Preferred strategies of men and women for managing chlamydial infection

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Objectives To determine men and women’s preferred strategies for managing chlamydial infection: partner notification (patient referral), postal testing kit (PTK) or patient-delivered partner medication (PDPM).

Design Interviewer-conducted questionnaires (women) and anonymous, self-administered questionnaires (men).

Population Women infected with chlamydia who were participating in a randomised study assigning partners to patient referral, PTK or PDPM. Men attending genitourinary medicine, family planning and fracture clinics in Edinburgh.

Methods Men and women were asked their preferred strategy for testing/treating sexual partners (patient referral, PTK or PDPM) if they or their partner had a positive chlamydia test. Women were also asked the reasons for their choice and whether partners were satisfied with the intervention received.

Main outcome measures Reported preferences of men and women for testing/treating partners.

Results Response rates were 97 and 81% for the women’s questionnaires at study entry and 6 months, respectively, and 81% for the men’s questionnaires. Of 174 women responding, 67% preferred PDPM for partners and 57% would prefer PDPM for themselves. The main reasons were that PDPM allows simpler, more convenient and faster treatment. Women reported that 65% of partners were satisfied with whichever intervention they received. Of 293 men responding, 70% would choose patient referral for partners and 53% would prefer patient referral for themselves. Men previously tested for chlamydia were significantly more likely to choose PDPM (n = 22) than those never tested (n = 7); P < 0.001. Only 3% of women and 9% of men preferred PTKs for partners.

Conclusion The results suggest that women prefer PDPM and men, at least hypothetically, prefer patient referral. PTK appears unpopular with both sexes.

Keywords Chlamydia, partner notification, patient-delivered partner medication, patient referral, postal testing.

Introduction

Genital chlamydial infection is an escalating problem in the UK, and one of the key aims of the national sexual health strategies is to reduce chlamydia infection rates.1,2 The incidence of re-infection is estimated to be 15–30% at 1 year among UK women.3,4 This is an important public health issue because repeated chlamydial infection is associated with increased risk of complications such as infertility.5 Re-infection often occurs as a result of resumption of sex with an untreated partner. Thus, timely treatment of sexual partners is essential.

Traditionally, management of sexual partners has involved partner notification, also known as ‘contact tracing’, by either the index patient (patient referral) or, less commonly, by a sexual health advisor (provider referral). The partner is advised to attend a genitourinary medicine (GUM) clinic for testing and treatment. Barriers to attending GUM services such as stigma and waiting times may deter partners from attending and reduce the effectiveness of partner notification.6

Two alternative strategies have been evaluated. Patient-delivered partner medication (PDPM) has been used in the USA and Sweden and has been shown to improve partner testing/treatment rates and reduce chlamydial re-infection.7–9 It involves the index patient delivering antibiotic therapy (usually azithromycin 1 g) directly to sexual partners and so expediting treatment of chlamydia. A strategy that has
been shown to be effective in Denmark is postal testing, whereby women give a postal testing kit (PTK) to partners for them to produce a urine sample that they post to a laboratory. Treatment is arranged if the test subsequently proves positive. Recent guidance from the National Institute of Health and Clinical Excellence (NICE) has recommended that PTK be considered as an option in the UK for testing sexual partners for chlamydia. However, little is known about how acceptable index patients and their sexual partners find these alternatives to partner notification.

To determine the acceptability of patient referral, PDPM and PTK, we conducted questionnaire surveys of men and women regarding their hypothetical preferred testing/treatment strategy for sexual partners.

**Methods**

Three separate questionnaire studies regarding preferred intervention for diagnosing and testing chlamydia for one’s partners and oneself, were conducted among men and women between January 2005 and June 2006.

**Women’s preference**

The women’s study was conducted among a group of women (aged 16–45 years) who had tested positive for *Chlamydia trachomatis* and who were already participants in a study based in clinics for family planning, termination of pregnancy or GUM in Edinburgh. The study involved randomisation of sexual partners to one of the three interventions: partner notification (patient referral), PTK or PDPM (azithromycin). The efficacy of each intervention was assessed over a 12-month follow-up period. During the last year of the study, from January 2005 to January 2006, we introduced an interviewer-administered questionnaire. At study entry, immediately following randomisation, the study nurse asked women what their preference would have been for their partner if they had been given the choice of patient referral, PDPM, PTK or no preference (Box 1).

Women were also asked to state which of these testing/treatment strategies (patient referral, PTK, PDPM or no preference) they would prefer for themselves in a purely hypothetical situation where a sexual partner tested positive for chlamydia. For each question, they were asked to indicate their reasons for preference from a list of responses, including other specified reasons.

**Partner’s reported preference**

Six months after randomisation, women participating in the study of partner interventions were contacted by the study nurse and a questionnaire was completed by telephone interview. Interviews were conducted between January 2005 and June 2006. Women were asked whether they and their sexual partners had been satisfied with the intervention that they had been randomised to receive (Box 1). In cases of dissatisfaction, women were asked for any reasons reported by partners.

**Men’s preference**

The questionnaire study of men was conducted among four groups of men (aged 16–45 years) attending clinics in Edinburgh; (i) a general GUM clinic, (ii) a specialised GUM clinic for men who have sex with men (MSM), (iii) a family planning clinic and (iv) a hospital fracture clinic. The questionnaire was self-administered and completed anonymously. The written introduction to the questionnaire provided background information about chlamydia and the reasons for conducting the questionnaire. The first two questions asked for their personal preference for testing/treating chlamydia in hypothetical situations, where either they themselves test positive for chlamydia and thus need to inform sexual partners, or a sexual partner tests positive for chlamydia and they needed testing/treatment for themselves (Box 1). Men were asked to indicate their preferred choice from a list of: partner notification–patient referral, partner notification–provider referral, PTK, PDPM, both PDPM and PTK in combination, or no preference. Each ‘tick box’ intervention was accompanied by a short simple description of what it involved. Men were also asked to indicate their age and whether or not they had previously been tested for chlamydia.

Between June 2005 and June 2006, the questionnaire was distributed directly to 100 consecutive men attending GUM,

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**Box 1.** Key questions asked in surveys

**Women’s questionnaire (study entry)**

If you had been given a choice of methods for contacting/treating your partner, which would you have chosen?

If your partner had been first to get a positive chlamydia test and he had been offered these methods, how would you wish to be tested/treated?

**Women’s questionnaire (6 months of follow up)**

Were you pleased with the testing/treatment option that you and your partner(s) were given?

Was your partner(s) pleased with the option he received?

**Men’s questionnaire**

Imagine that you have a positive chlamydia test. Which testing/treatment option would you prefer for your partner(s)?

A sexual partner discovers that they have chlamydia and you too may be infected. Which testing/treatment option would you prefer?
110 men attending fracture clinics and 60 men attending MSM clinics over the study period. Questionnaires in GUM clinics were distributed and collected (in an opaque sealed envelope) by the clinic reception staff, but in fracture clinics the study nurse distributed and collected them from men in the waiting area. One hundred questionnaires for men attending family planning clinics were placed in the waiting area of the clinic beside the collection box. A poster placed above the collection box invited men to complete the questionnaire, and then to place them in the accompanying opaque envelope in the collection box.

The women’s study and men’s questionnaire study were granted ethical approval by the Lothian Research Ethics Committee (reference 2003/6/12, approved 10 May 2004 and 06/S1103/18, approved 19 April 2006, respectively). Responses were compared using chi-square statistical tests.

**Results**

**Women’s preference**

A questionnaire was completed for 174 of the 180 women (97%) recruited in the last year of the randomised intervention study. Respondents had been randomised to patient referral (n = 57), PTK (n = 58) and PDPM (n = 59), respectively. The majority (n = 117, 67%) stated that they would have chosen PDPM for their partner if given the choice. 18% of women (n = 31) stated that they had no preference, 10% (n = 18) would have chosen patient referral T and a minority (3%) would have chosen PTK (n = 6). A further two women (1%) stated that they would wish a combination of PDPM with a PTK for their partner (although this combination had not been offered in the questionnaire). A total of 143 women (82%) gave reasons for their choice. The most common reasons for choosing a particular strategy for partners are shown in Table 1.

When asked which strategy women would prefer for themselves if a partner tested positive for chlamydia, the majority of women chose PDPM (n = 100, 57%) This was followed by patient referral (n = 41, 24%), no preference (n = 14,8%), and PTK (n = 11, 6%). Eight women (5%) expressed an alternative preference, for a combination of PDPM and PTK, although this was not a choice that they were offered. When comparing preferences for themselves and for partners, significantly more women would choose CT for themselves than for partners (P < 0.001). The most common reasons expressed for their choice are given in Table 1.

**Partner’s reported preference**

Of the 292 women reaching 6 months of follow up during the study period, 145 (50%) responded to contact with the study nurse and agreed to be interviewed over the telephone. Respondents’ partners had been randomised to patient referral (n = 46), PTK (n = 49) and PDPM (n = 51). A total of 142 of the responders (97%) reported that they had been able to contact all (n = 125) or some (n = 17) of their partners successfully. Four women from patient referral (n = 2) and PTK (n = 2) had not been able to contact any partners. Ninety-three of the 142 women (65%) stated that their partners had been satisfied with whichever intervention they were randomised to receive. A small number of women (n = 12; 8%) reported that their partners had not been satisfied. These were women whose partners had patient referral (n = 7) or PTK (n = 5). Reasons given by these 12 women for partner dissatisfaction were because their partner would have preferred PDPM (n = 7), partner was not pleased about having to attend a clinic (n = 2), partner was embarrassed about having to attend his GP (n = 1), partner refused to cooperate (n = 1) and partner refused PTK (n = 1). The remaining women reported either a ‘mixed response’ from partners (n = 7; 5%), (i.e. different responses from different partners),

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<tr>
<th>Table 1. Women’s reasons for preferred intervention strategy for testing/treating their sexual partner(s) for chlamydia infection (more than one reason often given, hence total exceeds 100%)</th>
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<tbody>
<tr>
<td><strong>Prefer PDPM (n = 117) (67%)</strong></td>
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<tr>
<td>Partner treated quicker (n = 92) (78%)</td>
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<tr>
<td>Simpler/more convenient (n = 88) (75%)</td>
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<tr>
<td>No need for clinic/GP (n = 54) (46%)</td>
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<tr>
<td>Difficult/unlikely to attend clinic (n = 40) (34%)</td>
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<tr>
<td>I would know partner has been treated (n = 4) (3%)</td>
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or ‘neither pleased/nor displeased’ \( (n = 21; 15\%) \) or ‘did not know’ \( (n = 9; 6\%) \).

**Men’s preference**

A total of 293 questionnaires were collected from men from each of the following clinics: GUM (86), MSM (47), family planning clinic (FPC) (60) and fracture (100) (response rates of 86, 78, 60 and 91\% respectively).

The four sources of men differed significantly in the proportion who had been tested at some time for chlamydia (51\% GUM, 69\% MSM, 13\% FPC and 17\% fracture clinic; \( P < 0.001 \)). There were no significant differences in the responses to the questions according to either source or age group. The modal age group for each group of responders was 26–30 years (27\%) for GUM, 31–40 years (41\%) for MSM clinics, 31–40 years (28\%) for FPC and >40 years (26\%) for fracture clinics. The preferred choice of men from all clinics, for either themselves or partners was partner notification–patient referral (Tables 3 and 4). Men who had previously been tested for chlamydia were significantly more likely to choose PDPM in some format (alone or in combination with a PTK) for themselves than those who had never tested (23\% men \( [n = 22] \) for chlamydia chose PDPM alone or with a PTK versus 4\% \( [n = 7] \) never tested for chlamydia; \( P < 0.001 \)). Likewise, men previously tested for chlamydia were significantly more likely to choose PDPM alone or with a PTK for a partner (30\% men \( [n = 28] \) tested for chlamydia choosing PDPM alone or with PTK versus 8\% \( [n = 15] \) of those not tested; \( P < 0.001 \)).

**Discussion**

Given the current climate of rising sexually transmitted infections and overburdened sexual health services, this study addresses an important clinical problem. Although it is a questionnaire study with inherent limitations, we succeeded in sampling a large group of men and women of reproductive age from a variety of settings. The results suggest that the majority of women with chlamydial infection would prefer PDPM for their partners, mainly because partners are treated quicker and it is a simpler, more convenient method. Hypothetically, most women would also prefer PDPM for themselves if their partner was diagnosed with chlamydia. However, significantly more women than men chose patient

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<th>Table 2. Women’s reasons for preferred intervention strategy for testing/treating themselves for chlamydial infection (more than one reason often given, hence total exceeds 100%)</th>
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<tr>
<td>Prefer PDPM ( (n = 100) ) (57%)</td>
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<tr>
<td>Treated quicker ( (n = 87) ) (87%)</td>
</tr>
<tr>
<td>Simpler/more convenient ( (n = 86) ) (68%)</td>
</tr>
<tr>
<td>No need for clinic/GP ( (n = 43) ) (43%)</td>
</tr>
<tr>
<td>Difficult/unlikely to attend clinic ( (n = 19) ) (19%)</td>
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<tr>
<td>No need to attend clinic ( (n = 19) ) (19%)</td>
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<tr>
<th>Table 3. Men’s preferred strategy for testing/treating sexual partners if they themselves had a positive chlamydia test</th>
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<tbody>
<tr>
<td>Preferred strategy</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Patient referral</td>
</tr>
<tr>
<td>Provider referral</td>
</tr>
<tr>
<td>PTK</td>
</tr>
<tr>
<td>PDPM</td>
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<tr>
<td>PDPM and PTK</td>
</tr>
<tr>
<td>No preference</td>
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<tr>
<td>Other</td>
</tr>
<tr>
<td>Not stated</td>
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*Would wish to give partner all options.
referral for themselves than for partners, suggesting that women value the opportunity to be tested and receive advice and testing for other sexually transmitted infections. A small number of women volunteered a combination of treatment and test (PDPM and PTK) as their preferred choice for partners \((n = 2)\) and for themselves \((n = 8)\). It is possible that if combined PDPM and PTK had been offered as an option to women, many more would have chosen this.

It is interesting that the questionnaire study of men revealed an overwhelming preference for patient referral for both a sexual partner and themselves. Men’s preference for partner referral is somewhat ‘at odds’ with the current real-life situation in many parts of the UK, where partner attendance rates are low, and those who do attend GUM services, often do so after a significant delay.\(^6,12\) It is also inconsistent with the finding that partners of women in the randomised intervention study reported dissatisfaction with patient referral and PTK, but not with PDPM.

The wide discrepancy between women’s and men’s preferred strategy may possibly reflect a difference between what one would prefer in a hypothetical situation and what one would actually choose in a real situation. This is suggested by the finding that men who had previously been tested for chlamydia were more likely to prefer PDPM than men who had never been tested. In San Francisco, USA, where PDPM has been available to clinicians since 2001, about 23% of individuals with chlamydia choose this.\(^13\) Although most partners in the randomised intervention study were satisfied regardless of the intervention received, these data may have been subject to bias because only 50% of women responded at 6 months, by which time they may not have accurately recalled their partner’s response. Our methodology could also be criticised for recruiting only from clinical settings that may have skewed our sample towards those individuals likely to attend a sexual health clinic for testing or treatment. By sampling women participating in a randomised trial, we may also have had a more motivated population than those in the general population. Furthermore, the men’s and women’s studies differed in the wording of certain questions and for logistical reasons, we collected data in different ways that hindered direct comparison of some findings.

We concede, therefore, that the opinions expressed by our study population may not be entirely representative of individuals with chlamydia in the general population. While there is obviously still a place for traditional methods of partner notification, our study does suggest an openness towards alternative management strategies, particularly PDPM, and particularly among women. PDPM (and possibly PTK in conjunction with PDPM) appear popular with a proportion of men and women. Despite the apparent acceptability of PDPM among patients, its use is controversial within the medical profession. In the UK, guidance from the GMC advises against prescribing without appropriate knowledge and assessment of the patient.\(^14\) Similar opinion has hampered use of PDPM in the USA, although legislation has been introduced in some states to enable PDPM to be used more easily.\(^15,16\) A recent survey of health professionals in the UK (gynaecologists, GPs, practice nurses and pharmacists) who are increasingly involved in managing chlamydia showed that most were in favour of using PDPM. In fact, 24% of doctors admitted to having prescribed azithromycin for a patient’s partner in the past.\(^17\)

The ethical question posed by PDPM is whether the public health benefits in terms of potential reduction in transmission, re-infection rates and costs to the health service outweigh the risks of allergy, drug interaction, antibiotic resistance, undiagnosed co-infection and noncompliance. In the case of chlamydia treatment with a single 1-g dose of azithromycin, it could be argued that the benefits of this inexpensive treatment probably do outweigh the very low risk

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**Table 4. Men’s preferred strategy for testing/treating themselves for chlamydial infection if a sexual partner had a positive chlamydia test**

<table>
<thead>
<tr>
<th>Preferred strategy</th>
<th>Clinic setting</th>
<th>Total ((n = 293))</th>
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<tbody>
<tr>
<td></td>
<td>Genitourinary medicine ((n = 86))</td>
<td>Men who have sex with men ((n = 47))</td>
</tr>
<tr>
<td>Patient referral</td>
<td>43 (50)</td>
<td>23 (49)</td>
</tr>
<tr>
<td>Provider referral</td>
<td>11 (13)</td>
<td>4 (9)</td>
</tr>
<tr>
<td>PTK</td>
<td>7 (8)</td>
<td>3 (6)</td>
</tr>
<tr>
<td>PDPM</td>
<td>7 (8)</td>
<td>4 (9)</td>
</tr>
<tr>
<td>PDPM and PTK</td>
<td>11 (13)</td>
<td>8 (17)</td>
</tr>
<tr>
<td>No preference</td>
<td>5 (6)</td>
<td>5 (10)</td>
</tr>
<tr>
<td>Other</td>
<td>1 (1)*</td>
<td>0</td>
</tr>
<tr>
<td>Not stated</td>
<td>1 (1)</td>
<td>0</td>
</tr>
</tbody>
</table>

\* Would prefer clinic to send PTK rather than delivery from partner.

\** Would prefer to attend GP.
of adverse reaction. The risk of undiagnosed co-infection is also likely to be low if the index case has tested negative for other STIs, although some studies suggest the risk is unacceptably high if the index case has been screened only for chlamydia. Trelle et al. performed a meta-analysis of five trials investigating PDPM and found a reduced risk of persistent or recurrent infection with chlamydia or gonorrhoea (risk ratio 0.73, 95% CI 0.57–0.93). They conclude that health professionals should consider strategies such as PDPD.

The use of PTKs alone was an unpopular strategy with our study population. If our findings are representative, extrapolating them to real life would mean that only 3% of women and 9% of men with chlamydia would choose PTKs for partners. Trelle et al. found two trials in which providing PTKs for partners increased the number of partners who got treated, but they estimated that eight index patients would need sampling kits to have one additional index patient with at least one additional partner tested. This is because rates of return of PTKs tend to be poor (19–39.5% reported in the UK). Although PTKs have been recommended by NICE, this conflicts with the advice of the British Association for Sexual Health and HIV who recommend that we offer epidemiological treatment to partners, rather than waiting for results.

The use of PTK in conjunction with PDPM was more appealing to men in our study than PTK used alone. The cost-effectiveness of this combination would need to be evaluated to justify the additional expense. The advantages would be that treatment would not be delayed, epidemiological data on chlamydia prevalence would be preserved and, if nucleic acid amplification tests for multiple STIs become more widely available, the problem of undiagnosed co-infection could be overcome.

Conclusion

This study suggests that while there is still a place for traditional methods of partner notification, novel strategies might be more acceptable to a proportion of men and women. PDPM appeared more popular with women and, at least hypothetically, patient referral was more popular with men. The fact that PDPM was more favourable to men who had previously been tested for chlamydia suggests that more men might choose PDPM if they actually had chlamydia. PTK used alone appeared unpopular with both sexes. We recognise the limitations of this questionnaire study, in particular the difficulties of extrapolating hypothetical responses to real life. However, we feel that our study demonstrates the popularity and advantages of novel management strategies that deserve further evaluation and debate.

Acknowledgements

The authors thank the men and women who completed questionnaires and the staff of the genitourinary medicine, family planning and fracture clinics for their cooperation and assistance.

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Editor's commentary on ‘Contact tracing or patient-delivered partner medication for genital Chlamydia infection?’

The treatment of genital chlamydial infection (single dose of azithromycin) is relatively simple, but the procedure for contacting and treating sexual contact(s) to prevent re-infection is complicated. Re-infection increases the risks of infertility and pelvic pain, making its prevention a key management objective. ‘Contact tracing’ is traditionally the method of approaching the sexual partner. However, the partner is usually asymptomatic and aware of the stigma associated with sexually transmitted infections, and frequently fails to attend, thus increasing the risk of re-infection. Consequently, alternative strategies such as ‘patient-delivered partner medication’ and ‘postal test kit’ to improve partner testing/treatment rates have been proposed, and are already in use in parts of the USA and Denmark, respectively. However, very little is known about the attitude of patients and their partners to these alternative approaches.

In this issue of the journal, Melvin et al. aimed to determine the acceptability of contact tracing, patient-delivered partner medication and postal test kit, by conducting questionnaire surveys of preferred strategy among men and women and their sexual partners. The female respondents were a subset of 174 Chlamydia-positive women, who were enrolled in a randomised trial of their sexual partners to one of the three strategies. For the purpose of the present analysis, the women were asked to declare their preferred strategy for managing their partners immediately after randomisation. The satisfaction of their partners with the allocated intervention was assessed by a questionnaire interview administered by telephone after 6 months. The male respondents, however, were 293 attendants at family planning (100), general genitourinary medicine (100), special clinic for men who have sex with men (60) or fracture (100) clinics. These men did not necessarily have Chlamydia infection or have sexual partners who were diagnosed with Chlamydia. Indeed, the four sources of male participants differed significantly in the proportion of men who had been tested at some time for Chlamydia (P < 0.001). Both the male and female groups received information leaflets on Chlamydia and the purpose of the study. The response rates were 97 and 81% for the women’s questionnaires at entry and at 6 months, respectively, and 81% for the men’s questionnaires. The authors found that 57 and 67% of the female respondents preferred patient-delivered partner medication for themselves and their partners, respectively, stating that it was simpler, quicker and more convenient. Women reported that 65% of partners were satisfied with whichever intervention they received, but only 50% of the sexual partners could be contacted, raising the possibility of bias. Of the 293 men who responded, 70% chose contact tracing for partners and 53% preferred contact tracing for themselves. The authors’ concluded that women preferred patient-delivered partner medication, while men at least in theory preferred contact tracing. What do these results tell us and how valid are they?

The reasons for the authors’ findings may well lie in the study’s design and execution. The male participants completed anonymous self-administered questionnaires in hypothetical situations of, having a personal positive Chlamydia test and, having a partner with such a positive test. The female participants on the other had a genuine positive Chlamydia test and their questionnaire was administered by a nurse, and worded differently from that of the men. These differences are significant and weaken any direct comparisons between the groups. Hypothetical responses to hypothetical questions may be just that. The authors rightly acknowledged that their finding of men’s preference for contact tracing was inconsistent with the current situation in the UK, where partner attendance rates are low and significantly delayed when it occurred. Furthermore, partners of women in the randomised study preferred patient-delivered partner medication to
contact tracing, suggesting a discrepancy between men’s responses to the hypothetical and the real-life scenarios. Not surprisingly, the 22 men in the study who had previously been tested for Chlamydia were significantly more likely to choose patient-delivered partner medication than the seven who had never been tested ($P < 0.001$). The authors also acknowledged that hospital-based participants, some enrolled in a randomised trial may be biased and unusually motivated, and as such, not representative of the general population.

In spite of these caveats, this report is timely in view of the escalating rate of Chlamydia infection and gives us some insight into the ‘what if’ scenario.

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**Editor’s commentary on ‘The ethics of patient-delivered partner therapy’**

Is the potential benefit of a (theoretical) reduction in the prevalence of illness in the population greater than the potential harm that may arise from liberalised use of a treatment that is currently subject to the strict regulations that apply to a prescription medicine? Are there better strategies to reduce the prevalence of this illness? These are the difficult questions posed by the use of patient-delivered partner therapy (PDPT) in those countries that have a tradition of strict regulation of prescribed medicines.

Regulations concerning prescription medicine are being increasingly extended to allow more persons to prescribe, but these changes are accompanied by careful guidelines for the professionals involved. PDPT may not allow such control. There are a number of other approaches to reducing the incidence of Chlamydia infection that appear to be part of a coordinated national response to the increase in sexually transmitted diseases (STIs). These include the use of patient group directions (PGDs) to allow the extension of powers available to nurses, pharmacists and others to extend Chlamydia testing and treatment services.

A crucial component of the aims of such programmes is to improve partner notification, treatment and follow up. This is made very clear in the recently published core requirements for evidence-based and cost-effective national screening programme for genital chlamydial infection in England (January 2008; [http://www.chlamydiascreening.nhs.uk/ps/core/index.html](http://www.chlamydiascreening.nhs.uk/ps/core/index.html)).

PGDs in the UK must involve the use of named qualified health professionals who may supply or administer medicines. There must be comprehensive arrangements for the security, storage and labelling of all medicines. It is difficult to see how such arrangements could apply to PDPT. Even within the regulated confines of a PGD, the Medicines and Healthcare products Regulatory Agency is wary of antibiotic use. ‘Particular caution should be exercised in any decision to draw up PGDs relating to antibiotics. Microbial resistance is a public health matter of major importance and great care should be taken to ensure that their inclusion in a direction is absolutely necessary and will not jeopardise strategies to combat increasing resistance’ ([http://www.mhra.gov.uk/Howweregulate/Medicines/Availabilityprescribingandsupplyingofmedicines/ExemptionsfromMedicinesActrestrictions/PatientGroupDirectionsintheNHS/index.htm](http://www.mhra.gov.uk/Howweregulate/Medicines/Availabilityprescribingandsupplyingofmedicines/ExemptionsfromMedicinesActrestrictions/PatientGroupDirectionsintheNHS/index.htm)). Azithromycin is an effective treatment for chlamydial infections and resistance in *Chlamydia trachomatis* is unknown (Health protection Agency, UK, Health protection report, Volume 2, No. 14; 4 April 2008). However, Gonococcus resistance to azithromycin has developed over the last 8 years and the UK Department of Health now recommends that azithromycin should not be used to treat gonorrhoea (Inspector of Microbiology and Infection Control. High-level azithromycin resistance in *Neisseria gonorrhoeae*. DH Gateway ref 9698, 4 April 2008). It would be naive to assume that Chlamydia resistance to azithromycin will not develop. Moreover, dual infections with both *C. trachomatis* and *N. gonorrhoeae* are common and there is a likelihood that azithromycin will be used at the lower dose for *C. trachomatis* (1 g) in cases where only the chlamydial infection is diagnosed or suspected, and gonococci will remain untreated.

The doctor in the UK is placed in a difficult position when contemplating PDPT as ‘the arrangements for PDPT are inconsistent with the principles set out in our guidance’ (personal communication, Michael Keegan, Standards & Ethics, General Medical Council). The advice from the General Medical Council (GMC) contained in Good Practice in Prescribing Medicines (2006) ([http://www.gmcuk.org/guidance/current/library/prescriptions_faqs.asp](http://www.gmcuk.org/guidance/current/library/prescriptions_faqs.asp)) does not specifically deal with PDPT but recommends that for the nearest equivalent, remote prescribing (e.g. prescribing by telephone, email, fax,
video link or a website), ‘In all circumstances, you must ensure that you have an appropriate dialogue with the patient to: 1. Establish the patient’s current medical conditions and history and concurrent or recent use of other medications including non-prescription medicines; 2. Carry out an adequate assessment of the patient’s condition; 3. Identify the likely cause of the patient’s condition; 4. Ensure that there is sufficient justification to prescribe the medicines/treatment proposed. Where appropriate you should discuss other treatment options with the patient; 5. Ensure that the treatment and/or medicine/s are not contra-indicated for the patient and 6. Make a clear, accurate and legible record of all medicines prescribed.” Such principles are used to regulate professionals, whether they are doctors, nurses, pharmacists or one of an increasing list of professionals that are responsible for prescribing prescription drugs. The chief aim of these regulations are ‘to safeguard public health’ (Directive 2001/83/EC of the European Parliament and of the Council of 6 November 2001 on the Community code relating to medicinal products for human use).

The GMC at present is ‘not in a position to take a view on whether the current challenges in reducing the incidence of STIs, and recent research findings, are sufficient justification to depart from the norms of good practice, even if the legal position on Prescription only Medicines (PoMs) allowed PDPT arrangements to be put in place.’ (personal communication, Michael Keegan). The uncertainties in the balance of good and bad with PDPT are perhaps so great that a move towards the use of prescription medicines in this way at present is too much of a voyage into uncharted waters.

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