126:946-954.
10. Rodríguez BR, Sethi AK, Cheruvu VK, Mackay W, Bosch RJ, Kitahata M, Boswell SL, Matthews C, Bangsberg D, Martin J, Whalen CC, Sieg S, Yadavalli S, Deeks S, Lederman MM. Plasma viremia is only a minor determinant of CD4 T-cell loss in untreated HIV-1 infection. *JAMA* 2006 296:1498-1506.
11. Henry WK, Tebas P, Lane HC. Explaining, predicting, and treating HIV-associated CD4 cell loss: after 25 years still a puzzle. *JAMA*. 2006; 296:1523-5.
12. Letters to the editor in response to the second article above.

13. Mellors JW, Margolick JB, Phair JP, Rinaldo CR, Detels R, Jacobson LP, Muñoz A. Prognostic value of HIV-1 RNA, CD4 cell count, and CD4 Cell count slope for progression to AIDS and death in untreated HIV-1 infection. *JAMA*. 2007; 297:2349-50.

### **Epidemiology of HIV/AIDS in the United States and world**

1. Corbett, EL, et al. The growing burden of tuberculosis: global trends and interactions with the HIV epidemic. *Arch Intern Med* 2003;163(9):1009-21.
2. Hariri S and McKenna M. Epidemiology of human immunodeficiency virus in the United States. *Clinical Micro Rev* 2007;20:478-488.
3. Hall HI, Song R, Rhodes P, Prejean J, An Q, Lee LM, Karon J, Brookmeyer R, Kaplan EH, McKenna MT, Janssen RS; HIV Incidence Surveillance Group. Estimation of HIV incidence in the United States. *JAMA* 2008;300:520-529. Also see: <http://www.cdc.gov/hiv/topics/surveillance/incidence.htm>
4. Kilmarx PH. Global epidemiology of HIV. *Current Opinions in HIV and AIDS*. 2009 Jul;4(4):240-6.

### **HIV testing**

5. Branson BM, Handsfield HH, Lampe MA, Janssen RS, Taylor AW, Lyss SB, Clark JE; Centers for Disease Control and Prevention (CDC). Centers for Disease Control and Prevention. Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings. *MMWR*. 2006;55 (No. RR-14):1-17.
6. Gostin LO. HIV screening in health care settings: Public health and civil liberties in conflict? *JAMA* 2006;296:2023-2025.

### **Sexual transmission of HIV**

7. Kingsley LA, Detels R, Kaslow R, Polk BF, Rinaldo CR Jr, Chmiel J, Detre K, Kelsey SF, Odaka N, Ostrow D, et al. Risk factors for seroconversion to human immunodeficiency virus among male homosexuals. Results from the Multicenter AIDS Cohort Study. *Lancet*. 1987;1:345-349.
8. Detels R, English P, Visscher BR, Jacobson L, Kingsley LA, Chmiel JS, Dudley JP, Eldred LJ, Ginzburg HM. Seroconversion, sexual activity, and condom use among 2915 HIV seronegative men followed for up to 2 years. *Journal of Acquired Immune Deficiency Syndromes*. 1989;2:77-83.
9. Coplan PM, Mitchnick M, Rosenberg ZF, 2004. Public health. Regulatory challenges in microbicide development. *Science* 304: 1911-2.
10. Lederman MM, Veazey RS, Offord R, et al., 2004. Prevention of vaginal SHIV transmission in rhesus macaques through inhibition of CCR5. *Science* 306: 485-7.
11. Wilson DP, Blower SM, Stein Z, Susser M, Coplan PM, Mitchnik M, Rosenberg ZF, 2004. Microbicides: Anti-HIV Efficacy and Ethics (Letters). *Science* 306: 1890.

### **Treatment of sexually transmitted infections to prevent HIV transmission**

1. Grosskurth H, Mosha F, Todd J, Mwijarubi E, Klokke A, Senkoro K, Mayaud P, Changalucha J, Nicoll A, ka-Gina G, et al. Impact of improved treatment of sexually transmitted diseases on HIV infection in rural Tanzania: randomised controlled trial. *Lancet*. 1995; 346:530-536.
2. Wawer MJ, Sewankambo NK, Serwadda D, Quinn TC, Paxton LA, Kiwanuka N, Wabwire-Mangen F, Li C, Lutalo T, Nalugoda F, Gaydos CA, Moulton LH, Meehan MO, Ahmed S, Gray RH. Control of sexually transmitted diseases for AIDS prevention in Uganda: a randomised community trial. Rakai Project Study Group. *Lancet*. 1999; 353:525-535.
3. Preventing HIV infection: lessons from Mwanza and Rakai. Letters and author's reply. *Lancet*. 1999; 353:1522-1523.
4. Hitchcock P, Fransen L. Preventing HIV infection: lessons from Mwanza and Rakai. *Lancet*. 1999; 353:513-515.
5. White RG, Orroth KK, Korenromp EL, Bakker R, Wambura M, Sewankambo NK, Gray RH, Kamali A, Whitworth JAG, Grosskurth H, Habbema JDF, Hayes RJ. Can Population Differences Explain the Contrasting Results of the Mwanza, Rakai, and Masaka HIV/Sexually Transmitted Disease Intervention Trials? A Modeling Study. *Journal of Acquired Immune Deficiency Syndromes*. 2004; 37:1500-1513.
6. Celum C, Wald A, Hughes J, Sanchez J, Reid S, Delany-Moretlwe S, Cowan F, Casapia M, Ortiz A, Fuchs J, Buchbinder S, Koblin B, Zwierski S, Rose S, Wang J, Corey L; HPTN 039 Protocol Team. Effect of aciclovir on HIV-1 acquisition in herpes simplex virus 2 seropositive women and men who have sex with men: a randomised, double-blind, placebo-controlled trial. *Lancet*. 2008 Jun 21;371(9630):2109-19.
7. Watson-Jones D, Weiss HA, Rusizoka M, Changalucha J, Baisley K, Mugeye K, Tanton C, Ross D, Everett D, Clayton T, Balira R, Knight L, Hambleton I, Le Goff J, Belec L, Hayes R; HSV trial team; Steering and Data Monitoring Committees. Effect of herpes simplex suppression on incidence of HIV among women in Tanzania. *New England Journal of Medicine*. 2008 Apr 10;358(15):1560-71. Epub 2008 Mar 12.

### **Male circumcision to prevent HIV transmission**

1. Auvert B, Buvé A, Ferry B, Caraël M, Morison L, Lagarde E, Robinson NJ, Kahindo M, Chege J, Rutenberg N, Musonda R, Laourou M, Akam E; Study Group on the Heterogeneity of HIV Epidemics in African Cities. Ecological and individual level analysis of risk factors for HIV infection in four urban populations in sub-Saharan Africa with different levels of HIV infection. *AIDS*. 2001 Aug;15 Suppl 4:S15-30.
2. Auvert B, Buvé A, Lagarde E, Kahindo M, Chege J, Rutenberg N, Musonda R, Laourou M, Akam E, Weiss HA; Study Group on the Heterogeneity of HIV Epidemics in African Cities. Male circumcision and HIV infection in four cities in sub-Saharan Africa. *AIDS*. 2001 Aug;15 Suppl 4:S31-40.

3. Auvert B, Taljaard D, Lagarde E, Sobngwi-Tambekou J, Sitta R, Puren A. Randomized, controlled intervention trial of male circumcision for reduction of HIV infection risk: the ANRS 1265 Trial. *PLoS Med.* 2005 Nov;2(11):e298.
4. Williams BG, Lloyd-Smith JO, Gouws E, Hankins C, Getz WM, Hargrove J, de Zoysa I, Dye C, Auvert B. The potential impact of male circumcision on HIV in Sub-Saharan Africa. *PLoS Med.* 2006 Jul;3(7):e262.
5. Bailey RC, Moses S, Parker CB, Agot K, Maclean I, Krieger JN, Williams CF, Campbell RT, Ndinya-Achola JO. Male circumcision for HIV prevention in young men in Kisumu, Kenya: a randomised controlled trial. *Lancet.* 2007 Feb 24;369(9562):643-56.
6. Gray RH, Kigozi G, Serwadda D, Makumbi F, Watya S, Nalugoda F, Kiwanuka N, Moulton LH, Chaudhary MA, Chen MZ, Sewankambo NK, Wabwire-Mangen F, Bacon MC, Williams CF, Opendi P, Reynolds SJ, Laeyendecker O, Quinn TC, Wawer MJ. Male circumcision for HIV prevention in men in Rakai, Uganda: a randomised trial. *Lancet.* 2007 Feb 24;369(9562):657-66.
7. Sahasrabuddhe VV, Vermund SH. The future of HIV prevention: control of sexually transmitted infections and circumcision interventions. *Infect Dis Clin North Am.* 2007 Mar;21(1):241-57, xi.

#### **Prevention of parenteral transmission of HIV**

1. Des Jarlais DC, Marmor M, Paone D, Titus S, Shi Q, Perlis T, Jose B, Friedman SR. HIV incidence among injecting drug users in New York City syringe-exchange programmes. *Lancet.* 1996; 348:987-991.
2. Vlahov D, Munoz A, Anthony JC, Cohn S, Celentano DD, Nelson KE. Association of drug injection patterns with antibody to human immunodeficiency virus type 1 among intravenous drug users in Baltimore, Maryland. *American Journal of Epidemiology.* 1990; 132:847-856.
3. Vlahov D, Des Jarlais DC, Goosby E, Hollinger PC, Lurie PG, Shriver MD, Strathdee SA. Needle exchange programs for the prevention of human immunodeficiency virus infection: epidemiology and policy. *American Journal of Epidemiology.* 2001; 154:S70-S77.

#### **Prevention of mother-to-child transmission of HIV**

1. Connor EM, Sperling RS, Gelber R, Kiselev P, Scott G, O'Sullivan MJ, VanDyke R, Bey M, Shearer W, Jacobson RL, *et al.* Reduction of maternal-infant transmission of human immunodeficiency virus type 1 with zidovudine treatment. Pediatric AIDS Clinical Trials Group Protocol 076 Study Group. *New England Journal of Medicine.* 1994; 331:1173-1180.
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### **Pre-exposure Prophylaxis**

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## OTHER WEBSITES

The following are among many HIV-related websites not listed in the course schedule.

1. Centers for Disease Control and Prevention, HIV/AIDS:  
<http://www.cdc.gov/hiv/>
2. Centers for Disease Control and Prevention, Global Aids Program:  
<http://www.cdc.gov/nchstp/od/gap/about.html>
3. Joint United Nations Programme on HIV/AIDS, UNAIDS:  
<http://www.unaids.org/en/>
4. World Health Organization, HIV/AIDS:  
[http://www.who.int/topics/hiv\\_infections/en/](http://www.who.int/topics/hiv_infections/en/)

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