Staff views of an opportunistic chlamydia testing pilot in a primary health organisation

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ABSTRACT

INTRODUCTION: The Auckland chlamydia pilot was one of three pilots funded by the Ministry of Health to trial implementation of the 2008 Chlamydia Management Guidelines prior to national roll-out.

AIM: To assess what elements in the testing programme pilot worked best for staff and to determine how an opportunistic testing programme could be better configured to meet staff needs and preferences.

METHODS: A staff survey listed key chlamydia testing tasks in chronological order, and service interventions supporting these tasks. Staff were asked to rate each task on its difficulty prior to the pilot, and then on the difference the pilot had made to each task. They were also asked to rate service interventions on their usefulness during the pilot implementation.

RESULTS: The survey had a response rate of 94%. The testing tasks posing the greatest difficulties to staff were those involving patient interactions (41%) and management of follow-up (52%). About 70% of staff felt tasks were improved by the pilot. Staff considered the three most useful service interventions to be a chlamydia-specific template created for the practice management system, provision of printed patient resources, and regular team discussions with other staff.

DISCUSSION: A significant proportion of staff reported difficulties with routine tasks required for opportunistic testing for chlamydia, highlighting the need to involve staff during programme design. Practice nurse–led approaches to future opportunistic testing programmes should be considered as nurses had a more positive response to the pilot and nurse-led approaches have been shown to be successful overseas.

KEYWORDS: Chlamydia trachomatis; general practitioners; health care surveys; medical receptionist; nurses; pilot projects; primary health care; staff development

Introduction

Chlamydia is the most commonly notified sexually transmitted infection in New Zealand.[1] Laboratory surveillance data indicate that over 70% of chlamydia cases are diagnosed in those aged under 25 years, and rates of diagnosis are higher in people of Maori and Pacific ethnicity.[1] The Auckland chlamydia pilot was one of three pilots funded by the Ministry of Health to trial implementation of the 2008 Chlamydia Management Guidelines prior to national roll-out.[2] The impact of the pilot on laboratory testing volumes has already been reported, and the high prevalence of chlamydia reinforced the importance of implementing good processes for the testing and management of chlamydia.[3]

Recent evaluations of opportunistic testing programmes for chlamydia in general practice have noted the value of addressing the needs of non-clinical staff, as well as those of clinical staff and patients. For example, in a British pilot study, reception staff identified females in the target age-group and handed out leaflets on chlamydia.[4] While this helped prepare patients, reception

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staff were frequently asked questions about chlamydia they were not qualified to answer. Clinical staff may often need education on sexual health knowledge and testing-related skills (including who, when and how to test), and on what information to provide for patients.[5] Researchers note that staff, and non-clinical staff in particular, may need extra support and incentives to ensure consistent implementation.[4] Many evaluations point to significant difficulties with non-clinical, service-based tasks, such as patient follow-up and partner notification.

Over the last decade, work in the UK by the NHS Institute for Innovation has highlighted the crucial role of non-clinical/service elements, such as staff, processes, materials, training, and management. One key finding is that programme improvements and innovations are more successful when configured to meet the needs of key staff stakeholders spanning clinical, administrative and managerial staff across the whole service pathway, from first point of contact through to follow-up. This 'user-centred' focus sits within a broader discipline known as 'service design'.[6]

This paper outlines a user-centred approach to designing and evaluating an opportunistic testing pilot project from the staff perspective. The aim of this evaluation was to assess what elements in the testing programme pilot worked best for staff, and how it might be improved. This paper reports staff assessments of the pilot and suggests ways to configure opportunistic testing programmes so as to encourage more effective implementation.

Methods

Pilot set-up

A South Auckland setting was chosen for the pilot because of the population demographics—a region with a relatively high proportion of young people of Maori and Pacific ethnicity. The pilot implementation was governed by an advisory group consisting of staff from the Auckland Sexual Health Service (ASHS), the participating primary health organisation (Total Healthcare Otara, THO) and a project manager.

The pilot implementation plan was approved by the Northern Regional Ethics Committee (NTX/10/EXP/169).

At THO, all patients report to a receptionist and are then triaged by a nurse or clinical assistant prior to a general practitioner (GP) consultation. The pilot was introduced to patients by a waiting room poster about chlamydia and the triage areas had a simple sign stating: 'If you are under 25 years expect to be asked sexual health questions'. A chlamydia test was then offered to all sexually active under-25-year-olds during triage.

A continuing medical education (CME) session informed clinical staff about the main recommendations of the chlamydia guidelines, including who should be offered testing, how to manage partner notification, and how to follow up diagnosed cases. The pilot was also regularly promoted to staff by the THO 'two-minute huddle technique', which sees the incoming clinical team at each practice location meet at the start of each shift to discuss any emergent issues and to identify priorities.

The pilot implementation commenced on 6 December 2010 and finished on 31 March 2011.

Pilot evaluation

The method for assessing how the pilot implementation affected staff was developed with THO. Key constraints were staff availability, patient availability and operational diversity across the 10 separate primary care practices within THO.

As noted in the introduction, a first step was to define staff stakeholders within the pilot. There was a total of 81 staff involved across the 10 practices: 12 receptionists, 6 clinical assistants, 24 nurses, 35 doctors, 10 practice managers (who were also doctors and were counted as such), and 4 operations managers. Patient management began with initial contact by receptionists, followed by triage by clinical assistants and nursing staff, and finally consultation with a GP if required. Performance was tracked by practice and operations managers for potential improvements.

The second step was to identify evaluation criteria and construct measures for different staff groups, and for both clinical and service behaviours along the service pathway.

Key behaviours and tasks were listed for each role at each stage of the service pathway, with an emphasis on tasks that were crucial, or likely to cause difficulty. A second list of service elements introduced to support implementation of the pilot was also developed (see the Appendix published in the web version of this paper). The combined list was used in a number of ways throughout the pilot. Firstly, the list was used to prompt incident reporting during an initial pilot set-up phase. Twenty 'teething problems' were identified and addressed in this way. For example, the practice management system (Medtech) was customised with a specific chlamydia template to better manage patient records. Secondly, the list was used to ensure key service behaviours were in place for each step. One result was the development of basic 'scripts' illustrating how staff might initiate discussion about chlamydia testing or partner notification. Another was the provision of a cell phone number for a specialist ASHS registrar to encourage staff to seek advice when appropriate.

A third use of the list was to develop a staff survey. The survey format developed as a result was a single, two-sided sheet in simple language, making it fast and easy for staff to complete. The survey was used as the most time-effective means of gaining staff feedback. Tasks were placed in chronological order, and staff then rated relevant tasks. Four-point semantic scales were used to assess whether a task was 'never', 'rarely', 'sometimes' or 'always' difficult, and whether the pilot made the task 'much worse', 'worse', 'better', or 'much better' to carry out.

Finally, the list was used as a template for reporting concerns and opportunities. A four-point semantic scale assessed whether an element of the pilot project had 'no impact', 'a small impact', 'a big impact' or 'was vital' to the pilot. As the study sample was small, a test of effect size, with a test result of less than -0.5 or more than 0.5 was used to assess inter-role differences.[7]

WHAT GAP THIS FILLS

What we already know: Recent evaluations of opportunistic testing programmes for chlamydia highlight the importance of addressing the needs of staff. Knowledge of sexual health and related clinical skills can be assumed when implementing such programmes.

What this study adds: This study shows that user-centred design of an opportunistic testing programme can improve staff views and performance by focusing attention on the service pathway, on tasks relative to roles and caseloads, and on service interventions that can address staff needs. This study confirms the potential benefits of designing opportunistic testing programmes in primary care that are led by practice nurses.

The survey was sent to all 81 staff on completion of the four-month pilot. The completed questionnaires were returned by 31 March 2011 for analysis. The survey results are summarised in the following section.

Results

Almost all staff responded to the survey (n=76), with the exception of one clinical assistant and four doctors, giving a response rate of 94%.

Difficulty of tasks prior to pilot

Table 1 summarises staff views of the tasks required for chlamydia testing and management prior to the pilot. Overall about 31% of staff reported difficulty with tasks, and key areas were communicating and interacting with patients in general, and follow-up in particular.

A number of specific tasks caused difficulty, including keeping patient confidentiality, communicating with patients effectively, gaining patient agreement to comply with care and treatment, being able to complete tests within the allocated appointment time, re-contacting patients, and discussion of partner notification.

Of note, the percentage of staff reporting difficult tasks increased from receptionists (11%) through to doctors (39%). Also of note was that a lower percentage of nurses and clinical assistants reported difficulties with patient interaction and follow-up compared to doctors. These results sug-

Table 1. Pre-pilot task execution reported by staff as 'sometimes' or 'always' difficult

Chlamydia testing and management task type	All staff (N=81) No. (%)*	Receptionist (n=12) No. (%)*	Clinical assistant (n=6) No. (%)*	Nurse (n=24) No. (%)*	Doctor (n=35) No. (%)*	Operations manager (n=4) No. (%)*
General patient interaction	33 (41)	2 (16)	2 (33)	10 (42)	19 (54)	2 (50)
Assessment	20 (25)	1 (8)	1 (17)	7 (29)	10 (28)	1 (25)
Diagnosis	18 (22)	1 (8)	1 (17)	7 (29)	10 (28)	1 (25)
Treatment	13 (16)	1 (8)	1 (17)	5 (21)	6 (35)	1 (25)
Follow-up	42 (52)	2 (16)	2 (33)	14 (58)†	24 (69)	1 (25)
Calculations						
Average percentage difficulties	31%	11%	23%	27%	39%	30%
Average number of difficulties per staff member	8	3	5	9	10	6
Percentage of staff with difficulties above average number	41%	33%	40%	35%	62%	25%

* Percentages summarise response to multiple items within each phase of the testing pathway and not all staff answered each item.

† Denotes effect size of nurses relative to doctors of less than -0.5 or greater than 0.5.

gest patterns of difficulty by stage in the service journey, by task, and by role.

Tasks improved by the pilot

Table 2 summarises staff views of the differences made to these tasks by the pilot. About 70% of staff reported that the pilot improved their performance on tasks, and this was relatively consistent across all stages of the service journey. The highest result was for treatment (75%) and among clinical assistants (100%) and nurses (92%), while the lowest was for diagnosis (60%) and among receptionists (50%) and operations managers (25%).

Tasks that were most improved were those relating to communicating with patients, to patient agreement and compliance, treatment-stage tasks, such as talking about sexually transmitted infec-

Table 2. Tasks reported on staff survey as made 'better' or 'much better' by pilot project

	All staff (N=81) No. (%)*	Receptionist (n=12) No. (%)*	Clinical assistant (n=6) No. (%)*	Nurse (n=24) No. (%)*	Doctor (n=35) No. (%)*	Operations manager (n=4) No. (%)*
Patient interaction	59 (73)	5 (42)	6 (100)	22 (92%)	24 (68%)	2 (50%)
Assessment	57 (71)	5 (42)	6 (100)	21 (88%)†	24 (68%)	1 (25%)
Diagnosis	49 (60)	6 (50)	5 (83)	16 (67%)†	20 (57%)	1 (25%)
Treatment	61 (75)	5 (42)	6 (100)	22 (92%)†	26 (74%)	3 (75%)
Follow-up	53 (66)	7 (58)	4 (67%)	15 (62%)†	23 (66%)	3 (75%)
Calculations						
Average percentage improvement	70%	47%	90%	80%	67%	50%
Average number of improvements per staff member	20	13	27	24	16	15
Percentage of staff with improvements above average number	58%	42%	80%	52%	52%	50%

* Percentages summarise response to multiple items within each phase of the testing pathway and not all staff answered each item.

† Denotes effect size of nurses relative to doctors of less than -0.5 or greater than 0.5.

tions (STIs) and safe sex, supplying condoms and medication, and follow-up stage tasks, such as making arrangements for getting results and organising follow-up.

Note these suggest improvements on tasks affording the greater difficulties prior to the pilot, such as patient interaction and follow-up.

Influence of pilot support services

Table 3 shows staff views of the difference made by pilot support services, such as new procedures, tools, training and other resources. The table indicates about 57% of staff felt the specific service support had a positive impact.

The three most useful types of support were:

- customisation of the practice management software (Medtech) to support individual staff member's testing knowledge and behaviours;
- patient-oriented promotions, such as posters and pamphlets; and
- fostering a culture of shared learning (such as by talking with other staff about difficulties and learnings, team huddles prior to clinics, and regular reminders).

The three most common staff suggestions for improving opportunistic chlamydia testing were: having better privacy at reception and triage areas, making chlamydia testing a key performance indicator for the PHO, and provision of resources, such as a poster, information leaflets and checklists. There were also suggestions to expand screening to other settings, such as schools, universities and workplaces, as well as having a screening service run by nurses and more time for screening consistently.

Discussion

The high response rate to the survey was a strength of this study and gives confidence that the results are a valid and reliable indicator of staff experiences of the pilot. However, a weakness was that staff were asked to judge their

Table 3. Solutions identified by staff as 'big' or 'vital' to the success of the pilot project

Solution	All staff (N=81) No. (%)	Receptionist (n=12) No. (%)	Clinical assistant (n=6) No. (%)	Nurse (n=24) No. (%)	Doctor (n=35) No. (%)	Operations manager (n=4) No. (%)
Medtech templates	65 (80)	8 (67)	6 (100)	24 (100)	26 (74)	4 (100)
Ongoing reminders	58 (71)	8 (67)	6 (100)	20 (83)	21 (61)	3 (75)
Posters, cards and printed information for patients	56 (70)	7 (58)	6 (100)	19 (79)	23 (65)	3 (75)
Guides for what to say/do	52 (64)	6 (50)	4 (66)	18 (75)	23 (65)	3 (75)
Learning tips and skills from other staff	49 (61)	7 (58)	6 (100)	17 (71)	17 (48)	3 (75)
Team huddles	47 (58)	6 (50)	6 (100)	15 (62)	19 (54)	2 (50)
CME session prior to pilot	45 (55)	5 (42)	5 (83)	9 (38)	23 (65)	4 (100)
Leadership/internal champion	36 (45)	3 (25)	5 (83)	11 (46)	17 (48)	1 (25)
Incident reports and fixes	34 (42)	3 (25)	5 (83)	9 (38)	15 (42)	3 (75)
Sexual health specialist registrar number to call	19 (24)	3 (25)	5 (83)	4 (17)	7 (20)	1 (25)
Calculations						
Average percentage noting an impact	57%	47%	88%	60%	54%	68%
Average number of high-impact solutions per staff member	6	6	9	6	5	7
Percentage of staff reporting improvements above average number	53%	50%	60%	43%	52%	50%

difficulty with tasks prior to the pilot implementation retrospectively, so there may have been recall bias. A before-and-after evaluation method would have been more robust, but unfortunately project time constraints meant this was not feasible. Note that self-reporting was considered appropriate as a means of evaluation, as the focus of the evaluation was to assess changes in staff experiences of clinical and service tasks as a result of the pilot.

The evaluation's results emphasised five areas of particular note for future programmes.

Firstly, one area for further attention is the difficulty of tasks relative to roles along the service pathway for opportunistic testing programmes. This evaluation noted a significant proportion of staff have difficulties with commonplace tasks required by opportunistic testing pilots. These are clinical difficulties (deciding on treatment, 20%), skills-based difficulties (how to word the offer to test, 28%), contextual difficulties (preserving confidentiality, 46%), and operational difficulties (completing tasks within the appointment time, 32%). Other studies tend to highlight only the importance of patient interactions during time-pressured sexual health consultations.[4,5,8]

Overall, clinical assistants and nursing staff appeared to experience both tasks and the pilot differently from doctors. One factor may be that the former deal with the higher volumes of easier cases, while the latter deal with the smaller volume of more difficult ones. Perkins et al.[4] also found that practice nurses had a more positive view of opportunistic chlamydia screening. A previous chlamydia opportunistic testing programme in Wellington found that practice nurses were more successful at increasing testing rates than doctors and that use of nurses had a more sustained effect on testing rates.[9] These results suggest that incorporating opportunistic chlamydia testing into routine practice is a particular challenge to doctors. Future programmes might give more specific attention to the broader needs of different roles, and to the design of nurse-led testing programmes. These various issues highlight the need to design programmes that service the full range of staff, and of staff tasks, along the service pathway.

Secondly, customising practice management software clearly brings significant benefits along the whole service pathway. This pilot was very fortunate in that THO staff had the appropriate information technology (IT) expertise. In other settings, it is very likely that extra IT support would be required to develop chlamydia-specific templates for implementation. Further refinement of process and software could better assist staff at the earliest stages (reception) and at the last (follow-up).

Thirdly, it appears crucial to provide a mix of service supports for staff. These include patient communications materials (posters and brochures) to help staff introduce patients to testing, behavioural tools (reminders, scripts and guides), group

Figure 1. Optimising opportunistic screening for chlamydia in primary care

1. Attention to the service pathway

Put time into designing the service pathway and supporting the tasks required of staff. Opportunistic testing/screening programmes need to be easy for primary care practices to introduce and maintain. In parallel, it is important to put time into designing pilots and evaluations that can more accurately assess the value of these interventions. For example, the methodology for this study would have been improved by doing an evaluation both pre- and post-implementation.

2. Training and support

Train and resource staff in communication and interpersonal skills specific to sexual health screening. Support these skills through patient communication materials (brochures, posters) and through staff behavioural reminders, guides and training updates.

3. Consider both service and clinical elements

Pay specific attention to staff tasks, testing processes and management systems for both service and clinical elements of opportunistic testing programmes. In particular, focus on the systems and service elements required for effective patient follow-up, partner notification and re-testing.

4. Role for nurse-led testing programmes

Consider prioritising nurse-led testing programmes as, in keeping with the results of other studies, this pilot suggests the role of nursing staff is better suited to testing larger numbers of asymptomatic patients. More attention to the design of opportunistic testing programmes that better utilise practice nurses could enhance the success of this approach.

learning skills (lunchroom conversations, team huddles), and formal CME training sessions. Other studies of opportunistic chlamydia screening in primary care have also suggested that additional supports, such as financial incentives, performance targets and feedback, and specific behavioural training on interacting with patients about sexual health issues may help to improve performance.[4,5,8]

Fourthly, in spite of attempts to support follow-up and re-testing tasks, this pilot encountered similar difficulties to those noted in other studies.[5,8,10,11] Some of the problems experienced with follow-up in this evaluation may be due to staff misconceptions about partner notification processes. Despite a CME session, many staff erroneously thought they needed to independently verify whether sexual contacts had been treated before partner notification was considered complete. Management of partner notification has been shown in previous studies to be an area of difficulty for primary care.[12,13] A strong emphasis on follow-up, partner notification, and re-testing tasks is recommended for future programmes.

Figure 1 summarises some suggestions for future opportunistic screening projects for chlamydia in primary care on the basis of this study.

Conclusion

This study has much in common with other evaluations of opportunistic testing programmes for chlamydia in primary care and suggests that a staff-centred approach to the design of an opportunistic testing programme has positive effects on staff views and performance. This study also offers useful insights for the development of future opportunistic screening projects for chlamydia in primary care.

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COMPETING INTERESTS
None declared.

Appendix 1: Tasks for opportunistic chlamydia testing

Patient interaction	1. Keeping patient information confidential, e.g. if parent present
	2. Patient understanding staff questions/advice
	3. Patient answering sexual history questions
	4. Patient providing test/specimen
	5. Patient resisting test/possible treatment
	6. Patient adhering to treatment advice/medication
	7. Patient communicating with staff
Assessment	8. Offering to test, e.g. opening remarks, wording
	9. Responding to patient request for test
	10. Deciding on test, e.g. urine or swab
	11. Asking sexual history questions
	12. Completing opportunistic test (takes too long)
	13. No time/test would take too long (not tested)
Diagnosis	14. Deciding on treatment, e.g. if patient pregnant
	15. Training to deal with patient's issues
	16. Identifying patient as contact of prior patient
	17. Diagnosing/treating—specialist advice required
	18. Accessing specialist by phone
Treatment	19. Talking about STIs/chlamydia/safe sex
	20. Giving information about negotiating safe sex
	21. Giving condoms
	22. Telling patient how they get results
	23. Talking about partner notification
	24. Giving patient partner notification information/card
	25. Supplying medication/condoms/other resources
	26. Using triage/consult template in MedTech
Follow-up	27. Following up patient's partner notification
	28. Contacting patient, e.g. if no phone number
	29. Getting patient or contact to attend

STIs Sexually transmitted infections