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Chlamydia screening – benefits and strategy need to be re-evaluated?

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England's National Chlamydia Screening Programme (NCSP) occupies a uniquely challenging place within health policy. The UK National Screening Committee, whose responsibility for setting screening policy is recommended as a model for Europe,¹ has not been involved in initiating the NCSP. Its guidance remains that chlamydia screening should not be offered in pregnancy, and it describes the NCSP not as a screening programme, but as a 'communicable disease control programme'.² Its most recent review in 2002 did not recommend general population screening for chlamydia.

This presents a challenge to the NCSP rollout, in the risk of being cut adrift from the mainstream of screening policy and practice in the UK, and from a wealth of experience in the development and management of sustainable screening programmes. The management of the NCSP is also unique among screening programmes in being managed by the Health Protection Agency, an 'arms-length' body that has limited direct control over, or accountability for, NHS outcomes or practice,³ and that does not manage any of the other existing large-scale screening programmes.

Is opportunistic screening effective?

This comes at a time when reviews of recent evidence have cast doubt on the evidence base for the current approach to chlamydia screening. 'Proactive' models of screening use population registers to identify a target population, and invite people personally to participate.^{1,4} This is the overarching strategy used for programmes approved by the National Screening Committee. 'Opportunistic' screening involves offering tests to people already attending healthcare settings.^{1,4} A rapid review of evidence commissioned by the National Institute for Health and Clinical Excellence reported that the evidence from randomised controlled trials is limited to the impact of register-based ('proactive') screening on the incidence of pelvic inflammatory disease, while there are no trials of the impact of

'opportunistic' screening in the general population.⁴ Recent evidence from a large Scandinavian cohort study suggests that the rate of progression to pelvic inflammatory disease, ectopic pregnancy and infertility may be lower than estimated in earlier work based in secondary care.⁵

So, what do we know about the effectiveness of the opportunistic model of chlamydia screening that is now being rolled out by the NCSP? The programme is in some respects based on the model used in the original pilots, which assessed the feasibility and acceptability of an opportunistic approach to a single round of screening.^{6,7} The need for pilots of social and healthcare interventions is increasingly recognised in the UK.⁸ However, this 'pilot' was in effect a blueprint for implementation, and, as such, had significant flaws according to the wider evidence on the prerequisites for a screening programme.

It is well established that organised programmes of screening require for their success that individual women are identifiable, and that specific measures (such as letters of invitation) are necessary in order to ensure high coverage.^{9,10} This was a lesson learned early in cervical screening, which resulted in a move from opportunistic to register-based screening, to maximise uptake among vulnerable groups. However, the chlamydia pilots were not designed to determine the feasibility of repeated rounds of screening, nor were they capable of providing a model for the monitoring, evaluation and improvement of any high-coverage screening programme. Modelling work, however, confirms that coverage of at least 50 per cent of the target population will be central to success.¹¹

Uptake was estimated without specific reference to the GP-registered population forming the basis for the established screening programmes for cervical and breast cancer, and, most importantly, for identifying groups and localities with poor uptake. Current performance indicators still do not specify the GP-registered population (as opposed to attenders) as a contributor to the denominator against which performance in meeting local delivery plan targets can be measured.¹² Proper attention to the challenges of measuring uptake, and, in particular, to the identification of

groups at risk of low uptake and developing means of reaching them, is an essential task if good coverage is to be achieved. This will require use of the apparatus that has made other forms of screening in the UK a success.

Increasing coverage through primary care registers

Many observers saw the most successful element of the original pilots as the large-scale engagement of primary care,^{6,7} yet the relative lack of primary care involvement is the most striking difference between the pilots and the existing NCSP, with only 15.4 per cent of non-genitourinary medicine screens in 2005/06 coming from primary care.³ In the Portsmouth chlamydia screening pilot,^{6,7} 83 per cent of 79 local practices took part in screening throughout the year, with 62.9 per cent of 11 999 tests and 61 per cent of all positives coming from primary care, with a positivity of 9.1 per cent. Each year, 60.4 per cent of men and 75.3 per cent of women aged 16–24 years attend their GP practice at least once, and within a year 21.3 per cent would be reached only by post, 9.2 per cent would not receive a letter but would attend, and 11.8 per cent would be missed by both methods.¹³ These data, from a study aiming to compare the potential coverage of opportunistic with register-based screening, suggest that supplementing existing strategies by invitation through primary care registers is the only approach likely to achieve high coverage.

Identification of high-risk groups

The NCSP is undertaking a major extension of activity into other settings, which were not evaluated in the original pilots. These include universities, colleges and schools, from which 9.6 per cent of 96 890 screens originated in 2005/06, along with a further 4.2 per cent from undefined 'other' settings. A separate commissioning of testing through a chain of commercial pharmacies has also taken place. This is, as the NCSP group describes it, 'proactive' but not register-based screening,¹⁴ and it presents a challenge for the measurement of outcomes and, most importantly, the identification of high-risk groups with poor uptake. The identification of groups at risk of poor uptake of screening is an essential part of the evaluation of a screening programme, which cannot be postponed indefinitely. The local delivery plan target for 2007/08 is 15 per cent of the estimated total population aged 15–24 years.

In order for the NCSP to achieve maximum benefit and efficiency, it will be important to ensure wider and repeated coverage, but to minimise repeated coverage of the lowest-risk individuals who may well be the easiest to access. Without the use of registers – by contrast with all

other screening programmes – a large, long-term unscreened group will be the likely result, as in the early days of cervical screening. The NCSP's increasing focus on accessible social venues is as yet unevaluated in population terms, but could result in annual testing of large numbers of university students, while less well-off adolescents in rural or otherwise isolated areas may be at risk of receiving no screening offers. Determining the NCSP's impact on health inequalities will require fine-grain locality-based uptake measures.

The engagement of primary care in the chlamydia screening pilots was made possible by financial incentives in the form of a £25 payment for the first 600 tests and £10 thereafter.⁷ This aspect of incentivisation is, on the whole, regarded with nervousness by genitourinary medicine and family planning clinicians, who are salaried practitioners. However, capitation and incentives (now in the form of the quality and outcomes framework) have always been fundamental to how primary care identifies the personnel and equipment resources for its tasks. Without harnessing primary care across the country, it is difficult to see how high coverage can be achieved – the NHS in Cornwall and the Scilly Isles is alone in achieving coverage of an estimated 15–19 per cent of the sexually active 15- to 24-year-old population over a large geographic area.³ It has notably done this by engaging 85 per cent of GP practices in addition to other healthcare settings, and providing free azithromycin for the treatment of positive patients in the practice setting.

Coverage of men will need special attention. In spite of evidence that large numbers of men do indeed attend primary care with genital symptoms,¹⁵ testing rates for chlamydia are extremely low.¹⁶ Many programme areas of the NCSP are focussing on non-healthcare settings with a view to recruiting young men. However, the cost-effectiveness of such an approach – by contrast with using the primary care setting as a focus of testing and targeting – is unproven.

If the NCSP is to achieve its aim of reducing morbidity as a result of chlamydia, it must be supported in developing an approach to screening that will allow detailed measurement of uptake and monitoring of screening intervals, and, importantly, show what inequalities of access it needs to address as the programme grows. This will require co-ordination with other screening programmes, and the practical support of leaders of other existing, highly successful programmes.

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See page 11 for further discussion of the role of general practice in chlamydia screening.