



Public Health
England

Protecting and improving the nation's health

Partner notification in chlamydia screening

National audit report

May 2016

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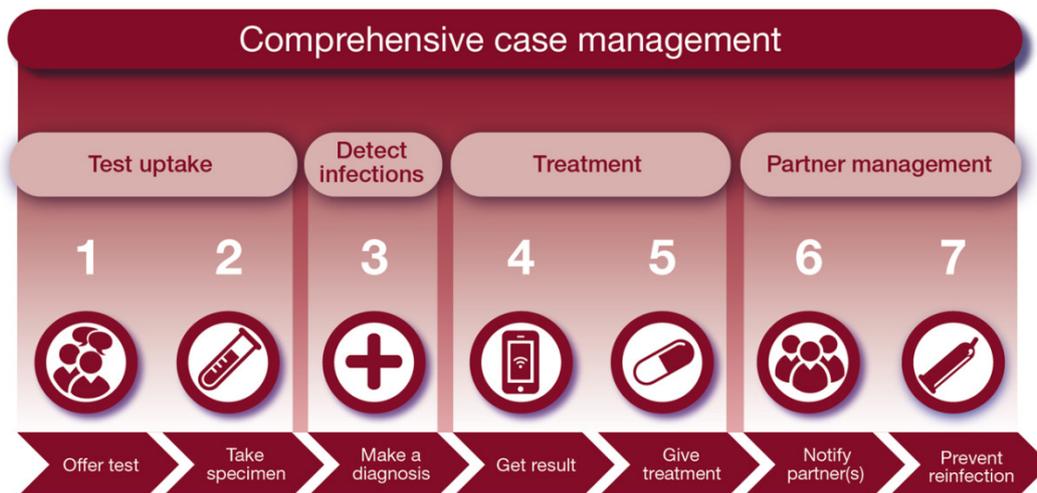
Contents

Executive summary	4
Introduction	7
Methodology	8
Findings	9
Response rate	9
Partner notification rates: performance against standards	11
Proportion of contacts that attended a sexual health service	16
Partner outcomes	17
Chlamydia positivity in contacts	17
Summary, discussion and recommendations	18
Appendix 1: Audit methodology	20

Executive summary

Partner notification (PN) is a key component in the management of chlamydia. PN is the process by which sexual partners of individuals with diagnosed sexually transmitted infections (STIs) are notified, informed of their exposure and offered treatment for infection. PN is an essential part of comprehensive case management and enables the detection of new infections, as well as limiting the risk of ongoing transmission and reinfection to previously treated individuals. Partner management is one of the four stages of the National Chlamydia Screening Programme (NCSP) Chlamydia Care Pathway with specified indicators for partner notification in step 6, see diagram 1.

Diagram 1 NCSP Chlamydia Care Pathway



The NCSP follows the British Association of Sexual Health and HIV's (BASHH) PN guidance. This audit focused on the following three of the four auditable BASHH outcome measures:

1. The proportion of index cases documented as offered at least one discussion for the purpose of PN.
2. The number of all contacts whose attendance at a sexual health service offering services at Level 1, 2 or 3 was documented as reported by the index case, or by a healthcare worker (HCW) discussion, within four weeks of the date of the first PN discussion.
3. The number of all contacts whose attendance at a sexual health service offering services at Level 1, 2 or 3 was documented as verified by a HCW, within four weeks of the date of the first PN discussion.

The audit results show that none of the PN auditable outcome standards were met:

Measure	Standard	Audit results
1. Proportion of index patients offered a PN discussion	97%	92%
2. Proportion of contacts reported to have attended a sexual health service within four weeks of the date of the first PN discussion.	0.6	0.53
3. Proportion of contacts whose attendance at a sexual health service was verified by a healthcare worker within four weeks of the date of the first PN discussion.	0.4	0.29

The audit data also reveals:

- nearly one third (675) of the 2186 contacts with a documented outcome were informed of the risk of infection ('a' in table 4)
- of all contacts, 58% (1674/2186) were reported to have attended a sexual health service at some time
- 9% (206/2186) were already known to have chlamydia infection, and 40% (875/2186) went on to have a chlamydia test (table 4 in the report)
- of those that proceeded to have a chlamydia test, 62% (544/875) were found to be positive, indicating that PN is an effective way of identifying chlamydia positive individuals
- the majority of contacts were reported to have attended a sexual health service within 5 days of the PN discussion with the index patient (average 3.2 days). This will help in reducing the time for onward transmission and risk of reinfection
- only three quarters of all contacts were deemed to be contactable, making effective partner notification impossible

Recommendations

Based on these audit data, the following recommendations apply:

- where PN offer is low, providers need to ensure that they review their PN processes and ensure PN is undertaken in line with best practice guidelines from BASHH and the Society of Sexual Health Advisors (SSHA)

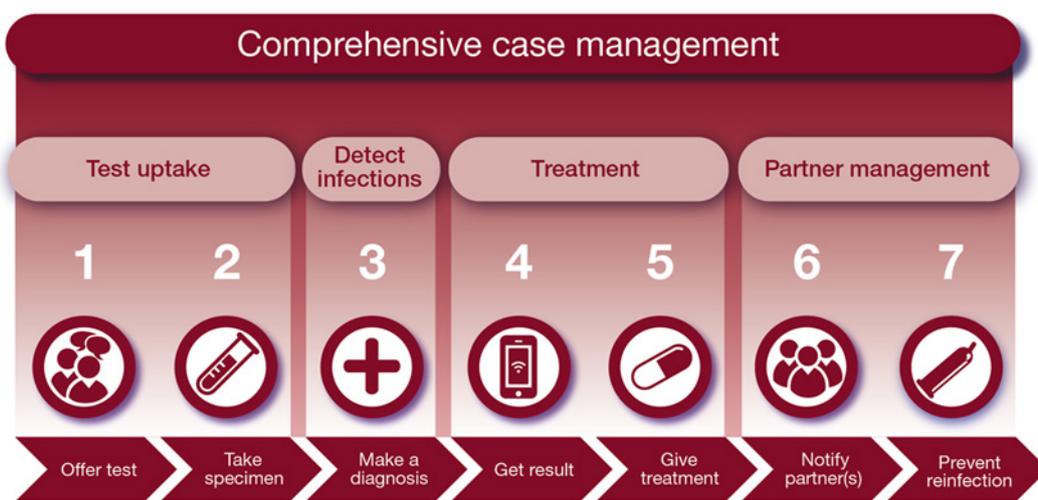
Partner notification in chlamydia screening

- where the standard of 0.6 contacts per index patient is not being met: providers need to ensure that timely attendance at a sexual health service is encouraged through for example:
 - supporting index patients to speak with partners
 - offering appropriate PN method including provider referral when needed
 - reviewing pathways to ensure access to appropriate care for the partners and minimise potential barriers to testing
- ensure that wherever possible more than one method of contacting a partner is recorded for each sexual partner, in order to inform partners of potential exposure and maximise chance of testing and treatment
- improve recording of PN outcomes to support and monitor improvement in PN

Introduction

Partner notification (PN) is a key element in the identification, management and control of chlamydia. Partner management is one of the four stages of the NCSP Chlamydia Care Pathway with specified indicators for PN, see figure 1.

Figure 1 NCSP Chlamydia Care Pathway



Improving PN outcomes can help to support other key measures such as the detection rate indicator as positivity is high and can lead to further PN.

The NCSP follows the British Association of Sexual Health and HIV's (BASHH) PN guidance¹. From a public health perspective it is essential to minimise onward transmission of chlamydia infection; this audit focused on the 'notify partners' component of the chlamydia care pathway and three of the four BASHH auditable outcome measures for PN:

1. The proportion of index cases documented as offered at least one discussion for the purpose of partner notification. Performance standard 97%
2. The number of all contacts whose attendance at a sexual health service offering services at Level 1, 2 or 3 was documented as reported by the index case, or by a healthcare worker (HCW) discussion, within four weeks of the date of the first PN discussion. Performance standard: at least 0.6 contacts per index case
3. The number of all contacts whose attendance at a sexual health service offering services at Level 1, 2 or 3 was documented as verified by a HCW, within four weeks of the date of the first PN discussion. Performance standard at least 0.4 contacts per index case

¹ McClean H. BASHH Statement on Partner Notification for Sexually Transmissible Infections. 2012.

The report also presents the findings of further analysis of the submitted data that providers and commissioners may find useful in reviewing their partner notification outcomes and inform improvements where required.

Methodology

A PN audit tool was developed to measure partner notification rates across chlamydia screening providers in England. Prior to its use it had been piloted across three chlamydia screening sites. [Appendix 1](#) contains more detail on the audit methodology and process used. Upon completion of the data entry, the tool presented the results of the audit immediately for a number of output indicators, including:

- proportion of contacts that attended a sexual health service within 28 days of date of PN discussion with index patient as reported by the patient or a healthcare worker compared to the standard of 0.6 contacts/index case
- proportion of contacts that attended a sexual health service within 28 days of date of PN discussion with index patient as verified by a healthcare worker compared to the standard of 0.4 contacts/index case
- proportion of contacts of all contacts that attended a sexual health service
- PN outcomes
- proportion of contacts that had a positive test result out of those that had a chlamydia test (positivity)

Invitations to participate in the audit were emailed to a distribution list of providers of chlamydia screening that PHE collates through its network of sexual health facilitators who are linked to each of the nine PHE centres across England. The completed audit tools that were returned were collated into a single database which was analysed to produce the findings in this report.

Note on calculating PN outcomes

We are aware that PN outcomes may be calculated differently by different services. The NCSP sought guidance from the BASHH Clinical Effectiveness Group (CEG). Based on guidance, for this audit we calculate the PN ratio as follows:

a contact whose attendance date at a sexual health service was within 28 days (20 working) of the date of the PN discussion was counted as meeting the standard. Contacts with attendance dates either before the date of PN discussion with the index patient, or after 20 working days, were excluded and not considered to meet the standard

Findings

This section reports on:

- response rate
- performance against the PN standards
- proportion of contacts that attended a sexual health service
- PN outcomes
- Positivity at testing of contacts

Response rate

Across England 120 invitation were sent out. The response rate was just over 50% with some regional variation. This is presented in Figure 2 and Table 1.

Figure 2: Response rate to the invitation to take part in the audit

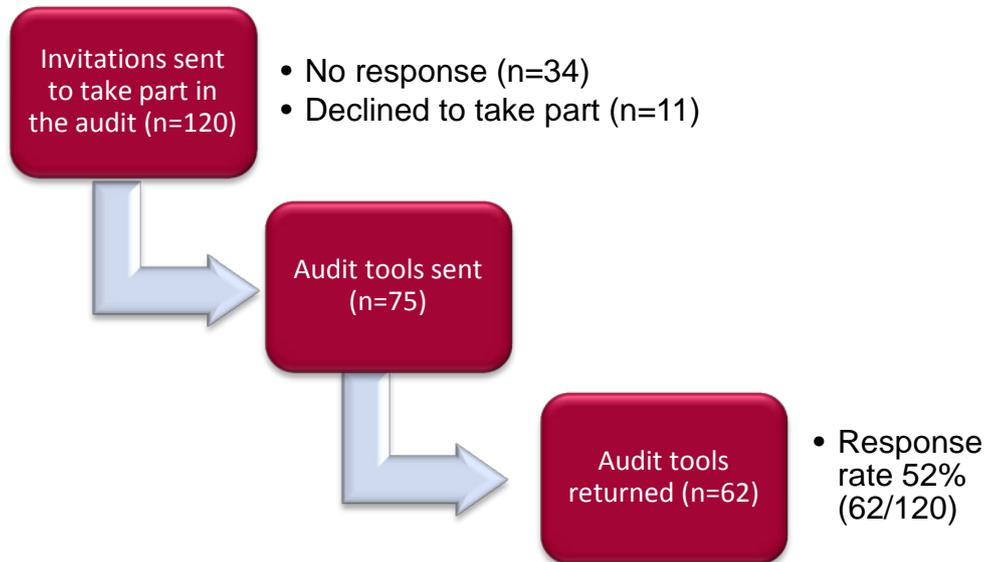


Table 2 shows the variation in response rate by PHE Centre. The response rate ranged from 14% (Yorkshire and Humber) to 79% (North West).

Table 1: Audit response rate by PHE Centre

PHE Centre	Number of invitations sent	Number of tools returned	Response rate
East Midlands	10	4	40%
East of England	12	7	58%
London	21	16	76%
North East	9	6	67%
North West	19	15	79%
South East	13	4	31%
South West	9	6	67%
West Midlands	13	2	15%
Yorkshire and Humber	14	2	14%
England	120	62	52%

Table 2 presents the reasons given for declining to take part in the audit upon receiving the invitation.

Table 2: Reasons for declining to take part in the audit

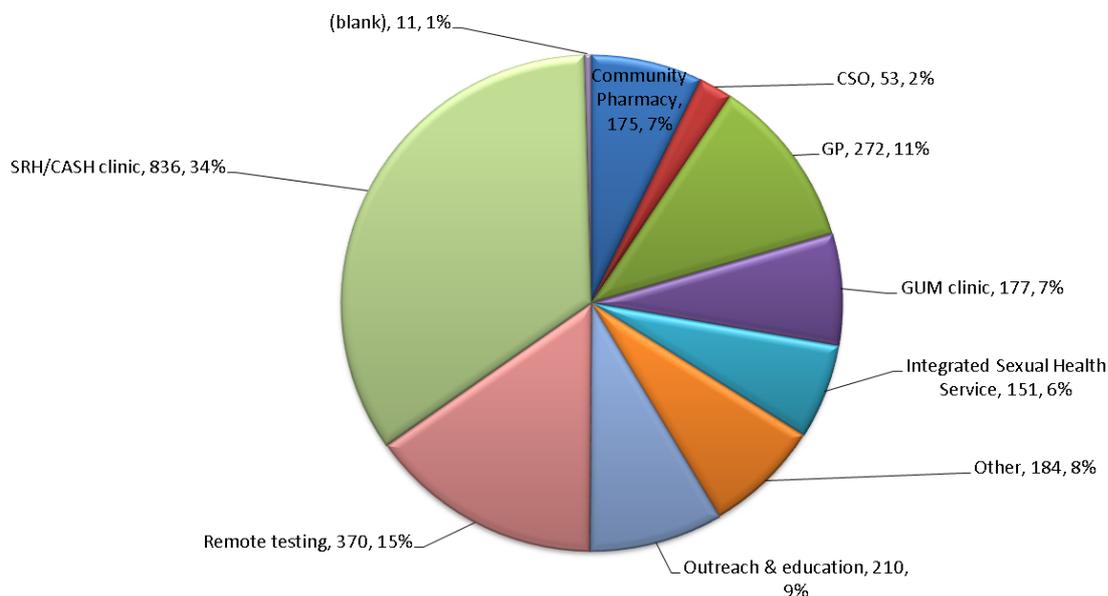
Reason	Number
Lack of capacity	5
Changed to a new database system and difficulty retrieving old data old system	3
New provider, no data available for audit period	3
Total	11

Response rate by initial testing service type

Chart 1 presents the distribution of the testing service types of the index patients. The majority of audit records (34%) originated from contraceptive and sexual health services/sexual and reproductive health (CASH/SRH) services, followed by those that tested using home sampling kits² (15%), general practice (GP) (11%) and outreach and education (9%). Level 3 genito-urinary medicine (GUM) services represent 7% of the audit data set.

² Home sampling and postal kits have been used interchangeably, also known as remote testing, ie sampling by the young person, that does not take place in a traditional healthcare setting

Chart 1: Proportion and number of audit records by testing service type of index patients (n=2439)



Partner notification rates: performance against standards

This section contains the audit results on the following three standards:

1. The proportion of index cases documented as offered at least one discussion for the purpose of partner notification. Performance standard 97%
2. The number of all contacts whose attendance at a sexual health service offering services at Level 1, 2 or 3 was documented as reported by the index case, or by a healthcare worker (HCW) discussion, within four weeks of the date of the first PN discussion. Performance standard: at least 0.6 contacts per index case
3. The number of all contacts whose attendance at a sexual health service offering services at Level 1, 2 or 3 was documented as verified by a HCW, within four weeks of the date of the first PN discussion. Performance standard at least 0.4 contacts per index case

Proportion of patients offered a PN discussion

Nationally, 92% of index patients in the audit sample had a documented offer of PN, not achieving the standard of 97%. For 172 patients the reasons for not offering PN was recorded as shown in table 3. The main reasons were 'no documented evidence of PN in the notes', and 'lost to follow up before PN initiated'.

Table 3 Reasons for not offering a PN discussion

Reason	Number	Proportion of those not offered
no documented evidence of PN	48	28%
lost to follow up before PN initiated	47	27%
documented that PN performed elsewhere	30	17%
patient transferred care	20	12%
other	20	12%
patient routinely seen for SH care elsewhere	7	4%
Total	172	100%

Patient or healthcare worker reported attendance

The NCSP follows the BASHH Standards for the management of Sexually Transmitted Infections 2014 on PN for chlamydia³. The measure for PN is “the percentage of all contacts of index cases of chlamydia who attend a service commissioned to manage STIs within four weeks of the date of first PN discussion”. A contact’s attendance at a service can be reported by the index patient or a healthcare worker. For this measure the performance standard is 0.6. When the attendance has been verified by a healthcare worker, the standard is 0.4 contacts per index case.

Following feedback from the pilots and for consistency and pragmatic reasons, the audit tool used by providers of chlamydia screening included as meeting the standard, those attendances 4 working weeks (20 working days) **after** the index PN discussion date, as well as four working weeks (20 working days) **prior** to index PN discussion date.

Following subsequent advice from BASHH, it was clear that only 28 days, or 20 working days, after the PN discussion should be included in the calculation for the auditable outcome measure. For the purpose of this audit we will report on the BASHH advice standard. However, this means that in some cases the local audit tool results may have slightly overestimated PN outcomes. A new updated PN audit tool will be published on the NCSP pages on www.gov.uk to reflect this.

³ BASHH Standards for the management of STIs, 2014

Partner notification in chlamydia screening

Using the national database, the difference between the reported date of attendance and the date of PN discussion with the index patient has been calculated and where this was between 0 and 20 working days (four working weeks), the attendance was considered to fall within the standard. Therefore attendances prior to the PN discussion date or after the four working weeks were not included in the calculation.

Nationally, the performance standard of patient or healthcare worker reported attendance has not been met, and there is a wide range in performance. 1296 contacts were reported to have attended a sexual health service within 20 working days of the date of the PN discussion with the index patient, a ratio of 0.53 contacts per index case (1296 contacts/ 2439 index patients) against the standard of 0.6. The range in achieving this standard was from 0 to 1.23, as shown in chart 2. The top 10% of local authority areas have an average ratio of 1.05.

Chart 2 Range in chlamydia reported PN ratio

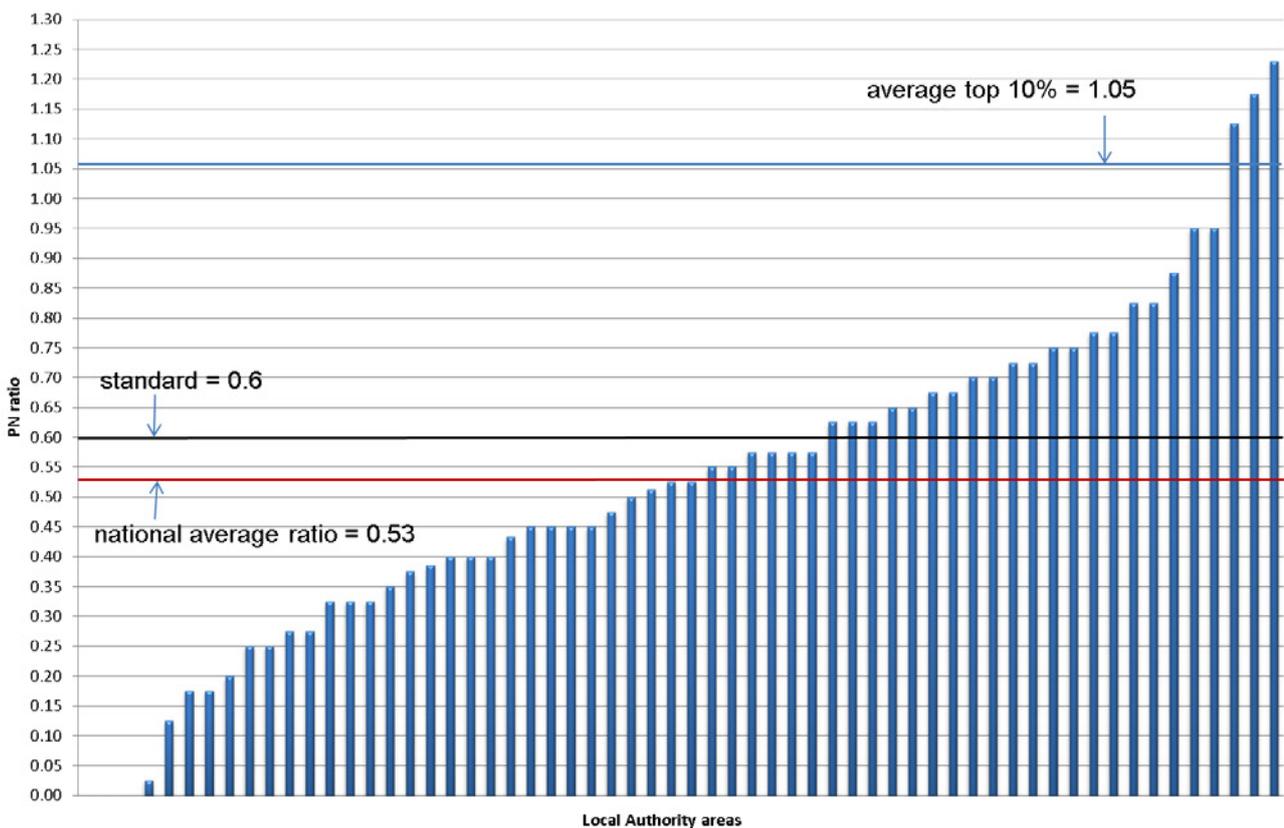
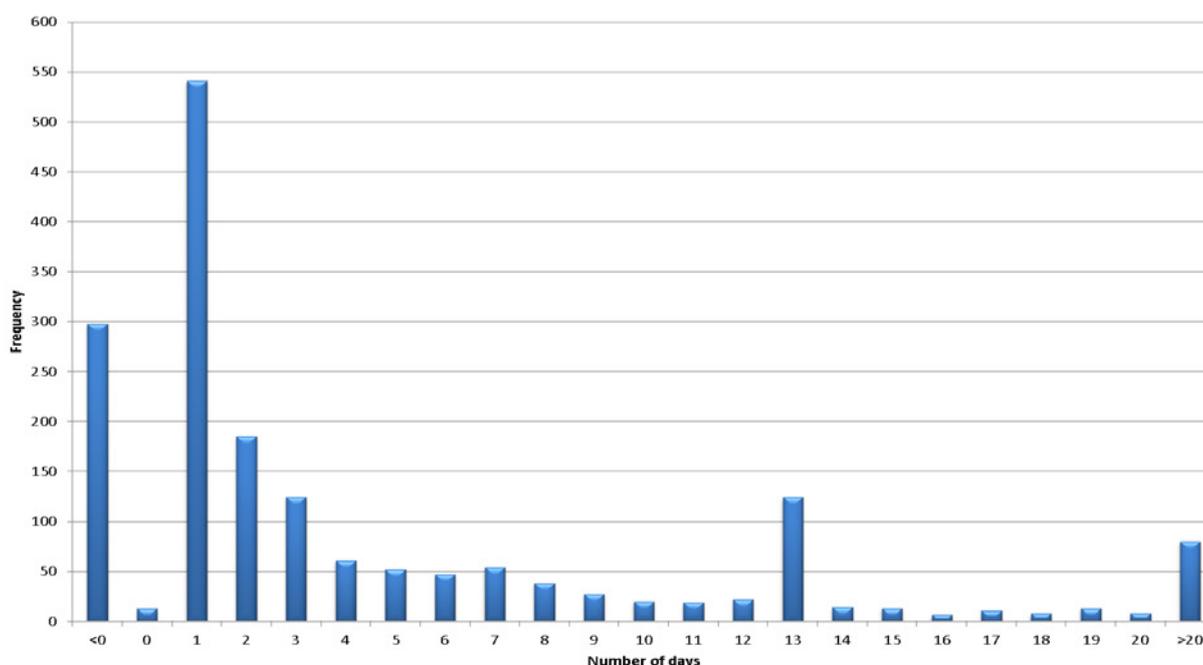


Chart 3 presents the range and the frequency in the number of days between date of PN discussion with the index patient and the contact's reported attendance at a sexual health service. While the majority of contacts with a reported attendance date attended a service within 5 working days (national average 3.22 days), the long 'tail' where the length of time is longer, results in the standard not being met. Where the difference in days between PN discussion and attendance at a service was less than 0, this is usually the result of the index patient being someone else's contact, and that person having been seen at a service before the date of the PN discussion with the new index case (and therefore these were not included in the PN calculation against the standards as per the BASHH advice to include only those attending after PN discussion date and up to and including 20 working days afterwards).

Chart 3 Frequency and range in the number of days between date of PN discussion and reported contact attendance at a sexual health service



Healthcare worker verified attendance

The BASHH Standards for the management of Sexually Transmitted Infections (2014) no longer have healthcare worker verified attendance as an auditable outcome measure. However, the standards still refer to the PN Statement⁴ which includes this. Feedback from the pilots suggested many service providers still collect this data; therefore it is included in this audit report.

⁴ McClean H. BASHH Statement on Partner Notification for Sexually Transmissible Infections. 2012.

Partner notification in chlamydia screening

Nationally, 699 contacts' attendances at sexual health services within 20 working of PN discussion with index patient were verified by healthcare worker, a ratio of 0.29 (699 verified attendances/2439 index patients). This means the recommended performance standard of 0.4 has not been met. Chart 4 shows the range in achieving this standard. The top 10% of local authority areas have an average ratio of 0.72.

Chart 4 Range in chlamydia verified PN ratio

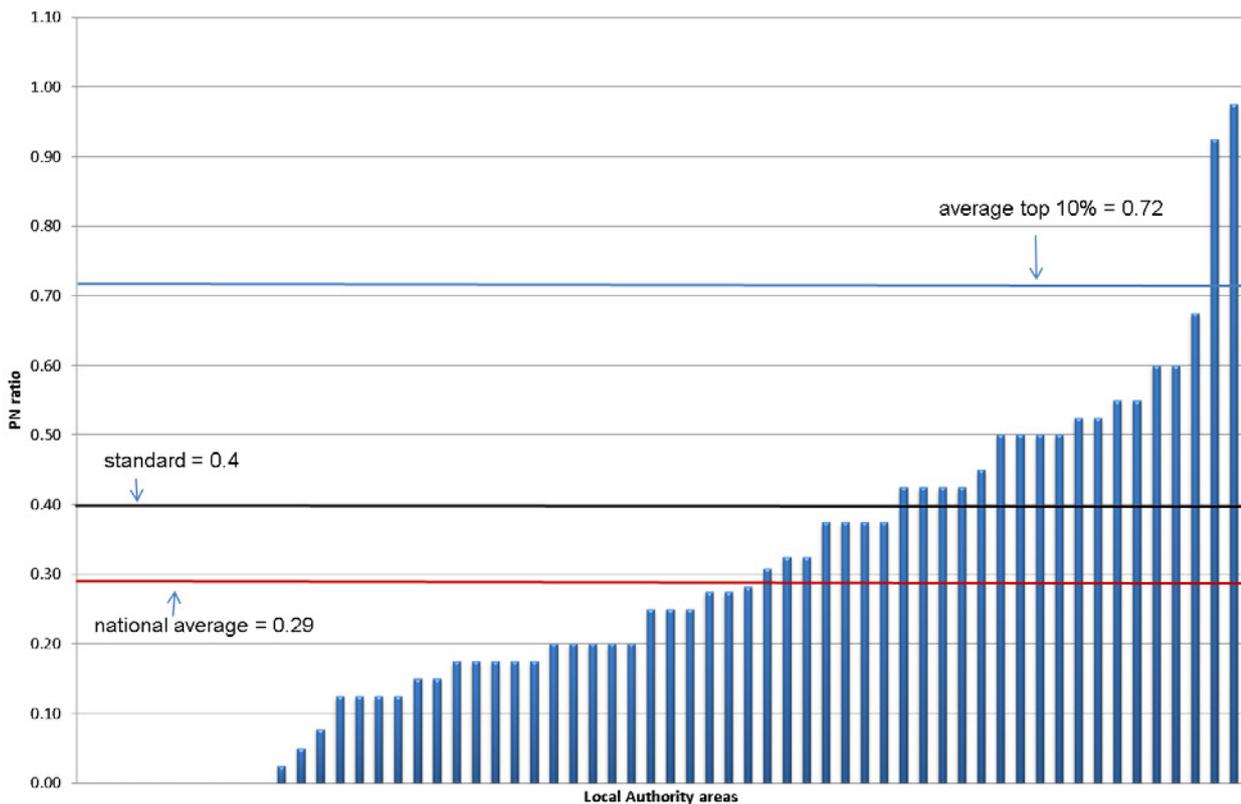
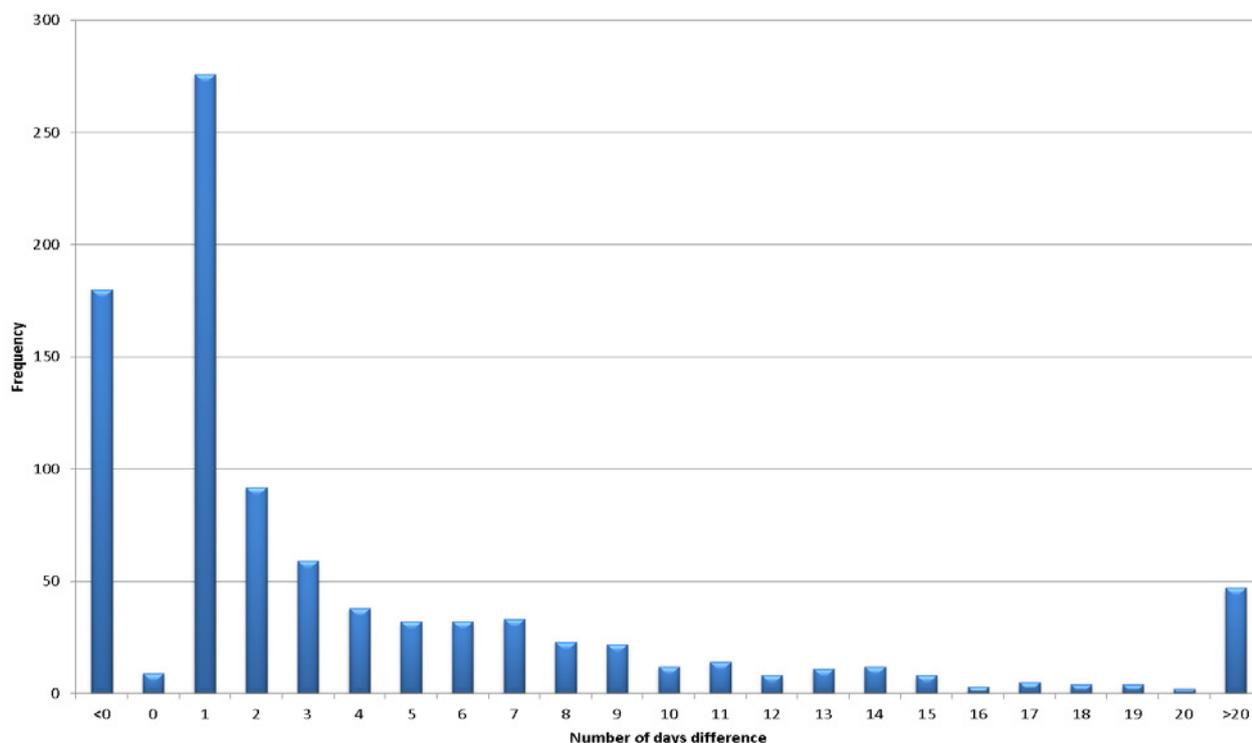


Chart 5 presents the frequency and the range in the number of days between date of PN discussion with the index patient and the contact's verified attendance at a sexual health service. Like the reported attendance, the majority of contacts attended a service within five working days. Where the difference in days between PN discussion and attendance at a service was less than 0, this is usually the result of the index patient being someone else's contact, and that person having been seen at a service before the date of the PN discussion with the new index case.

Chart 5 Frequency and range in the number of days between date of PN discussion and verified contact attendance at a sexual health service



Proportion of contacts that attended a sexual health service

More than half of all contacts (1674/2886, 58%) attended a sexual health service either inside or outside the 20 working days of the date of PN discussion with the index patient. From a personal as well as public health perspective this is important as it ensures that testing and care can be provided to the contact if required. This also offers the opportunity to stop the onward transmission of chlamydia.

It is important to note that of all 2886 contacts, only 71% (2047) were deemed ‘contactable’⁵. The proportion of contactable contacts that attended a sexual health service is significantly higher at 82% (1674/2047).

⁵ A ‘contactable’ contact is defined as a contact for which sufficient baseline contact information has been recorded to enable PN to take place

Partner outcomes

For three quarters of all contacts (2186/2886 contacts), a partner outcome was reported, as presented in table 4. The most frequently reported were:

1. for one third (675, 31%), a record was made that the contact had been informed of the risk of chlamydia infection, but it was not known whether or not they proceeded to have a test
2. contact had a positive test in the same service as the index patient (378, 17%)
3. unknown if contact had been informed of risk of chlamydia infection (324, 15%)

Table 4 Partner outcomes in chlamydia screening

PN outcomes	Number	Proportion
record made that contact informed of risk of chlamydia infection, but not known to have had a chlamydia test (a)	675	31%
contact had a positive test in your service (b)	378	17%
contact not known to have been informed of risk of chlamydia infection (c)	324	15%
contact already known to have chlamydia infection (d)	206	9%
contact had a positive test in another service (e)	166	8%
contact had a chlamydia test, but result not known (f)	176	8%
other	106	5%
contact had a negative test in your service	86	4%
contact had a negative test in another service	69	3%
Total	2186	100%

Chlamydia positivity in contacts

Successful partner notification is an effective way of identifying new chlamydia positive individuals. As table 4 shows, of the 2186 contacts for which partner notification outcome had been recorded, 40% (875, add b,c,d, e and f from table 4) had a chlamydia test. Of those that tested, 544 (add d and e from table 4) were found to be positive for chlamydia, a positivity of **62%**. This highlights the value of effective PN in identifying individuals with infection. Improving PN outcomes can assist in better control of chlamydia infection, as well as assist in achieving a higher chlamydia detection rate.

Summary, discussion and recommendations

Summary of findings

The audit results show that none of the PN auditable outcome standards were met:

Measure	Standard	Audit results
Proportion of index patients offered a PN discussion	97%	92%
Proportion of contacts reported to have attended a sexual health service within four weeks of the date of the first PN discussion.	0.6	0.53
Proportion of contacts whose attendance at a sexual health service was verified by a healthcare worker within four weeks of the date of the first PN discussion.	0.4	0.29

Effective partner notification is essential from a personal as well as public health perspective to ensure that testing and care can be provided to a contact if required, and to minimise onward transmission of the infection. It will also assist in preventing reinfection of the index patient from infected but untreated partners. The audit data also reveals:

- nearly one third (675) of the 2186 contacts with a documented outcome were informed of the risk of infection ('a' in table 4)
- of all contacts, 58% (1674/2186) were reported to have attended a sexual health service at some time
- 9% (206/2186) were already known to have chlamydia infection, and 40% (875/2186) went on to have a chlamydia test (table 4 in the report)
- of those that proceeded to have a chlamydia test, 62% (544/875) were found to be positive, indicating that PN is an effective way of identifying chlamydia positive individuals
- the majority of contacts were reported to have attended a sexual health service within 5 days of the PN discussion with the index patient (average 3.2 days). This will help in reducing the time for onward transmission and risk of reinfection
- only three quarters of all contacts were deemed to be contactable, making effective partner notification impossible

Strengths:

- The audit methodology was robust:
- The tool and data collection were piloted prior to use
- The tool collected patient level data and ensured consistent application of formulae to calculate performance against the standard
- The audit data comprises a large national dataset from across the regions and represents many different testing service types

Limitations:

- Those that returned completed audit tools may have been self-selecting providers that have achieved higher PN ratios than those that did not take part. The impact of this may be to over estimate the PN ratios reported in this audit
- Compared to national chlamydia testing activity, tests from level 3 GUM service are underrepresented in the audit data. GUM clinic records comprised 7% of the audit data, but account for 35% of NCSP tests⁶. PN outcomes in level 3 services may be significantly different to those in other testing service types and therefore impact on the overall findings
- The audit sample did not exclude those index patients that were contacts of a chlamydia positive partner. The consequence of this is that the reported PN ratios include the effectiveness of PN of the initial partner which may have been done at another service. The reported PN measures in this report therefore do not just reflect the effectiveness of PN as undertaken by the service returning the audit tool

Recommendations

Based on these audit data, the following recommendations apply:

- where PN offer is low, providers need to ensure that they review their PN processes and ensure PN is undertaken in line with best practice guidelines from BASHH and the Society of Sexual Health Advisors (SSHA)
- where the standard of 0.6 contacts per index patient is not being met: providers need to ensure that timely attendance at a sexual health service is encouraged through for example:
 - supporting index patients to speak with partners
 - offering appropriate PN method including provider referral when needed
 - reviewing care pathways to ensure access to appropriate care for the partners and minimise potential barriers to testing
- ensure that wherever possible more than one method of contacting a partner are recorded, in order to inform partners of potential exposure and maximise chance of testing and treatment
- improve recording of PN outcomes to support and monitor improvement in PN

⁶ CTAD 2014 data

Appendix 1: Audit methodology

The following data items were required for the audit on a sample of 40 patients found to be positive per provider, going back in time from 30th June 2015:

- name of commissioning authority
- name of service provider
- type of service provider (choice of GUM clinic, SRH/CASH clinic, GP, Community Pharmacy, remote testing, CSO, outreach & education, 'other' (incl prison/YOI, military, ToP, gynae, A&E/MIU, antenatal clinic etc.))
- index patient number (1 to 40)
- date of test
- gender
- age
- type of test site (choice of GUM clinic, SRH/CASH clinic, GP, Community Pharmacy, remote testing, CSO, outreach & education, 'other' (incl prison/YOI, military, ToP, gynae, A&E/MIU, antenatal clinic etc.))
- date of result notification
- date of treatment
- type of treatment site (choice of GUM clinic, SRH/CASH clinic, GP, Community Pharmacy, remote testing, CSO, outreach & education, 'other' (incl prison/YOI, military, ToP, gynae, A&E/MIU, antenatal clinic etc.))
- offered PN? (yes, no, unknown)
- date of PN discussion
- if no PN offered, why not? The drop down offered the following choices:
 - no documented evidence of PN
 - patient routinely seen for SH care elsewhere
 - patient transferred care
 - documented that PN performed elsewhere
 - lost to follow up before PN initiated
 - other
- total number of contacts
- total number of contactable contacts
- date of index patient or HCW reported attendance for testing and treating contact 1, up to 5 contacts
- date of healthcare worker verified attendance for testing and treating contact 1, up to 5 contacts
- PN outcome, drop-down list offered one of the following choices:
 - contact already known to have chlamydia infection
 - contact had a negative test in your service
 - contact had a negative in another service
 - contact had a positive test in your service
 - contact had a positive test in another service

Partner notification in chlamydia screening

- contact had a chlamydia test, but result not known
- record made that contact informed of risk of chlamydia infection, but not known to have had a chlamydia test
- contact not known to have been informed of risk of chlamydia infection
- other

Upon completion of the data entry, the tool showed the results of the audit straightaway in a number of output indicators, including:

- proportion of contacts that attended a sexual health service within 28 days of date of PN discussion with index patient as reported by the patient or a healthcare worker compared to the standard of 0.6 contacts/index case
- proportion of contacts that attended a sexual health service within 28 days of date of PN discussion with index patient as verified by a healthcare worker compared to the standard of 0.4 contacts/index case
- PN outcomes
- Proportion of contacts of all contacts that attended a sexual health service
- proportion of contacts that had a positive test result out of those that had a chlamydia test (positivity)

An initial email was sent to a range of chlamydia screening providers (or in some cases to commissioners) on 13 November 2015 to invite them to take part in the audit. Those that responded were sent the PN audit tool and the deadline for submissions was 15 December 2015. The response rates have been reported in the main body of the report.