The first steps...

Annual report of the National Chlamydia Screening Programme in England, 2003/04
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Prepared by:

Chlamydia Advisory Group on behalf of the National Chlamydia Screening Steering Group

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Contents

Chair’s statement 6
Acknowledgements 7
Executive summary 8

1 Introduction 9
1.1 Epidemiology 9
1.2 Historical perspective in England 10
1.3 Report objectives 10

2 National Chlamydia Screening Programme (NCSP) overview 11
2.1 Overall programme goal and vision 11
2.2 Screening policy 11
2.3 Core programme values 12
2.4 National programme management 12

3 NCSP implementation 14
3.1 Sites 14
3.2 Staffing 14
3.3 Finance 14
3.4 Tests and laboratories 15
3.5 Management 16
3.6 Innovative practices 16
3.7 Key achievements in 2003/04 18

4 Outputs and outcomes 20
4.1 NCSP monitoring and evaluation 20
4.2 Screening venues 21
4.3 Reported chlamydia tests 23
4.4 Opportunistic screening outside GUM clinics 26
4.5 Geographic variations 30
4.6 Patient outcomes 30

5 Allied developments in the field 33
5.1 Other research studies 33
5.2 Improving chlamydia diagnostic tests 33
5.3 Involving men in chlamydia screening 34

6 Challenges facing the NCSP 35
6.1 Staffing and recruitment problems 35
6.2 Engaging general practice 35
6.3 Chlamydia screening office 36
6.4 Quality assurance 36
6.5 Increasing coverage across sites and within clinical settings 37

Appendix Membership of the National Chlamydia Screening Steering Group (NCSSG) 2002–04 38

List of tables
Table 1 Laboratory and test details of each programme area 16
Table 2 Required core data set for national programme monitoring, NCSP, England 20
Table 3 Number of programme areas and venues offering opportunistic screening for Chlamydia trachomatis by quarter, NCSP, England, 1 April 2003 – 31 March 2004 21
Table 4 Number and type of screening venues by programme area, phase 1, NCSP, 2003/04 22
Table 5 Characteristics of men and women opportunistically screened outside GUM clinics, NCSP, England, 2003/04 28
List of figures

Figure 1 Number of chlamydia tests reported and percentage chlamydia positive by quarter, NCSP, England, 2003/04

Figure 2 Chlamydia positivity by reason for test and sex, NCSP, England, 2003/04

Figure 3 Chlamydia positivity by reason for test and age, NCSP, England, 2003/04

Figure 4 Number of screening venues and opportunistic screening volume by quarter, NCSP, England, 2003/04

Figure 5 Chlamydia positivity by age among men and women <25 years of age opportunistically screened outside GUM settings, NCSP, England, 2003/04

Figure 6 Chlamydia positivity by sex and behavioural risk, screened outside GUM settings, NCSP, England, 2003/04

Abbreviations used in this report

A&C Administration and Clerical
CAG Chlamydia Advisory Group
CI Confidence Interval
ClaSS Chlamydia Screening Studies
CMO Chief Medical Officer
CSO Chlamydia Screening Office
DH Department of Health
GUM Genitourinary Medicine
HIV Human Immunodeficiency Virus
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>HPA</td>
<td>Health Protection Agency</td>
</tr>
<tr>
<td>IPP</td>
<td>Infertility Prevention Project</td>
</tr>
<tr>
<td>IT</td>
<td>Information Technology</td>
</tr>
<tr>
<td>LCSSG</td>
<td>Local Chlamydia Screening Steering Group</td>
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<tr>
<td>MiDAS</td>
<td>Microbiological Diagnostics Assessment Service</td>
</tr>
<tr>
<td>NAAT</td>
<td>Nucleic Acid Amplification Test</td>
</tr>
<tr>
<td>Natsal 2000</td>
<td>National Survey of Sexual Attitudes and Lifestyles</td>
</tr>
<tr>
<td>NCSP</td>
<td>National Chlamydia Screening Programme</td>
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<tr>
<td>NCSSSG</td>
<td>National Chlamydia Screening Steering Group</td>
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<tr>
<td>NHS</td>
<td>National Health Service</td>
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<tr>
<td>NPfIT</td>
<td>National Programme for IT</td>
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<tr>
<td>NPT</td>
<td>Near-Patient Testing</td>
</tr>
<tr>
<td>PASA</td>
<td>Purchasing and Supplies Agency</td>
</tr>
<tr>
<td>PCT</td>
<td>Primary Care Trust</td>
</tr>
<tr>
<td>PID</td>
<td>Pelvic Inflammatory Disease</td>
</tr>
<tr>
<td>PIP</td>
<td>Pee in a Pot</td>
</tr>
<tr>
<td>SHA</td>
<td>Strategic Health Authority</td>
</tr>
<tr>
<td>SLA</td>
<td>Service Level Agreement</td>
</tr>
<tr>
<td>STD</td>
<td>Sexually Transmitted Disease</td>
</tr>
<tr>
<td>STI</td>
<td>Sexually Transmitted Infection</td>
</tr>
</tbody>
</table>
Programmes:

CA   Camden and Islington
CO   Cornwall
HU   Hull and East Riding
LA   Lambeth, Southwark and Lewisham
LE   Leeds
NT   Nottingham
PM   Portsmouth
SE   Southend-on-Sea
WR   Wirral
YK   York

Tests:

LCR  Ligase Chain Reaction
PCR  Polymerase Chain Reaction
SDA  Strand Displacement Amplification
TMA  Transcription Mediated Amplification
Chair’s statement

I am delighted to introduce the National Chlamydia Screening Programme (NCSP) first annual report. The NCSP is a major new public health programme. It is the first such nationally organised programme in Europe and confirms the government’s continued commitment to improving sexual health through the implementation of the National Strategy for Sexual Health and HIV.

Our first year has been a challenging one, but we have made considerable progress toward creating a unified chlamydia screening programme while being sensitive to local needs and encouraging local innovation. Bringing together health professionals to focus on developing and implementing chlamydia screening has been a major organisational challenge, involving innovation, collaboration and networking across a wide range of stakeholders. While building and refining the requirements required for successful implementation of the programme we have continued to implement chlamydia screening across the country. Local teams in phase 1 have commenced screening activity and phase 2 sites are now well underway. All this could not have happened without the commitment of local chlamydia screening teams.

In this, our first Annual Report, we have aimed to provide an informed picture of the nature, range and outcomes of chlamydia screening in England. My thanks go to the members of the Chlamydia Advisory Group (CAG) who have worked with energy and enthusiasm to ensure that we met our objectives for the year. I am particularly grateful to members of the National Chlamydia Screening Steering Group who provide invaluable advice and support to the Department of Health and the CAG.

There is still some way to go to create nationwide coverage in the programme, however I feel confident that the NCSP is well placed to face the challenges of the coming year and that we will remain on target for full implementation by 2008.

Dr Kevin Fenton
Chair, National Chlamydia Screening Steering Group
Acknowledgements

We would like to thanks all members of the National Chlamydia Screening Steering Group (NCSSG) (2002–04) for their advice and support. See appendix for the membership of the group.

We gratefully acknowledge the continuing collaboration of clinicians, microbiologists, public health practitioners, general practitioners, practice nurses and other colleagues who contribute to the implementation, monitoring and evaluation of chlamydia screening in England.

Specifically, for all their efforts in bringing chlamydia screening to their communities and for the data presented in this report, we would like to thank the clinical, laboratory and administrative personnel from the phase 1 programme areas: Camden and Islington, Cornwall, Hull and East Riding, Lambeth/Southwark/Lewisham, Leeds, Nottingham, Portsmouth, Southend-on-Sea, the Wirral and York.

Further information

Any comments or queries relating to this report should be directed to the Department of Health, Sexual Health Team in the first instance.

Further information on human immunodeficiency virus and sexually transmitted infections epidemiology in the UK is available at:
www.hpa.org.uk/infections/topics_az/hiv_and_sti/default.htm

A copy of this report can also be downloaded in pdf format from the Department of Health website on chlamydia screening

Suggested citation

Executive summary

- Genital chlamydia is now the most common sexually transmitted infection diagnosed in genitourinary medicine (GUM) clinics in England, with high prevalence being documented among young men and women aged under 25 attending a variety of specialist and general health care settings.

- In England, the case for screening began in earnest in 1998 with the publication of the Chief Medical Officer’s (CMO) Expert Advisory Group report on *Chlamydia trachomatis* infection¹, which outlined the public health importance of this disease and the need to screen high-risk individuals.

- Pilots of opportunistic chlamydia screening were undertaken in Portsmouth and the Wirral (1999–2000), and confirmed the high disease prevalence among those attending health care settings, and the feasibility and acceptability of such screening approaches.

- Concrete plans for a National Chlamydia Screening Programme (NCSP) gained momentum with the publication of the English *National Strategy for Sexual Health and HIV*, in July 2001, which clearly outlined the government’s commitment to a national roll-out of chlamydia screening.

- In its first year, chlamydia screening was introduced in 10 programme areas across England, involving over 300 sites.

- The results of the first year of screening has confirmed the feasibility of opportunistic screening outside of GUM clinic settings and the significant disease burden in this population, with 10.1% positivity among women and 13.3% among men. These findings are consistent with the pilot studies.

- Fifty per cent of positives and contacts were successfully managed outside of traditional sexual health/GUM settings.

- The national chlamydia screening programme is being implemented within the context of an evolving NHS characterised by devolution of decision-making to the local level; heterogeneity in accountability structures and prioritisation by Primary Care Trusts (PCTs); and performance management by Strategic Health Authorities (SHAs).

- The results from the first year of screening show that the current implementation strategies can work, and a variety of non-specialist clinical settings can be enlisted to implement screening. Clearly the challenge now will be to increase coverage at all levels.

1 Introduction

1.1 Epidemiology

Genital *Chlamydia trachomatis* infection is the most commonly diagnosed bacterial sexually transmitted infection in GUM clinics in the United Kingdom. The number of diagnoses of uncomplicated genital chlamydial infection in GUM clinics has risen steadily since the mid-1990s, and in England, Wales and Northern Ireland diagnoses rose by 8% (from 82,206 to 89,431) between 2002 and 2003, a rise of 7% in females and 10% in males. In 2003, the highest rates of genital chlamydial infection were among 16–19-year-old females (1,334/100,000) and 20–24-year-old males (961/100,000). The prevalence is highest in young, sexually active adults, especially women aged 16 to 24 years and men aged 18 to 29 years. As most people are asymptomatic, a large proportion of cases remains undiagnosed. Untreated genital chlamydial infection may have serious long-term consequences, especially in women, in whom it is a well-established cause of pelvic inflammatory disease (PID), ectopic pregnancy and infertility. The annual cost of chlamydia and its consequences in the United Kingdom is estimated to be more than £100 million.

There is growing evidence from other countries that active case finding for genital chlamydial infection, through targeted screening of at-risk populations, can significantly reduce the morbidity associated with this infection and its sequelae. The US piloted a regional chlamydia screening programme, known as the sexually transmitted disease (STD)-related Infertility Prevention Project or IPP, in 1988 and demonstrated a 65% decline in infection in family planning clinic attenders in the first eight years of screening. Sweden also observed similar declines after implementing widespread screening. Two randomised controlled trials, in the US and Denmark, halved the incidence of PID cases after 12 months of screening for chlamydia among asymptomatic women. Economic analyses have demonstrated the cost-benefits and cost-effectiveness of chlamydia screening.

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2 www.hpa.org.uk/infections/topics_az/hiv_and_sti/sti-chlamydia/chlamydia.htm
1.2 Historical perspective in England

The CMO’s Expert Advisory Group on *Chlamydia trachomatis* was set up in November 1996 to advise on the issues associated with screening for genital chlamydial infection. The report, published in 1998, concluded that the evidence exists for the effectiveness of chlamydia screening and called for the government to take action towards establishing a national screening programme.

A Department of Health (DH)-funded pilot of opportunistic screening commenced in Portsmouth and the Wirral. Testing was offered to all sexually active young women attending a range of health care settings, including general practice and family planning clinics, regardless of whether they had symptoms. Acceptance of testing was high (more than 75% of those offered) and was approximately 50% of the eligible population aged under 25 years in those areas. Prevalence in 16–24-year-old women was 9.8% in Portsmouth and 11.2% in the Wirral. Further details of the DH funded pilot are available at: www.dh.gov.uk/PolicyAndGuidance/HealthAndSocialCareTopics/SexualHealth/SexualHealthGeneralInformation/SexualHealthGeneralArticle/fs/en?CONTENT_ID=4084098&chk=CSLxsK

A plan to begin implementing national screening for chlamydia from 2002 was included in the DH *National Strategy for Sexual Health and HIV*. The subsequent implementation action plan outlined proposals for the phased implementation of an NCSP beginning with an initial 10 programmes in England (based on available funding at the time). In January 2004, the DH announced a further 16 programmes, bringing screening coverage to 25% of all PCTs.

1.3 Report objectives

This annual report aims to provide an overview of the structure, process and outcomes of the first full year of implementation of the NCSP in England. Further details on the programme have been published elsewhere, as well as on the DH website at: www.dh.gov.uk/PolicyAndGuidance/HealthAndSocialCareTopics/SexualHealth/SexualHealthGeneralInformation/SexualHealthGeneralArticle/fs/en?CONTENT_ID=4084098&chk=CSLxsK

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2 NCSP overview

The NCSP in England is an opportunistic screening programme for genital chlamydial infection, targeting sexually active women and men under 25 years of age.

2.1 Overall programme goal and vision

The goal of the NCSP in England is to control chlamydia through the early detection and treatment of asymptomatic infection; to prevent the development of sequelae; and to reduce onward disease transmission.

The programme’s vision is to implement, by 2008, a multi-faceted, evidence-based and cost-effective national prevention and control programme for genital chlamydial infection in England in which all sexually active adults are aware of chlamydia and its effects, and are able to access a range of prevention and screening services to reduce their risk of infection and the risk of onward transmission.

2.2 Screening policy

Under the NCSP, opportunistic screening for genital chlamydial infection is offered to all sexually active women and men, aged under 25 years, attending a variety of health and non-health care settings in England.

The national programme is being implemented in phases, with successive annual waves of local programmes being brought on board. This phased implementation allows for managed growth of the programme; intensive support from the DH and Health Protection Agency (HPA); and more equitable distribution of pump-priming funds.

Local management (organisation, delivery and monitoring) of chlamydia screening is coordinated within geographically distinct programme areas. These programme areas are managed by a Local Chlamydia Screening Steering Group (LCSSG), chaired by a programme lead. National coordination and management of the programme is the responsibility of the DH in partnership with the HPA, guided by the National Chlamydia Screening Steering Group (NCSSG).
2.3 Core programme values

The development and implementation of the NCSP in England is underpinned by a set of core values and principles, which provide a framework for participants. These include a commitment to:

- Timely, phased implementation of a chlamydia screening programme with multidisciplinary collaboration and joined-up working
- Modernisation of chlamydia diagnostic services and training and education for those involved
- Commissioning and responding to research and evaluation, and commitment to quality management

The core requirements of the programme can be seen in the screening manual, which can be accessed via the NCSP pages of the DH website:

2.4 National programme management

The NCSP in England is managed by the Sexual Health Team at the DH. The NCSSG advises the DH in this role. The Chlamydia Advisory Group (CAG) is a subset of members from the NCSSG, including the DH and the HPA, and the medical advisor to the DH. It is a more technically oriented working group that meets monthly to address the day-to-day management of the NCSP.

The NCSSG offers advice to the DH and the local programme leads on the protocol and procedural aspects required for establishing local screening programmes, and makes recommendations about performance and project management issues.

The HPA works in partnership with DH and participates as a full member of the NCSSG and CAG and provides epidemiological and laboratory advice and collates and analyses information on screening outcomes on a quarterly basis.
2.4.1 Interface with other national bodies

The NCSSG recognises that the effective prevention and control of genital chlamydial infection in England will require more than a comprehensive national screening programme to be implemented. As such, the NCSSG is involved in a wide range of collaborative activities geared towards improving the diagnosis and management of this disease. Some of the agencies involved in collaborative work with the NCSSG are: National Screening Committee, Medical Research Council Sexual Health and HIV Research Committee, Health Development Agency, Independent Advisory Group for Sexual Health and HIV and HPA Chlamydia Programme, and HPA Chlamydia Diagnosis Forum.
3 NCSP implementation

3.1 Sites

There are 10 programmes within phase 1 of the NCSP: Camden and Islington (CA); Cornwall (CO); Hull and East Riding (HU); Lambeth, Southwark and Lewisham (LA); Leeds (LE); Nottingham (NT); Portsmouth (PM); Southend-on-Sea (SE); Wirral (WR) and York (YK). Portsmouth and Wirral were involved in the initial pilot from 1999 to 2000.

All programmes have a chlamydia screening office (CSO), based in a variety of venues: GUM clinics, contraceptive/family planning departments, community hospitals or health centres. Sites used for screening have been set out in the core requirements and include contraceptive clinics, young person’s services and obstetric and gynaecology departments. Screening within termination clinics is variable at present with only six programmes routinely including this within the programme.

In phase 1, inclusion of general practice was not mandatory, but could be included on a cost-neutral basis. During the first year of implementation, six of the 10 programmes had included primary care sites with between 1 and 100% of general practices taking part. GUM clinics have only been included as ‘screening’ venues in four of the phase 1 programmes. This is because most of their chlamydial testing is for diagnostic reasons rather than opportunistic screening. However, all 10 GUM clinics in the programme areas are involved in the management and treatment of positive cases and partner notification. All local programmes have included non-clinical sites for screening: young person’s drop-ins, military bases, colleges, etc. One programme tested in a prison during the first year.

3.2 Staffing

Staffing between programme areas is varied but includes a programme coordinator, who is usually a G or H grade nurse; administrative support in the form of an Administration and Clerical (A&C) 3, 4 or occasionally 5; support F grade nurse(s) and occasionally a medical consultant session once or twice a week. All programmes have a multidisciplinary LCSSG.

This variation in staffing reflects the fact that each local programme has developed differently to reflect local needs and infrastructures.

3.3 Finance

Pump-priming funds from the DH were provided to all programmes in 2002, with further funding provided in April 2003 and 2004. As agreed in the service level agreement (SLA) with the DH, funding for phase 1 programmes will pass to the relevant PCTs in April 2005.
With ‘shifting the balance of power’, PCTs will be responsible for the funding, management and strategic development of their own programmes. However, local programme areas must conform to national guidance on screening developed by the NCSSG. They will also provide data on their screening activity to HPA and DH as before. This will ensure compatibility across local screening programmes, and ongoing programme monitoring and evaluation at the national level.

### 3.4 Tests and laboratories

The NCSP has allowed some flexibility in the types of samples obtained in the screening programme, based on evidence of their effectiveness and the requirements of the various nucleic acid amplification test (NAAT) platforms. Current sample types used include urine and self-collected vulva-vaginal swabs. Women having a pelvic examination for other reasons may have a cervical swab taken.

Among the phase 1 programmes currently screening, eight areas each use one laboratory, Nottingham uses two laboratories and Lambeth, Southwark and Lewisham use three. Four types of NAAT are utilised: polymerase chain reaction (PCR) AMPLICOR® or COBAS AMPLICOR™; strand displacement amplification (SDA) BDProbeTec™; transcription mediated amplification (TMA) APTIMA® Combo 2™ Assay; and ligase chain reaction (LCR) Abbott LCx®. The Abbott LCx® test was withdrawn from the UK market in early 2003, but one programme had surplus test kits and reagent, and therefore continued to use this test until August 2003. Several laboratories had not had NAATs before and therefore had to acquire new equipment and train staff. Ten of the 13 laboratories took on extra staff to manage the changed workload. As outlined in the screening manual document, all chlamydia positive and equivocal samples are confirmed through testing using a different NAAT or a re-run of the sample using the same platform.

The turnaround time for negative results varied from two to seven days with an average of three days. Positive results were usually three or four days longer because of the time taken to repeat the test. The NCSSG’s Quality Assurance sub-group is looking at setting standards regarding turnaround time.
Table 1. Laboratory and test details of each programme area

<table>
<thead>
<tr>
<th>Programme</th>
<th>CA</th>
<th>CO</th>
<th>HU</th>
<th>LA</th>
<th>LE</th>
<th>NT</th>
<th>PM</th>
<th>SE</th>
<th>WR</th>
<th>YK</th>
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<tbody>
<tr>
<td>Number labs</td>
<td>1</td>
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<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
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<td>1</td>
</tr>
<tr>
<td>NAAT</td>
<td>PCR</td>
<td>PCR</td>
<td>PCR</td>
<td>1 PCR</td>
<td>SDA</td>
<td>SDA</td>
<td>SDA</td>
<td>SDA</td>
<td>LCR/PCR</td>
<td>TMA</td>
</tr>
<tr>
<td>Equivocal (%)*</td>
<td>1.0</td>
<td>1.2</td>
<td>0.5</td>
<td>2.0</td>
<td>0.4</td>
<td>0</td>
<td>0.2</td>
<td>0</td>
<td>1.0</td>
<td>0.8</td>
</tr>
<tr>
<td>Inhibitory (%)*</td>
<td>2.5</td>
<td>0.8 M</td>
<td>3.3</td>
<td>8.2</td>
<td>0.4</td>
<td>1.0</td>
<td>1.4</td>
<td>N/A</td>
<td>N/A</td>
<td>5.0</td>
</tr>
</tbody>
</table>

* These percentages are as provided by the 10 phase 1 programme areas.

3.5 Management

The local chlamydia screening coordinator, based at the CSO, is responsible for ensuring that all data are collected and sent to HPA on a quarterly basis. All CSOs have developed bespoke computer programmes to manage their patient data; however, these vary across the sites. As with other screening programmes, there is no single national patient management information technology (IT) system used for the NCSP. This variability is pragmatic, reflecting the heterogeneity of NHS IT systems, as well as the need to respond to future developments in the NHS national programme for IT (NPfIT).

Data on chlamydia-positive patients and partner notification activity are collected and stored on an ongoing basis by local programmes, but are only reported to the DH and HPA annually. Management of chlamydia-positive patients varies across the sites. For example, the Camden programme sends all their chlamydia-positive patients to their local GUM clinic, whereas in Cornwall, treatment and partner notification may also occur at the test initiation site. In Hull and Wirral, the CSO deals with the chlamydia-positive patients and partner notification. In the other sites it is a mixture of referral to the CSO, GUM and management at the test site. These arrangements reflect the flexibility of local programmes to develop screening activity to meet local need and infrastructure. However, the NCSP core requirements have clear guidelines for ‘failsafe’ arrangements to ensure that all screened chlamydia-positive patients and their contacts are appropriately managed.

3.6 Innovative practices

Besides adhering to guidelines outlined in the NCSP screening manual, local programmes are actively encouraged to implement, monitor and evaluate innovative screening practices in order to identify new models of care and local ‘good practice’ which may be shared.
Cornwall’s ‘pee in a pot’ (PIP) days are an innovative way of screening in non-clinical settings. The staff attends a venue, e.g. a military base or college, and screen attenders using urine tests or self-taken vulva-vaginal swabs. Several other programmes are testing in colleges and universities (e.g. Hull). Portsmouth has screened in the local naval bases and Leeds has involved the local youth offender team.

Camden decided at the beginning to use self-taken vulva-vaginal swabs and produced a leaflet for women on how to take the swab. This screening method has proved most acceptable, and to date approximately 90% of women being screened have provided this type of specimen. An evaluation of the acceptability of vulva-vaginal specimens was undertaken in Camden, which revealed that none of the women who declined screening identified concerns about the self-taken swab as a reason for doing so.

Wirral has started working with two local Boots chemists, where they issue free chlamydia urine test kits. Patient Group Directions have been developed and the pharmacists are being trained to treat chlamydia-positive patients along with their partners. The Nottingham programme has produced a website (www.chlamydiascreening-notts.nhs.uk/) and an excellent leaflet for partner notification. All programmes have developed bespoke local partner notification slips.

### Innovation in chlamydia screening – the Lambeth, Southwark and Lewisham experience

A text messaging service to assist chlamydia screening has been trialled and is now in use in Lambeth; it has been described as a ‘cutting edge, cost-effective and reliable way’ of contacting young people with their chlamydia screening results. In Lambeth, only chlamydia negative results are sent via text. Positive and other results are dealt with by phone call or letter. Consent to text is via screening consent forms that have been updated to include text messaging as a way of contacting screened individuals.

The text message informs clients that their recent test is negative, followed by the contact number for the chlamydia coordinator.

The text message is simple and easy to understand, and client feedback has been extremely positive. Each batch of about 20 text messages sent generates about two phone calls from young people either confirming the result or simply looking for a human voice to reassure them. The time and resources of sending letters is saved, and the ‘risk’ of someone opening mail is removed. The ‘status’ of the text can also be obtained, i.e. PENDING/SENT/NUMBER NOT KNOWN.
3.7 Key achievements in 2003/04

The NCSP is being implemented within the context of an evolving NHS characterised by devolution of decision-making to the local level; heterogeneity in accountability structures and prioritisation by PCTs; and performance management by SHAs. Screening in primary care will require clarification of funding for screening activity; looking at how screening can have a minimum impact on workload for all primary care staff; and considerable investment in training. The results from the first year of screening nevertheless show that the implementation strategies can work, and a variety of non-specialist clinical settings can be enlisted to implement screening. Clearly the challenge now will be to increase coverage at all levels.
Highlights of the NCSP's first year, 2003/04

- In the first year of the NCSP, chlamydia screening was introduced in 10 programme areas across England, involving over 300 screening sites.

- A further 16 areas were added in January 2004 (phase 2) leading to a total coverage of over 25% of PCTs in England.

- Over 36,000 chlamydia tests were reported in the first year from phase 1 programmes, 50% of which were opportunistic screens from non-GUM clinics.

- The DH, in partnership with the HPA Chlamydia Diagnosis Forum, hosted a series of five educational seminars on chlamydia diagnostics during 2004.

- DH commissioned the Health Development Agency to update the 1998 CMO review of the evidence for chlamydia screening.

- A further £8 million investment was announced for conversion to NAATs at targeted laboratories.

- DH commissioned the NHS Purchasing and Supplies Agency (PASA) to undertake a national tendering and procurement exercise for NAATs provision across England.

- DH commissioned the Men’s Health Forum to undertake a project to ascertain men’s attitudes to and knowledge about chlamydia and the production of men-specific health promotion materials (final report due winter 2004).

- Joint working with the Ministry of Defence is ongoing to develop new technology for near-patient testing (called NPTgold), with a genital chlamydia result available within one hour of sample collection.

- DH commissioned the Microbiological Diagnostics Assessment Service (MiDAS), to undertake a head-to-head evaluation of commercially available NAATs for *Chlamydia trachomatis*. 
4 Outputs and outcomes

4.1 NCSP monitoring and evaluation

Programme monitoring and evaluation of the NCSP occurs nationally and locally. National programme monitoring includes implementation, screening uptake, coverage, prevalence reductions, costs, positivity, risk factors, re-infection rates and trends. Local monitoring and evaluation focuses on outcomes, including screening volume, management of chlamydia-positive patients and partner notification activities. Because the programme has only one year of data reporting, not all of these outcomes can be properly evaluated at this time. This section will report on the testing activities and local implementation of screening, chlamydia positivity and risk factors for infection, and the results of patient management and partner notification efforts by local programmes.

Two separate reporting mechanisms are in place for tabulation of outputs and outcomes. Individual chlamydia test records (disaggregate data) are reported quarterly from each programme area to HPA, following a minimum core data set (Table 2). Programme areas can elect to report only screens and contacts from index positives (the original chlamydia-positive patients) or all chlamydia testing activities, regardless of payment source or testing location. Three programme areas opted to report all testing activities; the other seven phase 1 programme areas only reported the core data for those tests covered by the NCSP.

Aggregate summary data for persons testing positive within the NCSP and the outcome of their treatment and partner follow-up are reported annually by programme areas to the DH, and collated by HPA. Patient management data include treatment of chlamydia-positive patients, number of partners reported and contacted, number of partners receiving treatment and number of partners accepting testing (with results of testing).

Table 2. Required core data set for national programme monitoring, NCSP, England

<table>
<thead>
<tr>
<th>Clinic ID code</th>
<th>Reason for test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient ID code or NHS number</td>
<td>Specimen type</td>
</tr>
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<td>Sex</td>
<td>New sex partner, last 3 months</td>
</tr>
<tr>
<td>Date of birth</td>
<td>Two or more sex partners, last 12 months</td>
</tr>
<tr>
<td>Postcode of residence</td>
<td>Type of laboratory test</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Test result</td>
</tr>
<tr>
<td>Date of attendance</td>
<td></td>
</tr>
</tbody>
</table>
4.2 Screening venues

The first full year of reporting in the NCSP covers chlamydia testing performed from 1 April 2003 to 31 March 2004. The number of programme areas, screening venues and screening tests increased over the year, reflecting the phased nature of implementation (Table 3). By the end of the first year of implementation, screening was available to young people at over 300 different venues across the 10 phase 1 programme areas.

Table 3. Number of programme areas and venues* offering opportunistic screening for *Chlamydia trachomatis* by quarter, NCSP, England, 1 April 2003 – 31 March 2004

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Number of programme areas</th>
<th>Number of screening venues</th>
</tr>
</thead>
<tbody>
<tr>
<td>First: Apr–Jun 2003</td>
<td>4</td>
<td>74</td>
</tr>
<tr>
<td>Second: Jul–Sep 2003</td>
<td>5</td>
<td>121</td>
</tr>
<tr>
<td>Third: Oct–Dec 2003</td>
<td>9</td>
<td>184</td>
</tr>
<tr>
<td>Fourth: Jan–Mar 2004</td>
<td>10</td>
<td>247</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10</strong></td>
<td><strong>302</strong></td>
</tr>
</tbody>
</table>

* Does not include eight GUM clinics.

The type of screening venues varied for each programme area. In some programme areas, screening tests are available through general practices. Other programme areas have used unique outreach activities, such as PIP days, to extend chlamydia screening in their communities. Table 4 lists the number and type of venues by programme area that offered chlamydia screening during the first year of phase 1.
Table 4. Number and type of screening venues by programme area, phase 1, NCSP, 2003/04

<table>
<thead>
<tr>
<th></th>
<th>CA</th>
<th>CO</th>
<th>HU</th>
<th>LA</th>
<th>LE</th>
<th>NT</th>
<th>PM</th>
<th>SE</th>
<th>WR</th>
<th>YK</th>
<th>All</th>
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</thead>
<tbody>
<tr>
<td>FP</td>
<td>16</td>
<td>13</td>
<td>3</td>
<td>17</td>
<td>20</td>
<td>10</td>
<td>1</td>
<td>13</td>
<td>3</td>
<td>96</td>
<td></td>
</tr>
<tr>
<td>GP</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>49</td>
<td>1</td>
<td>71</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>131</td>
</tr>
<tr>
<td>GUM</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>CSO</td>
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<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>GYN</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td>4</td>
<td>1</td>
<td>2</td>
<td></td>
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<td>TOP</td>
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<td></td>
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<td></td>
<td></td>
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<tr>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>PIP</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
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<td>4</td>
<td>6</td>
<td>1</td>
<td>4</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
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<td></td>
<td></td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>UNK</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
<td>49</td>
<td>4</td>
<td>20</td>
<td>1</td>
<td>21</td>
<td>81</td>
<td>7</td>
<td>97</td>
<td>6</td>
<td>310</td>
</tr>
</tbody>
</table>

Abbreviations: FP – family planning/contraception; GP – general practice; GUM – genitourinary medicine; CSO – chlamydia screening office; GYN – gynaecology and obstetrics; ANC – antenatal; COL – colposcopy; TOP – termination of pregnancy; MIL – military; MPIP – pee-in-a-pot day at military site; UNI – university, college or school; UPIP – pee-in-a-pot day at university location; PIP – general pee-in-a-pot day; YTH – young person’s clinic; OTH – other venue, such as outreach bus, infertility clinic; UNK – venue type unknown.
4.3 Reported chlamydia tests

A total of 36,089 tests from all 10 phase 1 programme areas were reported to HPA by 15 June 2004. Due to reporting delays, some tests performed during the financial year are not reflected in these totals, but will be included in future reports.

Tests occurred in a phased manner, as previously stated, and are represented graphically in Figure 1. Only four programme areas had begun testing during the first quarter, as reflected by the low testing volumes; however, almost 40% of tests reported were done during the fourth quarter of the financial year. Overall chlamydia positivity remained fairly stable over the reporting period.

Figure 1. Number of chlamydia tests reported and percentage chlamydia positive by quarter, NCSP, England, 2003/04

Because programme areas could report all testing activities, the population of persons tested was analysed by the reason for the test and testing location. Four categories are reported on: 1) opportunistic screens from outside GUM clinics; 2) tests performed at GUM clinics; 3) tests done for diagnostic reasons or because the client presented with symptoms; and 4) screens performed on individuals identified as contacts.
Figure 2 illustrates the important epidemiological difference between persons tested opportunistically outside GUM clinics, those attending GUM clinics, and those tested for diagnostic reasons or as a contact. Clearly, persons who are contacts of cases are at the highest risk of infection, as is evidenced by the data in Figure 2. The general pattern of increasing chlamydia positivity from opportunistic screening to contact testing was true for both males and females.

**Figure 2. Chlamydia positivity by reason for test and sex, NCSP, England, 2003/04**

This pattern also held true regardless of the age of the client tested (Figure 3). Positivity peaks at 16–19 years of age among persons screened or diagnostically tested; however, the positivity among contacts peaked among the 20–24-year-old age group. It is important to note that chlamydia infection is highly age-dependent, regardless of the reason for test. Even among persons supposedly at the highest risk of infection – those who are contacts of chlamydia-positive patients – the positivity among older contacts (25 years and older) is far lower than that among younger contacts (Figure 3), especially for women. Older women, regardless of
reason for test, have a marked decrease in chlamydia positivity compared with younger women. Scientists in the field suggest that this reflects an increased biological susceptibility among younger women due to the immaturity of the cervix and the high prevalence (60–80%) of cervical ectopy.

Figure 3. Chlamydia positivity by reason for test and age, NCSP, England, 2003/04

The main focus of the NCSP is to extend chlamydia screening to the under-25-year-old population who otherwise would not have been tested, as this population represents a potential ‘hidden reservoir’ of infections. Nearly all attenders at GUM clinics will be tested for a variety of sexually transmitted infections based on clinical protocols and the ethos of genitourinary medicine. Additionally, people complaining of symptoms or who are contacts of chlamydia-positive patients will receive chlamydia testing as part of a diagnostic check-up to rule out chlamydial infection. Therefore, these populations, and people over 24 years of age, are excluded from further discussion of results.

4.4 Opportunistic screening outside GUM clinics

Even though 18,337 screens outside GUM clinics were reported, epidemiological analysis and reporting is limited to 16,413 screens due to missing or unknown data for test result, sex, age, type of test, or inconsistent sample type (for example male tests with self-collected vulva-vaginal swabs), or age greater than 24 years.

As was observed with all tests reported, opportunistic screening outside GUM clinics occurred in a phased manner over the first year (Figure 4). By the end of the fourth quarter, over 7,000 screens were performed at 247 screening venues. Overall chlamydia positivity among all persons opportunistically screened outside GUM clinics was 10.1% among women and 13.3% among men under 25 years of age (Figure 5). Positivity among women peaked at 12.1% in 16–19-year-olds, and among men the highest positivity (19.8%) was observed in those 20–24 years of age.
Figure 5. Chlamydia positivity by age among men and women <25 years of age opportunistically screened outside GUM settings, NCSP, 2003/04

Other important characteristics of the screened population are presented in Table 5. The screened population was mostly female and of white ethnicity. Behavioural risks were common among both men and women. About 60% of the population was tested via urine samples and 30% of female samples were self-taken vulva-vaginal swabs. Roche PCR and Becton-Dickinson SDA tests were the most common NAATs used at participating laboratories. Most screens were done at 96 contraceptive clinics, but 13% of screens were done at 16 young person’s clinics and 10% across 131 general practices.
### Table 5. Characteristics of men and women opportunistically screened outside GUM clinics, NCSP, England, 2003/04

<table>
<thead>
<tr>
<th>TOTAL TESTS</th>
<th>Screening tests among women</th>
<th>Screening tests among men</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. (%)</td>
<td>No. (pos.)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>16,413</td>
<td>15,241 (1,538)</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 16</td>
<td>1,349 (8.2)</td>
<td>1,284 (96)</td>
</tr>
<tr>
<td>16–19</td>
<td>7,201 (43.9)</td>
<td>6,544 (792)</td>
</tr>
<tr>
<td>20–24</td>
<td>7,863 (47.9)</td>
<td>7,413 (650)</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>11,138 (67.9)</td>
<td>10,286 (973)</td>
</tr>
<tr>
<td>Black Caribbean</td>
<td>413 (2.5)</td>
<td>365 (66)</td>
</tr>
<tr>
<td>Black African</td>
<td>408 (2.5)</td>
<td>373 (37)</td>
</tr>
<tr>
<td>Black British/other</td>
<td>380 (2.3)</td>
<td>316 (48)</td>
</tr>
<tr>
<td>Asian subcontinent</td>
<td>262 (1.6)</td>
<td>253 (15)</td>
</tr>
<tr>
<td>Chinese/other Asian</td>
<td>408 (2.5)</td>
<td>373 (37)</td>
</tr>
<tr>
<td>Black British/other</td>
<td>380 (2.3)</td>
<td>316 (48)</td>
</tr>
<tr>
<td>Other ethnic group</td>
<td>210 (1.3)</td>
<td>202 (13)</td>
</tr>
<tr>
<td>Mixed</td>
<td>571 (3.1)</td>
<td>491 (73)</td>
</tr>
<tr>
<td><strong>Risk behaviours</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New sex partner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>5,077 (45.0)</td>
<td>4,583 (586)</td>
</tr>
<tr>
<td>No</td>
<td>6,207 (55.0)</td>
<td>5,825 (466)</td>
</tr>
<tr>
<td>Two or more sex partners</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>5,061 (45.8)</td>
<td>4,547 (589)</td>
</tr>
<tr>
<td>No</td>
<td>5,994 (54.2)</td>
<td>5,654 (436)</td>
</tr>
<tr>
<td><strong>Specimen type</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urine</td>
<td>9,799 (59.7)</td>
<td>8,627 (899)</td>
</tr>
<tr>
<td>Cervical swab</td>
<td>2,101 (12.8)</td>
<td>2,101 (217)</td>
</tr>
<tr>
<td>Vulva-vaginal swab</td>
<td>4,513 (27.5)</td>
<td>4,513 (422)</td>
</tr>
<tr>
<td><strong>Laboratory test</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCR</td>
<td>7,041 (42.9)</td>
<td>6,384 (542)</td>
</tr>
<tr>
<td>SDA</td>
<td>7,629 (46.5)</td>
<td>7,169 (828)</td>
</tr>
<tr>
<td>TMA</td>
<td>813 (5.0)</td>
<td>783 (70)</td>
</tr>
<tr>
<td>LCR</td>
<td>930 (5.7)</td>
<td>905 (98)</td>
</tr>
<tr>
<td><strong>Quarter</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apr–Jun 2003</td>
<td>1,032 (6.3)</td>
<td>1,015 (115)</td>
</tr>
<tr>
<td>Jul–Sep 2003</td>
<td>2,408 (14.7)</td>
<td>2,316 (250)</td>
</tr>
<tr>
<td>Oct–Dec 2003</td>
<td>5,301 (32.3)</td>
<td>5,013 (492)</td>
</tr>
<tr>
<td>Jan–Mar 2004</td>
<td>7,672 (46.7)</td>
<td>6,897 (681)</td>
</tr>
</tbody>
</table>

**Abbreviations:**
- pos. – positive; CI – confidence interval; PCR – polymerase chain reaction; SDA – strand displacement assay; TMA – transcription mediated assay; LCR – ligase chain reaction.
- * Only persons responding to the question are included in totals.
- † Includes gynaecology, infertility, colposcopy and antenatal services.
- ‡ Includes chlamydia screening office, outreach activities and unknown clinic types.
The collection of behavioural risk data within the NCSP has been controversial. The data reported in the first year of the programme has illustrated the usefulness of these data. We found that behavioural risks were quite common in the screened population, but varied by sex. For women, having a new sex partner or more than one sex partner was associated with a 32–57% increase in risk of infection, even after adjusting for all other factors, including age (Figure 6).

Among men, there was no difference in chlamydia positivity between men with behavioural risk factors and those without; however, this may be partially due to the small sample size of the male population. This information has allowed us to further refine our analysis of the epidemiology of infection within this population, has contributed to our understanding of the behavioural components contributing to the spread of chlamydia, and will allow us to monitor behavioural changes within the screened population that may affect our disease control efforts.

Figure 6. Chlamydia positivity by sex and behavioural risk, screened outside GUM settings, NCSP, England, 2003/04
4.5 Geographic variations

Because the programme only has one year of data so far, it is not possible to perform important analyses of the geographic distribution of disease and the determinants thereof. However, in future years we will be able to report on SHA and PCT level trends in positivity. We will also be able to assess screening access through investigation of the tested population’s PCT of residence versus the PCT of the clinic they attend. Further years’ data will also be used to assess screening uptake and coverage. We will be able to compare estimates of the sexually active male and female young adult population within PCTs with the screening data reported to measure increase in the number and proportion being tested within various geographic boundaries. These analyses combined will provide important information for programme planning and resource allocation in the future as participating PCTs begin to take on chlamydia screening within their mainstream funding.

4.6 Patient outcomes

Aggregate summary data for people testing positive within the NCSP and the outcome of their treatment and partner follow-up are reported annually by programme areas to the DH, and collated by HPA. Because these are aggregate totals, only summations of each data item can be presented; statistical analysis is not possible. The patient management data as reported by each phase 1 programme area is presented in Table 6.
Table 6. Patient management and partner follow-up data reported in aggregate for national programme monitoring, NCSP, England, 2003/04

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of positive NCSP tests</td>
<td>3,763 positives</td>
</tr>
<tr>
<td>Number of positives treated</td>
<td>3,697 of positives were treated 98% treatment completion rate Adam 50% were treated at GUM 768 (21%) were treated at the local chlamydia office 310 (8%) were treated at a contraception clinic 760 (21%) were treated elsewhere</td>
</tr>
<tr>
<td>Number of partners reported by chlamydia-positive patients</td>
<td>3,255 partners were reported for 2,425 (64% of all) chlamydia-positive patients*</td>
</tr>
<tr>
<td>Number of partners contacted</td>
<td>1,768 (54%) partners were contacted by patients 100 (3%) partners were contacted by clinical staff 58 (2%) partners attended voluntarily 668 (21%) partners were not contacted 661 (20%) partners had unknown contact status 59% partner contact rate</td>
</tr>
<tr>
<td>Number of partners treated</td>
<td>1,459 partners had confirmed treatment 45% partner treatment completion rate 76% effective partner treatment rate†</td>
</tr>
<tr>
<td>Treatment location for positives</td>
<td>711 (49%) partners were treated at GUM clinics‡ 197 (14%) partners were treated at the CSO 268 (15%) partners were treated at a contraception clinic§ 218 (15%) partners were treated elsewhere 65 (5%) partners had unknown treatment location</td>
</tr>
<tr>
<td>Number of partners tested</td>
<td>1,065 of contacted partners were tested 55% effective partner testing rate†</td>
</tr>
<tr>
<td>Testing location for partners</td>
<td>542 (51%) tested partners attended GUM clinics 68 (6%) tested partners attended the CSO 55 (5%) tested partners attended contraception clinics 400 (38%) tested partners attended elsewhere</td>
</tr>
<tr>
<td>Number of partners testing positive</td>
<td>731 (69%) tested partners had a positive chlamydia test</td>
</tr>
</tbody>
</table>

* Several programme areas could not report partner follow-up data.
† Effective rate has number of contacted partners (n = 1,926) as denominator.
‡ One programme area indicated partners were treated in both CSO and GUM; data combined into GUM.
§ One programme area indicated partners were treated in both family planning clinic and CSO; data combined into contraception clinic.
Phase 1 programme areas reported patient management and partner follow-up data for 3,763 chlamydia-positive patients. Almost all of those (98%) found through the screening programme were confirmed to have been successfully treated. We know from other data sources that the principal line of therapy was single dose Azithromycin, which has been shown to be highly effective at curing genital chlamydial infections. Over half of all reported partners were contacted and over 75% of the contacted partners had effective treatment confirmed. Uptake of testing by contacted partners was less than the uptake of treatment (55% versus 76%). This was not surprising, as the original screening pilot found similar outcomes (unpublished data).

There are several observations with the patient management and partner follow-up data that warrant highlighting. First, positive patients do not necessarily have to be treated at a GUM clinic. Treatment in community settings can and does occur, without compromising treatment completion rates for chlamydia-positive patients. Second, if contacting of partners is done, the primary route will be through the index patients, not by clinical staff. Over 90% of all partners that are confirmed to have been contacted were done so by the chlamydia-positive patient. Third, if partners are contacted, they will accept treatment. We observed an over 75% effective treatment completion rate among the partners during the first year of the NCSP. Further, as with patient treatment, partners can be treated at many locations, not just GUM clinics. About half of all treated partners received their therapy outside GUM settings. Additionally, partner testing will be less than partner treatment, but those partners who do accept testing have an extremely high probability of testing positive. We found 7 out of 10 partners tested had chlamydia. Thus the two-pronged approach of prophylaxis for partners not agreeing to testing and treatment for those testing positive will have the most benefit in interrupting the transmission cycle.

Finally, these data illustrate that patient management and partner follow-up can occur in settings not previously thought to be either willing or able to do these activities. This has important implications for local programme implementation schemes, both those occurring in phase 1 areas, as well as those currently being planned in phase 2 areas. Local communities should be encouraged by these data that show patients will not be lost and partners can successfully be treated if other clinics in the community are involved in these aspects of the screening programme. By involving a variety of clinical settings in the patient management and partner follow-up for people testing positive, the workload can be shared across multiple locations thus increasing the efficient use of resources and reducing the burden on GUM clinics.
5 Allied developments in the field

5.1 Other research studies

Chlamydia testing, funded as part of the National Survey of Sexual Attitudes and Lifestyles (Natsal 2000), confirmed the prevalence of disease in the general population and the demographic and behavioural factors associated with prevalent undiagnosed infection. A description of, and early findings from, the recently completed Chlamydia Screening Studies (ClaSS) in Bristol were recently presented in the journal *Sexually Transmitted Infections*. This study examined alternative approaches to screening using postal specimens; potential partner notification approaches; and appropriate test/specimen combinations for use in the field. In that same journal issue, Adams et al. modelled the health care costs of this kind of screening programme and estimated the average cost (with partner management) was approximately £21 per screening test and £38 per case identified. This model, however, does not address cost-effectiveness, an analysis that would require greater knowledge of outcomes.

Another DH-funded study examining chlamydia incidence and re-infection among screened individuals is currently underway, with results expected by the end of 2004. Taken in context, these studies provide a robust evidence base to inform subsequent developments of the national screening programme.

5.2 Improving chlamydia diagnostic tests

Microbiology laboratories in screening areas have required additional investment and training to facilitate the use of NAATs, quality assurance and control. In areas where screening monies are being used to invest in NAATs, care is needed to avoid creating a two-tier service in which routine diagnostic tests are performed using lower sensitivity assays.

Sir Liam Donaldson (CMO) wrote to SHAs in September 2003 (CEM/CMO/2203) and outlined the clinical governance issues raised by the continued use of sub-optimal tests for the detection of *Chlamydia trachomatis* infection in England. The CMO also announced a

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further £8 million investment by DH to assist NHS laboratories to support the change to NAATs.

Twenty-seven SHAs coordinated 73 bids from a consortium of PCTs. While not all PCT bids were approved (primarily due to low testing volumes and lack of central networking of laboratories) all 27 SHAs were allocated funds. This process will result in all SHAs in England having access to NAATs technology.

5.3 Involving men in chlamydia screening

The results of the first year of screening activities confirm the high prevalence of asymptomatic genital chlamydial infection in men and the difficulties opportunistic methods have in identifying and testing them. Although the NCSP actively includes men and women in all screening activities, effective strategies need to be developed and evaluated and good practice shared. Greater effort will be needed to ensure that men themselves are aware of chlamydia, its effects and strategies for its prevention and control. In this regard, the NCSP has the potential to make a substantial contribution to improving men’s sexual health in the coming years.

Throughout 2003/04, ongoing work by the Men’s Health Forum has been underway with the Men and Chlamydia project. This project is largely funded by DH using ‘Section 64’ monies. The project has three primary objectives:

- Increase men’s awareness of chlamydia
- Promote the adoption of safer sexual practices
- Encourage men to seek screening and treatment where appropriate.

Final evaluation and results are expected in winter 2004.
6 Challenges facing the NCSP

Some of the major implementation issues during 2003/04 are discussed below.

6.1 Staffing and recruitment problems

As with other areas in the NHS, the NCSP has not been immune to difficulties with staff recruitment and retention. Some phase 1 areas viewed the DH pump-priming funds as a means of expanding local capacity before commencing chlamydia screening activities – resulting in delayed local implementation.

The NCSSG and CAG have been reviewing this matter and have recommended a number of strategies to overcome these issues for future phases.

6.2 Engaging general practice

While the value of screening in primary care was shown in the pilot study, inclusion of general practice was not mandatory for phase 1. Programmes could include this setting on a ‘cost-neutral’ basis, again unlike the pilot study where payments were made to general practice for their involvement.

However, the first year demonstrated that opportunistic screening can and does occur in a wide variety of settings, including primary care. One hundred and thirty-one general practices from five programme areas reported screening, without direct payments for participation. While it is noted that this may be largely due to good will and a reflection of the enthusiasm of primary care colleagues, it does suggest that GPs were willing to engage in the programme.

Over 10% of all screening tests were obtained from general practice, and that proportion increased throughout the first year. Strong efforts were made by both the national management team and local chlamydia screening coordinators and their teams, to engage primary care and to ease the implementation of screening in those settings. Creative delivery strategies utilized in phase 1 programme areas address some of the barriers to screening within general practice, including:

- allowing patients to self-select for screening and self-complete the test request form (saving time);
- training practice nurses to make appropriate invitations for screening (reducing the need for expensive medical consultant involvement);
- covering administrative time for specimen and data collection (augmenting costs);
• shifting the responsibility for notification of results and follow-up to the local CSO (reducing workload burden within general practice); and

• empowering GPs and their staff to holistically attend to the physical and sexual health needs of their young adult population (enhancing the skills and capabilities of general practice staff).

The lessons learned about implementing screening in primary care from the first phase of the programme have informed the development of guidelines for chlamydia screening in general practice as well as model local enhanced service contracts outlining set standards and outcomes for screening in this setting. The devolved nature of general practice provision in England means that efforts to encourage local involvement of GPs in chlamydia screening will be a challenge to the programmes in coming years and developments and progress will be reported in future annual reports.

6.3 Chlamydia screening office

Finding suitable accommodation for the CSO has been a concern in some areas. This may reflect difficulties in identifying and renting appropriate accommodation, or in some cases ensuring adequate staffing and procuring equipment. The roles and responsibilities of the CSO are outlined in the screening manual. However, in practice, each CSO will have unique functions and inter-relationships with their screening sites. When treating chlamydia-positive patients outside of the CSO, clear processes are needed to ensure the CSO knows what has happened to complete the management audit cycle for both index patients and their contacts. For some programme areas, closing the audit loop has been challenging.

6.4 Quality assurance

The multi-site nature of local screening activity, with some sites still not computerised, will need to be addressed, in particular dataflow logistics and centralising data management. As and when local programmes become established, performance management and quality assurance arrangements will be required to ensure that chlamydia screening activity is maintained over time.
6.5 Increasing coverage across sites and within clinical settings

A key strategy for improving the effectiveness of chlamydia screening is to ensure that (a) screening is offered in as many clinical and non-clinical care settings as possible within a programme area, and (b) that within each setting, the proportion of attenders offered screening (and the screening volume) remains high.

(a) Although data from the first year of screening is highly encouraging and attests to the feasibility of offering opportunistic screening in a variety of settings outside of GUM clinics, LCSSGs should be looking to expand the number and range of sites offering screening within their locality over time. A key strategy for achieving this will be to increase the number and types of general practices offering screening.

(b) Increasing screening activity and testing volume within specific settings remains a second challenge to programme implementation. The benefits of having a wide range of clinical settings within a local programme will be diminished if only a minority of attendees are offered screening. The factors influencing screening volume are many and include: staff motivation, ongoing education, monitoring, evaluation, feedback mechanisms and resourcing. It is the LCSSG’s responsibility to ensure that local screening volumes are monitored regularly, and to ensure that these data are fed back to sites so that problems with site recruitment are identified and tackled early.

Implementing the NCSP has highlighted a range of challenges at the local and national levels which will need to be tackled proactively in the coming year.

Over the next three years, the NCSSG will continue to oversee and advise on the phased implementation of the NCSP in England. This will include development work related to the structure, process and outcomes of chlamydia screening, laboratory work related to test technology improvements, and recommendations on age-appropriate screening.
# Appendix

## Membership of the National Chlamydia Screening Steering Group (NCSSG) 2002–04

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Member</th>
</tr>
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<tbody>
<tr>
<td>HPA</td>
<td>Kevin Fenton (Chair)<em>&lt;br&gt;D. Scott LaMontagne</em> and&lt;br&gt;Gwenda Hughes</td>
</tr>
<tr>
<td>British Association for Sexual Health and HIV</td>
<td>Angela Robinson and Jan Clarke</td>
</tr>
<tr>
<td>DH advisor</td>
<td>Sarah Randall*</td>
</tr>
<tr>
<td>Phase 1 Chlamydia Programme (Wirral)</td>
<td>Jenny Hopwood</td>
</tr>
<tr>
<td>Clinical pathologists</td>
<td>Alan Herring, Harry Mallinson and&lt;br&gt;Geoff Ridgway</td>
</tr>
<tr>
<td>Faculty of Family Planning</td>
<td>Chris Wilkinson</td>
</tr>
<tr>
<td>Family Planning Association</td>
<td>Toni Belfield</td>
</tr>
<tr>
<td>National Screening Committee</td>
<td>Muir Grey</td>
</tr>
<tr>
<td>Regional Public Health Group</td>
<td>Julia Verne and Heather Grimbaldeston</td>
</tr>
<tr>
<td>Royal College of General Practitionans</td>
<td>William Ford-Young</td>
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<tr>
<td>Royal College of Nursing</td>
<td>Sue Capstick and Kathy French</td>
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<tr>
<td>Royal College of Obstetricians and Gynaecologists</td>
<td>Allan Templeton</td>
</tr>
<tr>
<td>Society of Sexual Health Advisers</td>
<td>Clare Johnson and Tina Sharp</td>
</tr>
<tr>
<td>British In-vitro Diagnostic Association</td>
<td>Doris-Ann Williams</td>
</tr>
<tr>
<td>Department of Health (Secretariat)</td>
<td>Peter Carter*, Sally Anderson*,&lt;br&gt;Andrea Duncan*, Alison Austin,&lt;br&gt;Liam Toohill</td>
</tr>
</tbody>
</table>

* denotes membership of the Chlamydia Advisory Group (CAG)
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