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## Predictors of Index Patient Acceptance of Expedited Partner Therapy for *Chlamydia trachomatis* Infection and Reasons for Refusal, Sexually Transmitted Disease Clinics, New York City, 2011 to 2012

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### Abstract

**Background**—Expedited partner therapy (EPT) for *Chlamydia trachomatis* (*Ct*) reduces repeat *Ct* infection and was legalized in New York State in 2009. It is a practice in which a *Ct*-infected index patient delivers medication or a prescription directly to sex partner(s), without those partners receiving medical evaluation. There have been few evaluations of EPT implementation assessing acceptance and uptake among index patients. We measured EPT acceptance among index patients, identified predictors of accepting EPT, and described reasons for declining EPT.

**Methods**—We conducted a retrospective analysis using electronic medical records from patients attending New York City Department of Health and Mental Hygiene STD clinics from July 2011 to October 2012. A multivariable model examined the associations between accepting EPT and patient and clinic-level characteristics.

**Results**—Overall, 54.8% (1076/1964) of index patients accepted EPT when offered (55.9% of males and 54.4% of females [ $P = 0.55$ ]). Predictors of EPT acceptance included having a male provider offer EPT (adjusted odds ratio, 1.43; 95% confidence interval, 1.12–1.83). Index patients who had a partner present at the clinic during the treatment visit were less likely to accept EPT (adjusted odds ratio, 0.28; 95% confidence interval, 0.20–0.40). Among 888 patients who refused EPT, common reasons were as follows: “partner in clinic today for treatment” (26.3% [234/888]), “no longer with partner” (25.0% [222/888]), “partner already treated” (20.3% [180/888]), and “prefer medication be delivered by clinician” (19.6% [174/888]). Expedited partner therapy acceptance did not differ by patient age, sex, or race. Excluding persons whose partners were already treated and persons whose partners were in the clinic for treatment, EPT acceptance rates were 69.4%.

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**Conclusions**—Expedited partner therapy acceptance rates were high among index patients whose partners were not otherwise treated.

*Chlamydia trachomatis* (*Ct*) is the most commonly reported sexually transmitted disease (STD) in the United States.<sup>1</sup> In New York City (NYC) in 2012, there were 62,460 reported cases of chlamydia.<sup>2</sup> Repeated infection with *Ct* is also common and increases risk for adverse sequelae, including infertility and ectopic pregnancy.<sup>3,4</sup> When sex partners of a patient with *Ct* infection are left untreated, the index patient is at increased risk for reinfection after treatment.

Expedited partner therapy (EPT) is a sex partner management strategy endorsed by the Centers for Disease Control and Prevention, whereby a health care provider (HCP) offers a patient *Ct* or *Neisseria gonorrhoeae* (*GC*) infection medication or a prescription to be delivered to their sex partner(s) without an intervening medical evaluation of the partner(s).<sup>5</sup> Three randomized control trials,<sup>6–8</sup> a subgroup analysis of a randomized trial,<sup>9</sup> and observational studies<sup>10,11</sup> have shown that EPT is an effective method for preventing repeated *Ct* or *GC* infection of the index case.<sup>6–11</sup> However, there have been few published reports after the implementation of EPT that assess EPT acceptance among index patients with *Ct* infection.<sup>11,12</sup>

Expedited partner therapy is legal in many states.<sup>13</sup> Legislation permitting EPT for *Ct* infection in NY State was passed in 2009, regulations were adopted in 2010,<sup>14,15</sup> and HCP guidelines were issued by the NY State Department of Health in early 2011. In mid-2011, in accordance with the NY State law and regulations, the NYC Department of Health and Mental Hygiene (DOHMH) STD clinics began offering EPT to heterosexuals diagnosed as having laboratory-confirmed chlamydia, without concurrent gonorrhea or syphilis infection.

The objectives of this analysis were to measure rates of acceptance among patients eligible for and offered EPT in the NYC DOHMH STD clinics, and to identify patient and provider-level predictors of EPT acceptance to optimize EPT practices in the NYC DOHMH STD clinic system. To better understand obstacles to acceptance, our analyses also examined patients' self-reported reasons for refusing EPT.

## MATERIALS AND METHODS

### Study Design

We conducted a retrospective analysis of electronic medical record (EMR) data from patients attending NYC DOHMH STD Clinics from July 2011 to October 2012.

### Study Population

During the analysis period, the NYC DOHMH operated 9 STD clinics located throughout NYC. These clinics offer confidential and free HIV testing as well as STD testing and treatment for people 12 years or older. The clinics routinely perform nucleic acid amplification testing for *Ct* using urine, or on male urethral or female endocervical specimens. In addition, men and women who report receptive anal intercourse are screened for anorectal *Ct* infections using nucleic acid amplification testing.

According to clinic protocol, patients are considered eligible for EPT if they are heterosexual, have laboratory-confirmed *Ct* infection, and do not have concurrent gonorrhea or syphilis infection. Patients with anorectal *Ct* infection who meet the eligibility criteria are offered EPT. Patients who are treated presumptively for *Ct* are not considered eligible for EPT at the time of treatment because laboratory confirmation of infection is lacking. However, patients may return for EPT if *Ct* infection is laboratory confirmed. Expedited partner therapy is dispensed as a “partner pack,” which includes the following: a single 1-g dose of azithromycin (or prescription for the same), information about EPT for both the patient and the partner (available in English and Spanish), condoms, and a list of STD clinics and addresses. Patients can receive packs for as many partners as needed. All index patients eligible for and offered EPT were considered for analysis.

## Measures

The primary outcome of interest was EPT acceptance by eligible index patients. Acceptance was assessed using a specific “EPT module” within the EMR that clinicians are required to complete when assigning a patient a chlamydia diagnosis. The module includes the questions: “EPT Eligible (Yes/No),” “EPT Offered (Yes/No),” and “EPT Accepted (Yes/No).” Other patient and clinic characteristics were collected from the EMR and grouped into 3 categories: “demographic characteristics,” “nondemographic patient characteristics,” and “clinic characteristics.” Demographic variables included the following: patient sex, age, and race/ethnicity. Nondemographic patient characteristics included the following: marital status, primary language spoken by the patient, whether the index patient’s sex partner was in clinic on the same day as the EPT visit (a structured field within the EMR which is collected for all patients), clinical signs suggestive of *Ct* infection, abnormal physical examination findings, self-reported history of *Ct* or *GC* infection, self-reported number of days since last sexual exposure, self-reported number of sex-partners in the past 3 months, and medication allergy. We defined clinical signs suggestive of *Ct* infection as physician-documented urethral, vaginal, or endocervical discharge, or cervical abnormality found during physical examination. Patients who reported that a sex partner was with them on the day of the EPT visit were still eligible for and offered EPT under the assumption that the patient might have other partners who could benefit from EPT. Clinic characteristics included the following: HCP sex and number of days between the *Ct* diagnostic visit and the visit at which EPT was offered.

Patients who declined the offer of EPT were asked their main reason for refusal. A structured EMR field allowed selection of 1 of 8 responses: “no longer with partner,” “uncomfortable discussing STD with partner,” “concerned about intimate partner violence,” “prefers medicine to be delivered by clinician,” “partner has already been treated,” “I don’t think my partner would take it,” “partner is in the clinic today for treatment,” and “other.” The response categories were derived from the results of a local knowledge, attitudes, and practices survey done several years before EPT implementation (data not shown). For the purpose of this analysis, we defined patients who refused EPT because their partner was (a) already treated or (b) in the clinic that day for treatment, as patients with at least 1 sex partner who had been or was being treated for *Ct* infection.

Because chlamydia is largely asymptomatic and the results of laboratory testing are not available for several days, there is often an interval between the visit at which the index patient was tested for *Ct* and the visit at which the patient is treated for *Ct* infection and offered EPT. If there was no record of laboratory-confirmed *Ct* infection associated with the clinic visit at which EPT was offered, we used data from the immediately preceding visit.

### Statistical Analyses

For patients who had multiple laboratory-confirmed *Ct* diagnoses and received multiple offers of EPT, the main analysis looked only at the first offer of EPT between July 2011 and October 2012.

Frequencies were used for descriptive analyses of the distribution of characteristics among patients who accepted and refused EPT, and bivariable analyses were used to measure crude associations between EPT acceptance and potential predictors. Variables that had a *P* value less than 0.10 on bivariable analysis were included in a multivariable model.

All demographic variables were included in the multivariable logistic regression models, given an assumption that age, sex, and race are confounders of the relationship between other nondemographic patient characteristics or clinic characteristics and EPT acceptance. Variables in the other 2 categories were added to the model as a group, and likelihood ratio tests (LRTs) were used to determine whether each group added predictive value to the model. Within groups, variables were dropped if the individual parameter estimated *P* value exceeded 0.10. Once the final multivariable model was determined, a Hosmer-Lemeshow goodness-of-fit test was performed to assess the predictive value of the overall model. Generalized estimating equations were used to account for a clustering effect by clinic.

This was an analysis of routinely collected data examined for the purpose of program evaluation and did not require institutional review board approval. All analyses were completed using SAS 9.2 (SAS Institute, Inc, Cary, NC).

## RESULTS

### Characteristics of the Population

Among 6590 laboratory-confirmed chlamydia infections identified between July 2011 and October 2012, 31.4% (2066/6590) were determined by the clinician to be EPT eligible. Among EPT-eligible patients, 99.4% (2053/2066) were offered EPT, and 54.9% (1128/2053) accepted the offer of EPT. Most patients (92.8% [1047/1128]) requested only 1 partner pack. Sixty-six patients had 2 laboratory-confirmed chlamydia diagnoses, and 2 patients had 3 diagnoses. Thirty-three men documented as EPT eligible were also documented as being men who have sex with men and were excluded. Finally, 2 patients were excluded from analysis because of small cell count for the marital status “widowed.” The final analysis included 1964 heterosexual index patients offered EPT during the project period, among whom 72.2% were female, 62.4% identified as non-Hispanic black, and the mean age was 22.8 years.

## Predictors of EPT Acceptance

The distribution of variables of interest is presented in Table 1. Among other significant variables, index patients with signs suggestive of *Ct* infection (odds ratio [OR], 1.32; 95% confidence interval [CI], 1.10–1.58) and those offered EPT by a male HCP (OR, 1.30; 95% CI, 1.07–1.59) were more likely to accept EPT. Index patients were less likely to accept EPT if a sex partner was present at the clinic (OR, 0.28; 95% CI, 0.20–0.40), or if the index patient's primary language was other than English (OR, 0.31; 95% CI, 0.14–0.70). Neither sexual exposure in the past 3 months nor the number of sex partners in the past 3 months was significantly associated with EPT acceptance. There was no statistically significant association between EPT acceptance and patient age, sex, race, or marital status.

## Multivariable Analysis

An LRT indicated that the addition of nondemographic patient characteristics to a model containing only patient demographic variables significantly improved the predictive value of the model ( $P < 0.01$ ). A second LRT indicated that adding clinic level variables to a model containing both patient demographic and nondemographic variables significantly improved the predictive value of the model ( $P < 0.01$ ).

The final multivariable model can be seen in Table 2. Increased EPT acceptance was associated with having a male HCP offer EPT (adjusted OR [aOR], 1.43; 95% CI, 1.12–1.83) and signs suggestive of chlamydia (aOR, 1.28; 95% CI, 1.00–1.63), whereas decreased EPT acceptance was associated with having a sex partner at the clinic on the day EPT was offered (aOR, 0.25; 95% CI, 0.17–0.39). When a “sex concordance” variable indicating whether the index patient and HCP were the same sex was added to the multivariable model and the individual HCP and index patient sex variables were excluded, sex concordance did not significantly affect EPT acceptance (aOR, 1.02; 95% CI, 0.82–1.29). Increased number of days since last sexual exposure was negatively associated with EPT acceptance. The final model was rerun using generalized estimating equations to assess whether NYC DOHMH STD clinic site affected EPT acceptance, but no such significant effect was found.

## Declining the Offer of EPT

Among patients who refused EPT, the most common reasons for refusal were “partner is in the clinic today for treatment” (26.3% [234/888]), “no longer with partner” (25.0% [222/888]), “partner has already been treated” (20.3% [180/888]), and “prefer medication to be delivered by clinician” (19.6% [174/888]). Other less common reasons included the following: “uncomfortable discussing STDs with partner” (1.8% [16/888]), “I do not think my partner would take it” (0.7% [6/888]), and “concerns about intimate partner violence” (0.1% [1/888]).

Index patients who declined EPT because a sex partner was in clinic being treated on the day EPT was offered did not differ from those who refused for other reasons by sex ( $P = 0.63$ ), race ( $P = 0.07$ ), age ( $P = 0.47$ ), or number of sex partners for the past 3 months ( $P = 0.18$ ); however, they did differ in terms of the number of days between the chlamydia diagnosis visit and the visit at which EPT was offered. The mean number of days between the chlamydia diagnosis visit and the EPT offer visit was 7.7 for index patients with a sex

partner at the clinic and 8.9 for index patients who refused EPT for other reasons ( $P < 0.01$ ). When the final multivariable model (Table 2) was rerun, excluding patients indicating that their partner had been treated or was at the clinic for treatment, signs suggestive of chlamydia became a stronger predictor of EPT acceptance (aOR, 1.50; 95% CI, 1.11–2.01), but did not otherwise modify the model.

### Patients With Multiple Offers of EPT

Among the 68 patients with multiple offers of EPT, 66 (97.1%) had 2 offers and only 2 (2.9%) had 3 offers of EPT. These patients were 86.8% (59/68) female; 13.2% (9/68) non-Hispanic white, 51.5% (35/68) non-Hispanic black, 30.9% (21/68) Hispanic, and 4.4% (3/68) of another race. The mean and median ages were 20.0 and 21.6 years, respectively. For patients with 2 offers of EPT, the median time between offers was 46 days.

## DISCUSSION

Our analysis found that among patients who are offered EPT for chlamydia in NYC STD clinics, approximately half accept. Many of the patients who refused EPT indicated that at least 1 sex partner had been or was already being treated for *Ct*. Expedited partner therapy acceptance did not differ by age, sex, or race in our multivariable models, even when excluding those whose sex partners had been treated.

The EPT acceptance rate we found (54%) is consistent with the EPT acceptance rate for both chlamydia and gonorrhea found by Mickiewicz et al.<sup>12</sup> after the implementation of a structured field in the EMR in Denver Metro Health Clinics (48%), and by Taylor et al.<sup>11</sup> for chlamydia alone in an Urban Indian Health Center (52%), where a structured field did not seem to have been used. When considering partner treatment overall, the results are more encouraging; the EPT acceptance rate was much higher after excluding index patients who indicated their partner had already been treated or were at the clinic to be treated (69.4% [68.6% of females and 71.6% of males]). Altogether, based on patients' report of partner treatment and EPT dispensed on the day of clinic visit, almost 80% of index patients offered EPT could have had at least 1 sex partner treated for chlamydial infection, whether through EPT or another partner management mechanism.

We found that index patients were significantly more likely to accept EPT when offered by a male HCP, regardless of index patient sex. This was not driven by a single physician with high acceptance rates (data not shown). In Denver, EPT acceptance was higher among patients offered EPT by a nurse, compared with nonnursing assistants, supporting the hypothesis that provider type may influence EPT acceptance.<sup>12</sup> A meta-analysis of the effect of physician sex in medical communication found that female physicians engage more in active partnership and psychosocial communication with patients and had visits lasting 10% longer than those of male physicians,<sup>16</sup> yet we found higher acceptance when EPT was offered by males. It is possible that patients view male HCPs as more authoritative than their female counterparts, and, with respect to EPT acceptance, authority matters more than communication style.<sup>17</sup> Another possible explanation is that concordance of HCP sex and index patient sex is more important than HCP sex itself. However, we found that sex



concordance did not significantly affect EPT acceptance. Further study is required to fully understand the influence of HCP sex and HCP-patient interactions on EPT acceptance.

We found that EPT acceptance did not differ by patient sex, which contrasted with bivariable findings from Denver and multivariable findings from Arizona.<sup>11,12</sup> We also found that race was not associated with EPT acceptance, but Mickiewicz et al.<sup>12</sup> found that blacks were less likely than whites to accept EPT. The differences in findings may be real, reflecting differences in the patient population, or may be artificial, reflecting differences in analytic approach or how the EPT program was implemented in the Denver and Arizona settings compared with the NYC DOHMH STD Clinics.

Our analysis confirms findings from previous randomized trials that the threat of intimate partner violence is not a major concern.<sup>8</sup> In our analysis, among those who refused EPT, only one person reported fear of intimate partner violence as the reason for declining EPT.

Presumptive treatment in our clinics is common, and patients treated presumptively are not offered EPT at the time of treatment and therefore miss an opportunity for partner treatment. The STD clinics will offer EPT to a presumptively treated patient if he/she returns to obtain EPT; however, this method of EPT delivery is contingent on a treated patient accessing an automated messaging system for test results and revisiting the clinic. Data for the 15 month period of analysis show that less than 5% of *Ct*-infected patients who were assigned a message encouraging return for EPT did so (data not shown). Because a substantial proportion of people treated presumptively for chlamydia will not have laboratory-confirmed *Ct*, and the NYC STD clinic system serves a large number of patients, the cost of offering EPT at the time of presumptive treatment is prohibitive and not desirable. It may be reasonable, however, to offer EPT to those patients presumptively treated for *Ct* because they report sexual exposure to a partner with documented *Ct* infection; approximately 33% of these patients are ultimately shown to have a laboratory-confirmed *Ct* diagnosis (K. Jamison, NYC DOHMH, personal communication). Other approaches are needed to demonstrably close the gap between the large number of patients with chlamydia and the smaller number of index patients who are offered EPT. Using disease investigative specialists to deliver EPT to presumptively treated patients (or their partners) may be one such strategy, but it is not currently permissible in NYC.

Our analysis has limitations. Clinical signs suggestive of chlamydia infection were associated with increased EPT acceptance, so our measures of EPT acceptance may be lower than what would be observed if more presumptively treated patients (who are often symptomatic) had the opportunity to access EPT once *Ct* infection is laboratory confirmed. The names of sex partners are not recorded in index patients' EMR, so we could not validate index patients' report of sex partner(s) being present in the STD clinic and being treated for *Ct* at the same time as the index patient, nor could we validate patients' report of sex partner(s) being otherwise treated for *Ct*. In addition, the EMR does not capture data on the type of relationship the index patients had with their sex partner(s) (e.g., casual, vs. steady), which may be associated with EPT acceptance. Finally, our analysis used STD clinic data and may not be generalizable to patients in other clinical settings.

Despite these limitations, our analysis is one of the first evaluations of EPT acceptance after wide-scale implementation of EPT by an urban STD clinic system. Structured EMR data fields allowed us to differentiate index patients by the offer and acceptance of EPT and to assess reasons for refusing EPT. Our findings originate from a robust sample size drawn from a diverse urban clinic population and suggest that the practice of EPT for chlamydia is generally acceptable to patients at NYC DOHMH STD clinics. Only 20% of index patients refused EPT because they preferred medication be delivered by a clinician. Encouragingly, our data also indicate that most patients declining the offer of EPT have at least 1 sex likely treated for *Ct* infection. Our data suggest the need for strategies to quickly and effectively manage the partners of presumptively treated patients. Also needed are strategies targeting index patients who refuse EPT without any indication that at least 1 sex partner is being treated for chlamydia.

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## References

- Centers for Disease Control and Prevention. Notifiable diseases and mortality tables. MMWR. 2013; 62:ND-621–ND-634.
- The New York City Department of Health and Mental Hygiene Bureau of Sexually Transmitted Disease Control. Q Rep. 2013; 11
- Sellors JW, Mahony JB, Chernesky MA, et al. Tubal factor infertility: An association with prior chlamydial infection and asymptomatic salpingitis. *Fertil Steril*. 1988; 49:451–457. [PubMed: 3342898]
- Hillis SD, Owens LM, Marchbanks PA, et al. Recurrent chlamydial infections increase the risks of hospitalization for ectopic pregnancy and pelvic inflammatory disease. *Am J Obstet Gynecol*. 1997; 176(1 Pt 1):103–107. [PubMed: 9024098]
- Centers for Disease Control and Prevention. Expedited Partner Therapy in the Management of Sexually Transmitted Diseases: Review and Guidance. Atlanta, GA: US Department of Health and Human Services; 2006.
- 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. [PubMed: 15716561]
- 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. [PubMed: 16080084]
- Schillinger JA, Kissinger P, Calvet H, et al. Patient-delivered partner treatment with azithromycin to prevent repeated *Chlamydia trachomatis* infection among women: A randomized, controlled trial. *Sex Transm Dis*. 2003; 30:49–56. [PubMed: 12514443]
- Shiely F, Hayes K, Thomas KK, et al. Expedited partner therapy: A robust intervention. *Sex Transm Dis*. 2010; 37:602–607. [PubMed: 20601929]
- Golden MR, Hughes JP, Brewer DD, et al. Evaluation of a population-based program of expedited partner therapy for gonorrhea and chlamydial infection. *Sex Transm Dis*. 2007; 34:598–603. [PubMed: 17413683]
- Taylor MM, Reilley B, Yellowman M, et al. Use of expedited partner therapy among chlamydia cases diagnosed at an urban Indian health centre, Arizona. *Int J STD AIDS*. 2013; 24:371–374. [PubMed: 23970704]
- Mickiewicz T, Al-Tayyib A, Thrun M, et al. Implementation and effectiveness of an expedited partner therapy program in an urban clinic. *Sex Transm Dis*. 2012; 39:923–929. [PubMed: 23169171]



13. [Accessed March 7, 2014] Legal Status of Expedited Partner Therapy September 27, 2013.  
Available at: <http://www.cdc.gov/std/ept/legal/>
14. N.Y. Pub. Health Law § 2312. 2009
15. 10 NYCRR 23.5. 2010
16. Roter DL, Hall JA, Aoki Y. Physician gender effects in medical communication: A meta-analytic review. *JAMA*. 2002; 288:756–764. [PubMed: 12169083]
17. Levinson W, Kao A, Kuby A, et al. Not all patients want to participate in decision making. *J Gen Intern Med*. 2005; 20:531–535. [PubMed: 15987329]

**TABLE 1**

Characteristics of Patients Offered EPT and Distribution of Characteristics Among Those Accepting and Rejecting the EPT Offer at NYC DOHMH STD Clinics, July 2011 to October 2012

Characteristic	Overall, n (%) <sup>*</sup>	EPT Accepted		Unadjusted OR, OR (95% CI)
		Yes n(%) <sup>*</sup>	No n(%) <sup>*</sup>	
Total	(1964)	1076 (54.7)	888 (45.2)	
Patient Age, mean (median)	22.8 (21.0)	22.9 (21.0)	22.7 (21.0)	1.00 (0.99–1.02)
Patient sex				
Female	1418 (72.2)	771 (54.4)	647 (45.6)	Reference
Male	546 (27.8)	305 (55.9)	241 (44.1)	1.06 (0.87–1.29)
Patient race				
White (non-Hispanic)	100 (5.1)	59 (59.0)	41 (41.0)	Reference
Black (non-Hispanic)	1226 (62.4)	698 (56.9)	528 (43.1)	0.92 (0.61–1.39)
Hispanic	495 (25.2)	247 (49.9)	248 (50.1)	0.69 (0.45–1.07)
Other (non-Hispanic)	143 (7.3)	72 (50.3)	71 (49.7)	0.70 (0.42–1.18)
Marital status				
Married	53 (2.7)	35 (66.0)	18 (34.0)	Reference
Single	1874 (95.4)	1023 (54.6)	851 (45.4)	0.62 (0.35–1.10)
Separated/Divorced	37 (1.9)	18 (48.6)	19 (51.4)	0.49 (0.21–1.15)
Primary Language Spoken <sup>†</sup>				
English	1768 (90.0)	980 (55.4)	788 (44.6)	Reference
Spanish	167 (8.5)	88 (52.7)	79 (47.3)	0.89 (0.65–1.23)
Other	29 (1.5)	8 (27.6)	21 (72.4)	0.31 (0.14–0.70)
HCP sex <sup>†</sup>				
Female	1388 (70.7)	734 (52.9)	654 (47.1)	Reference
Male	576 (29.3)	342 (59.4)	234 (40.6)	1.30 (1.07–1.59)
Days between Chlamydia diagnostic visit and EPT offer visit <sup>†</sup> , mean (median)	8.9 (7.0)	9.2 (8.0)	8.6 (7.0)	1.02 (1.01–1.04)
Partner at the clinic (vs. not at clinic) on EPT offer visit <sup>†</sup>	161 (8.2)	44 (27.3)	117 (72.7)	0.28 (0.20–0.40)
Patient has signs of <i>Chlamydia trachomatis</i> infection (vs. no signs) <sup>†</sup>	869 (44.2)	509 (58.6)	360 (41.4)	1.32 (1.10–1.58)
Abnormal (vs. normal) physical examination <sup>†</sup>	753 (38.3)	433 (57.5)	320 (42.5)	1.20 (1.00–1.44)
Patient history (vs. no history) of gonorrhea or chlamydia <sup>†</sup>	617 (31.4)	363 (58.8)	254 (41.2)	1.27 (1.05–1.54)
Patient history (vs. no history) of any STD <sup>†</sup>	1274 (64.9)	708 (55.6)	567 (44.5)	1.09 (0.90–1.31)
Days since last sexual exposure <sup>†</sup> , mean (median)	16.9 (7.0)	13.29 (7.0)	21.5 (7.0)	0.99 (0.99–1.00)
No. sex partners in past 3 mo, mean (median)	1.9 (1.0)	1.9 (1.0)	1.9 (1.0)	1.00 (0.97–1.04)
Patient had any sexual exposure (vs. no sexual exposure) in past 3 mo	1369 (69.7)	764 (55.8)	605 (44.2)	1.14 (0.94–1.39)
Patient has any medication allergy (vs. no allergy)	94 (4.8)	55 (58.5)	39 (41.5)	1.17 (0.77–1.79)

Values are presented as n (%) unless otherwise indicated.

\* All percentages are rounded.

<sup>†</sup> Denotes significance at  $\alpha = 0.10$  using  $\chi^2$  P value.

TABLE 2

Multivariable Analysis: Predictors of Acceptance of EPT Offer at NYC DOHMH STD Clinics, July 2011 to October 2012 (n = 1964)

Variable	aOR	95% CI	$\chi^2$ P value
Sex			
Female	Reference	—	—
Male	0.92	0.70–1.19	0.51
Patient age	1.00	0.99–1.02	0.74
Race			
White (non-Hispanic)	Reference	—	—
Black (non-Hispanic)	0.69	0.38–1.27	0.23
Hispanic	0.58	0.31–1.08	0.08
Other (non-Hispanic)	0.69	0.34–1.43	0.32
Partner at the clinic on EPT offer visit	0.25	0.17–0.39	<0.01*
Signs suggestive of <i>Chlamydia trachomatis</i> infection	1.28	1.00–1.63	0.05
History of chlamydia or gonorrhea	1.24	0.99–1.57	0.06
Days since last sexual exposure	0.99	0.99–1.00	<0.01*
HCP sex			
Female	Reference	—	—
Male	1.43	1.12–1.80	<0.01*

Hosmer-Lemeshow goodness-of-fit test:  $\chi^2$  P value = 0.5416 with  $df$  = 8.

\* Denotes significance at  $\alpha = 0.05$ .