Best Practices and Early Detection of Repeat Chlamydial and Gonococcal Infections: Effective Partner Treatment and Patient Retesting Strategies for Implementation in California Health Care Settings

These guidelines were developed by the California Department of Public Health (CDPH) Sexually Transmitted Disease (STD) Control Branch in collaboration with the:
California Family Health Council
California STD/HIV Prevention Training Center
Los Angeles County Department of Public Health
San Francisco Department of Public Health
and the California Department of Health Care Services Office of Family Planning

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Chlamydial and Gonococcal Reinfection:

A Threat to Women's Reproductive Health

Background

Prevention and management of chlamydial and gonococcal infections are priorities for women's health. Research demonstrates that as many as 20 percent of females acquire chlamydia or gonorrhea again within six months after their initial positive test and treatment. Repeat infection is associated with an increased risk of reproductive complications, including a four-fold risk of pelvic inflammatory disease and a two-fold risk of ectopic pregnancy, which are in turn associated with a higher risk of infertility.

The Centers for Disease Control and Prevention (CDC) highlights the prevention and early detection of repeat infections in females as a key strategy to avert STD-related infertility. To prevent repeat infections, CDC recommends that all partners in the previous 60 days be treated empirically. To detect repeat infections, CDC recommends that patients be retested for chlamydia and gonorrhea approximately three months after treatment for their initial infection, and that retesting be a priority for providers.

In California, clinical practice data suggest that the best practices for partner management and retesting are underutilized. Within the California family planning setting, the majority of female cases are counseled to notify their partners that they need treatment, but are not given further resources to assist in this process, resulting in less than half of partners receiving treatment. Further, less than 30 percent of female cases are retested within the one to six months following their initial diagnosis and treatment for chlamydia or gonorrhea. Although approximately 60 percent of female patients return to their clinic or doctor's office within the target timeframe for retesting, only about half of these returning women receive a retest. Implementing best practice interventions may improve partner treatment and reduce missed opportunities for retesting.

While this document is focused on the prevention of repeat infections in women, males who are found to be infected with chlamydia or gonorrhea should also receive effective partner management and retesting services.

Summary of Best Practices

Partner Management

Because many repeat infections result from sex with a current partner who did not receive treatment, all recent partners must receive treatment promptly. To better facilitate clinical follow-up and morbidity reporting, it is preferred that partners be tested for infection; however, presumptive treatment should be provided immediately, without waiting for laboratory confirmation of a positive result. When possible, it is most effective to have the patient bring her current partner to the clinic when she returns for treatment, so that both patient and partner can be counseled and treated at the same visit. For partners who are unlikely to return to clinic with the patient, another highly effective treatment option is patient-delivered partner therapy (PDPT), which has been legally allowable in California for chlamydia since 2001 and for gonorrhea since 2007. Other partner notification and referral options are available for partners for whom these two treatment options are not appropriate or available. For more details, please see **Best Practices for Partner Management**, below.

Retesting

Since patients at risk for one infection are often at risk for both, patients treated for either chlamydia or gonorrhea should be retested for both, regardless of their initial test results. To improve retesting rates, clinics should implement both patient- and clinic-level strategies to increase patient return rates and to reduce missed opportunities for retesting when patients return to the clinic for any reason. Patients should be counseled to return to the clinic/office for a repeat test at three months post-treatment and should be provided education to ensure they understand why this is important. Additionally, reminder systems are useful for improving return rates, and recall systems should be used, when feasible, for patients who are not retested within three months. While patients should be counseled to return to the clinic for retesting three months post-treatment, opportunistic retesting should occur whenever a patient next returns to the clinic/office, regardless of her reason for a visit, during the 1 to 12 months post-treatment. To prevent missed opportunities for retesting, it is recommended that clinics institute systems-level interventions, such as paper or electronic chart prompts, to flag patient records for clinic staff. For more details, please see **Best Practices for Partner Management**, below.

Chlamydia and Gonorrhea Clinical Management in a Nutshell:

→ **Screen** all appropriate patients for chlamydia and gonorrhea;

→ **Treat** all infected patients promptly;

→ **Treat** all or their recent partners; and

→ **Screen** all treated patients again three months after treatment (retest)

Best Practices for Partner Management

To help protect patients from repeat infection with chlamydia and/or gonorrhea, providers should ensure that all recent sex partners are promptly treated.

Whom:

ALL sex partners from the two months prior to diagnosis.

- To identify all partners who require treatment, patients should be asked directly to note all of the people they have had sex with during the previous two months. This should be asked even if the patient is married or in a steady relationship.
- If the last sexual contact was over two months prior to the diagnosis, the most recent sex partner should be offered testing and treatment.

What:

Partners exposed to chlamydia should be treated with medications effective against chlamydia. Partners exposed to gonorrhea should be treated with dual therapy, due to concerns about antimicrobial resistance.

- Recommended treatment regimens for chlamydia and gonorrhea are specified in the 2015 CDC STD Treatment Guidelines.
- Although testing partners is a preferred approach, empiric treatment should be provided prior to laboratory confirmation for a positive result.

How:

Work with the patient to customize plans for (1) informing ALL recent partners that may be infected and need to be treated, and (2) ensuring partner treatment.

- Patients should be provided with a variety of options for partner notification and treatment, and assisted in choosing the most effective method for each partner.
- Best practices are described in Table 1, in order of effectiveness.

Table1. Best Practices for Partner Notification and Treatment

Proven Effective, Most Feasible, and Highly Recommended Methods in California:
Concurrent Patient/Partner Treatment: At the time the patient is first contacted about her positive test result (e.g., via the telephone), she is asked to bring her partner into the clinic with her so that both can be treated at the same visit. This method for partner management is recommended over other methods, as it has the benefit of providing: (1) optimal care for the partner, including testing for sexually transmitted infections (STI) and human immunodeficiency virus (HIV), risk-reduction counseling, assessment of allergies and contraindications to antibiotic treatment, and empiric treatment; (2) concurrent treatment of both the patient and her partner, which reduces the likelihood that infection will be passed back and forth; and (3) confidential partner counseling, which provides the opportunity to discreetly assess whether the partner has additional sex partners other than the index patient, and, if so, to provide the partner with PDPT packs for distribution to these other partners.

PDPT: The clinic/provider gives medication1 (preferred) or prescription(s), together with related educational materials, to the patient to deliver to her partner(s). This method is feasible and effective for patients who have ongoing contact with their partners, yet believe they may be unable or unwilling to access care in a timely fashion, and for patients who have more than one partner.

Methods Shown to Have Limited Effectiveness:

Health Department Partner Notification: The provider asks the local health department (disease intervention specialists) to notify partner(s) of their possible infection and need for treatment. To protect the patient's confidentiality, her identity is not shared with the partner(s). To use this option, providers need to first verify that their local health department has resources available to both interview chlamydia/gonorrhea cases to elicit partners and then to follow-up with these partners to ensure treatment. While some local health departments may not have the capacity to assist with all partner follow-up requests related to chlamydia and gonorrhea because of the large number of cases, most will be able to provide assistance with high-priority or exceptionally difficult-to-reach cases.

Provider Referral: The provider, or other clinic staff, collects from the patient the names and contact information of her partner(s) and notifies these partners about their possible infection and need for treatment. To protect the patient's confidentiality, her identity is not shared with the partner(s).

Methods with Unknown Effectiveness:

Internet Notification and Referral of Partners: The patient uses Internet resources (e.g. an Online Partner Notification System (www.inSPOT.org)) to anonymously inform her partner(s) of their possible infection.These online resources generally include a clinic locator system that the partner(s) can use to find local services for care and treatment. This method may be particularly useful if the patient is not comfortable speaking with the partner(s), has only an e-mail address and no other contact information, or lives a long distance from the partner(s).

[1]PDPT is not a benefit of the California Family Planning, Access, Care and Treatment (Family PACT) program; however, publicly-funded health centers in California may be eligible for participation in the PDPT Distribution Project, which is administered by the California Family Health Council. Information can be accessed at the California Family Health Council: PDPT Distribution Program website (www.cfhc.org/pdpt).

Best Practices for Retesting

To ensure early detection of repeat infections with chlamydia and gonorrhea, all patients who are treated for chlamydia and/or gonorrhea should be tested again a few months after treatment. Retesting is a critical component of patient management for patients testing positive for chlamydia or gonorrhea.

Whom:
ALL patients treated for chlamydia and/or gonorrhea.

- Patients should be retested even if they believe that all of their sex partners were treated.

What:
Retesting should include tests for both chlamydia and gonorrhea, since patients at risk for one infection are often at risk for both.

When:
Although retesting three months after treatment is recommended, repeat infections can occur anytime.

- While patients should be counseled to return to the clinic for retesting three months post-treatment, opportunistic retesting can occur anytime during the 1to 12 months post treatment. For patients at high risk of repeat infections or who are unlikely to return for a scheduled follow-up (e.g., adolescents), retesting should occur whenever the patient next seeks care, even if the visit is earlier than three months post-treatment.
- Reinfections can occur at any time; however, studies have shown that the majority occur within the first six months post-treatment. Evaluations of California family planning data have indicated that, of those patients who return to the clinic during the one to six months after treatment, almost 40 percent return only one time, giving providers only one opportunity to retest them.
- If nucleic acid amplification tests (NAAT) are used, patients should not be retested less than three weeks post-treatment, due to the risk of false-positive test results. In general, a test-of-cure is not recommended for non-pregnant patients who received first-line therapies.
- It is recommended that pregnant women receive a test-of-cure three weeks after they are treated, as well as a test for reinfection, at three months post-treatment. If the patient is at continued risk for repeat infections, retesting just prior to delivery is recommended to reduce the risk of newborn exposure.

How:

Implement both patient- and clinic-level strategies that aim to 1) improve patient return rates, and 2) reduce missed opportunities for retesting when patients return to clinic for any reason. See Table 2.

Table 2. Best Practices for Improving Retesting

Strategies to Improve Patient Return Rates

1. **Provide comprehensive counseling to inform patients with chlamydia and/or gonorrhea about their high risk for repeat infections and subsequent higher risk of complications, the importance of getting all partners treated, and their need for retesting.**

- Ensure that all printed patient education materials and notification letters include recommendations for retesting at three months.

- Provide verbal counseling and written materials for patients diagnosed with chlamydia or gonorrhea that include comprehensive patient education messages related to repeat infections, partner treatment, and retesting, including the following:
    - Having chlamydia and/or gonorrhea once will not protect you from getting it again.
    - There is a high chance of being infected with chlamydia and/or gonorrhea again a short time after you are treated for your first infection.
    - Most of the time, there are no symptoms when you get chlamydia or gonorrhea.
    - The most common reason people get infected again with chlamydia or gonorrhea is because they have sex again with someone who still has the infection. It is very important to make sure everyone you are having sex with gets the medicine they need to cure their infection.
    - It is essential that you wait at least seven days after both you and your partner(s) take this medicine before you have sex again.
    - For women: Getting a second infection with chlamydia and/or gonorrhea can be much worse than the first infection because it is more likely to lead to dangerous and long-term problems, including pain during sex, ongoing lower belly pain, and not being able to have babies when you want (infertility).
    - It is very important to get tested again for chlamydia and/or gonorrhea about three months after you were treated in order to find any new infections early, before they do more harm to your body. You should get tested again even if you are sure that all of the people you are having sex with got medicine.
    - Using a condom every time you have sex will help protect you against future infections with chlamydia or gonorrhea.

- Ensure that presumptively treated patients are provided the above verbal counseling messages when they are called with the confirmation of their positive test results.

2. **Create appointment and reminder systems to assist patients in remembering to retest:**

- Make three-month advance appointments at the time of initial treatment (if possible). Provide appointment cards.

- Offer to provide patients with reminders by mail (self-addressed letters or postcards),

telephone, text messages, and /or e-mails, informing them that it is time to make (or come in for) their retest appointment.

- Before patients leave the clinic on the day they are treated, ask them to think about how they might remember to return to the clinic in three months to retest. One example is asking them to add a reminder in their own calendars (e.g., mobile phone calendars) before they leave the clinic.

3. If feasible, follow up with patients who do not return for a retest at the recommended time (i.e., three months after treatment):

- Follow-up with patients by telephone, mail, text messages, and/or emails to tell them that the recommended time for scheduling their retest appointment has passed and it is critical that they come in for this service.

- Add additional or higher alert prompts to these patients charts to indicate to staff that these patients need follow-up if they return to clinic for any reason.

Strategies to Reduce Missed Opportunities for Retesting

1. Institute systems-level interventions in the clinic to ensure that patients returning to clinic who are due for a retest are consistently captured and tested:

- Flag patient charts: Institute a chart prompt system, such as adding automatic pop-up reminders to electronic medical records or internal flags to paper charts, to ensure that clinic staff do not miss a retesting opportunity if a patient due for a retest returns to the clinic/office for any reason (e.g., pregnancy test, emergency contraception, birth control refill, symptoms, general check-up, etc.).

- Add a trigger question (also called a risk assessment or screening question) to intake, history, and/or exam forms/interviews for all visit types to identify patients who may be due for a retest when they return to clinic. An example of a possible retest trigger question that can be asked of all patients at all visits is: “Have you tested positive for an STD, such as chlamydia and/or gonorrhea, during the past 12 months?” A “Yes” answer to this question would then prompt further discussion to determine whether the patient is currently due for a retest.

- Add a retest column to the chlamydia/gonorrhea follow-up log: Retesting is an essential step in the clinical management of a patient who has tested positive for chlamydia and/or gonorrhea. Clinical sites utilizing a paper STD follow-up log to track lab results, follow-up efforts, and treatment of positives can add an additional column to the log where they can record that retesting chart prompts have been put in place in the clinic systems once patients are treated.

2. Provide patients with expedited options for clinic-based retesting:

- Offer "express" clinic visits for chlamydia and gonorrhea retesting: Add an expedited walk-in visit option that allows patients due for retesting who do not report any symptoms and do not need an exam to be screened for chlamydia and gonorrhea without having to make an appointment or wait to be seen by a clinician.

- Institute clinical protocols to allow non-clinical staff (e.g., medical assistants, nurses) to accept specimens for chlamydia/gonorrhea screening and to retest at visits that do not otherwise require an exam by the clinician. For example, front desk staff can provide express-visit patients with a urine cup or a vaginal swab in order to streamline specimen collection.

3. Investigate the feasibility of providing patients with alternative retesting options that do not require a clinic visit, as available locally:

- Offer the option for patients to mail in self-collected specimens[2].

- Offer the option to use online, downloadable lab slips for testing at local lab sites. Multiple options are available through private companies that charge a fee.

[2] Chlamydia and gonorrhea tests are not currently FDA-cleared for home testing; however, laboratories that successfully complete verification studies can perform testing on mailed-in specimens. The CDPH STD Control Branch can provide interested labs with technical assistance and verification protocols.

Online Resources

1. Centers for Disease Control and Prevention. 2015 STD Treatment Guidelines. Available online: 2015 STD Treatment Guidelines (http://www.cdc.gov/std/tg2015/)

2. Patient-Delivered Partner Therapy for Chlamydia, Gonorrhea, and Trichomoniasis: Guidance for Medical Providers. Available online: Patient-Delivered Partner Therapy for Chlamydia, Gonorrhea, and Trichomoniasis: Guidance for Medical Providers (https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/Clinical-Guidelines-CA-STD-PDPT.pdf)