


19th Annual HIV CONFERENCE
May 14-15, 2010 • Orlando, FL

STD Patient Case Presentations

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Disclosure of Financial Relationships

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Learning Objectives

- Identify high-risk sexual and drug behaviors associated with an increased risk of transmitting HIV
- Understand the rationale for STD screening in HIV-infected persons
- Discuss STD screening guidelines and preferred STD screening tests for HIV-infected persons.
- Summarize the impact of STDs on the risk of acquiring HIV
- Summarize the impact of STDs on the risk of transmitting HIV



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STD/HIV Interactions

- **Trends among persons living with HIV:**
 - Glaring racial disparities
 - Estimated 56,000 new HIV cases each year
 - Increases in unsafe sex
 - Increases in syphilis, gonorrhea
 - Transmission of drug-resistant virus
- **STDs increase amount of HIV shed at genital mucosa (cervix, urethra, rectum)**

Collis et al., *CID* 2001;32:611-22.
Erbelding, *J AIDS* 2003;33:247-52.
Novak et al., *CID* 2005;40:468-474.
Tang et al., *J Clin Virol* 2004;30:1-10.
Weinstock et al. *JID* 2004;189:2174-80.



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Case #1

- A 31-year-old woman with HIV infection (CDC category A2) presents to establish care with a new primary care provider (you)
 - ✧ HIV diagnosis for one year
 - ✧ CD4 counts stable between 370 to 450 cells/mm³
 - ✧ Acquired HIV through sexual contact with an HIV-infected male IDU (continues relationship - doubts he is monogamous, unclear of partners gender[s])
 - ✧ Explains since she is HIV-infected and on oral contraceptives, she does not routinely use condoms
 - ✧ Primarily has oral and vaginal sex; intermittently engages in anal sex
 - ✧ No current symptoms of dysuria, vaginal discharge, or genital sores
 - ✧ History of genital chlamydia
 - ✧ Does not use injection drugs

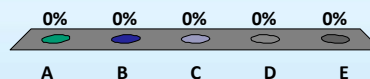


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Which of the following is TRUE regarding screening for sexually transmitted diseases (STDs) in this HIV-infected patient?

- A. She is asymptomatic, so STD screening is not indicated
- B. Genital chlamydia screening is not necessary because she is older than 25
- C. Women with HIV are at low risk for asymptomatic trichomonas infection, so screening for this infection is not recommended
- D. Men and women who report receptive anal intercourse should receive screening for rectal chlamydia
- E. Only HIV-infected men who have sex with men (MSM) should be routinely screened for syphilis



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Patient Follow-up

- Laboratory performed:
 - ✧ Vaginal fluid saline microscopy (revealed motile trichomonads)
 - ✧ Pharyngeal swab for *N. gonorrhoeae* (NG) culture, rectal swab for NG, *C. trachomatis* (CT) cultures, and a first-catch urine for NAAT for NG and CT → negative
 - ✧ RPR
 - ✧ Pregnancy test (negative)
 - ✧ The patient's cultures were negative, but her RPR was 1:16 (confirmed by FTA)
- Management:
 - ✧ She was treated appropriately for trichomoniasis and syphilis

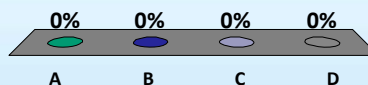


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Which of the following statements is FALSE?

- A. Her partner should be screened for STDs and epidemiologically treated for syphilis exposure
- B. Her partner should be treated for trichomoniasis
- C. She should have repeated STD screening in 12 months
- D. She should have brief behavior counseling on STI risk reduction



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Patient Follow-up (con't)

- Her partner was tested and treated for syphilis and trichomoniasis
- After she received the results of the positive STD tests, counseling was provided. The patient stated that she was more motivated to use condoms, but was unsure if she would be able to use them 100% of the time
- After a discussion of additional birth control options, she was again prescribed oral contraceptive pills
- Follow-up STD screening was planned within the next 3 to 6 months.



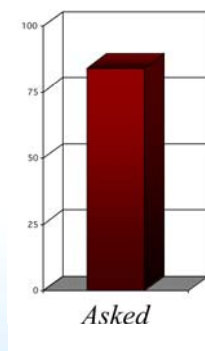
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Proportion of Physicians Discussing Topics with HIV-Positive Patients

4 US Cities (n=317)

- **Adherence to ART 84%**



Metsch LR, Pereyra M, del Rio C, et al. Delivery of HIV Prevention Counseling by Physicians at HIV Medical Care Settings in 4 US Cities. *Am J Public Health* 2004;94:1186-92.



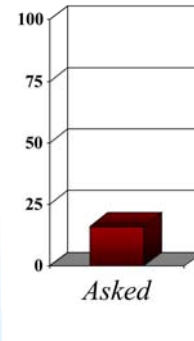
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Proportion of Physicians Discussing Topics with HIV-Positive Patients

4 US Cities (n=317)

- Adherence to ART 84%
- Condom use 16%

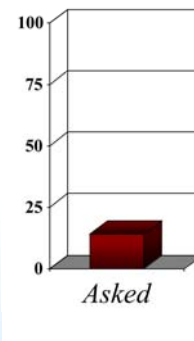


Metsch LR, Pereyra M, del Rio C, et al. Delivery of HIV Prevention Counseling by Physicians at HIV Medical Care Settings in 4 US Cities. *Am J Public Health* 2004;94:1186-92.

Proportion of Physicians Discussing Topics with HIV-Positive Patients

4 US Cities (n=317)

- Adherence to ART 84%
- Condom use 16%
- HIV transmission and/or risk reduction 14%



Metsch LR, Pereyra M, del Rio C, et al. Delivery of HIV Prevention Counseling by Physicians at HIV Medical Care Settings in 4 US Cities. *Am J Public Health* 2004;94:1186-92.

Case #2

- Neil is a 33-year-old male, a patient in your practice for 4 years, presents with a new rash "all over his body"
- HIV-positive and on three-drug ART (tenofovir/emtricitabine/efavirenz [Atripla]) for two years
- Most recent lab tests (3 months ago) - CD4 370 and viral load <50
- Takes valacyclovir episodically for mild, infrequent recurrent genital herpes outbreaks
- No other concurrent health problems
- Past discussions: sexually active - only male partners



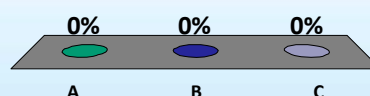
Case #2 (con't)

- Describing the rash, first noticed a few red spots on his chest 3 days prior. Within a day, it had spread over his entire chest and back, then to his upper and lower extremities
- Also reports feeling feverish with malaise, but no other current symptoms: no itch, pain, swollen glands, cough, nausea, vomiting, diarrhea, stiff neck, visual changes, headache, or fever
- NKA and no new medications
- Had all childhood immunizations; had chicken pox as a child
- Not changed skin care products or detergents recently



What percentage of physicians report that they include a sexual history as part of a routine clinical assessment?

- A. Over 90%
- B. Less than 50%
- C. I'm not sure



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Case #2 (con't)

- Neil has 1 steady male sex partner for the past 3 years.
 - ✧ Insertive and receptive anal and oral sex; no condoms - partner is HIV-positive
 - ✧ Partner probably has other partners
- He also had 1 sexual contact with a new anonymous partner met via internet 2 months ago
 - ✧ With this partner, insertive and receptive anal sex with condoms, and oral sex without condoms
 - ✧ did not disclose HIV status
- Neil has genital herpes (mild recurrences 2X/yr) and urethral gonorrhea once years ago

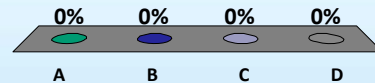


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Based on Neil's history so far what is his greatest risk factor for STDs?

- A. His age (33 yrs old)
- B. His HIV status
- C. He is not at increased risk for STDs
- D. Having anal sex with male sexual partners without a condom



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Case #2 (con't)

- Vital signs: 98.8°F, P 76, R 16/min, BP 116/70.
- On examination, Neil's rash appears as below:

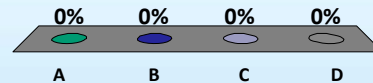


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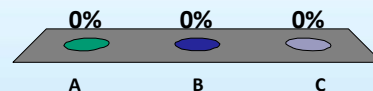
Which of the following could be the cause of this rash?

- A. Viral infection
- B. Secondary syphilis
- C. Allergy to food or medication
- D. Any of the above could be correct



Which of the following is the best next step?

- A. Additional physical exam
- B. Order diagnostic tests
- C. Enough information is available now to make a management plan



Case #2 (con't)

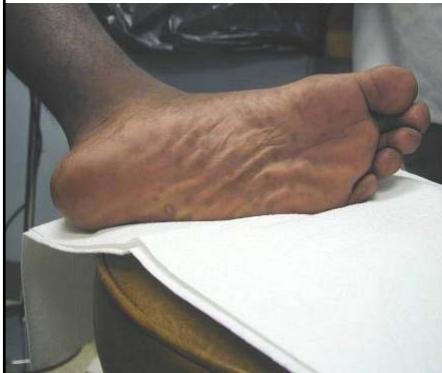
- Rash is the most common sign of secondary syphilis
 - Occurs 75-90% of cases - highly variable in morphology and distribution
 - Papulosquamous, dry, erythematous and widely distributed, often (not always) involving the palms of the hands and soles of the feet (50-60%)
- Other manifestations of secondary syphilis
 - Generalized lymphadenopathy (70-90%)
 - Constitutional symptoms - fatigue and fever (50-80%)
 - Mucous patches (5-30%) flat, white to pink, painless lesions of mucous membranes, usually buccal mucosa or tongue and vulvar mucosa
 - Condyloma lata (5-25%) raised, pink or flesh-colored lesions usually occur in moist areas (skin folds, perianal area)
 - Alopecia (10-15%) patchy; may involve eyebrows as well as hair of the head.



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Secondary Syphilis



Source: Southeast Region STD/HIV Prevention Training Center at the University of South Florida College of Medicine



Source: CDC/NCHSTP/Division of STD Prevention, STD Clinical Slides



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Source: CDC/NCHSTP/Division of STD Prevention, STD Clinical Slides

Source: Gower Medical Slides

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(c) University Erlangen,
Department of Dermatology
Phone: (+49) 9131- 85 - 2727

www.dermis.net

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Secondary Syphilis - Condylomata lata



Source: Southeast Region STD/HIV Prevention Training Center



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Secondary Syphilis - Alopecia



Source: Southeast Region STD/HIV Prevention Training Center



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Secondary Syphilis – Mucous Patches



Source: Dermatology On-line Atlas (<http://www.dermis.net>)



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- Neurosyphilis can occur in any stage of syphilis (in secondary, <2%), usually manifesting with meningitis or stuttering stroke symptoms



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CDC Home Search Health Topics A-Z

MMWR
Weekly
June 29, 2007 / 56(25):625-628

Symptomatic Early Neurosyphilis Among HIV-Positive Men Who Have Sex with Men --- Four Cities, United States, January 2002--June 2004

Due to their high rates of syphilis, HIV-positive men who have sex with men (MSM) are at risk for early symptomatic neurosyphilis (NS)


HIV-positive MSM with syphilis have a roughly **one in 50 chance** (1.7%) of developing early symptomatic NS

Of 37 NS patients with follow-up, approximately **one-third** (11 cases) had **persistent symptoms at six-months despite treatment**

- * permanent disabilities (decreased vision / hearing; rarely paralysis)

53% of NS patients had no other syphilis symptoms and 24% unaware of HIV infection

Reinforce importance of reducing sexual risk behavior among HIV-positive MSM to prevent syphilis infection, as well as the need for sexually active MSM to get tested regularly for HIV and other STDs

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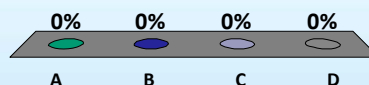
Follow-up

- After one week, Neil's rash is resolving. His test results are: RPR 1:512, TP-PA reactive
- Gonorrhea and Chlamydia NAAT tests: negative (urine)
- Gonorrhea cultures: negative (rectal and pharyngeal)

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What recommendation regarding follow-up should be made to Neil?

- A. Neil does not need to return until 4 months from now
- B. Return in 3, 6, 9, 12 and 24 months for clinical and serologic evaluation
- C. Return at 6 and 12 months for clinical and serologic evaluation
- D. A lumbar puncture for CSF evaluation should be done today.



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Indications for LP with Syphilis and HIV

- Trial with patients with concurrent HIV infection and syphilis
- Prospective clinical cohort with no neurologic symptoms at the time of lumbar puncture
- Different stratification criteria to calculate the performance of lumbar puncture in detecting asymptomatic neurosyphilis (ANS):
 1. Lumbar puncture in patients with late latent syphilis or syphilis of an unknown duration, regardless of the CD4 cell count or rapid plasma reagin titer
 2. Lumbar puncture if the CD4 cell count was ≤ 350 cells/mL and/or the rapid plasma reagin (RPR) titer was $\geq 1:32$, regardless of the syphilis stage
 3. Lumbar puncture in the context of serologic nonresponse to syphilis therapy.

Ghanem KG, Moore RD, Rompalo AM, Erbeding EJ, Zenilman JM, Gebo KA. Clin Infect Dis. 48(6): 816-821,2009



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Indications for LP with Syphilis and HIV

- 202/231 patients with syphilis w/o neurologic symptoms
- Immediate LP performed for 46 patients:
 - 10 cases (22%) of ANS were detected
 - With first criterion, 2/10 (14%) of ANS with early-stage syphilis would have been missed (sensitivity, 80% [95% CI, 44%–97%]; specificity, 76% [95% CI, 60%–89%]).
 - Criterion 2 would miss no cases of ANS (sensitivity, 100% [95% CI, 70%–100%]; specificity, 87% [95% CI, 72%–96%]) but would require LP be performed for 88% of patients
 - Performance of LP performed in 13 cases based on serologic nonresponse to syphilis therapy yielded 4 cases (31%) of ANS
- Conclusions: in patients with HIV and syphilis, use of criteria based on RPR titer and CD4 cell count, instead of stage-based criteria, improved the ability to identify ANS

Ghanem KG, Moore RD, Rompalo AM, Erbelding EJ, Zenilman JM, Gebo KA. Clin Infect Dis. 48(6): 816–821, 2009

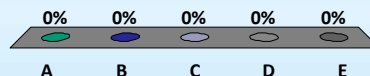


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Which of the following are TRUE regarding follow-up using serologic tests for syphilis after treatment for secondary syphilis?

- A. All follow-up assessments should be made by comparison to the non-treponemal titer obtained on the day of treatment
- B. The treponemal test usually remains reactive for life, and cannot be used for purposes of follow-up
- C. The non-treponemal test may be negative by one year
- D. The titer should decrease four-fold by 6-12 months
- E. All of the above are correct



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Treatment Failure Should be Considered in the Following Scenarios:

- Clinical signs or symptoms that persist or recur, including neurologic symptoms
- Failure of titer to drop 4-fold
 - For primary/secondary syphilis
 - within 6-12 months for HIV-positive persons or
 - within 6 months for HIV-negative persons.
 - For latent syphilis
 - within 12-24 months for HIV-positive person or
 - within 12-24 months for HIV-negative with an initially high titer (>1:16)
- Sustained 4-fold increase (2 dilutions) in titer compared with the lowest post-treatment titer measured (note: may be difficult to distinguish from re-infection)



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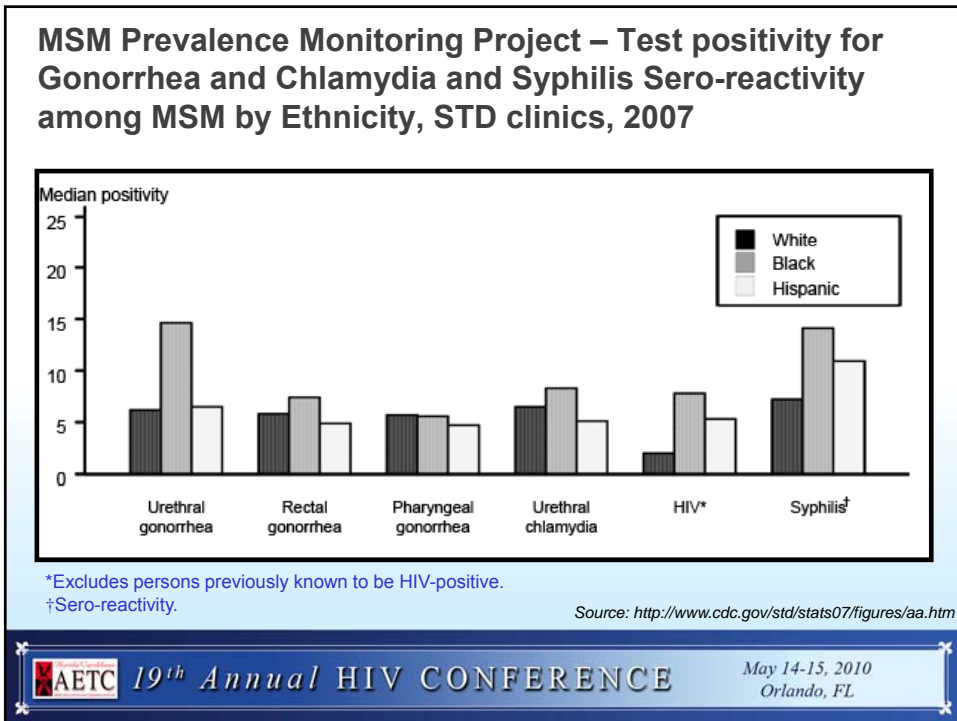
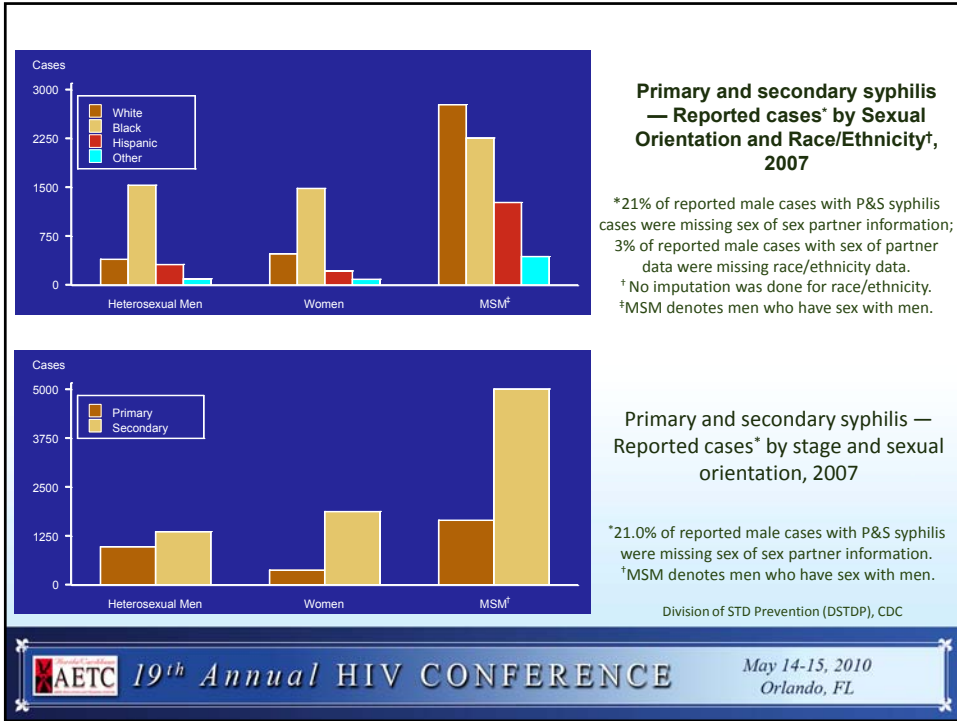
Follow-up

- Neil returns for his follow-up serologic tests as recommended. His main partner was evaluated, found to have syphilis, and treated as well. Neil emailed his second partner, informing him of the syphilis exposure and his HIV status, but he has not seen this partner since his treatment. He now only uses websites where he can select the option to disclose his HIV status, and have other positive partners. By one year, his RPR is non-reactive. He has had no further symptoms related to syphilis.

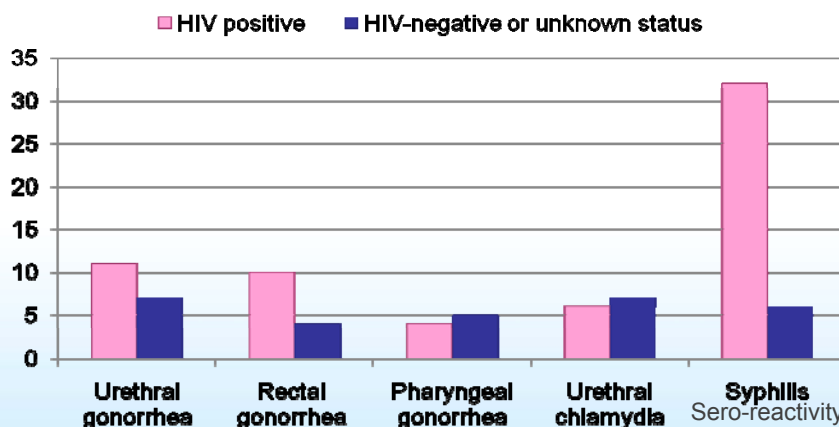


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MSM Prevalence Monitoring Project – Test positivity for Gonorrhea and Chlamydia and Syphilis Sero-reactivity among MSM by HIV status, STD clinics, 2007



Source: <http://www.cdc.gov/std/stats07/msm.htm>



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Case #3

- 23-year-old heterosexual HIV-infected woman presents to an STD clinic complaining of severe pain in her vulva
 - Sexual history: she has had a steady HIV-negative sexual partner for 8 months, but occasionally exchanges sex for crack cocaine
 - Rarely uses condoms (she has heard it is difficult for women to transmit HIV to men)
 - Her history and exam are consistent with primary genital herpes; laboratory studies are sent to confirm this suspected diagnosis
 - She also undergoes complete testing for other common STDs

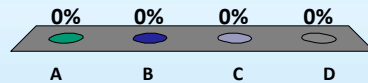


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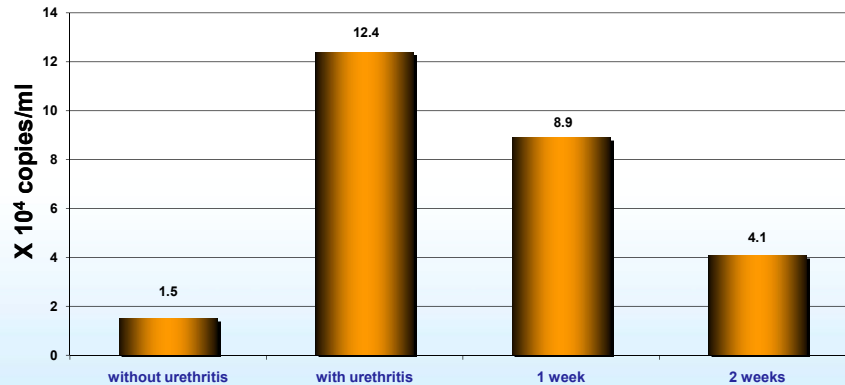
Which of the following is TRUE regarding STDs and HIV transmission?

- A. The presence of genital lesions caused by HSV in an HIV-infected person confers a major increase (up to 4-fold) in the risk of HIV transmission to a HIV-negative partner
- B. If this patient's HIV-negative sexual partner has a history of genital herpes, her current HSV infection would not place him at increased risk of acquiring HIV
- C. Among sexually transmitted pathogens, only those organisms that cause genital ulcer disease are associated with an increased risk of HIV transmission
- D. Treatment of common sexually transmitted infections that cause cervicitis, including chlamydia and trichomoniasis, in HIV-infected women has not been shown to decrease genital shedding of HIV




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Median Concentration of HIV-1 RNA in Semen Among 135 HIV-Infected Men With (n=86) and Without (n=49) Urethritis in Malawi



Cohen MS, Hoffman IS, et al. Lancet. 1997 Jun 28;349:1868-73


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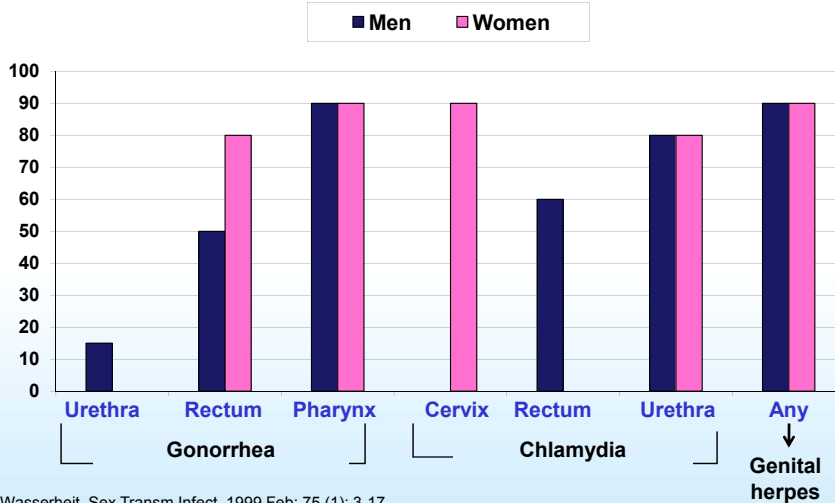
HSV Prevention: Crossroads

- **Growing body of data linking HSV-2 to HIV**
 - HIV acquisition: HSV-2 increases risk 2-4 fold
 - HIV transmission: HSV-2 increases plasma and genital VL and suppressive HSV-2 Rx lowers both
- **Clinical trials**
 - **HPTN 039 and Partners in Prevention:** trial of suppressive ACV in patients with HIV+ / HSV+ (PIP) and HIV- HSV-2+ (HPTN) → ?prevent HIV transmission
 - Both large studies showed no effect on HSV-2 suppression and HIV transmission)
 - http://depts.washington.edu/uwicrc/research/studies/pip_transmission.html;
 - http://www.hptn.org/web_documents/HPTN039/HPTN039ResultsForCROI2008.pdf
- **In the interim**
 - Need to increase awareness about risk of HSV in enhancing HIV acquisition, with message for risk reduction and HIV testing
 - Encourage strategies likely to prevent transmission (e.g., condoms, sex without lesions)


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Why Bother Screening?

Percent of Persons with STD Who Are Asymptomatic



Fleming, Wasserheit. Sex Transm Infect. 1999 Feb; 75 (1): 3-17


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Treatment of STD in HIV-infected persons

- CDC STD Treatment Guidelines highlight specific regimens for HIV-infected persons when appropriate
- In general, treatment guidelines are not different between HIV-infected and non-infected patients
- Because re-infection rates are high, patients with chlamydia or gonorrhea should be re-tested 3 months after treatment

CDC. Sexually Transmitted Diseases
Treatment Guidelines, 2006 / Vol. 55 / No. RR-11



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STD Screening: FIRST VISIT

- **All patients**
 - Ask about STD symptoms
 - Syphilis serology, chlamydia, gonorrhea
 - Hepatitis A/B/C status
 - **Men should be screened for urethral infection**
 - **Patients who report receptive anal sex**
 - Rectal gonorrhea
 - Rectal chlamydia
 - **Patients who report receptive oral sex**
 - Pharyngeal gonorrhea
- *Check with local laboratory/program regarding availability of approved tests for pharynx/rectum***

CDC; HRSA; NIH; HIVMA of the IDSA. Incorporating HIV prevention into the medical care of persons living with HIV. Recommendations of CDC, HRSA, NIH, HIVMA of the IDSA. MMWR 2003;52 (RR-12):8



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STD Screening: FIRST VISIT

- **Women**
 - **Chlamydia:** routinely test ***all*** women at first visit, especially those ≤ 25 years;
 - **Trichomoniasis**
 - **Gonorrhea:** routinely test ***all*** sexually active women
 - **Pregnancy:** ask a woman of childbearing age if she suspects pregnancy or has missed her period
 - *Identify possible current pregnancy, interest in future pregnancy, or sexual activity without reliable contraception*

CDC; HRSA; NIH; HIVMA of the IDSA. Incorporating HIV prevention into the medical care of persons living with HIV. Recommendations of CDC, HRSA, NIH, HIVMA of the IDSA. MMWR 2003;52 (RR-12):8



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STD Screening: SUBSEQUENT VISITS

- **Periodic retesting for all sexually active patients**
- **Annually for all, more frequent (every 3-6 months) depending on risk:**
 - Multiple or anonymous sex partners
 - Unprotected vaginal or anal intercourse with partner with negative or unknown HIV status
 - Sex or needle-sharing partner with above risks
 - “Life changes” associated with increased risk

CDC; HRSA; NIH; HIVMA of the IDSA. Incorporating HIV prevention into the medical care of persons living with HIV. Recommendations of CDC, HRSA, NIH, HIVMA of the IDSA. MMWR 2003;52 (RR-12):8



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