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Reticence to prescribe: utilization of expedited partner therapy among obstetrics providers in Arizona

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Summary:

Expedited partner therapy (EPT) is the practice of providing an extra dose or prescription of antibiotic to patients diagnosed with chlamydia or gonorrhoea to deliver to their sexual partner(s). Obstetrical providers who delivered more than 20 infants in Maricopa County, Arizona, USA, during the year 2008 were surveyed by telephone regarding their use of EPT. A total of 142 eligible respondents completed the survey, representing 34% (142/421) of the delivering providers, 67 (47%) of whom reported the use of EPT in their clinics. Having received information about EPT was significantly associated with its use (67% versus 41%) ($P = 0.008$). The most common reasons for not using EPT included the inability to obtain allergy history in partners (24%) and concern for liability (11%). Additional education regarding the use of EPT may increase the use of this personal and public health tool among some obstetrics providers in Maricopa County; however, concerns for liability may limit broad utilization.

Keywords

expedited partner therapy; patient-delivered partner therapy; PDPT; STD; STD treatment; chlamydia; gonorrhoea

INTRODUCTION

Untreated, chlamydia and gonorrhoea in pregnant women can result in transmission to infants in the perinatal period. Infection with chlamydia can result in neonatal ophthalmia and pneumonia; neonatal gonorrhoea is a cause of ophthalmia, sepsis, arthritis, meningitis and scalp abscess.[1,2] The wide spread use of silver nitrate solution has been effective in the prevention of gonococcal ophthalmia; however, this prophylaxis does not prevent the perinatal transmission of *Chlamydia trachomatis* or the disseminated manifestations of

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gonorrhoea. Although chlamydia and gonorrhoea screening is recommended during pregnancy, untreated infection in the male partners may result in undiagnosed asymptomatic re-infection in women.[1]

Expedited partner therapy (EPT), also termed as patient-delivered partner therapy (PDPT), is the practice of providing medication or a prescription to the patient infected with chlamydia or gonorrhoea to deliver to their sexual partner(s).[3] EPT has been demonstrated to be effective for the treatment of heterosexual partners of cases of chlamydia and gonorrhoea and in the prevention of re-infection.[4,5] Rates of chlamydia in Arizona are highest among women (563 cases/100,000 population versus 196 cases/100,000 in men).[6] Of the 10,267 cases of chlamydia among women reported in Maricopa County (Phoenix Area) in 2008, 19% were reported pregnant. Among the 978 female gonorrhoea cases reported in Maricopa County, 10% were pregnant. Estimates of receipt of prenatal care in Maricopa County are high; in 2008 98.5% of births were preceded by one or more prenatal visits.[7] In late 2008, Arizona passed a statute revision allowing for the use of EPT.[8,9] An educational campaign including provider mailings, lectures and website support materials was developed.[10] The purpose of the current study was to evaluate the awareness of the revised statute and the utilization of EPT among obstetrics and gynecology providers in Maricopa County.

MATERIALS AND METHODS

The survey was developed by the Arizona Department of Health Services, STD Control Program. One physician completed the surveys by telephone during February 2010 with either the provider or the provider's representative. A list of delivering providers in Maricopa County was derived from live birth records of infants born in 2008 from the Arizona vital records database. Providers were eligible to be contacted for the survey if they delivered at least 21 infants in 2008. Contact information for providers and providers' offices was obtained from the Arizona Medical Board website or via the search engine, Google.

The data-set of obstetrics providers included physicians and certified nurse midwives. Providers, or their representatives (which included medical assistants and nurses), were asked a series of questions regarding their use of EPT as well as their prenatal syphilis screening practices (results reported elsewhere). Certified nurse midwives were excluded from the final analysis as they reported not having prescribing ability. Although providers and/or provider representatives may have been aware of EPT use or non-use by other survey-eligible providers in the same clinic, only one provider was associated with a survey response for this analysis to ensure validity. Using a common themes approach, answers to open-ended questions for barriers to provision of EPT were categorized and quantified. Multiple themes were recorded per respondent when provided.

The number of deliveries performed by each provider was recorded from birth registry data. Clinic and provider demographic data included clinic location, number of providers in each practice, provider type (physician, certified nurse midwife, etc.), number of deliveries performed in 2008, provider specialty, provider practice location and type of practice (private practice, Indian Health Service, Federally Qualified Health Centre [FQHC], large

private health-care system and county medical system). Survey respondents were mailed letters of appreciation, EPT patient and provider information sheets, and a copy of the Arizona revised statute. Patient information sheets were provided in English and Spanish.[10]

Per US Department of Health and Human Services guidelines, measuring and reporting provider performance data for clinical, practical or administrative uses is not subject to review by Institutional Review Boards.[11]

Data were compiled using Microsoft Excel 2007 and analysed using SPSS Version 17 (Chicago, IL, USA). Correlates of EPT use were analysed using the chi-square test. Comparison of medians was performed using the Kruskal–Wallis test. Multivariate analysis was performed using logistic regression.

RESULTS

A total of 421 providers delivering 97.2% of the infants in Maricopa County were identified to be eligible for the survey and were contacted by telephone. A total of 146 surveys were completed, representing 35% (146/421) of the delivering providers. The remaining 275 (65% of the total number of providers) either had no contact information, had relocated or were unavailable to be surveyed. Survey responses from four certified nurse midwives without prescribing ability were excluded from the analysis. A total of 142 survey respondents including providers ($n = 38$) or provider representatives ($n = 104$) completed the survey, representing 32,768 out of 62,667 (52%) total deliveries in Maricopa County in 2008 (Table 1).[7] Only one provider reported seeing male patients (50% of patient base); the remaining 141 respondents were from practices that served only women. The median number of providers in the offices of the respondents was three (range 1–18).

There were 67 survey respondents (47%) who reported the use of EPT in their clinics; 46 (32%) respondents reported receiving information about EPT. Having received information about the revised statute to allow for EPT was significantly associated with the use of EPT (67% versus 41%) ($P = 0.008$). There were no significant differences in the use of EPT by provider type (MD versus DO) (44% versus 69%, $P = 0.07$). EPT users did not differ by practice type ($P = 0.8$), median number of providers in the practice (median 3 providers/practice among EPT users and non-users, $P = 0.6$) or median number of deliveries (199 versus 212, $P = 0.6$). Having received information about EPT remained associated with EPT use in multivariate analysis controlling for number of deliveries, practice type and provider type ($P = 0.001$).

There were 75 (53%) of respondents who reported not using EPT. The most common reasons for not using EPT included the inability to obtain medical and allergy history in partners (24%), concern for malpractice/liability/malpractice insurance non-coverage (11%) and a clinic policy of not prescribing medications to non-clinic patients (11%) (Table 2). One provider reported prior use of EPT with subsequent discontinuation after a partner reported an adverse event (nausea and vomiting) following azithromycin treatment that resulted in an emergency room visit. There were no reported barriers to EPT described by 13% of the survey respondents. An additional 7% reported being unaware of the new law.

COMMENTS

Approximately half of survey respondents reported the use of EPT in their clinical obstetrics settings. These results are similar to previous studies of this type.[12,13] Our study shows that EPT use was significantly associated with having received information about the statute change allowing EPT in Arizona. Furthermore, the study describes barriers to EPT use related to potential or reported adverse events occurring following EPT treatment of partners. Concern for liability or a malpractice event was also reported. Many respondents who reported not utilizing EPT perceived no barriers to its implementation.

EPT, or PDPT, has been demonstrated to be effective for chlamydia and gonorrhoea partner management among heterosexuals.[4,5,14,15] Despite this, as well as national guidelines for use[3] and resources regarding legal issues,[16,17] legal and structural barriers to EPT limit its use in some areas.[18,19] Our results describe important concerns of providers that include risks of adverse events in unexamined partners that could result in malpractice claims. Other providers cited the inability to treat partners due to clinic policies that disallow treatment of non-clinic patients. This barrier may be exacerbated with the increasing use of electronic medical records that contain electronic prescribing options that must be directly linked to clinic patients. Electronic patient-linked prescriptions sent directly to local pharmacies have obviated the use of paper prescriptions in some Phoenix-area clinics.

Although one provider reported adverse events occurring in one treated partner, the symptoms associated with the emergency room referral (nausea and vomiting) are not consistent with an allergic reaction. Azithromycin is safe and effective in the treatment of chlamydia.[1,20,21] Gastrointestinal intolerance is the primary side-effect of azithromycin treatment, with diarrhoea being reported as the most common manifestation.[18,20–22] As of October 2010, the authors have not found any published reports of allergic events or adverse reactions associated with EPT. A phone line (est. in 2001) and email (ept@cdph.ca.gov) tracked by the California Department of Health, STD Control Branch, for use by providers to report adverse events associated with EPT has received no calls as of October 2010 (Heidi Bauer, personal communication). Information regarding azithromycin dosing and prevention of gastrointestinal side-effects is included in the patient and provider EPT fact sheets developed by the Arizona STD programme.[10]

There are several inherent limitations to this study. Sample representation and provider participation limits the ability to generalize these results across providers in Maricopa County. It was assumed that providers were following national recommendations for chlamydia and gonorrhoea screening during pregnancy. The frequency of chlamydia and gonorrhoea diagnoses was not linked to providers. Although provider representatives were aware of the use or non-use of EPT, they were frequently not aware of the reason why a provider might not be using EPT. In addition, provider self-report of EPT use may not reflect actual clinical practice. Finally, the use of EPT was not evaluated prior to the time of the statute amendment, making it legal, and thus increases in EPT use could not be estimated.

In this analysis, provider use of EPT was associated with having received information about this practice. These findings suggest that additional provider education regarding the use of

EPT in Arizona may result in the expansion of this clinical practice. In early 2009, following the passage of the EPT legislation, a media campaign was launched entitled 'You can treat the partners'. As part of this media effort, 1500 postcards were mailed to family practice, internal medicine, and obstetrics and gynecology providers. In addition, 57 clinical presentations were delivered to 1614 participants between 1 January 2009 and September 2010 that included specific descriptions of the law and the method of EPT delivery. Patient education materials were developed in English and Spanish and placed on the state STD programme website.[10] Provider and pharmacy fact sheets were posted as well. Following the survey completion in March 2010, efforts to expand EPT within Maricopa County have included mailing EPT education materials to each survey respondent and visits by health department staff to 46 individual clinics and hospitals that have diagnosed and reported STDs. Visited clinics and providers were given a brief overview of EPT and provided with hard copies of the EPT educational materials for providers and patients. Since 2009, EPT has been provided at the Maricopa County STD Clinic, one of only two categorical STD clinics in the state of Arizona. As of 1 October 2010, 82 prescriptions have been filled for EPT medications at the pharmacy associated with this clinic.

Efforts to expand the use of EPT locally and nationally should attempt to address provider concerns related to liability. In addition, clinical linkages between treatment of female patients and their male partners should be facilitated, not hindered, by newly implemented electronic medical records systems. Finally, there is a need for expanded advocacy within medical associations and the medical community to promote provider responsibility and reimbursement for the treatment of sexual partners, using EPT or other forms of partner referral.

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Table 1

Descriptions of survey respondents and EPT practices (n = 142)

Type of survey respondents	Number (%) of survey respondents (n = 142)	Number (%) of respondents reporting use of EPT
Survey respondent		
Clinical provider	38 (27)	15 (40)
Provider representative	104 (73)	52 (50)
Represented provider type		
Physician (MD or DO)	142 (100)	67 (47)
Obstetrics/gynaecology	138 (97)	66 (48)
Perinatology	3 (2)	1 (33)
Family practice	1 (0.7)	0(0)
Practice type		
Private practice	129 (88)	60 (47)
Health care organization	8 (5)	3 (38)
Federally Qualified Health Center	7 (5)	3 (43)
County health system	1 (1)	0 (0)
Indian Health Services	1 (1)	1 (100)

EPT = expedited partner therapy

Table 2

Reported barriers and concerns regarding the use of EPT by respondents not currently using EPT ($n = 75$)

Described barriers	Total number* (%) of respondents not using EPT ($n = 75$)	Provider respondent ($n = 23$)	Provider representative ($n = 52$)
Unable to obtain medical and allergy history in partners	18 (24)	9 (39)	9 (17)
No perceived barriers to using	10 (13)	4 (17)	6 (12)
Concern for malpractice/liability/malpractice insurance will not cover	8 (11)	7 (30)	1 (2)
Clinic does not prescribe to non-clinic patients	8 (11)	4 (17)	4 (8)
Concern for adverse or allergic events in the partner/ partner safety	6 (8)	4 (17)	2 (4)
Partner should be seen by PCP	6 (8)	0 (0)	6 (12)
Think practice is illegal/not aware of law allowing for EPT	5 (7)	1 (4)	4 (8)
Patients have too many partners or unknown partners/ unable to track partners	3 (4)	1 (4)	2 (4)
Would consider if no other option for partner treatment	4 (5)	0 (0)	4 (8)
Clinic policy not to treat partners	4 (5)	2 (9)	2 (4)
Do not treat men	4 (5)	2 (9)	2 (4)
Previous use but had a sexual partner who claimed to have an adverse reaction to azithromycin resulting in ER visit	1 (1)	1 (4)	0 (0)
Lack of reimbursement	1 (1)	1 (4)	0 (0)
Patient insurance concerns	1 (1)	0 (0)	1 (2)
Unknown	14 (19)	0 (0)	14 (27)

EPT = expedited partner therapy; PCP = primary care practitioner; ER = emergency room

*Multiple barriers per respondent included