UNMC HIV ECHO Session 3

Welcome!

The University of Nebraska Medical Center's Specialty Care Center welcomes you to our third HIV ECHO session - “STI’s“

Today's Subject Matter Experts are Dr. Sara Hurtado Bares MD, and Heather Saarela, BSPH

HIV ECHO Facilitator: Heather Saarela, BSPH

Sessions are held the first Thursday of every month except January/July 2025

Disclosures

- Our HIV ECHO Project is made possible through our grant funding from ViiV Healthcare and is a sub-project of our IM-CAPABLE project.

UNMC HIV ECHO Session 3 Agenda

- Dr. Sara Bares will kick the session off with a didactic presentation over all STI business
- Heather Saarela will be presenting a few STI treatment & diagnosis case study questions for Dr. Bares
- Announcements to be shared at the end

Housekeeping Reminders:

We love discussion!

Please stay muted unless you are speaking.

We love to see your face!

Sessions will be recorded with links available later.

End of session surveys will be available.

Let’s Talk About Sexually Transmitted Infections

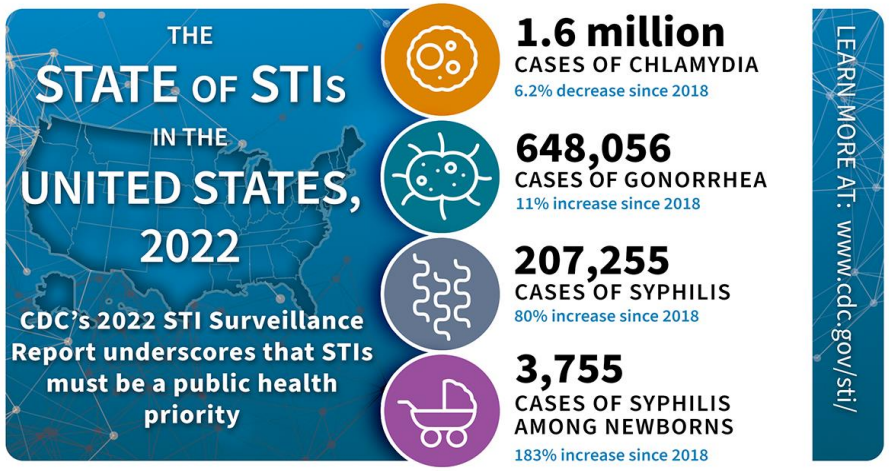
Sara Hurtado Bares, MD, FIDSA
Division of Infectious Diseases

University of Nebraska Medical Center

The New York Times

Sexually Transmitted Disease Cases Rise to Record High, C.D.C. Says

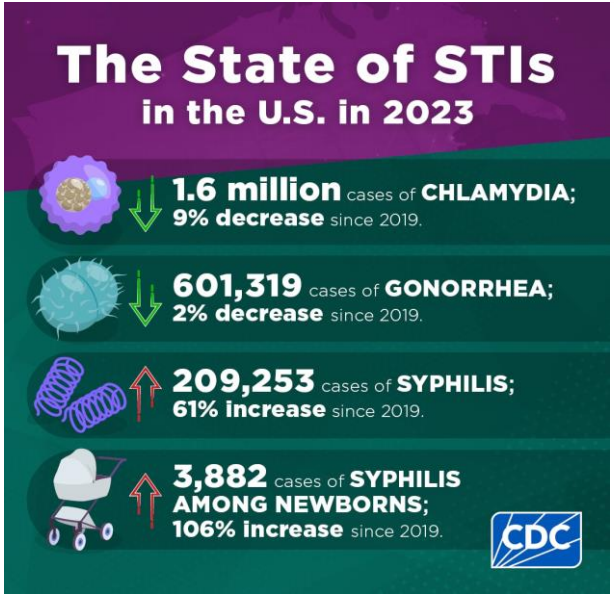
Cases of syphilis, gonorrhea and chlamydia in the United States jumped last year, and an alarming number of newborn deaths were linked to congenital syphilis.



CNN health Food Fitness Wellness Parenting Vital Signs • LIVE TV Edition

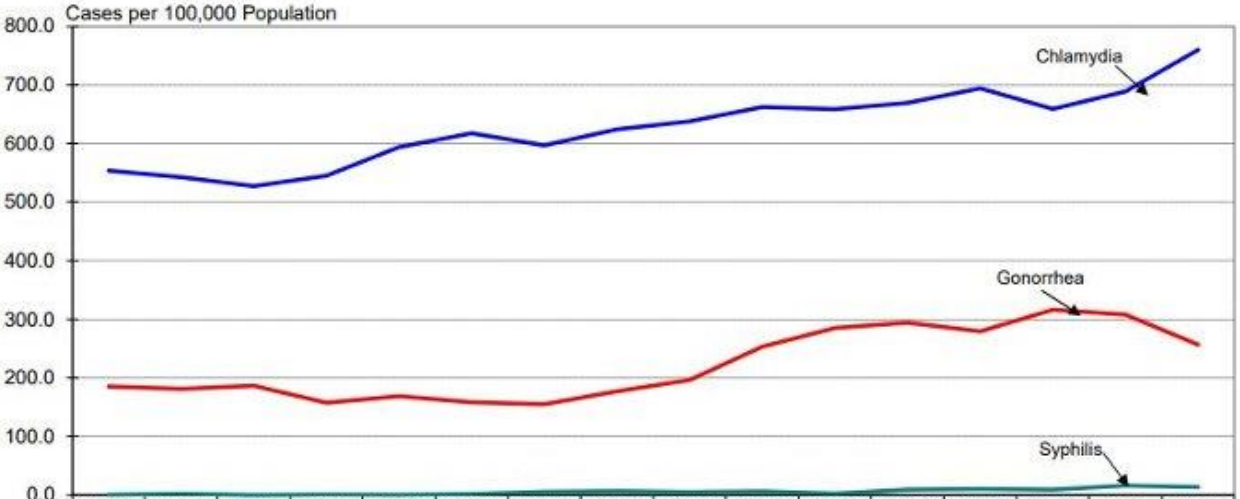
Three STDs reach all-time highs in the US, new CDC report says

By Jacqueline Howard, CNN
Updated 5:18 PM ET, Tue October 8, 2019



Sexually Transmitted Disease Rates*

Douglas County, NE
2007-2022

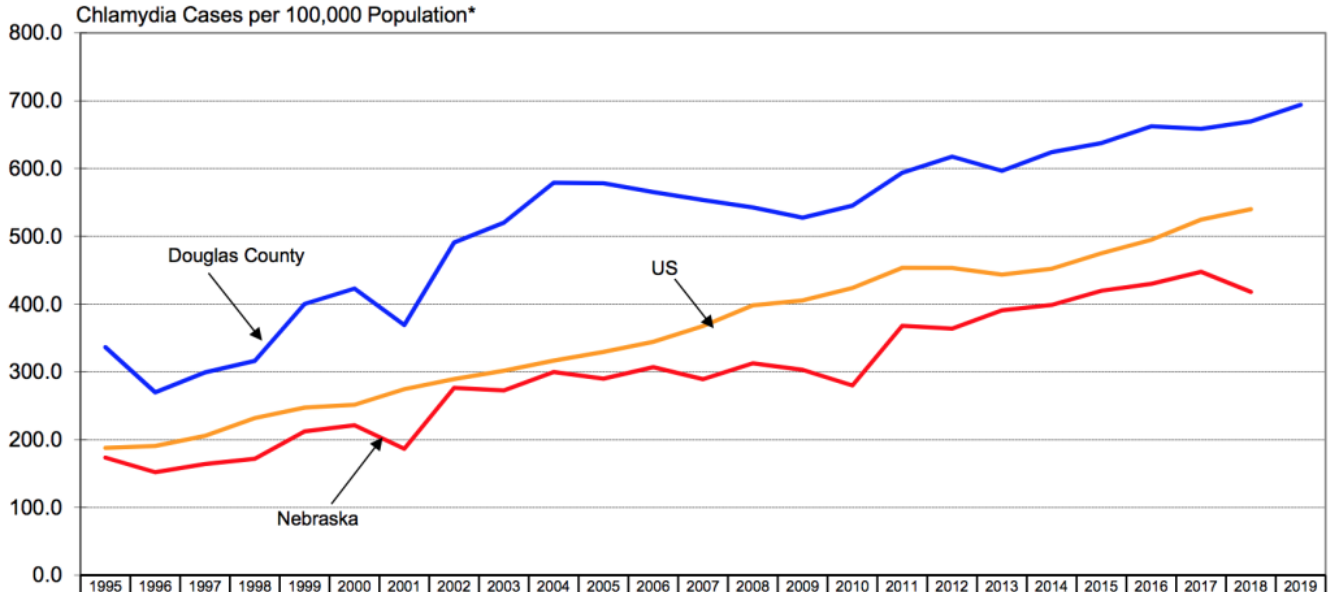


	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Chlamydia	553.5	542.6	527.5	545.1	593.7	617.6	596.5	624.0	637.6	662.2	658.5	669.5	694.0	658.9	688.54	760.2
Gonorrhea**	185.1	181.2	186.6	157.6	168.6	158.3	155.0	176.9	196.5	253.3	285.1	294.4	279.5	316.2	308.0	256.6
Syphilis***	0.4	2.0	0.2	0.8	0.4	1.5	5.6	6.8	5.1	6.1	2.3	9.2	10.3	9.2	16.6	13.5

* 2005-2009 populations used for rate calculations are Projection Estimates for Douglas County from Woods & Poole Economics, 2010 which uses the US Decennial Census, , and 2011-2020 which use the US Census Bureau Population Estimates Program. Population estimates for 2022 are not available.
** Includes Gonorrhea and Resistant Gonorrhea
*** Primary and Secondary Syphilis.
Source: DCHD Sexually Transmitted Disease Surveillance
Based on Date of Report

Douglas County Health Department
04/05/2023

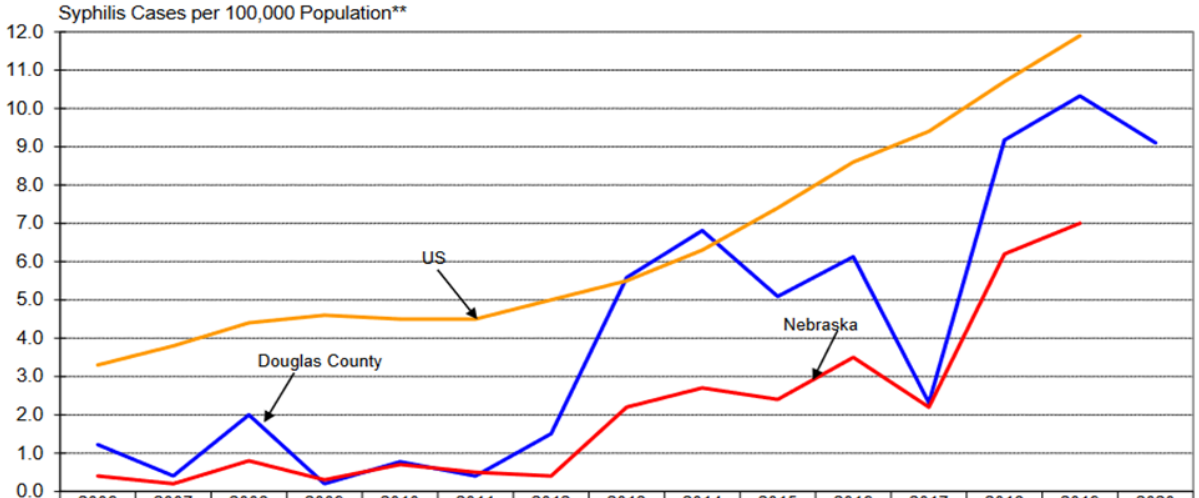
Chlamydia Rates*
Douglas County, Nebraska, and US
1995-2019



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Douglas County	336.3	269.7	299.1	316.1	400.2	422.8	369.0	490.8	520.1	578.9	578.1	565.2	553.5	542.6	527.5	545.1	593.7	617.6	596.5	624.0	637.6	662.2	658.5	669.5	694.0
Nebraska**	173.4	152.0	164.0	171.7	212.1	221.3	186.4	276.4	272.5	299.8	289.9	307.0	289.2	312.5	303.0	280.0	368.0	363.7	390.7	398.6	419.6	429.8	447.6	418.0	NA
US**	187.8	190.6	205.5	231.8	247.2	251.4	274.5	289.4	301.7	316.5	329.4	344.3	367.5	398.1	405.3	423.6	453.4	453.3	443.5	452.2	475.0	494.7	524.6	539.9	NA

Syphilis* Rates**

Douglas County, Nebraska, and US
2006-2020



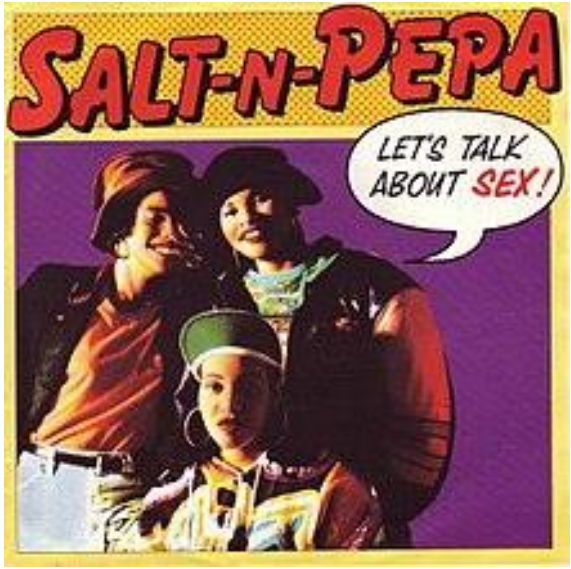
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Douglas County	1.2	0.4	2.0	0.2	0.8	0.4	1.5	5.6	6.8	5.1	6.1	2.3	9.2	10.3	9.1
Nebraska***	0.4	0.2	0.8	0.3	0.7	0.5	0.4	2.2	2.7	2.4	3.5	2.2	6.2	7.0	NA
US***	3.3	3.8	4.4	4.6	4.5	4.5	5.0	5.5	6.3	7.4	8.6	9.4	10.7	11.9	NA

* Primary and Secondary Syphilis
** 2006-2009 Populations used for rate calculations are Projection Estimates for Douglas County from Woods & Poole Economics, 2010 uses the US Decennial Census, 2011-2020 use the US Census Bureau Population Estimates Program
NA - The data was not available at this time
Based on Date of Report
Source: DCHD Sexually Transmitted Disease Surveillance
*** Source: CDC Sexually Transmitted Disease Surveillance

Douglas County Health Department
07/25/2021

Taking a Comprehensive Sexual History

- Create a comfortable environment
  - Private space for discussions
  - Offer free condoms
  - Sit down with patient
- Practice makes perfect
  - Figure out what works for you and hone your language over time
- Start with a preamble emphasizing sexual health:
  - “I’m going to spend a few minutes talking about your sexual health because your sexual health is an important part of your general health.”
- Ask open-ended questions:
  - “Tell me about your sex life.”
  - “What are your biggest concerns about your sexual health?”
- Let the patient lead, and probe with questions
  - “Tell me what you do to protect yourself against HIV or STIs.”



https://febrilepodcast.com/episode-5-adventures-from-sti-clinic/

The Five Ps

- **Partners:**
  - Try things like:
    - “Tell me about your sexual partners.”
    - “What are the genders of your sexual partners?”
  - Avoid:
    - “Do you have sex with men, women, or both?” → this can be gendering and lead you to miss things
- **Practices:**
  - “To understand your risk of STIs, I need to understand what kinds of sex you have”
  - Reflect the language patients use
    - Avoid overly complex language
    - Okay to use the patient’s language, even if it’s not language you typically use
  - Use specific questions that spell out the practices:
    - “Do you have penis in vagina sex? Penis in butt sex?”
    - “Are you top, bottom or both/versatile?”
    - Ask about other types of sexual behavior – oral sex, receptive anal sex
- **Past history of STIs**
- **Planning or prevention of pregnancy**
- **Protections from STIs:**
  - Condoms, PrEP, PEP
  - Vaccination
  - Partner services

https://febrilepodcast.com/episode-5-adventures-from-sti-clinic/

Asymptomatic patient interested in STI testing

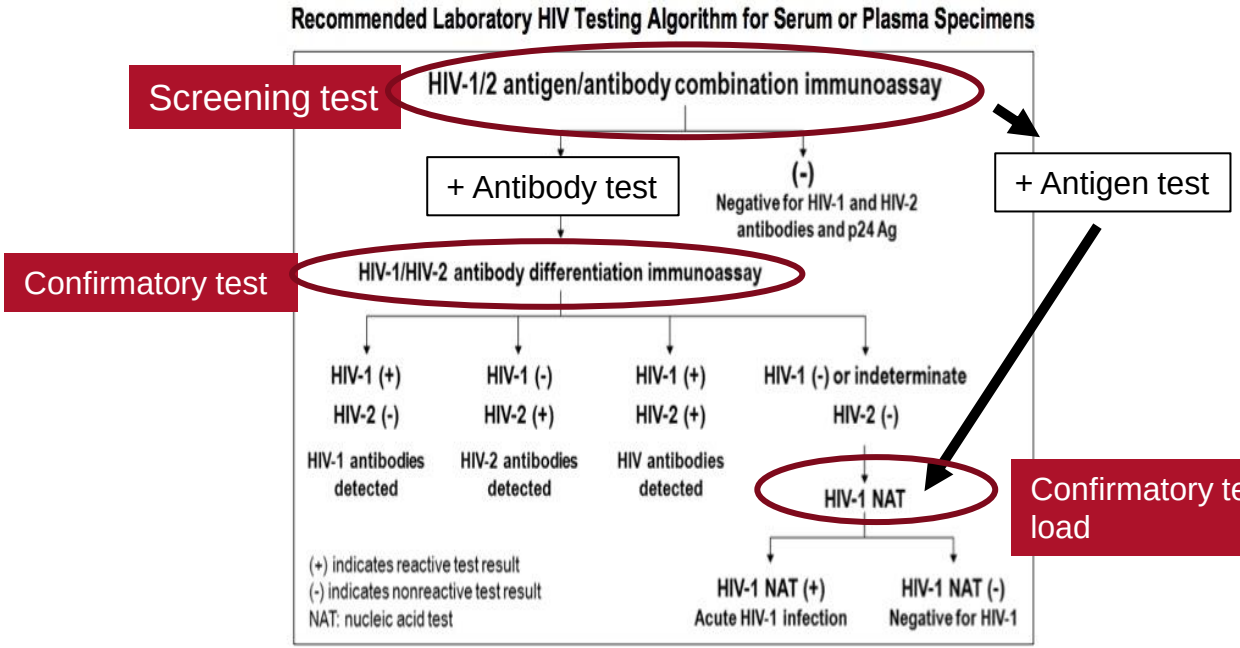
- Use your history to inform what STI screening tests you will offer

	HIV	Chlamydia/ Gonorrhea	Syphilis	Hepatitis B	Hepatitis C
Everyone ages 13-64	once				
Sexually active women <25		yearly			
Women >25 with risk factors for STI		yearly			
Pregnant women	1st trimester; 3rd if risk	if risk factors	1st and 3rd trimesters	once	once
Sexually active gay, bisexual and other men who have sex with men	at least yearly	at least yearly	at least yearly		at least yearly

https://www.cdc.gov/sti-awareness/talktesttreat/providers.html

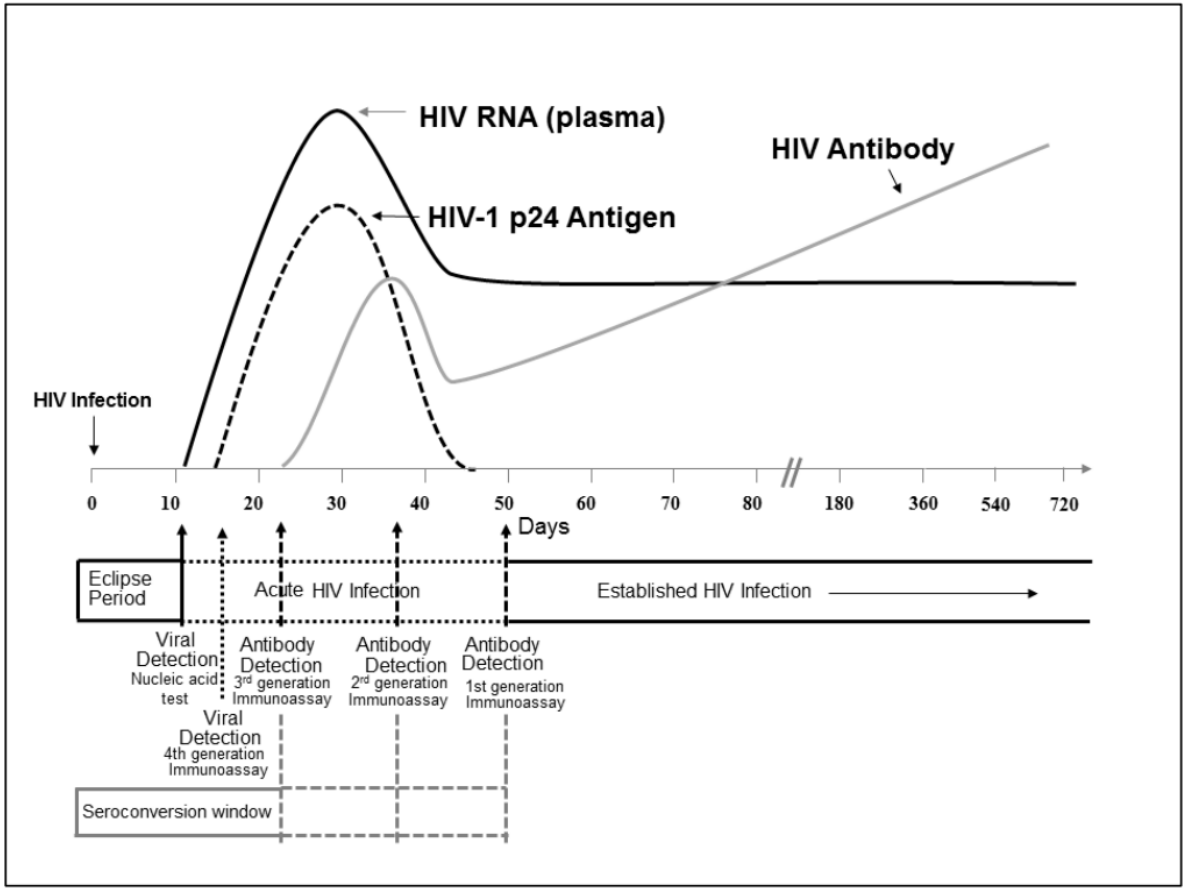
How to test and treat if positive…

CDC Recommended Testing Algorithm for HIV



http://www.cdc.gov/hiv/guidelines/testing.html

Figure 1. Sequence of appearance of laboratory markers for HIV-1 infection



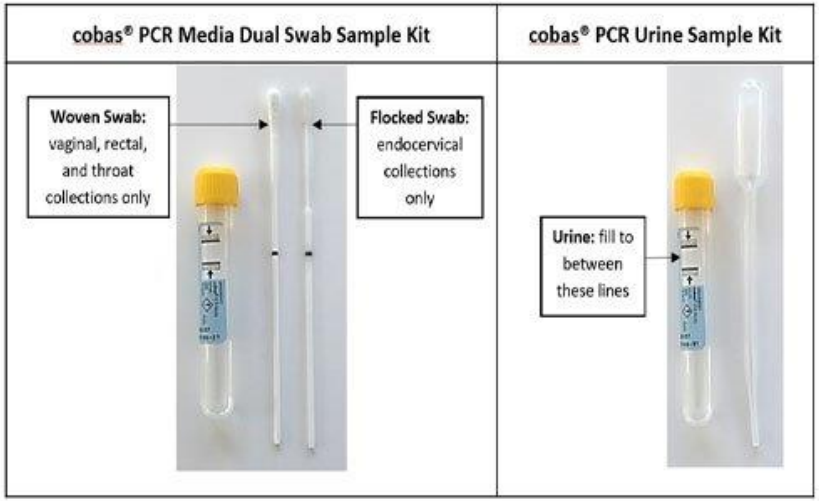
Neisseria gonorrhea (GC) and *Chlamydia trachomatis* (CT)

Diagnosis:

- NAAT of urine, vagina/endocervix, rectum, and/or oropharynx
- Swab <u>all</u> exposed sites
  - Most GC/CT infections are asymptomatic and occur outside of genital tract
  - At UNMC HIV clinic, 100% of GC and 75%of CT infections in asymptomatic MSM would have been missed if only urine had been collected

Treatment:

- GC
  - Ceftriaxone 500mg IM x 1 (or 1g IM x 1 if >150kg)
- CT
  - Doxycycline 100mg PO BID x 7 days



https://www.natap.org/2015/IDSA/IDSA_01.htm

Counseling and Follow-Up

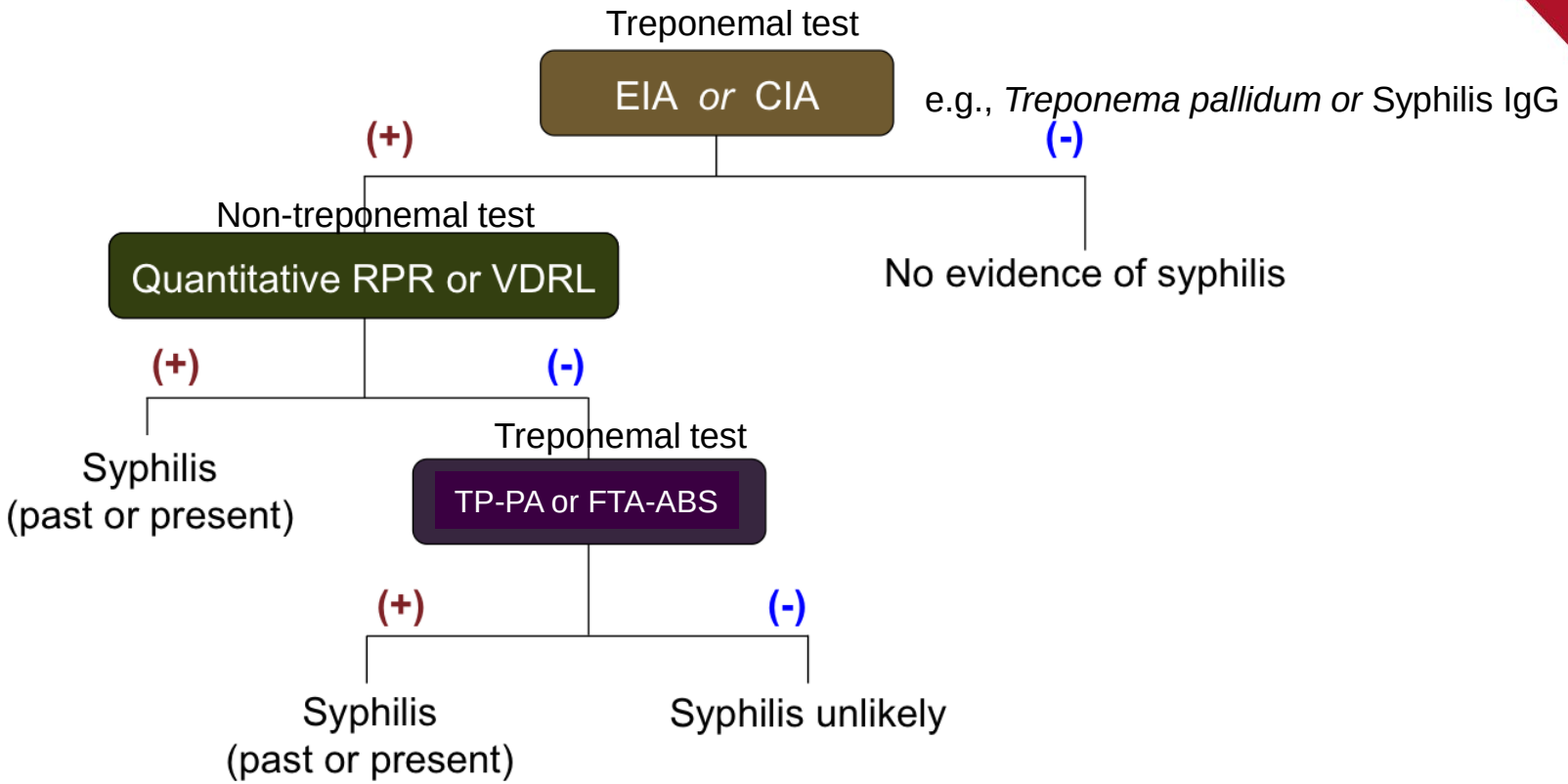
Counseling:
- Abstain from sexual activity for 7 days after treatment and until all sex partners are treated
- Encourage notification of any sex partner within the last 60 days
- Offer additional STI testing, HIV PrEP, and/or doxyPEP if cisgender male or transgender female

Partner therapy:
- Expedited partner therapy (EPT) can be offered to partners of patients with chlamydia

Repeat testing:
- ALL patients should return in 3 months for repeat testing to assess for reinfection
- Patients with oropharyngeal gonorrhea should return for test of cure 7-14 days after completed therapy

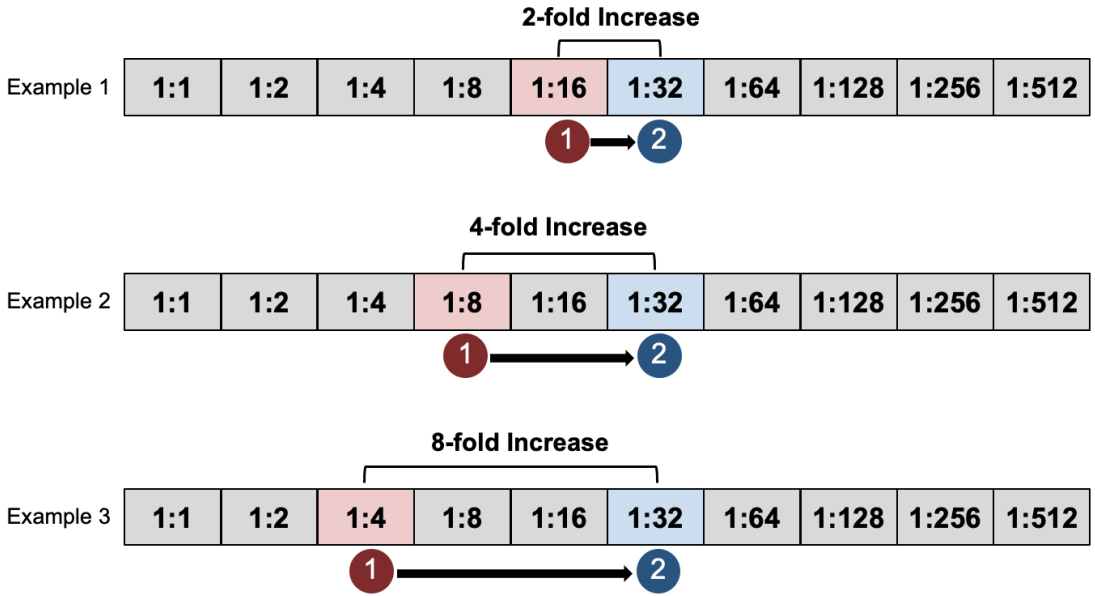
https://www.cdc.gov/std/treatment-guidelines/clinical-EPT.htm

Syphilis Testing Algorithm



Positive Titers in Persons Previously Treated for Syphilis

4-fold (two dilution) increase in nontreponemal titer = reinfection



https://www.std.uw.edu/go/comprehensive-study/syphilis/core-concept/all

Syphilis - Treatment

Early syphilis (1˚, 2˚, early latent)

- Benzathine penicillin (PCN) G 2.4 million units intramuscularly (IM) x 1
- If true PCN allergy:
  - Doxycycline 100mg PO BID (orally, twice daily) x 14 days
  - Ceftriaxone 1g IM or intravenously (IV) daily x 10 days

Late latent/unknown duration

- Benzathine PCN G 2.4 million units IM weekly x **3 doses**
- If true PCN allergy:
  - Doxycycline 100 mg PO BID x 28 days

Hepatitis B and C

Hep B surface antigen (HBsAg)
- Protein on surface of virus
- Detected in high levels during **acute** and **chronic infection**

Hep B surface antibody (anti-HBs or HBsAb)
- Indicates recovery and **immunity**

Total Hep B core antibody (anti-HBc)
- Appears at onset of symptoms in acute hep B and **persists for life**
- Tests for both IgM and IgG

HCV Ab with reflex to HCV RNA if Ab is positive
- Chronic HCV: + HCV Ab, + HCV RNA
- Past HCV (s/p spontaneous clearance or treatment): + HCV Ab, undetectable HCV RNA
- *Remember*: HCV Ab is NOT protective against future infection!

STI Case Studies

Case studies presented by: Heather Saarela, BSPH and Sara Hurtado Bares, MD

University of Nebraska Medical Center

Case 1: 25-year-old male with no PMHx presents with 2 days of dysuria and penile discharge

Clinical diagnosis?

- Urethritis; less like a UTI

Possible etiologies?

- Gonorrhea (GC), chlamydia (CT); trichomonas, *M. genitalium*

Diagnostic testing?

- Urine sample for GC/CT via NAAT

Empiric treatment?

- GC: Ceftriaxone 500mg IM x 1 (if <150kg) or 1g IM x 1 (if >150kg)
- CT: Doxycycline 100mg PO BID x 7 days

Other testing/counseling/etc?

- Screen for HIV, syphilis, HBV/HCV
- Schedule return visit in 3 months to test for reinfection
- Offer HIV PrEP and/or doxyPEP
- Counseling and expedited partner therapy

Case 1, continued

Urine GC/CT positive for CT but patient completed course of doxycycline and has not had any improvement in symptoms

Differential diagnosis?

- Poor adherence with doxycycline
- Reinfection
- Antimicrobial resistance
- Coinfection with another organism (e.g., Trichomonas, *M. genitalium)*

Next steps?

- Review adherence/completion, ask about partner testing and treatment and send urine NAAT for trichomonas and *M. genitalium*

Case 2: 34-year-old male with painful perirectal ulcers

Clinical diagnosis?

- Perirectal ulcer

Possible etiologies?

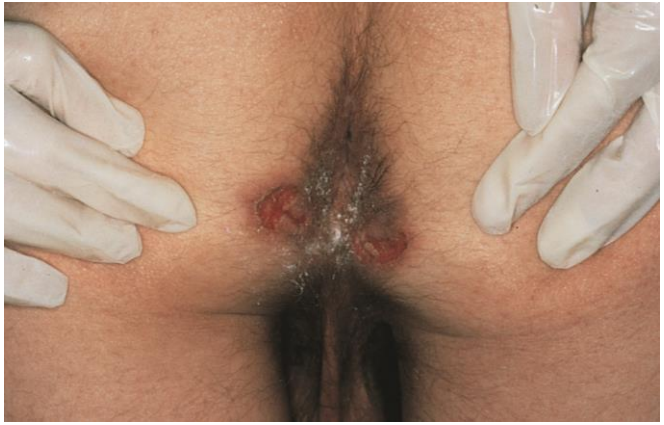
- HSV-1 and -2, chancroid, mpox; less likely syphilis, LGV, granuloma inguinale

Diagnostic testing?

- Clinical diagnosis; if history and/or clinical appearance is not conclusive, send HSV PCR

Empiric treatment?

- Valacyclovir 500mg PO BID x 3 days or 1g PO daily x 5 days
- Acyclovir 800mg PO TID x 2 days or 800mg PO BID x 5 days



Case 3: A 44-year-old male presents with 3 days of rectal pain and discharge

Additional history:

- Reports receptive anal sex with other men. Uses condoms most but not all of the time. Denies fevers/chills, diarrhea, nausea or vomiting.

Case 3: A 44-year-old male presents with 3 days of rectal pain and discharge

Clinical diagnosis?

- Proctitis

Possible etiologies?

- Gonorrhea (GC), chlamydia (CT) including LGV serovars, HSV, *T. pallidum*

Diagnostic testing?

- Rectal swab for GC/CT, *T. pallidum* IgG, +/- HSV PCR if ulcers on exam

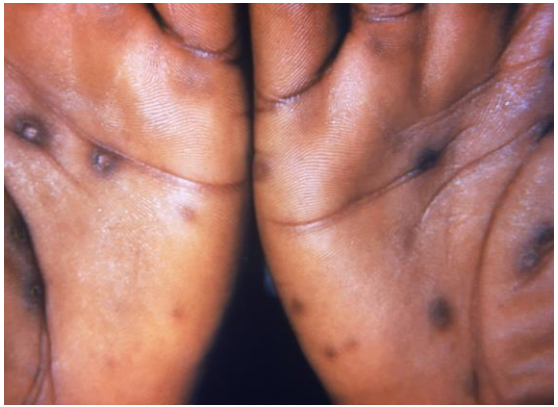
C. trachomatis

- **A-C** – **Trachoma** (leading global cause of preventable blindness)
- **D-K** – **Urethritis, cervicitis, epididymitis, PID, reactive arthritis;** also **neonatal conjunctivitis and pneumonia**
- **L1-L3** – **lymphogranuloma venereum (LGV)**; painful LAD with groove sign, painless genital ulcer, proctitis

NOTE: Most labs do not perform serotyping and it is important to differentiate between the serotypes and think about L1-L3/LGV when patients present with proctitis or when a rectal swab is positive for chlamydia because treatment is **doxycycline 100mg PO BID x 3 weeks** (vs 7 days)

Case 4 – Diffuse Rash Involving the Palms and Soles

- 42-year-old female with well-controlled HIV with full body hyperpigmented maculopapular rash; + involvement of palms (see photo) and soles
- PMHx (past medical history): HIV, early latent syphilis diagnosed 4 years prior with seroreversion following treatment (RPR 1:16 → nonreactive)
- Labs:
  - *T. pallidum* IgG positive
  - RPR 1:32



Case 4, continued

Clinical diagnosis?

- Secondary syphilis

Etiology?

- *Treponema pallidum*

Treatment?

- Benzathine PCN G 2.4 million units IM x 1

Case 4, continued

- Provider on call receives a call from the patient reporting fever and worsening of the rash

How would you explain this?

Jarisch-Herxheimer Reaction

- Self-limited reaction associated with initiation of anti-treponemal therapy
- Fever, chills, nausea, vomiting, exacerbation of secondary syphilis rash within 2-24 hours of treatment initiation
- Most common in early syphilis, especially secondary syphilis, due to high bacterial burden
- Often mistaken for a penicillin allergy

Take-Home Points

- Practice, practice, practice – the more sexual histories you obtain, the more comfortable you will become

- STIs are common and frequently asymptomatic; screening – *at all exposed sites* – is important

- The most common cause for repeat positive testing is reinfection; remember to provide counseling and expedited partner therapy

Thank you!

Questions? sara.bares@unmc.edu

Provider Resources

Print

STI Treatment (Tx) Guide Mobile App

The new app offers quick and easy access to streamlined STI prevention, diagnostic, and treatment recommendations. The user-friendly interface includes more clinical care guidance, sexual history resources, patient materials, and other features to assist with patient management. Download the free app for Apple and Android mobile devices.

Download on the App Store

GET IT ON Google Play

Thank you for joining UNMC's third HIV ECHO Session!

We will see you on March 6th, 2025, at 12PM CST!

Interested in collaborating with us as a Subject Matter Expert? We would love to have you join us. Feel free to reach out to us at: UNMCHIVECHO@unmc.edu

After session-feedback survey will be available as a link in the chat as well as on our iECHO website! ☺