

STIs Are Running Rampant—Are You Up to Date on the Latest Guidelines?

December 5, 2022

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Our Speakers

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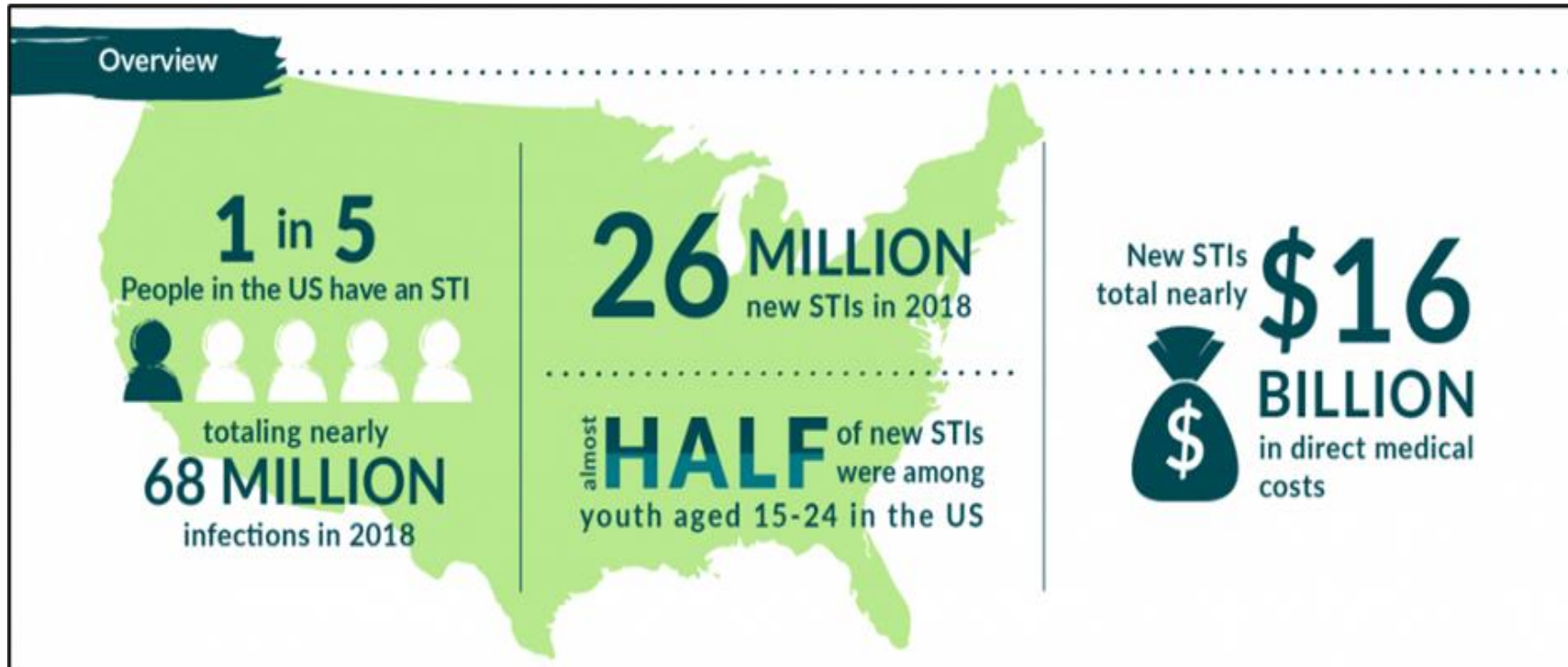
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A Growing Problem



Nomenclature for discussion

Chlamydia trachomatis: CT

Neisseria gonorrhoea: NG



Together = CTNG

Complications of CTNG Infections

- Pelvic inflammatory disease
- Ectopic pregnancy
- Infertility
- Chronic pelvic pain
- Increased risk for HIV transmission and acquisition

Take-Home Message

Chlamydial infections are asymptomatic in nearly 75% of women

Gonorrhea is asymptomatic in 50% of women

Because so many infections are initially asymptomatic, some women don't exhibit recognizable symptoms until complications (eg, PID) have occurred

A Role for Urgent Care

- In the 1980s and 1990s, most STI care was provided in dedicated STI clinics. Funding cuts have led to a decrease in these clinics, with almost 80% of STI cases now diagnosed in non-STI clinics
- Nearly half of Millennials and Gen Z (aged 10-41) do not have a PCP

Take-Home Message

80% of STI cases are now diagnosed in non-STI clinics

Case Study 1

18-year-old female college freshman

CC: vaginal discharge

HPI: Symptoms started one week prior and include vaginal discharge and itching. No dysuria, abdominal pain, or pelvic pain

Sexual history: No prior history of STI. Has had two sexual partners in the past 6 months

LMP: 3 weeks ago

Allergies: tetracycline

Poll Questions

You order send out tests for CT and NG. How would the testing samples be collected at your clinic?

- No vaginal swabs, I would use a urine sample for CTNG testing
- Patient provides self collected vaginal swabs (SCVS)
- I would perform a bimanual exam, a pelvic exam, and collect an endocervical swab

What if this were a male patient?

- Urine sample
- Provider collected urethral swab
- Patient provides self collected urethral swabs (SCVS)

Urine vs SCVS vs Provider-Collected Cervical or Urethral Swab for CTNG Screening

- SCVS vs Cervical (CT and NG in women)
 - Sensitivity: 92%–98%
 - Specificity: 99%

- Urine vs Cervical (CT and NG in women)
- Sensitivity: 79%–87%
 - Specificity: 99%

- Urine vs PC urethral (CT and NG in men)
 - Sensitivity: 88% –92%
 - Specificity: 99%

Bottom line....

- CDC considers SCVS equivalent to provider- collected
- Urine screening in women has poor sensitivity
- Urine screening is considered acceptable for CTNG screening in men

Case Study 1 (continued)

Vaginal swab is sent to an external lab for NAAT testing

- Chlamydia: Positive
- Gonorrhea: Negative
- Trichomonas: Negative
- BV: Negative
- Candida: Negative

Diagnosis: Cervicitis

Provider reviews results and prescribes treatment

Poll Question

What antibiotic treatment would you prescribe for this patient?

- Doxycycline 100mg PO BID x 7 days
- Rocephin 500mg IM
- Azithromycin 500mg PO x 1
- Rocephin 500mg IM and Azithromycin 500mg PO

Chlamydia Trachomatis Treatment

CDC Treatment Guidelines for Adults and Children >45 kg

First-line: Doxycycline 100mg: orally twice daily for 7 days

Alternative: Azithromycin: single dose 1g orally

If gonorrhea infection has not been excluded: Ceftriaxone 500mg IM

CT Important Change

- *Azithromycin removed as first-line therapy*

Presumptive treatment for CTNG should be provided for men and women at increased risk, in areas with a high prevalence of CTNG, if follow-up cannot be ensured, or if testing with NAAT is not possible.

Case Study 2

27-year-old female, recently married and actively trying to conceive

CC: vaginal discharge and irritation

HPI: 2 weeks vaginal discharge, reports regular menses

Sexual history: No prior history of STI. Has had one sexual partner in the past 1.5 years

Pelvic exam

- Presence of white/off-white discharge in and around the vaginal vestibule
- Mild CMT, no adnexal pain or masses

Case Study 2 (continued)

In-house laboratory assessments

- Urine pregnancy: Negative
- UA normal
- Wet mount microscopy: Negative for trichomonas

External lab assessments via PC cervical swab

- Chlamydia: Negative
- Gonorrhea: Positive

Poll Question

What other tests should be routinely ordered when cervicitis is diagnosed?

- Bacterial vaginosis
- Trichomonas vaginalis
- HIV and Syphilis
- BV and Trichomonas
- All the above

Common Causes of Vaginal Discharge and Itching

Infectious Causes

Bacterial vaginosis

Vulvovaginal candidiasis

Chlamydia

Gonorrhea

Trichomoniasis

- Sensitivity of microscopy for detecting *T vaginalis* is very low (approximately 50%)
- *Symptomatic* women with cervicitis and negative wet-mount microscopy – consider (NAAT or POC PCR) testing

Less Common Causes

- Human papilloma virus
- Primary syphilis
- Infections caused by *mycoplasma genitalium*, *ureaplasma urealyticum*, or *E. coli*

Common Noninfectious Causes

Body's reaction to a foreign body (eg, retained tampon)
Chemical or allergic reactions (eg, soap)

Other Recommended Tests

Women with a diagnosis of cervicitis should also be evaluated for potential concomitant infections

- Syphilis
- HIV

Poll Question

Patient diagnosed with gonorrhea. What treatment would you order?

- Ceftriaxone (Rocephin) 250mg IM
- Azithromycin 1gm PO
- Ceftriaxone (Rocephin) 250mg IM and Azithromycin 1gm PO
- Ceftriaxone (Rocephin) 500mg IM
- Azithromycin 1gm PO
- Ceftriaxone (Rocephin) 500mg and Azithromycin 500mg PO

Neisseria Gonorrhoea Treatment

CDC Treatment Guidelines for Adults and Children >45 kg

First-line:

Ceftriaxone (Rocephin): 500 mg intramuscularly for persons <150 kg

- Ceftriaxone (Rocephin): 1 gm intramuscularly for persons >150 kg

Oral Alternative: Cefixime (Suprax): Single 800 mg oral dose

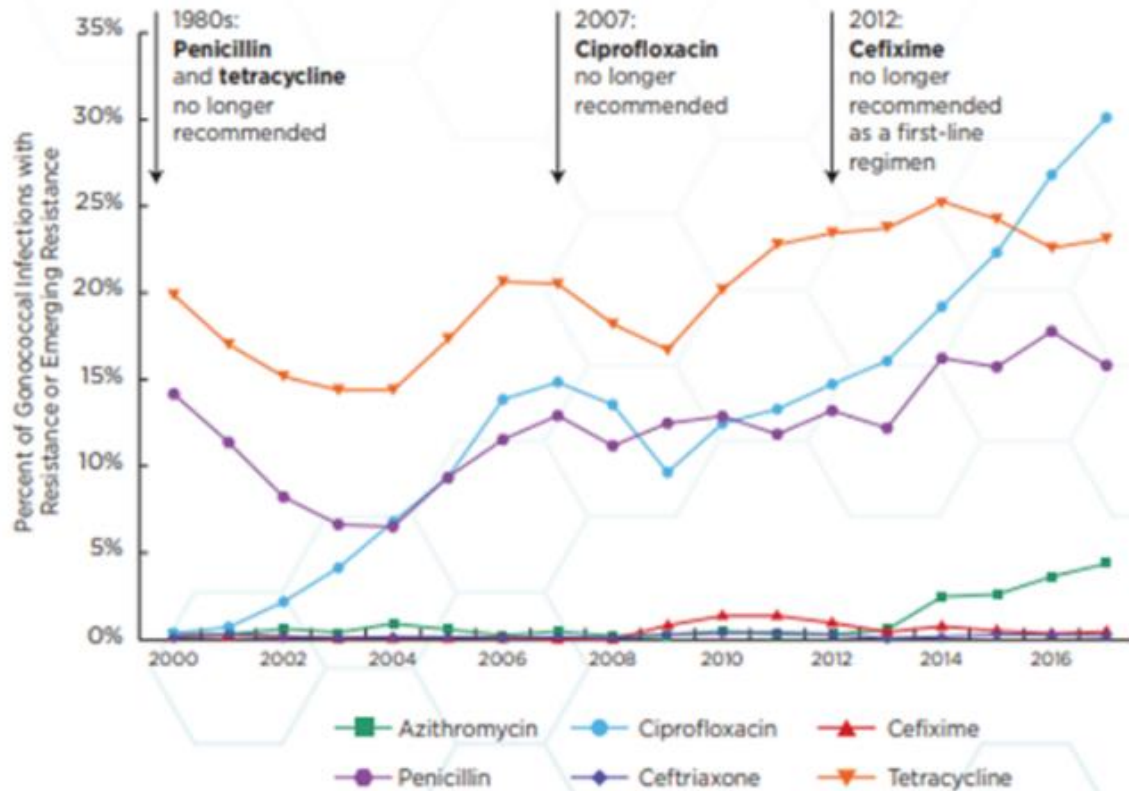
NG Important Changes

- Higher-dose ceftriaxone recommended
- Azithromycin no longer recommended as dual therapy

The percentage of gonorrhoea isolates exhibiting resistance to azithromycin increased more than seven-fold from 2013 to 2018

Emerging Antibiotic Resistance

Gonorrhea rapidly develops resistance to antibiotics—ceftriaxone is the last recommended treatment.



Stewardship tip!

The advent of new and more rapid point-of-care CT and NG testing will make it easier to exclude co-infection with both pathogens.

Stick to monotherapy if either CT or NG has been excluded by testing.

Azithromycin resistance rates are rising

Poll Question

After treatment, the nurse asks if you would like to schedule a follow-up appointment either with the PCP or back at your clinic. You tell him:

- No, she has received the necessary treatment already
- Yes, but only if she has further symptoms
- Yes, schedule her to be seen in 3 months regardless of whether she has symptoms

Follow-Up Considerations

Retest in 3 months: Due to high rates of reinfection (regardless of whether their sex partners were treated), women should be instructed to return in 3 months after treatment for repeat testing—even if asymptomatic

Partner testing: All sex partners during the previous 60 days should be referred for evaluation, testing, and presumptive treatment

Expedited partner therapy: And other effective partner referral strategies should be considered for treating male partners of women

Avoiding reinfection: Sex partners should abstain from sexual intercourse until they and their partners are treated, and symptoms have completely resolved

Trichomoniasis Vaginalis Treatment

Women —————→ Metronidazole: 500 mg orally 2x/day x 7days

Women alternative ———→ Tinidazole: 2 g orally single dose

Men —————→ Metronidazole: 2 g orally in a single dose

Poll Question

Do you routinely offer asymptomatic sexually active women with non-STI complaints screening for chlamydia and gonorrhea?

- No, I am too busy, and we are an urgent care center, not a primary care office
- Probably, but I am afraid her insurance won't cover the cost
- Yes, she should be offered screening

CDC Screening Guidelines for CTNG

Routine screening for chlamydia and gonorrhea infection on an annual basis is recommended for all sexually active females aged 15–24

A national survey of youth aged 15–25 years found that most had never received an STI test; only 16.6% of females and 6.6% of males had been tested in the past 12 months



Take-home message

This population accounts for almost half of all new STD infections yearly!

Screening for Women at Increased Risk of CTNG

Risk factors for women 25 years or older (screen annually if):

They have a new partner

More than one sex partner

A sex partner with concurrent partners

A sex partner who has an STI

Practice inconsistent condom use

Have a previous or coexisting STI

Have a history of exchanging sex for money or drugs

Have a history of incarceration

Pharyngeal and rectal gonorrhea screening can be considered in females based on reported sexual behaviors and exposure, through shared clinical decision-making between the patient and the provider

Take-home message:

- Screen based on age and risk factors – not just symptoms or exposure!
- Chlamydia infections are asymptomatic in 70-75% of cases
- Gonorrhea infections are asymptomatic in 50% of cases

Case Study 3

27-year-old male

CC: My partner has gonorrhea

HPI: Pt states that his male partner was diagnosed with gonorrhea the day before. He has no symptoms but requests CTNG screening

Sexual history: Prior history of urethral cervicitis due to gonorrhea. He reports both oral and anal sex with his partner in the previous week

Allergies: Penicillin

Poll Question

You order a send-out CT, NG, and TV NAAT test via a urine sample on the patient. Should you treat this patient presumptively with antibiotics to cover for CT and NG while awaiting results?

- No, he has no symptoms. I want to see the test results before treating with antibiotics or I'll get dinged by the stewardship police
- Yes, symptoms or not, he has risk factors for CTNG

Poll Question

Test results reveal gonorrhea. What treatment would you order for this patient?

- Ceftriaxone 250mg
- Ceftriaxone 500mg
- Cefixime 800mg single oral dose
- Azithromycin 1gm single oral dose
- Single doses of IM gentamicin 240 mg and oral azithromycin 2 gm

Poll Question

Should a rectal and pharyngeal swab be obtained for CTNG testing?

- No, If he doesn't have evidence of CTNG in his urine he is highly unlikely to have it in his pharynx or rectum
- Yes, his sexual history dictates obtaining a rectal and pharyngeal swab

CDC Screening Guidelines for Men

Men Who Have Sex with Men

- Chlamydia testing at least annually for sexually active MSM at sites of contact (urethra, rectum) regardless of condom use
- Add Pharyngeal Gonorrhea testing at least annually for sexually active MSM with pharyngeal sites of contact
- Every 3 to 6 months if at increased risk (i.e., MSM on PrEP, with HIV infection, or if they or their sex partners have multiple partners)

Men Who Have Sex with Women

There is insufficient evidence for screening among heterosexual men who are at low risk for infection, however, screening young men can be considered in high prevalence clinical settings (adolescent clinics, correctional facilities, STI/sexual health clinic)

Research Using Rapid POC CTNG Testing

Recent studies have shown that rapid CTNG testing has the potential to significantly reduce over- and undertreatment with antibiotics

May, et al, found a significant reduction in unnecessary antibiotic treatment (overtreatment) for CT/NG in subjects tested on a rapid molecular test compared with those tested with delayed NAAT

Gaydos, et al, also compared rapid CT/NG testing vs delayed CT and NG testing

- ✓ In this study, none of the patients in the rapid testing group were undertreated compared with 56% who were undertreated in the routine testing group
- ✓ Overtreatment was reduced, as well, with only 25% unnecessarily treated in the rapid testing group vs 47% in the routine testing group

Help on the Way

- FDA approved rapid PCR test for CT, NG, and TV in women (Lancet Infectious Diseases 2021)
- Sensitivity of 97% for chlamydia and gonorrhea
- CLIA-waived
- Other rapid CLIA-waived POC CTNG tests are expected to hit the market soon

Take-Home Points

80% of STI cases are now diagnosed in non-STI clinics

Gonorrhea is asymptomatic in 50% of women

Chlamydia is asymptomatic in 75% of women

Half of all new STDs are in females aged 15-24

Self-collected vaginal swabs are sufficient for CTNG screening

*Ceftriaxone **500 mg** now recommended for gonorrhea treatment – azithromycin removed*

Doxycycline treatment of choice for chlamydia— azithromycin removed as first-line therapy

Questions

Thank you!

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