Saturday CME Breakfast

*Trends in Sexually Transmitted Infections*

C. Junda Woo, MD, MPH
Medical Director
San Antonio Metropolitan Health District
San Antonio, Texas

**Educational Objectives**
By the end of this activity, the participant should be better able to:

1. Discuss the epidemiology of gonorrhea, chlamydia, HIV and syphilis nationally and in Texas.
2. Describe at least two practice changes recommended in the 2015 CDC STD Treatment Guidelines.
3. Discuss reverse sequence serology testing for syphilis.
4. Know CDC recommendations about PrEP for HIV.
5. Discuss the legal basis for expedited partner therapy for chlamydia and gonorrhea.

**Speaker Disclosure**
Dr. Woo has disclosed that she has no actual or potential conflict of interest in relation to this topic.
Trends in Sexually Transmitted Infections (STIs)

C. Junda Woo, MD, MPH, Medical Director
San Antonio Metropolitan Health District
June 3, 2017

What we will cover:
- Epidemiology of gonorrhea, chlamydia, syphilis and HIV
- Practice changes in 2015 CDC STD guidelines
- Reverse sequence serology testing for syphilis
- Expedited partner therapy for chlamydia and gonorrhea
- CDC recommendations about “PrEP” for HIV-negative people

Knowledge check: Which of the following is false?
1. Reportable STIs reached record highs in 2015
2. The CDC ties this trend to cuts in public health funding
3. Syphilis rates are being driven by men who have sex with men
4. STI rates are increasing faster in Texas than nationally

Most Recent U.S. Data
- Chlamydia rose 6% between 2014 and 2015
  - Two-thirds were 15- to-24 years old
  - 1.5 million cases (rate: 479 per 100,000)
- Gonorrhea rose 13%
  - Majority were men who have sex with men
  - 395,216 cases (rate: 124 per 100,000)
  - 1° and 2° syphilis increased 19%
  - 82% were men who have sex with men
  - 23,872 cases (rate: 8 per 100,000)

Most Recent Texas Data
- Chlamydia rose 0.6% between 2014 and 2015
  - Two-thirds were 15- to-24 years old
  - 133,850 cases (rate: 487 per 100,000)
- Gonorrhea rose 4%
  - Majority were men who have sex with men
  - 37,539 cases (rate: 137 per 100,000)
  - 1° and 2° syphilis increased 3%
  - Mostly men who have sex with men
  - 1,708 cases (rate: 6.2 per 100,000)

http://dshs.texas.gov/hivstd/reports/

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HIV: New Diagnoses, 2015
- U.S. rate 14.7 per 100,000, Texas 20.1 per 100,000 (CDC)
- Increase among 20- to 24-year-olds in Texas:

Racial and Ethnic Disparity

CDC STD Treatment Guidelines:
Testing
- Annual testing for chlamydia in women up to age 25
  - Even if no symptoms!
- Only about half of insured, eligible women under 25 were tested for chlamydia in 2015 [Healthcare Effectiveness Data and Information Set (HEDIS)]
  - We may be over testing women older than 25

CDC STD Treatment Guidelines:
Testing
- Test for chlamydia, gonorrhea, HIV and syphilis annually in men who have sex with men
  - Extragenital swabs may be self-collected
  - Vaginal swabs preferred in most women
- Retest 3 months after treatment for chlamydia, gonorrhea and trichomonas

Audience Poll: Yes / No
Are you recommending repeat chlamydia and gonorrhea testing at 3 months?

1. Yes
2. No
**Audience Poll: Yes / No**

Are you performing extragenital testing in your practice?

1. Yes
2. No

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**CDC STD Treatment Guidelines: Testing**

- HIV test routinely:
  - At least once between ages 13 and 64
  - When initiating tuberculosis treatment
  - If testing for other STI
  - Know the window period of your test
- Herpes: Serology *not* usually recommended

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**Audience Poll: How do you test for syphilis?**

1. Enzyme immunoassay, and reflex RPR
2. RPR, and reflex TPPA or FTA
3. Neither
4. Unsure
5. N/A; I don’t test for syphilis

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**CDC STD Treatment Guidelines: Testing**

- “Reverse sequence serology screening” is spreading
- CDC says either sequence okay
- Reverse sequence easier for laboratory
- Treponemal tests: immunoassays, TPPA, FTA
- Non-treponemal: RPR, VDRL

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Free CDC-funded posters: aradford@uw.edu


(CDC Public Health Image Library, phil.cdc.gov)
### Decoding Syphilis Test Results

#### RPR/VDRL negative, treponeme positive

1. Early primary syphilis
   - Latency period of 90 days
   - RPR can take 2 weeks after primary lesion to turn positive
     (You can have a syphilis ulcer and a negative RPR.)
2. Treated syphilis

#### Treponemal test (EIA, FTA or TPPA)

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<th>Non-treponemal (RPR / VDRL)</th>
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<tr>
<td>+</td>
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#### Biological false positive

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#### RPR/VDRL negative, treponeme positive

3. Secondary syphilis with prozone in RPR test
   - 1%-2% of secondary syphilis patients
   - More common if HIV+
4. Late untreated syphilis
   - Up to 30% of untreated patients
5. False negative RPR/VDRL (< 1%)
6. False positive FTA/EIA (< 1%)
Knowledge Check: 
Most sensitive test for trichomoniasis?

1. Culture
2. Wet mount microscopy
3. Nucleic acid amplification test
4. 10-minute point-of-care antigen detection test

CDC STD Treatment Guidelines: 
Treatments

- Gonorrhea and true ceftriaxone allergy
  - Gemifloxacin 320 mg. po and azithromycin 2 gm.
  - Doxycycline out entirely
  - Increasing resistance to azithromycin too…
- Trichomoniasis and HIV+
  - Metronidazole 500 mg po bid x 7 days


CDC STD Treatment Guidelines: 
Treatments

- Pregnant with chlamydia
  - Azithromycin 1 gm. po once is first-line
  - Amoxicillin now “alternate”
- Pregnant with latent syphilis
  - No grace period—restart dose series if >7 days
  - Penicillin G Benzathine 2.4 mu IM weekly x 3 weeks


CDC STD Treatment Guidelines: 
Treatments

- Genital warts
  - Podophyllin resin 10%-25% is out
  - Podophyllotoxin 0.5% solution/gel remains first-line
  - Sinecatechins (patient-applied green tea extract in a 15% ointment)

Mechanism | Immune enhancement | Cell death | Unclear
---|---|---|---
How often | 1x/week | Every night | 3x/day for 3 days, then 4 days off | 3x/day
Max. use | 16 weeks | 8 weeks | 4 weeks | 16 weeks
Wash off? | Yes | No | No | No
Pregnancy | Avoid | No | No | No
Cost | $61+ (12 pkts) | $1,067 (28 pkts) | $106 - $223/bottle | $1,062/tube


Expedited Partner Therapy (EPT)

- No clinician visit
- 20% drop in chlamydia prevalence at follow-up
- 50% decline in gonorrhea prevalence at follow-up
- CDC: “Routinely offer EPT to heterosexuals with chlamydia or gonorrhea if you cannot be sure that all partners from last 60 days will be treated”
- Legal in Texas since 2009

**Expedited Partner Therapy (EPT)**
- Heterosexual
- No symptoms
- Non-pregnant
- No known drug allergies
- Cefixime + azithromycin for gonorrhea
- CDC: Benefits of treating partner outweigh cefixime risk
- Implementation info: [http://dshs.texas.gov/hivstd/ep/default.shtm](http://dshs.texas.gov/hivstd/ep/default.shtm)

**CDC STD Treatment Guidelines: Men who have sex with men**
- Epididymitis treatment if insertive anal intercourse
  - Ceftriaxone 250 mg IM plus an oral antibiotic x 10 days
  - Usually, oral antibiotic is doxycycline 100 mg bid
  - But if insertive anal sex, use a quinolone instead:
    - Levofloxacin 400 daily or ofloxacin 200 mg bid
- Annual STI screen with extragenital testing if indicated
- Vaccines: Hepatitis A and B vaccines; HPV up to age 26

**Audience Poll: Yes / No**
*Have you heard of PrEP for HIV-negative patients?*
1. Yes
2. No

**Audience Poll: Yes / No**
*Do you prescribe PrEP?*
1. Yes
2. No
PrEP: Candidates

- Discordant couples (one partner HIV-positive)
- Man who has sex with man, or bisexual male, and:
  - Recent STI, high # sexual partners, or inconsistent/no condom use in a non-monogamous relationship
- Heterosexual with high-risk partners
  - Injection drug use, bisexual male, high prevalence community
- Commercial sex work
- Injection drug use and shares equipment

PrEP: Identifying Candidates

- History of STIs?
- “Do you have sex with men, women or both?”
- “Is there anything you do to protect yourself from STIs?”
  - Condoms (never/sometimes/always)
  - Mutual monogamy
  - Serosorting
  - Oral only
  - “Does your partner have other partners?”
- Number of partners in last 3 months

PrEP: Logistics

1st visit:
- Document HIV-negative test within past week
- Assess for acute HIV
- Labs: creatinine clearance > 60, Hep B panel if unvaccinated
- Counseling: adherence, condoms
- Emtricitabine + tenofovir: Both nucleoside/nucleotide reverse transcriptase inhibitors (NRTIs)—poor regimen if HIV+
- Possible stomach upset, headache—wears off in 1 month
- Free or low-cost via manufacturer

PrEP: Logistics

90-day supply each visit
- Every 3 months: HIV test & if female, pregnancy test
- Every 6 months: renal function and STI tests
  - 1 in 200 experience reversible bump in creatinine
- Every visit: assess adherence & side effects

Discontinue PrEP if...

- Changed life situation: lower HIV risk
- Positive HIV test or acute HIV symptoms
- Non-adherence
- Renal disease or other medication intolerance

What about drug resistance?

- Usually a patient with early HIV that was undetectable on initial screening test
- 25 HIV cases prevented for every resistant case caused
- Many non-NRTI treatment options remain

What about intermittent use?

- Emerging evidence that PrEP may be effective if taken only before and after sex
- At least two hours beforehand
- Awaiting more data
- Not recommended by CDC at this time

Won’t this encourage unsafe sex?

- Contradicted by the biggest studies
- PrEP is for high risk individuals already engaging in unsafe sex
- You are counseling the person every three months
- 92% isn't 100% so stress condoms to prevent all STIs
- Syphilis transmissible through oral sex

nPEP

- Not recommended if partner HIV negative or unknown
- But may consider if HIV risk factors
- Start within 72°, treat 28 days
- CDC, April 2016: emtricitabine/tenofovir + raltegravir
- HIV test at baseline, 4-6 weeks, 3 mos., 6 mos.
- Discuss PrEP!

Resources

- National HIV/AIDS Clinicians’ Consultation Center (web or phone): http://nccc.ucsf.edu/
- National STD Training Curriculum (free CME): https://www.std.uw.edu/
- LGBT health: LGBTHealthEducation.org (free CME)
  https://www.cdc.gov/std/treatment/sexualhistory.pdf


Thank you!

Junda Woo
Medical Director
210-207-8896 (office)
210-725-3100 (cell)
The following medications were discussed in this presentation. The table below lists the generic and trade name(s) of these medications.

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Trade Name</th>
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<tr>
<td>Amoxicillin</td>
<td>Amoxil, Augmentin, Moxatag</td>
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<td>Zithromax, Zmax</td>
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<td>Cefixime</td>
<td>Suprax</td>
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<td>Ceftriaxone</td>
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<td>Doxycycline</td>
<td>Actidate, Doryx, Monodox, Vibramycin</td>
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<td>Emtricitabine/Tenofovir (PrEP)</td>
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