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Q/ Should you test or treat partners of patients with gonorrhea, chlamydia, or trichomoniasis?

Empirically treating partners of women or heterosexual men with gonorrhea or chlamydia decreases the risk of persistent or recurrent infection in the index patient.

EVIDENCE-BASED ANSWER

A/ **GENERALLY SPEAKING, TREATING PARTNERS EMPIRICALLY IS AS EFFECTIVE** or more effective than traditional referral and testing. Empiric treatment of partners of female or heterosexual male patients diagnosed with gonorrhea or chlamydia using expedited partner therapy (having the index patient deliver therapy to the partner) decreases the risk of persistent or recurrent infection in the index patient (strength of recommendation [SOR]: **A**, meta-analysis). The effect is greater for gonorrhea than chlamydia.

By contrast, expedited partner therapy for trichomoniasis appears equivalent to a test-first approach (SOR: **B**, single randomized controlled trial [RCT]).

No studies have evaluated empiric treatment of chlamydia, gonorrhea, or trichomoniasis in men who have sex with men. State laws vary with regard to expedited partner therapy and should be considered. Moreover, this type of empiric therapy misses the opportunity to counsel partners and treat comorbid disease, if present.

Evidence summary

Treating partners of patients with sexually transmitted infection has been a core component of therapy since the 1940s. Traditionally, partners have been referred to a health care provider (by the index patient, the provider, or a public health officer) for evaluation before being treated. Current methods of partner referral reach only 40% to 60% of named sexual partners.[1]

Expedited partner therapy vs traditional patient referral

Success of treatment is most readily measured by a reduction in the persistence or recurrence of infection in the index patient. Four RCTs and 1 observational cohort study have compared traditional patient referral with expedited partner treatment.[2-6] The primary outcome measure in all studies was reduction of persistent or recurrent infection in the index patient (**TABLE 1**).

Chlamydia. Of the 4 studies that evaluated expedited partner treatment for chlamydia, 1 cohort study showed a statistically significant decrease in recurrent or persistent chlamydial infection in index patients.[2] One RCT showed a statistically significant reduction in recurrent or persistent urethritis, but didn't report persistent and recurrent gonorrheal and chlamydial infections separately.[3] Two RCTs showed a decrease in recurrent or persistent chlamydial infection in the index patient, but the difference didn't reach statistical significance.[4,5]

Gonorrhea. Two RCTs evaluated expedited partner treatment for gonorrhea compared with patient referral. One demonstrated a statistically significant decrease in persistent or recurrent gonococcal infection.[5] The other showed a statistically significant decrease in recurrent or persistent urethritis, but without identifying recurrent gonorrheal and chlamydial infections separately.[3]

TABLE 1

Traditional patient referral vs expedited partner treatment: How the 2 compare

Patient population	Design	Outcomes	Favored treatment: PDPT vs PR	*P* value	NNT
Heterosexual men with *N gonorrhoeae* or *C trachomatis*[2]	RCT	Recurrent/persistent *N gonorrhoeae* or *C trachomatis*	PDPT	<.001	5
Women with *C trachomatis*[3]	RCT	Recurrent/persistent *C trachomatis*	PDPT	.11	33.3
Women and heterosexual men with *N gonorrhoeae* or *C trachomatis*[4]	RCT	Recurrent/persistent *N gonorrhoeae*	PDPT	.01	12.5
		Recurrent/persistent *C trachomatis*	PDPT	.17	50
Women with *T vaginalis*[5]	RCT	Recurrent/persistent *T vaginalis*	PR	.64	32.3
Women with *C trachomatis*[6]	Observational cohort	Recurrent/persistent *C trachomatis*	PDPT	<.05	7.1

C trachomatis, Chlamydia trachomatis; N gonorrhoeae, Neisseria gonorrhoeae; NNT, number needed to treat; PDPT, patient delivered partner therapy; PR, patient referral; RCT, randomized controlled trial; *T vaginalis, Trichomonas vaginalis.*

Trichomoniasis. One RCT compared expedited partner therapy with patient referral for patients with trichomoniasis. The study didn't show a statistically significant difference in recurrent or persistent infection.

The verdict: Expedited partner therapy works better

A meta-analysis of the above studies evaluated the effect of expedited partner therapy compared with patient referral on the rate of recurrent or persistent gonorrhea, chlamydia, and trichomoniasis and the number of partners treated per index patient.[1] Empiric therapy was associated with a lower rate of recurrent or persistent infections (risk ratio [RR]=0.73; 95% confidence interval [CI], 0.57-0.93) and a higher number of partners treated per patient (RR=1.44; 95% CI, 1.12-1.86).

Take state law into account

Providers need to consider their state's laws regarding empiric partner therapy. A state-by-state evaluation of the legal status of expedited partner therapy is available on the Centers for Disease Control and Prevention's Web site, and is summarized in **TABLE 2**.[7]

Recommendations

A review of expedited partner therapy by the Centers for Disease Control and Prevention concluded: "The evidence indicates that expedited partner therapy should be available to clinicians as an option for partner management ... [but it] does not replace other strategies such as standard patient referral or provider-assisted referral, when available. ... Expedited partner therapy should be ac-

TABLE 2

What's the status of expedited partner therapy (EPT) in your state?[7]

EPT is permissible in 20 states: Arizona, California, Colorado, Illinois, Iowa, Louisiana, Minnesota, Mississippi, Nevada, New Hampshire, New Mexico, New York, North Dakota, Oregon, Pennsylvania, Tennessee, Texas, Utah, Washington, and Wyoming. (EPT is also permissible in Baltimore, MD.)

EPT is potentially allowable in 21 states: Alabama, Alaska, Connecticut, Delaware, Georgia, Hawaii, Idaho, Indiana, Kansas, Maine, Maryland, Massachusetts, Missouri, Montana, Nebraska, New Jersey, North Carolina, Rhode Island, South Dakota, Virginia, and Wisconsin. (EPT is also potentially allowable in the District of Columbia and Puerto Rico.)

EPT is prohibited in 9 states: Arkansas, Florida, Kentucky, Michigan, Ohio, Oklahoma, South Carolina, Vermont, and West Virginia.

companied by information [advising] recipients to seek personal health care in addition to expedited partner therapy. Expedited partner therapy has a limited role in partner management for trichomoniasis. No data support its use in the routine management of syphilis, and there is no experience with expedited partner therapy for gonorrhea or chlamydial infection among men who have sex with men."[8]

Neither the American Academy of Family Physicians nor the American College of Obstetricians and Gynecologists has issued a policy statement on expedited partner therapy. JFP

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References

1. Trelle S, Shang A, Nartey, L, et al. Improved effectiveness of partner notification for patients with sexually transmitted infections: systematic review. *BMJ.* 2007;334:354-360.
2. Kissinger P, Mohammed H, Richardson-Alston G, et al. Patient-delivered partner treatment for male urethritis: a randomized, controlled trial. *Clin Infect Dis.* 2005;41:623-629.
3. Schillinger JA, Kissinger P, Calvet H, et al. Patient-delivered partner therapy with azithromycin to prevent repeated *Chlamydia trachomatis* infection among women: a randomized, controlled trial. *Sex Transm Dis.* 2003;30:49-56.
4. Golden MR, Whittington WL, Handsfield HH, et al. Effect of expedited treatment of sex partners on recurrent or persistent gonorrhea or chlamydial infection. *N Engl J Med.* 2005;352:676-685.
5. Kissinger P, Schmidt N, Mohammed H, et al. Patient-delivered partner treatment for *Trichomonas vaginalis* infection: a randomized controlled trial. *Sex Transm Dis.* 2006;33:445-450.
6. Kissinger P, Brown R, Reed K, et al. Effectiveness of patient delivered partner medication for preventing recurrent *Chlamydia trachomatis*. *Sex Transm Infect.* 1998;74:331-333.
7. Centers for Disease Control and Prevention. Legal status of expedited partner therapy. Available at: http://www.cdc.gov/std/ept/legal/default.htm. Accessed December 10, 2009.
8. Centers for Disease Control and Prevention. *Expedited Partner Therapy in the Management of Sexually Transmitted Diseases.* Atlanta: US Department of Health and Human Services; 2006.