AMPLIFY

Diagnostic Testing in Urgent Care Part 2: STI

Christopher Chao, MD

Joe Hwang, PA-C

Diagnostic testing in Urgent Care:

Christopher Chao, MD

Medical Director, Urgent Care, WakeMed Health and Hospital, Raleigh, NC

Immediate Past President, College of Urgent Care Medicine

Diagnostic testing in Urgent Care:

Joe Hwang, PA-C, MLS (ASCP), MPH

Regional Director, ExperCARE Health

Laboratory Director, Urgent Care of Oconee

Financial Disclosures

- Christopher Chao, MD
  - Speaker, Consultant — AstraZeneca
  - Advisor — BioMérieux
  - Advisor — Pfizer
  - Advisor — Abbott
  - Advisor — Roche
  - Editorial Board — EB Medicine

Financial Disclosures

- Joe Hwang, PA-C
  - Speaker — Sekisui
  - Speaker — GSK
  - Speaker — HealthTrackRx
  - Independent Contractor — Aptitude
  - Author/Peer Reviewer — EB Medicine

Learning Objective

- Identify common sexually transmitted infections encountered in Urgent Care
- Obtain a comprehensive and anatomically relevant sexual history to guide appropriate STI testing and diagnosis
- Select appropriate diagnostic tests for STI testing in Urgent Care
- Recognize common diagnostic pitfalls for STI testing in Urgent Care
- Interpret HIV and syphilis test results

Introduction

- Why STI testing matters in Urgent Care
  - Urgent Care is a major access point for Sexual Health
  - In the United States, recent data shows that rates of sexually transmitted disease reached an all-time high in 2021.
  - Patients expect STI testing in the Urgent Care

The presentation that makes us pause

- Patient is a 23 y/o male presents for “STD testing.”

What patients see on social media and public health campaigns

- What does “STD testing” mean to the clinician? To the patient?
- What are patient expectations?

List of STI pathologies

- Bacterial
  - *Neisseria gonorrhoeae*
  - *Chlamydia trachomatis*
  - *Treponema pallidum*
  - *Mycoplasma genitalium*
  - *Ureaplasma*
  - *Haemophilus ducreyi*
  - *Klebsiella granulomatis*
- Viral
  - Human Immunodeficiency Virus
  - HPV
  - HSV
  - Hepatitis B
  - Hepatitis C
  - Molluscum contagiosum
  - Monkeypox
- Parasitic STIs
  - Trichomonas vaginalis
  - Pediculosis pubis
  - Scabies

Appropriate STI testing

- STI test selection should be guided by a thorough sexual and exposure history
  - Why it matters
    - Missed diagnosis when the wrong tests/sites are ordered
    - Missed diagnosis when the test is ordered during the incubation period
    - Overdiagnosis (ie HSV antibody testing)
    - Increased costs when ordering tests that do not add clinical value
    - Patient harm from anxiety, stigma and inappropriate treatment when diagnostic tests are inappropriately ordered

- **Ordering every possible test is neither feasible nor clinically appropriate**

Asymptomatic (screening) vs Symptomatic (diagnostic)

- Asymptomatic
  - Risk-based screening
  - Identify exposure sites
  - Follow guideline-based intervals
- Symptomatic
  - Target testing to symptom + anatomic site
  - Physical exam when appropriate
  - Treat empirically when indicated

The big 5 – “core” testing

- Gonorrhea
- Chlamydia
- Trichomonas
- HIV
- Syphilis

Testing options in Urgent Care

CLIA waived point of care testing for Urgent Care

	CT/NG	Trich	HIV	Syphilis
Blood			Ag/AB	TP AB
Oral Fluid			AB	
Urine	Molecular			
Swab	Molecular	Antigen Vag swab		

Most Urgent Care centers will use send-out testing

Core labs

Chlamydia trachomatis
Neisseria gonorrhoeae
Trichomonas vaginalis

Multiplex panels may also include

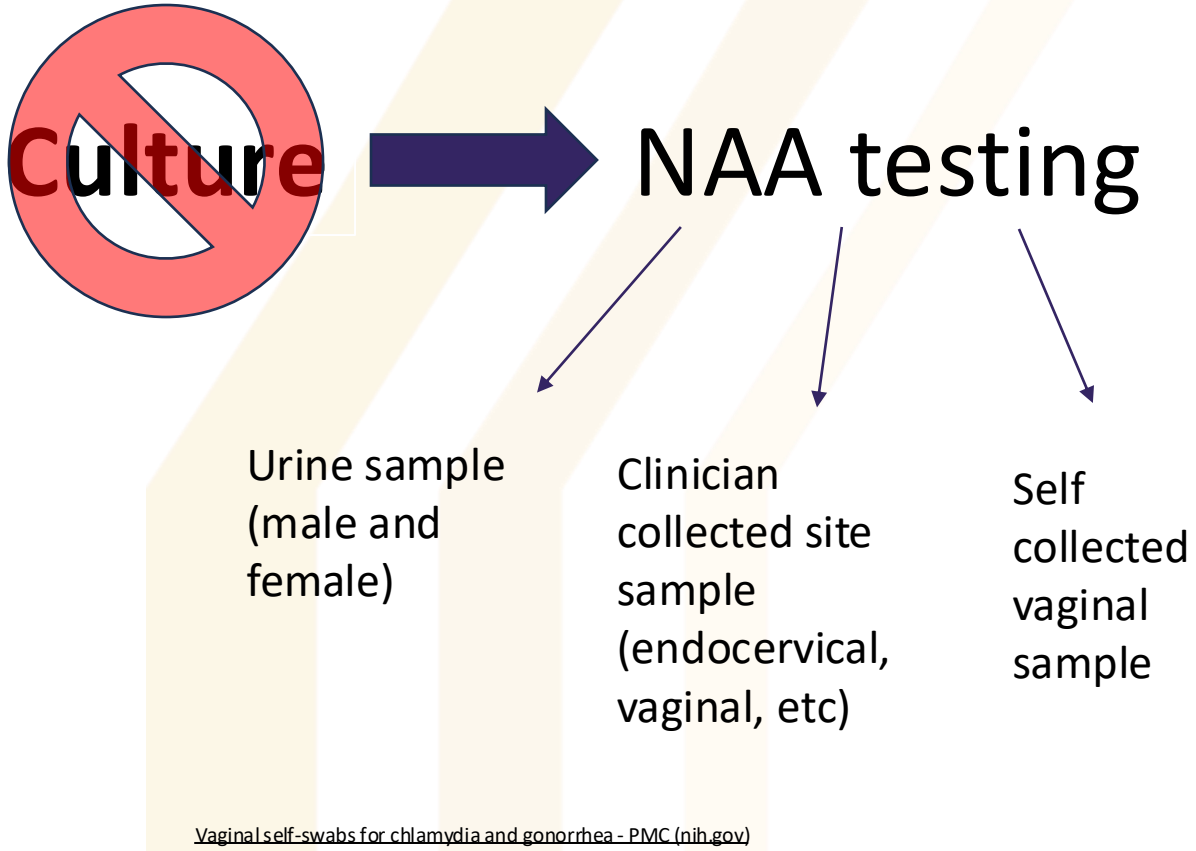
Mycoplasma genitalium
Mycoplasma hominis
Ureaplasma urealyticum
Ureaplasma parvum
BV
Candida (*albicans, glabrata, krusei*)

Point-of-care testing

- Loss to follow-up after STI testing is a concern
  - Undertreated patients are often lost to follow-up
    - Up to 40% of patients who have a positive STI test are lost to follow-up
  - Addresses the following issues:
    - Untreated patients at the time of visit can have disease progression and further transmit disease
    - Missed opportunity for expediated partner treatment
    - Lack of definitive diagnosis creates a missed opportunity for patient education
    - Disruption of clinical workflow including excessive time spent by clinical staff tracking down patient

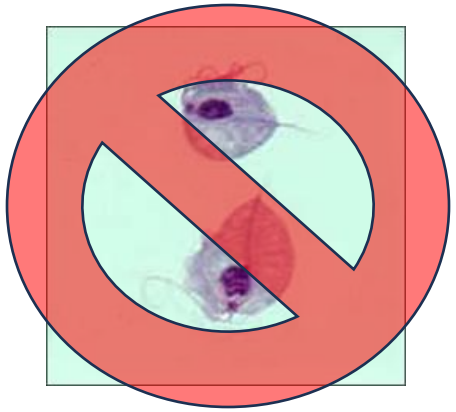
Diagnostic testing for chlamydia and gonorrhea

- Historically, culture has been the diagnostic gold standard.
- Due to advances in molecular testing technology, NAA testing is the standard of care. Overall sensitivity, specificity and ease of specimen transport is better than any other tests available for the diagnosis of chlamydia and gonococcal infections



Vaginal self-swabs for chlamydia and gonorrhea - PMC (nih.gov)

Diagnostic testing for trichomonas

Historically, visualization has been the diagnostic test for trichomonas
Example: Wet Prep
Quick, easy, low cost, Immediate results
Poor sensitivity (compared to culture) **Interpretation is skill dependent** Provider Provided Microscopy (PPM) waiver may be required
 Image credit: CDC website STD Facts - Trichomoniasis (cdc.gov)

NAA testing

- Urine sample (male and female)
- Clinician collected site sample (endocervical, vaginal, etc)
- Self collected vaginal sample

Vaginal self-swabs for chlamydia and gonorrhea - PMC (nih.gov)

Collection methods for CT/NG/TV testing

NAA test: collection options		
Urine Sample	**HCP obtained swab**	**Self-Swab**
First pass urine (FPU) aka “dirty urine”	Endocervical swab Blind swab (LVS)	Patient performed lower vaginal swab
Non-invasive	Chaperone required Exams may be uncomfortable	Non-invasive
- Patient should not have voided 1-2 hours prior to collection May not be as sensitive compared to vaginal swabs - Cannot assess oropharyngeal or anal source	- If pelvic exam is indicated, swab can be obtained as part of the exam - **Pelvic exam may identify other pathologies**	- **Studies suggest equivalent or even superior sensitivity compared to urine or provider obtained swabs** - Patients need to be counseled on appropriate technique

Pelvic exam indicated if there is a suspicion of PID or intraabdominal pathology

Vaginal self-swabs for chlamydia and gonorrhea - PMC (nih.gov)
Everything the emergency medicine physician needs to know about vaginal self swabbing for patients. — NUEM Blog
Assessment of self taken swabs versus clinician taken swab cultures for diagnosing gonorrhoea in women: single centre, diagnostic accuracy study | The BMJ

Clinical pearls

- First-pass urine i.e. dirty urine is preferred for male anatomy
- While both urine and vaginal swabs are acceptable, vaginal swabs have a higher sensitivity compared to urine
- Self-swab has at least equivalent outcomes versus clinician obtained swabs

Urgent Care Workflow

- Obtain history and pertinent exam
  - The 5 Ps
    - Partners
      - # of partners (Current and recent), Gender of partners, New Partners, Partner risk factors
    - Practices
      - Vaginal
      - Oral (give/receive)
      - Anal (insertive/receptive)
    - Past History
      - Prior infections and treatment, HIV status, test-of-cures?
    - Protection
      - Barrier method, HIV PrEP, PEP (HIV, doxy-PEP)
    - Pregnancy

Additional history

Symptoms
Timing/Exposure Window
Safety (domestic violence, sexual assault)
Substance Use

Urgent Care Workflow

- Obtain history and pertinent exam

- What initial testing is needed?
- Do you need empiric treatment?
- Opt-in testing (HIV, Syphilis)
- Additional testing based on specific risk factors

Clinical pearl: Dysuria is not always UTI

- Differential diagnosis of dysuria
  - Inflammatory
    - Dermatologic — dermatitis, psoriasis
    - Infectious — cystitis, urethritis, pyelonephritis, STIs
      Women: vulvovaginitis, cervicitis, Men: prostatitis, epididymitis
    - Non-infectious — foreign body
  - Non-inflammatory
    - Anatomic — stricture, spasms
    - Drug related — bladder-irritating foods or medications
    - Endocrine — atopic vaginitis, endometriosis
    - Neoplastic — TCC bladder, RCC
    - Traumatic — Foley catheter placement, instrumentation

Vaginitis

- 90% of vaginitis is due to bacterial vaginosis, vaginal candidiasis and *trichomonas*

	How common?	Risks	Testing options
Bacterial vaginosis	Most common cause of vaginitis. 40-50% of cases in women of childbearing age	Risk for PROM and preterm labor. Increases risk of STI transmission	- pH > 4.5 - Wet Prep - Antigen testing - Molecular testing
Vulvovaginal candidias	~ 75% of women will have one episode in a lifetime	Complications are rare Sign of underlying DM or immundeficiency?	- pH < 4.5 - Wet Prep - Molecular testing
Trichomonas	10-25% of vaginal infections ~ 30% symptomatic	Associated and as a vector for other STIs Transmitted sexually (STI)	- pH > 4.5 - Wet Prep - Antigen testing - Molecular testing

STIs

- Chlamydia
  - Most common bacterial STI in the United States
  - Up to 1.8 million cases reported each year (2017-2021)
  - Many cases are asymptomatic
    - Women:
      - Urethritis: dysuria, urgency, frequency
      - Cervicitis: vaginal discharge, vaginal bleeding, abdominal pain.
    - Men:
      - Dysuria, urethral discharge
  - May infect oral, rectal or vaginal tissue
  - Complications include PID, infertility, increased risk of ectopic pregnancy, vertical transmission to newborn (conjunctivitis, pneumonia)

STIs

- Gonorrhea
  - Up to 700,000 cases reported each year (2017-2021)
  - Many cases are asymptomatic
    - Women:
      - Urethritis: dysuria, urgency, frequency
      - Cervicitis: vaginal discharge, vaginal bleeding, abdominal pain.
    - Men:
      - Dysuria, urethral discharge
  - May infect oral, rectal or vaginal
  - Complications include PID, infertility, increased risk of ectopic pregnancy, disseminated gonococcal infection (arthritis), vertical transmission to neonate

STIs

- Trichomoniasis
  - Most patients are asymptomatic
    - Men: penile itching, dysuria or discharge
    - Women: itching, burning or soreness in the GU area, dysuria, discharge. Discharge may have a fishy smell
  - Complications:
    - Causes genital inflammation and increases risk of transmission of STIs including HIV
    - Increases risk of pre-term labor

About Trichomoniasis | Trichomoniasis | CDC

Controversies: Is bacterial vaginosis a STD?

23 y/o male who is asymptomatic, presents to urgent care requesting a test for bacterial vaginosis. States that his partner has recurrent BV and he read on the internet that BV is a STD and wants testing and treatment

- Is BV a STD?
- Recommend intervention?

Case 1: Patient request testing after exposure

- Patient is a 24-year-old male presents for “STD testing.” He is asymptomatic. States he had unprotected intercourse (insertional vaginal) with a new partner (female) last night and he wants to ensure that he did not pick up an STD. He wants testing for “everything.”
- Denies oral intercourse
- Denies rectal penetration
- Is testing currently actionable?

Case 1: Patient request testing after exposure

The timeline is critical

Pathogen	Earliest detection	Reliable detection	Best practices
Chlamydia	2-3 days	5-7 days	Test > 7 days after exposure
Gonorrhea	2-3 days	5-7 days	Test > 7 days after exposure
Trichomonas	3-5 days	7 days	Test > 7 days after exposure
HIV (4th generation test)	10-14 days (p24 antigen)	18-45 days	Repeat ~ 6 weeks and 3 months
Syphilis (treponemal tests)	~ 3 weeks	4-6 weeks	

Testing too early may result in a false negative
At 24 hours, testing is largely non-actionable.

Baseline testing is useful (but set expectations) -> A negative test does not rule out current infection
Consider HIV PEP if high-risk exposure
Consider Doxy PEP (MSM, transgender women)

Case 2: 24-year-old male presents with “UTI”

- 24-year-old male presents with burning with urination
  - “I think I have a UTI”

- HPI
  - 3-day history of dysuria and urethral irritation
  - Mild clear urethral discharge noted in the morning
  - No fever, chills, flank pain, or abdominal pain
  - No testicular pain or scrotal swelling
  - Denies hematuria

Case 2: 24-year-old male presents with “UTI”

- 24-year-old male presents with burning with urination
  - “I think I have a UTI”

- HPI
  - Sexually active with a new partner (female) for 3 weeks
  - Insertional vaginal
  - No condom use

- How would you proceed?
- How would you collect the specimen?

Case 2: 24-year-old male presents with “UTI”

- Consider additional STI testing based on history and risk

Core workup

- Chlamydia/Gonorrhea/Trich
  - ~~Oropharynx~~
  - Urine
  - ~~Rectal~~
  - ~~Endocervical/vaginal (female)~~
- UA?
- Urine culture if UA abnormal?

Opt-in

- Syphilis
- HIV (4th generation)
  - ~ 14 days after exposure
- ~~Herpes~~
- ~~Hepatitis B~~
- ~~Hepatitis C~~
- ~~Ureaplasma/Mycoplasma~~

Test results need to be interpreted within the context of the clinical presentation. Serological conversion may take weeks to months!

But if you don’t have point-of-care testing

- Do you empirically treat?
- What is the difference between this case and the previous case?
  - This patient is SYMPTOMATIC

  - Recommended treatment regimen:
    - CT : Doxycycline 100mg PO BID X 7 days
      - Alternate treatment: azithromycin 1 gram PO X 1 (if only CT)
    - NG: Ceftriaxone 500mg IM X 1 (1 gram if > 150kg)
      - Alternative treatment: consult guidelines
    - TV: Metronidazole 500mg PO BID X 7 days

Clinical pearls

- UTIs are uncommon in males – ALWAYS consider STI in the differential
- The preferred test for males is first-pass urine
- Ask about extra-genital sites
- HIV and syphilis testing should be performed using an opt-out approach

Case 2: 24-year-old male presents with “UTI”

- Case conclusion:
  - Patient empirically treated for CT and NG
    - Doxycycline 100mg twice a day for 7 days
    - Ceftriaxone 500mg IM
  - CT/NG/TV NAA sent out
  - Patient declined HIV and Syphilis

  - CT positive. NG negative. TV negative

- Is this reportable?

Case #3: Is this UTI or something else

- Patient is a 24 y/o female presents with dysuria, urinary frequency and vaginal discharge
  - Sexually active with a new male partner for 1 month
  - Inconsistent condom use
  - One previous UTI 1 year ago
  - Denies vaginal itching, odor or pelvic pain

Case #3: Is this UTI or something else

- Differential diagnosis
  - Uncomplicated cystitis
  - Urethritis
  - Vaginitis
  - Genital herpes urethritis
  - Non-bacterial urethritis

- Is this UTI or STI?

Case #3: Is this UTI or something else

- Workup
  - UA: SG 1.020, pos leukocytes, pos nitrates, negative blood
  - Patient concerned about STI
    - CT/NG/TV NAA vaginal swab sent
    - Opt-out HIV/syphilis testing
  - Patient diagnosed with acute uncomplicated cystitis
  - Patient discharged on nitrofurantoin 100mg PO BID X 5 days
  - Advised sexual abstinence until test results finalized

Case #3: Is this UTI or something else

- Case conclusion
  - CT/NG/TV test negative
  - Patient reports symptoms resolved.

- Sidebar : Is a urine culture needed?

- Clinical pearls:
  - Ask about STI risk when patients present with UTI symptoms
  - If there is risk -> shared decision making to test

Case 4: Test of Cure

- Which of the following patients requires a test-of-cure after treatment for uncomplicated gonorrhea?
- A) A 24-year-old male treated with ceftriaxone for uncomplicated urethral gonorrhea
- B) A 19-year-old pregnant female treated for cervical chlamydia with appropriate first-line therapy
- C) A 32-year-old male treated for pharyngeal gonorrhea with ceftriaxone, now asymptomatic
- D) A 28-year-old female treated for rectal gonorrhea with appropriate first-line therapy

Case 4: Test of Cure

- Which of the following patients requires a test-of-cure after treatment for uncomplicated gonorrhea?
- ~~A) A 24-year-old male treated with ceftriaxone for uncomplicated urethral gonorrhea~~
- B) A 19-year-old pregnant female treated for cervical chlamydia with appropriate first-line therapy
- C) A 32-year-old male treated for pharyngeal gonorrhea with ceftriaxone, now asymptomatic
- ~~D) A 28-year-old female treated for rectal gonorrhea with appropriate first-line therapy~~

Case 4: Test of Cure

- Test of cure is recommended for pharyngeal gonorrhea due to higher risk of treatment failure
- Test of cure is recommended for pregnancy
- Beware of post-test residual positive

Pathogen	Duration of positive results attributable to residual nucleic acid
Chlamydia	3-4 weeks (mean time 9 days)
Gonorrhea	3-4 weeks (mean time 6 days)
Trichomonas	3-4 weeks (mean time 7 days)

- CDC recommends TOC for pharyngeal gonorrhea in 7-14 days

Case 4: Test of Cure

- Clinical pearl
  - If patient presents for testing after treatment, and has NEW symptoms or NEW exposure, this is a NEW evaluation!

HIV and Syphilis opt-in testing

- Every patient who presents for STI evaluation and testing should be offered HIV and syphilis testing

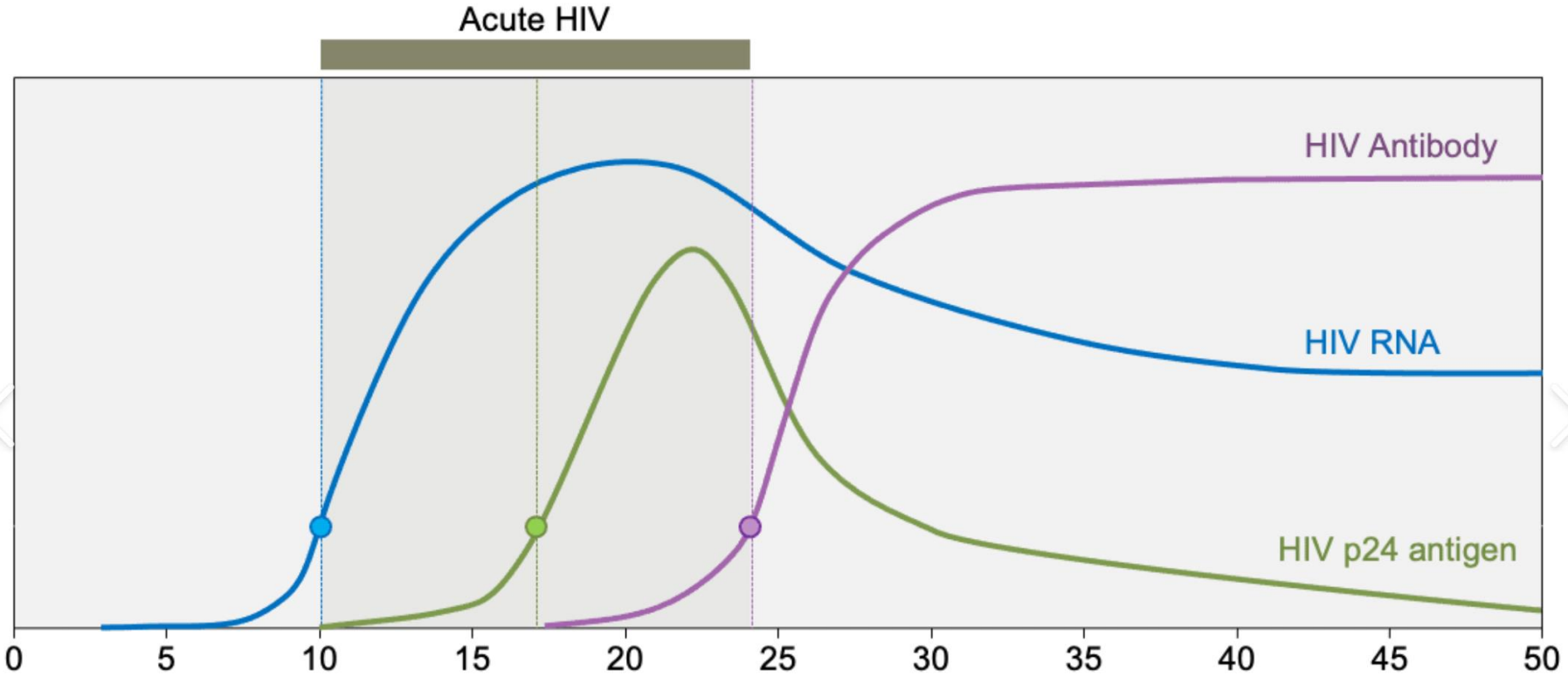
- What is a 4th generation HIV test?
- How is HIV testing reported?
- What is the reverse sequence algorithm for Syphilis?

HIV and Syphilis opt-in testing

- Every patient who presents for STI evaluation and testing should be offered HIV and syphilis testing

- What is a 4th generation HIV test?
  - p24 antigen + antibody test
- How is HIV testing reported?
  - ~~ELISA -> Western Blot~~ (old algorithm)
  - HIV 4th gen -> AB differentiation -> HIV NAA
- What is the reverse sequence algorithm for Syphilis?
  - EIA -> RPR -> TP-PA

HIV testing



Incubation period – tests negative

Early infection – 4th gen test neg, RNA NAA pos

Acute HIV – antigen + NAA pos, AB neg

Initial test	HIV 4th gen test	Negative / Positive (18-45 days)
Step 2	HIV AB differentiation	Negative / Positive (25 – 90 days)
Step 3	HIV RNA NAA	Negative / Positive (10-33 days)

Case #5

A 27-year-old patient presents for routine STI screening. Concerned about a potential HIV exposure 2 weeks ago. A 4th-generation HIV Ag/Ab test is performed today and is negative. Which of the following is the best interpretation?

A) The patient is HIV negative and no further testing is needed

B) The test may not detect acute infection this early; a repeat test in 6 weeks or later is recommended

C) A 4th generation test cannot detect acute HIV, and a HIV RNA qualitative test is recommended

D) Since patient is asymptomatic, a negative 4th generation HIV test rules out acute HIV

Case #5

A 27-year-old patient presents for routine STI screening. Concerned about a potential HIV exposure 2 weeks ago. A 4th-generation HIV Ag/Ab test is performed today and is negative. Which of the following is the best interpretation?

~~A) The patient is HIV negative and no further testing is needed~~

B) The test may not detect acute infection this early; a repeat test in 6 weeks or later is recommended

~~C) A 4th generation test cannot detect acute HIV, and a HIV RNA qualitative test is recommended~~

~~D) Since patient is asymptomatic, a negative 4th generation HIV test rules out acute HIV~~

Understanding syphilis testing

- Reverse sequence algorithm

Treponemal tests

Step 1: EIA (enzyme immunoassay) detects IgG +/- IgM against antigens (TpN15, 17 and 47)

Step 3: TP-PA (T palladium particle agglutination

Positive for life!

Non-Treponemal tests

Step 2: RPR (rapid plasma
A **non-treponemal test** that detects **reagin antibodies** (IgG/IgM) directed against **cardiolipin–lecithin–cholesterol**

Step 1: EIA
Negative -> No serological evidence of syphilis, If high index of suspicion, repeat in 2-4 weeks
Positive ->

Step 2: RPR
Positive -> Stage disease

Negative -> Discordant result

Step 3: TP-PA
Positive -> Treated or latent syphilis

Negative -> Likely false positive EIA

Understanding syphilis testing

- Understanding RPR titers

1:1 1:2 1:4 1:8 1:16 1:32 1:64

Low titer

High titer

Clinical pearls for syphilis testing

- Treponemal tests typically remain positive for life and confirm past infection. They cannot distinguish reinfection from prior infection
- If there is concern for re-infection: Non-treponemal tests are used to detect active infection or changes in titer which can indicate reinfection. Comparison with previous titers is ideal, but a baseline can be established
  - 4-fold increase from baseline -> active infection
  - Low titer -> less likely to be active infection
- Consider serologic window period; incubation period 2-4 weeks, and tests may be negative during this window. Consider repeat testing if high risk exposure
- Don’t forget about other STIs!

Case #6: Syphilis reinfection?

- Patient is a 32-year-old man with a history of treated syphilis (primary stage, treated with appropriate penicillin therapy 4 years ago). He presents to the clinic requesting syphilis testing after a recent sexual encounter with a new partner, approximately 6 weeks ago. He reports no new symptoms such as rash, genital sores, fever, or lymphadenopathy. He is concerned about reinfection and wants reassurance.

- Should you order the RPR only? Or do you order the syphilis screen aka reverse sequence algorithm?

Case #6: Syphilis reinfection?

1) Do you expect EIA to be positive?

2) How do you interpret the RPR?

Previous RPR titer unknown:

RPR: negative -> Re-infection unlikely
RPR: 1:2 -> Re-infection unlikely
RPR: 1:16 -> Concern for re-infection

Repeat testing may be beneficial to compare titers

Previous RPR 1:4

RPR: negative -> No re-infection
RPR: 1:1 to 1:8 -> No re-infection
RPR: 1:16 or higher -> 4-fold increase in titer, infection present

3) If reverse sequence algorithm ordered, what do you expect for the TP-PA

Controversy: Should you order ureaplasma and M gen testing?

- *Ureaplasma* and *Mycoplasma genitalium* are frequent colonizer of the urinary tract
- *Ureaplasma* colonization rates are high 40-80% in sexually active adults and only 10-20% of positive test results represent pathological disease
- *Ureaplasma* -> miscarriages?

Controversy: Should you order ureaplasma and M gen testing?

- CDC advises against the routine screening of *Mycoplasma genitalium*.
  - Testing may be considered in men with persistent or recurrent urethritis not responding to treatment for NG or CT, women with persistent or recurrent cervicitis not responding to standard treatment, or women with recurrent or treatment resistant PID
  - Testing may be considered in high-risk populations

- European guidelines and US guidelines differ
  - European guidelines (IUSTI). Test and treat current sexual partners of confirmed cases
  - US guidelines (CDC) No routine screening of asymptomatic individuals (including partners)

Case 7: HSV testing

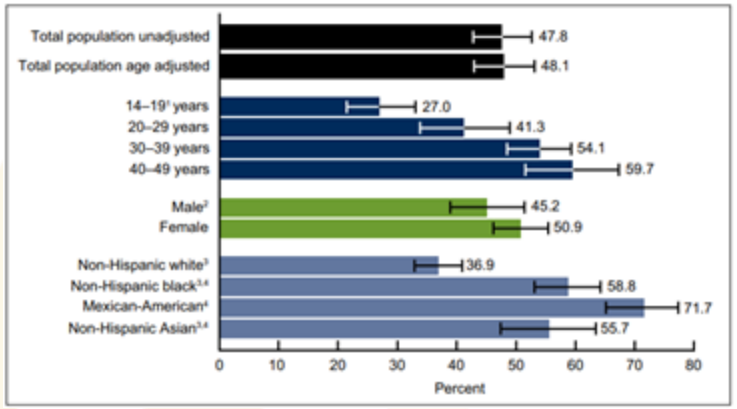
- Patient (34 y/o) presents to urgent care because “he has herpes.” 1 week prior to the visit, he had a “pimple” in his groin area. Because the pimple was crusted over, a blood test for herpes was ordered.
- Results:

Test	Result	
HSV-1 IgG	29.4 (Ref: < 0.9 NEG, 0.9-1.1 EQUIVACAL, > 1.1 POS)	POSITIVE
HSV-2 IgG	0.08 (Ref: < 0.9 NEG, 0.9-1.1 EQUIVACAL, > 1.1 POS)	NEGATIVE
HSV-1/2 IgM by ELISA	0.28 (Ref < 0.89 not detected)	NEGATIVE

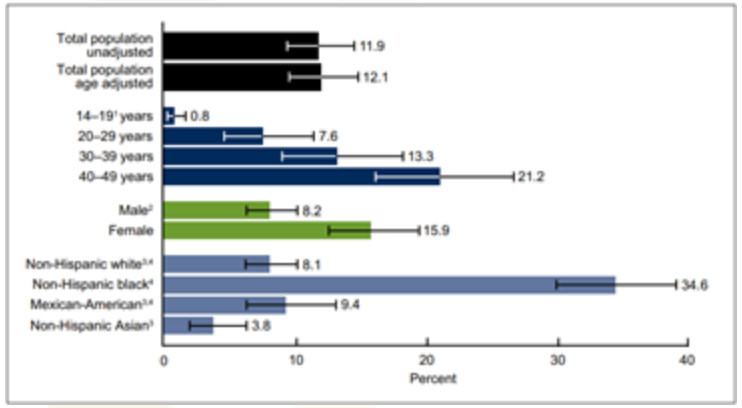
- When he called asking for the results he was told “you have herpes.”
- He is here for a second opinion

Case 7: HSV testing

- Common, lifetime infections
- Many cases are asymptomatic
  - Herpes simplex virus type 1
    - Estimated to affect 67% of global population
    - Oral lesions
    - **Increasing prevalence as the cause of genital lesions**
  - Herpes simplex virus type 2
    - Estimated to affect 11% of global population
    - Women (15.8%) > Men (8.2%)

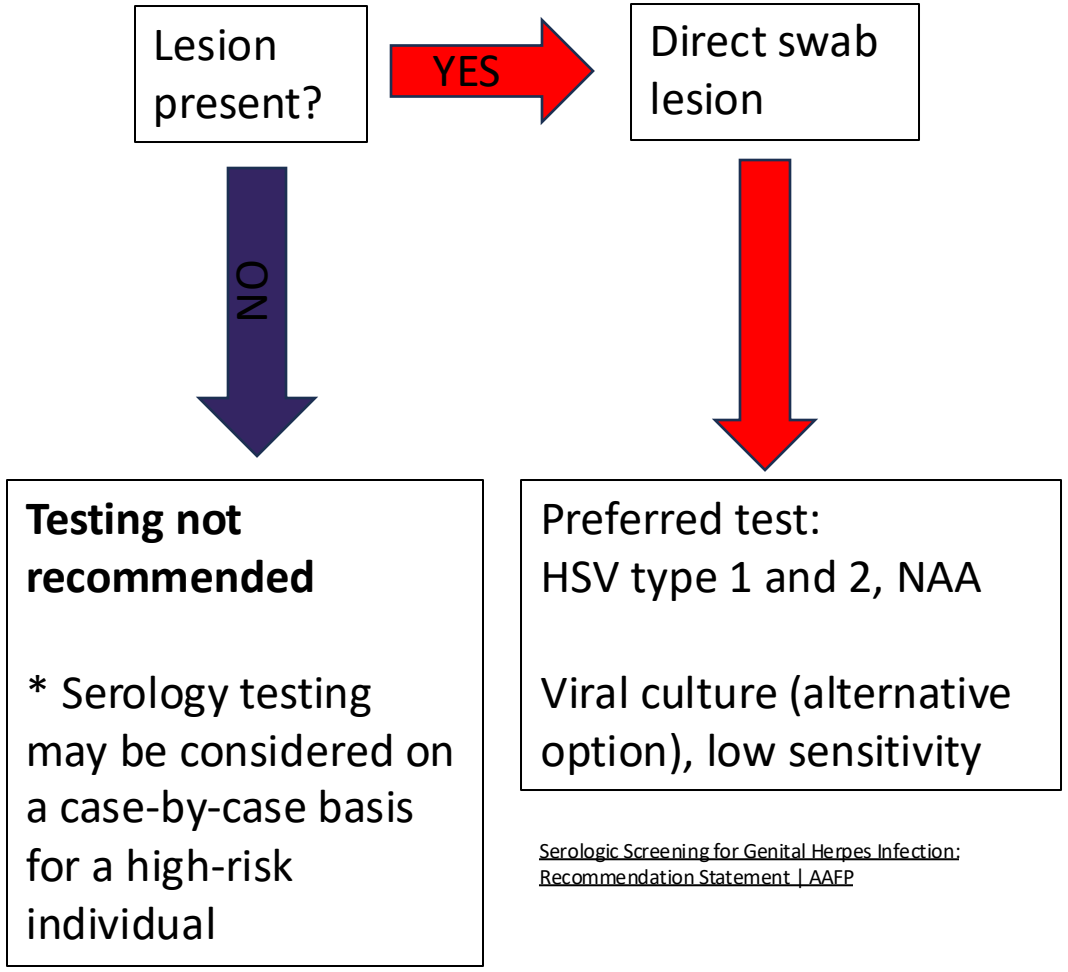


Prevalence of HSV-1 2015-2016



Prevalence of HSV-2 2015-2016

Case 7: HSV testing



Serologic Screening for Genital Herpes Infection: Recommendation Statement | AAFP

- Limitations of serology testing:
  - Positive result
    - High false positive rates
    - Cross reactivity
    - Positive test does not indicate active infection or disease
      - IgM may be detectable following recurrent outbreaks
    - Positive HSV-1 cannot determine the site of infection (oral or genital)
  - Negative result
    - Does not rule out acute disease
    - May take 12 weeks for antibodies to be detectable

Case 7: HSV testing

- No lesion -> No testing
- Lesion -> Swab for molecular detection of HSV-1, HSV-2

Case 7: HSV testing

Case conclusion

- No clinical conclusion can be drawn from the serology test
  - Approximately 48% of the US population has antibodies to HSV-1
  - Test cannot differentiate between oral and genital lesions
  - Since suspected lesion has healed, no further testing is indicated or recommended.

Due to the limitations of serology test, CDC does not recommend serology tests for most clinical situations.

Monkeypox?

- Swab lesion
  - Collect two swabs from each lesion generally from 2-3 lesions
  - Molecular test is preferred
  - Differential diagnosis and consider testing for
    - HSV
    - VZV
    - *H. ducreyi*
    - Syphilis
    - MRSA
  - Always consider testing for STIs (co-infection common)

Reminder: Screening varies by specific population

- Women
- Pregnant Women
- MSW
- MSM
- Transgender and Gender Diverse Persons
- Patient with HIV

Take home points

- All patients presenting for STI testing should be offered HIV and syphilis testing
- Dysuria in younger men and those without urological abnormalities should prompt evaluation for STIs
- Don’t assume UTI in women without assessing STI risk
- Most vaginitis is not sexually transmitted (Ordering broad molecular vaginitis panels without context detects colonization leading to overtreatment)
- Do not test for HSV in the absence of lesions
- Do not routinely test for *Ureaplasma* or *Mycoplasma genitalium*

Take home points

- Testing should be driven by exposure, anatomy and symptoms
  - Visit always should start with a comprehensive sexual history
- You must test the right sites
- Know the testing window. Testing too early -> false negative -> false reassurance
- More testing does not mean better care

Questions

I Need Your Feedback – Scan the QR Code

Prefer paper?

On the form in front of you, please score me and the content I shared with you today.

AFTER THE CONVENTION

You may claim CME here www.urgentcareassociation.org/learning-center/cme/