

Barriers to opportunistic chlamydia testing in primary care

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SUMMARY

Background: Opportunistic testing and screening for genital chlamydia infection in sexually active women under the age of 25 years can lead to a reduction in chlamydia infection and its related morbidity.

Aims: To explore the barriers to testing for genital chlamydial infection in primary care.

Design of study: Qualitative study with focus groups.

Setting: Rural and urban general practice in Southwest England.

Methods: Focus groups were held with randomly selected high- and low-testing general practices in Herefordshire, Gloucestershire and Avon. The high- and low-testing practices did not differ in their age/sex make-up, or by deprivation indices. Open questions were asked about the management of genitourinary symptoms and opportunistic testing for chlamydia. Data were collected and analysed concurrently until saturation occurred.

Results: Although staff from high test rate practices were much more aware of the evidence for opportunistic chlamydia testing and screening, none of the practices were happy to discuss chlamydia in a consultation unrelated to sexual health. The greatest barriers to opportunistic chlamydia testing and screening were lack of knowledge of the benefits of testing, when and how to take specimens, lack of time, worries about discussing sexual health, and lack of guidance. Healthcare staff stated that any increased testing should be accompanied by clear, concise primary care trust guidance on when and how to test, including how to obtain informed consent and perform contact tracing. Staff felt that testing could be undertaken at family planning clinics or with cervical smears if patients received information before the consultation. Alternatively, in larger practices specific chlamydia clinics could be held.

Conclusion: The Department of Health needs to be aware of the extreme pressures that primary care staff are under, and the potential barriers to any screening implementation. Efforts to increase chlamydia screening in this setting should be accompanied by clear guidance and education. Any chlamydia clinics or increased testing must have appropriate financial and staff resources. Genitourinary medicine (GUM) clinics, or level three practices with GUM expertise, will need to be increased in parallel with testing in primary care to provide appropriate contact tracing and follow-up.

Keywords: chlamydia infection; Chlamydia trachomatis; diagnostic tests; primary health care; qualitative research; screening.

Introduction

THE chief medical officer of England's expert advisory group on *Chlamydia trachomatis* concluded in 1998 that 'evidence supports opportunistic screening of sexually active women aged under 25 years, especially teenagers'.¹ Active case finding reduces the incidence of pelvic inflammatory disease² and the introduction of chlamydia screening programmes can lead to a reduction in infection, together with its related morbidity and sequelae.^{3,4} The first pilot of opportunistic screening in the United Kingdom (UK) was extremely successful.⁵ Funding for screening within 10 sites in England has been approved, but will be restricted, in the initial roll-out, to family planning and genitourinary medicine (GUM) clinics, as 'logistical issues need to be addressed' within general practice.⁶ Consequently there is some concern that a national screening programme is being introduced to general practices too slowly.⁷ In their 2003 report on fighting infection, the House of Lords Select Committee on Science and Technology stated that 'the public health control of all sexually transmitted infections must continue to be a priority'.⁸ As widespread opportunistic chlamydia testing and/or screening has major implications for primary care, we undertook focus groups with general practice staff to explore the barriers to testing for genital chlamydial infection.

Methods

This exploratory qualitative research study, using focus groups within practices, aimed to obtain information from all members of the primary healthcare team about the barriers to opportunistic testing and screening for chlamydia in primary care.

Definitions

We have used the following definitions in the text:

- Diagnostic testing: testing of patients with genitourinary symptoms that may be caused by chlamydial infection.
- Opportunistic testing: screening asymptomatic patients already attending an appointment at the practice, who are unaware that they could be tested for chlamydia. This could be an appointment related to GUM; for example, a family planning appointment or a cervical smear, or it could be a consultation unrelated to sexual health; for example, at a well women clinic, new patient clinic, or for other medical symptoms.
- Screening: systematic testing of all patients at risk of chlamydia in a practice population.

Participants and recruitment

The focus groups were part of a programme of research to determine reasons for variations in general practitioners'

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HOW THIS FITS IN*What do we know?*

Opportunistic testing for *Chlamydia trachomatis* in sexually active young women reduces the incidence of pelvic inflammatory disease and infertility. A pilot study of opportunistic screening for chlamydial infection in the United Kingdom was extremely successful.

What does this paper add?

The main barriers to testing are a lack of knowledge of the evidence for chlamydia screening, and of when and how to take specimens, lack of time, and worries about discussing sexual health. To be successful, any programme to increase opportunistic testing or screening for chlamydia in primary care needs clear, concise guidance, healthcare education, and adequate financial resources and staffing in primary care and genitourinary medicine.

(GPs') requests for genital chlamydial infection laboratory diagnosis.⁹ We recruited urban and rural general practices served by the Bristol, Gloucester and Hereford microbiology laboratories. Practices in Bristol that were involved in the health technology assessment funded study of different chlamydia testing methods¹⁰ were excluded. These had higher testing rates than any other practices and were considered atypical of most UK practices. Laboratory data and practice population data from April 2000 to March 2001 were used to determine GP requests per 1000 patients for *C. trachomatis* testing. Sampling was lower in the rural setting, therefore practices in each locality were stratified into rural or urban and then ordered by number of chlamydial specimens sent to each laboratory per 1000 practice population. The range of chlamydia testing by all GP practices in the three counties was very wide (range for Bristol = 0.09–32.58, Herefordshire = 2.13–19.86, Gloucestershire = 1.27–23.28 tests per 1000 population per year) (Table 1). Practices in the highest and lowest 10 percentiles were randomised and approached initially by telephone and then by letter in order from these lists. This resulted in four strata (rural practices with high and low rates of testing, and urban practices with high and low rates of testing). Testing for chlamydia ranged from 0.6–4.2 per 1000 practice patient population in practices with low testing rates and 8.1–23.3 per 1000 in practices with high rates of testing (Table 1). Statistical analysis of their patient population data for age and sex did not show a significant difference between high- and low-testing practices (Mann–Whitney U test comparing percentage of 17–24 year age groups $P = 0.57$).

Focus group question development

A group of microbiologists, GPs, epidemiologists, and gynaecological clinicians developed a series of questions about chlamydial sampling. Open-ended questions were asked about the practice management of the diagnosis of chlamydia in men and women in different clinical contexts, and about the perceived barriers to chlamydia testing. Questions were asked in relation to opportunistic testing and screening of asymptomatic patients, particularly women attending as new patients for cervical screening and family planning services, and well women clinics. Questions were asked about how the practices might overcome the barriers to opportunistic testing and screening, and how they could implement a screening programme in their practice. As chlamydia testing with urine specimens was not available in the centres sampled, we asked about the practicalities of testing by different methods.

Focus groups

Twelve of 15 practices that were approached agreed to take part in focus groups. Twelve focus groups were held at the practice premises between April and August 2002: six with high-testing practices and six with low-testing practices. All healthcare staff who may be involved in the management of chlamydia were invited. This included practice managers, GPs, nurses, midwives, and district nurses. At least one nurse participated at every focus group and in the larger practices there were two or three nurses. Each focus group only consisted of staff from a single practice, therefore the focus groups varied in size from two (a single-handed GP and nurse) to eight (four GPs, two nurses, a district nurse, and a midwife). The average duration of focus groups was 75 minutes. Practices were informed of their sampling rate and the purpose of the study at the beginning of the focus group. The focus groups were moderated by a female researcher with extensive qualitative research experience, and observed by a microbiologist, an obstetrics and gynaecology registrar, or another researcher. The focus groups were audiotaped. To increase confidence in the validity of the findings, at the end of each focus group the points raised were summarised by the moderator and verified by the group. The observer made field notes during the focus groups and the moderator did so afterwards. Memos were used to capture pertinent issues after listening to the audiotapes. These data were appended to the transcripts for further analysis.

Ethics

Ethical approval was obtained from the local research ethics committees in each area (Gloucester, Hereford and Bristol).

Table 1. Genital chlamydia testing rate in the focus group practices per 1000 practice population.

	High test rate practices						Low test rate practices					
	Urban			Rural			Urban			Rural		
	A	B	C	D	E	F	G	H	I	J	K	L
Chlamydia specimens submitted per 1000 patient population	20.8	13.6	23.3	9.5	8.1	9.8	1.4	4.2	2.05	0.6	2.4	1.9

All participants gave written informed consent for the focus groups to be audiotaped and transcribed.

Data analysis

We adopted an iterative approach to data analysis, with analysis beginning after the first focus group, to allow emerging themes to be explored in subsequent focus groups. All of the audiotapes were transcribed; the moderator then validated the transcriptions against the original recordings. These transcribed data were analysed using a modified grounded theory approach, utilising the constant comparative method.^{11,12} The transcripts were scrutinised independently. A number of major themes and ideas emerged from the data, which were discussed and confirmed by the research team. An initial coding frame was developed that identified common categories and themes that explored the barriers to testing, and the management strategies of the participants. A high level of consensus was achieved between research team members in interpreting the data. Saturation of data occurred relatively quickly and no new themes emerged after eight focus groups. The last four focus groups served to enrich the data.

Results

Barriers to chlamydia testing in primary care

Healthcare staff reported that the greatest barriers to opportunistic testing and screening within primary care were lack of evidence of the benefits of chlamydia testing, lack of knowledge of when and how to take specimens, and lack of time. We found that none of the practices were happy to discuss chlamydia in a consultation unrelated to sexual health. Even in the context of a consultation for a cervical smear, many nurses and GPs felt they could not raise the issue of chlamydia testing.

Evidence for the benefits of chlamydia testing. The GPs wanted evidence that any opportunistic testing or screening programme for chlamydia would benefit their practice populations:

'I would want to see clear evidence that it is justified, bearing in mind the overall cost restraints to the NHS [National Health Service], because from what I have read I would have trouble accepting that.' (Doctor, low-testing urban practice H.)

The GPs from low-testing practices displayed a more negative attitude to opportunistic testing and screening than those from high-testing practices, who already believed that opportunistic testing for chlamydia was highly effective:

'I suspect it's [chlamydia screening] probably more effective than some of the screening things that we do at the moment.' (Doctor, high-testing urban practice B.)

Even with clear-cut evidence presented to them on the benefits of opportunistic testing and screening, GPs in practices with low test rates were not convinced that it was relevant to their practice population. There was a percep-

tion by low-testing GPs that their patients were not at risk of chlamydial infection and that they had few patients in the age group at risk:

'I am a bit sceptical of research which I always feel has come out of inner-city family planning clinics where there is a very high incidence of sexual disease. I wonder how much [research] has been based in a similar population of a rural area.' (Doctor, low-testing rural practice K.)

However, practice population data supplied by the practices indicated that these practices had a similar age/sex profile.

Time. GPs reported there was little time available for a longer consultation to discuss sexual health issues, gain consent, perform the test procedure, and ask about contact tracing:

'Well this time pressure makes it very difficult if someone comes in for just a normal sort of 10-minute appointment slot and you want their smear — and then counselling for chlamydia ... and then they say how does it affect me and how could I get it, and you know it's 25 minutes down the line so it just makes it very difficult to put all the perfection into practice.' (Doctor, low-testing rural practice K.)

GPs feel that opportunistic testing or screening within routine surgery time just isn't practicable. Most GPs in both high- and low-testing practices felt a chaperone was needed for them to undertake vaginal examinations and take swabs. A minority of GPs also stated they would need a chaperone to discuss sexual health issues with a patient:

'I think more nursing time would be useful ... if somebody came in with something that was a bit more nebulous and not obviously clear cut I think I could be criticised unless I got a chaperone each time and that takes time.' (Doctor, high-testing rural practice D.)

They reported that even if specific funding was available this might not be sufficient to compensate for the staffing pressures generated:

'It's time, I mean we don't have [the staff] you can't get locums, even locum nurses anymore are harder [to find], there just aren't the people out there and it takes a long time, not only [to test] but you have to talk about what you are doing.' (Doctor, high-testing urban practice A.)

Appropriateness of discussing chlamydia in consultations unrelated to sexual health. All healthcare staff in high- and low-testing practices were very concerned about the appropriateness of opportunistic testing or screening, particularly in a consultation unrelated to sexual health, as they thought that it would upset patients:

'I don't think they will go out of here thinking we are off our rocker — they will think we are perverts!' (Doctor, low-testing urban practice H.)

'My suspicion is that there's a whole raft of appropriate swabs and tests that we are not doing and the equation is fairly complicated. It's one of time, it's one of resource, it's one of appropriateness in terms of clinical presentation. I mean, if someone comes in with depression I don't think that chlamydia testing is going to be top of the pops at that session. We are under crushing pressure in terms of volume.' (Doctor, high-testing rural practice F.)

When asked whether practices would consider discussing chlamydia in new patients' health checks, GPs reported that they were reluctant to discuss sexual health issues at this consultation, as they thought that it would hinder development of the doctor-patient relationship. GPs and practice nurses in high- and low-testing practices said that patients would not want information about sexually transmitted infections (STIs) recorded in their notes because of its implications for future health reports that the GP may be requested to supply:

'Some of them don't want that sort of information on their records because they might have problems and end up having hepatitis or HIV tests done at the same time. The concern is, they may [be] worried about the life insurance.' (Doctor, high-testing urban practice A.)

Concerns about discussing chlamydia at cervical smear examination. Some healthcare staff, especially GPs in low-testing practices, were wary about discussing chlamydia testing when women attended for a cervical smear:

'I think we are just lucky to get some people to come for their smears without going further down the road.' (Doctor, low-testing rural practice K.)

All practices revealed a lack of confidence about the information they should be giving to the patient, including the possible implications associated with a positive result. This was especially evident in low-testing rural practices.

'If somebody has come for a smear and you take a chlamydial swab without explaining to them that that could lead to contact tracing for sexual contacts etc, I think you are on dodgy ground — I think you would have to get proper consent.' (Doctor, low-testing rural practice L.)

Need for contact tracing. Most high- and low-testing practices reported that they did not do any contact tracing, except to advise the patient's partner to attend for treatment. GPs raised the issue that contacts could often be registered at a different general practice, making prescribing treatment more difficult. One GP said that he issued a single prescription to cover the treatment of the patient and their sexual contact. All practices sampled declared there was a 3- to 4-week waiting time for an appointment at the GUM clinic. This was a major concern as GPs thought this delay would necessitate them having to be responsible for all of the treatment and contact tracing generated by increased opportunistic testing or screening:

'The patients say that "I can't get an appointment [at the GUM clinic] for 3 weeks". You can't expect someone to sit around with their whatever for weeks. So it is force of circumstances you have to get involved sometimes and that's less than ideal.' (Doctor, high-testing rural practice F.)

The GPs in high- and low-testing practices were very concerned about the appropriateness of primary care staff discussing in detail the patient's sexual contacts over the previous 6 months, as currently recommended by GUM clinics:

'Well I just think from a contact tracing point of view you may think they are in a stable relationship and they may not be wanting to tell you about any of the sexual encounters they may have had and they may be more willing to talk to a third party and I would guess that the GUM clinic have ways of approaching these things.' (Doctor, high-testing urban practice A.)

Attitudes to Department of Health screening programme proposals. Healthcare staff were asked for their opinions about the Department of Health proposal to opportunistically test and screen asymptomatic women. The GPs responded that they didn't believe the Department of Health had 'any idea of what really goes on in general practice' or the 'extreme pressures GPs were under':

'Now you know how stretched we are at the moment. You put an extra 1 minute onto anything and it's the straw that breaks the camel's back.' (Doctor, low-testing rural practice L.)

Ways to overcome the barriers

Despite raising many barriers to opportunistic testing and screening in their current clinical practice, the healthcare staff had many suggestions on how opportunistic testing could be improved and how screening could be introduced.

Test at smear consultation. Practice staff felt that if chlamydia testing became routine at the cervical smear appointment then it would be more acceptable to patients and staff to discuss sexual health issues:

'If it was appropriate to do it as a screening test then it would be better if it was offered to all and then those who didn't feel that they needed it could decline. But with that goes a certain amount of responsibility to give the patient all the information they need to make the decision and that's time.' (Doctor, high-testing rural practice D.)

GPs suggested that, provided patients were sent information leaflets with their smear consultation appointment, opportunistic testing could be increased:

'If when they were sent their little letter from the high-ups who say go for your smear, they were sent a leaflet about chlamydia, saying if you felt that this was appropriate to you mention it when you have your smear, then that's

already covered a lot of the ground.' (Doctor, low-testing rural practice K.)

Specific clinic for chlamydia tests. Most healthcare staff felt that a properly resourced drop-in clinic, which included chlamydia testing, was the most appropriate way forward to introduce screening:

'We provide contraceptive services, but an actual clinic for young people done at a suitable time, you know a drop-in clinic would be great; give us some money, give us a nurse. That would be great.' (Doctor, low-testing urban practice G.)

Alternatively, GPs thought that it was more practical to opportunistically test patients attending family planning clinics, as discussing sexual health issues in other settings would be unacceptable to patients. However, although some practices did currently discuss risks of sexually transmitted infections, no practices specifically discussed chlamydia during a consultation for family planning services unless the patients were symptomatic or brought the matter to their attention:

'I don't think I hardly ever do screening for chlamydia ... it just doesn't occur to me. I mean if there are symptoms I would, but I am sure I should do more screening.' (Nurse, low-testing rural practice K.)

Staff from one of the practices pointed out that they had a template on the computer to ensure that they covered all appropriate areas, including sexual health issues, but chlamydia per se was not included. High test rate practices stated that they would be able to improve opportunistic testing and screening through awareness campaigns:

'I am quite sure if we worked and ran an awareness campaign we could raise the demand.' (Doctor, high-testing rural practice F.)

However, several of the smaller practices did not have a large enough patient list to allow for a dedicated family planning clinic and this would make setting up an opportunistic testing and screening programme more difficult.

Guidance and education for healthcare staff and patients. All senior practice staff stated that if any testing of asymptomatic patients was introduced into primary care they would want clear precise guidance, including background information, and when and how to test for genital chlamydia. There was general agreement that practices are inundated with guidance, most of which was too long and unwieldy, therefore 'it went in the bin' or was 'filed away in a cabinet':

'If they can't summarise and condense it into one side of A4 or less I am never going to read it — so don't bother because it's just ridiculous.' (Doctor, low-testing rural practice K.)

Low-testing practices did not have any family planning trained nurses and now recognise this as a future need:

'Getting the correct training for nurses in terms of family planning.' (Doctor, high-testing rural practice F.)

Even high-testing practices were mindful of the resource implications of any opportunistic testing or screening policy, pointing out that any increased testing would need to be primary care trust (PCT) policy:

'Surely there's an optimum amount of testing to get a certain number of positive results ... we should be looking at a clear-cut policy of who we should be testing — rather than risking upsetting patients that could happen if you did things in a more general and opportunistic way.' (Doctor, high-testing rural practice D.)

'If we were looking at a screening policy it would have to be PCT policy. There would have to be defined budgets available and there would be a knock-on effect in terms of timing. I would have to know exactly what the resource implications were.' (Doctor, high-testing rural practice F.)

Non-invasive specimens. Urine sampling for chlamydia was not routinely available in the three localities that we studied, therefore the diagnostic sample required for women was an endocervical swab. GPs felt that non-invasive testing would be much more acceptable and easier to implement in any opportunistic testing or screening programme:

'I think the whole procedure of taking swabs is a bit of a turn-off really.' (Doctor, high-testing rural practice D.)

'I mean it would be much easier to give someone a pot and instruction leaflet perhaps to take their first-pass urine and then they can send it off themselves.' (Doctor, high-testing urban practice A.)

Discussion

This study indicates that there are significant barriers to introducing opportunistic testing within general practice (Table 2). However, none of these are insurmountable with the appropriate financial and human resources, together with education and training. The main challenge to expanding opportunistic testing within primary care will be to overcome the extreme work pressure that practice staff currently feel under, and by convincing them, through education and appropriate resource provision, that diagnosing chlamydia within this setting has major health benefits. An educational programme, especially targeted at low-testing practices, will be needed to improve the knowledge about which age groups are at risk of infection, and the benefits of early diagnosis. Prejudices about sexual health promotion and the barriers to communication, identified by practice staff, will need to be challenged during any educational sessions. Staff will need to acquire the necessary skills to allow them to raise sexual health issues in consultations unrelated to sexual health. Such techniques have been discussed in the Royal College of General Practitioners' *Handbook of sexual health in primary care*.¹³

Staff from all practices felt that fitting opportunistic testing into normal clinics was not feasible in the current climate and suggested that specific clinics should be targeted or

Table 2. Overcoming barriers to chlamydia testing in primary care.

Barriers to opportunistic testing	Ways of overcoming barriers to testing
Lack of knowledge of the evidence	Education of staff and patients Clear, concise PCT guidance on when and how to test
Time	Non-invasive specimens
Concerns about discussing sexual health	Develop skills to discuss sexual health Specific clinics for chlamydia tests Test at cervical smear consultation Send patient leaflets pre-appointment
Need for contact tracing	Clear lines of responsibility for contact tracing
Staffing	Increase in trained staff in primary care and GUM clinics
Finances	Properly resourced programme

PCT = primary care trust; GUM = genitourinary medicine.

established with appropriate time and human resources. An inner-city contraceptive service provider has been successfully used to introduce opportunistic testing to young people in London.¹⁴ The disadvantage of targeting opportunistic testing to cervical smear appointments, as our participants suggested, is that women aged under 20 years, who are most at risk, will be missed. Clear, concise PCT guidance on exactly when and how to test would clarify any PCT testing policy. If this guidance addresses how staff should approach patients, gain consent, and proceed with contact tracing, this would address most of the barriers raised by focus group participants.

Practices were not happy to take on the additional pressure generated by contact tracing; therefore, this will need to be taken on by GUM clinics or level two GP practices with an interest in genitourinary medicine. Lines of responsibility for contact tracing will need to be clarified, and levels of staffing and numbers of clinics in GUM will need to increase in parallel with any increased testing in primary care. Closer relationships (which were reported to be lacking in the study) between GUM and primary care will need to be enhanced. This may be very challenging as both GUM and primary care resources are now stretched to the limit.

None of the practices in this study (undertaken in 2002) had urine testing available, and there was unanimous support for the ease of urine samples. The Wirral and Portsmouth primary care pilot study on chlamydia screening in women found high acceptability for the programme among women⁵ and healthcare workers. The Wirral pilot indicated that improvement in public awareness and greater education on STIs was necessary to help to alleviate the perceived stigma and distress associated with positive results. In line with this, the GPs and nurses in this study thought that the stigma attached to a chlamydia test would be reduced if it became routine, like having a smear. Increased publicity in the pilot study aided normalisation of the topic of infection in the target group.¹⁵ In the Wirral and Portsmouth study, health professionals were financially remunerated and this may have influenced uptake of testing. GPs in our study also indicated strongly their unwillingness to take on an opportunistic testing or screening programme that is not properly resourced.

Santer *et al* introduced screening in eight practices in Edinburgh.¹⁶ They found that only 36% of eligible women

were offered screening. In line with our findings, non-recruitment occurred mainly because the test had not been offered owing to lack of staff time. The study suggested that effective screening for teenage women is unlikely to be any higher than 23% unless a structured incentive system is introduced, together with a campaign to raise public and professional awareness.

Strengths and weaknesses of this study

The findings from this qualitative study are transferable to other practices within the UK, which are all under similar time pressures and demands to take on the extra workload. We randomly sampled practices with high and low chlamydia test rates from urban and rural areas, so that we obtained the views of practice staff with very different testing strategies in different areas. We were therefore able to obtain the opinions from the least and most enthusiastic testing practices. This gives great insights into the obstacles faced in introducing any screening programme.

In Bristol we excluded practices actively involved in the chlamydia health technology assessment research programme. Although we excluded these high-testing practices, this did not bias the sampling because there were still other high test rate practices in Bristol, and those selected had similar testing rates to high-testing practices in Gloucester and Hereford. If we had included the research practices actively involved in chlamydia testing we might have been able to determine how the barriers identified in this study could be overcome. We plan to address this area with further focus groups.

During the focus group, the facilitator was careful not to influence the opinions of participants. The facilitator had no local involvement in GUM or microbiology, which allowed her to approach the work without any preconceptions. The observers sat back from focus groups and only participated after data collection was complete to clarify points of fact and to present guidance on the diagnosis of chlamydia.¹⁷

Implications of this research for healthcare providers

Increasing opportunistic testing and implementing a screening programme in general practice will be challenging. This study underscores the need for clear direction and leadership

on chlamydia testing in primary care, and a resourced implementation programme with parallel healthcare training and patient awareness programmes. This is an essential component of the public health control of chlamydia.

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