



STI Screening & Prevention

NIKPOUR 12.21.14

Learning Objectives

- ▶ Describe the guidelines for STI screening
- ▶ Describe the guidelines for partner notification
- ▶ List STI prevention strategies including immunizations
- ▶ See also – for closely related topics
 - ▶ Evaluation of vaginal discharge
 - ▶ Trichomonas
 - ▶ Syphilis
 - ▶ HIV
 - ▶ Genital Warts
 - ▶ PID

STI Screening

- ▶ Guidelines available: 2010 CDC Guidelines & ACOG STI Treatment Guidelines, USPSTF 2008 Guidelines
- ▶ Screening is stratified by epidemiological categories
 - ▶ General population
 - ▶ Adolescents
 - ▶ Pregnant women
 - ▶ Men who have sex with men (MSM)
 - ▶ Women who have sex with women (WSW)
 - ▶ Persons in correctional facilities

STI Screening: General Population¹⁻²

- ▶ **HIV/AIDS**: all adults and adolescents between ages of 13 to 64 should be tested at least one time. Annually screen anyone who uses IV drugs or has unsafe sexual practices.
- ▶ **Chlamydia/Gonorrhea**: annual screening for all sexually active women ≤ 25 yo; annual screening for high-risk women > 25 yo (new/multiple sex partners)
 - ▶ Often translated in practice to annually in women ages 15-25
 - ▶ Urine screening test is acceptable (even preferred, to boost compliance)
- ▶ **HPV/Cervical Dysplasia**: pap every 3 years from age 21 to 65 yo. For women ≥ 30 yo with a history of normal Pap smears, cytologic screening with HPV serology every 5 years.
- ▶ Routine screening of asymptomatic women for other STIs is not recommended

STI Screening: Adolescents¹⁻²

- ▶ The prevalence of many STIs are highest among adolescents
 - ▶ Reported rates of chlamydia and gonorrhea are highest among young women from 15 to 19 yo.
 - ▶ HPV infections are acquired in many people in their adolescents
- ▶ All minors can consent to their own health services for STIs. No state requires parental consent
- ▶ Screening Guidelines
 - ▶ HIV/AIDS, chlamydia and gonorrhea screening guidelines are the same as general population.
 - ▶ Routine screening for other STI's in adolescents not recommended and should be determined on a case-by-case basis.

STI Screening: Pregnant Women¹⁻²

- ▶ Pregnant women and their fetuses are at risk of serious complications with various STIs. Early detection and treatment are important to prevent long-term negative consequences
- ▶ Screening Guidelines
 - ▶ HIV/AIDS: routine screening of ALL women at 1st prenatal visit
 - ▶ Chlamydia: routine screening of ALL women at 1st prenatal visit
 - ▶ If in a high risk population (e.g. teen, multiple partners), re-screen in 3rd trimester
 - ▶ Gonorrhea: routine screening of AT-RISK women at 1st prenatal visit
 - ▶ Syphilis: routine screening of ALL women at 1st prenatal visit
 - ▶ Hepatitis B: routine screening of ALL women at 1st prenatal visit

STI Screening: WSW¹

- ▶ WSW are a diverse population of people that participate in a wide range of sexual practices. Many women who have sex with women also engage in sexual intercourse with men.
- ▶ Studies⁴ indicate that women with both male and female partners may be at increased risk of STIs c/w that of the general population

STI Screening: People in Correctional Facilities¹

- ▶ Correctional facilities range in the disease prevalence at each institution. Furthermore, facilities may only hold people for limited periods of time (<48 hours) making universal screening guidelines difficult to uphold.
- ▶ Screening recommendations
 - ▶ **Chlamydia**: universal screening of adolescent females at intake in juvenile detention centers
 - ▶ **Gonorrhea**: universal screening of adolescent females at intake in juvenile detention centers
 - ▶ **Syphilis**: universal screening on basis of local area and institutional prevalence of seropositive people.

STI Screening: USPSTF Recs³

- ▶ USPSTF assesses public health through the a cost-effective filter
- ▶ Screening Recommendations
 - ▶ Women < 25 y/o: routine screening for chlamydia, gonorrhea, HIV, and syphilis
 - ▶ Pregnant women: antenatal screening for hepatitis B, HIV, and syphilis
 - ▶ Additionally screen for chlamydia, gonorrhea if <25, or w/ high risk sexual behavior
 - ▶ At-risk men: screened for HIV and syphilis
 - ▶ Men and nonpregnant women > 25 y/o w/o high-risk sexual behavior do not require routine screening

STI Partner Notification

- ▶ Partner notification can:
 - ▶ decrease the risk of reinfection for the index patient
 - ▶ provide the opportunity for partner evaluation and treatment¹
- ▶ Patient-Delivered-Partner-Therapy (PDPT)
 - ▶ Providers can offer patients treatment for their partners for GC, CT, and Syphilis (Trichomonas as well if patient is pregnant)
- ▶ It is important for providers to spend time counseling patients on partner notification
 - ▶ The time spent counseling a patient is associated with an increase in rates of partner notification

¹MMWR, 2010

⁵Wilson, 2009

STI Prevention

▶ Male condoms

- ▶ **Latex**: prevents pregnancy and adequately protects against STI transmission when used correctly
- ▶ **Polyurethane**: prevents pregnancy and STI transmission at the same rate as latex condoms
- ▶ **“Natural”**: made out of lamb cecum; effectively prevents pregnancy but has pores 10 and 25 times larger than HIV and HBV, respectively; thus there is still the risk of STI transmission¹

▶ Female condoms

- ▶ Can be use in place of male condoms for vaginal sex

STI Prevention cont'd

▶ Topical gels

- ▶ Tenofovir gel: an antiretroviral topical treatment used during sexual intercourse that has been shown to reduce HIV transmission by 39% in South African women⁶
- ▶ Microbicide gels: currently under investigation for efficacy

▶ Male circumcision¹

- ▶ Can reduce the risk of HIV and other STI transmission as shown by three randomized control trials in South Africa

▶ Pre-exposure prophylaxis to prevent HIV

- ▶ Antiretroviral therapy reduces susceptibility to HIV transmission in a study involving West African women⁷

¹MMWR, 2010

⁶ Karim, 2010

⁷ Cohen, 2007

STI Vaccinations

- ▶ HPV Pre-exposure vaccine¹
 - ▶ Recommended for all young women between 9-26 years old
 - ▶ Can be used for all young men between 9-26 to prevent genital warts
 - ▶ Gardisil is the quadrivalent vaccine which also protects against genital warts
 - ▶ Cervarix is the bivalent vaccine
 - ▶ Gardisil 9 is the new 9-valent vaccine (16,18,6,11 + 31,33,45,52,58)²
- ▶ Hepatitis B vaccine¹
 - ▶ Recommended for all unvaccinated, uninfected people presenting for STI screening

¹ MMWR, 2010

² FDA, 12/2014

Summary

- ▶ Screening is recommended for certain sexually transmitted bacterial and viral infections in specific populations; however, regular universal screening for all STIs is not recommended
- ▶ Partner notification and treatment can reduce the risk of reinfection for index patient and curb future STI transmission
- ▶ There are various means of STI prevention including abstinence, monogamy, and practicing safer sex through the use of male or female condoms
- ▶ Improved means of HIV prevention through use of ART gels, and pre- and post-exposure prophylaxis
- ▶ Vaccination against HPV and HBV can prevent future infection and long-term sequelae

IMPORTANT LINK / REFERENCES

1. [CDC STD Treatment Guidelines, 2010. MMWR](#)
2. Centers for Disease Control and Prevention. Sexually Transmitted Diseases Treatment Guidelines, 2010. MMWR. 2010; 59(RR12); 1-110.
3. Burstein G, Jacobs A, Kissin D, et al. Changes in the 2010 STD Treatment Guidelines What Adolescent Health Care Providers Should Know. <http://www.acog.org/About-ACOG/ACOG-Departments/Adolescent-Health-Care/Changes-in-the-2010-STD-Treatment-Guidelines--What-Adolescent-Health-Care-Providers-Should-Know>. Accessed on 12/24/2014.
4. Meyers D, Wolff T, Gregory K, et al. USPSTF Recommendations for STI Screening. *Am Fam Physician*. 2008;77:819-824.
5. Koh AS, Gomez CA, Shade S, et al. Sexual risk factors among self-identified lesbians, bisexual women, and heterosexual women accessing primary care settings. *Sex Transm Dis* 2005;32:563-9
6. Wilson TE, Hogben M, Malka ES, et al. A randomized controlled trial for reducing risks for sexually transmitted infections through enhanced patient-based partner notification. *Am J Public Health* 2009;99(Suppl 1):S104-10.
7. Karim QA, Karim SS, Frohlich JA, et al. Effectiveness and safety of tenofovir gel, an antiretroviral microbicide, for the prevention of HIV infection in women. *Science* 2010;329:1168-74.
8. Cohen MS, Gay C, Kashuba AD, et al. Narrative review: antiretroviral therapy to prevent the sexual transmission of HIV-1. *Ann Intern Med* 2007;146:591-601
9. <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm426485.htm>