

# Update on Sexually Transmitted Infections: Advanced & Interesting Cases

**Jonathan Baker, PA-C, MPAS, DFAAPA (*He/Him*)**

Anorectal & Sexual Health PA | Laser Surgery Care | NYC

Immediate Past President | NYSSPA

Past President | LBGTPA

Delegate | AAPA HOD

**@RectalRockstar**

JonathanBaker.PA@gmail.com

# Financial Disclosure

**Jonathan Baker** has relevant relationships with ineligible companies to disclose within the past 24 months. (Note: Ineligible companies are defined as those whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients.) Company name and type of financial relationship: Salary support from Franz Therapeutics, Antiva Biosciences, Inovio Pharmaceuticals, and Merck & Co.

\*Off-label indications will be included; off-label use will be identified

# Objectives

Participants should be able to:

- Discuss clinical presentation, workup, and treatment of common STIs
- Review and reference current guidelines for screening and treatment of STIs
- Recognize atypical STI presentations and treatment options
- Contextualize STIs among a diverse patient population (including relationship structures and sexual/gender diversity)

# Sex & Gender

- Assigned sex at birth  
(AMAB or AFAB)
- Gender = social and cultural  
distinctions mapped on biology
- Sexuality = attraction, behaviors,  
orientation

# Gonorrhea/Chlamydia Screening

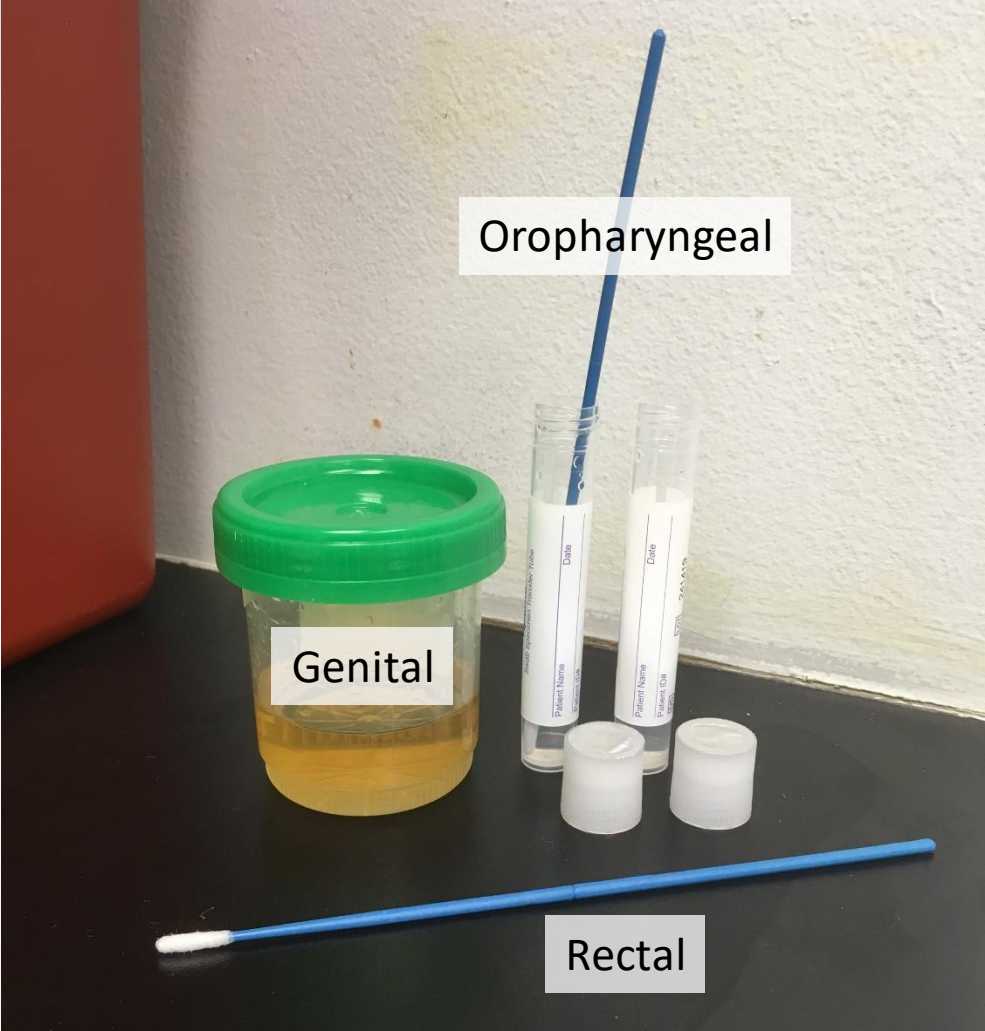
## Screen for gc/Ct

Genital | Pharyngeal | Rectal

### based on

**1)** exposure route **2)** local guidelines **3)** population prevalence

- ✓ Screen women  $\leq 25$ y annually
- ✓ Consider screening men  $\leq 25$ y in areas of  $\uparrow$  prevalence or risk factors
- ✓ Screen MSM annually (Q3-6 mo for MSM at high risk)



Oropharyngeal

Genital

Rectal

# Men who have Sex with Men

**MSM (Men who have sex with men) – a heterogeneous population of men who engage in sexual behaviors involving men**

## **MSM may identify as:**

Gay Men who identify their sexual orientation as “gay”

Bisexual Sexual attraction to more than 1 gender

Heterosexual Sexual attraction to female presenting partners

Gender nonbinary Behavior/appearance does not conform with norms

Transgender Gender assigned at birth does not match identity

*\*Identities may be temporary, before sexual debut, or after sexual sunset*

# Consensual Non-Monogamy (CNM)

- Relationship structure with partners other than 1 primary
- Examples: open, swingers, triad+, monogamish, unilateral, medical
- CNM partners
  - ✓ Are no more likely to be diagnosed with a STI
  - ✓ Express similar rates of both commitment and jealousy as monogamous partners



# HIV Preexposure Prophylaxis (PrEP)

*“All sexually active adult and adolescent patients should receive information about PrEP.”*  
CDC 12/2021

**Tenofovir/emtricitabine PO QD or  
Cabotegravir-IM Q2 months**

- >99% effective at reducing risk of HIV acquisition
- “Safer than Aspirin”
- PrEP use is “protected” per CDC
- Potential for pericoital dosing, implantable, etc.

# Proctitis

Rectal inflammation  
with pain, discharge, bleeding  
+/- tenesmus and spasm

Differential:

- Idiopathic
- Inflammatory Bowel Disease
- Infection: ie *C Diff*
- Ct/gc/LGV/HSV/syphilis

# 2020 CDC Guidelines Update: Gc Treatment

## **Ceftriaxone 500 mg IM once**

- Alternative: Gentamicin 240 mg IM once + Azithromycin 2 g PO once  
**OR** Cefixime 800 mg PO Once
- Weight  $\geq 150$  kg (300 lb), ceftriaxone 1g IM once
- *If chlamydial infection has not been excluded:*  
doxycycline 100 mg PO BID x 7 days.

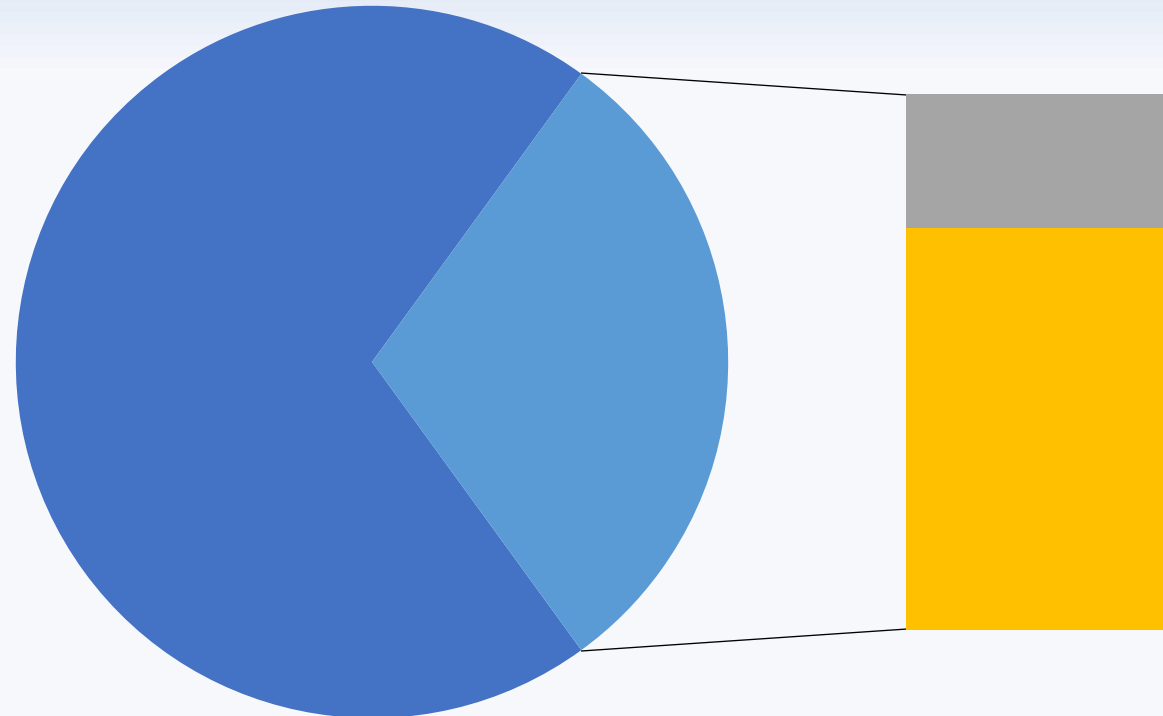
## Pharyngeal gc exceptions

- No alternative to ceftriaxone, consult infectious diseases specialist
- If chlamydia coinfection is identified treat:  
doxycycline 100 mg PO BID x 7 days

# Lymphogranuloma Venereum (LGV)

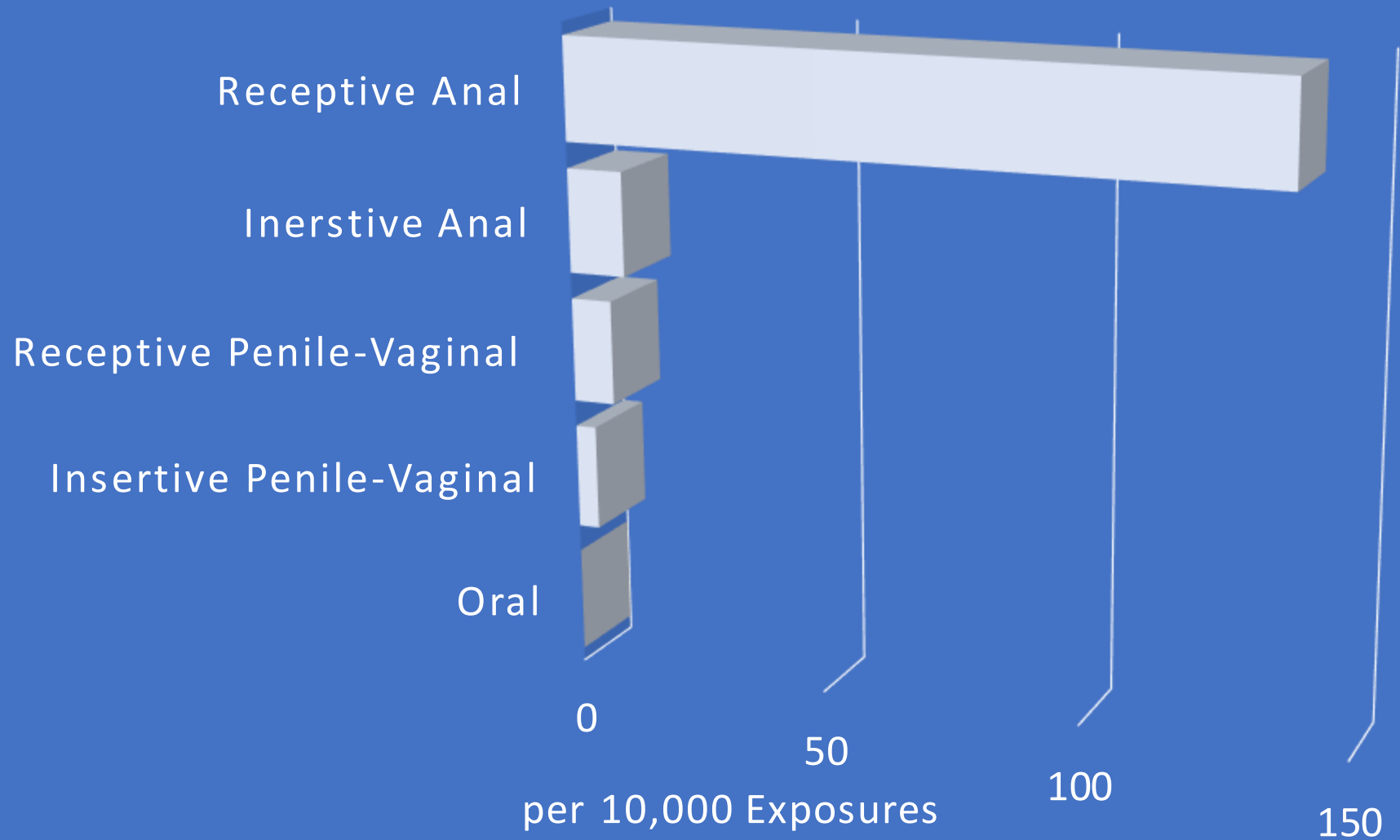
- Chlamydia Trachomatis serovars L1, L2, L3
- Inguinal/femoral lymphadenopathy
- +/- anogenital ulceration & severe proctitis
- **Clinical diagnosis**, specific diagnostic testing not widely available
- Rx: Doxycycline 100mg BID x 21 days
  - Partners treated with 7d doxy

# Anal Intercourse & Heterosexual Identity



- 70% Deny Heterosexual AI**
- 30% Report Heterosexual AI**
- 20-30% Report Condom Use During AI**
- 70-80% Deny Condom Use During AI**

# Estimated Risk of Acquiring HIV from an Infected Source



# Anal Ulcers

- Differential
  - Fissure
  - Traumatic
  - Severe dermatitis
  - HSV
  - LGV
  - Syphilis
  - Malignancy (SCC)

# Syphilis

- Primary syphilis - painless Chancre
- But, anal chancre can be **painful**
- Firm, well demarcated ulcer
- Appears 2-6 weeks post exposure
  
- Treponemal Ab testing ~6 wks
  - TPPA, FTA-ABS
- RPR testing ~6-8 wks

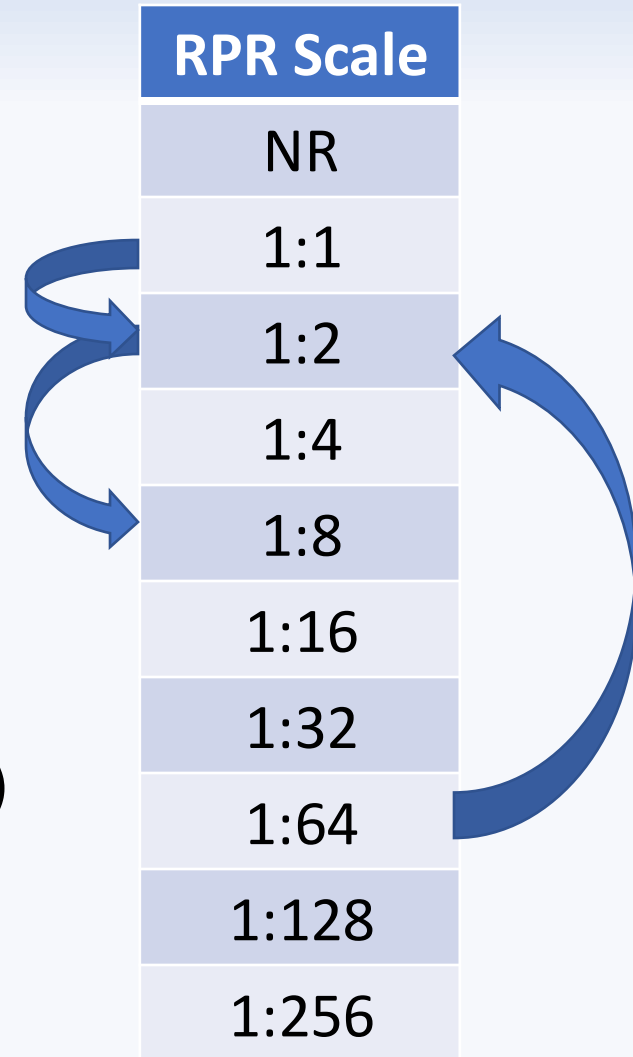


# Syphilis Reverse Sequence Testing

- Treponema Pallidum Ab testing reflexed to RPR
- Pro: sooner detection, reduced risk of false positive
- Cons: limited use in patients with history of syphilis

# Syphilis Management

- “Significant change” 2 fold change in titer
  - 1:2 → 1:8 = think new infection
- Cure is a 4 fold decrease in titer @ 6 mos
  - 1:64 → 1:2 = resolved infection
- Caveats: Inter- intra- lab variability, Serofast
- Rx: Benzathine PCN 2.4 million U IM
  - 1 dose: 1° or 2° infection, infection <1 yr (early latent)
  - 3 dose: late latent infection. >12 mo
- IV PCN G if neuro involvement



# DoxyPEP: Bacterial STI Prophylaxis

A trial of 554 MSM and TGW found doxycycline a safe, acceptable, and effective means to reduce risk of bacterial STIs (gonorrhea, chlamydia, and syphilis)

**200 mg taken within 72 hours of exposure**

<b>Risk Reduction Among:</b>	<b>HIV PrEP Users</b>	<b>People LWH</b>
<b>Overall</b>	<b>66%</b>	<b>62%</b>
Chlamydia	88%	74%
Gonorrhea	55%	57%
Syphilis	87%	77%*

*\*All values statistically significant except 77% was trending*

**Doxycycline for STI prophylaxis is OFF-LABEL**

# Sexual History Taking

Why do we take a sexual history?

- Determine screening, diagnostics, treatments, and immunizations
- Document rationale for expensive testing

Is counselling on safer sex effective?

- Make patients aware their risks
- Not counselling may be perceived as condoning behavior

Sexual History not  
one size fits all;  
**there is no formula**

Focus on  
**Behaviors &  
Anatomy**

# Chancroid

- Caused by *H. ducreyi*
- Diagnosis is clinical
  - Painful genital ulcer(s) and inguinal adenopathy
  - R/O syphilis and HSV
- Increases risk of HIV acquisition
- Treatment (any of the following)
  - Azithromycin 1g PO once
  - Ceftriaxone 250mg IM once
  - Ciprofloxacin 300mg PO x 3d
  - Erythromycin 500mg PO x 7d
- *Extremely rare in the US and no commercially available lab test*

# Granuloma Inguinale (Donovanosis)

- Caused by *Klebsiella granulomatis*
- Painless, slowly progressive anogenital ulcers without lymphadenopathy
- Treatment doxycycline 100mg BID x 21 days until all lesions have completely healed
- *Extremely rare in the US and no commercially available lab test*

# Primary Genital HSV Features

- Extragenital manifestations common
- Fever, HA, malaise, myalgias
- Aseptic meningitis rare
- New lesions can manifest 4-10d after onset

# Recurrent Genital HSV Features

- Prodromal symptoms common but not always
- Recurrences in similar cutaneous distribution
- HSV 2 recurrence more common 4-5x a year



# Primary Treatment

Acyclovir	400mg	TID	7-10 days
	200mg	5x/D	7-10 days
Valacyclovir	1000mg	BID	7-10 days
Famciclovir	250mg	TID	7-10 days

**Treatment can be extended if healing is incomplete after 10 days of therapy.**

## Recurrent Treatment (within 72 hrs)

Acyclovir	400mg	TID	5 days
	800mg	BID	5 days
	800mg	TID	2 days
Valacyclovir	500mg	BID	3 days
	1g	QD	5 days
Famciclovir	125mg	BID	5 days
	1g	BID	1 day
	500mg once followed by 250mg BID x 2 days		

**If HSV2 or frequent recurrences consider suppressive therapy**

# Drug Resistant HSV

## **OFF-LABEL** therapy for antiviral resistant HSV

- Cidofovir topical 1%-3% ~~QD~~-BID
- Cidofovir IV 5mg/kg once weekly
- Foscarnet 40-80mg/kg IV Q8hrs until clinical resolution

# Gender Nonbinary (GNB)

*“I've always been very free in terms of thinking about sexuality, so I've just tried to change that into my thoughts on gender as well.*

***Non-binary/genderqueer is that you do not identify in a gender. You are a mixture of all different things. You are your own special creation.***

*I've sometimes sat and questioned, **do I want a sex change? It's something I still think about: ‘Do I want to?’ I don't think it is,***

*When I saw the word non-binary, genderqueer, and I read into it, and I heard these people speaking, I was like, ‘F\*ck, that is me.’”*

*-Sam Smith*

# Sexually Transmissible Enteric Infections

- Giardia lamblia and Hystolitica entamoeba
  - Diarrhea, gas, flatulence, cramping, nausea, dehydration, or NO SYMPTOMS
  - Dx 3 stool samples on separate days (“ova and parasites”)
- Giardia treatment
  - Metronidazole 250 mg PO TID x 5-7 days
  - Tinidazole 2g PO once
  - Albendazole 400mg PO QD x 5 days
- H. entamoeba treatment
  - Metronidazole 750 mg PO TID x 10 days
  - Followed by paromomycin 50mg TID x 7 days  
(IF symptomatic or cysts on examination of samples)

# Anolingus

## Hepatitis A

- Oral-fecal transmission
- HAV vaccination recommended for MSM
- Supportive management
- 10-15% relapse in 6 months
- PEP with vaccine or immunoglobulin

# Sexual Transmission of Hepatitis

## HBV

- Vaccine recommended for all patients
- PEP with HBV vaccination or immunoglobulin
- Check titers if at risk for occupational and non-occupational exposure

## HCV

- ↑ Transmission with fisting and anal intercourse
- ↑ risk in MSM, HIV-positive, and PrEP users
- No known postexposure prophylaxis (PEP)
- Several multidrug PO treatments available

# Human Papillomavirus (HPV)

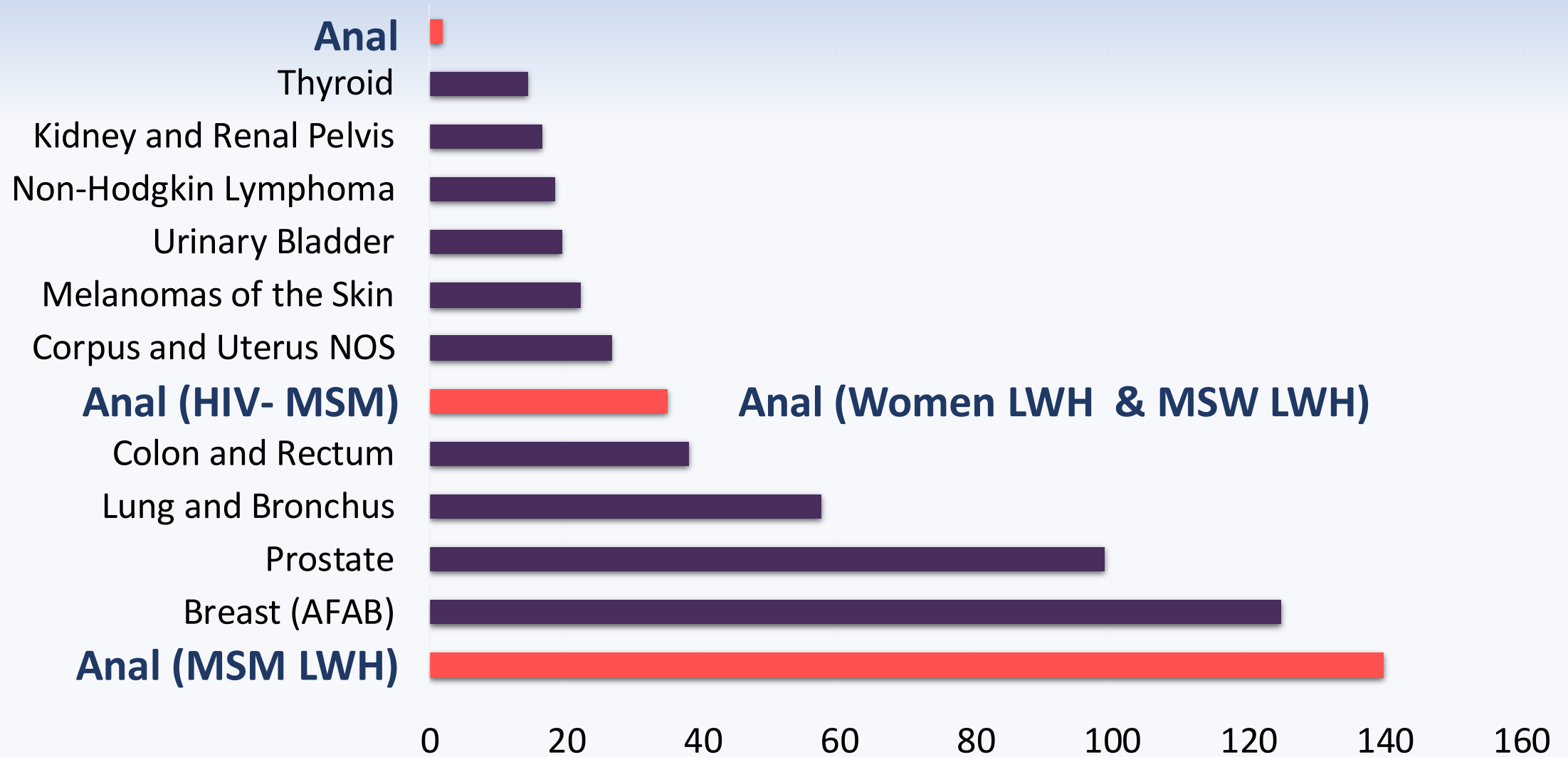
- The most common STI
- Can affect the genital, mouth, & anus
- LR HPV can cause condyloma (uncommon)
- HR HPV can cause cancer

*“Most sexually active people who are not vaccinated get HPV infection at some point in their lives, even if they only have one sexual partner.”*

-NYC DOH



# Anal Cancer Incidence per 100,000



# Anal Cytology

- ↑ Sensitivity ↓ Specificity
- Various methods
- 3-10% unsatisfactory
- Abnl result → HRA (“anal colposcopy”)



**Special  
Equipment**



**Special  
Training**



Start to consider how you'll care for/refer your patients who are LWH



# Anal Pap

## Equipment

- water-moistened synthetic-fiber swab with non-scored stick
- Liquid media (same as cervical cytology)

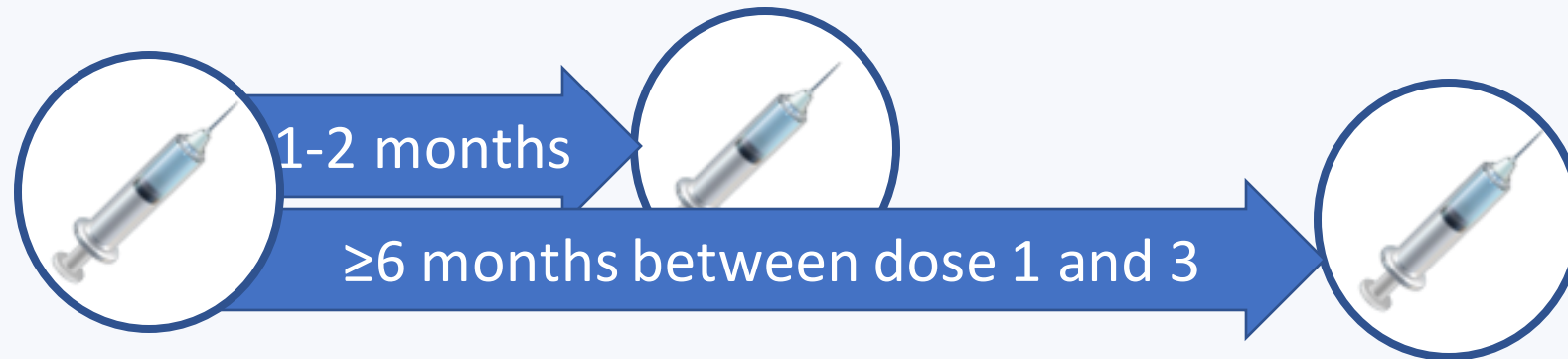


1. Evert anal verge.
2. Blindly insert one half of swab through the anal verge.
3. Apply lateral pressure in a circular motion while withdrawing the swab (10+ seconds)
4. Stir into liquid preparation (15+ seconds)

<https://www.youtube.com/watch?v=YyzmLYFc7Yc>

# HPV Vaccination

- Recommended up to age 26, considered up to age 45
- For ages 27-45 consider:
  - Prior exposure to HPV
  - Potential for future exposure to HPV
  - Cost/insurance coverage
- No current recommendation for HPV9 after HPV4



# Take Home Points

- Sexually transmitted infections are common and presentations vary in different patients and anatomical sites
- Screening, testing, and treatment guidelines continue to evolve and should be used alongside clinical decision making
- Sexual history taking should be focused to understand the context for an individual's screening, testing, treatment, and risk reduction needs and opportunities
- Don't assume anything about an individual's gender or sexuality

# Citations

- Habel, M. A., et al. "Heterosexual Anal and Oral Sex in Adolescents and Adults in the United States, 2011-2015." *Sexually transmitted diseases* 45.12 (2018): 775.
- Centers for Disease Control and Prevention. Viral Hepatitis And Men Who Have
- Centers for Disease Control and Prevention and Association of Public Health Laboratories. Laboratory Testing for the Diagnosis of HIV Infection: Updated Recommendations. Available at <http://dx.doi.org/10.15620/cdc.23447>. Published June 27, 2014. Accessed April 2019.
- U.S. Cancer Statistics Working Group. U.S. Cancer Statistics Data Visualizations Tool, based on November 2017 submission data (1999-2015): U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; [www.cdc.gov/cancer/dataviz](http://www.cdc.gov/cancer/dataviz), June 2018. Sex with Men. Published January 2019.
- Silverberg, M. J., Lau, B., Justice, A. C., Engels, E., Gill, M. J., Goedert, J. J., ... & Napravnik, S. (2012). Risk of anal cancer in HIV-infected and HIV-uninfected individuals in North America. *Clinical Infectious Diseases*, 54(7), 1026-1034.
- Genital herpes Medicine. Patel, Raj.. Published June 1, 2010. Volume 38, Issue 6. Pages 276-280.
- FDA. FDA approves expanded use of Gardasil 9 to include individuals 27 through 45 years old. October 5, 2018. Available at: <https://www.fda.gov/newsevents/newsroom/pressannouncements/ucm622715.htm>. Accessed April 2019.
- HIV in the United States and Dependent Areas. <https://www.cdc.gov/hiv/statistics/overview/ata glance.html>. Published September 25, 2019. Accessed October 30, 2019.
- Owens DK, Davidson KW, Krist AH, et al. Preexposure Prophylaxis for the Prevention of HIV Infection: US Preventive Services Task Force Recommendation Statement. *Jama*. 2019;321(22):2203-2213.
- Siegler A, Mouhanna F, Giler R, et al. Distribution of active PrEP prescriptions and the PrEP-to-need ratio, US, Q2 2017. In: ; 2018.
- Patel P, Borkowf CB, Brooks JT, Lasry A, Lansky A, Mermin J. Estimating per-act HIV transmission risk: a systematic review. *AIDS Lond Engl*. 2014;28(10):1509.
- Dubrow R, Silverberg MJ, Park LS, Crothers K, Justice AC. HIV infection, aging, and immune function: implications for cancer risk and prevention. *Curr Opin Oncol*. 2012;24(5):506-516. doi:10.1097/CCO.0b013e328355e131
- CDC. HIV Specific Criminal Laws. July 1, 2019. Available at: <https://www.cdc.gov/hiv/policies/law/states/exposure.html>. Accessed April 11, 2020
- Hernández-Ramírez RU, Shiels MS, Dubrow R, Engels EA. Cancer risk in HIV-infected people in the USA from 1996 to 2012: a population-based, registry-linkage study. *Lancet HIV* 2017 Aug 10. pii:
- Rubel, Alicia N., and Anthony F. Bogaert. "Consensual nonmonogamy: Psychological well-being and relationship quality correlates." *The Journal of Sex Research* 52.9 (2015): 961-982.
- Petroll AE, Walsh JL, Owczarzak JL, McAuliffe TL, Bogart LM, Kelly JA. PrEP Awareness, Familiarity, Comfort, and Prescribing Experience among US Primary Care Providers and HIV Specialists. *AIDS Behav*. 2017;21(5):1256-1267. doi:10.1007/s10461-016-1625-1S2352-3018(17)30125-X.
- Hare C, et al. The Phase 3 Discover Study: Daily F/TAF or F/TDF for HIV Preexposure Prophylaxis. CROI, March 2019, Abstract 104. Seattle.
- Fonner VA, Dalgligh SL, Kennedy CE, et al. Effectiveness and safety of oral HIV preexposure prophylaxis for all populations. *AIDS Lond Engl*. 2016;30(12):1973-1983. doi:10.1097/QAD.0000000000001145
- Smith DK, Herbst JH, Zhang X, Rose CE. Condom effectiveness for HIV prevention by consistency of use among men who have sex with men in the United States. *JAIDS J Acquir Immune Defic Syndr*. 2015;68(3):337-344.
- Valabhani S, Li X, Vittinghoff E, Donnell D, Pilcher C, Buchbinder S. Seroadaptive behavior: association with seroconversion among HIV-MSM. In: ; 2012.
- Smith DK, Grohskopf LA, Black RJ, et al. Antiretroviral postexposure prophylaxis after sexual, injection-drug use, or other nonoccupational exposure to HIV in the United States: recommendations from the US Department of Health and Human Services. *Morb Mortal Wkly Rep Recomm Rep*. 2005;54(2):1-20.
- Metsch LR, Feaster DJ, Gooden L, et al. Effect of risk-reduction counseling with rapid HIV testing on risk of acquiring sexually transmitted infections: the AWARE randomized clinical trial. *Jama*. 2013;310(16):1701-1710.
- Centers for Disease Control and Prevention. STDs in Men Who Have Sex with Men. Published July 2018.
- Centers for Disease Control and Prevention. Sexually Transmitted Diseases Treatment Guidelines, 2015. Published June 2015.
- Saxon C, Hughes G, Ison C; UK LGV Case-Finding Group. Asymptomatic Lymphogranuloma Venereum in Men who Have Sex with Men, United Kingdom. *Emerg Infect Dis*. 2016;22(1):112-116. doi:10.3201/EID2201.141867
- Palefsky et al. Treatment of Anal High-Grade Squamous Intraepithelial Lesions to Prevent Anal Cancer. Virtual. CROI 2022.
- Centers for Disease Control and Prevention Genital HSV Infection. 2015. Available at: <https://www.cdc.gov/std/tg2015/herpes.htm>. Accessed March 2020.
- Centers for Disease Control and Prevention Granuloma Inguinale. 2015. Available at: <https://www.cdc.gov/std/tg2015/donovanosis.htm>. Accessed March 2020.
- Centers for Disease Control and Prevention Chancroid. 2015. Available at: <https://www.cdc.gov/std/tg2015/chancroid.htm>. Accessed March 2020.
- Centers for Disease Control and Prevention. Parasites: Giardia. 2019. Available at: <https://www.cdc.gov/shigella/>. Accessed March 2020.
- Centers for Disease Control and Prevention. Parasites - Amebiasis. 2015. Available at: <https://www.cdc.gov/parasites/amebiasis/> Accessed March 2020.
- Centers for Disease Control and Prevention. "Human Papillomavirus (HPV): Vaccine Schedule and Dosing." Updated August 15, 2019. Available at: <https://www.cdc.gov/hpv/hcp/schedules-recommendations.html>

# Questions?



@RectalRockstar



JonathanBaker.PA@gmail.com

