

CDC updates guidelines on treatment of sexually transmitted infections

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The Centers for Disease Control and Prevention (CDC) **has updated its guidelines** for the treatment of people who have or are at risk for sexually transmitted infection (STIs).

Key changes were made to treatment recommendations for *Neisseria gonorrhoeae*, *Chlamydia trachomatis*, *Trichomonas vaginalis*, pelvic inflammatory disease (PID) and *Mycoplasma genitalium*.

Along with the AAP *Red Book*, the guidelines are a source of clinical guidance for the diagnosis, management and treatment of STIs based on current evidence.

Adolescent screening recommendations

Reported rates of STI, including chlamydia and gonorrhea, continue to rise across the U.S. Prevalence rates of certain STIs are highest among adolescents and young adults (AYA).

The CDC continues to recommend routine laboratory screening for common STIs for all sexually active AYA.

It also suggests providers consider opt-out screening for chlamydia and gonorrhea (i.e., the patient is notified testing will be performed unless the patient declines) for AYA females regardless of reported sexual activity as part of a clinical visit. Cost-effectiveness analyses indicate that opt-out chlamydia screening among AYA females could increase screening significantly, save costs and identify STIs among youths who do not disclose their sexual behavior.

Chlamydia

Chlamydia continues to be the most commonly reported notifiable infectious disease in the U.S., and prevalence rates are highest among sexually active females ages 15-24.

Asymptomatic infection is common, and the CDC continues to recommend at least annual screening of all sexually active females younger than 25 years and all young males who have sex with males based on sexual behavior and anatomic site of exposure. Screening should be considered for sexually active young males in clinical settings serving populations with a high male chlamydial infection prevalence.

The new guidelines recommend doxycycline 100 milligrams (mg) orally twice daily for seven days as first-line chlamydial infection treatment for AYA. For patients with a doxycycline allergy or pregnancy, alternatives include azithromycin 1 gram (g) orally in a single dose or levofloxacin 500 mg orally once daily for seven days.

Studies have shown doxycycline is more efficacious than azithromycin, especially for extragenital sites. If doxycycline non-adherence is a concern, azithromycin is an option. If azithromycin is used, post-treatment evaluation and testing should be considered, especially with rectal infections.

Gonorrhea

Antibiotic resistance remains a challenge and complicates gonococcal treatment. With the emergence of azithromycin resistance and optimization of antimicrobial stewardship, dual treatment for gonococcal infection is no longer recommended.

The recommended treatment for gonococcal infection of the cervix, urethra and rectum is ceftriaxone 500 mg intramuscularly (IM) in a single dose. For patients over 150 kilograms (kg), the ceftriaxone dose should be increased to 1 g.

If ceftriaxone is not available, gentamicin 240 mg IM in a single dose *plus* azithromycin 2 g orally in a single dose, *or* cefixime 800 mg orally in a single dose are both alternative regimens.

If chlamydial co-infection cannot be excluded, doxycycline 100 mg orally twice daily for seven days should be added.

Gonococcal pharyngeal infections are common among certain populations and can be a source of community transmission. Pharyngeal infections are more difficult to treat than genital infections.

The recommended pharyngeal gonococcal treatment regimen is ceftriaxone 500 mg IM in a single dose for patients less than 150 kg and 1 g for those weighing over 150 kg. No reliable alternative treatment regimen is recommended. Any person with pharyngeal infection should return for a test of cure seven to 14 days after treatment.

Trichomoniasis

The new recommended trichomoniasis treatment regimen differs for females and males.

For females, the recommended regimen is metronidazole 500 mg orally twice daily for seven days, which can reduce persistent trichomoniasis infections. The regimen recommended for males continues to be metronidazole 2 g orally in a single dose. Alternatively, tinidazole 2 g orally in a single dose can be used for both females and males.

PID

PID treatment should not only be effective against chlamydia and gonorrhea infection but also provide empiric, broad spectrum coverage for other likely pathogens.

The new guidelines recommend the addition of metronidazole to all PID treatment regimens. Metronidazole provides coverage for anaerobic organism as well as bacterial vaginosis (BV), which is associated with PID.

The recommended PID IM or oral regimen is ceftriaxone 500 mg IM in a single dose *plus* doxycycline 100 mg twice daily for 14 days *plus* metronidazole 500 mg twice daily for 14 days. If ceftriaxone is not available, cefoxitin 2 g IM *and* probenecid 1 g orally in a single dose can be given or another parenteral third-generation cephalosporin can be given with 14 days of doxycycline and metronidazole.

Mycoplasma genitalium

M. genitalium causes persistent/recurrent urethritis among males, cervicitis and PID among females, and asymptomatic infections among both genders.

Males with recurrent urethritis and females with recurrent cervicitis should be tested for *M. genitalium* using a Food and Drug Administration-approved nucleic acid amplification test. Testing should be considered with PID. Asymptomatic screening is not recommended.

Resistance testing should be performed to guide therapy, due to rapidly increasing azithromycin resistance.

Two-stage therapy approaches, using resistance-guided therapy if available, are recommended. If macrolide sensitivity is demonstrated, use doxycycline 100 mg twice daily for seven days then an initial dose of azithromycin 1 g followed by 500 mg once daily for three additional days. If macrolide resistant or resistance testing not available, use doxycycline 100 mg twice daily for seven days followed by moxifloxacin 400 mg daily for seven days.

Additional changes were made regarding alternative BV treatments and HPV vaccine recommendations and counseling messages.

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