



## Extragenital Testing

A CLINICAL PERSPECTIVE

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### What is “extragenital” testing?

- Testing for STIs at any body site other than genitourinary (urethral/urine/vaginal/cervix)
- Usually refers to rectal and oropharynx
- Typically for gonorrhea and/or chlamydia only
- Routinely done only for men who have sex with men (MSM)

### Current Recommendations (CDC 2010)

- Test for rectal infection with *N. gonorrhoeae* and *C. trachomatis* in men who have had receptive anal intercourse during the preceding year (NAAT of a rectal swab is the preferred approach);

and

- Test for pharyngeal infection with *N. gonorrhoeae* in men who have had receptive oral intercourse during the preceding year (NAAT is the preferred approach).
- Testing for *C. trachomatis* pharyngeal infection is not recommended.

### The burden of rectal & pharyngeal GC/CT

- Multiple reports demonstrate that both gonorrhea and chlamydia are common infections at rectal and pharyngeal sites in MSM
 

Pharyngeal GC positivity 3-9%	Rectal GC positivity 5-10%
Pharyngeal CT positivity 1-2%	Rectal CT positivity 5-11%
- You miss a lot of disease if you don't screen MSM at all sites of exposure
  - SF clinic data: 53% of chlamydia and 64% of gonococcal infections in MSM were in non-urethral sites<sup>1</sup>
- Rectal GC and CT infection is associated with risk of HIV acquisition
  - 8-fold increased risk with 2 prior rectal infections<sup>2</sup>
  - Rectal GC or CT infection is a trigger indicator for initiating HIV PrEP

1. Kent CID 2005;41 2. Bernstein J Acquir Immune Defic Syndr 2010;53(4)

### UW-Madison screening data, cy2014

Pharyngeal gonorrhea: 5.0% positive, 32.3% of all GC cases

Rectal gonorrhea: 5.6% positive, 22.6% of all GC cases

Rectal chlamydia: 6.5% positive, 8.0% of all CT cases

Total extragenital cases identified: 51 positive tests, 18.6% of all CT/GC

*In this population of college students, nearly 1 in 5 of all CT or GC infections were non-genital (men and women combined)*

### Clinical Considerations: History

Identifying who should be tested at extragenital sites requires that a proper sexual history be obtained by the provider. At a minimum this should include:

- Gender of recent sexual partners (“are your partners men, women or both?”)
- Then for MSM, ask this additional question: “have you had any receptive anal sex in the past 6 months?”
  - Not all MSM have anal sex. Some MSM have only insertive anal sex (“top”). Some MSM have only receptive anal sex (“bottom”). Some MSM have both types of anal sex (“versatile”). Some MSM have only oral sex. You can't assume any of this; you have to ask.
- And, “have you performed oral sex on your male partners?” [ie receptive oral sex]
- Usually one should also ask about # of partners and frequency of condom use, but this does not affect which sites to test or what tests are ordered.

## Clinical: Pharyngeal gonorrhea

- Pharyngeal GC infection is important primarily because it represents a reservoir for anogenital disease
- Transmission dynamics, natural history not well studied. Probably transient.
- Usually no associated pathology, although there is a theoretical risk of invasive disease, esp in immunocompromised persons
- Almost always asymptomatic
- Sometimes more difficult to eradicate; fewer drugs produce reliable cure
- Use CDC recommended therapy: ceftriaxone 250mg + azithromycin 1g

## Clinical: Rectal gonorrhea / chlamydia

- Rectal GC and rectal CT infection are both common in MSM
- Usually asymptomatic, but can cause proctocolitis
  - rectal pain, discharge, bleeding
  - LGV-associated proctocolitis can be severe
- GC treatment: ceftriaxone 250mg + azithromycin 1g
- CT treatment: azithromycin 1g. Some data suggests doxycycline is more effective for eradicating rectal infection; doxy is recommended for LGV
- Conventional NAATs cannot identify LGV strains

## Clinical: Pharyngeal chlamydia

- Pharyngeal CT infection is probably also a reservoir for anogenital disease
- Very little data exists about prevalence, incidence, transmission, or natural history
  - until NAATs, no easy or accurate way to test
- At this point in time, no recommendation for routine screening/testing
  - this will probably change in the future, as data accumulates with NAAT based testing
- Ideal treatment regimen uncertain; we would use azithromycin 1g

*Genital chlamydia is a very common infection...  
and oral sex is a very common behavior...  
so a presumption of oral infection given exposure is reasonable*

## Standard STI screening for MSM

### Routine:

- Urine NAAT for gonorrhea and chlamydia
- Pharyngeal NAAT for gonorrhea, if history of receptive oral sex
- Rectal NAAT for gonorrhea and chlamydia, if history of receptive anal intercourse
- HIV antigen/antibody test
- Syphilis serology

### Supplemental:

- Hepatitis B serology, if not immunized prior to onset of sexual activity
- Hepatitis C serology, if HIV+ or history of IDU

Screen at least annually; more often as dictated by risk (multiple partners)

## Specimen Collection

### Pharyngeal Testing

1. Swab the posterior pharynx with the collection swab
2. Place the swab in transport media
3. Procedure is identical to collecting a routine swab for throat culture, strep screen, etc



### Rectal Testing

1. Insert the collection swab into the anal canal, ~2-3cm (1 inch)
2. Leave it there for a few seconds, rotate
3. Remove and place in transport media

## So why aren't more MSM being tested?

### The Provider Problem

- Poor sexual history skills, inexperience with rectal testing
- Ignorance about STDs in general, and MSM sexual behaviors/risk in particular
- Technically confusing (which swabs? which orders? which laboratory?)

### The Laboratory Problem

- No FDA-cleared test commercially available
- Availability varies by lab, health system, region
- Lack of clear recommendations
- Site-specific collection requirements, assays, not always well communicated

Plus: resistance to change, and cost

*See excellent 2015 blog post by Bill Smith on this topic (handout provided)*

## What about testing non-MSM?

### Pro:

- Anal sex among MSW/WSM is more common than you think
- Oral sex is a near universal behavior regardless of sexual orientation
- Potentially an important reservoir of disease in the population
- As many as 10-25% of CT infections in women may be extragenital

### Con:

- Incidence of rectal GC/CT is much lower than in MSM; is it high enough to justify screening?
- No direct link to reproductive health/fertility
- CDC: insufficient data to support routine testing at this time

See distributed article (Trebach) and editorial (Dombrowski) from STD 2015;42(5) for more on this topic

## References & Further Reading

- Gunn et al. Screening among men who have sex with men: value of multiple anatomic site testing, San Diego, California, 1997-2003. *Sex Trans Dis* 2008;35(10).
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- Trebach et al. Neisseria gonorrhoeae and Chlamydia trachomatis among women reporting extragenital exposures. *Sex Trans Dis* 2015;42(5).
- Dombrowski JC. Do women need screening for extragenital gonococcal and chlamydial infections? *Sex Trans Dis* 2015;42(5).