

Los Angeles County Sexually Transmitted Diseases Screening and Vaccination Recommendations for HIV-infected Adults and Adolescents

Christine Wigen, MD, MPH
Assistant Medical Director, STD Program
Los Angeles County Department of Public Health
Division of HIV and STD Programs
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Overview

- LAC STD and HIV Morbidity
- STD/HIV Interaction
- STD Screening Recommendations
- Vaccination Recommendations

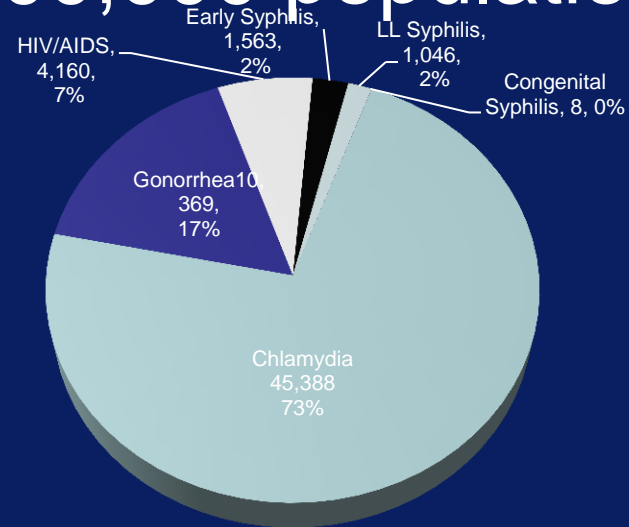


LAC STD and HIV Morbidity

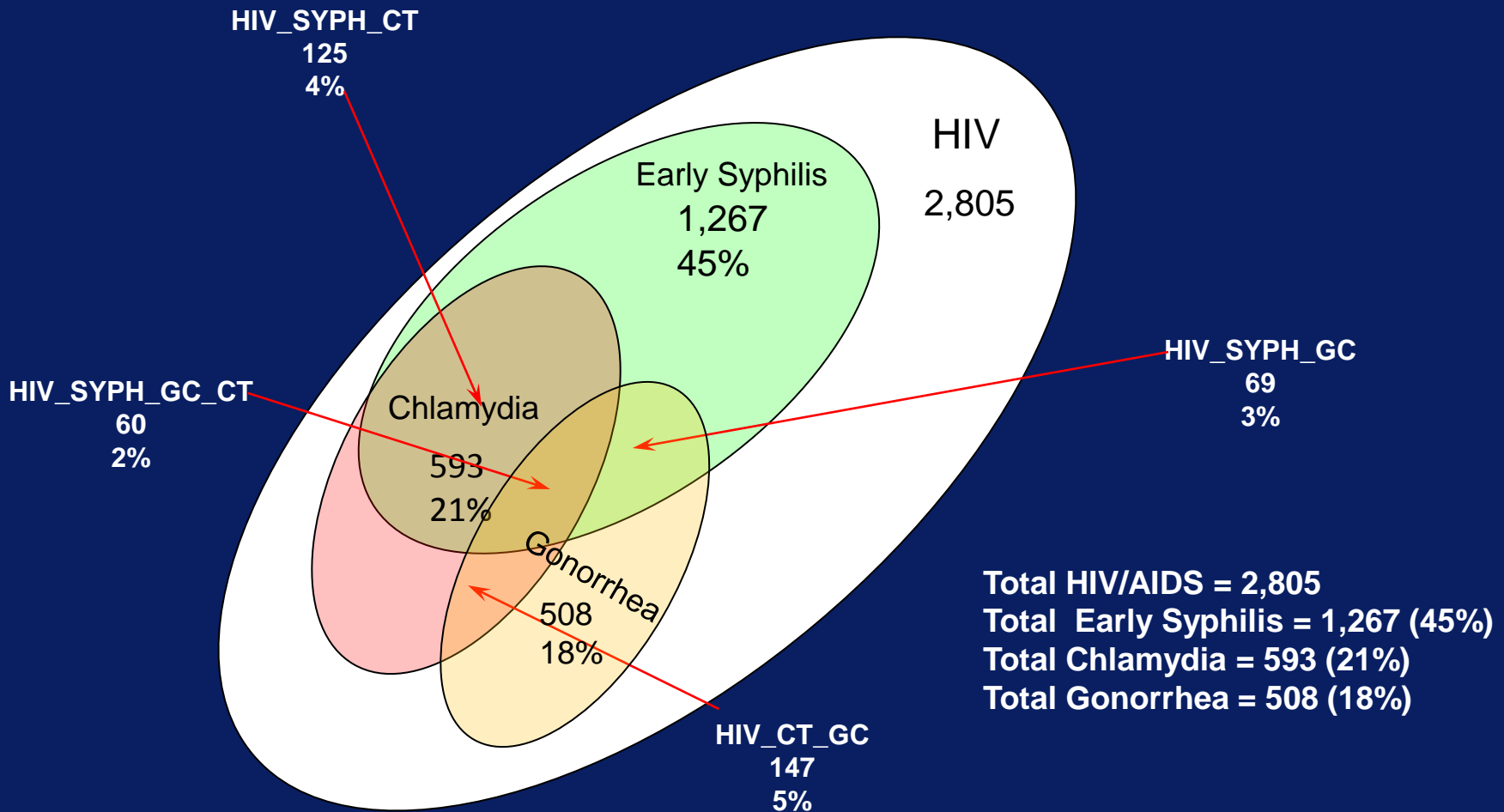


Los Angeles County STD Morbidity

- Has one of the highest incidences of HIV and STIs in the United States and California
- Annual Incidence per 100,000 population, LAC
 - 12.9 HIV/AIDS
 - 8.7 P&S Syphilis
 - 421.6 Chlamydia
 - 96.1 Gonorrhea



HIV/STD Co-morbidity Pattern Among HIV Cases Reported for PS: LAC, 2011



STD/HIV Interaction



Sexual Transmission of HIV

- Accounts for 75-85% of HIV infections worldwide
- Heterosexual transmission is the major cause in developing nations, and is the most rapidly increasing subset of US AIDS cases
- Increases in rectal gonorrhea and syphilis seen in men who have sex with men (MSMs) has led to the concern about increasing HIV transmission among MSM



Sexual Transmission of HIV

Risks of Specific Sexual Behaviors

- Magnitude of risk depends on choice of partner, sex act and condom use, and is difficult to estimate for specific situations
- Estimated per-act risk of transmission is low:
 - Receptive oral intercourse: ~0.01%
 - Penile-vaginal intercourse: female ~ 0.1%, male ~ 0.5%
 - Receptive anal intercourse: ~1%
- Cofactors appear important in transmission



Co-factors Increasing Risk of HIV Transmission

- Increased viral load
 - Recent HIV infection
 - Late stage HIV infection
 - Lack of antiretrovirals (HIV meds)
- **STDs**
- Menstruation
- Type of sexual act





AHP Strategies

Four priority strategies:

1. Make voluntary HIV testing a routine part of medical care
2. Expand HIV testing outside medical settings
3. Prevent new infections by working with persons diagnosed with HIV and their partners
4. Further decrease perinatal HIV transmission



STD Screening Recommendations for HIV-infected Adults and Adolescents



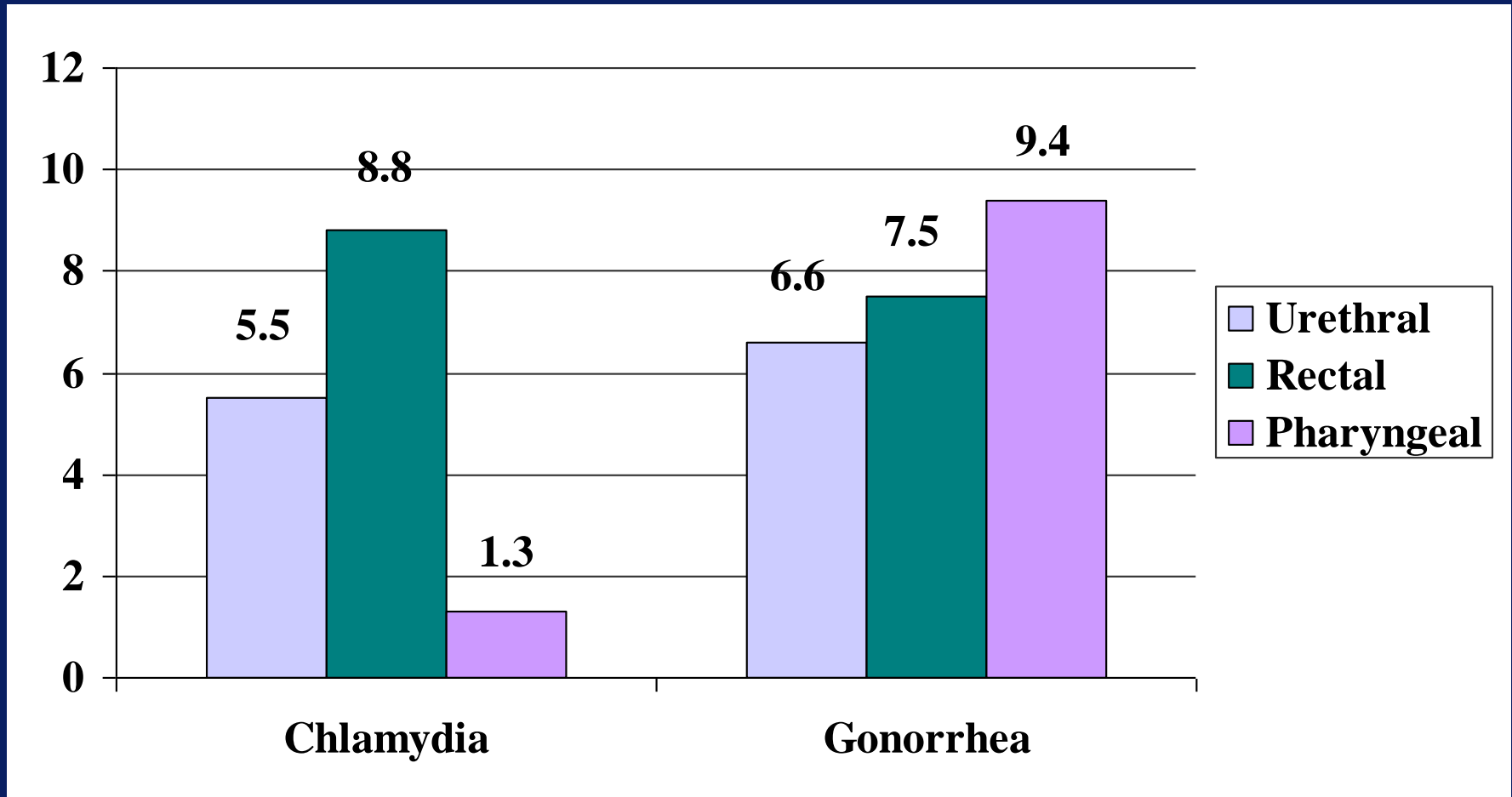
STD Screening for HIV-infected Men

STD	Site	Type of Sex
Syphilis	blood	oral, anal
GC/CT	urethra/urine	insertive
GC/CT	rectum	receptive anal
GC	pharynx	receptive oral

FREQUENCY: At least at the initial visit then annually or more frequently based on risk

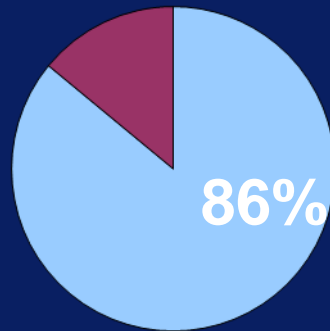


How common are CT and GC infections among MSM seeking STD testing?

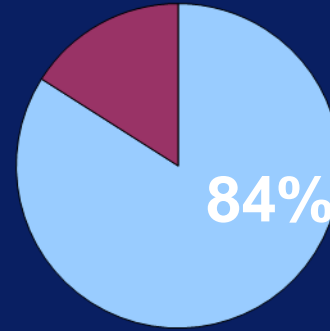


Majority of Rectal Infections in MSM are Asymptomatic

Rectal Infections



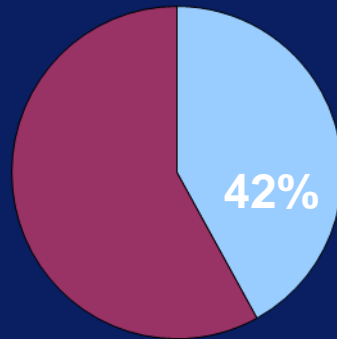
Chlamydia
n=316



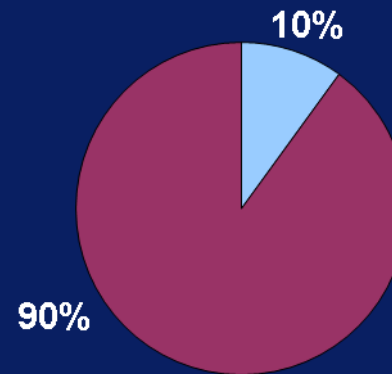
Gonorrhea
n=264



Urethral Infections

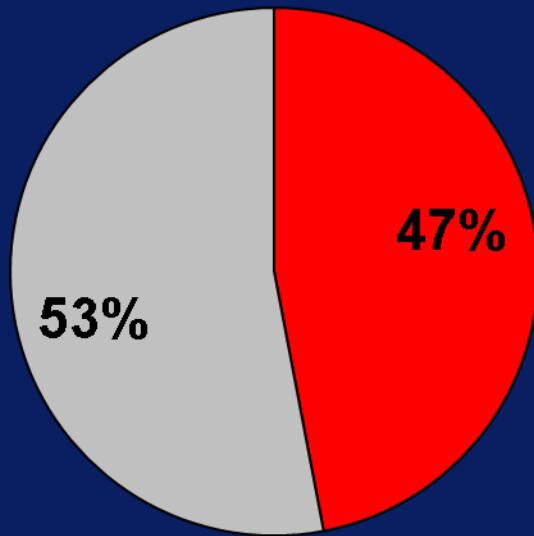


Chlamydia
n=315

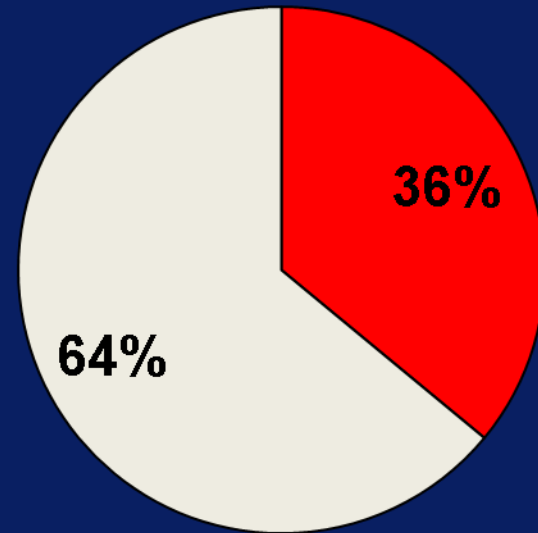


Gonorrhea
n=364

Proportion of CT and GC infections among MSM not identified if screening only urine/urethral sites:



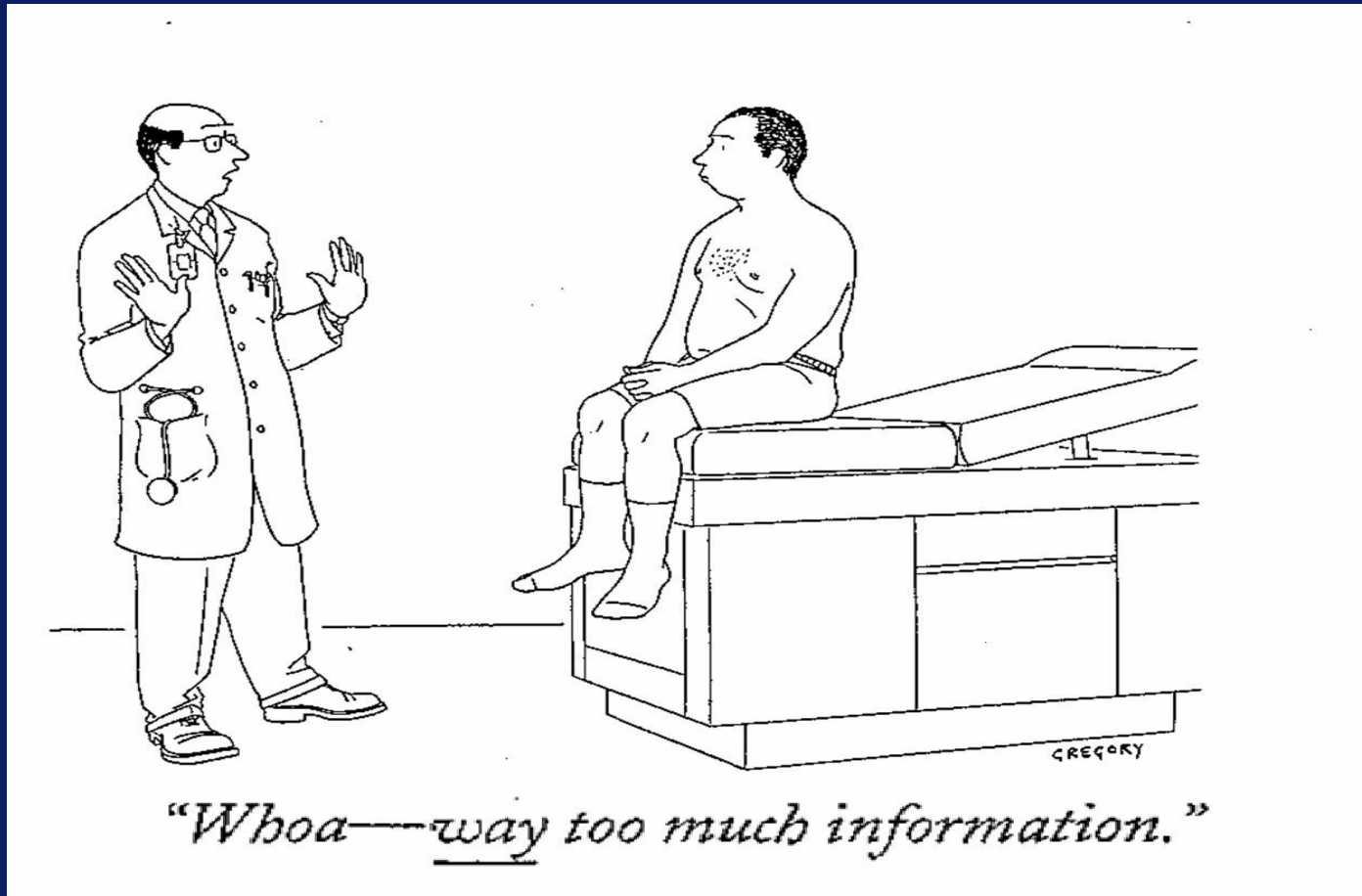
Chlamydia



Gonorrhea



STD Screening: Requires asking



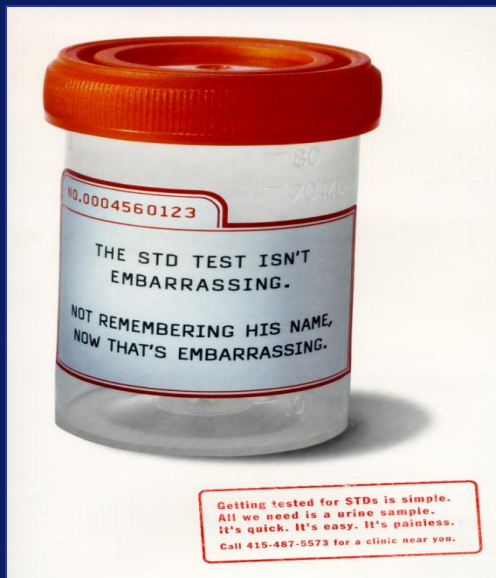
Ask Screen Intervene



NAAT: Novel Specimen Collection



- Non-invasive screening
- Urine and self-obtained swabs
- High patient acceptability
- Screening in non-clinical settings
- Pharyngeal and rectal available (not FDA approved)



Performance Estimates¹ of Chlamydia and Gonorrhea Tests

	<u>Sensitivity</u>	<u>Specificity</u>
CT Culture	40-70%	> 99%
GC Culture	45-85%	> 99%
DFA	50-70%	95-99%
EIA	60-70%	95-99%
NAP/NAPSA	60-75%	97-99%
NAATs*	95-98%	>99%
Roche <i>Amplicor</i> (PCR)** GenProbe <i>Aptima</i> (TMA)** B-D <i>ProbeTec</i> (SDA)		

*Able to use urine and vaginal swabs

**FDA-cleared for LBP

¹Performance estimates vary widely due to difference in statistical analysis

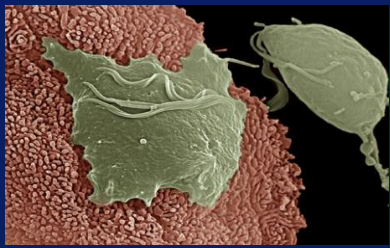


STD Screening for HIV-infected Women

STD	Site	Type of Sex
Syphilis	blood	oral, vaginal, anal
GC/CT	vagina/cervix/urine	vaginal
GC/CT	rectum	receptive anal
GC	pharynx	receptive oral
Trichomonas	vagina/cervix/urine	vaginal

FREQUENCY: At least at the initial visit then annually or more frequently based on risk





Trichomoniasis Screening in HIV-infected Women

- High prevalence of *Trichomonas vaginalis* (TV) among HIV-positive women
- Screening recommended at entry into care then annually
- TV treatment reduces vaginal HIV shedding and potential complication of upper genital tract infections



New Testing Options for Trich

- Microscopy is inferior to new options, including
 - Rapid antigen testing
 - APTIMA TMA Trichomonas (FDA approved 4/11)
 - Nucleic Acid Amplification Test
 - Utilizes same technology as APTIMA Combo 2 (for CT/GC)
 - May use same specimen type as used with APTIMA Combo 2 (i.e. vaginal swab, endocervical swab, urine)
- Huppert CID 2007

Test	Sensitivity	Specificity
APTIMA TMA	98.2%	98%
OSOM	90%	100%
Culture	83%	100%
Wet prep	56%	100%

Table 3. Differences in test sensitivity stratified by the presence or absence of vaginal symptoms.

Test method	Sensitivity, % (95% CI)		
	All patients (n = 330)	Vaginal symptoms present (n = 210)	Vaginal symptoms absent (n = 120)
Wet mount	50.8 (37.7–63.9)	57.5 (40.8–72.9)	38.1 (18.1–61.5)
Culture	75.4 (62.7–85.5)	77.5 (61.5–89.1)	71.4 (47.8–88.7)
Rapid test	82.0 (70.0–90.6)	92.5 (79.6–98.4)	61.9 (38.4–81.9)
TMA	98.4 (91.2–99.9)	97.5 (86.9–99.9)	100 (83.8–100)

NOTE. The comparator was any test result positive for *Trichomonas vaginalis* infection. TMA, transcription-mediated amplification.

Commercially Available Point of Care TV Tests



Affirm VP III

- Detects *Gardnerella*, Trich, *Candida*
- DNA hybridization, colorimetric test
- Moderate complexity test
- Results in 45 minutes
- Sensitivity/specificity
 - *Gardnerella*: 84%, 96%
 - Trich: 80%, 98%
 - *Candida*: 78%, 96%



OSOM Trichomonas Rapid Test

- Detects *T. vaginalis* antigen
- Color immunochromatographic capillary flow test; “dipstick”
- CLIA waived
- Results in 10 minutes
- Sensitivity/specificity
 - Vaginal swab: 83%, 98%
 - Saline from wet mount: 75%, 98%



Other Screening Recommendations for All HIV-infected Patients

- Hepatitis C infection:
 - HCV antibody
 - HCV RNA for confirmation if antibody positive
- Hepatitis B infection:
 - HBsAg
 - Antibody to HBsAg
 - Antibody to hepatitis B total core antigen
 - If HBsAg positive, HBV DNA PCR testing to confirm chronic infection



Vaccination Recommendations



Vaccine-Preventable STDs

- HPV:
 - Higher rate of cervical and anal carcinomas in HIV-infected
 - Vaccination recommended for females & males ≤ 25
- Hepatitis B:
 - Sexual transmission accounts for most new infections, and are especially common among unvaccinated MSM.
 - Vaccination recommended for unexposed/uninfected
- Hepatitis A: Vaccination recommended for MSM, IDU, those at increased sexual risk, and those with chronic liver disease, including persons with HBV and HCV with evidence of chronic liver disease



LAC STD Resources

- Check out the website
<http://lapublichealth.org/std/index.htm>
- STD Nursing Unit Record Search/Consultation: 213-744-3106
 - (Services include, syphilis case record search, lab/disease/treatment consultation, referrals. Staffed M-F 8am-5pm)
- STD/Hotline (for patients): 1-800-758-0880
 - Counselors available from 7am-5pm M-F.
 - Automated 24 hours a day, 7 days a week to provide: information for STD clinics and HIV testing locations, and to order free condom delivery (10 condoms/pkg/request).



References:

Workowski KA, Berman S; Centers for Disease Control and Prevention (CDC). Sexually transmitted diseases treatment guidelines, 2010. MMWR Recomm Rep. 2010 Dec 17;59(RR-12):1-110.

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Aberg JA, Kaplan JE, Libman, et al. Primary care guidelines for the management of persons infected with human immunodeficiency virus: 2009 update by the HIV Medicine Association of the Infectious Diseases Society of America. CID. 2009 Sep 1;49(5):651-81.

CDC. Incorporating HIV prevention into the medical care of person living with HIV: recommendations of CDC, the Health Resources and Services Administration, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. MMWR Recomm Rep. 2003 Jul 18;52(RR-12):1-24.



THANK YOU!



Questions?

Christine Wigen, MD, MPH

Email: cwigen@ph.lacounty.gov

Phone #: 213-744-3092

