# **ORIGINAL ARTICLE**

# Opportunistic screening for genital *Chlamydia trachomatis* infection and partner follow-up in family planning clinics in three Scottish cities

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#### **Abstract**

Three large urban family planning clinics (FPCs) in Scotland participated in a study to examine the implications of opportunistically offering urine testing for genital Chlamydia trachomatis infection and FPC follow-up of positive women and of their male partners. Ninety-eight percent (3029) of women accepted the test. The prevalence of infection was 5.2% and this decreased significantly with age. There was no significant difference in prevalence between centres. Ninety-one percent of positive women intended to inform at least one partner about their infection status. Pretest counselling took about 10 minutes per woman while management (excluding full screening for sexually transmitted infections) of positive women took an additional 10 minutes. Screening in the FPC is acceptable to many women and to some of their male partners. Training and resources for administration and staffing are required if opportunistic screening is to be implemented.

# Key message points

- Opportunistic testing for genital Chlamydia trachomatis infection is acceptable to the majority of women who attend family planning clinics.
- A small minority of women remains reluctant to be tested: this
  issue needs to be addressed.
- Additional resources are required to implement the full range of sources for opportunistic testing.
- Women who have the infection find it hard to discuss this with their male partners.
- 'Unisex' clinics where men as well as women can discuss sexual health matters should be promoted.

#### Introduction

The advent of nucleic acid amplification (NAA) tests for genital *Chlamydia trachomatis* infection, more sensitive than tests previously used and which can be used on urine samples, allows diagnosis of this often-asymptomatic infection. Opportunistic testing of women has been recommended to reduce the burden of long-term morbidity.<sup>1,2</sup>

This study aimed to determine the prevalence of genital *C. trachomatis* infection in women attending urban family planning clinics (FPCs) in Scotland and the implications of opportunistically offering urine testing and follow-up in the FPC to women attending, and to their male partners if acceptable.

## Method

A random sample of women attending FPCs in Glasgow, Edinburgh and Aberdeen between November 2000 and June 2001 were invited by research nurses to consent to take part in the study. At each centre the recruitment target was an unbiased sample of 250 women aged <20, 20–24, 25–29 and ≥29 years. Sexual behaviour information was provided anonymously, a first void specimen of urine for testing was obtained and an anonymous study proforma completed. Women received their usual clinical care in the clinic. If an endocervical swab was taken in the course of routine clinical care (screening or symptomatology) a first-void urine was not obtained.

Laboratory testing was performed using the LCx probe system (Abbot Diagnostics Maidenhead, UK) (Glasgow and Edinburgh FPCs) and the Probetec *Chlamydia trachomatis* amplified DNA assay (Becton Dickinson, Oxford, UK) (Aberdeen FPC) according to the manufacturers' instructions.

As is normal clinical practice, women were informed of the test result. Up to three reminders were sent to those with positive tests to tell them of the need for further advice, treatment and partner follow-up, the latter being available at the FPC if requested. Women with positive tests and attending partners were counselled and treated with azithromycin 1 g stat. Partners were also offered a urine test. The women provided information about treatment of other partners elsewhere.

All variables collected were examined as potential risk factors for infection by univariate logistic regression. Those factors found significant were then examined in a multivariate logistic regression. Analyses were performed using the Statistical Products and Software Solutions (SPSS, Chicago, IL, USA).

Ethical committees' approval was obtained for the study.

#### Results

Ninety-eight percent (3029/3094) of women accepted the test. Refusal rates were similar and low in all age groups. Reasons given for refusal included: self-perception of low risk because of steady relationship or no current partner, recent/previous chlamydia test, unwilling to give urine specimen at this appointment, and upset because of positive pregnancy test.

**Table 1** Risk factors for genital chlamydia infection: results of multivariate logistic regression analysis

N.T.				p <sup>a</sup>
No	Yes	n	(%)	
988	61	1049	5.8	0.43
957	54	1011	5.3	
925	44	969	4.5	
659	71	730	9.7	< 0.0001
777	58	835	6.9	
718	11	729	1.5	
				0.004
67	4	71	5.6	
6.1	2	67	1.5	
1300	74	1402	0.4	
220	10	220	4.2	0.0
				0.9
344	20	330	3.1	
140	Q	157	5.1	0.56
				0.50
2122	131	2072	5.5	
334	1.4	3/18	4.0	0.29
				0.29
2309	134	2309	5.7	
221	12	2.42	2.5	0.12
				0.13
2311	130	2313	3.4	
2205	110	2404	5.0	0.15
				0.15
383	40	023	0.4	
701	41	922	5.0	0.40
				0.49
1041	00	1101	3.4	
1160	16	1214	3 8	<0.0001
				<0.0001
1//	20	221	12.0	
1/107	63	1560	4.0	0.022
				0.022
551	44	333	0.2	
516	36	552	6.5	
526	38	564	6.7	
2526	120	2654	4.8	0.005
2526	128			
	957 925 659 777 716 718 346 752 67 64 1368 220 1568 1509 522 149 2722 334 2369 331 2377 2285 585 781 452 1041 1168 243 199 1497 331 516 526	957 54 925 44 659 71 777 58 716 19 718 11 346 6 752 32 67 4 64 3 1368 94 220 10 1568 89 1509 82 522 28 149 8 2722 151 334 14 2369 134 331 12 2377 136 2285 119 585 40 781 41 452 19 1041 60 1168 46 243 55 199 28 1497 63 331 22 516 36 526 38	957 54 1011 925 44 969 659 71 730 777 58 835 716 19 735 718 11 729  346 6 352 752 32 784 67 4 71 64 3 67 1368 94 1462  220 10 230 1568 89 1657 1509 82 1591 522 28 550  149 8 157 2722 151 2872  334 14 348 2369 134 2369  331 12 343 2377 136 2513  2285 119 2404 585 40 625  781 41 822 452 19 471 1041 60 1101  1168 46 1214 243 55 298 199 28 227  1497 63 1560 331 22 353 516 36 552 526 38 564	957 54 1011 5.3 925 44 969 4.5 659 71 730 9.7 777 58 835 6.9 716 19 735 2.6 718 11 729 1.5 346 6 352 1.7 752 32 784 4.1 67 4 71 5.6 64 3 67 4.5 1368 94 1462 6.4 220 10 230 4.3 1568 89 1657 5.4 1509 82 1591 5.2 522 28 550 5.1 149 8 157 5.1 2722 151 2872 5.3 334 14 348 4.0 2369 134 2369 5.7 331 12 343 3.5 2377 136 2513 5.4 2285 119 2404 5.0 585 40 625 6.4 781 41 822 5.0 452 19 471 4.0 1041 60 1101 5.4 1168 46 1214 3.8 243 55 298 18.5 199 28 227 12.3 1497 63 1560 4.0 331 22 353 6.2 516 36 552 6.5 526 38 564 6.7

<sup>a</sup>The figures in bold indicate statistical significance.

FPC, family planning clinic; GUM, genitourinary medicine clinic; STD, sexually transmitted disease clinic; STI, sexually transmitted infection.

The prevalence of infection was 5.2% (159/3029) overall and decreased with age (p<0.0001) (Table 1). There was no significant difference in prevalence between centres. Significant differences in prevalence of infection (p<0.05) were also found by marital status, number of partners in last year, reason for attending the FPC, and signs/symptoms of genital infection.

Ninety-one percent (145/159) of positive women returned to the clinic for care. Of these, 91% (132/145) were intending to inform at least one partner of their

infection status; women were less willing to inform previous partners. Only 57% (83/145) of women were screened for sexually transmitted infections (STIs) in the clinic and no woman was found to have an STI.

Eighty 'first-mentioned' partners of the 159 positive women (50%) were reported to have been treated for genital chlamydia infection. A total of 33 partners attended the FPC, 24 accepted a urine test and 14 tested positive.

The research nurses reported that pretest counselling and screening of the women took 10 minutes per woman on average and that counselling and management of a positive woman took 10 minutes. The latter estimate does not include time for STI screening of positive women or partner counselling and treatment.

### Discussion

The very high acceptance rate demonstrates the acceptability of opportunistic testing in the FPC setting. The overall prevalence of 5.2% is comparable with recently published Scottish data based on NNA tests.<sup>3,4</sup>

The reasons given by women for refusing the offer of a test and their unwillingness to inform all partners demonstrated that much work remains to be done to inform women and men about genital chlamydia and to help them act to protect themselves from the infection and its sequelae. There is also strong support for the argument that men should be screened,<sup>5</sup> especially in view of women's reluctance to inform previous partners of their infection and the high proportion of male partners who were tested at the FPC and found to be positive.

FPC staff members already have skills in sexual behaviour counselling and in gynaecology. It is also encouraging that some male partners are willing to be treated in these clinics. The notion of 'unisex' care is an attractive one with the added benefit of shared sexual health responsibility.

Opportunistic screening in the FPC for genital *C. trachomatis* infection in women and their partners can be feasible and effective only if there are additional resources for staff training and for counselling, for treatments, and for screening for and management of STI. The advent of integrated family planning and genitourinary medicine services will facilitate opportunistic testing of females and males within the same health care location.

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