AETC AIDS Education & Training Center Program Mountain West

2023 STI Update

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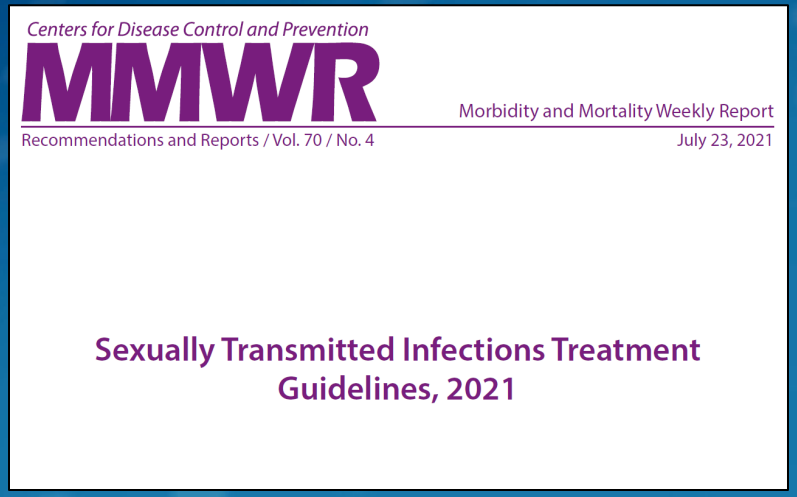

Disclosure

- No conflicts of interests or relationships to disclose

Disclaimer

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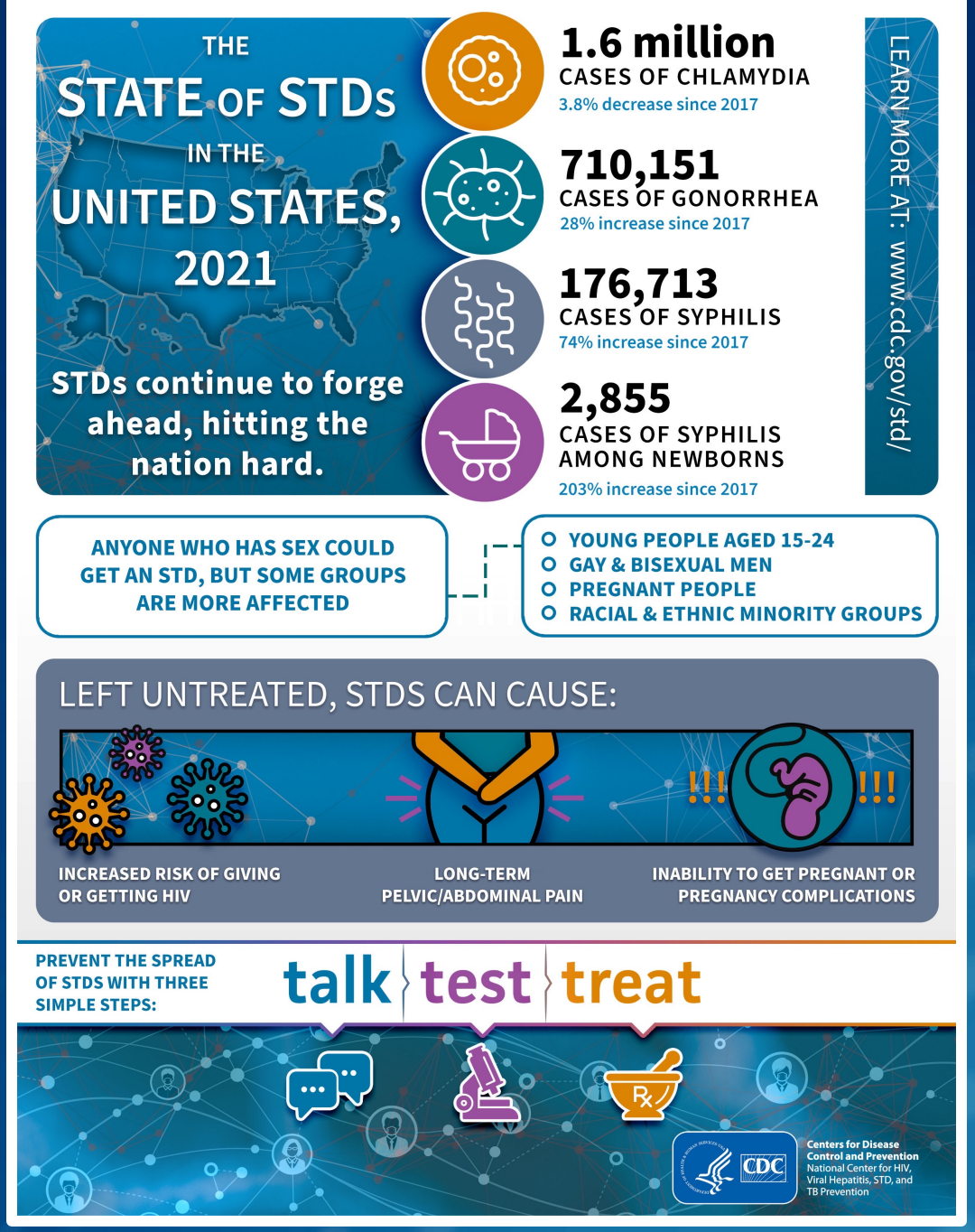


https://www.cdc.gov/std/statistics/infographic.htm

We have a plan! (June 2023)

STI

VISION

The United States will be a place where sexually transmitted infections are prevented and where every person has high-quality STI prevention, care, and treatment while living free from stigma and discrimination.

This vision includes all people, regardless of age, sex, gender identity, sexual orientation, race, ethnicity, religion, disability, geographic location, or socioeconomic circumstance.

Focused on:
Chlamydia
Gonorrhea
Syphilis
HPV/HPV vaccination
HSV is coming!

B. Goals

In pursuit of this vision, the STI Plan establishes five goals:

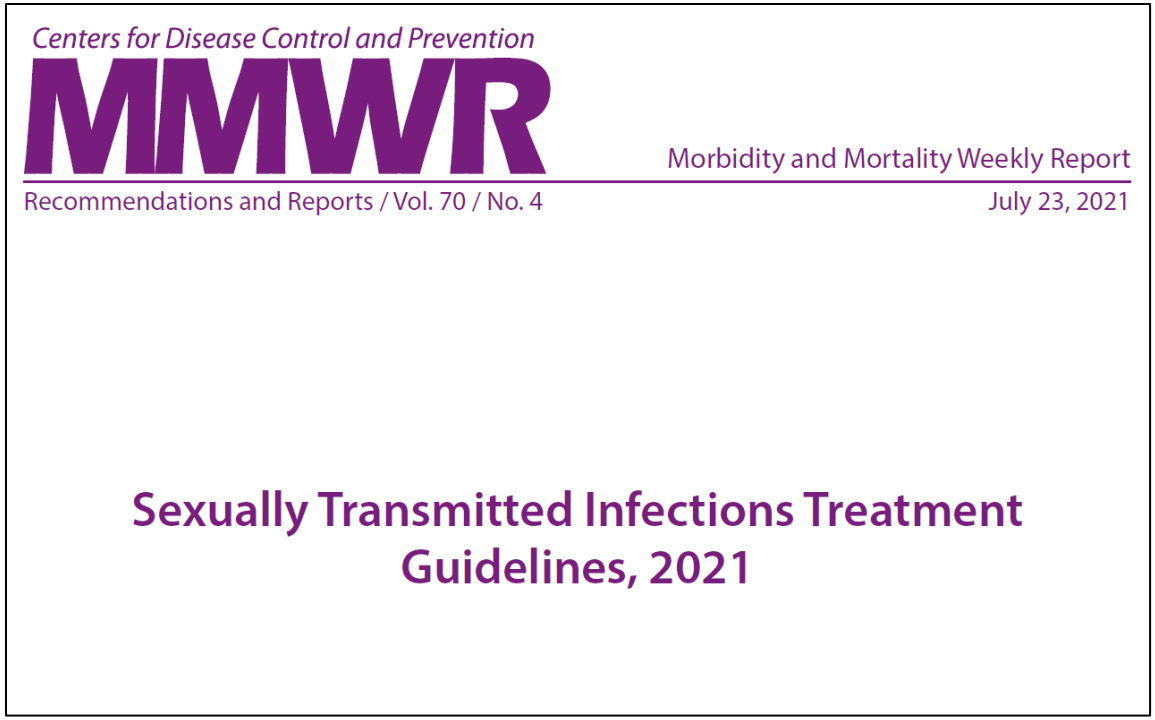
1. **Prevent new STIs**
2. **Improve the health of people by reducing adverse outcomes of STIs**
3. **Accelerate progress in STI research, technology, and innovation**
4. **Reduce STI-related health disparities and health inequities**
5. **Achieve integrated, coordinated efforts that address the STI epidemic**

Sexually Transmitted Infections
National Strategic Plan
for the United States | **2021–2025**

[Sexually Transmitted Infections (STI) National Strategic Plan: 2021-2025 (hhs.gov)]

MWAETC

New-ish 2021 CDC STI Guidelines



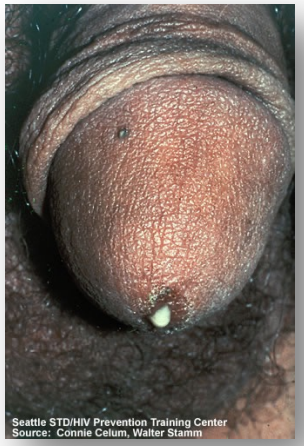
Mobile app now available for Apple and Android devices
Search "STI Tx Guide"
https://www.cdc.gov/std/treatment-guidelines/provider-resources.htm#MobileApp

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

What's in a Name?

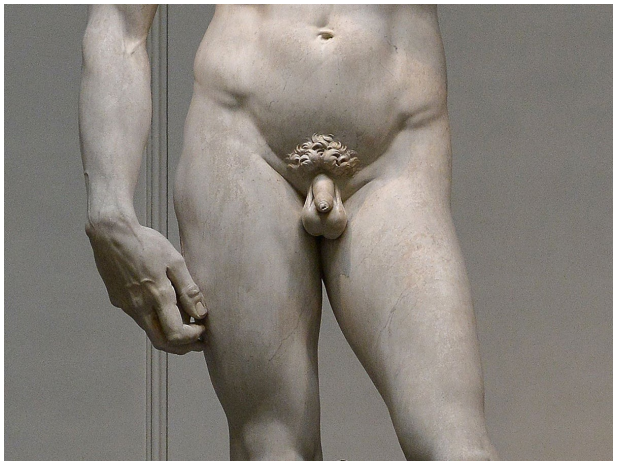
STD

- Sexually transmitted *disease*
- Refers to disease or illness
- Implies sickness



STI

- Sexually transmitted *infection*
- Refers to pathogen
- Often asymptomatic



CDC STI Treatment Guideline Development

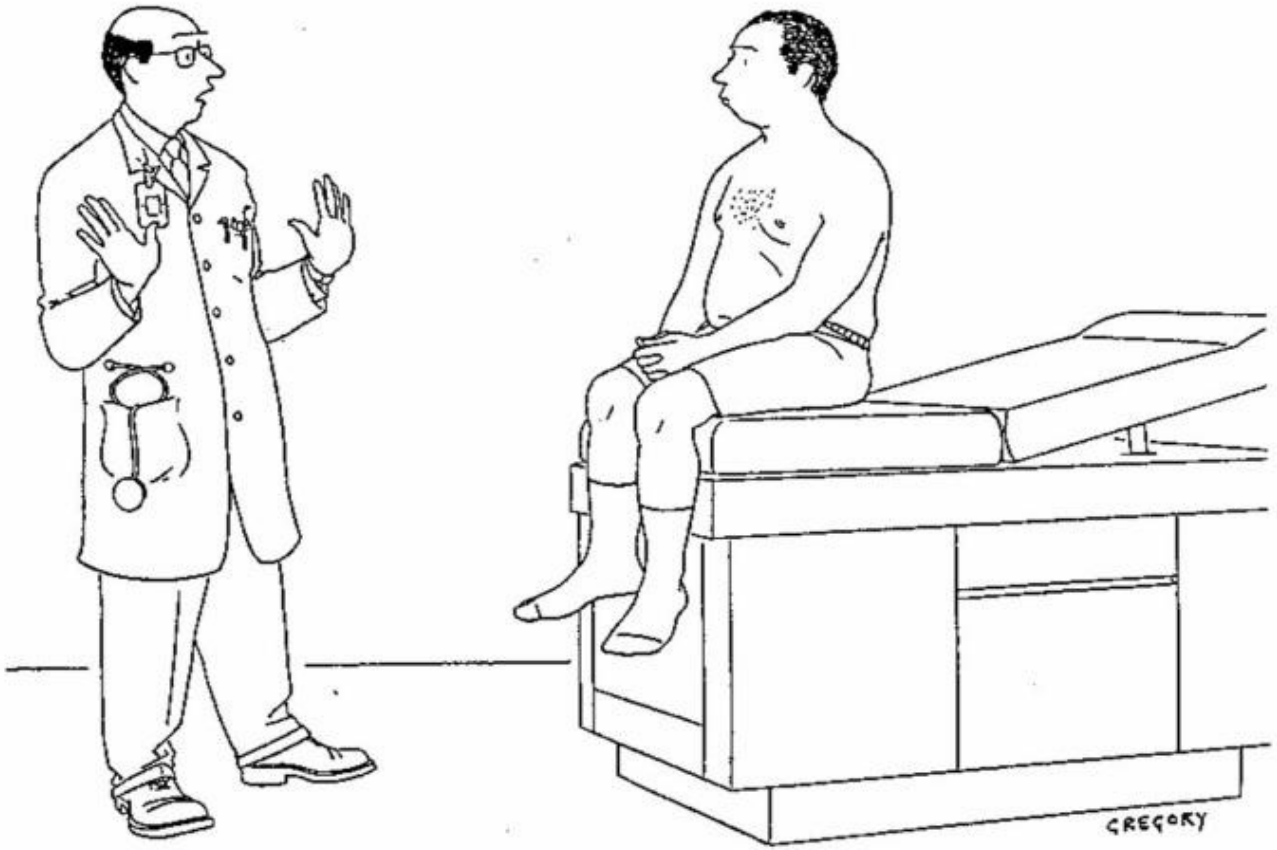
- Evidence-based on principal outcomes of STI therapy
- “Recommended” regimens preferred over “alternative” regimens
- Treatments alphabetized unless there is a priority of choice
- Released July 2021

Areas for improvement and caveats…

- CDC still uses gender-based recommendations
  - Screening guidelines for “women” and “men”
  - For clinical purposes, consider anatomy and anatomic sites of exposures
  - Need more inclusive language, acknowledgment of gender diversity/sexual minorities
- Graphic images ahead
- Racism, not race/ethnicity, creates and perpetuates health disparities

The ins and outs of screening: 2021 CDC recommendations

STI Screening: Don't Be This Person!



"Whoa—way too much information."

New Sexual History Taking Guide: New 5 P's

1. Partners

   What are the genders of your partners…

2. Practices
3. Protection from STIs
4. Past history of STIs
5. Pregnancy intention (new)

   Previously "prevention"

Additional questions for identifying HIV and viral hepatitis risk:

- Have you or any of your partner(s) ever injected drugs?
- Is there anything about your sexual health that you have questions about?

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

Updates to Hepatitis C (HCV) screening

All adults	Pregnant persons	MSM with HIV
At least once if ≥18 years*	With each pregnancy*	At least once if ≥18 years* & annually thereafter

*unless local prevalence is <0.1%

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STI Screening for Women (WSM and WSW)

Women under 25 years of age

- Chlamydia/gonorrhea
- HIV at least once
- Hep C at least once if ≥ 18 yo (unless prevalence of Hep C < 0.1%)

Women 25 years of age and older

- Chlamydia/gonorrhea if at risk
- HIV at least once
- Hep C at least once (unless prevalence of Hep C < 0.1%)

Pregnant persons

- Chlamydia (<25 years of age, or older women if at risk, and retest during 3rd trimester)
- Gonorrhea (<25 years of age, or older women if at risk, and retest during 3rd trimester)
- HIV at 1st antenatal visit, and in 3rd trimester, if at risk
- Syphilis serology at 1st antenatal visit, in 3rd trimester, and at delivery, if at risk (WA DOH)
- HepB sAg
- Hep C (unless prevalence of Hep C < 0.1%) WITH EVERY PREGNANCY

Screening not recommended for M. genitalium or trichomonas

STI Screening in Men who Have Sex with Women (MSW)

- No routine screening in the community
  - Except HIV (**age 15-65 and if seeking STI testing**) and Hepatitis C if **age ≥18**

- CDC says consider screening for:
  - CT in “young men” in adolescent clinics, correctional facilities, and STI clinics or in populations with high burden of infection
  - Syphilis if increased risk (includes history of incarceration, age <29)
  - Hepatitis B if at increased risk (sexual or percutaneous exposure)

2022 PHSKC & WA DOH Updated Syphilis Screening Guidelines

Cis-women and cis-men who have sex with women (including pregnant persons)

Test sexually active* patients with any of the following risk factors at least annually and whenever they present for care up to every 3 months:

- Persons who inject drugs
- Persons who use methamphetamine or nonprescription opioids
- Persons living homeless or who are unstably housed
- Person engaged in transactional sex
- Persons entering correctional facilities or with a history of incarceration in the prior 2 years
- Persons with a history of syphilis in the prior 2 years

Persons with a sex partner with any of the above risks should test for syphilis at least annually

---

Pregnant persons should be tested at the following times:

- First prenatal care
- Time of 3rd trimester laboratory testing - typically done at 24-28 weeks gestation
- Time of delivery if any of the above risks are present or the pregnant person was diagnosed with a bacterial STI or first-episode of HSV (genital herpes) during pregnancy++.

Test pregnant persons not engaged in prenatal care any time that present to a clinical setting (i.e., ERs, jail, substance use treatment facilities, labor and delivery, etc.)

Pregnant persons with fetal demise at ≥20 weeks gestation

Sexually active persons aged 45 and under if they have not tested since January 2021.

Women whose male partners have sex with both men and women should test for syphilis annually

---

Sexually active HIV positive persons outside of mutually monogamous relationships should test annually

---

Persons diagnosed with gonorrhea or HIV should be tested for syphilis if not done at the time of their initial gonorrhea/HIV testing

https://content.govdelivery.com/accounts/WAHCA/bulletins/318b7e0

MWAETC

STI Screening for MSM

- HIV*
- Syphilis*
- Urethral GC and CT*
- Rectal GC and CT (if receptive anal sex)*
- Pharyngeal GC (if oral sex)*
- Hepatitis B (HBsAg, HBV core ab, HBV surface ab)
- Hepatitis C: (At least once if ≥ 18 yo, unless prevalence of infection < 0.1%)
- Anal cancer: annual digital anorectal exam may be useful (no anal Pap rec yet)
  - BUT STAY TUNED!!! Awaiting guidelines…
- HSV-2 serology (consider)

***At least annually, more frequent (every 3-6 months) if multiple/anonymous partners, drug use, or partners with risk**

Routine screening not recommended for M. genitalium

STI Screening for Transgender Persons

Based on current anatomy and gender of sex partners

- Offer HIV screening to all transgender persons
- TG persons who have sex with cisgender men or transgender women, at similar risk for STIs as cis-MSM

Transgender women post vaginoplasty

- GC/CT (all sites of exposure: oral, anal, genital)

(urine vs neovaginal swab not specified, best specimen type based on tissue type used to construct neovagina)

Transgender men post metoidioplasty

- If vagina still present and need to screen for STIs, cervical (or front hole) swab should be used as “a urine specimen will be inadequate for detecting cervical infections”

Extra-Genital screening: If you just check the pee, you'll miss GC and CT…

What is “Extragenital” Screening?

- Extragenital screening = 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
- Previously recommended routinely only for MSM, but now *permissive* for other individuals

Importance of Extragenital GC/CT Infections

- Transmission
  - 30% of symptomatic gonococcal urethritis is attributable to oro-pharyngeal exposure[1]
- HIV Transmission
  - Can increase risk of acquisition[2-4]
- Treatment can differ
  - Pharyngeal GC[5]
    - Ceftriaxone > Cefixime
  - Rectal CT[6]
    - Doxy >>> Azithromycin

1. Barbee et al, *STI,* 2015; 2. Vaughan, *BMC Med Res Methodol,* 2015; 3. Kelly, *AIDS Res Hum Retroviruses,* 2015; 4. Jin, *JAIDS*, 1999; 5. Moran, *STD* 1995; 6. Kong, *JAC,* 2015

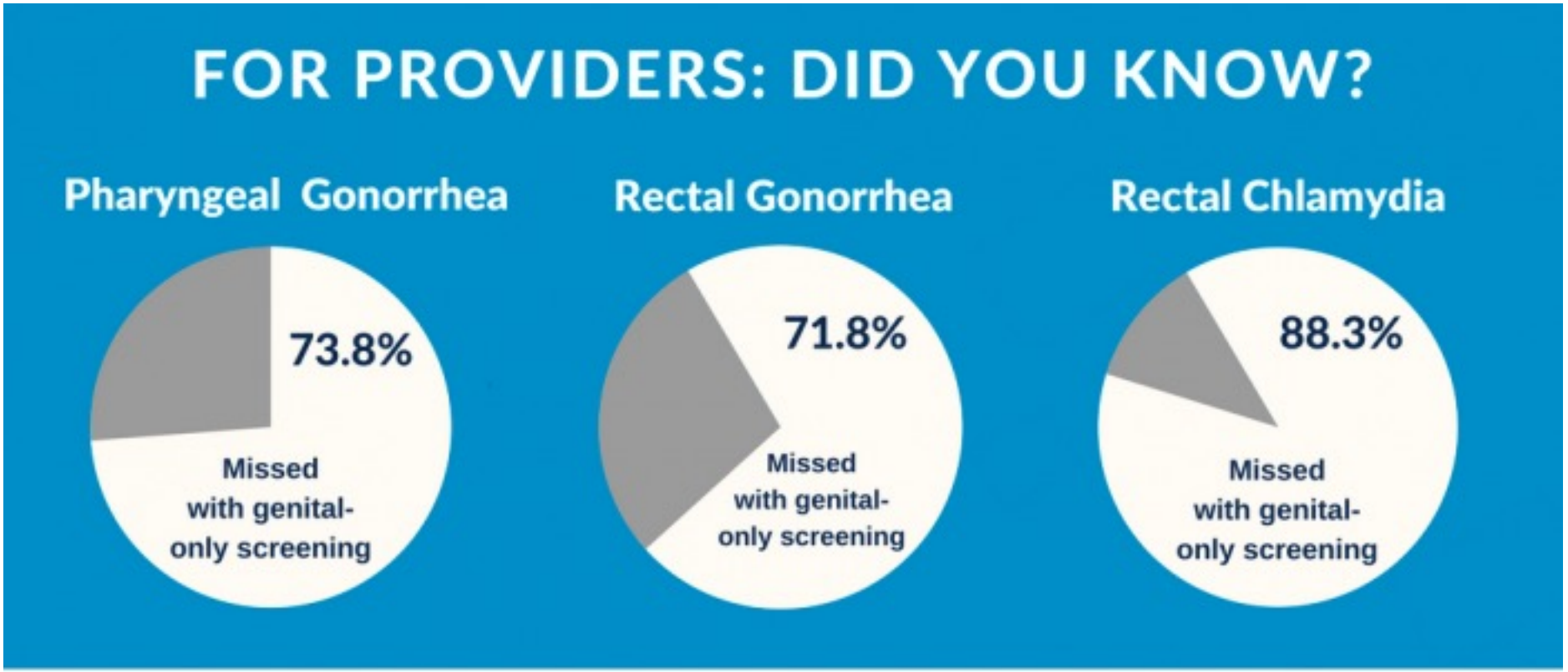
Extragenital Gonorrhea & Chlamydia is Common

- Among MSM, high rates of extra-genital GC & CT
  - Pharyngeal GC: 9.2%[1]
  - Rectal GC: 9.7%[3]
  - Rectal CT: 12%[3]

- The majority of infections are asymptomatic
  - 92% of pharyngeal GC[2]
  - 84-86% of rectal GC[2]

1. Kent CK. CID 2005
2. Morris, CID 2006
3. Barbee, STD 2014

Checking Urine Alone Insufficient in MSM

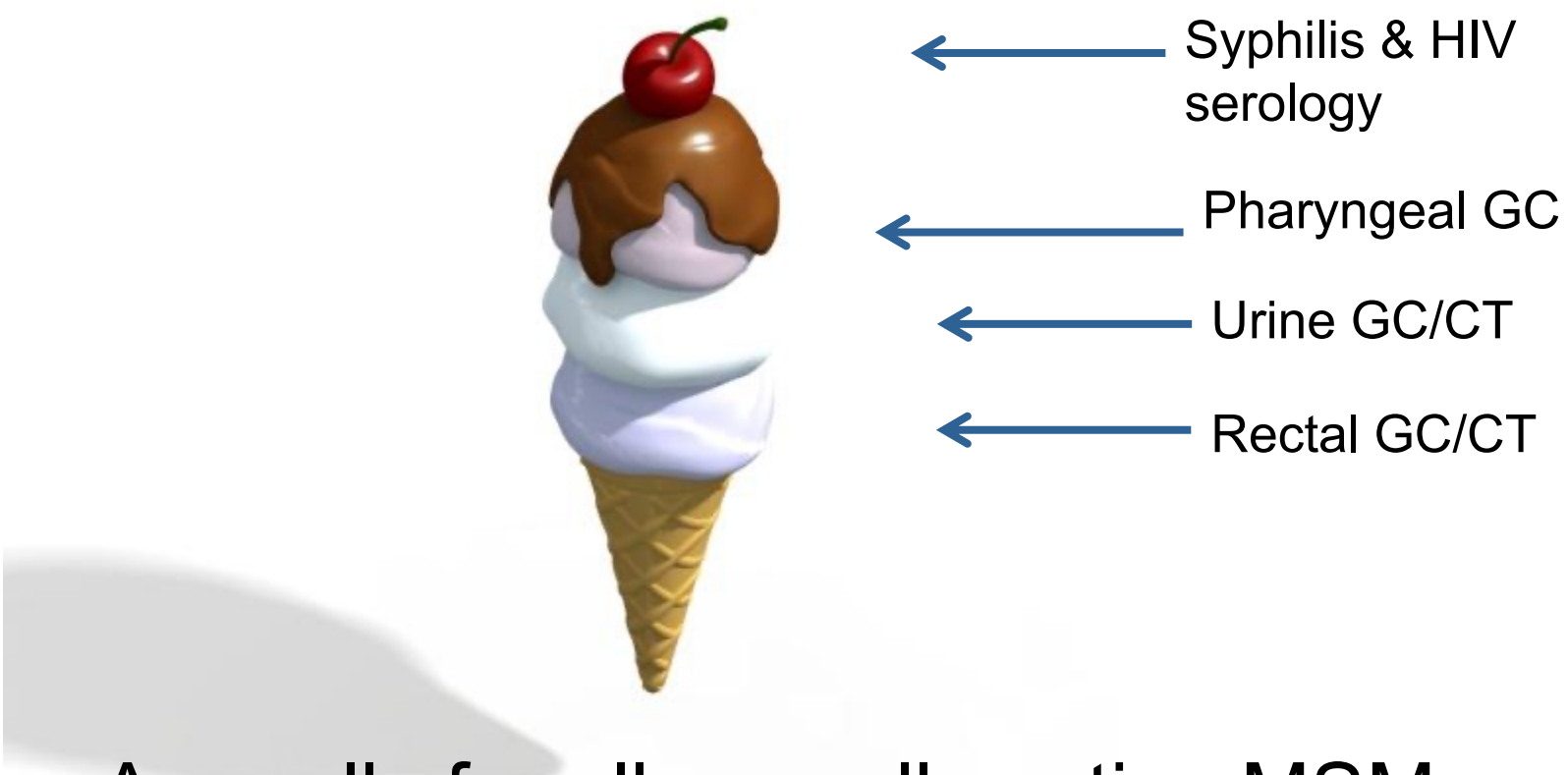


STD Surveillance Network, July 2010- June 2012 ,
STD clinic data for 11 SSuN jurisdictions. Patton, et al. Clin Infect Dis. March 2014.

NASTAD

National Coalition of STD Directors

Don’t forget the triple dip: *STI Screening for MSM*

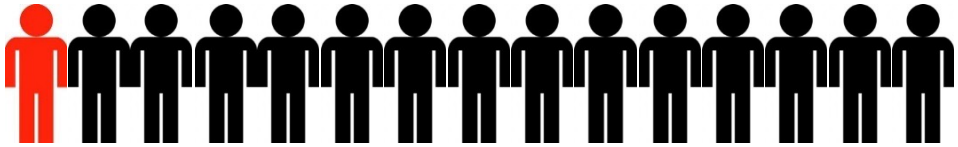


Annually for all sexually active MSM

Every 3-6 months for high-risk MSM

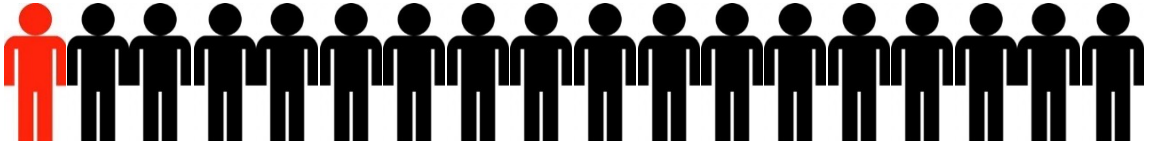
STDs predict future HIV Risk among MSM

Rectal GC or CT



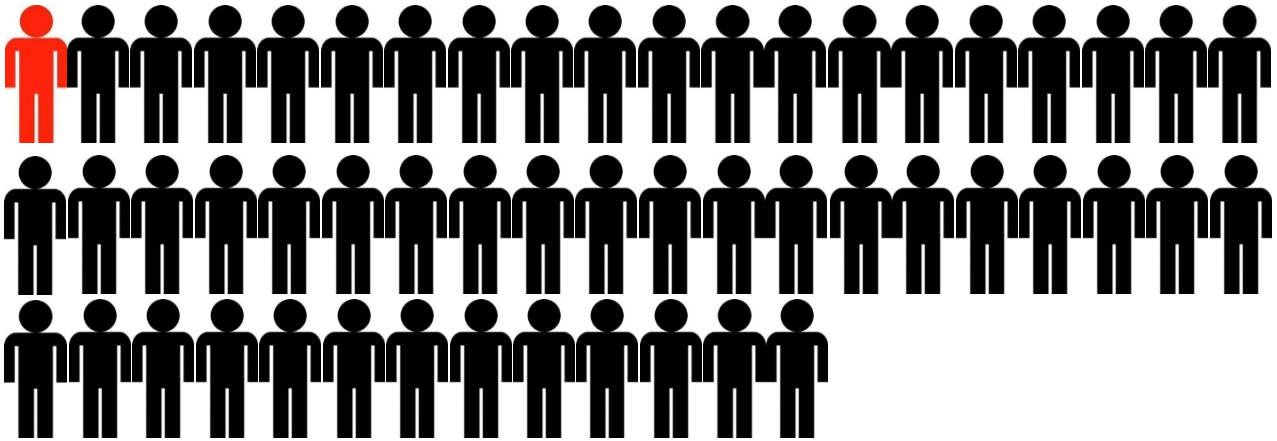
1 in 15 MSM were diagnosed with HIV within 1 year.*

Primary or Secondary Syphilis



1 in 18 MSM were diagnosed with HIV within 1 year.**

No rectal STD or syphilis infection



1 in 53 MSM were diagnosed with HIV within 1 year.*

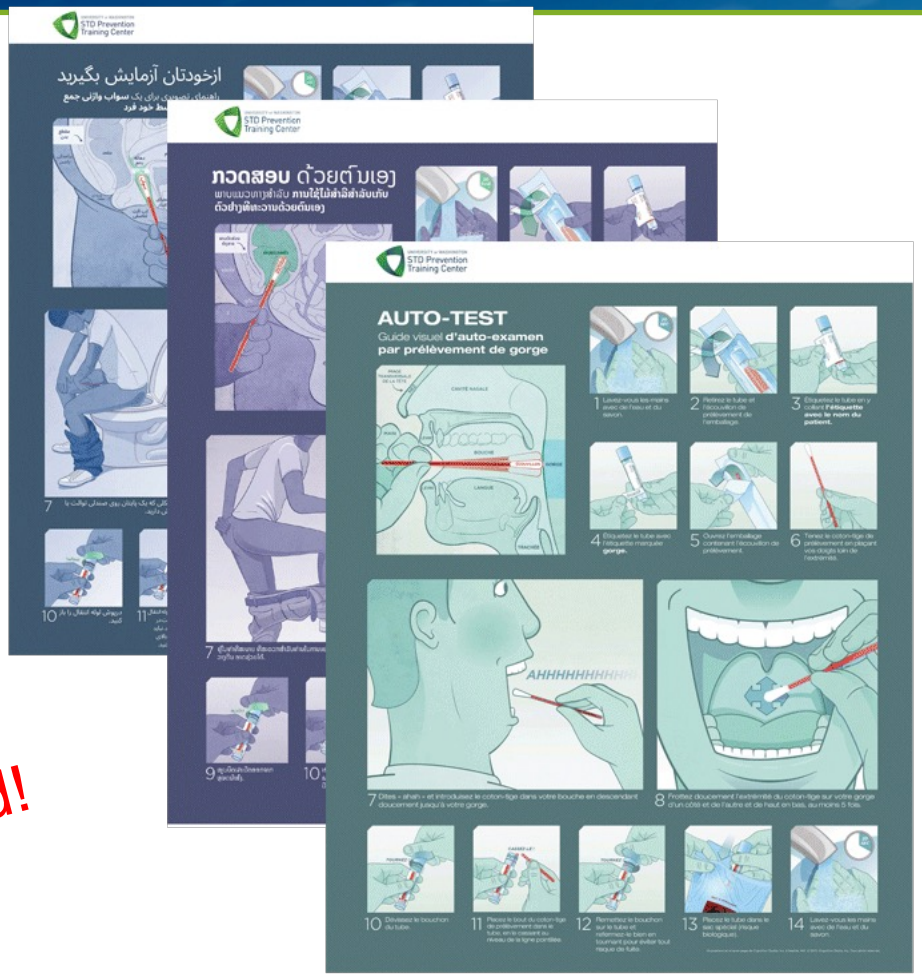
**STD Clinic Patients, New York City. Pathela, CID 2013:57;*
***Matched STD/HIV Surveillance Data, New York City. Pathela, CID 2015:61*

What about extragenital screening for women?

- Not routinely recommended by CDC STD Guidelines
  - ***BUT MORE PERMISSIVE LANGUAGE IN THE 2021 GUIDELINES***
  - ***Rectal CT and pharyngeal/rectal GC "can be considered in females based on reported sexual behaviors and exposure, though shared clinical decision…"***
- Meta-analysis of 14 studies of rectal testing[1]
  - Overall 6.0% rectal CT positivity
  - When urogenital CT detected 68.1% also rectal positive
  - 2.2% isolated rectal CT
  - Rectal CT not associated with reported anal intercourse
- Can increase rates of chlamydia case-finding
- Should be treated if found

1: Chandra, Sexually Transmitted Infections, 2018

TESTYOURSELF Visual Guides for Self-Collection



Now available in 22 languages!

Gender de-emphasized!

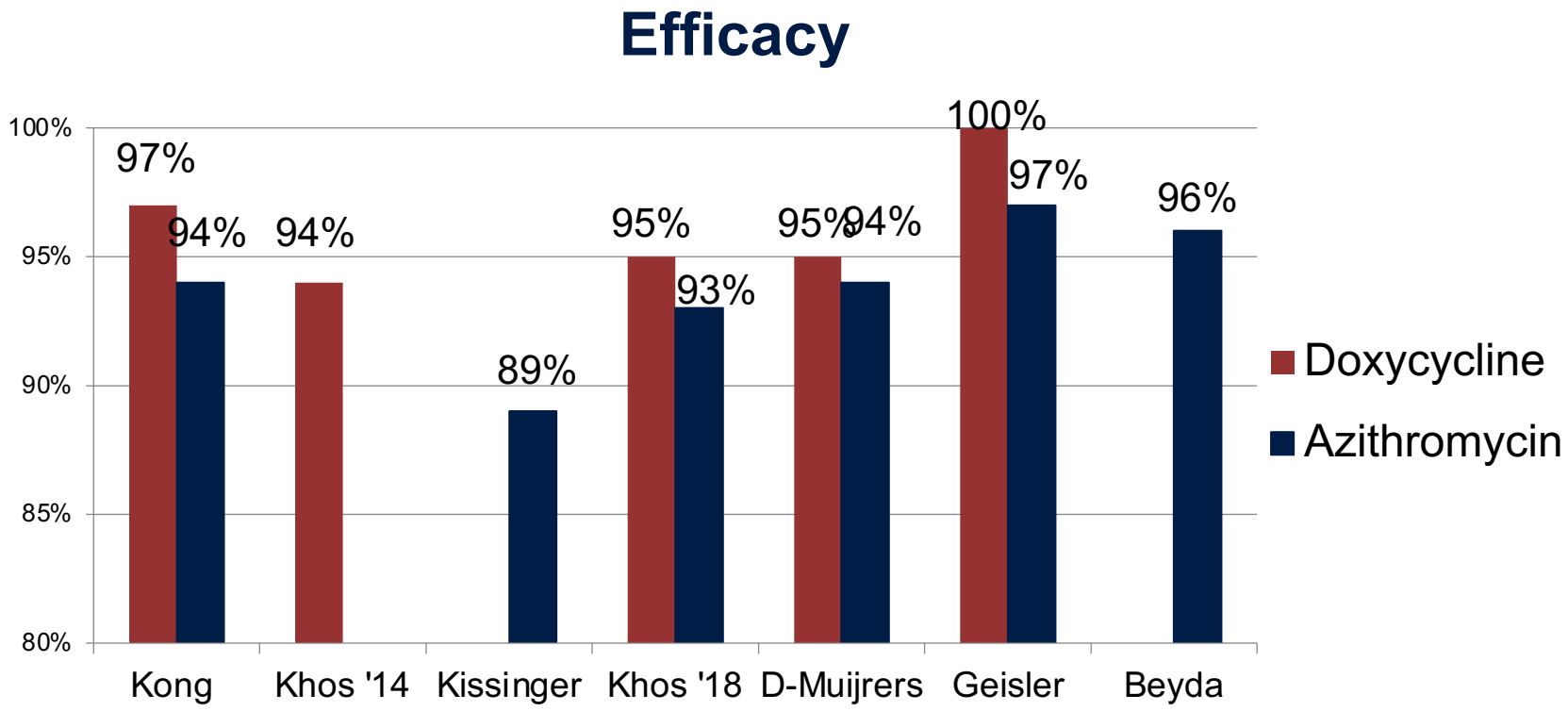
Visit https://www.uwptc.org/visual-guides for free posters for your clinic

CHLAMYDIA

You diagnose a 24 yo man who has sex with men with rectal CT after implementing a self-testing program in your clinic. What is the best treatment for this?

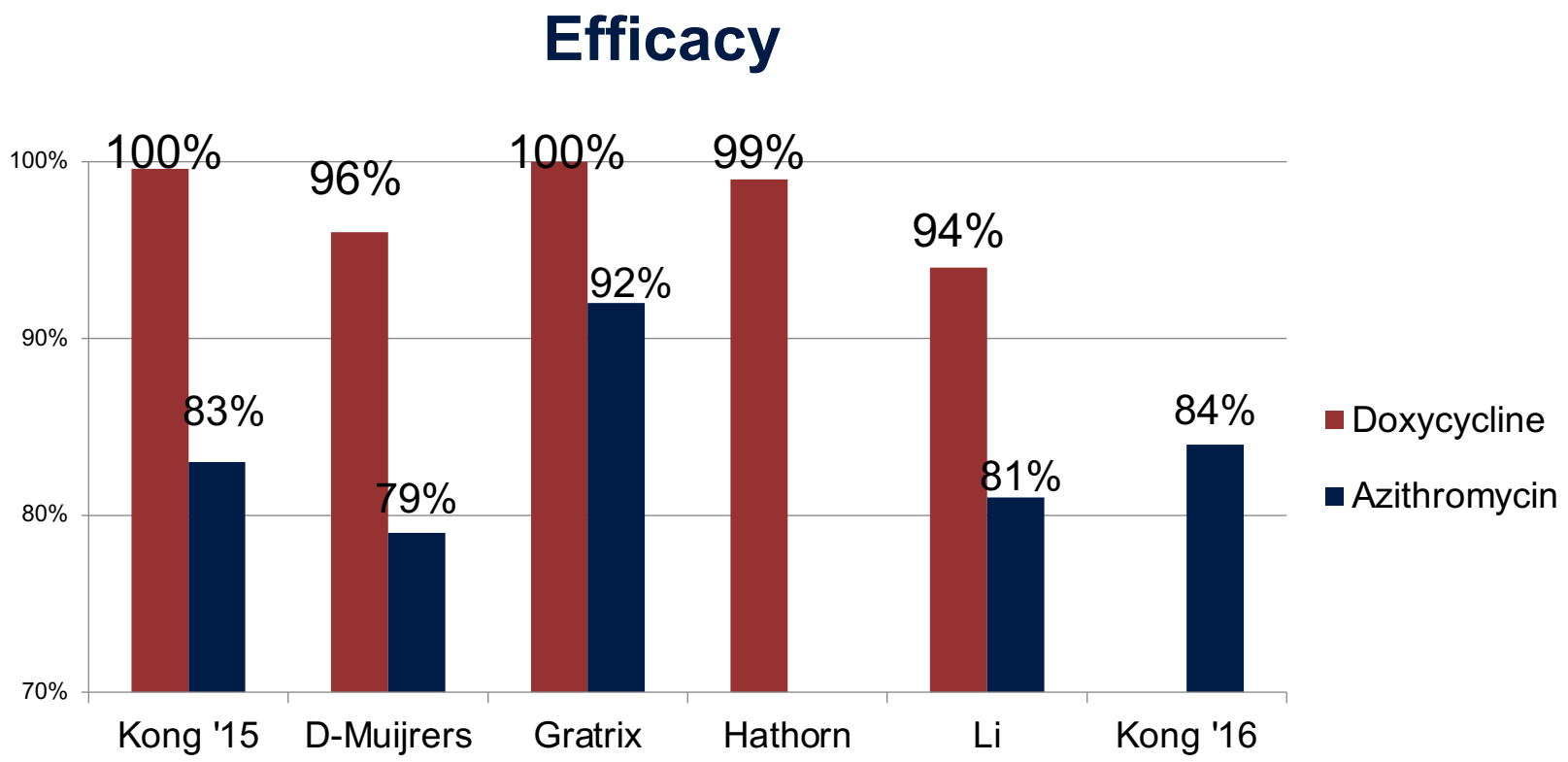
1. Azithromycin 1 gm orally once
2. Doxycycline 100 mg twice daily for 7 days
3. Either is fine

Doxycycline vs Azithromycin for Urogenital Chlamydia



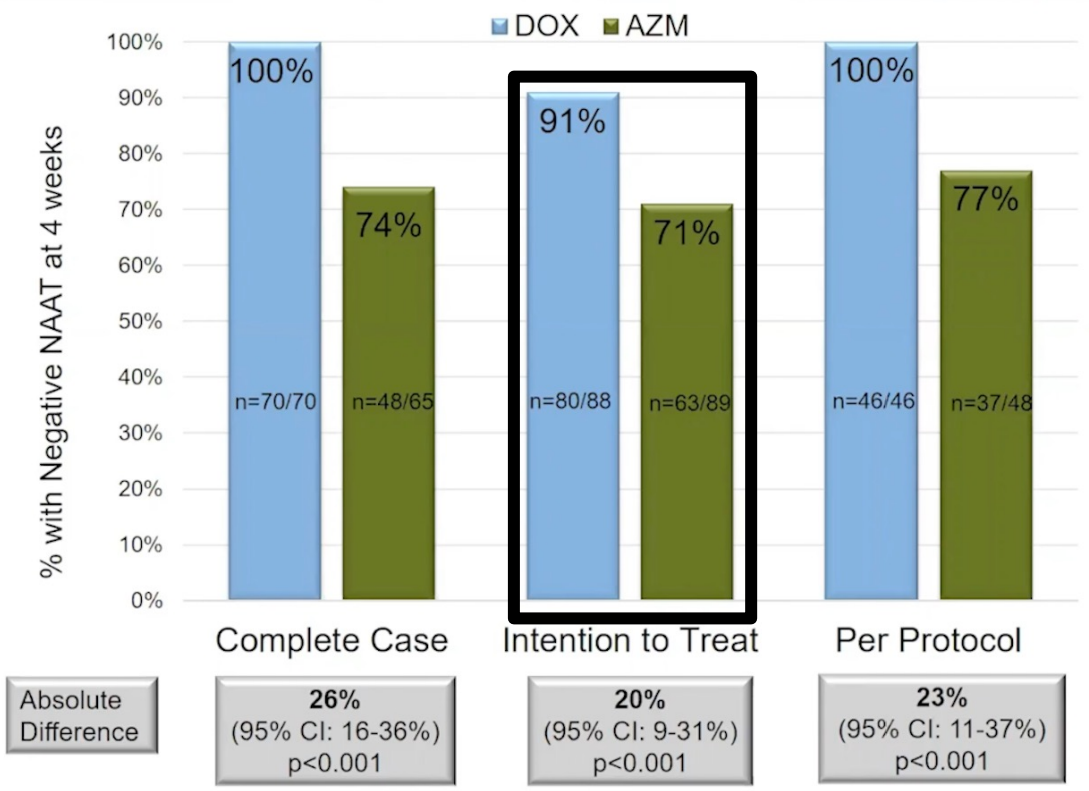
Slide credit: Dr. Will Geisler

Doxycycline vs Azithromycin for Rectal Chlamydia



Slide credit: Dr. Will Geisler

First RCT of Doxycycline vs Azithromycin for Rectal CT: Microbiologic cure at 4 weeks



Only one participant randomized to doxycycline had a +NAAT, other seven lost to follow-up

Chlamydia Treatment:

Urogenital/ Rectal/ Pharyngeal

Change in 2021 STI Treatment Guidelines

Recommended regimens (non-pregnant):

- Doxycycline 100 mg orally twice daily for 7 days*

Alternative regimens (non-pregnant):

- Azithromycin 1 g orally in a single dose **OR**
- Levofloxacin 500 mg orally once daily for 7 days

*Doxycycline delayed-release 200 mg, once-daily dosing for 7 days effective for urogenital CT. More costly but lower frequency GI side effects than standard doxycycline.

Chlamydia Treatment: Pregnancy

Recommended regimen (pregnant*):

- Azithromycin 1 g orally in a single dose

Alternative regimens (pregnant*):

- Amoxicillin 500 mg orally three times a day for 7 days

*** Test of cure at 3-4 weeks only in pregnancy**

But Azithromycin, How We Love Thee…

- Advantages
  - Can be dispensed in clinic, directly-observed therapy
  - Single dose
    - Better for adherence issues
    - More discreet, better for adolescents, confidentiality
    - Better tolerated, fewer adverse effects
  - Safe in pregnancy and breastfeeding

*NOTE: CDC STD Treatment Guidelines are guidance not prescriptive. Clinicians may use judgment with clinical decision making.

Sure feels like there are a lot of changes for me in the 2021 CDC STI Guidelines!

Chlamydia

Just you wait…

Gonorrhea

GONORRHEA

You get a call from the lab telling you that the patient you tested for STIs yesterday has a positive gonorrhea NAAT. Before deciding on treatment, what do you need to know?

1. Site of infection
2. Patient's weight
3. Drug allergy history
4. Chlamydia test result
5. All of the above

New Gonorrhea Treatment Guidelines

for uncomplicated infections

Ceftriaxone **500** mg IM x 1
for persons weighing <150 kg*

*For persons weighing ≥ 150 kg, 1 g of IM ceftriaxone should be administered

However, if chlamydia has not been excluded, treat for chlamydia with:

Doxycycline 100 mg PO BID x 7 days

For pregnancy, allergy, or concern for non-adherence, 1 g PO azithromycin x 1 can be used

- No longer recommending dual therapy for GC with azithromycin
- Test-of-Cure at 7-14 days post treatment for **pharyngeal** gonorrhea

Update to CDC's Treatment Guidelines for Gonococcal infection, 2020; MMWR

New **Alternative** Gonorrhea Treatment

for uncomplicated infections of the cervix, urethra, and rectum **if ceftriaxone is not available**:

Cefixime **800** mg PO x 1

However, if chlamydia has not been excluded, treat for chlamydia with:

Doxycycline 100 mg PO BID x 7 days

For pregnancy, allergy, or concern for non-adherence, 1 g PO azithromycin x 1 can be used

Cephalosporin allergy: Gentamicin 240 mg IM + azithromycin 2 g PO

No reliable alternative treatments are available for **pharyngeal** gonorrhea

Update to CDC's Treatment Guidelines for Gonococcal infection, 2020; MMWR

Any downside to the alternative/allergy regimen?

- Nausea was common
  - 27% for gentamicin + azithro
  - 37% for gemifloxacin + azithro
- Also vomiting
  - 3% and 7% in each group vomited <1 hr after administration

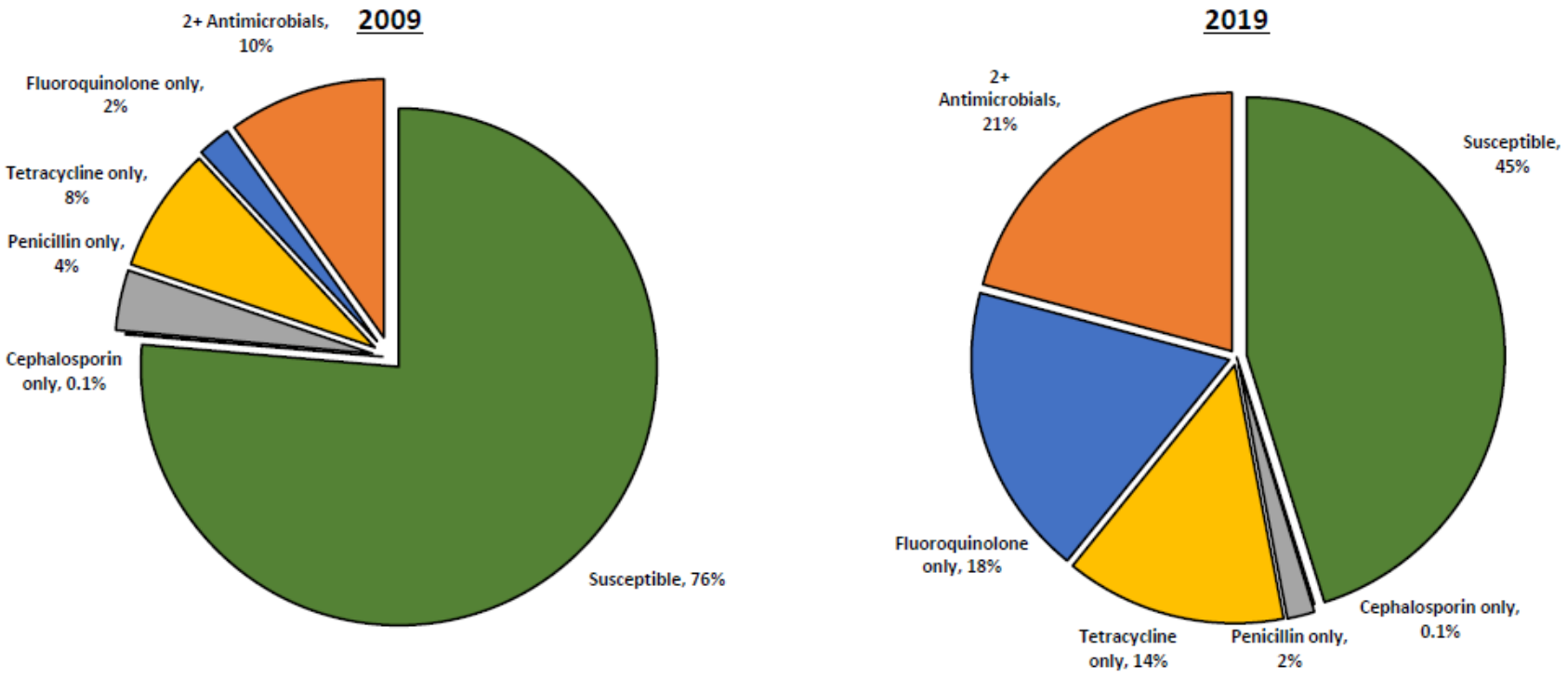
Rationale for GC Treatment Changes

- Growing GC resistance
- Antibiotic stewardship
- Pharmacokinetics/pharmacodynamics
- Decreasing efficacy of azithromycin against CT

- And low ceftriaxone resistance in the US…for now

More than half of GC isolates are resistant to at least one antibiotic

Prevalence of Resistant or Decreased Susceptibility of *N. gonorrhoeae* Isolates to Antimicrobials, GISP, 2009 and 2019*

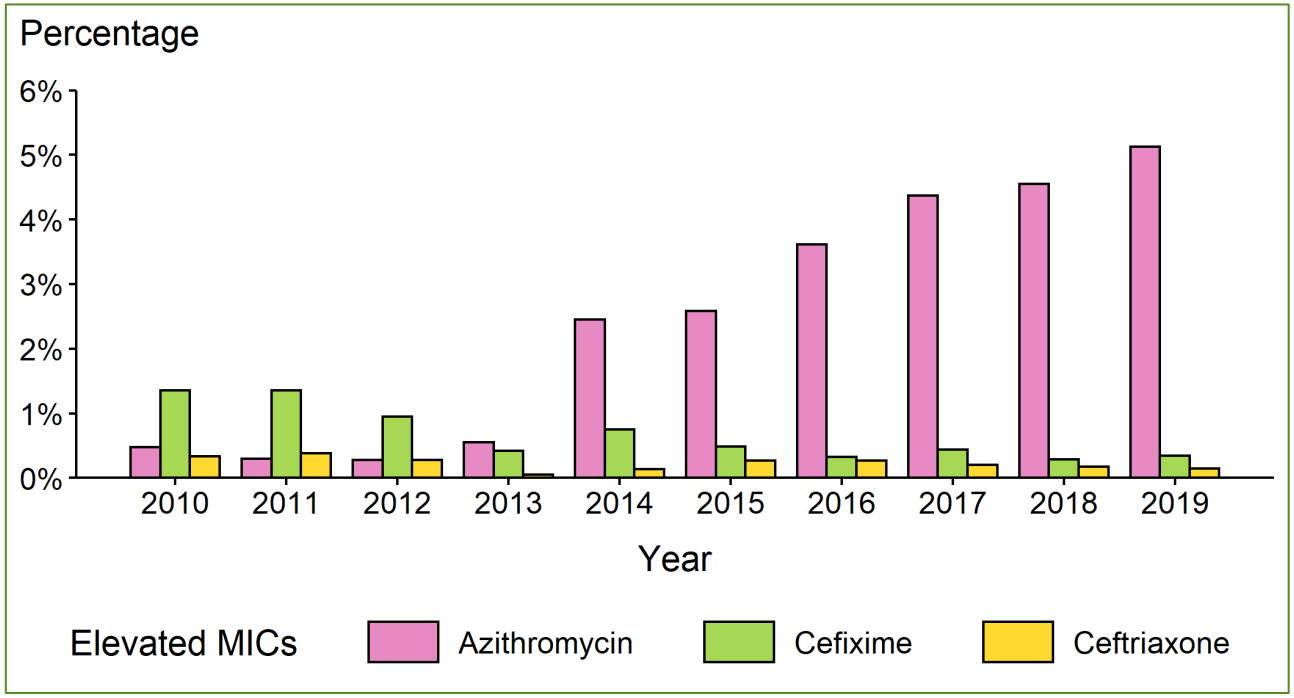


** 2019 data are preliminary*

Slide courtesy Sancta St. Cyr
National STD Prevention Conference 2020

Why Remove Azithromycin? Growing Resistance

Rise in GC Isolates with Decreased Susceptibility to Azithromycin (~5%) Gonococcal Isolate Surveillance Project (GISP), 2010–2019



- WHO and CDC guidance suggests removing drug when >5% resistance
- Among MSM, resistance ~10%

Clinical Infectious Diseases

MAJOR ARTICLE

Decreased Azithromycin Susceptibility of *Neisseria gonorrhoeae* Isolates in Patients Recently Treated with Azithromycin

Carolien M. Wind,[1] Esther de Vries,[1] Maarten F. Schim van der Loeff,[2,5] Martijn S. van Rooijen,[1] Alje P. van Dam,[3,4] Walter H. B. Demczuk,[7] Irene Martin,[7] and Henry J. C. de Vries[1,6,8]

[1]STI Outpatient Clinic, [2]Research Department, and [3]Public Health Laboratory, Department of Infectious Diseases, Public Health Service Amsterdam, [4]Department of Medical Microbiology, Onze Lieve Vrouwe Gasthuis General Hospital, [5]Department of General Medicine, and [6]Department of Dermatology, Academic Medical Center, University of Amsterdam, The Netherlands; [7]National Microbiology Laboratory, Public Health Agency of Canada, Winnipeg; and [8]Center for Infection and Immunity Amsterdam, Academic Medical Center, University of Amsterdam, The Netherlands

Patients who received AZM <30 d from GC diagnosis had higher MIC than unexposed patients

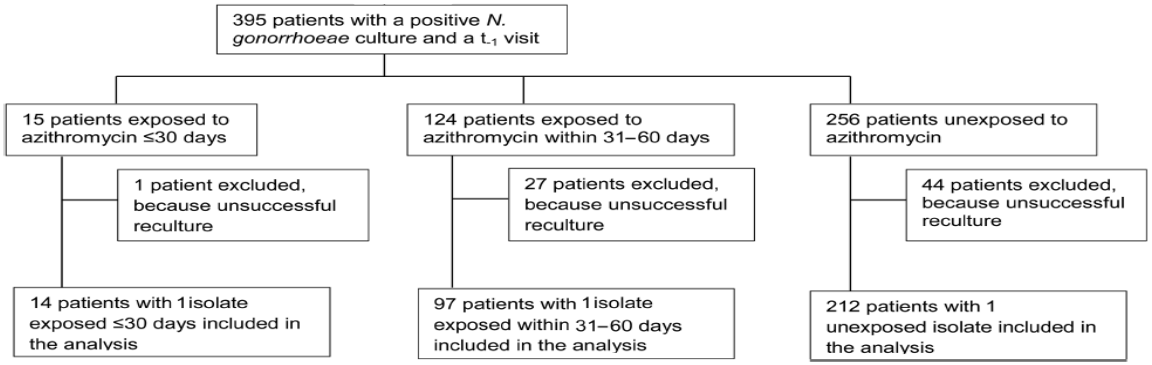


Figure 1. Flow chart of included patients. Abbreviations: STI, sexually transmitted infection; t_0, clinic visit of *Neisseria gonorrhoeae* culture; t_{-1}, clinic visit in 60 days preceding t_0 with (or without) azithromycin exposure.

Why Increase Dose of Ceftriaxone? Weight-based Pharmacokinetics

Weight	3 mg/kg	5 mg/kg^	10 mg/kg
50 kg	150 mg	250 mg	500 mg
80 kg*	240 mg	400 mg	800 mg
100 kg	300 mg	500 mg	1000mg
150 kg	450 mg	750 mg	1500mg

Mouse model suggested 5 mg/kg dose for susceptible isolate (MIC 0.008)

***U.S. adult average weight: 80 kg**

Connolly KL. Antimicrob Agents Chemother 2019;63:e01644–18.

Gonorrhea Treatment Around the World

Country	Treatment	Comments
United Kingdom	Ceftriaxone 1g x1	If you have susceptibility data prior to treatment, AND it's susceptible to cipro → use cipro 500 mg
Australia & Europe	Ceftriaxone 500mg x1 Plus Azithromycin 2g	
Japan	Ceftriaxone 1g	

Expedited Partner Therapy

A 19 yo cisgender man is diagnosed with rectal GC and CT on routine screening. He reports sex with 3 cisgender men in the past 60 days. What should you do for these partners?

1. Offer cefixime plus azithromycin as patient-delivered partner therapy (PDPT)
2. Offer cefixime plus doxycycline as PDPT
3. Do not offer PDPT

Expedited Partner Therapy (EPT) or Patient-delivered partner therapy (PDPT)

- No states in US prohibit EPT (either allowable or potentially allowable by law/statute in all 50 states)
- Appropriate for partners of patients with GC/CT whose treatment cannot be ensured or is unlikely
  - Not appropriate for syphilis, maybe trichomonas
- Partners in the past 60 days
  - Or if no sex for >60 days, attempt to treat most recent partner(s)
- Previously only recommended for WSM and MSW, due to concerns about missing HIV and syphilis in MSM
  - Now "shared decision making" for EPT for MSM
- Providing patients with packaged oral medications is preferred approach
  - Partners (especially adolescents) may not fill prescriptions

Expedited Partner Therapy (EPT) Big Changes in 2021

- Partners should be highly encouraged to present for testing and treatment
- BUT if partners will not or cannot:

EPT for exposure to GC and CT:
cefixime 800 mg PO x 1 AND doxycycline 100 mg PO x 7 days*

EPT for exposure to GC alone:
cefixime 800 mg PO x 1

EPT for exposure to CT alone:
doxycycline 100 mg PO x 7 days*

*Azithromycin 1 g can be considered but decreased efficacy for rectal CT

NW AETC

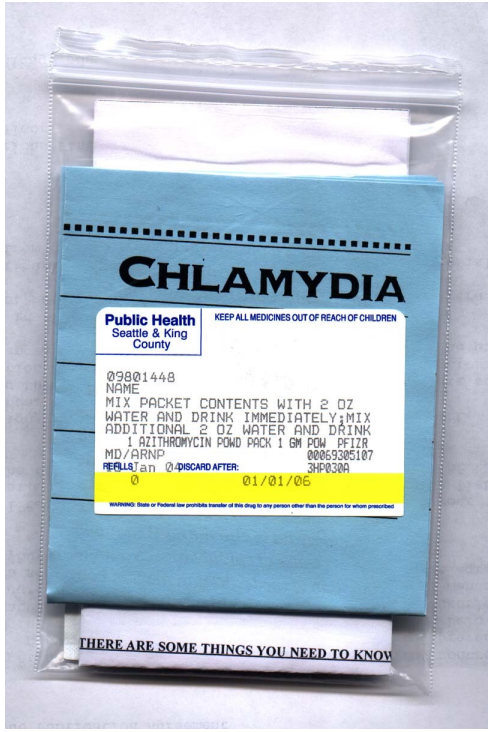
Expedited Partner Therapy: What to Include

Information provided with EPT

- Information about medications, allergies & STI
- Advice about complications and when and where to seek care (e.g. PID)

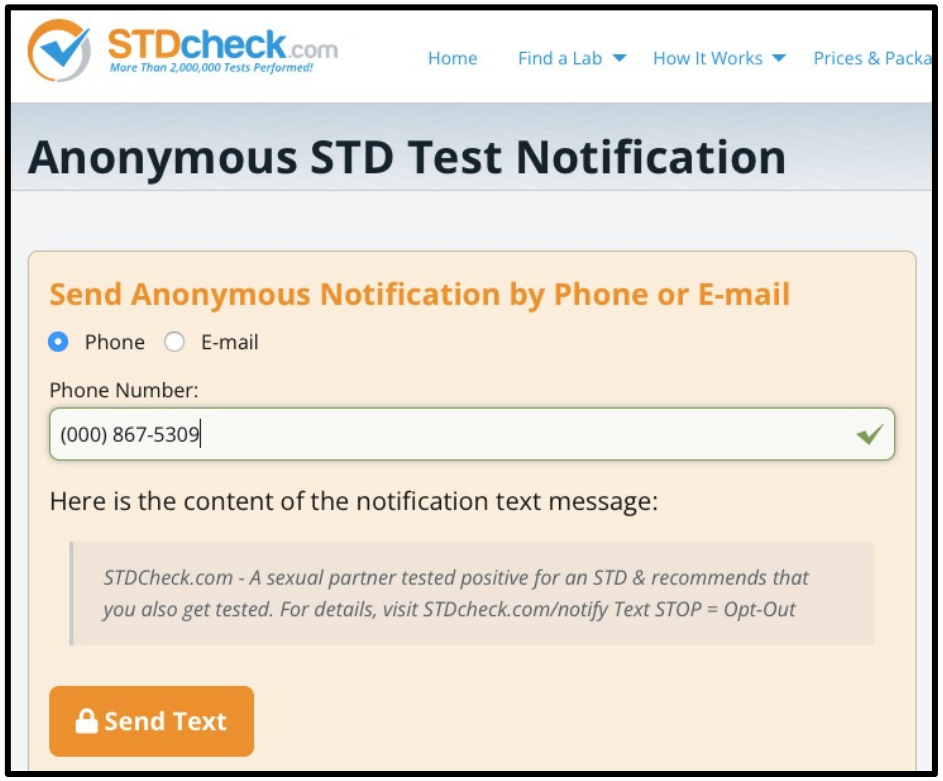
- With new recommendation would also counsel about doxy: pregnancy, GI symptoms, photosensitivity

- Best resource for fact sheets I have found from Oregon Health Authority: https://www.oregon.gov/oha/ph/DISEASESCONDITIONS/HIVSTDVIRALHEPATITIS/SEXUALLYTRANSMITTEDDISEASE/Pages/partnertherapy.aspx



https://kingcounty.gov/en/legacy/depts/health/communicable-diseases/hiv-std/providers/partner-notification/ept-guidelines.aspx

How to find anonymous partners met on the internet? Send an email love letter…



https://www.stdcheck.com/anonymous-notification.php

MYCOPLASMA GENITALIUM

A Case of Persistent Urethritis

- 29-year-old transgender woman presents with burning with urination and meatal discharge x 2 days
- She reports unprotected sex (IAI) approximately 7 days ago
- She is treated empirically for GC/CT with ceftriaxone and doxycycline
- She returns 1 week later reporting ongoing symptoms; initial GC/CT testing has returned negative and she says she has had no sex at all since last visit

- What are possible causes?

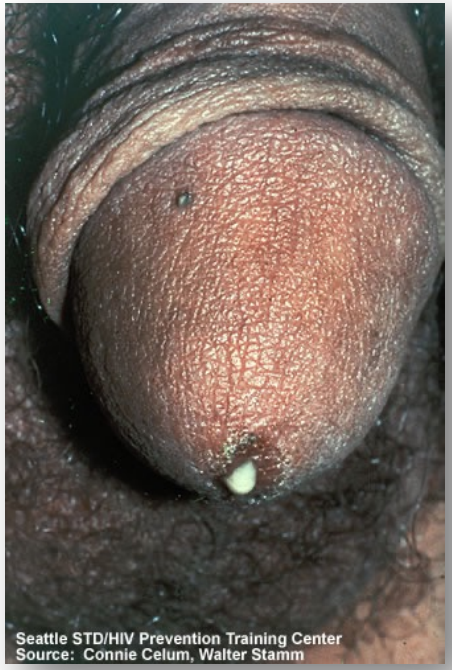
Differential Diagnosis of Urethritis

Gonococcal Urethritis

- Neisseria gonorrhoeae

Non-Gonococcal Urethritis (NGU)

- Chlamydia trachomatis (15-40%)
- Ureaplasma urealyticum
- Mycoplasma genitalium (15-40%)
- Trichomonas vaginalis
- Herpes simplex virus
- Adenovirus
- Other enteric bacteria
- Neisseria meningitidis



FeeltheBurn?
FREESTDCHECK.ORG
AHF

Prevalence of Key Pathogens among Men with Symptomatic Urethritis

Study Site (n)	*Gonorrhea*	*Chlamydia*	*M. genitalium*	*Trichomonas*
Birmingham, AL (n=235)	33%	23%	30%	7%
Durham, NC (n=93)	42%	32%	25%	8%
Greensboro, NC (n=152)	43%	29%	39%	10%
New Orleans, LA (n=103)	37%	25%	29%	2%
Pittsburgh, PA (n=174)	26%	27%	28%	12%
Seattle, WA (n=157)	35%	25%	29%	2%
Overall	**35%**	**25%**	**29%**	**7%**

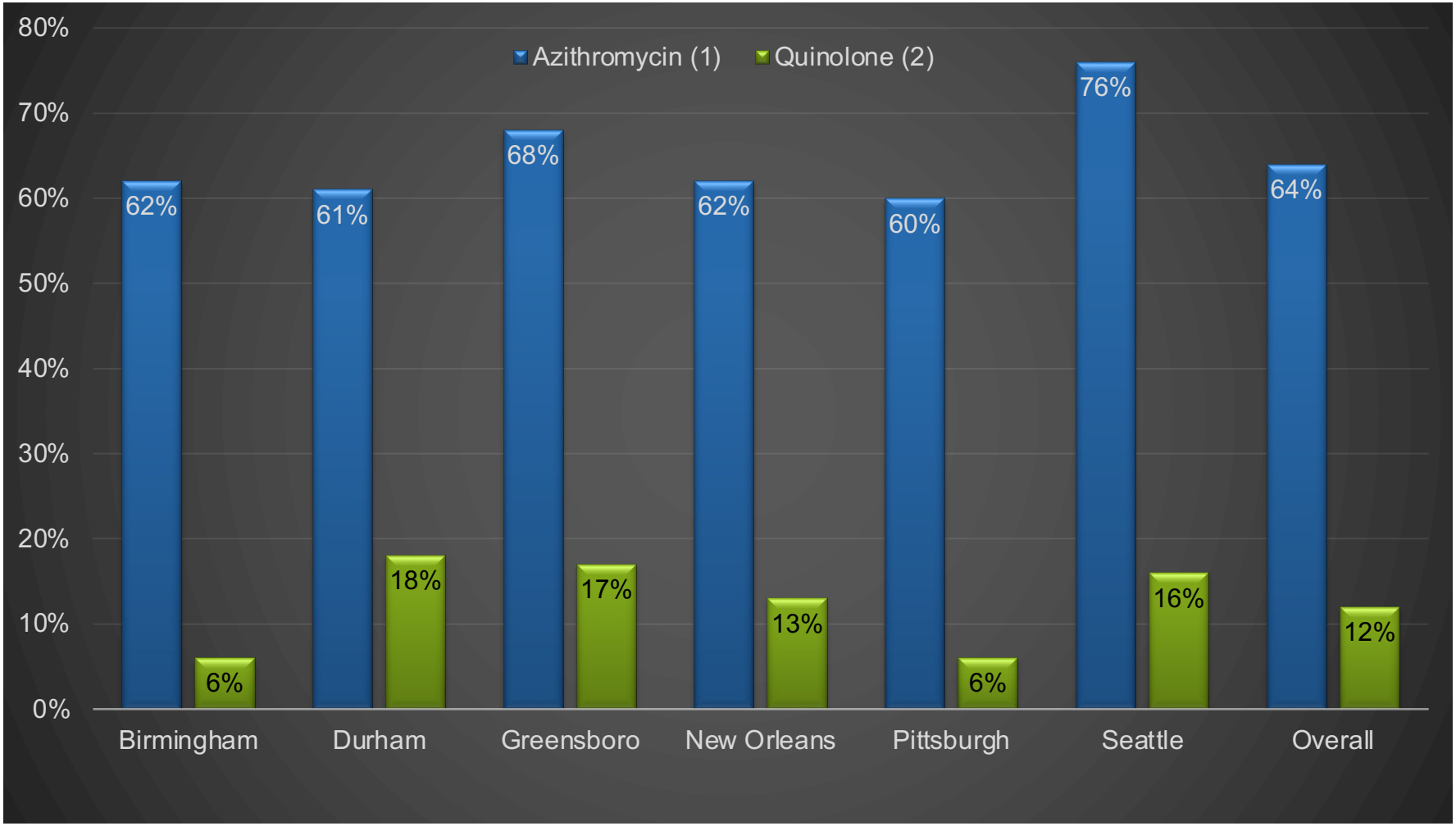
More than 1 in 4 men with urethritis have *M. genitalium*

Bachmann LH, CID 2020

No longer an emerging pathogen: *Mycoplasma genitalium*

- Bacterial slow-growing pathogen, but does not gram stain
- Role in urethritis and cervicitis; also PID but less clear
- No recommendations for routine screening, in 2021 test in persistent urethritis that fails initial treatment, consider for persistent PID/cervicitis
- In 2019 FDA approved 1st MG NAAT (*Aptima*) for urine, urethral, penile meatal, endocervical, vaginal specimens
- Ureaplasma and other mycoplasma species of unclear significance
  - Testing/treatment not recommended
- Macrolide and doxy resistance, also some quinolone
  - Macrolide resistance tests may be available to guide therapy soon

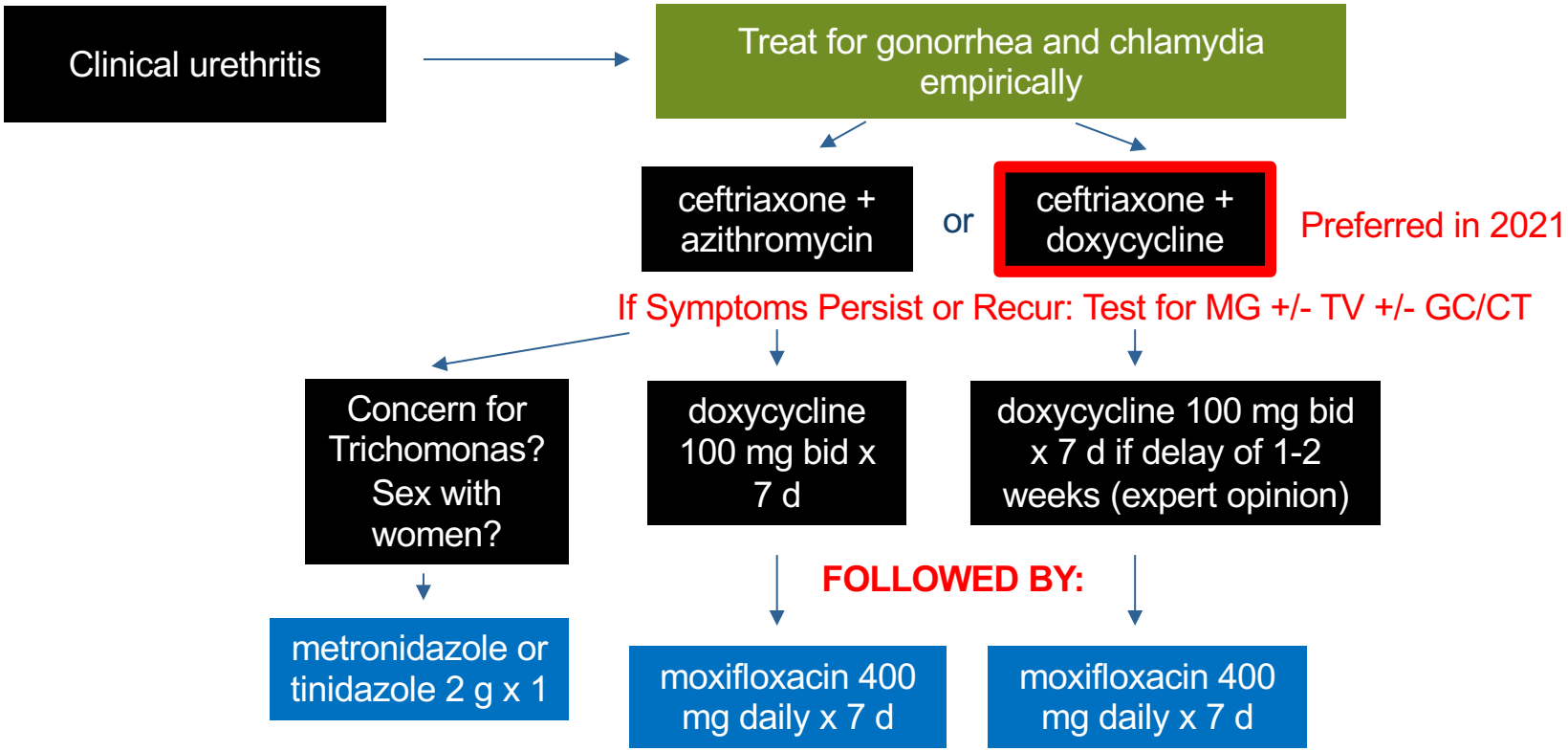
Prevalence of Resistance Mutations in *M. genitalium* among Men with Urethritis



1. 23S rRNA mutation, among those with evaluable results
2. *parC* mutation, among those with evaluable results

Bachmann LH, CID 2020

2021 Urethritis Treatment: Initial and Persistent/Recurrent



- **MG macrolide resistance testing may change some of these guidelines, but not yet currently available in US.**
- **If macrolide sensitive, after doxycycline course, give azithromycin 1 g, then 500 mg daily x 3**

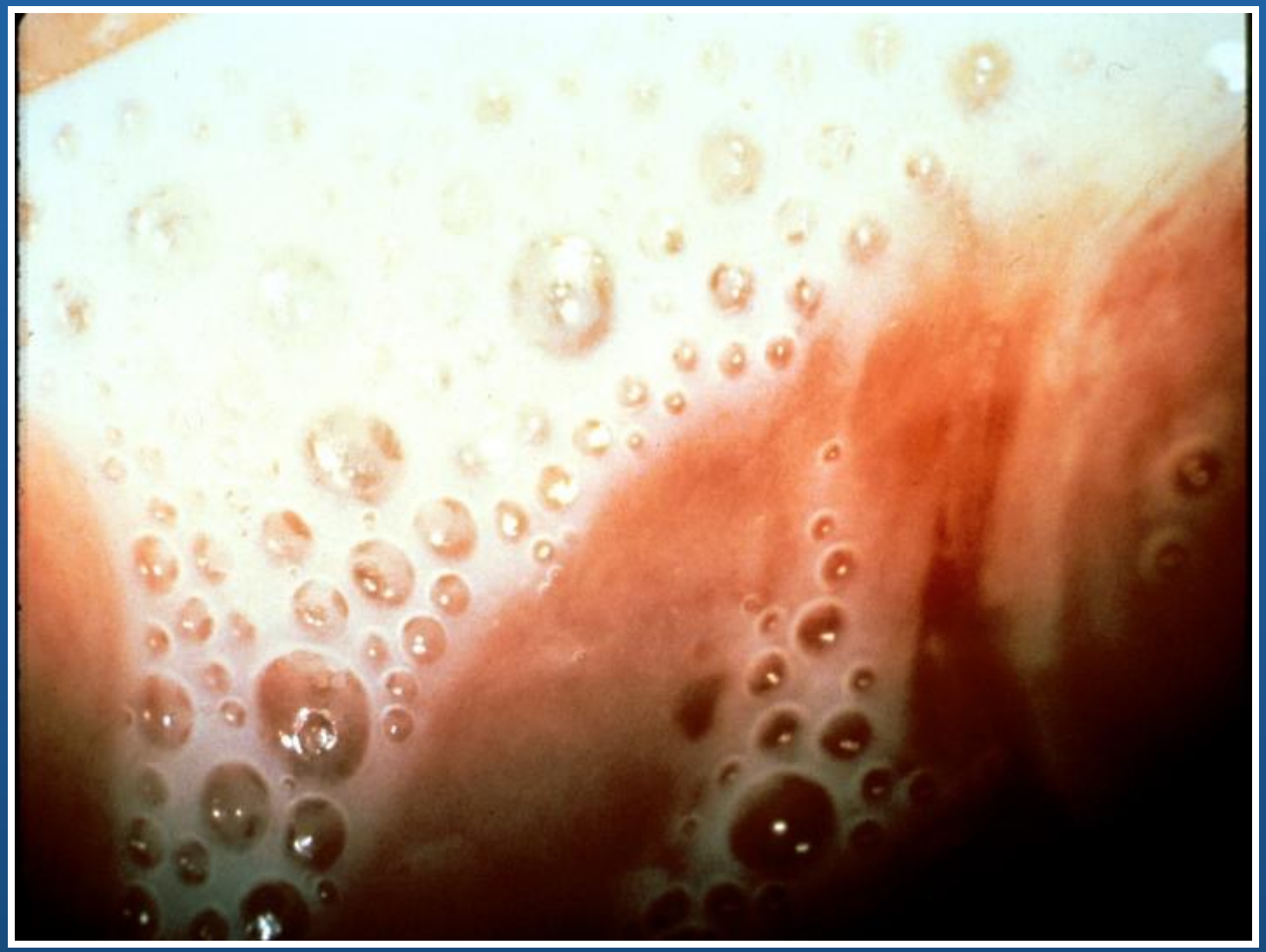
TRICHOMONAS

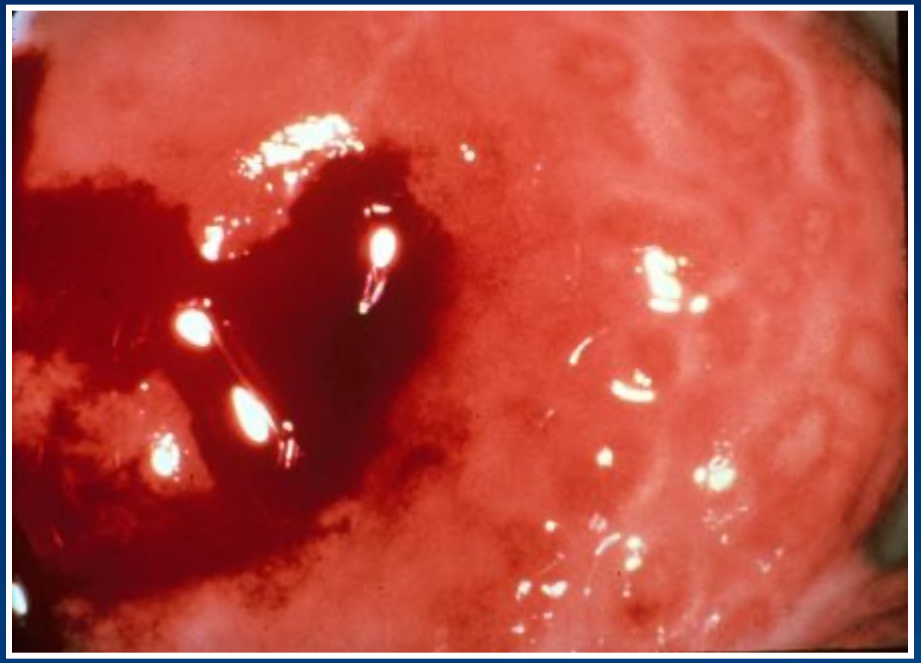
Courtesy of John Alderete, Ph.D.

A 56 year old woman tells you she has had some yellow-green vaginal discharge with a strong odor, and she would like it to go away. She denies sexual activity of any kind for over 5 years. Urine NAAT is positive for trichomonas. How should you treat her?

1. Metronidazole 2 gm orally once
2. Metronidazole 500 mg orally twice daily for 7 days
3. It depends whether she has HIV or not

Typical frothy, yellowish vaginal discharge of trichomoniasis

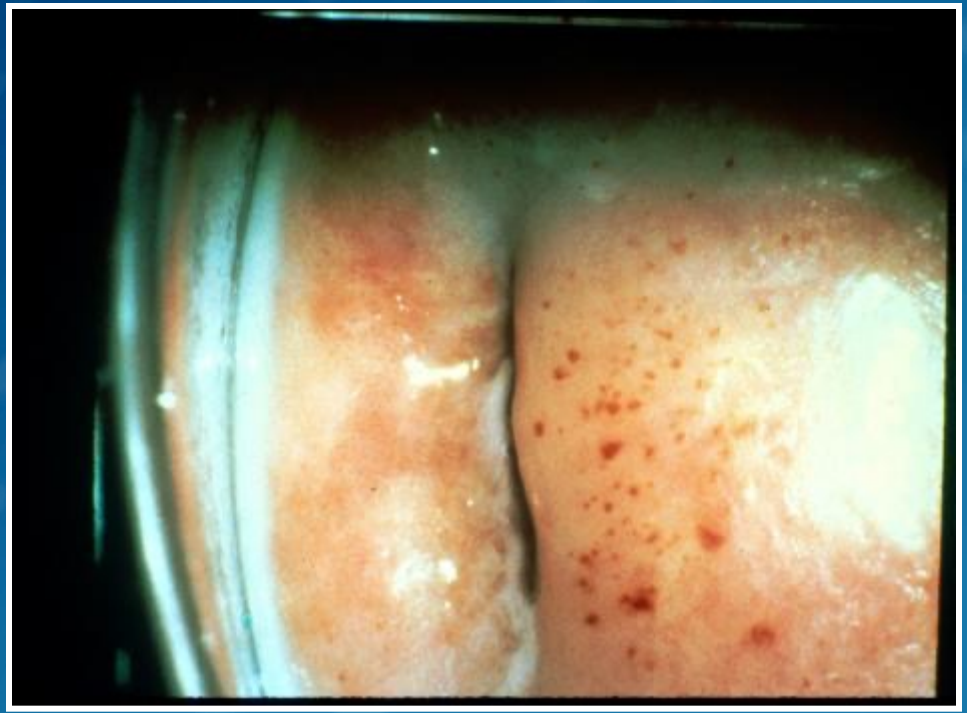




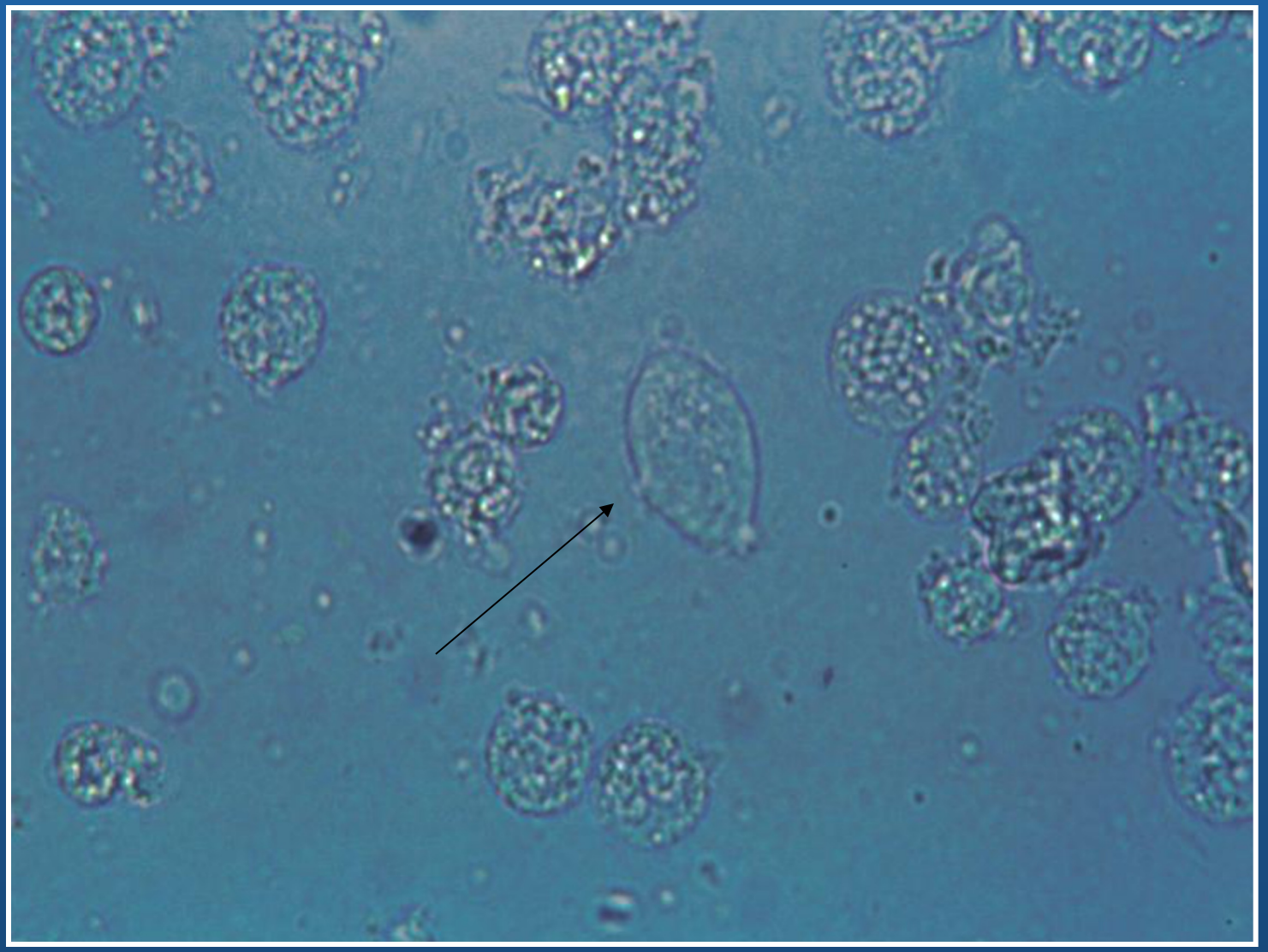
Cervicitis due to *Trichomonas vaginalis*

Strawberry cervix

"Colpitis macularis"



Saline microscopy of *Trichomonas vaginalis* with PMNs



Trichomoniasis: The “Neglected STD”

- Under appreciated in its importance—most common nonviral STD in US (4-8 million new cases/yr estimated)
  - Not reportable in the US
  - Wider age distribution of 20-45 y
  - Prevalence 3% in US, 15-20% in US black women 30-50 y
  - Very high rates in incarcerated women (9-32%) and men (2-9%) screened
    - 17% in WA DOC pilot screening program at intake (2016)
  - 70-85% asymptomatic, may persist for years
  - Can lead to pre-term delivery, LBW, PID
  - Worldwide—MAJOR implications –multiple studies show increased acquisition of HIV if T. vaginalis infection (2-3 fold)

Muzny C, CID 2015.
Soper D, AJOG 2004.
NHANES, Sutton, CID 2007.

T. vaginalis screening/diagnostic testing

Screening for *T. vaginalis* is recommended for

- Cisgender women with HIV (entry to care, then annually)
- Cisgender women in correctional settings
- Consider for other high prevalence settings
- Screening for men is not recommended
  - Rare in MSM
- Extragenital *T. vaginalis* is rare
  - Rectal and oral testing is not recommended!!

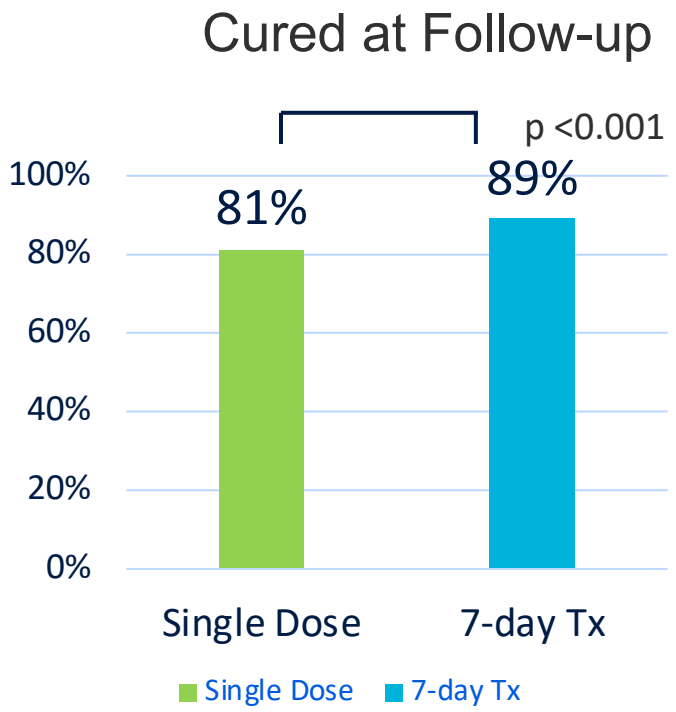
Diagnostic testing: Patients with vaginal discharge

Multiple FDA-cleared NAAT and rapid tests

- Urine, urethral, endocervical (including liquid cytology), vaginal
- Not all tests are approved for men

Treatment Consideration: Single dose metronidazole is not as effective as 7 days

- Single dose (2 gm) previously recommended for trich in HIV-negative women, 7-day therapy (500 mg BID) recommended for patients with HIV (CDC TX GL 2015)
- N=623 women randomized 1:1 to single dose MTZ vs 7 day
- Culture TOC, 6-12 days post treatment



Kissinger, 2018 Lancet Infect Dis

Trichomoniasis Treatment 2021

Change in 2021 STI Treatment Guidelines

Vaginal trichomonas (HIV+/HIV-/pregnant)

Metronidazole 500 mg PO BID x 7d

Penile/urethral trichomonas or male partners

Metronidazole 2 g PO single dose

Alternative regimen

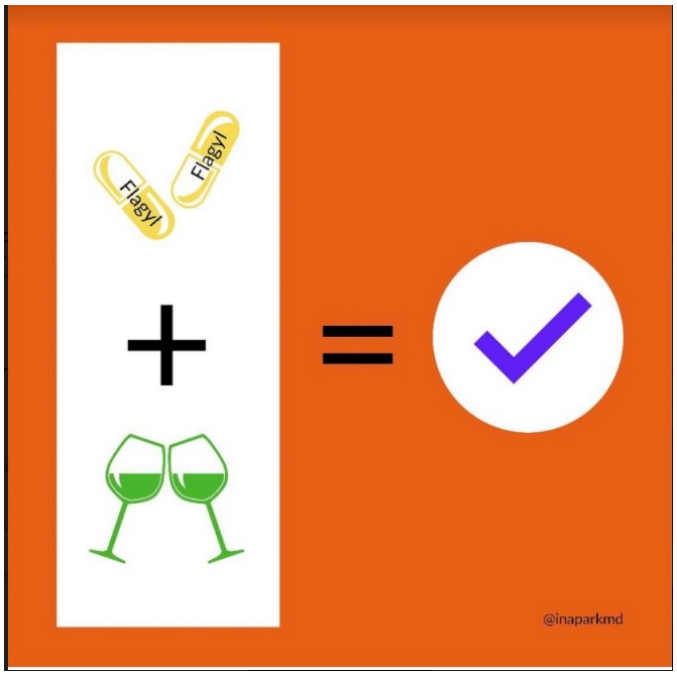
Tinidazole 2 g PO single dose

CDC 2015 STD Treatment Guidelines,
ACOG Practice Bulletin 215. OB/GYN Vol 135. Jan 2020

Metronidazole and Alcohol

- Metronidazole does not actually inhibit acetaldehyde dehydrogenase (as occurs with disulfiram)
- Evidence review: no in vitro or clinical studies, no animal models, and no adverse event reporting
- Refraining from ETOH is unnecessary during treatment

Change in 2021 STI Treatment Guidelines



2021 CDC STI Treatment Guidelines
Fjeld H, Raknes G. Tidsskr Nor Laegeforen. 2014;134(17):1661–3

Who Needs a Test of Cure and Who Needs Retesting?

Test of Cure vs Retesting

RETEST FOR REINFECTION	Time period	Who
GC/CT/LGV (all sites)	3 m (anytime from 1-12 m ok)	All patients
Trichomonas	3 m (anytime from 1-12 m ok)	Patients w/vaginal infection

TEST OF CURE	Time period	Who
GC (pharynx)	2 weeks	All patients
CT* (cervix)	4 weeks	Pregnant patients only

*Test of cure for GC in pregnancy not mentioned in the guidelines but experts recommend TOC in this setting

Syphilis: Not Just for MSM Anymore

SYPHILIS SUCKS. AND NOT IN A PLEASURABLE WAY.

And it's spreading.

You can get it from oral or anal sex.
So get tested. Today.

SYPHILIS.
EASY TO GET, EASY TO CURE.
SyphilisRising.com

Public Health
Seattle & King County

2022 PHSKC & WA DOH Updated Syphilis Screening Guidelines

Cis-women and cis-men who have sex with women (including pregnant persons)

Test sexually active* patients with any of the following risk factors at least annually and whenever they present for care up to every 3 months:

- Persons who inject drugs
- Persons who use methamphetamine or nonprescription opioids
- Persons living homeless or who are unstably housed
- Person engaged in transactional sex
- Persons entering correctional facilities or with a history of incarceration in the prior 2 years
- Persons with a history of syphilis in the prior 2 years

Persons with a sex partner with any of the above risks should test for syphilis at least annually

---

Pregnant persons should be tested at the following times:

- First prenatal care
- Time of 3rd trimester laboratory testing - typically done at 24-28 weeks gestation
- Time of delivery if any of the above risks are present or the pregnant person was diagnosed with a bacterial STI or first-episode of HSV (genital herpes) during pregnancy++.

Test pregnant persons not engaged in prenatal care any time that present to a clinical setting (i.e., ERs, jail, substance use treatment facilities, labor and delivery, etc.)

Pregnant persons with fetal demise at ≥20 weeks gestation

Sexually active persons aged 45 and under if they have not tested since January 2021.

Women whose male partners have sex with both men and women should test for syphilis annually

---

Sexually active HIV positive persons outside of mutually monogamous relationships should test annually

---

Persons diagnosed with gonorrhea or HIV should be tested for syphilis if not done at the time of their initial gonorrhea/HIV testing

https://content.govdelivery.com/accounts/WAHCA/bulletins/318b7e0

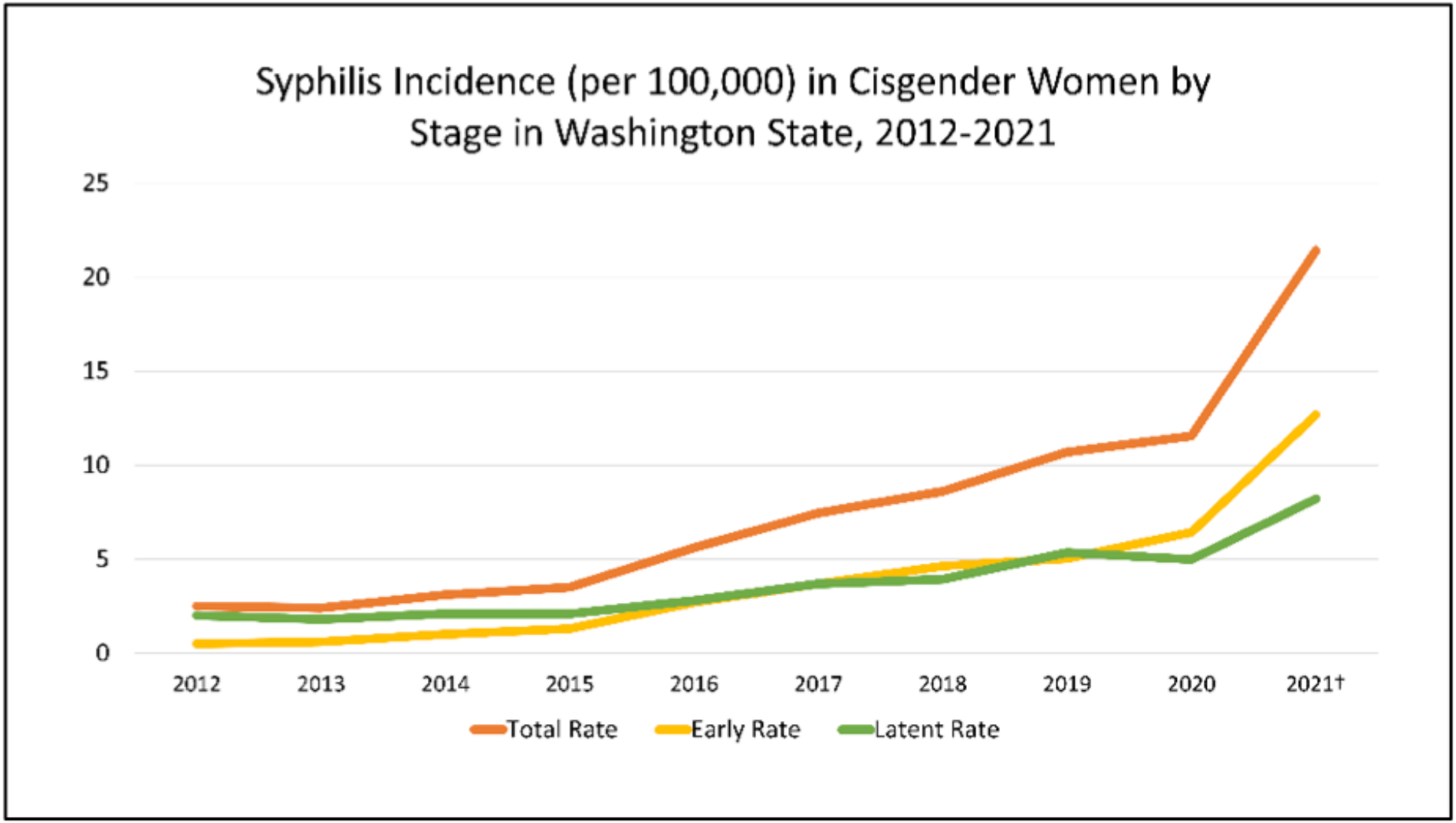
MWAETC

Syphilis Treatment in 2023: Penicillin Shortages

- Limited benzathine (*Bicillin L-A*) and procaine (*Bicillin C-R*) since mid-2023
  - "Increased demand" and "competitive shortages"
  - Benzathine prioritized, next shipment this month with recovery Q2 2024
  - Procaine not expected until March 2024 with recovery Q3 2024

- Now what?
  - Doxycycline:
    - 100 mg BID x 14 days for early syphilis
    - 100 mg BID x 28 days for latent syphilis
  - Preserve penicillin for those whom penicillin is the only option (pregnant people, babies with congenital syphilis, true allergies to doxycycline)
  - Do not use for strep!

Syphilis in Cisgender Women in WA Trends



Congenital Syphilis

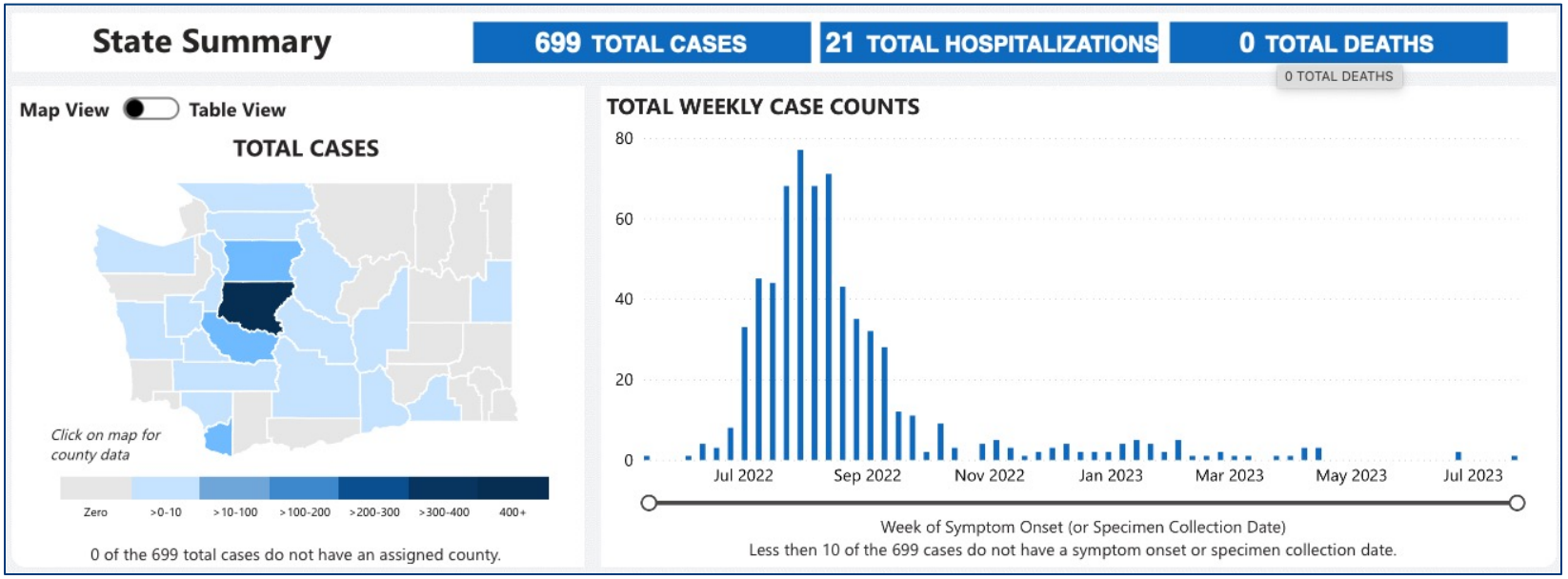
- *T. pallidum* transmission from pregnant person with syphilis to fetus
  - Risk highest with primary or secondary syphilis
- In 2021, cases of congenital **syphilis increased by 32%** and resulted in 220 stillbirths and infant deaths in US
  - In WA 2021: 51 cases, 11 in King County, 4 deaths, 31 preemie/NICU
- Early congenital syphilis: rhinitis/nasal discharge, hepatosplenomegaly, jaundice, bone involvement, rash, ophthalmic disorders, lymphadenopathy, hematologic abnormalities, neurologic
- Late congenital syphilis: facial changes (saddle deformity of nose), abnormal tooth development, bony abnormalities, ophthalmic disorders, deafness

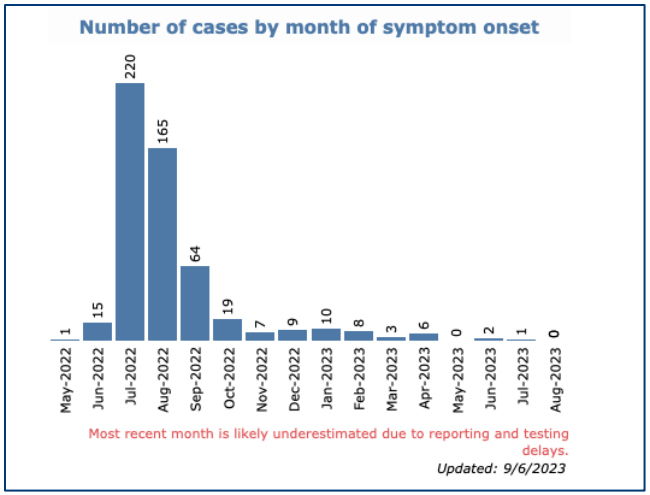
****All pregnant persons diagnosed with syphilis should be treated with penicillin (formulation based on stage)—those with allergy need to be desensitized**

MPOX, the Virus Formerly Known as Monkeypox:

currently taking a backseat…for now

Mpox cases in WA and King County



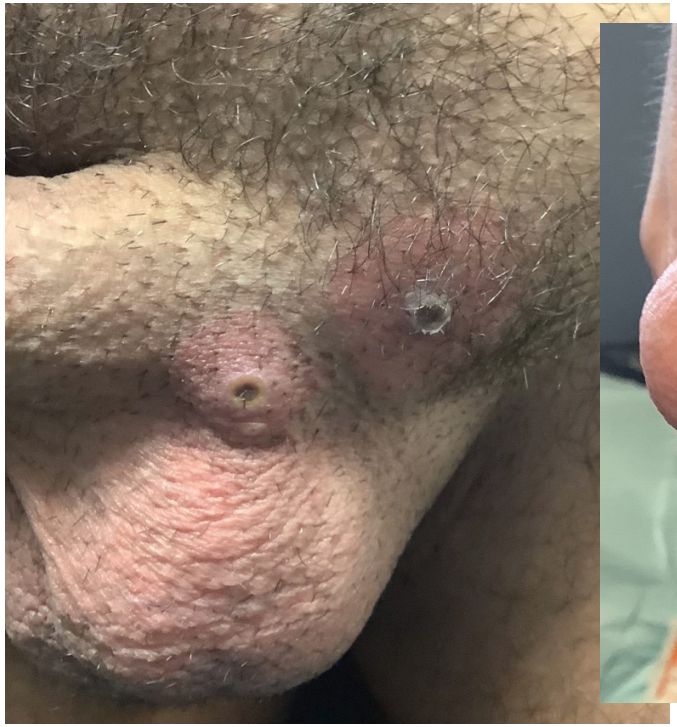


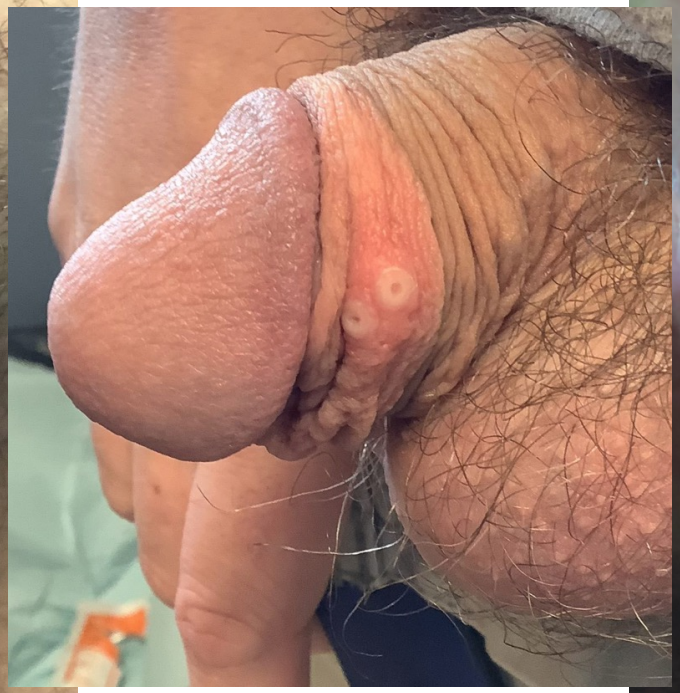
Don't forget to vaccinate!

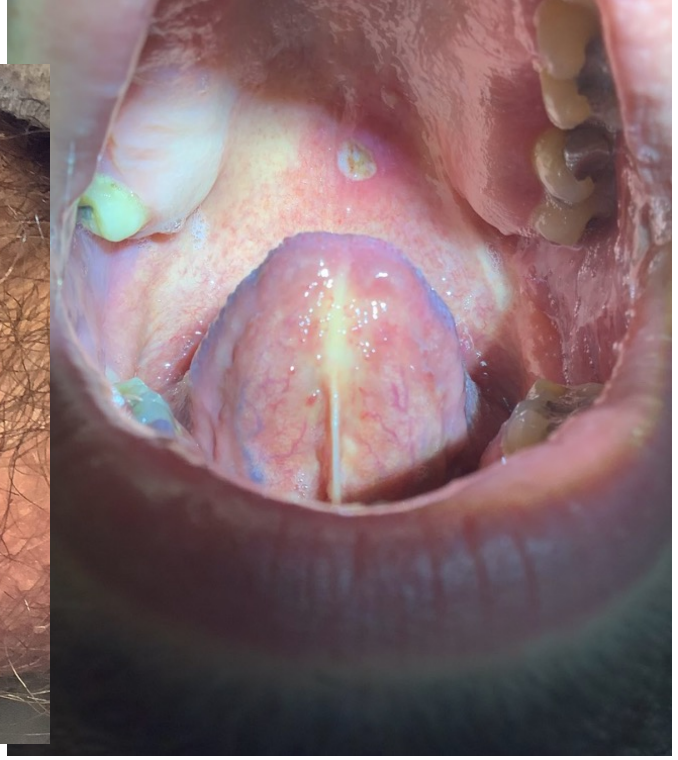
- No current rec to booster
- No vax if had mpox infection

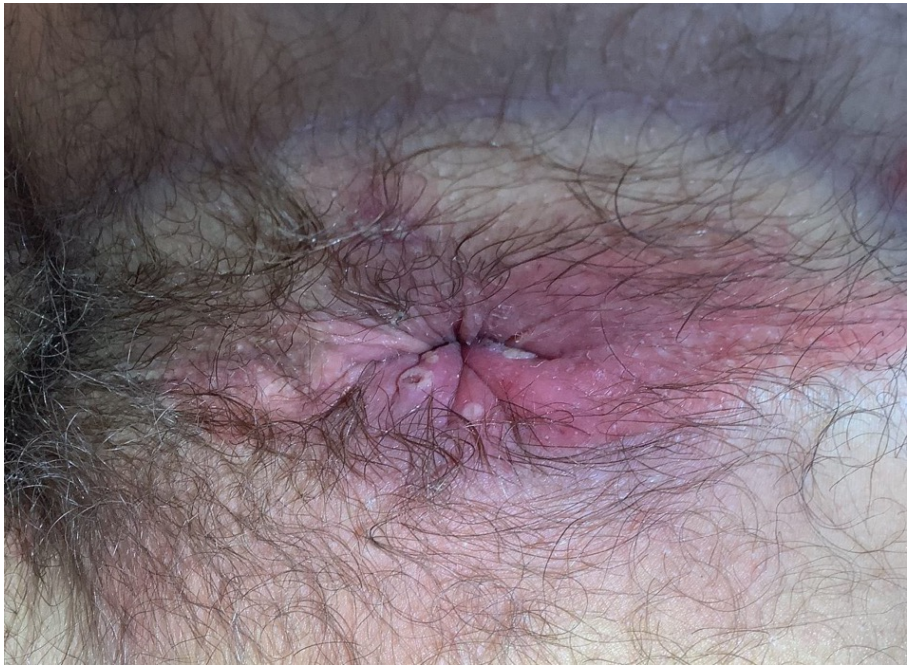
https://kingcounty.gov/en/legacy/depts/health/mpox/data.aspx
https://doh.wa.gov/you-and-your-family/illness-and-disease-z/mpox/mpox-data

MWAETC









A New Tool in our Prevention Toolbox: DoxyPEP

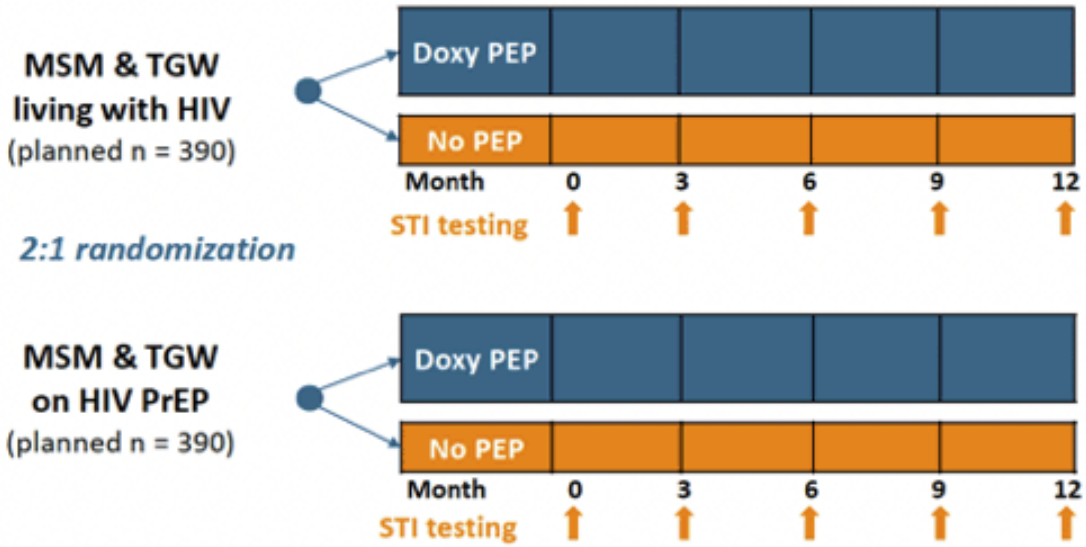
A 24 year old MSM on HIV PrEP comes in to be treated for rectal chlamydia found on routine screening. He had secondary syphilis earlier in the year. How would you counsel him to prevent STIs?

1. Always use condoms
2. Get the Hep B and HPV vaccines
3. Have fewer partners and less sex
4. Offer DoxyPEP
5. Just get HIV/STI testing and treatment more often

What is DoxyPEP?

Intervention: Open label doxycycline 200mg taken as PEP within 72 hours after condomless sexual contact

Maximum of 200 mg every 24 hours



Inclusion criteria:

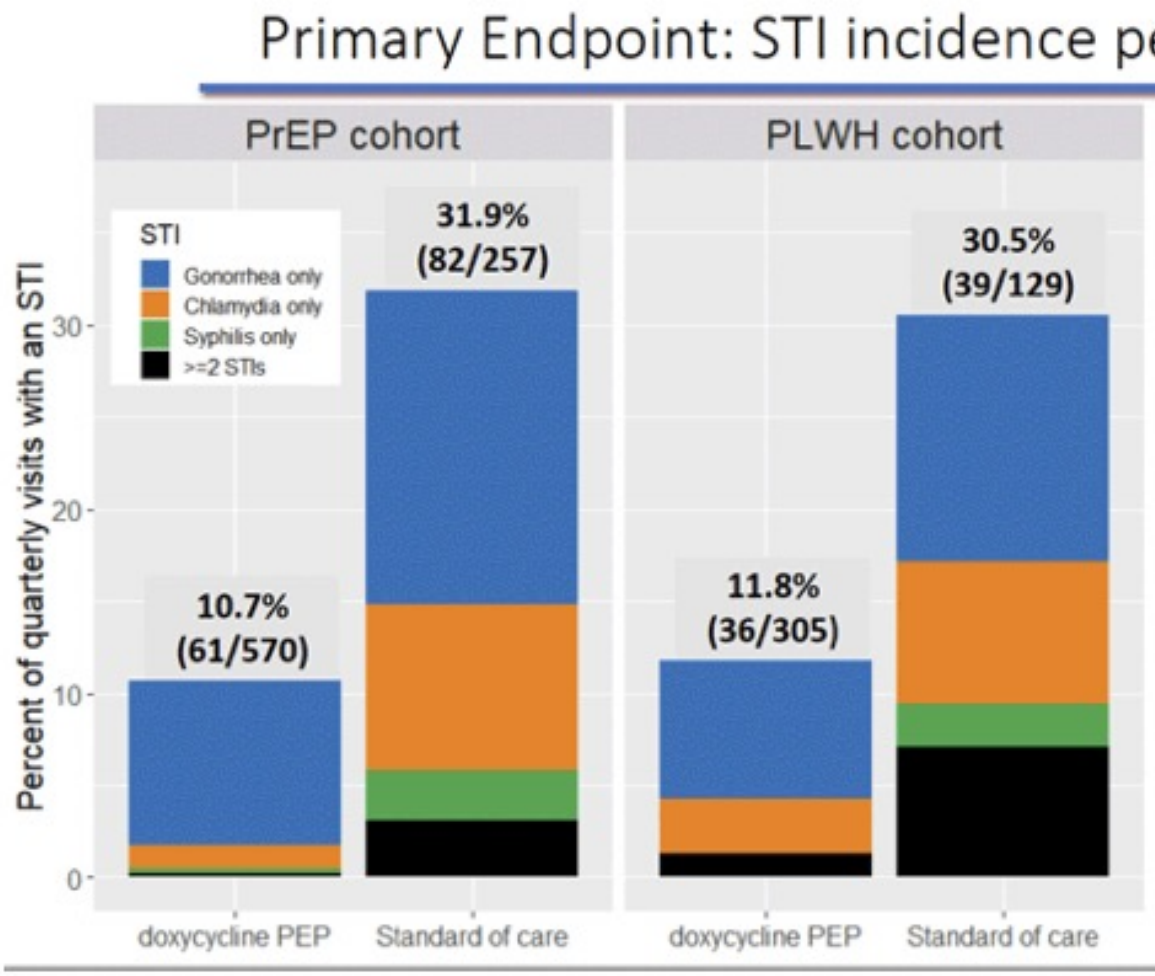
- Male sex at birth
- Living with HIV or on PrEP
- ≥ 1 STI in past 12 months
- Condomless sex with ≥ 1 male partner in past 12 months

STI Testing: Quarterly 3 site GC/CT testing + RPR, GC culture before treatment

Sites: San Francisco & Seattle HIV & STI clinics

Luetkemeyer et al, NEJM 2023

DoxyPEP reduced STI incidence by 65%



Reduction in STI incidence/quarter	
	risk reduction (95% CI)
PrEP	0.34 (0.24 - 0.46)
Living with HIV	0.38 (0.24 - 0.60)
Total	0.35 (0.27 - 0.46)

all p< 0.0001

DoxyPEP: What we know

DoxyPEP works very well to prevent STIs in this study population: ↓ by more than **60%** each quarter

↓ in *each* bacterial STI per quarter, including gonorrhea

Need to treat about **5 people** to prevent a quarter with an STI, in a population with a high STI incidence (30% per quarter)

Safe & well tolerated

DoxyPEP: What we are still learning

- STI resistance, and will it make DoxyPEP less effective? Especially GC and syphilis
- Effect on M. genitalium
- Impact on bystander bacteria like Staph aureus, commensal Neisseria, and the gut microbiome
- Adherence, sexual behavior…

DoxyPEP Local Guidelines

HIV/STI/HCV Program
Sexual Health Clinic
Ninth and Jefferson Building
908 Jefferson St, 11th Floor
Seattle, WA 98104
206-744-3590
www.kingcounty.gov/health

Public Health
Seattle & King County

Guidelines, June 2023

Doxycycline Post-Exposure Prophylaxis (Doxy-PEP) to Prevent Bacterial STIs in Men who Have Sex with Men (MSM) and Transgender Persons who Have Sex with Men

Includes information about who to offer DoxyPEP, counseling messages, dosing and prescribing recs, billing codes, lab monitoring. Also a fantastic fact sheet for patients!

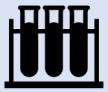
https://cdn.kingcounty.gov/-/media/depts/health/communicable-diseases/documents/hivstd/DoxyPEP-Guidelines.ashx

https://cdn.kingcounty.gov/-/media/depts/health/communicable-diseases/documents/hivstd/DoxyPEP-facts.ashx?la=en&hash=47631D55F34D12F6896792E2B0E975EF

Monitoring on DoxyPEP

Laboratory

- No serious lab abnormalities in DoxyPEP
- Package insert: LFTs, renal function & CBC checked “periodically” when taking doxycycline for a prolonged period
- Take home:
  - No baseline labs needed
  - Consider checking annually



STIs

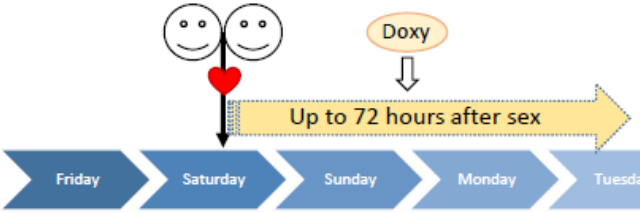
- Screen for STIs every 3 months at all anatomic sites of exposure
  - *Can we screen less frequently? May depend on patient factors*
- If diagnosed with an STI on doxy-PEP, treat according to the CDC STI treatment guidelines

Doxy PEP – How to Take

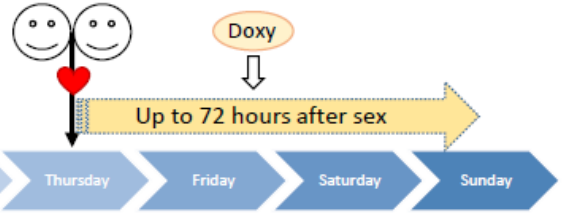
= sex without a condom, including oral sex

Two 100mg pills of doxycycline ideally <u>within 24 hours</u> but no later than 72 hours after condomless sex

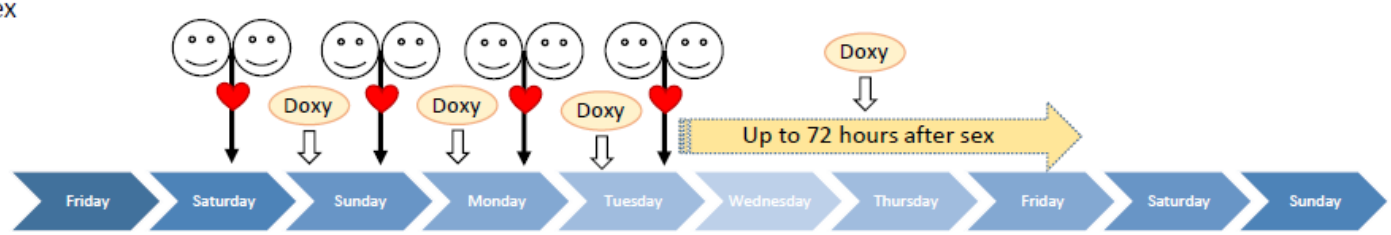
Example: Sex on Sat; take dose of doxy by Tues



Example: Sex on Thursday; take dose of doxy by Sunday



Example 2: Daily (or more) sex Sat-Tues; take daily dose of doxy and last dose within 24 hours *but not later than 72 hours* after last sex



***No more than* 200 mg every 24 hours**

A few rapid fire updates!

- Pelvic Inflammatory Disease: metronidazole no longer considered optional when treating PID
- Gonorrhea prevention: Meningitis B vaccine?

And so much more to explore…

- Special populations
- Herpes testing
- Penicillin allergy
- Newer vaginitis diagnostics

- And stay tuned for:
  - Anal cancer screening
  - Meningitis B vaccine to prevent gonorrhea

Acknowledgments

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- Sancta St. Cyr - CDC
- Will Geisler - University of Alabama Birmingham
- Sharon Adler - UCSF, California Prevention Training Center
- Chris Fox - OHSU

Any *Burning* Questions?

Thank you!!

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