STI SCREENING & PREVENTION

NIKPOUR 9.15.23

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: 2021 CDC Guidelines & ACOG STI Treatment Guidelines, USPSTF 2008 Guidelines
- Screening is stratified by epidemiological categories
  - General population
  - Adolescents / Children
  - Pregnant women
  - Men who have sex with men (MSM)
  - Women who have sex with women (WSW)
  - Women who have sex with women and men (WSWM)
  - Persons in correctional facilities

STI SCREENING

- Prevention and control of STIs are based on the following 5 major strategies:
  - Accurate risk assessment, education, and counseling of persons at risk regarding ways to avoid STIs through changes in sexual behaviors and use of recommended prevention services
  - Pre-exposure vaccination for vaccine preventable STIs
  - Identification of asymptomatically infected persons and persons with symptoms associated with STIs
  - Effective diagnosis, treatment, counseling, and follow-up of infected persons
  - Evaluation, treatment, and counseling of sex partners of persons who are infected with an STI

THE 5 P'S OF SEXUAL HISTORIES

1. PARTNERS

- "Are you currently having sex of any kind?"
- "What is the gender(s) of your partner(s)?"

2. PRACTICES

- "To understand any risks for STIs, I need to ask more specific questions about the kind of sex you have had recently."
- "What kind of sexual contact do you have, or have you had?"
- "Do you have vaginal sex, meaning 'penis in vagina' sex?"
- "Do you have anal sex, meaning 'penis in anus' sex?"
- "Do you have oral sex, meaning 'mouth on penis/vagina'?"

3. PROTECTION FROM STIS

- "Do you and your partner(s) discuss prevention of STIs and HIV?"
- "Do you and your partner(s) discuss getting tested?"
- "In what situations do you use condoms?"

THE 5 P'S OF SEXUAL HISTORIES

4. PAST HISTORY OF STIs

- "Have you ever been tested for STIs and HIV?"
- "Have you ever been diagnosed with an STI in the past?"
- "Have any of your partners had an STI?"
- **Additional questions for identifying HIV and viral hepatitis risk:**
  - "Have you or any of your partner(s) ever injected drugs?"
  - "Is there anything about your sexual health that you have questions about?"

5. PREGNANCY INTENTION

- "Do you think you would like to have (more) children in the future?"
- "How important is it to you to prevent pregnancy (until then)?"
- "Are you or your partner using contraception or practicing any form of birth control?"
- "Would you like to talk about ways to prevent pregnancy?"

STI SCREENING: GENERAL POPULATION

- HIV:
  - All individuals between ages of 13-64 should be tested at least once
  - 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 understood in practice to screen annually in women ages 15-25
  - Urine screening test is acceptable (even preferred, to boost compliance)
- Routine screening of asymptomatic women for other STIs (beyond HPV on the next slide) is not recommended

HPV SCREENING RECOMMENDATIONS

Patient population	USPSTF (2018)	ACS (2020)
<21 y old	No screening	
21–25 y old	Cytology alone every 3 y	No screening
25–29 y old	• Cytology alone every 3 y • Cotesting [b] every 5 y • Primary HPV [a] test every 5 y	Preferred: • Primary HPV [a] test every 5 y Acceptable: [c] • Cotesting [b] every 5 y • Cytology alone every 3 y
30–65 y old		
>65 y old	No screening necessary after adequate negative prior screening [d]	
Prior total hysterectomy	No screening necessary in those without a history of high-grade cervical dysplasia or cervical cancer	No screening necessary in those without a history of CIN 2+ or a more severe diagnosis in the past 25 y or cervical cancer ever
Prior HPV vaccination	Follow age-specific recommendations	

[a]Food and Drug Administration–approved test.

[b]Cotesting is cytology and hrHPV testing.

[c]Acceptable where access to primary HPV testing is not available.

[d]Adequate negative prior screening is defined as 2 consecutive negative primary HPV tests, 2 negative cotests, or 3 negative cytology tests within the last 10 years, and the most recent in the past 3–5 years.

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STI SCREENING: ADOLESCENTS

- 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 during their adolescence
- All minors can consent to their own health services for STIs; No state requires parental consent
- Screening Guidelines
  - HIV, GC, and CT screening guidelines are the same as general population
  - Routine screening for other STIs in adolescents not recommended and should be determined on a case-by-case basis

STI SCREENING: PREGNANT WOMEN

- Pregnant women and their fetuses are at risk of serious complications with various STIs
- Screening Guidelines
  - HIV: routine screening of ALL women at 1st prenatal visit
  - Chlamydia: routine screening of ALL women at 1st prenatal visit
  - Gonorrhea: routine screening of AT-RISK women at 1st prenatal visit
    - For all 3 of these, if in a high-risk population (i.e., multiple partners, new partner, partner with STI, drug misuse), re-screen in 3rd trimester
  - Syphilis: routine screening of ALL women at 1st prenatal visit and repeat screening at 28w
  - Hepatitis B: routine screening of ALL women at 1st prenatal visit

STI SCREENING: WSW & WSWM

- WSW are a diverse population of people that participate in a wide range of sexual practices
- 53-97% of WSW have had sex with men in the past or continue to do so; 5-28% of WSW report having a male partner in the last year
- Studies[4] indicate that women with both male and female partners may be at increased risk of STIs c/w that of the general population
- Transmission risk probably varies by the specific STI and sexual practice (i.e., oral-genital sex; vaginal or anal sex using hands, fingers, or penetrative sex items; and oral-anal sex)
- Thus, screening should be nuanced by type of sexual activity but likely resemble routine screening of all individuals

STI SCREENING: TRANS & GENDER DIVERSE

- Routine screening for GC & CT <25 yo; screening for those >25 if at elevated risk
  - Location of screening site is based on reported sexual behavior and exposure
- Consider annual screening for syphilis
- Recommend routine screening for HIV; frequency of repeat screening based on level of risk
- People with a cervix should undergo routine screening for HPV

STI SCREENING: PERSONS IN CORRECTIONAL FACILITIES

- ~1/2 of entrants are released back into the community <48 hours. As a result, treatment completion rates for those screened for STIs in short-term facilities is suboptimal
  - However, because of the mobility of incarcerated populations in and out of the community, the impact of screening in correctional facilities on the prevalence of infections among detainees and subsequent transmission in the community after release might be considerable
- Those aged ≤35 years in juvenile and adult detention facilities have been reported to have higher rates of chlamydia, gonorrhea, and syphilis than nonincarcerated persons

STI SCREENING: PERSONS IN CORRECTIONAL FACILITIES

- Chlamydia: females ≤35 yo should be screened at intake and offered as opt-out screening
- Gonorrhea: females ≤35 yo should be screened at intake and offered as opt-out screening
- Trichomonas: females ≤35 yo should be screened at intake and offered as opt-out screening
- Syphilis: universal screening on basis of local area and institutional prevalence of seropositive people
- Hepatitis: universal screening for Hep B and Hep C
- HIV: universal screening at intake and offered as opt-out screening

STI PARTNER NOTIFICATION

- Partner notification can:
  - Decrease the risk of reinfection for the index patient
  - Provide the opportunity for partner evaluation and treatment
- 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

STI PREVENTION

- Prevention counseling is most effective if provided in a **nonjudgmental** and **empathetic** manner appropriate to the patient's culture, language, sex and gender identity, sexual orientation, age, and developmental level.

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

STI PREVENTION

- 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 women[6]
  - Microbicide gels: currently under investigation for efficacy
- Male circumcision
  - Has been shown to reduce the risk of HIV and HPV transmission in Africa; not reproduced in U.S.
- Pre-exposure prophylaxis to prevent HIV
  - Antiretroviral therapy reduces susceptibility to HIV transmission in a study involving West African women[7]

STI VACCINATIONS

- HPV Pre-exposure vaccine
  - Recommended for all young people between 9-26 yo
  - Shared decision-making for those 27-45 yo
    - Gardisil is the quadrivalent vaccine which also protects against genital warts
    - Cervarix is the bivalent vaccine
    - Gardisil 9 is the new 9-valent vaccine (6,11,16,18 + 31,33,45,52,58)
- Hepatitis B vaccine
  - Recommended for all unvaccinated, uninfected people presenting for STI screening

SUMMARY

- Screening is recommended for certain sexually transmitted bacterial and viral infections in specific populations; however, regular universal screening for most 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 LINKS / REFERENCES

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