

# Updates in STI Detection and Treatment

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#### **Continuing Education Disclosure**

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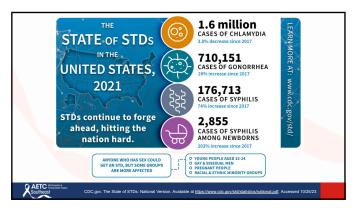
# **Objectives**

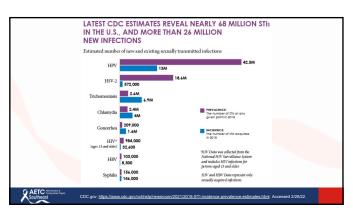
At the end of this session, participants will be able to:

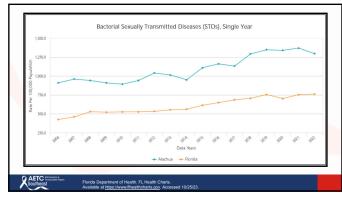
- Recognize, diagnose, and choose appropriate treatment for common bacterial sexually transmitted infections (STIs)
- Share barriers to, facilitators of, and lessons learned from the field regarding improvements in STI screening, testing and treatment

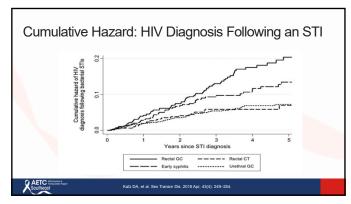


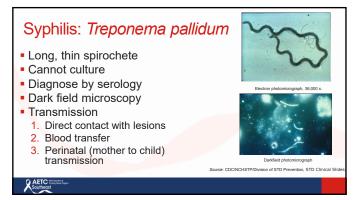


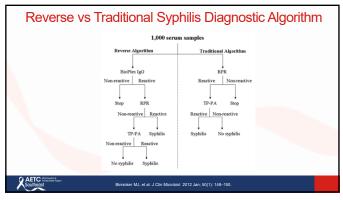






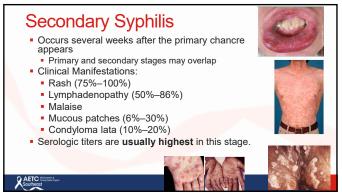


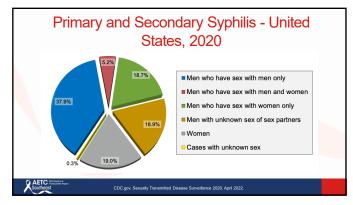




# Primary Syphilis Chancre At site of exposure, can have multiple Progresses from macule to papule to ulcer Typically painless, indurated, and has a clean base Highly infectious Heals spontaneously within 3 to 6 weeks Lymphadenopathy: classically rubbery, painless, bilateral Syphilis blood testing may be negative in primary syphilis

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#### Case

- Pam is a 62 year old woman who presents for evaluation due to 40 pound weight loss in the last 6 months.
- Multiple male sex partners with no condom use
- New onset hearing loss in both ears

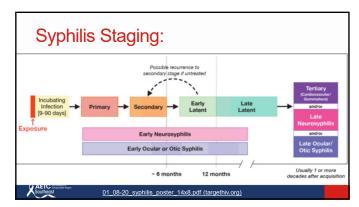
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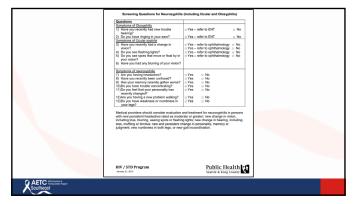
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## Case Follow-up

- Upper endoscopy identified candida esophagitis
- HIV Ag/Ab test positive with viral load 2 million and CD4 63
- Syphilis antibody strong positive, RPR 1:1 (never previously known to have syphilis)
- CSF WBC 1 RBC 1 protein 23 glucose 68 VDRL non reactive
- Diagnosed with HIV and otic syphilis
- Treated with IV penicillin G x 14 days with resolution of hearing loss
- Started on antiretroviral medications and now with undetectable HIV viral load and CD4 350

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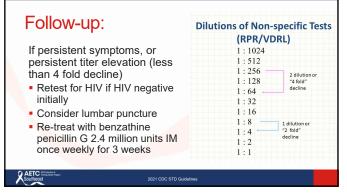




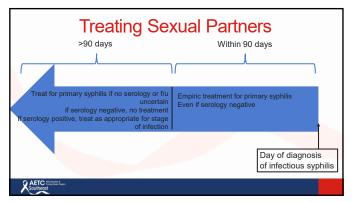
Syphilis Treatment:				
		Recommended Rx	Dose/Route	Alternatives
٠	Primary, secondary, or early latent <1 year	benzathine penicillin G	2.4 million units IM in a single dose	doxycline 100mg 2x/day for 14 days OR tetracycline 500mg orally 4x/day for 14 days
	Latent >1 year, latent of unknown duration	benzathine penicillin G	2.4 million units IM in 3 doses each at 1 week intervals (7.2 million units total)	doxycline 100mg 2x/day for 28 days OR tetracycline 500mg orally 4x/day for 28 days
	Pregnancy	See complete CDC guidelines.		
	Neurosyphilis	aqueous crystalline penicillin G	18-24 million units per day, administered as 3-4 million units IV every 4 hours or continuous infusion, for 10-14 days	procaine penicillin G 2.4 MU IM 1x daily PLUS probenecid 500 mg orally 4x/day, both for 10-14 days
٠	Congenital syphilis	See complete CDC guidelines.		
	Children: Primary, secondary, or early latent <1year	benzathine penicillin G	50,000 units/kg IM in a single dose (maximum 2.4 million units)	
	Children: Latent >1 year, or unknown duration Latent	benzathine penicillin G	50,000 units/kg IM for 3 doses at 1 week intervals (maximum total 7.2 million units)	

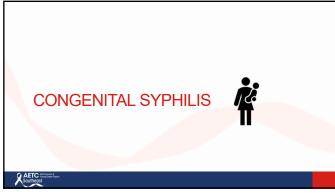
#### Syphilis Follow-up **HIV Negative HIV Positive** · Primary and secondary syphilis Primary and secondary syphilis Clinical and serologic Clinical and serologic evaluation at 3, 6, 9, 12 and evaluation at 6 & 12 months after treatment 24 months after treatment Latent Syphilis Latent syphilis Clinical and serologic Clinical and serologic evaluation at 6, 12, and 24 evaluation at 6, 12, 18, and 24 months months

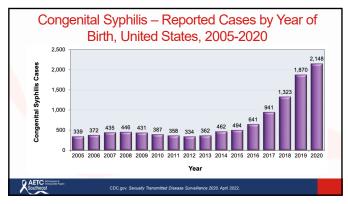
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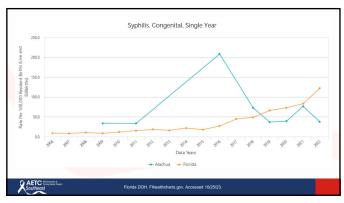


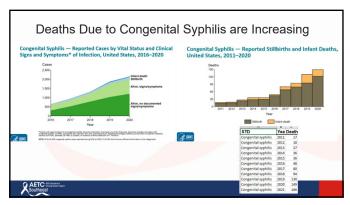
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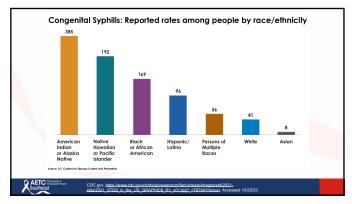














# Vertical Transmission of Syphilis

- Risk
  - Can occur at any stage of maternal infection
  - Highest risk: primary or secondary syphilis during pregnancy
- Provention
  - Early detection of unrecognized syphilis in the mother
- Detection of new infections throughout pregnancy
- Maternal treatment at least 4 weeks prior to delivery



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#### Case

- 36 yo woman presents at 18w6d gestation for her initial visit to OBGYN for care for pregnancy. She was referred to the high risk OB clinic due to chronic hypertension and obesity. This is her first pregnancy. She reports a prior history of gonorrhea.
- Patient with no symptoms other than lack of menses and weight gain
- Exam with no abnormal physical findings
- Baseline labs are obtained
  - HIV negative
  - Urogenital gonorrhea and chlamydia negative

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# Syphilis Testing Component Between Component Between Component Co

### What are possible explanations for this result?

- 1. Syphilis, s/p effective treatment
- 2. Syphilis, s/p inadequate treatment
- 3. False positive
- 4. Syphilis, never treated
- 5. All of the above

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Treatment Recommendations for Syphilis in Pregnant Patients by Syphilis Stage		
Stage of Infection	CDC 2021 Recommended Treatment Regimen	
Incubating Infection Primary Secondary Early Latent	Benzathine penicillin G 2.4 million units IM x 1  No alternatives exist for <u>pregnant patients</u> with documented penicillin allergy	
Late Latent or Latent of Unknown Duration	Benzathine penicillin G 2.4 million units IM every 7 days x 3 weeks (7.2 million units total)*  No alternatives exist for <u>pregnant patients</u> with documented penicillin allergy	
Neurosyphilis or Ocular/Otic Syphilis	Aqueous crystalline penicillin G 18-24 million units/day, administered as 3-4 million units IV every 4 hours, or by Cl for 10-14 days  - Alternative regimen  Procaine penicillin G 2.4 mu IM daily for 10-14 days PLUS Probe	

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# Treatment of Syphilis in Pregnancy

- Some experts recommend an extra dose of penicillin G benzathine 1 week after first dose in event of primary, secondary or early latent disease
  - Evidence of efficacy
  - Pharmacokinetic data of altered penicillin levels in pregnant people
  - Has not been evaluated in randomized controlled trials
- KEY POINT: if asymptomatic patient with suspected latent syphilis was previously treated, but receipt of appropriate regimen cannot be verified, provide full 3-dose penicillin regimen recommended for late latent syphilis

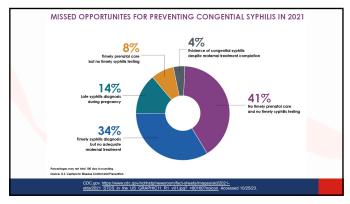
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# Syphilis in Pregnancy

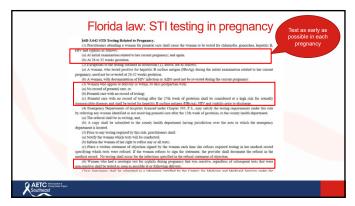
- Typically treat in outpatient setting, with counseling about potential side effects and when to contact provider
  - Jarisch-Herxheimer reaction
    - Preterm labor, fetal distress
  - Seek OB attention immediately if develop fever, contractions or decreased fetal movement after treatment
- Sonographic fetal evaluation should be done if syphilis is diagnosed in 2<sup>nd</sup> half of pregnancy (don't delay treatment)

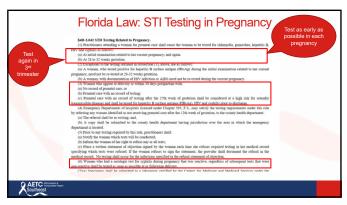
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# Syphilis Treatment: Current Challenge

- National shortage of Bicillin LA which is treatment of choice for syphilis
- In absence of pregnancy, treat with doxycycline
  - Primary, secondary or early latent syphilis
    - Doxycycline 100 mg by mouth twice daily for 14 days
  - Late latent syphilis or syphilis of unknown duration
    - Doxycycline 100 mg by mouth twice daily for 28 days
- People who are pregnant, breastfeeding or allergic to doxycycline can get Bicillin LA from health department

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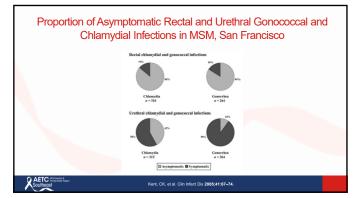
GONORRHEA & CHLAMYDIA

#### Case

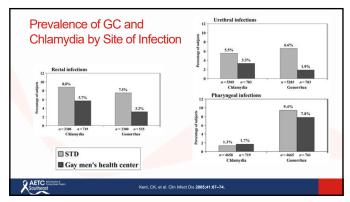
- Mr. J is a 32 yo man who comes for his annual visit
- You obtain a sexual health history
  - Partners: male
  - Practices: oral sex and anal receptive and insertive sex
  - Partners: 4 since his last visit with an associated urogenital STI screen
  - HIV/STI Prevention: not on PrEP, inconsistently uses condoms for anal sex, no condom use for oral sex
  - Prior STI: He has had one episode of urogenital gonorrhea at age 25
- He is feeling well

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#### Mr. J:

- Sexual health history suggests risks for syphilis, gonorrhea and chlamydia
- Recommended mucosal sites to be tested for gonorrhea and chlamydia: throat, rectum and urogenital
- Samples collected
- Client-centered STI prevention counselling performed, condoms offered, discussed HIV pre-exposure prophylaxis (PrEP)
- Test results returned: pharyngeal swab positive for gonorrhea



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# Pharyngeal Gonorrhea

- < 10% diagnosed are symptomatic</p>
- Most common in MSM
- Most ceftriaxone treatment failures have involved pharyngeal gonorrhea

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#### **Uncomplicated Gonorrhea: Treatment**

- Ceftriaxone (weight based)
  - < 300 pounds give 500 mg IM x 1</p>
  - >300 pounds give 1 g IM x 1
- Treat for chlamydia if infection has not been excluded
- Alternative regimens for urogenital or rectal gonorrhea
  - Gentamicin 240 mg IM + 2g azithromycin orally
  - Cefixime 800 mg PO x 1
- There are no reliable treatment alternatives for pharyngeal gonorrhea



CDC.gov. 2021 STI Guidelines Available at https://www.cdc.gov/mmwr/volumes/69/wr/

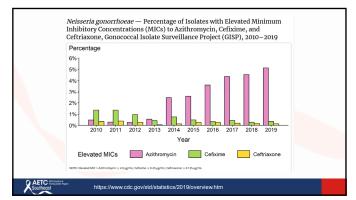
# Follow-up testing:

- Pharyngeal gonorrhea: <u>test-of-cure</u> is recommended with culture or NAAT 7-14 days after initial treatment
  - If NAAT is positive, perform confirmatory culture
  - All positive cultures for test of cure should undergo antimicrobial susceptibility
- Due to high reinfection rates (7-12%) among persons with previously treated gonorrhea, persons treated for gonorrhea should be retested 3 months after treatment

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https://www.cdc.gov/mmwr/volumes/69/wr/mm6950a6.htm?s\_cid=mm6950a6\_w

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#### Case

- Ms. M is a 23 yo woman presenting for her 6 month follow-up of well controlled HIV. She is taking Biktarvy every day with no medication related side effects.
- She tested negative for STIs 6 months ago. Today, she states she would like to be tested for STIs "to be on the safe side."
- What will you do?
- A. Tell her she doesn't have any STIs as if she did, she would have symptoms
- B. Perform a sexual health history and offer STI testing based on this

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#### Ms. M:

- Sexual Health History
  - Partners: two male, their sexual health unknown to her
  - Practices: Vaginal receptive sex only
  - Prevention of STIs: Not consistently using condoms
  - Past history of STIs: None
- Prevention of Pregnancy: Nexplanon implant placed last year
- The following tests are obtained based on SHH: self-collected vaginal swab for GC/CL NAAT, syphilis cascade
- NAAT is positive for Chlamydia



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#### **Treatment**

- Prevents adverse reproductive health outcomes and further sexual transmission
- Preferred regimen: Doxycycline 100 mg by mouth twice daily for 7 days

Alternative regimens:
Azithromycin 1 g by mouth in a single dose (preferred in pregnancy)
or

Levofloxacin 500 mg by mouth daily for 7 days

 Follow-up: Retest approximately three months after treatment; schedule this follow-up appointment at the time of initial treatment



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# Follow-up After Treatment

- Non-pregnant people should be rescreened 3 months after treatment
- Pregnant people should undergo test of cure to document chlamydial eradication by NAAT 4 weeks after treatment



# Chlamydia & Gonorrhea: Partner Management

- Sex partners should be evaluated, tested and treated if they had sexual contact with the patient during the 60 days preceding the patient's onset of symptoms or diagnosis of chlamydia
- The most recent sex partner should be evaluated and treated even if last sexual contact was > 60 days before symptom onset or diagnosis

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#### **Expedited Partner Therapy (EPT)**

- Clinical practice of treating sex partners of persons with diagnosed chlamydia or gonorrhea who are unable or unlikely to seek timely treatment
- Medical providers should offer EPT when the provider cannot ensure that all of a patient's sex partners from prior 60 days will seek treatment



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## **Trichomonas Guideline Changes**

https://www.cdc.gov/std/ept

- Metronidazole 500 mg BID x 7 days preferred over single dose
- Alcohol abstention no longer recommended by the CDC

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#### AETC Program National Centers and HIV Curriculum

- National Coordinating Resource Center serves as the central web based repository for AETC Program training and capacity building resources; its website includes a free virtual library with training and technical assistance materials, a program directory, and a calendar of trainings and other events. Learn more: <a href="https://aidsetc.org/">https://aidsetc.org/</a>
   National Clinical Consultation Center provides free, peer-to-peer, expert advice for health professionals on HIV prevention, care, and treatment and related topics. Learn more: <a href="https://nccc/ucsf.edu">https://nccc/ucsf.edu</a>
- National HIV Curriculum provides ongoing, up -to-date HIV training and information for health professionals through a free, web –based curriculum; also provides free CME credits, CNE contact hours, CE contact hours, and maintenance of certification credits. Learn more: <a href="https://www.hiv.uw.edu">www.hiv.uw.edu</a>

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