

**In-person**  
March 13-16, 2024

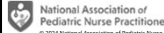
**Virtual**  
May - July 31, 2024

## 45th National Conference on Pediatric Health Care

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### Unusual STI Presentations in Primary Care

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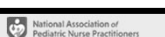
Experts in pediatrics, Advocates for children.

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## Speaker Disclosure

- Nothing to disclose



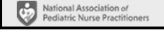
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## Learning Objectives

- List unusual presenting symptoms for sexually transmitted infections.
- Identify changes in the most recent 2021 CDC testing and treatment guidelines.
- Define appropriate test-of-cure and test of reinfection guidelines for reviewed STIs.



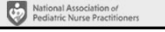
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## Outline

- Definitions
- STI Landscape
- Why talk about youth?
- Social context
- Definitions
- Cases



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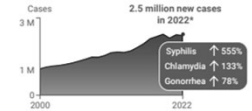
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## STI Landscape

- 2.5 million chlamydia, gonorrhea and syphilis cases in 2022

### STI Overview

Chlamydia, gonorrhea, and syphilis cases have been increasing for years.

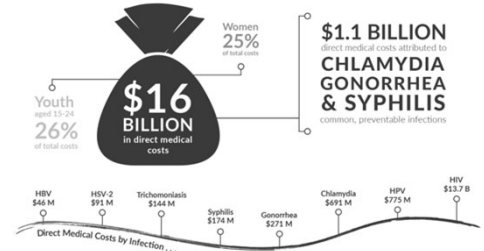


People most affected by STIs include:

- Adolescents and people aged 15-24 years
- Gay, bisexual, and other men who have sex with men
- Pregnant people
- People from some racial and ethnic minority groups

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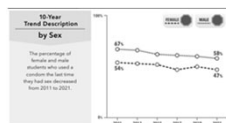
## STI Landscape - Financial Impact



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## Why talk about youth?

- ½ of ALL new STI infections in youth
- Condom use declining
  - 60% in 2011 → 52% in 2021
- Testing rates declining
- 20% of new HIV diagnoses



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## Why talk about youth?

- Substance use linked to STI infection
- Substance use before sex
- Early age of sex
- 30% of HS students ever had sex
- 6% of HS student > 4 lifetime partners



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## Why are youth at higher risk?

- Biology
  - Cervical ectropion
  - Cervical mucous
- Behavioral
  - Prefrontal cortex
    - Executive function
  - Condom use
  - Peer pressure
  - Invincible



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## Why are youth at higher risk?

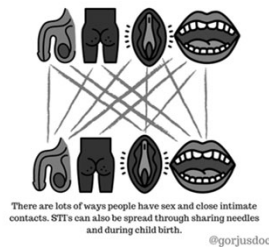
- Social Context
  - Ace score
  - Community prevalence
  - Inadequate access
  - Health class/knowledge
  - Dependent
  - High rates of STIs

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## Definitions

We will use the term "women" or "female" to refer to patients of female sex, and "men" or "male" to refer to patients of male sex

### How are they spread?



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## Definitions - Expedited Partner Therapy (EPT)



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## Case study - Evan

13 yo M with PMH of asthma presents to your clinic complaining of penile bump.



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## Case study - Evan

- PRN albuterol, NKDA
- Fhx/Surgical hx: non-contributory
- Social: Lives with both parents, younger brother, 2 cats. 10<sup>th</sup> grade at local high school.
- Additional history: Denies dysuria, pain, penile discharge, rash. Denies ever having sex. Completed HPV vaccine series.
- Exam: Tanner stage IV, testes without lumps/bumps, no visible changes on penile shaft/glans, no pearly penile papules, no vesicles/ulcerations, no papules/warts, no inguinal LAD

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## Case study - Evan

### Labs

- Urine GC/CT testing



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## Chlamydia - Youth rates in United States

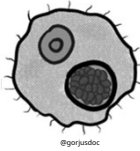
Women 15-24, 2022, per 100,000

Men 15-24, 2022, per 100,000



## Chlamydia

- Bacteria: *Chlamydia trachomatis*
- Spread: Genital (penis/vagina), mouth, anal co
  - No contact with semen required.
- Symptoms:
  - 70-90% no symptoms
  - Women: bleeding, discharge, dysuria, pyuria, frequency)
  - Men: Mucoid/watery penile discharge, dysuria, epididymitis, testicular pain/tender/swelling



@goryudoc

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## Chlamydia

### • Treatment:

#### Recommended Regimens for Chlamydial Infection Among Adolescents and Adults

Doxycycline 100 mg orally 2 times/day for 7 days

#### Alternative Regimens

Azithromycin 1 g orally in a single dose

OR

Levofloxacin 500 mg orally once daily for 7 days

#### Recommended Regimens

Azithromycin 1 g orally in a single dose

OR

Doxycycline 100 mg orally twice a day for 7 days

- Give EPT
- No sex until: 7 days after treatment/completion of 7 day course
- Follow-up: 3 months, test for reinfection
  - If pregnant: 4 weeks after completion of medication, for test of cure

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## Take Home

**Concerns near genital site, even with negative HPI  
Consider in early teen years**

**Chlamydia treatment now Doxy 100mg BID**

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## Case Study – Jenn

- 17 yo F presents to clinic c/o  
rash on legs.



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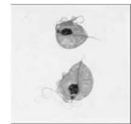
- Medications: No medications
- Allergies: NKDA
- Additional history: Denies PMH eczema, nodules in vaginal area. Denies new lotions, soaps, detergents, razors, hair removal. Denies new vaginal hygiene products. Denies dysuria, vaginal bleeding. Reports in vaginal feels "really sweaty or something" because always wet.
- Exam: diffuse patches on upper legs/inguinal area, hyperpigmented, with white, dried discharge on upper legs, no fissures, no pitting, no nodules, no vesicles, no erythema

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## Case Study – Jenn

### Labs

- Wet mount of vaginal swab
  - pH
  - Whiff test
  - Motile or non-motile trichomonas
- Urine GC/CT
  - Swab GC/CT okay too



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## Trichomoniasis

- Protozoa parasite: *Trichomonas vaginalis*
- Spread: vagina to vagina, vagina to penis
- Symptoms:
  - 70% no symptoms
  - Genital itching/burning, irritation, redness/soreness
  - Discomfort or burning while peeing
  - Women: increased, thin discharge with fishy smell (white/gray or yellow/green) strawberry cervix
  - Men: burning after ejaculation, penile discharge



@gorjusedoc

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## Trichomoniasis

### • Treatment:

#### Recommended Regimen for Trichomoniasis Among Women

Metronidazole 500 mg 2 times/day for 7 days

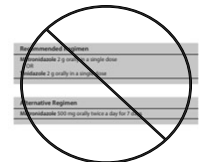
#### Recommended Regimen for Trichomoniasis Among Men

Metronidazole 2 g orally in a single dose

#### Alternative Regimen for Women and Men

Tinidazole 2 g orally in a single dose

- EPT reasonable but no clear data
- No sex until: completion of 7 day course, symptoms resolved
- Follow-up: 3 months after treatment, 1 in 5 reinfects



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### Take Home

**Upper leg rash legs can be STI rash  
Discharge can feel like dampness/wetness**

**F trichomonas treatment now Metronidazole x 7 days**

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### Case Study – Olive

- 16 yo F presents to clinic alone c/o recurrent sore throat. Mom is at work but available on the phones. Onset a few days ago, no other viral symptoms. Has been recurrent for almost a year. Multiple negative strep tests, and ENT referral is pending.



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### Cast Study - Olive

- PMH depression
- Medications: Zoloft
- NKDA
- Additional history: no fever, no increased drooling, no rash, + headache, + sexarche with at least one person but pt declines to discuss further, last urinary STI testing 6 months ago normal/negative
- Physical exam: tonsils 2+ bilaterally, mildly erythematous, no ulcerations, no exudate, no petechiae, no cobblestoning, nares without nasal drainage and not boggy, R NT tonsillar LAD

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### Case Study – Olive

#### Labs

- Rapid strep
- Throat culture
- Oropharyngeal GC/CT
- Urine GC/CT

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## Gonorrhea - Youth rates in United States

Women 15-24, 2022, per 100,000

Men 15-24, 2022, per 100,000





### Take Home

**Sore throat, especially recurrent, may be STI  
Oropharyngeal Gonorrhea requires test of cure  
Gonorrhea treatment now 500mg Ceftriaxone IM (1g  
if weight > 150 kg), may be two needles**

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## Case Study – Nevaeh

- 16 year old female presents to clinic in a wheelchair, she is accompanied by Mother. She is c/o right knee pain x2 -3 days, swollen, unprovoked, no known injury



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## Case Study – Nevaeh

- Medication: Albuterol prn wheezing, Hydrocortisone 2.5% ointment for eczema flare up, oral contraception for dysmenorrhea, Ibuprofen prn
- NKDA
- As you obtain a history.....PMH: Eczema, Mild Intermittent asthma, FH: Mom – Arthritis and HTN, MGM – HTN, T2DM
- Confidential: SA with 1 new male partner, sexarche 15< 3 lifetime partners, Hx of Chlamydia 8 months ago, negative sti screen 2 months ago.
- Exam: R knee swelling and limited ROM, no erythema/warmth, pustule on R wrist

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## Case Study – Olive

### Labs:

- ANA titer
- CBC
- ESR
- Urine GC/CT

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## Case Study – Olive

- Schedule F/U 2 days for appointment with sports medicine doctor
- Next day lab results: call Mom, she shares with you patient is in ER for fever
- 2<sup>nd</sup> day, returns to clinic for f/u, fever, HA she is ill appearing, sent to ER, and admitted for Meningitis

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## Gonorrhea

### • Treatment:

#### Recommended Regimen for Uncomplicated Gonococcal Infection of the Cervix, Urethra, or Rectum Among Adults and Adolescents

**Ceftriaxone** 500 mg\* IM in a single dose for persons weighing <150 kg  
if chlamydial infection has not been excluded, treat for chlamydia with doxycycline 100 mg orally 2 times/day for 7 days.  
\* For persons weighing ≥150 kg, 1 g ceftriaxone should be administered.

#### Recommended Regimen for Uncomplicated Gonococcal Infection of the Pharynx Among Adolescents and Adults

**Ceftriaxone** 500 mg\* IM in a single dose for persons weighing <150 kg  
\* For persons weighing ≥150 kg, 1 g ceftriaxone should be administered.



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## Case Study – Joe

- 19-year-old male presents to clinic for c/o mouth sores x 3-4 days, denies fever, no sore throat



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## Case Study - Joe

- Denies any other concerns, No PMH, No medications.
- College student 2<sup>nd</sup> year
- Social Hx: SA w/ male partners, use condoms most of the time, Sexarche: 17, 2 lifetime partners, no hx of STIs, ETOH and marijuana, 1-2/week
- Physical exam: 2-3 oral lesions oral mucosa, translucent, round, painless lesions, no exudate, no erythema noted

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# Syphilis

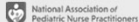
**Bacteria:** Treponema pallidum

**Spread:** can initiate infection wherever inoculation occurs, kissing, oral cavity, breast, genitals

**Symptoms:**

**Early:** primary and secondary syphilis (occur within weeks to months after initial infection)  
Chance sore, papule, generally painless appearing at site of inoculation  
Regional Lymphadenopathy-mild to moderate

**Latent Infection:** untreated during earlier stages of syphilis  
Latent is asymptomatic or can develop into major complications of infection

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# Syphilis

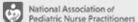
• Treatment:

**Recommended Regimen for Primary and Secondary Syphilis\* Among Adults**  
Benzathine penicillin G 2.4 million units IM in a single dose  
\* Recommendations for treating syphilis among persons with HIV infection and pregnant women are discussed elsewhere in this report (see Syphilis Among Persons with HIV Infection; Syphilis During Pregnancy).

**Recommended Regimens for Latent Syphilis\* Among Adults**  
Early Latent Syphilis: Benzathine penicillin G 2.4 million units IM in a single dose  
Late Latent Syphilis: Benzathine penicillin G 7.2 million units total, administered as 3 doses of 2.4 million units IM each at 1-week intervals  
\* Recommendations for treating syphilis in persons with HIV and pregnant women are discussed elsewhere in this report (see Syphilis in Persons with HIV Infection and Syphilis During Pregnancy).

**Recommended Regimen for Adults\***  
Benzathine penicillin G 2.4 million units IM in a single dose  
\* Recommendations for treating syphilis in persons with HIV infection and pregnant women are discussed elsewhere in this report (see Syphilis Among Persons with HIV Infection and Syphilis During Pregnancy).

**Recommended Regimens for Adults\***  
Early Latent Syphilis  
Benzathine penicillin G 2.4 million units IM in a single dose  
Late Latent Syphilis or Latent Syphilis of Unknown Duration  
Benzathine penicillin G 7.2 million units total, administered as 3 doses of 2.4 million units IM each at 1-week intervals  
\* Recommendations for treating syphilis in persons with HIV infection and pregnant women are discussed elsewhere in this report (see Syphilis in Persons with HIV Infection and Syphilis During Pregnancy).

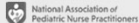
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