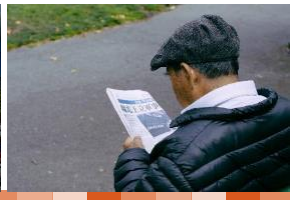


Gonorrhea and Chlamydia (plus): Update on Testing and Treatment

Stephanie Cohen, MD, MPH
Medical Director, SF City Clinic
Disease Prevention and Control Branch
Population Health Division

City Clinic
A landmark in prevention

POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH

Disclosures

- The views expressed herein do not necessarily reflect the official policies of the City and County of San Francisco; nor does mention of the San Francisco Department of Public Health imply its endorsement
- I have no financial relationships to disclose
- I will discuss off label use of NAATs

California PTC

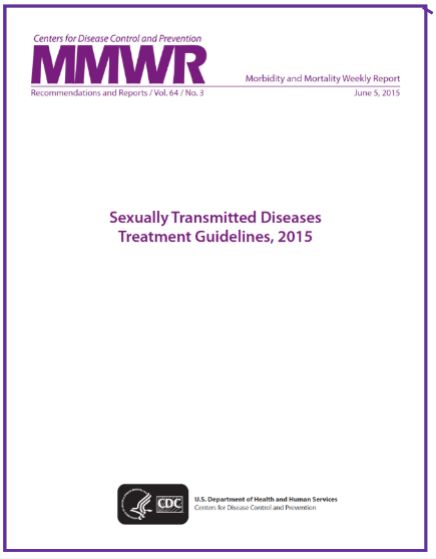
POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH

2

Clinical Practice Objectives

- Screen for gonorrhea (GC) and chlamydia (CT), include extra-genital screening in MSM
- Understand implications of emerging antibiotic resistance in GC
- Ensure partners are treated
- Improve re-testing for GC and CT

City Clinic
A landmark in prevention



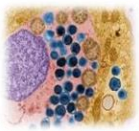
THE guide for STD treatment

CDC Treatment Guidelines
App for iOS and Android

Available now, **FREE!**
(accept no competitors)

http://www.cdc.gov/std/tg2015/

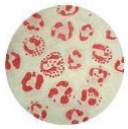
4



Chlamydia

- Incidence: #1 reported nationally notifiable disease (n=1.59 million cases reported in 2016)
- Intracellular bacterium that infects columnar epithelium
- Can cause cervicitis, urethritis, epididymitis, proctitis, PID
- Majority of infections are asymptomatic

Gonorrhea



- Incidence: #2 reported nationally notifiable disease (n=468,514 cases in 2016)
- Developed resistance to multiple classes of antibiotics
- Can cause cervicitis, urethritis, epididymitis, proctitis, PID, disseminated infection
- Often asymptomatic in cervical, oral, and rectal infections

Screening is essential to prevent complications

5

Case 1: Cynthia

18 yo woman presents for physical exam. No complaints, no prior medical history. She reports 1 male sex partner in the past 6 months. She's on OCPs and does not use condoms with her partner. She smokes marijuana and drinks alcohol, but denies other drug use. She has no prior history of STDs and no history of intimate partner violence.

What should she be tested for?

6

Case 1 Cynthia What should she be tested for?

- Chlamydia
- Chlamydia and gonorrhea
- Chlamydia, gonorrhea and syphilis
- Chlamydia, gonorrhea, syphilis and herpes

WHY SCREEN?

- Highly prevalent
- Frequently asymptomatic
- Reduces transmission
- Prevents complications, such as PID
- Standard of care
- Quality Measure: Chlamydia screening in females under 25 years old

8

STD PREVENTION AND CONTROL SERVICES, SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
STD AND HIV SCREENING GUIDELINES

These evidence-based recommendations provide guidance for chlamydia, gonorrhea, syphilis and HIV screening in persons without symptoms or a need for diagnostic testing.[1]

WOMEN

	Chlamydia and Gonorrhea	Syphilis	HIV
25 years and younger	Test every 12 months	Not routinely recommended[2]	At least one lifetime test[2]
Older than 25 years	Not routinely recommended[2]		At least one lifetime test[2]
Pregnant[3]	Test in 1st trimester, repeat in 3rd trimester if at increased risk[2]	Test in 1st trimester, repeat in 3rd trimester if at increased risk[2]	First prenatal visit, repeat in 3rd trimester if at increased risk[2]

MEN WHO HAVE SEX WITH WOMEN

	Chlamydia and Gonorrhea	Syphilis	HIV
Any age, any site	Not routinely recommended[2]		At least one lifetime test[2]

MEN WHO HAVE SEX WITH MEN (MSM)

	Chlamydia and Gonorrhea	Syphilis	HIV
Blood		Every 3 months	
Rectal & Pharyngeal[4]	Every 3 months		
Urine[5]	Every 3 months		

TRANS WOMEN AND TRANS MEN WHO HAVE SEX WITH MEN

	Chlamydia and Gonorrhea	Syphilis	HIV
Blood		Every 3 months	
Rectal & Pharyngeal[4]	Every 3 months		
Urine[5]*/Vaginal Swab*	Every 3 months		

Citywide STD Screening Guidelines

Other risk factors to consider:

- Sex with a man who has sex with men
- History of STD in the past year
- Methamphetamine use
- Sex work
- Intimate partner violence
- Incarceration
- Contact to STD

http://www.sfcityclinic.org/providers/ScreeningandSurveillance_CitywideSTDscreeningguidance.pdf

9

Case 1: Cynthia

You correctly decide to screen Cynthia for Chlamydia and Gonorrhea.

What is the optimal GC/CT test to obtain?

10

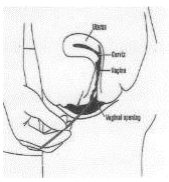
Case 1 Cynthia What is the optimal GC/CT test to obtain?

- Cervical swab for nucleic acid amplification test (NAAT)
- Cervical swab for culture
- Urine NAAT
- Vaginal swab for culture
- Vaginal swab for NAAT

Start the presentation to see live content. Still no live content? Install the app or get help at PollEv.com/app

Centers for Disease Control and Prevention
MMWR
Morbidity and Mortality Weekly Report
Recommendations and Reports / Vol. 63 / No. 2
March 14, 2014

Nucleic acid amplification tests (NAATs) are recommended for detection of genital tract infections in men and women – with and without symptoms
- highly sensitive and specific compared to culture
- less dependent on specimen collection and handling



Optimal specimen types are:
First catch **urine** for men
Self collected **vaginal** swabs from women

NAATs are recommended for: detection of **rectal** and **oropharyngeal** infections*

**Not FDA-approved but validated at PHL and many commercial labs*

12

STD PREVENTION AND CONTROL SERVICES, SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
STD AND HIV SCREENING GUIDELINES

These evidence-based recommendations provide guidance for chlamydia, gonorrhea, syphilis and HIV screening in persons without symptoms or a need for diagnostic testing.[1]

WOMEN

	Chlamydia and Gonorrhea	Syphilis	HIV
25 years and younger	Test every 12 months	Not routinely recommended[2]	At least one lifetime test[2]
Older than 25 years	Not routinely recommended[2]		At least one lifetime test[2]
Pregnant[3]	Test in 1st trimester, repeat in 3rd trimester if at increased risk[2]	Test in 1st trimester, repeat in 3rd trimester if at increased risk[2]	First prenatal visit, repeat in 3rd trimester if at increased risk[2]

MEN WHO HAVE SEX WITH WOMEN

	Chlamydia and Gonorrhea	Syphilis	HIV
Any age, any site	Not routinely recommended[2]		At least one lifetime test[2]

MEN WHO HAVE SEX WITH MEN (MSM)

	Chlamydia and Gonorrhea	Syphilis	HIV
Blood		Every 3 months	
Rectal & Pharyngeal[4]	Every 3 months		
Urine[5]	Every 3 months		

TRANS WOMEN AND TRANS MEN WHO HAVE SEX WITH MEN

	Chlamydia and Gonorrhea	Syphilis	HIV
Blood		Every 3 months	
Rectal & Pharyngeal[4]	Every 3 months		
Urine[5]*/Vaginal Swab*	Every 3 months		

Citywide STD Screening Guidelines

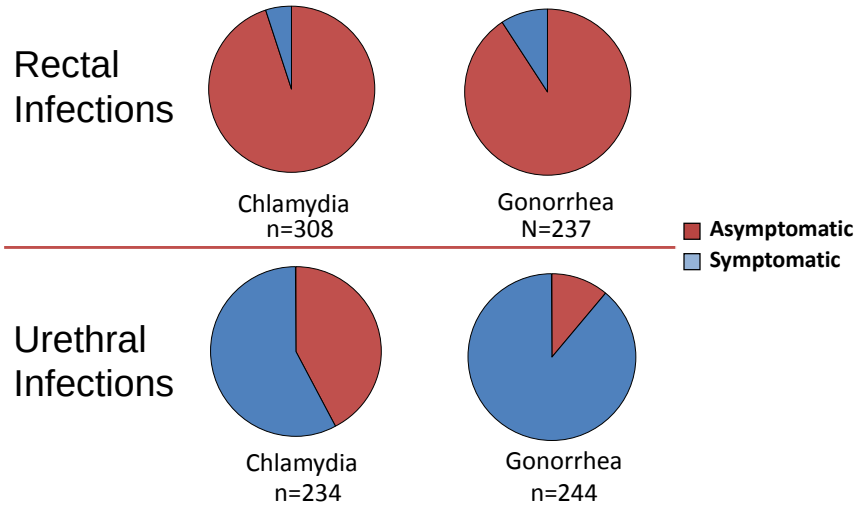
Other risk factors to consider:

- Sex with a man who has sex with men
- History of STD in the past year
- Methamphetamine use
- Sex work
- Intimate partner violence
- Incarceration
- Contact to STD

http://www.sfcityclinic.org/providers/ScreeningandSurveillance_CitywideSTDscreeningguidance.pdf

13

Unlike Urethral Infections, Most Rectal Gonorrhea and Chlamydia Infections in MSM are Asymptomatic

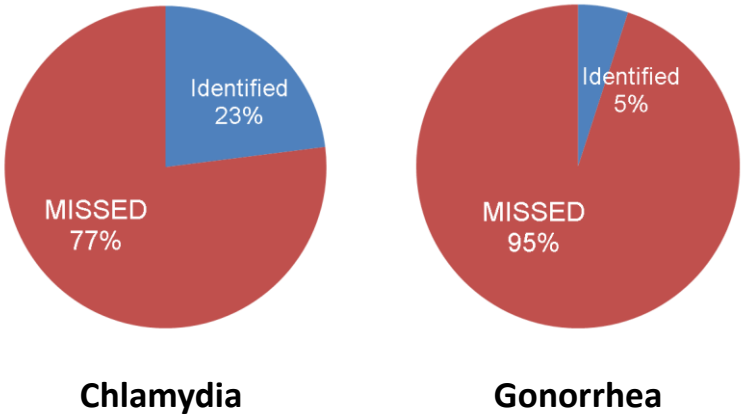


San Francisco City Clinic, 2011; Adapted from Kent, CK et al, *Clin Infect Dis* July 2005

14

Proportion of Chlamydia or Gonorrhea Infections in Asymptomatic MSM MISSED if only Urine Screened

n=3398



Marcus et al, STD Oct 2011; 38: 922-4

Slide Courtesy I. Park MD, MS

15

Extragenital Screening in Women?

- 4402 women screened at Baltimore STD clinics
- 57 (2%) had isolated extragenital CT and 50 (1%) had isolated extragenital GC
- This accounted for 14% of the 412 total CT and 30% of the 165 total GC
- Self-reported anal sex not predictive of rectal CT infection in women

- Potential benefits of screening women at extra-gen sites:
  - Prevent sequelae of cervical infxn (either in pt or her partner's partners)
  - Diminish incidence of GC and CT at population level
  - Prevent HIV acquisition and transmission

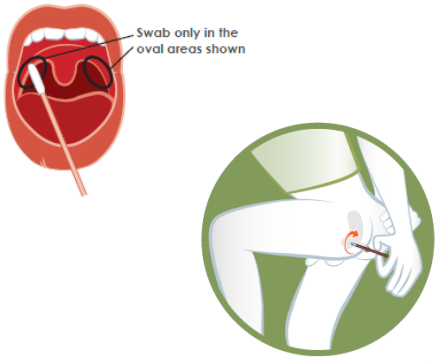
Bottom line:
- Women get rectal infections too! Test for extra-genital STDs if symptomatic
- No current recommendations for targeted screening

Dombrowski 2015; Trebach 2015; Gatrix 2015

16

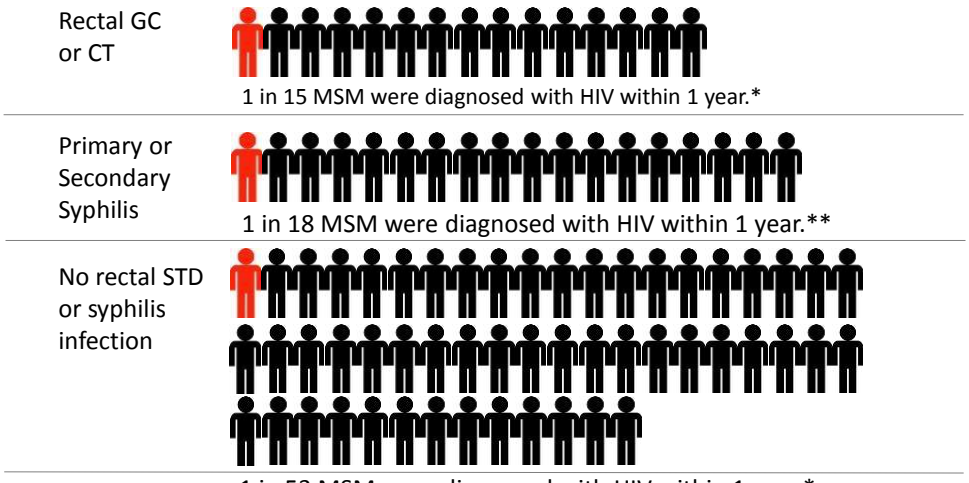
Self-collected Rectal/Pharyngeal STI Testing

- Highly acceptable, similar performance compared to clinician-collected specimens
- Self-collection can be performed at laboratory along with blood draw/urine collection or in the exam room before/after the provider visit
- **Standing orders** in EMRs may facilitate patient-collected testing
- Download **patient instructions** from SFCC website



Van der helm, 2009, STD; Sexton, 2013 J Fam Pract; Dodge, 2012 Sex Health
Freeman 2011, STD; Alexander 2008, STI; Moncada 2009, STD

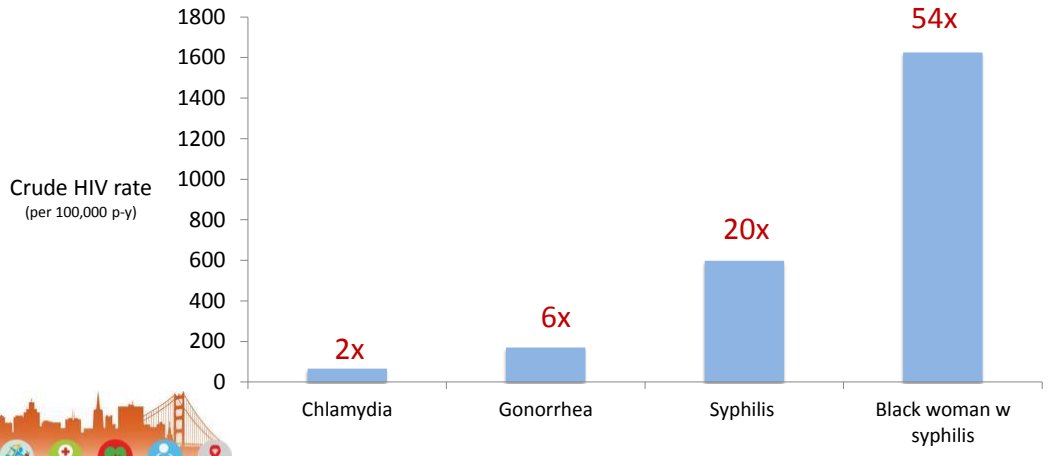
STDs Predict Future HIV Risk Among MSM



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

STDs Indicate Vulnerability

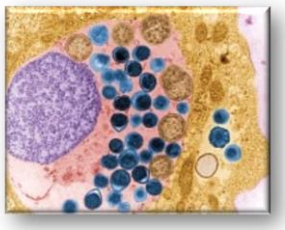
FL, 2000-2009: Surveillance data to estimate risk of HIV after syphilis, GC, CT



POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH

Slide courtesy of Seidman & Weber; Peterman et al, 2014.

19



CT/GC Treatment

Case 2: Richard

- 30 yo HIV positive MSM at primary care visit.

  Routine STD screen: Rectal CT NAAT is positive, treated with Azithromycin 1 g PO x1.

  At his next follow-up visit 3 months later, his **rectal** CT NAAT is again positive and he reports that he has not had any receptive anal sex since his last visit.
- How would you treat him?

21

Case 2 Richard Treatment?

Azithromycin 1 g PO x1

Doxycycline 100 mg PO BID x 7 days

Doxycycline 100 mg PO BID x 21 days

Levofloxacin 500 mg PO daily x 7 days

Chlamydia Treatment

Adolescents and Adults

Recommended regimens (non-pregnant):

- Azithromycin 1 g orally in a single dose
- Doxycycline 100 mg orally twice daily for 7 days

Recommended regimens (pregnant*):

- Azithromycin 1 g orally in a single dose

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

New Alternative Regimen (non-pregnant):

- Doxycycline (delayed release) 200 mg QD x 7 d
  - Equally efficacious to doxycycline BID, ↓ GI side effects
  - More $$$

Moved to Alternative Regimen (pregnant*):

- Amoxicillin 500 mg po TID x 7 days
  - CT persistence documented in vitro after treatment prompted removal from recommended to alternate

CDC 2015 STD Treatment Guidelines www.cdc.gov/std/treatment

24

Azithromycin versus Doxycycline for Treatment of Urogenital Chlamydia

- RCT comparing azithromycin with doxycycline
- Directly observed treatment of urogenital chlamydia among adolescents in youth correctional facilities
- Primary end point was treatment failure at 28 days after treatment initiation
  - Treatment failure determined on basis of NAAT, sexual history, and genotyping of CT strains
- Efficacy:
  - Azithromycin 97% effective
  - Doxycycline 100% effective

Geisler et al. NEJM 2015;373:2512-21.

25

Is Azithro Adequate Treatment for Rectal Chlamydia Infection?

Population MSM in Seattle	Treatment	Repeat positive
(N=407)	Azithro 1 g	22%
(N=95)	Doxy 100 BID x 7	8%

Based on retrospective uncontrolled observational clinical data: Dummond, Int J STD AIDS 2011; 22:478 and Khosropour, STD 2014; 41:79

- Meta-analysis pooled efficacy 82.9% for azithromycin 1g PO x 1, 99.6% for doxycycline 100mg PO bid x 7 days but all observational
- Not randomized
- Varying times to test of cure
- Low rates of follow-up
- Australian, European guidelines have moved to doxycycline
- US CDC Treatment Guidelines remain azithromycin 1g PO x 1

Use doxy for recurrent rectal CT!

26

Is Azithro Adequate Treatment for Rectal Chlamydia Infection?

Population MSM in Seattle	Treatment	Repeat positive
(N=407)	Azithro 1 g	22%
(N=95)	Doxy 100 BID x 7	8%

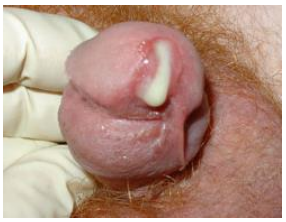
Based on retrospective uncontrolled observational clinical data: Dummond, Int J STD AIDS 2011; 22:478 and Khosropour, STD 2014; 41:79

Use doxy for recurrent rectal CT!

27

Case 3: Keith

- Keith is a 22 yo man with no PMH who presents with 2 days of urethral discharge and dysuria. He had 2 male and 1 female partner in the last 3 months. He has a documented history of anaphylaxis to cephalosporins.
- How would you treat him?



28

Case 3 Keith Treatment Options

Ciprofloxacin 500 mg PO x1

Cefixime 400 mg PO x1 plus
Azithromycin 1 g PO x1

Azithromycin 2 g PO x1

Gentamicin 240 mg IM x1 plus
Azithromycin 2 g PO x1

Ceftriaxone 250 mg IM x1 plus
Azithromycin 1 g PO x1

Start the presentation to see live content. Still no live content? Install the app or get help at PollEv.com/app

Current Recommended Gonorrhea Treatment – Any Anatomic Site

Ceftriaxone 250mg IM x 1 + **Azithromycin 1g PO x 1**

This is Dual treatment for GC – add the azithromycin or doxycycline regardless of CT result

Example: If patient is treated empirically with azithromycin for urethritis and the NAAT is GC+ ≥ 5 days later, must repeat azithro in combination with ceftriaxone to meet treatment recommendations

CDC 2015 STD Tx Guidelines www.cdc.gov/std/treatment

31

Gonorrhea Treatment and Test of Cure

- Doxycycline no longer recommended (leaves only Ceftriaxone + Azithromycin as recommended tx)
- ***For cephalosporin allergic, 2 options:***
  - *Gentamicin 240 mg IM (or 5mg/kg IM) with azithromycin 2g orally OR*
  - *Gemifloxacin 320 mg orally with azithromycin 2g orally*
- Who needs a test of cure?
  - Pregnant patients
  - Patients with pharyngeal GC treated with an alternative regimen
  - Cases of suspected treatment failure (culture AND simultaneous NAAT)
  - Consider if using non-recommended or monotherapy
- In addition, all patients should have a *repeat test* 3 months after treatment

CDC 2015 STD Tx Guidelines www.cdc.gov/std/treatment

32

Neisseria gonorrhoeae causes gonorrhea, a sexually transmitted disease that can result in discharge and inflammation at the urethra, cervix, pharynx, or rectum.

RESISTANCE OF CONCERN

N. gonorrhoeae is showing resistance to antibiotics usually used to treat it. These drugs include:

- cefixime (an oral cephalosporin)
- ceftriaxone (an injectable cephalosporin)
- azithromycin
- tetracycline

PUBLIC HEALTH THREAT

Gonorrhea is the second most commonly reported notifiable infection in the United States and is easily transmitted. It causes severe reproductive complications and disproportionately affects sexual, racial, and ethnic minorities. Gonorrhea control relies on prompt identification and treatment of infected persons and their sex partners. Because some drugs are less effective in treating gonorrhea, CDC recently updated its treatment guidelines to slow the emergence of drug resistance. CDC now recommends only ceftriaxone plus either azithromycin or doxycycline as first-line treatment for gonorrhea. The emergence of cephalosporin resistance, especially ceftriaxone resistance, would greatly limit treatment options and could cripple gonorrhea control efforts.

In 2011, 321,849 cases of gonorrhea were reported to CDC, but CDC estimates that more than 800,000 cases occur annually in the United States.

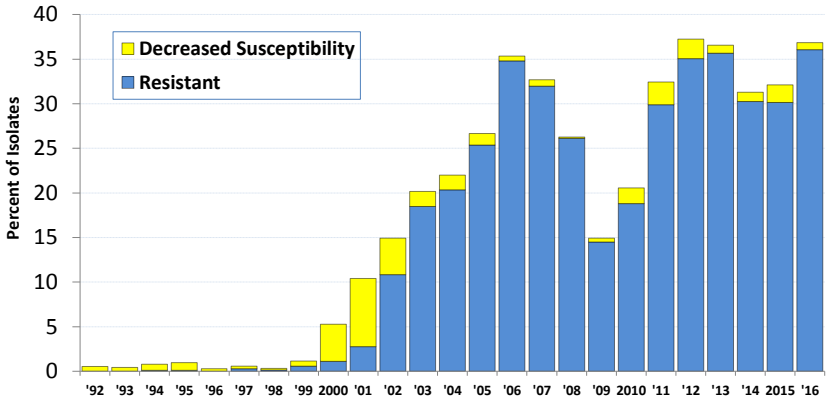
	Percentage	Estimated number of cases
Gonorrhea		820,000
Resistance to any antibiotic	30%	246,000
Reduced susceptibility to cefixime	<1%	11,480
Reduced susceptibility to ceftriaxone	<1%	3,280
Reduced susceptibility to azithromycin	<1%	2,460
Resistance to tetracycline	23%	188,600

Source: The Gonococcal Isolate Surveillance Project (GISP)–5,900 isolates tested for susceptibility in 2011.
For more information about data methods and references, please see technical appendix.

CDC U.S. Department of Health and Human Services Centers for Disease Control and Prevention

Gonococcal Isolate Surveillance Project (GISP), 2016

Percent of *Neisseria Gonorrhoeae* Isolates with Decreased Susceptibility or Resistance to Ciprofloxacin in California GISP STD Clinic Sites, 1992–Aug 2016

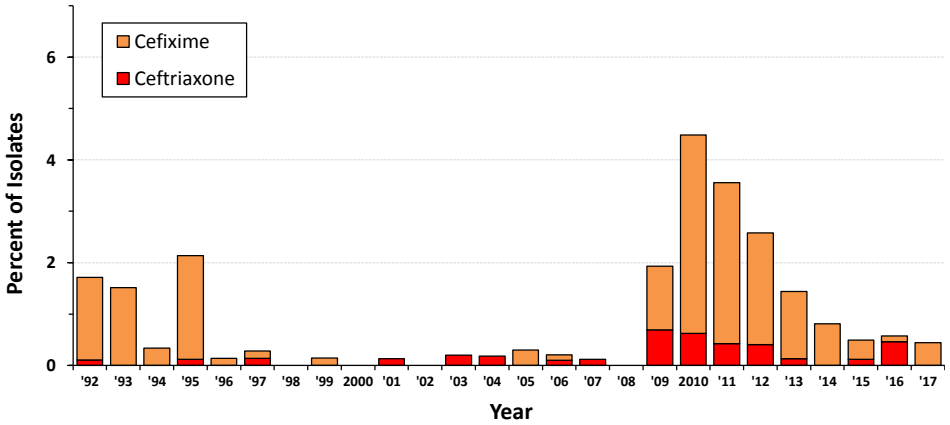


Note: Resistant isolates have MICs ≥ 1 µg ciprofloxacin/mL. Isolates with decreased susceptibility have MICs of 0.125 – 0.5 µg ciprofloxacin/mL. 2015-2016 data are provisional as of 3/2/2017.
STD Clinic Sites: Long Beach (ended participation in 2007), Los Angeles (added in 2003), Orange, San Diego, San Francisco

34 Rev. 03/2017

Gonococcal Isolate Surveillance Project (GISP)

Percent of *Neisseria Gonorrhoeae* Isolates with CDC "Alert" Values for Selected Cephalosporins in California GISP STD Clinic Sites, 1992–2017

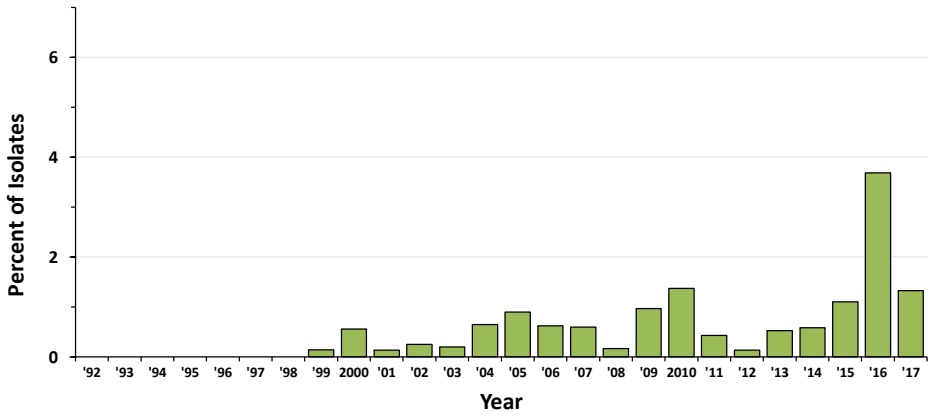


*Cefixime susceptibility was not run in 2007-2008.
Note:"Alert" values are set by CDC as markers to look at possible decreased susceptibility. Cefixime alerts have MICs ≥ 0.25 µg/mL. Ceftriaxone alerts have MICs ≥ 0.125 µg/mL. 2016 data are provisional as of 3/2/2016.

35 Rev. 09/2017

Gonococcal Isolate Surveillance Project (GISP)

Percent of *Neisseria Gonorrhoeae* Isolates with CDC "Alert" Values for Azithromycin in California GISP STD Clinic Sites, 1992–2016



Note:"Alert" values are set by CDC as markers to look at possible decreased susceptibility. Azithromycin alerts have MICs ≥ 2.0 µg/mL. No data before 1992.
2015-2016 data are provisional as of 3/2/2017.
STD Clinic Sites:Long Beach (ended participation in 2007), Los Angeles (added in 2003), Orange, San Diego, San Francisco

36 Rev. 09/2017

Cephalosporin Treatment Failures

- Oral cephalosporin treatment failures reported worldwide
  - Japan, Hong Kong, England, Austria, Norway, France, South Africa, and Canada
  - No cephalosporin treatment failures reported in U.S. to date
- Ceftriaxone treatment failures in pharyngeal gonorrhea and a few isolates with high-level ceftriaxone resistance reported

37

Suspected GC Treatment Failure

TEST WITH CULTURE AND NAAT:
- If GC culture <u>not</u> available, call your local health department

REPEAT TREATMENT:
- Ceftriaxone 250 mg IM + AZ 1g PO if first Tx with alternative regimen
- Gemifloxacin 320 mg + AZ 2g OR Gentamicin 240 mg IM + AZ 2g if first Tx with CTX+AZ
- If reinfection suspected, repeat treatment with CTX 250 + AZ 1g

REPORT:
- To your local health department within 24 hours

TEST AND TREAT PARTNERS:
- Treat all partners in last 60 days with same regimen

TEST OF CURE (TOC):
- TOC 7-14 days with culture (preferred) and NAAT

38

Partner Management

- Clinical evaluation is first-line option
  - Partner should be examined and counseled and treated for STD of exposure
- Patient Delivered Partner Therapy (PDPT) – clinician provides medication or a prescription to a patient to take to their partners to ensure treatment, without examining the partner
- Legally allowable in CA
- Recommended by CDC for non-MSM patients
- SFDPH recommends for ALL patients (including MSM) treated for gonorrhea or chlamydia
  - Gonorrhea: cefixime 400mg PO x 1 AND azithromycin 1g PO x 1
- Should give supporting materials including info sheet. SFDPH has available modifiable templates: http://www.sfcityclinic.org/providers/

39

CDPH California Department of Public Health

STD Controllers association

CAPTC

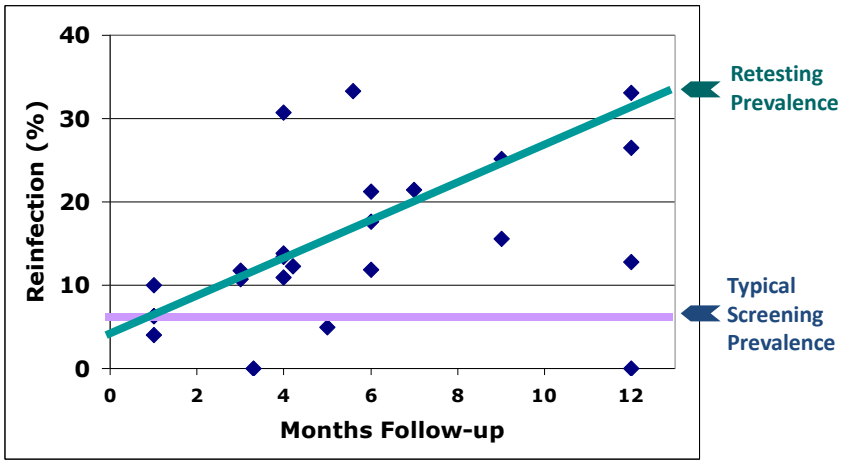
www.std.ca.gov

Patient-Delivered Partner Therapy (PDPT) for Chlamydia, Gonorrhea, and Trichomoniasis: Guidance for Medical Providers in California

These guidelines were developed by the California Department of Public Health Sexually Transmitted Diseases (STD) Control Branch in collaboration with the California STD Controllers Association, and the California Prevention Training Center (CAPTC)

40

Repeat Chlamydial Infection is Common



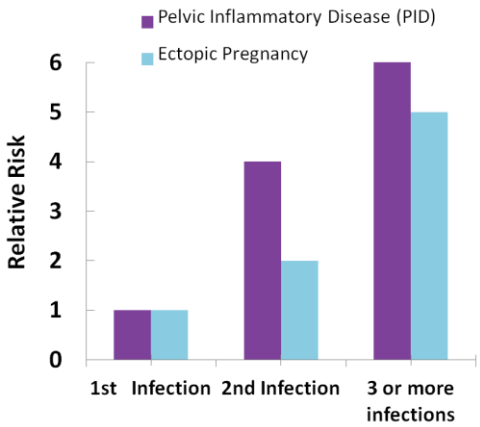
41

Reinfection is Dangerous

Having a repeat infection is highly associated with increased risk for adverse reproductive health consequences

2nd infection:
- 4x risk of PID
- 2x risk of ectopic pregnancy

3+ infections:
- 6x risk of PID
- 5x risk of ectopic pregnancy



Prepared by: CDPH STD Control Branch; Source: Hillis SD, et al. (1997). Am J Obstet Gynecol 176(1 Pt 1): 103-7

42

Testing After an STD Infection

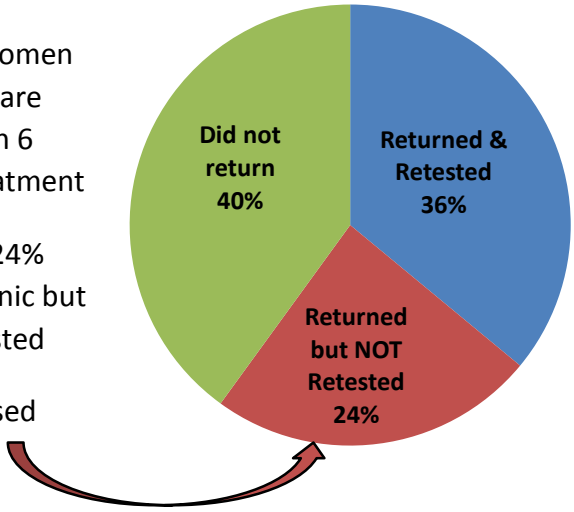
- Women who test positive for CT/GC, **or trichomonas** should be rescreened three months following treatment
- Men who test positive for chlamydia or gonorrhea should be rescreened at three months after adequate therapy
- All patients with a bacterial STDs or trichomonas should be tested for other STDs including CT/GC, syphilis, and HIV

CDC 2015 STD Treatment Guidelines www.cdc.gov/std/treatment

43

Retesting Rates in California FP Clinics

- Only 36% of women treated for CT are retested within 6 months of treatment
- BUT, another 24% returned to clinic but were not retested
- These are missed opportunities!



Source: Chow J. FPACT Data, FY11-12

How Soon Can I Retest for CT/GC?

- Need to wait at least **3 weeks** for CT to clear
- GC clearance within 1-2 weeks (2 weeks for pharyngeal infection)
- 3 months is the target, but retest opportunistically whenever patient returns in the next 1-12 months

CDC 2015 STD Tx Guidelines, www.cdc.gov/std/treatment

45

Case 4: Miguel

- 42 yo HIV positive MSM presents with rectal discharge and pain with sex
- Presumptively treated with Ceftriaxone 250 mg IM x1 and Doxycycline 100 mg PO BID x 7 days for proctitis
- Rectal CT NAAT positive
- VDRL and rectal GC NAAT are negative

46

Case 4 Miguel What would you do?

- Obtain a repeat GC/CT NAAT in 3 months
- Ask him to return for CT test of cure at 21 days
- Order a test for LGV
- Presumptively extend his doxycycline course from 7 days to 21 days

Acute Proctitis Management
2015 CDC STD Treatment Guidelines

- **Ceftriaxone 250mg IM x 1**
  plus
- **Doxycycline 100mg po BID x 7 days****

+/- HSV and syphilis treatment depending on exam findings

"Bloody discharge, perianal ulcers, or mucosal ulcers among MSM with acute proctitis and either a positive rectal chlamydia NAAT or HIV infection should be offered **presumptive treatment for LGV with doxycycline 100 mg twice daily orally for a total of 3 weeks"

5-30% symptomatic rectal CT (i.e. CT proctitis) is LGV

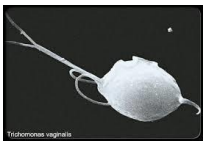
49

Trichomonas Vaginalis (aka "trich")

- Accounts for up to 35% of symptomatic vaginitis
- Increases risk of HIV acquisition in women
- Presents with copious discharge, often frothy
- Wet mount approximately 60% sensitive
- NAAT testing 95-100% sensitive
- **DPH Public Health Lab (at 101 Grove) now offering a Trich NAAT!**

WHO TO TEST

- Annual screening in asymptomatic **HIV-positive** women
- Diagnostic evaluation of vaginitis
- 3-month f/u screening after confirmed case of trichomonas
- Diagnostic evaluation of MSW with persistent or recurrent non-gonococcal urethritis

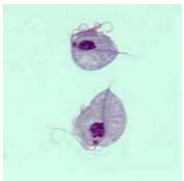


50

Trich – How to Screen and Treat

Accepted specimen sources are:

- Vaginal swab (self-collected or clinician collected)
  - Use the orange Aptima kit
- Urine
- If also screening for GC/CT, you only need to send *one* kit



Treatment:

- HIV-negative:
  - Metronidazole 2 g PO x1 *OR*
  - Tinidazole 2 g PO x1
- HIV-positive:
  - Metronidazole 500 mg PO BID x 7 days
- No sex for 7 days after treatment
- Can be detected in 70% of male sexual partners of infected women: **Sex partners should be empirically treated**

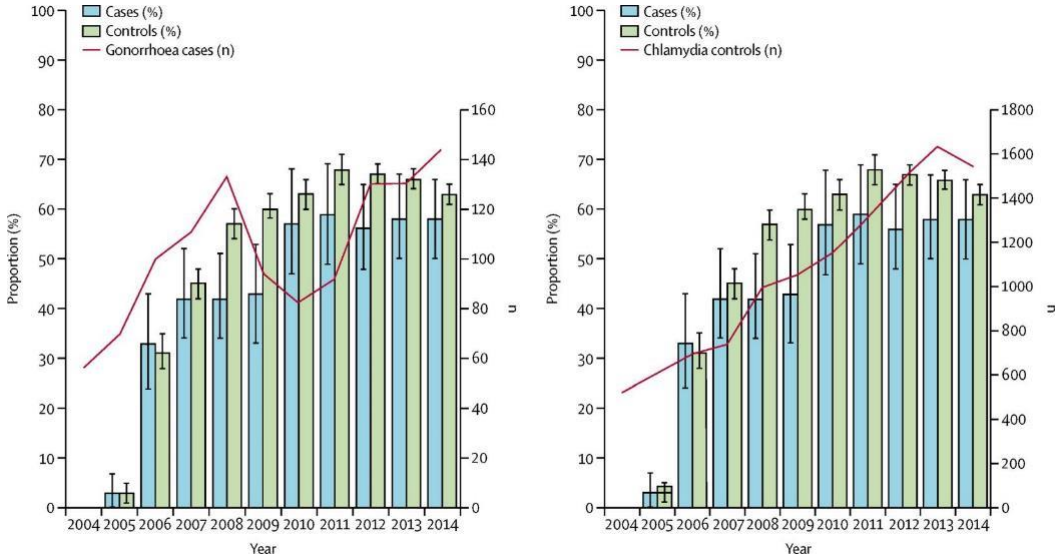
51

Meningococcal Disease Outbreaks in MSM: Recommendations for San Francisco

- Offer the quadrivalent meningococcal vaccine (MenACWY; Menactra® or Menveo®) to:
  - All HIV-positive persons
  - All sexually active MSM
  - Also:
    - All indiv 11-18
    - High risk groups
      - Travelers
      - Military recurits
      - Microbiologists

52

Meningococcal Group B Vaccine for Gonorrhea Prevention?



Petousis-Harris Lancet 2017

Take Home Points

- Routine screening is critical to STD prevention
  - Self-collection!
  - Don't forget extra-genital sites!
- Treat partners, and repeat a screen in 3 months
- Additional data required to determine best treatment for asymptomatic rectal CT: azithro vs. doxy
- High index of suspicion for LGV: If signs / symptoms of proctitis are present and LGV testing not available: offer presumptive treatment for LGV
- Trich testing now available
- Vaccinate MSM for meningococcal disease

54

Thank you!

- Dominique Reminick and the CA HIV/STD Prevention Training Center
- Julie Stoltey
- Ina Park
- Susan Philip
- Tamara Ooms
- SF City Clinic NPs

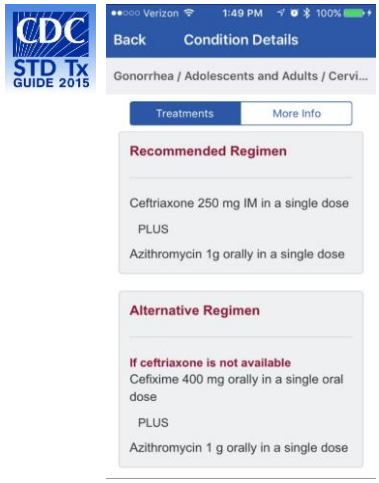
- Stephanie.Cohen@sfdph.org
- For clinical questions: 415-487-5595
- To report a GC, CT or syphilis case: 415-487-5530

POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH

55

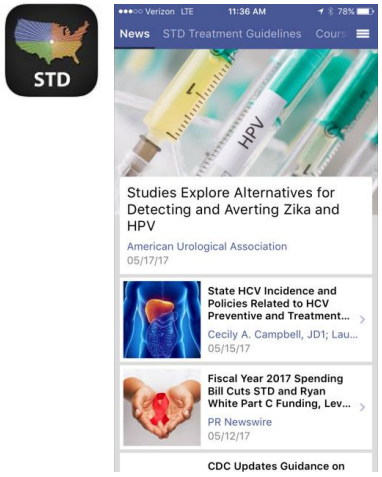
STD Treatment Guidelines Apps

STD Treatment Guidelines



Available on iTunes & Google Play

STD Clinical Toolbox



Available on iTunes

STD Treatment Guidelines wall charts, pocket guides, and the full MMWR article at: www.cdc.gov/std/tg2015/

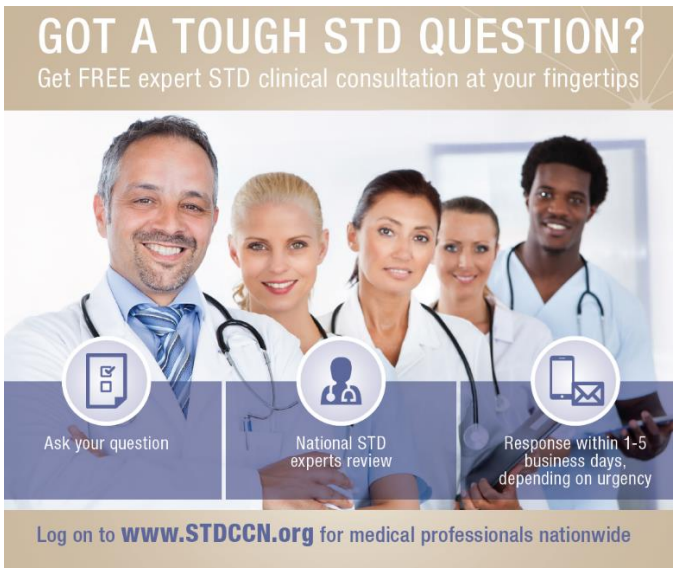
The NNPTC provides:

- Clinical training
- STD clinical consultations
- Resources and tools for STD Treatment

Visit: www.nnptc.org

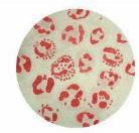
National Network of STD Clinical Prevention Training Centers

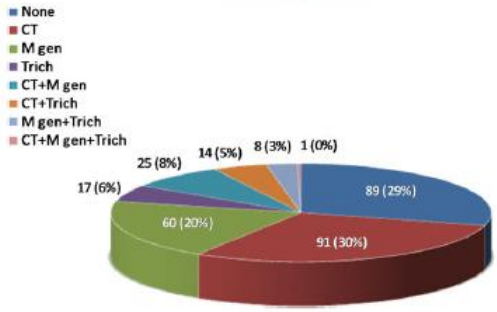
CDC Centers for Disease Control and Prevention



Urethritis

- Gonorrhea



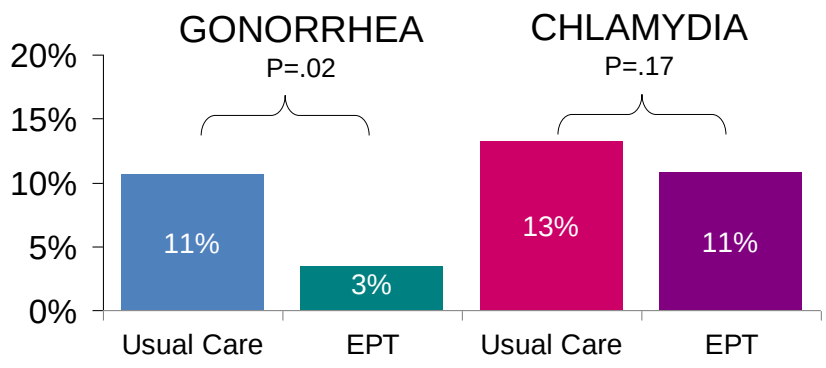


- Non-gonoccocal urethritis (NGU):
  - Chlamydia
  - Mycoplasma genitalium
  - HSV
  - Trichomonas
  - Ureaplasma urealyticum
  - Adenovirus
  - Haemophilus

Schwebke CID 2011

58

The Effectiveness of Expedited Partner Treatment on Re-Infection Rates



Golden M, et al. N Engl J Med 2005 Feb 17;352(7):676-85.