Management of Gonorrhea and Chlamydia in Patients with HIV Infection

Adult Clinical Guideline from the New York State Department of Health AIDS Institute

www.hivguidelines.org/LINK
Purpose of the Guideline

• Increase the numbers of NYS residents with HIV and gonococcal or chlamydial coinfection who are identified and treated with effective interventions.

• Reduce gonorrhea and chlamydia rates in support of the NYSDOH Prevention Agenda 2013-2018 goals.

• Reduce the growing burden of morbidity associated with gonococcal and chlamydial infections.

• Emphasize the need for 3-site screening for patients at high risk of acquiring STIs.
Transmission and Prevention

✔ RECOMMENDATIONS

• Clinicians should inform patients with HIV infection about the risk of acquiring or transmitting chlamydia, gonorrhea, and other STIs from close physical contact with all sites of possible exposure, including the penis, vagina, mouth, or anus. (AIII)

• When patients with HIV infection are diagnosed with gonococcal or chlamydial infections, clinicians should discuss risk-reduction strategies, including the value of correct condom use (AII). Clinicians should also educate patients about the potential for oral transmission of gonorrhea and chlamydia (AIII), the benefits of identifying STIs early (AIII), and the need for prompt evaluation and treatment of partners (AIII).
## Description of Risk Status for Sexual Exposure to Gonorrhea and Chlamydia

<table>
<thead>
<tr>
<th>Risk Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>No/Low Risk</td>
<td>Patient reports no sexual activity or sex only within a mutually monogamous relationship within the year prior</td>
</tr>
<tr>
<td>Moderate Risk</td>
<td>Patient reports a new sex partner within the year prior</td>
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<tr>
<td>High Risk</td>
<td>Patient self-identifies as being at high risk of sexually transmitted infections (STIs) and/or reports any of the following for self or sex partner(s):</td>
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<tr>
<td></td>
<td>• Multiple or anonymous sex partners</td>
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<tr>
<td></td>
<td>• Bacterial STI diagnosed since last STI screening</td>
</tr>
<tr>
<td></td>
<td>• Participation in sex parties or sex in other high-risk venues</td>
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<tr>
<td></td>
<td>• Participation in any type of transactional sex</td>
</tr>
<tr>
<td></td>
<td>• Use of recreational substances during sex</td>
</tr>
</tbody>
</table>
Obtaining a Sexual History

✔ RECOMMENDATION

- Clinicians should ask all patients about sexual behaviors and new sex partners at each routine monitoring visit to assess for risk behaviors that require repeat or ongoing screening. (AIII)
Who to Screen

- All patients with HIV infection should be serologically screened for gonorrhea and chlamydia at least once per year.

- MSM who engage, or whose partners may engage, in continued high-risk behavior should be serologically screened for gonorrhea and chlamydia at least every 3 months.

- The diagnosis of another bacterial STI in a patient with HIV infection or a patient’s sex partner should prompt a clinician to perform gonorrhea and chlamydia screening tests and to consider more frequent screening for gonorrhea and chlamydia.

- Pregnant patients with HIV infection should be serologically screened for gonorrhea and chlamydia at the first prenatal visit.
Frequency of Screening

RECOMMENDATIONS

• For MSM and MtF transgender women who have sex with men, clinicians should perform 3-site screening (genital, pharyngeal, rectal) at the following intervals:
  o At first visit and annually thereafter if the patient is at low risk of infection. (AII)
  o At first visit and every 3 months thereafter if the patient is at high risk of infection. (AII)
• For all other patients, clinicians should perform genital screening (urine/urethra, vagina/cervix) and extragenital screening (pharyngeal and/or rectal) at sites of contact at the following intervals:
  o At first visit and annually thereafter if the patient is at low risk of infection. (AII)
  o At first visit and every 3 months thereafter if the patient is at high risk of infection. (AII)
• Clinicians should serologically screen pregnant patients with HIV infection for gonococcal and chlamydial infections at the first prenatal visit. (AII)
Key Points: Screening Frequency

• Because most gonorrheal and chlamydial infections are asymptomatic, regular screening is essential to protect patients’ health and prevent the spread of STIs. This is an essential component of patient education.
• Gonococcal and chlamydial screening at least every 3 months is recommended for all individuals at high risk of exposure, including those who:
  • Have, or whose partners may have, multiple or anonymous sex partners
  • Engage, or whose partners may engage, in sexual activity at sex parties or other high-risk venues
  • Are, or whose partners may be, involved in transactional sex (i.e., sex workers and their clients)
  • Have been diagnosed with a bacterial STI in the previous 12 months
  • Report recreational substance use during sexual activity
  • Self-identify as at high risk for STIs
When to Consider Three-Site Screening

- This Committee supports routine three-site (urine, pharyngeal, and rectal) screening in sexually active MSM and MtF transgender women who have sex with men.
- Screening at three sites (i.e., genital, pharyngeal, and rectal) is recommended for patients who are included in recognized high-risk groups and for those who report exposure at extragenital sites.
- Information about the patient’s sexual behaviors informs decisions about the frequency and type (genital only or three-site) of screening and points clinicians to key areas to address in risk-reduction counseling.
- The recommendation for extragenital (three-site) screening should be discussed with the patient. For individuals who opt out of three-site screening, testing based on the patient’s reported sites of anatomical exposure should be performed and documented in the medical record.
Presentation of Symptomatic Infection

✔ RECOMMENDATIONS

- When patients with HIV infection present with symptoms suggestive of gonococcal or chlamydial infection, clinicians should perform diagnostic testing as recommended in the guideline. (AI)
- Clinicians should include lymphogranuloma venereum (LGV) infection in the differential diagnosis for patients who test positive for rectal chlamydial infection or who present with such symptoms as rectal pain, tenesmus, bloody rectal discharge, or isolated, atypical perianal ulcerative lesions and adenopathy. (AII)

Key Point: Although LGV occurs only sporadically in the U.S., outbreaks of LGV proctocolitis have been reported among MSM in New York and other U.S. cities, and many of these cases occurred in individuals with HIV infection.
Lab-Based Diagnosis

**RECOMMENDATIONS**

- Clinicians should obtain NAAT (preferred) on samples collected from genital and extragenital sites (AI); if NAAT is not available, then clinicians should:
  - Send alternative samples for culture in accordance with the protocols of the laboratory performing the analysis, with the understanding that culture is significantly less sensitive than NAAT. (AI)

- If a patient has a known exposure to a cephalosporin-resistant strain, clinicians should obtain samples for both culture/susceptibility and NAAT testing from the patient and his/her sex partner(s). (AlIII)

- Clinicians should perform syphilis testing for any patient with HIV infection who is diagnosed with a gonorrheal or chlamydial infection. (AlII)
## Sample Collection & Testing Methods

<table>
<thead>
<tr>
<th>Exposure Site</th>
<th>Sample Collection Method [a]</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urethra</td>
<td>First-catch urine for nucleic acid amplification testing (NAAT) [b]</td>
<td>• In males, for ease of collection, first-catch urine [c] is recommended over urethral swab. Some studies have demonstrated equal specificity but lower sensitivity with urethral swab compared with urine for NAAT. However, additional data are needed to establish the relative effectiveness of these collection methods.</td>
</tr>
</tbody>
</table>
| Vagina/cervix | Vaginal or cervical swab (recommended) or first-catch urine (alternative) NAAT | • The recommended sample collection method is a vaginal swab for testing with an FDA-approved assay; this method is equivalent to cervical swab.  
• First-catch urine testing, which is inferior to swab, may be used as an alternative.  
• Some NAAT assays are approved for self-collected vaginal samples and perform as well as NAAT for other specimens. |
| Rectum        | Males and females: Rectal swab for NAAT [b] | • Culture is not sufficiently sensitive for detection of rectal C. trachomatis. |
Sample Collection & Testing Methods (con’t.)

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<th>Exposure Site</th>
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| Pharynx       | Males and females: Pharyngeal swab for NAAT [b] | • Culture is not sufficiently sensitive for detection of pharyngeal *C. trachomatis*.  
• The incidence of pharyngeal chlamydial infection is lower than pharyngeal gonorrheal infection, and data on the clinical benefit of treating patients with asymptomatic pharyngeal infection are limited.  
• To reduce the risk of transmission, this Committee recommends treatment for pharyngeal chlamydial infection, even if the pharynx is the only site of infection. |

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a. Handling of specimens: Conditions for collection and transport of samples for laboratory testing for *C. trachomatis* and *N. gonorrhoeae* may greatly affect the sensitivity of culture because the organisms can degrade easily during transport. Guidance regarding sample collection with either direct plating or the use of specialized transport media for culture should be obtained from the clinician’s laboratory. After collection, culture samples should be stored in the referring laboratory’s recommended transport media and transported at ≤4°C to the laboratory within 24 hours.

b. NAAT testing is more sensitive than culture for the detection of gonococcal or chlamydial infections. Although NAAT has not yet received FDA approval for rectal or pharyngeal specimens, NAAT performed by a laboratory with a Clinical Laboratory Evaluation Program-specified protocol is recommended for detecting both rectal and pharyngeal *C. trachomatis* and *N. gonorrhoeae*. If NAAT is not available, then culture should be obtained according to the protocols of the clinician’s institution.
Reporting

✔ RECOMMENDATION

• **New York State (NYS) requirements**: Clinicians must report within 24 hours from the time a case is first seen all suspected or confirmed gonorrhea and chlamydia diagnoses to the local health department of the area where the patient resides.

For more information, see the following:

- NYS Local Health Department Contact List: [https://www.health.ny.gov/prevention/prevention_agenda/contact_list.htm](https://www.health.ny.gov/prevention/prevention_agenda/contact_list.htm)
## Treatment of Uncomplicated Gonococcal Infection

### RECOMMENDATIONS

- Clinicians should treat uncomplicated gonococcal infections of the cervix, urethra, rectum, or pharynx as follows:
  - Preferred: Ceftriaxone 250 mg IM injection in a single dose *plus* azithromycin 1 g by mouth in a single dose. (AII)
  - Alternative, for patients who are allergic to azithromycin: Ceftriaxone 250 mg IM in a single dose *plus* doxycycline 100 mg by mouth twice daily for 7 days. (AII)
  - Alternative, if ceftriaxone is not available: Cefixime 400 mg by mouth in a single dose *plus* azithromycin 1 g by mouth in a single dose. *This regimen is not recommended for treatment of pharyngeal infection.* (AII)

- Clinicians should instruct patients to abstain from sexual activity for at least 7 days after starting treatment, and to continue to abstain until symptoms resolve and all sex partners are treated. (AII)
Key Points: Gonorrhea Treatment

- Directly observed treatment provided on site maximizes adherence.

- *N. gonorrhoeae* has developed resistance to nearly all previously effective antimicrobials, leaving cephalosporins as the only available class of drugs recommended for treatment of gonococcal infections.

- Cephalosporin-resistant *N. gonorrhoeae* has been reported outside of the U.S., and reduced susceptibility to cephalosporins has been observed with isolates of *N. gonorrhoeae* from residents of NYC.

- Combination treatment with two antimicrobials with different mechanisms of action is recommended to slow further emergence of resistance.

- People infected with *N. gonorrhoeae* are frequently coinfected with *C. trachomatis*.

- In the U.S., in 2016, 26.9% of *N. gonorrhoeae isolates were* quinolone-resistant.

- Because of fluoroquinolone-resistant *N. gonorrhoeae* in the U.S. fluoroquinolones other than gemifloxacin should not be used to empirically treat proven or suspected gonococcal infections; however, if fluoroquinolones are being considered, then clinicians should perform fluoroquinolone susceptibility testing before initiating treatment.
# Treatment of Gonococcal Infection in Patients with Penicillin Allergy

<table>
<thead>
<tr>
<th>RECOMMENDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• For patients without prior severe allergic responses to penicillin, clinicians should treat gonococcal infection with a cephalosporin-containing regimen, as recommended above, and monitor carefully for adverse effects. (AII)</td>
</tr>
<tr>
<td>• Reactions considered severe include the following: severe IgE-mediated response, such as anaphylaxis or urticaria with pruritic rash, or a severe non-IgE-mediated response, such as Stevens-Johnson syndrome, toxic epidermal necrolysis, or drug-induced hypersensitivity with inflammation of internal organs.</td>
</tr>
<tr>
<td>• For patients with prior severe allergic responses to penicillin, clinicians should treat gonococcal infection with a single dose of azithromycin 2 g by mouth <em>plus</em> a single dose of either gentamicin 240 mg IM or gemifloxacin 320 mg by mouth. (AII)</td>
</tr>
</tbody>
</table>
Treatment of Uncomplicated Chlamydial and LGV Infections

✔ RECOMMENDATIONS

• Clinicians should treat uncomplicated chlamydial infection of the cervix, urethra, rectum, or pharynx as indicated in the guideline. (AII)

• Clinicians should treat symptomatic chlamydial proctitis with a medication regimen sufficient to treat LGV. (AIII)
# Recommended Treatment* of Uncomplicated Chlamydial and LGV Infections

## Uncomplicated cervical, urethral, rectal, or pharyngeal infection:

- **Recommended:** Azithromycin 1 g by mouth as a single dose OR Doxycycline 100 mg by mouth twice daily for 7 days.
- Alternatives (NOT recommended for pharyngeal infection):
  - Erythromycin base 500 mg by mouth four times per day for 7 days OR
  - Erythromycin ethylsuccinate 800 mg by mouth four times per day for 7 days OR
  - Levofloxacin 500 mg by mouth once daily for 7 days OR
  - Ofloxacin 300 mg by mouth twice per day for 7 days.

**Note:** Treat asymptomatic pharyngeal infection even if it is the only site of infection.

## Symptomatic proctitis:

- **Recommended:** Doxycycline 100 mg by mouth twice daily for 21 days.
- Presumptively treat for LGV (see the NYSDOH AI guideline on LGV); if LGV is excluded by testing, then patients should complete the standard seven-day regimen for uncomplicated chlamydial infection.

*Adapted from CDC 2015 STD Treatment Guideline
## Post-Treatment Follow-Up

### RECOMMENDATIONS

- Clinicians should follow up with patients who have completed treatment for gonococcal and chlamydial infections as detailed in the guideline. (AIII)

- Clinicians should rescreen patients who had confirmed gonococcal or chlamydial infection at 3 months post-treatment for evidence of reinfection. (AII)
## Recommended Follow-Up

<table>
<thead>
<tr>
<th>Clinical Circumstance</th>
<th>Recommended Clinician Follow-Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asymptomatic after treatment with recommended regimen:</td>
<td>• Retest at 3 mo (or as close to 3 mo as possible) post-treatment to assess for reinfection.</td>
</tr>
<tr>
<td>• Urogenital or rectal infection treated with preferred or appropriate alternative regimens.</td>
<td>• If lab test is positive for <em>N. gonorrhoeae</em>, assess for re-exposure and partner treatment, and retreat with recommended regimen.</td>
</tr>
<tr>
<td>• Pharyngeal gonorrhea treated with preferred regimen.</td>
<td></td>
</tr>
<tr>
<td>Asymptomatic after possibly ineffective course of treatment:</td>
<td>• Assess for re-exposure and partner treatment.</td>
</tr>
<tr>
<td>• Urogenital or rectal infection treated with regimen other than preferred or alternative regimens.</td>
<td>• Perform a test of cure at site of infection with <em>N. gonorrhoeae</em> NAAT 14 d after completion of treatment.</td>
</tr>
<tr>
<td>• Pharyngeal infection treated with an alternative regimen.</td>
<td>• If test of cure is positive, perform culture and susceptibility testing before retreatment and retreat with recommended regimen if possible.</td>
</tr>
<tr>
<td>• Suspected nonadherence to full course of treatment.</td>
<td>• If recommended regimen cannot be used, retreat with an alternative regimen or according to susceptibility test results.</td>
</tr>
</tbody>
</table>

Adapted from CDC 2015 STD Treatment Guideline
### Recommended Follow-Up (cont.)

<table>
<thead>
<tr>
<th><strong>Clinical Circumstance</strong></th>
<th><strong>Recommended Clinician Follow-Up</strong></th>
</tr>
</thead>
</table>
| Symptomatic post-treatment: Persistent symptoms post-treatment; infection at any site. | • Assess for re-exposure and partner treatment.  
• Assess patient adherence and use of preferred or appropriate alternative regimen.  
• Swab symptomatic site(s) for *N. gonorrhoeae* culture and antibiotic susceptibility testing ≥72 h after treatment. NAAT may be obtained in addition to culture ≥7 d after treatment.  
• Re-treat for suspected treatment failure.  
• Assess for STIs that may cause persistent or recurrent symptoms.* For persistent or recurrent urethritis negative for *N. gonorrhoeae* and *C. trachomatis*, treat empirically for *M. genitalium* and/or *T. vaginalis* according to CDC recommendations.  
• Assess for non-STI etiologies as part of the differential diagnosis if a patient is repeatedly symptomatic. |

*Other STIs may include *M. genitalium*, *T. vaginalis*, herpes simplex virus, adenovirus, and enteric bacteria. Adapted from CDC 2015 STD Treatment Guideline
Recommended Follow-Up (cont.)

<table>
<thead>
<tr>
<th>Clinical Circumstance</th>
<th>Recommended Clinician Follow-Up</th>
</tr>
</thead>
</table>
| Asymptomatic after treatment with preferred or alternative regimen. | • Retest at 3 mo (or as close to 3 mo as possible) post-treatment to assess for reinfection.  
  • If laboratory test is positive for *C. trachomatis*, assess for re-exposure and partner treatment and re-treat with recommended regimen. |
| Symptomatic post-treatment: Persistent symptoms post-treatment; infection at any site. | • Perform a test of cure at site of infection with *C. trachomatis* NAAT 3 wk after treatment.  
  • If test of cure is positive, assess for re-exposure and partner treatment, and re-treat with recommended treatment regimen using azithromycin or doxycycline. Azithromycin is preferred to maximize adherence.  
  • If test of cure is negative, consider other STIs* that may cause persistent or recurrent symptoms.  
  • Consider non-STI etiologies as part of the differential diagnosis when the patient is repeatedly symptomatic. |

*Other STIs may include *M. genitalium*, *T. vaginalis*, herpes simplex virus, adenovirus, and enteric bacteria. Adapted from CDC 2015 STD Treatment Guideline
Retreatment of Uncomplicated Gonococcal Infection

**RECOMMENDATION AND REPORTING**

- Clinicians should re-treat cases of uncomplicated gonococcal infection following suspected treatment failure according to recommendations. (AIII)
- **NYS Requirement:** Clinicians must report cases of suspected gonorrhea treatment failure that are not due to reinfection:
  - New York State: Report suspected treatment failures to the local health department within 24 hours.
  - New York City: Call 866-692-3641 to notify the health department of suspected treatment failures.

**Key Point:** Gonococcal and chlamydial reinfection rates are high among people who have been successfully treated.
# Recommended Regimens for Retreatment of Gonorrhea

## Clinical Circumstance

<table>
<thead>
<tr>
<th>Clinical Circumstance</th>
<th>Recommended Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possible reinfection (most cases).</td>
<td>Ceftriaxone 250 mg by mouth in a single dose <em>plus</em> azithromycin 1 g by mouth in a single dose.</td>
</tr>
<tr>
<td>Low reinfection risk; initial treatment was incomplete or regimen administered was not preferred or alternative.</td>
<td>Ceftriaxone 250 mg by mouth in a single dose <em>plus</em> azithromycin 1 g by mouth in a single dose.</td>
</tr>
<tr>
<td>Low reinfection risk; initial treatment with cefixime and azithromycin.</td>
<td>Ceftriaxone 250 mg by mouth in a single dose <em>plus</em> azithromycin 2 g by mouth in a single dose.</td>
</tr>
<tr>
<td>Low reinfection risk; initial treatment with ceftriaxone 250 mg IM and azithromycin 1 g by mouth.</td>
<td>Gentamicin 240 mg IM <em>or</em> gemifloxacin 320 mg by mouth <em>plus</em> azithromycin 2 g by mouth in a single dose.</td>
</tr>
<tr>
<td>Reduced susceptibility to relevant antibiotics on antimicrobial susceptibility testing.</td>
<td>Consult local health department.</td>
</tr>
<tr>
<td>Patient cannot use above regimens due to allergies.</td>
<td>Obtain clinical consultation with infectious disease specialist.</td>
</tr>
</tbody>
</table>

Adapted from CDC 2015 STD Treatment Guideline
Sex Partner Exposure to HIV

**RECOMMENDATIONS AND REQUIREMENTS**

- Clinicians should educate patients with partners who do not have HIV infection or partners of unknown HIV status to be vigilant for any post-exposure acute HIV symptoms in their partners, such as febrile illness accompanied by rash, lymphadenopathy, myalgias, and/or sore throat. (AIII)

- Partners who present within 36 hours of an HIV exposure should be evaluated as soon as possible for initiation of PEP. (AII)

- NYS Public Health Law mandates that medical providers do the following:
  - Report all suspected or confirmed HIV, gonorrhea, and chlamydia diagnoses to the local health department in the area where the patient resides.
  - Talk with individuals with HIV infection about their options for informing their sexual partners that they may have been exposed to HIV.
### RECOMMENDATIONS AND REQUIREMENTS

- Clinicians should advise their patients that sex partners who were exposed up to 60 days before the source case’s onset of symptoms or diagnosis of gonococcal or chlamydial infection should seek evaluation and treatment and HIV testing. (AIII)

- When a patient with HIV infection is diagnosed with gonorrhea or chlamydia, clinicians should advise the patient to encourage sex partners to seek medical care for possible exposure to HIV and gonorrhea and chlamydia and should inform the patient that NYSDOH Partner Services offers free, confidential partner notification assistance. (AIII)

- NYS Public Health Law mandates that expedited partner therapy (EPT) not be used for sex partners of patients with gonorrhea, syphilis, or HIV.
Patient Education

When a patient with HIV infection is diagnosed with gonococcal or chlamydial infection, the clinician should inform the patient about the implications of the diagnosis for his/her sex partner(s):

- A new STI diagnosis signals that the patient was engaging in sexual behaviors that place any sex partner at increased risk of acquiring HIV infection, and sex partners should be tested for HIV.
- A sex partner also may have been exposed to gonorrhea or chlamydia and should be tested and evaluated for treatment.
- A local health department may contact sex partners confidentially about the potential exposure and treatment options.

Clinicians should provide patients with information and counseling about risk reduction and safer sex practices.