Chlamydia Testing Activity Dataset (CTAD)

Main Submission Document

Draft/Full Operational Information Standard
Amendment History:

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Amendment History</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>03.05.2011</td>
<td>First draft for comment</td>
</tr>
<tr>
<td>1.1</td>
<td>13.05.2011</td>
<td>Amended draft following comments from ISB</td>
</tr>
<tr>
<td>1.2</td>
<td>23.05.2011</td>
<td>Revised version following ISB appraisal meeting on 17.05.11</td>
</tr>
</tbody>
</table>

Related Documents:
The documents listed below provide additional information and can be found in the Supporting Documents pack.

<table>
<thead>
<tr>
<th>Supporting Document Number</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SD1</td>
<td>Chlamydia Testing Activity Survey</td>
</tr>
<tr>
<td>SD2</td>
<td>Vital Signs Indicator – Dept of Health Gateway Ref</td>
</tr>
<tr>
<td>SD3</td>
<td>Vital Signs Indicator – Technical Appendix</td>
</tr>
<tr>
<td>SD4</td>
<td>NCSP VSI Tables (April to December 2010)</td>
</tr>
<tr>
<td>SD5</td>
<td>GUMCAD DSCN 04/2008</td>
</tr>
<tr>
<td>SD6</td>
<td>Public Accounts Committee Report, 2009-10</td>
</tr>
<tr>
<td>SD7</td>
<td>Testing specimens for Chlamydia trachomatis. BMJ. Skidmore et al.</td>
</tr>
<tr>
<td>SD8</td>
<td>Non-GUM, non-NSCP Laboratory Audit Report</td>
</tr>
<tr>
<td>SD9</td>
<td>CTAD Phase 1 Pilot Report</td>
</tr>
<tr>
<td>SD10</td>
<td>CTAD Phase 2 Pilot Report</td>
</tr>
<tr>
<td>SD11</td>
<td>NIGB approval for CTAD</td>
</tr>
<tr>
<td>SD12</td>
<td>Health Protection (Notification) Regulations</td>
</tr>
<tr>
<td>SD13</td>
<td>NCSP Core Requirements – 5th Edition</td>
</tr>
<tr>
<td>SD14</td>
<td>CTAD Steering Group Members</td>
</tr>
<tr>
<td>SD15</td>
<td>ROCR ministerial approval (Email from Parliamentary Under Secretary of State for Public Health to DH)</td>
</tr>
<tr>
<td>SD16</td>
<td>ROCR Approval for NSCP Dataset Collection</td>
</tr>
<tr>
<td>SD17</td>
<td>HIV and STI Web Portal User Guide</td>
</tr>
<tr>
<td>SD18</td>
<td>CTAD Technical Guidance and Specification</td>
</tr>
<tr>
<td>SD19</td>
<td>NCSP Patient Information Leaflet</td>
</tr>
<tr>
<td>SD20</td>
<td>CTAD Cost/Benefit Analysis</td>
</tr>
<tr>
<td>SD21</td>
<td>CTAD Clinical Safety Reports</td>
</tr>
<tr>
<td>SD22</td>
<td>HPA Position Statement for Stakeholders</td>
</tr>
</tbody>
</table>
## Glossary of Terms:

<table>
<thead>
<tr>
<th>Term</th>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlamydia Testing Activity Dataset</td>
<td>CTAD</td>
<td>Acronym</td>
</tr>
<tr>
<td>National Chlamydia Screening Programme</td>
<td>NCSP</td>
<td>Acronym</td>
</tr>
<tr>
<td>Genitourinary Medicine services</td>
<td>GUM</td>
<td>These are specialised services, where the primary function of the specialist clinical multidisciplinary team is concerned with the provision of screening, diagnosis and management of sexually transmissible infections and related genital medical conditions.</td>
</tr>
<tr>
<td>Genitourinary Medicine Clinic Activity</td>
<td>GUMCAD</td>
<td>An electronic data collection from GUM clinics to support STI surveillance at a local and national level. This collection is managed by the Health Protection Agency. GUMCAD was previously known as the KC60 central return.</td>
</tr>
<tr>
<td>Genitourinary Medicine Clinic Activity 2</td>
<td>GUMCAD-2</td>
<td>An electronic data collection from Enhanced Sexual Health Services to support STI surveillance at a local and national level. GUMCAD-2 is an extension to GUMCAD. The proposed Implementation date is July 2011 and data collection will be managed by the Health Protection Agency.</td>
</tr>
<tr>
<td>Sexually Transmitted Infection</td>
<td>STI</td>
<td>Acronym</td>
</tr>
<tr>
<td>Primary Care Trust</td>
<td>PCT</td>
<td>Acronym</td>
</tr>
<tr>
<td>Local Authority</td>
<td>LA</td>
<td>Acronym</td>
</tr>
<tr>
<td>Lower Super Output Area</td>
<td>LSOA</td>
<td>Acronym</td>
</tr>
<tr>
<td>Health Protection Agency</td>
<td>HPA</td>
<td>Acronym</td>
</tr>
<tr>
<td>Department of Health</td>
<td>DH</td>
<td>Acronym</td>
</tr>
<tr>
<td>Vital Signs Indicator</td>
<td>VSI</td>
<td>Acronym</td>
</tr>
<tr>
<td>Chlamydia Screening Office</td>
<td>CSO</td>
<td>Acronym</td>
</tr>
</tbody>
</table>
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1 Summary

<table>
<thead>
<tr>
<th>Standard</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Number</td>
<td>ISB 1538</td>
</tr>
<tr>
<td>Title</td>
<td>Chlamydia Testing Activity Dataset (CTAD)</td>
</tr>
<tr>
<td>Type</td>
<td>Fundamental / Operational</td>
</tr>
<tr>
<td>Description</td>
<td>The overall aim of the proposed dataset is to enable comprehensive collection of robust data from laboratories on all chlamydia testing carried out in England, in order to estimate population screening coverage rates at local level, and to contribute towards improved understanding of the epidemiology of the infection in England, and the impact that the National Chlamydia Screening Programme has on this.</td>
</tr>
</tbody>
</table>

Applies to

CTAD is a disaggregate, patient level dataset and will collect data on all NHS commissioned chlamydia tests from laboratories within England.

The dataset will include all individuals tested for chlamydia in all NHS settings (as part of the NHS National Chlamydia Screening Programme and tests occurring outside of the Screening Programme) and in non-healthcare community settings (as part of the NHS National Chlamydia Screening Programme), in England. These settings include:

- Genitourinary medicine clinic services (Level 3 sexual health services).
- Other DH-commissioned sexual health services (Level 2/Enhanced sexual health services [ESRH]).
- All other healthcare settings where testing/screening for chlamydia is carried out, including GP practices and pharmacies.
- All other non healthcare community settings where screening for chlamydia is carried out, including: prisons, educational establishments, community outreach venues, youth services, etc.

<table>
<thead>
<tr>
<th>Release</th>
<th></th>
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<tbody>
<tr>
<td>Release Number</td>
<td>Amd 131/2010</td>
</tr>
<tr>
<td>Title</td>
<td>Initial standard</td>
</tr>
<tr>
<td>Stage</td>
<td>Draft / Full</td>
</tr>
<tr>
<td>Proposed Implementation Date</td>
<td>From September 2011, with full implementation by April 2012.</td>
</tr>
</tbody>
</table>
2 Contacts

<table>
<thead>
<tr>
<th>Sponsor*</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Andrea Duncan</td>
</tr>
<tr>
<td>Organisation</td>
<td>Programme Manager, Sexual Health &amp; HIV, Department of Health</td>
</tr>
<tr>
<td>Email Address</td>
<td><a href="mailto:Andrea.duncan@dh.gsi.gov.uk">Andrea.duncan@dh.gsi.gov.uk</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Developer</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Dr Catherine Lowndes</td>
</tr>
<tr>
<td>Organisation</td>
<td>Consultant Scientist (Epidemiology), Project Director - CTAD, Health Protection Agency</td>
</tr>
<tr>
<td>Email Address</td>
<td><a href="mailto:catherine.lowndes@hpa.org.uk">catherine.lowndes@hpa.org.uk</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Developer</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Dr Mary Macintosh</td>
</tr>
<tr>
<td>Organisation</td>
<td>Director, National Chlamydia Screening Programme, Health Protection Agency</td>
</tr>
<tr>
<td>Email Address</td>
<td><a href="mailto:mary.macintosh@hpa.org.uk">mary.macintosh@hpa.org.uk</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Developer</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Janice Atkins</td>
</tr>
<tr>
<td>Organisation</td>
<td>Scientist - CTAD, Health Protection Agency</td>
</tr>
<tr>
<td>Email Address</td>
<td><a href="mailto:janice.atkins@hpa.org.uk">janice.atkins@hpa.org.uk</a></td>
</tr>
</tbody>
</table>

*A statement from the sponsor is included in Appendix A*
3 Overview of Submission

Detailed justification regarding CTAD is provided in the attached products for this Draft/Full stage of the ISB approval process. During the Requirement stage, in-depth information was provided about the need to establish a comprehensive, unified chlamydia dataset from laboratories on all chlamydia testing carried out in England, in order to estimate population screening coverage rates at local level, and to contribute towards improved understanding of the epidemiology of the infection in England, and the impact that the National Chlamydia Screening Programme has on this.

Initial evidence for the feasibility and acceptability of implementing the standard was provided from preliminary testing of the standard in the Requirement Stage application. Full testing has been completed for this Draft/Full stage in a range of laboratories within England. The CTAD Phase 2 Pilot report provides evidence that it is feasible to implement the standard in laboratories in England. Comprehensive implementation and maintenance information has been included at this stage for review by the ISB (SD10).
4 Products

4.1 Summary of Mandatory Products

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Draft</th>
<th>Full</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirements</td>
<td>Specification</td>
<td>Specification</td>
</tr>
<tr>
<td>Test strategy</td>
<td>Analysis of costs</td>
<td>Clinical safety closure report</td>
</tr>
<tr>
<td>Implementation strategy</td>
<td>Test report</td>
<td>First of type implementation report</td>
</tr>
<tr>
<td>Maintenance strategy</td>
<td>Clinical safety case</td>
<td>Implementation plan</td>
</tr>
<tr>
<td>Analysis of costs</td>
<td>Draft implementation plan</td>
<td>Maintenance plan</td>
</tr>
<tr>
<td>Stakeholder plan &amp; evidence of consultation</td>
<td>Draft maintenance plan</td>
<td>External approvals for information standard</td>
</tr>
<tr>
<td>Issues log / Risk register</td>
<td>Issues log / Risk register</td>
<td>Issues log / Risk register</td>
</tr>
<tr>
<td>Glossary of Terms</td>
<td>Glossary of Terms</td>
<td>Glossary of Terms</td>
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</tbody>
</table>

4.2 Provided

<table>
<thead>
<tr>
<th>Product</th>
<th>Document Reference</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glossary of Terms</td>
<td>Included above as part of this document</td>
<td>Glossary of Terms</td>
</tr>
<tr>
<td>Risk register/ Issues log</td>
<td>Section 5 of this document</td>
<td>Risk register/Issues log</td>
</tr>
<tr>
<td>Implementation Plan/Maintenance Plan</td>
<td>Section 6 onwards of this document</td>
<td></td>
</tr>
<tr>
<td>Analysis of costs</td>
<td>SD20</td>
<td>Cost/Benefit Analysis</td>
</tr>
<tr>
<td>Test Report / First of type implementation report</td>
<td>SD10</td>
<td>CTAD Pilot - Phase 2 Report</td>
</tr>
<tr>
<td>Clinical safety case/Clinical safety closure report</td>
<td>SD21</td>
<td>Clinical Safety Reports</td>
</tr>
<tr>
<td>External approvals for information standard</td>
<td>Section 8.1.4 and Section 10.2</td>
<td></td>
</tr>
</tbody>
</table>

4.3 Not Provided

Where a Full stage product expands on a Draft stage product i.e. Draft implementation plan (Draft) and Implementation Plan (Full), only the full stage product has been included.
5 Risk Register / Issues Log

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Type (R/I)</th>
<th>Priority (L/M/H)</th>
<th>Raised by</th>
<th>Progress / Resolution</th>
<th>Status (Open/Closed)</th>
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<tbody>
<tr>
<td>1.</td>
<td>Specification</td>
<td></td>
<td></td>
<td></td>
<td>18.05.11 NEW item from appraisal</td>
<td>Open</td>
</tr>
<tr>
<td></td>
<td>The specification and the technical guidance appear to be the same document.</td>
<td></td>
<td></td>
<td></td>
<td>The technical guidance document appears stronger than the specification. Therefore these documents need to be combined with perhaps the technical guidance as the key document to form the specification. The following items were missing from the specification: 1. Correct performance criteria identified. 2. What are currently performance criteria appears to be conformance criteria, which needs further work. 3. Items that are mandatory or not and rules around these need to be provided in the specification.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>There are key areas such as conformance criteria that need further work.</td>
<td></td>
<td></td>
<td></td>
<td>The Standard Specification document has been updated to incorporate information from the Technical Guidance document.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1. Section 7.5: Performance Characteristics has been updated in the Main Submission Document.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. Section 3.4: Conformance criteria in the Standard Specification and Section 10.7: Conformance in the Main Submission Document have been updated.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. A column showing which data items are mandatory/optional has been added to Figure 2 of the Standard Specification and to Table 4 of the Main Submission document. Text has also been added to Section 2.1:</td>
<td></td>
</tr>
</tbody>
</table>


### Testing

There is confidence in the submission regarding the ease in recording data items as most are already collected, however 7 data elements out of the 16 are new. Further testing will need to provide evidence that the new data items are not burdensome.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th><strong>Information Specification of the Standard Specification.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Text had been added to Section 10.1: Implementation plan. It would be useful to discuss this further at the appraisal meeting.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>18.05.11: Actions from appraisal - applies to Risk 11 also</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1) It was agreed at the appraisal that the guidance would be updated around best practice and completeness of data items. The maintenance document should be updated in line with this to show that documents would be updated as an ongoing activity. Hints and tips should be provided for example what happens if items are null does the submission fail? What’s mandatory and not?</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2) Data quality updates that were made to the implementation plan need to be further developed for example how will they be achieved, are people signed up to steering group, frequency of meetings etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3) Update the main submission to show that the guidance has been shared and used in piloting, reference the original document in the appendices.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1. Section 10.6: Maintenance has been updated.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Section 3.5: Improving data quality / completeness</strong> has also been added to the Standard Specification.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>2. Section 10.1: Implementation Plans</strong> has been updated.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. Text has been added to <strong>Section 8.7: Consultation and support</strong>.</td>
</tr>
</tbody>
</table>

### Updated sponsor statement to be provided

Current one appears to be out of date

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th><strong>18.05.11 NEW item from appraisal</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>The suggestion was made to add some text around the future direction of the HPA within this letter.</td>
</tr>
</tbody>
</table>
Please see Appendix A for an updated sponsor letter including text around the future direction of the HPA.

<table>
<thead>
<tr>
<th>4.</th>
<th>This <strong>strategic fit</strong> section needs to be more strategic. For example, is the same requirement likely to emerge for other STIs? How would this eventually link with HIV testing, which is likely to become more common with the removal of the need for pre-test counselling?</th>
<th>I</th>
<th>M</th>
<th>MS</th>
<th>It would be useful to discuss this further at the appraisal meeting.</th>
<th>18.05.11: Appraisal Meeting discussion</th>
<th>Developer to make relevant updated in terms of the HPA future state, data linkages and mention consultation with the IC. As this is lab data we need to be clear that even if HPA future state changes this data will still be collected. Text has been added to Section 8.1.1 on the HPA future state, the IC and data linkage.</th>
<th>Open</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. <strong>Known Standards and Interdependencies.</strong> This section tabulates GUMCAD and CTAD showing the extent of overlap. Suggest that GUMCAD be viewed as the activity dataset, and CTAD as a test results dataset which is linked to GUMCAD records by NHS number. This would need data modelling. It would enable CTAD to be seen as test results for one or two parts of GUMCAD. It also highlights the need to map KC60 codes to SNOMED_CT, as lab results will be SNOMED-CT coded.</td>
<td>I</td>
<td>M</td>
<td>MS</td>
<td>Please can we discuss this further at the appraisal meeting? SNOMED CT is not routinely used by laboratories and not coded as part of standard LIMS (Laboratory Information Management Systems) across England. Laboratories would not be able to supply SNOMED-CT coded data at present.</td>
<td>18.05.11: Appraisal Meeting discussion</td>
<td>Reference and consideration to SNOMED CT needs to be made in documents. Text has been added to section 8.6 Interdependencies.</td>
<td>Open</td>
<td></td>
</tr>
<tr>
<td>6. <strong>ROCR</strong> license is due to expire December 2010. Has the need for this data set been revalidated and is there a business case?</td>
<td>I</td>
<td>M</td>
<td>MR</td>
<td>18.05.11 – Update from appraisal meeting under consultation.</td>
<td>18.05.11 Appraisal Discussion – see comments against risk 1 for action.</td>
<td>Open</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. <strong>Implementation plan</strong> SD10 Phase 2 report (pg3) identifies issues that need to be addressed by a full implementation plan. This also should</td>
<td>R</td>
<td>H</td>
<td>PI</td>
<td>Text has been added to this section.</td>
<td></td>
<td></td>
<td>Open</td>
<td></td>
</tr>
</tbody>
</table>
address the issue of how improvement in completeness of additional variables will be achieved.

<table>
<thead>
<tr>
<th>8. Maintenance plan</th>
<th>R</th>
<th>M</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 10.6 of main submission needs developing further for full stage approval. There should be a clear mechanism for users to submit suggestions for improvement and a process for handling these.</td>
<td>Text has been added to this section. 18.05.11 Appraisal Discussion – see comments for risk 1, focus here would be sharing good practice, updating documents, Mechanism for capturing feedback from users maybe? Update maintenance section.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9. Stakeholder Engagement</th>
<th>R</th>
<th>H</th>
<th>MS</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Royal College of Pathologists are currently developing a number of information standards relating to the processing and reporting of samples within Laboratories including the development of a National Laboratory Medicine Catalogue.&quot; The developer has not responded adequately to this issue (&quot;CTAD will only collect limited clinical information from the laboratory on Chlamydia diagnosis&quot;). CTAD needs to fit within broader discussions about laboratory testing. There is no evidence that the HPA have engaged with the RCPath.</td>
<td>We are currently in the process of trying to contact the Royal College of Pathologists, so perhaps we can discuss this further at the appraisal meeting. From looking at the NLMC website (<a href="http://nlmc.x-labsystems.co.uk/">http://nlmc.x-labsystems.co.uk/</a>), Chlamydia does not yet appear to be included in the catalogue. Section 8.7 of the Main Submission Document proposes that representatives from the Royal College of Pathologists sit on the CTAD Implementation Group, in order to assist in co-ordination of the roll out of the standard. 18.05.11 Appraisal Discussion Developers to ensure they are connected to NLMC development and RCPATH. Developers to engage with Gifford and Rick Jones and to be incorporated within the catalogue. This needs to be done and reflected in the documents. Contact will be made with Gifford Batstone and Rick Jones to engage the Royal College of Pathologists with CTAD and ensure CTAD is connected to NLMC</td>
<td></td>
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</tr>
</tbody>
</table>

Section 10.1 Implementation plans has been updated to address the recommendations for implementation set out in SD10 – Phase 2 Pilot Report.

Section 10.6: Maintenance has been updated.
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>10. GP Postcode</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Table 4: Format for the CTAD extract: why is Postcode_GP included? This can be obtained via the GP code and the national organisation codes service (<a href="http://www.connectingforhealth.nhs.uk/systemsandservices/data/ods/genmedpracs">http://www.connectingforhealth.nhs.uk/systemsandservices/data/ods/genmedpracs</a>) Noted also on p27: “In the case of GP postcode not being available, laboratories may collect national GP codes which can be used to map to PCTs/LAs.” Why not do this for all GPs? Ditto Postcode_Testing_Service - should these not be national provider codes? See review comments for further details on GP postcode areas.</td>
<td>R</td>
<td>M</td>
<td>MS</td>
</tr>
<tr>
<td>Both GP code and GP postcode may not be available from all laboratories or for all tests. Therefore, collecting both maximises the attribution of tests to geographical areas. Postcode of testing service – national provider codes could not be collected as laboratories often use local testing service codes. <strong>18.05.11 Appraisal Discussion</strong> The developer confirmed that this was a proxy for patient postcode to allocate a geographical area, where a patient postcode may not be. ISB to confirm closure with MS.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>11. Ethnicity</strong>: demographic data should be available from other datasets for example the SCR, rather than being re-acquired at the time of a lab test. Would it be reasonable for other lab tests to collect this as well? What do users of the NCSP think about supplying this data? This highlights the need to put CTAD within the context of other lab tests, and consult with MRCPath.</td>
<td>R</td>
<td>M</td>
<td>MS</td>
</tr>
<tr>
<td>We are a little unclear what is meant by this query – please can we discuss further at the appraisal meeting? However, it is worth noting that for CTAD, we are not expecting laboratories to access ethnicity data but just to provide it if it is available. The following text is taken from the CTAD Main Submission Document: “The Health Protection (Notification) Regulations 2010 (SD12), which came into force on 6th April 2010, state that for statutorily notifiable diseases, laboratories must report ethnicity when making notifications to the relevant body, including when notifying causative agents found in human samples to the Health Protection Agency. This would suggest that laboratory...”</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


IT systems will be enabled to store and report ethnicity data for some diseases, implying that this could perhaps be extended to diseases that are not notifiable, including *Chlamydia trachomatis*.

### 18.05.11 Appraisal Discussion

Ethnicity has been covered in the guidance it just needs to be updated if it’s not available. There will need to be link to maintenance and handled as part of implementation review with an update to guidance with feedback from sites.

The Standards Specification document provides details of the code to use if ethnicity is not available (see Figure 4).

#### Data Dictionary Issues

1. **Post code of usual address:**
   - The existing data element in the DD allows only for a default of ZZ99 3VZ where the patient has no fixed abode or where the patient is an overseas visitor – see example:

   "If a **PATIENT** has no fixed abode this should be recorded with the appropriate code (ZZ99 3VZ). For **PATIENTS** who are **Overseas Visitors**, the **POSTCODES OF USUAL ADDRESS** field must show the relevant country pseudo postcode commencing ZZ99 plus space followed by a numeric, then an alpha character, then a Z. For example, ZZ99 6CZ is the pseudo-postcode for India. Pseudo-Country postcodes can be found in the **NHS Postcode Directory**."

2. **Post code of usual address:**
   - Further discussion between developer, data dictionary and ISB to take place.

   Points 1 to 3: The NHS Data Dictionary are currently investigating the use of “ZZ99 3VZ” as a default for where the postcode is not known/not stated.

   The developers are awaiting a decision from the ISB / Data Dictionary regarding points 4 and 5.
As this is used in the CDS it cannot be altered to provide any further defaults – I understand this data item may not be available in the CTAD record as the patients address may not be known - furthermore, one of the pilot sites was not able to provide this data. You will need to decide therefore if the existing defaults are sufficient for use in the CTAD – if the field is to be left blank where the data is not available then this item should be set to required.

2. Postcode of General Medical Practice (patient registration):

Seven pilot sites were not able to submit this data presumably because either the GP where the patient was registered wasn’t known or the patient wasn’t registered at a GP?

As the data element is mandatory you will either need to establish two default codes for these scenarios or change the status to “required” so that the record is not rejected if data in this field is not available.

3. Postcode of Testing Service:

Five pilot sites were not able to provide this data therefore appropriate default codes need to be established or status needs to be reset to required to allow blank field to flow.
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Local Patient id – awaiting decision from ISB/developer re format length</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. NHS Number Status indicator – awaiting decision from ISB/developer re whether this MUST or MAY be included in the data set.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6 Background and Customer Need

This application relates to reporting of data to the Health Protection Agency for monitoring and evaluation of the National Chlamydia Screening Programme (NCS). Currently, there are three data returns managed by the HPA that collect data on chlamydia testing and diagnoses in England: the Genitourinary Medicine Clinic Activity Dataset (GUMCAD) return, the National Chlamydia Screening Programme data return, and the non-NCS non-GUM aggregate laboratory data return. Data from these sources are currently combined to estimate total chlamydia testing coverage and diagnoses in England\(^1\). The development of a simpler system for assessment of chlamydia testing coverage and positivity rates would be advantageous.

This application therefore proposes a new dataset which would flow from laboratories to the HPA – the reporting of basic data on all chlamydia testing activity, from all age groups and sources of test request, from all laboratories that carry out testing for chlamydia in England, the Chlamydia Testing Activity Dataset (CTAD). Since the data items specified in the dataset are in general already routinely recorded by laboratories, CTAD represents an opportunistic, pragmatic and low-cost means of collecting routine data necessary to monitor the NCS. This would enable unified, comprehensive reporting of all chlamydia testing and diagnosis data, and would eliminate the need to combine data from disparate sources. This would simplify and streamline information flow and improve data completeness and quality.

A detailed assessment of the current situation, and of the need for the new CTAD dataset, follows.

Sexual health is a high priority for the NHS. The Department of Health’s National Strategy for Sexual Health and HIV (2001)\(^2\) set out a comprehensive framework for England for preventing the sexual causes of premature death and ill health, through reducing the undiagnosed prevalence and transmission of sexually transmitted infections and HIV, reducing unintended pregnancies and improving health and social care for people with HIV. Improving sexual health is one of the six key goals for PCTs identified by the NHS Next Stage Review ‘High Quality Care for All’\(^3\).

As part of the goal of improving sexual health, the control of *Chlamydia trachomatis* infection and its associated complications is a high priority. Chlamydia infection is very frequent, and on the increase, particularly among young people, and it is estimated that up to 10% of under 25 year-olds may have a chlamydia infection. The infection is easily identified and treated with antibiotics. However the vast majority of infections do not cause any symptoms and infected persons are therefore unaware of their infection and do not seek care. This increases the likelihood of the infection spreading, since people may not realise they are infected and will not seek treatment or change their sexual behaviour. Furthermore, untreated chlamydia infection is a leading cause of reproductive ill-health in women. It is estimated that between 5-30% of chlamydia-infected women go on to develop pelvic inflammatory disease, of whom up to 10% may become infertile or experience ectopic pregnancy, which can be life-threatening. The financial cost of treating chlamydial infections is considerable. The Report of the Chief Medical

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Officer in 1998 estimated that the annual cost of chlamydia to the NHS could be up to £100 million per year.

All patients attending specialised genitourinary medicine (GUM) clinics are routinely tested for chlamydia infection and treated accordingly, and 99,767 diagnoses of chlamydia were made in 2009 in GUM clinics within England\(^4\). However, due to the lack of symptoms, control of this infection also requires screening and treatment of the large pool of asymptomatic infections in the population at large. Given this situation, the National Chlamydia Screening Programme (NCSP) was established in 2003, following recommendations made in the Chief Medical Officer’s Expert Advisory Group Report\(^5\) and the Department of Health’s National Strategy for Sexual Health and HIV\(^1\). The aim of the National Chlamydia Screening Programme is to detect undiagnosed chlamydia infection through proactively offering screening to all sexually active young people aged under 25, in a variety of health and community settings, in order to reduce the population prevalence of chlamydia and prevent the development of associated health problems. The programme offers regular chlamydia screening to young people and recommends that they be screened annually or when they change partner. The NCSP has been phased in over a number of years and all Primary Care Trusts (PCTs) in England are now offering opportunistic screening in a variety of healthcare and non-healthcare settings, coordinated locally by Chlamydia Screening Offices (CSOs) located in 100 programme areas. To date, over 3.6 million chlamydia tests have been carried out by the NCSP, with over 250,000 positive results. Each screening site is registered with the NCSP through the Chlamydia Screening Offices. To date there are 28,319 sites registered with the programme.

A core dataset, including information on age, sex, ethnicity, postcode of residence and sexual behaviour (Table 1), is recorded on a specific form for each person screened within the NCSP. Currently, these data are collected and compiled by the Chlamydia Screening Offices locally, on behalf of the PCT, and forwarded to the Health Protection Agency. All screens reported via this route must as a minimum report the compulsory data items within the NCSP core dataset (Table 1). A test report missing one or more of these items is rejected by the HPA.

Table 1: NCSP Core Data Items

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Testing items</th>
<th>Sexual behaviour data</th>
</tr>
</thead>
<tbody>
<tr>
<td>*C1. Clinic ID code (HPA)</td>
<td>*C8. Date of attendance</td>
<td>C11. New sexual partner in last 3 months</td>
</tr>
<tr>
<td>*C2. Unique patient ID number or C3. NHS number</td>
<td>C9. Reason(s) for test</td>
<td>C12. Two or more sexual partners in last 12 months</td>
</tr>
<tr>
<td>*C4. Sex</td>
<td>C10. Specimen type</td>
<td></td>
</tr>
<tr>
<td>*C5. Date of birth</td>
<td>C13. Type of laboratory test</td>
<td></td>
</tr>
<tr>
<td>*C6. Postal code of residence</td>
<td>*C14. Chlamydia test result</td>
<td></td>
</tr>
<tr>
<td>C7. Ethnicity</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^*\) Notes: Items marked with an asterisk are compulsory; individual test records missing one or more of these will be rejected by HPA. Either the patient ID number or the patient NHS number should be provided − it is not compulsory for both to be supplied.

It has been estimated that between 26-43% of the 16-24 year age group needs to be tested annually, together with effective patient and partner notification and management, to begin to


control chlamydial infection and have an effect on population infection rates in England\(^6\). In order to assess the extent of coverage of the target population by the NCSP, data collected on NCSP forms and reported to the HPA were initially used. However, poor progress towards the LDP (Local Delivery Plan) 2007/8 target of 15% coverage was noted in many PCTs, and feedback from PCTs indicated that significant numbers of community-based screens for chlamydia other than those reported to the NCSP were being carried out. To investigate this further, a survey of laboratories was undertaken (Chlamydia Testing Activity Survey Report, 2008, SD1). This survey indicated that in 2007/8, nearly a third of all chlamydia tests were being carried out either (a) in non-NCSP, non-GUM settings, or (b) in NCSP settings but without completion of the NCSP form. The latter situation may be due at least in part to the additional time required to complete the data items on the NCSP forms. Nearly two-thirds of these tests were carried out in General Practice.

In 2008 the Department of Health announced the introduction of a new national priority for local delivery of chlamydia screening, in the form of a ‘Tier 2 indicator’ under the Vital Signs performance framework, with targets of 17% of the eligible population screened for 2008/09, 25% for 2009/10 and 35% for 2010/11. For the reasons discussed in the preceding paragraph regarding screening tests performed outside the NCSP, it was stipulated that data on screens/tests not carried out at GUM clinics and not reported on NCSP approved forms, could also be reported to the NCSP and included in the PCT’s Chlamydia Vital Signs Indicator. Thus the Vital Signs Indicator would include tests carried out in all non-GUM testing and screening settings, be they reported on NCSP forms or not. Data on chlamydia testing in 15-24 year-olds performed outside the GUM setting, and outside the NSCP, are currently reported in aggregated form from laboratories to the Health Protection Agency, and these data are used in conjunction with data submitted on the NCSP forms, to compile testing coverage figures (SD2; SD3; SD4).

Thus, currently, there are three data returns managed by the HPA that collect data on chlamydia testing and diagnoses in England:

(1) The Genitourinary Medicine Clinic Activity Dataset (GUMCAD) return, which replaced the aggregated KC60 return in 2009 and has ISB approval as a mandatory information standard (DSCN 04/2008; SD5), collects disaggregate data on all chlamydia diagnoses made in genitourinary medicine (GUM) clinics. In 2009, over 50% of all chlamydia diagnoses in England were in GUM clinics\(^7\) and it is estimated that in 2009, around 35% of all chlamydia tests performed in England were at GUM clinics.

(2) The National Chlamydia Screening Programme core data return (discussed above), which has been in place since April 2003, and has ROCR and NIGB (although not ISB) approval. This data return collects disaggregated data on all tests/screens carried out in healthcare and non-healthcare sites which are registered with the programme, and which report data on those screened using an approved NCSP form. It is estimated that in 2009, around 50% of all chlamydia tests performed in England were through the NCSP.

(3) Finally, the non-NCSP non-GUM data return, discussed above, which was launched in April 2008 and is a voluntary reporting system, reports aggregated laboratory testing data, compiled by laboratories themselves, or CSOs or PCTs, on chlamydia testing among those aged 15-24 years performed outside of GUM clinics and not reported on the NCSP form. It is estimated that in 2009, around 15% of all chlamydia tests performed in England were in non-NCSP, non-GUM settings.

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As stated above, the two latter data returns together form the basis for assessment of progress towards the PCT Chlamydia VSI targets. The Operating Framework for the NHS in England 2011/12\(^8\) states that NHS organisations will continue to be held to account against the existing public health indicators and hence the Vital Signs performance target of 35% coverage of the eligible population screened will remain unchanged for 2011/12.

A new indicator for monitoring chlamydia testing coverage and diagnosis rates has been proposed in the current Public Health Outcomes Framework consultation document\(^9\) and will be in operation from April 2012. It includes reporting of the diagnostic rates amongst the resident 15-24 year old population and takes account of both GUM diagnoses as well as those made outside of GUM.

Reliable data on all chlamydia tests carried out in England are key for accurately monitoring population coverage for assessment of the effectiveness of chlamydia control strategies. However the existing data sources discussed above are however not wholly adequate for this purpose, for the following reasons:


They are not wholly comparable, due to being reported from different sources covering different geographical areas, in different ways.

There is likely to be incomplete reporting from some areas and double reporting of data in others (due, for example, to inappropriate assignment of laboratory tests to type of testing service, or of tests carried out in GUM to the VSI coverage data, especially in integrated sexual health services where distinguishing GUM from non-GUM tests may be challenging).

Due to the aggregate nature of the non-GUM, non-NCSP data return, it is not possible to carry out validation of the data submitted, for example to investigate issues of misclassification of laboratory tests to type of testing service.

Data from the NCSP and the non-GUM, non-NCSP return are age-specific, therefore not providing a comprehensive picture of all chlamydia testing and diagnoses.

The reporting of data on STI testing and diagnoses from all services offering STI testing is currently undergoing ISB approval (Extension to Enhanced Sexual Health Services (ESHSs) GUMCAD-2 - Amd 85/2010\(^{10}\)). Data items collected will be the same as those in the GUMCAD return from genitourinary medicine clinics (Table 2). While GUMCAD-2 will thus contain most of the data items defined in the proposed CTAD return, it will not suffice as a comprehensive data source for chlamydia testing. Unlike other STIs and HIV, a significant proportion of chlamydia testing occurs in the community and would be missed by GUMCAD-2. Over 60% of all NCSP screens (over 50% in women and over 75% in men) are currently performed outside of general practices and community and sexual health services and hence will not be reported through GUMCAD-2. These non-primary healthcare community settings include educational establishments, youth clinics and outreach testing sites, remote testing through the internet and postal kits, testing in pharmacies, testing in secondary healthcare settings including obstetrics and gynaecology clinics / wards, prison and testing in military healthcare settings (Table 3). Please see Section 8: Business Justification for further discussion of strategic considerations.

### Table 2: GUMCAD / GUMCAD-2 data items

<table>
<thead>
<tr>
<th>Patient registration information at first attendance</th>
<th>Attendance information</th>
<th>Clinical details and coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Patient ID</td>
<td>10. Attendance date</td>
<td>12. KC60/SHHAPT (diagnostic or clinical codes)</td>
</tr>
<tr>
<td>3. Gender</td>
<td></td>
<td>or</td>
</tr>
<tr>
<td>4. Age</td>
<td></td>
<td>13. READ (diagnostic or clinical codes)</td>
</tr>
<tr>
<td>5. Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Country of birth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. PCT of residence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. LSOA of residence</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 3: NCSP Testing Volumes April – December 2010: Proportion of tests performed by test source

<table>
<thead>
<tr>
<th></th>
<th>All (%)</th>
<th>Women (%)</th>
<th>Men (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CASH (Community Sexual Health Services)</td>
<td>21.8</td>
<td>27.8</td>
<td>12.8</td>
</tr>
<tr>
<td>General Practice</td>
<td>16.6</td>
<td>20.3</td>
<td>10.9</td>
</tr>
</tbody>
</table>

\(^{10}\) [http://www.isb.nhs.uk/library/release/46](http://www.isb.nhs.uk/library/release/46)
Termination of Pregnancy | 1.9 | 3.1 | 0.0
Pharmacy | 2.2 | 2.7 | 1.5
Education | 13.4 | 11.2 | 16.6
Chlamydia Screening Offices | 4.9 | 4.5 | 5.4
Remote testing | 7.7 | 8.1 | 7.0
Gynecology & fertility services | 0.5 | 0.8 | 0.1
Antenatal & Obstetric services | 0.9 | 1.5 | 0.1
Military | 1.2 | 0.2 | 2.6
Outreach | 23.1 | 15.0 | 35.3
Prison | 1.3 | 0.1 | 3.0
Youth | 3.7 | 3.5 | 3.9
Other | 1.1 | 1.2 | 0.9

The development of a simpler system for assessment of chlamydia testing coverage and positivity rates would thus represent a substantial improvement on the current situation. This application therefore proposes a new dataset to flow from laboratories to the HPA - the reporting of basic data on all chlamydia testing activity, from all age groups and sources of test request, from all laboratories that carry out testing for chlamydia in England, the Chlamydia Testing Activity Dataset (CTAD). This would enable unified reporting of all chlamydia testing and diagnosis data, regardless of age, and would thus eliminate the need to combine data from disparate sources, thereby simplifying and streamlining information flow and improving data completeness and quality. This is especially important when considering that the proposed new chlamydia diagnoses indicator for 2012 onwards will include chlamydia tests from all settings i.e. both GUM and non-GUM.

If CTAD gains ISB approval and is implemented, it is envisaged that, following a period of overlap to allow for validation and continuity of reporting, both the disaggregate reporting of core NCSP data items submitted on NCSP-approved forms through Chlamydia Screening Offices, as well as aggregate reporting of laboratory data on non-GUM, non-NCSP tests (compiled by laboratories, CSOs or PCTs), will be discontinued. This will represent a substantial reduction in workload for CSOs, as well as a reduction in workload for some laboratories and PCT staff.

The CTAD data return will thus provide a more comprehensive and cost-effective means to monitor chlamydia screening test coverage at local level than the disparate systems currently in place. CTAD will provide more robust data and more accurate estimates of testing activity from all age groups and all testing sources, and thus of population coverage of screening in all settings, than is currently possible using existing datasets. As such it represents an improvement in the monitoring and surveillance of chlamydia testing coverage and diagnoses, as detailed in the Dept. of Health’s response to the recommendations of the Public Accounts Committee Report (SD6: page 8: paragraph 18).

In addition to enabling chlamydia screening coverage to be estimated accurately, comprehensive data on chlamydia testing and diagnoses among men and women of all ages are essential for surveillance purposes, in order to comprehensively monitor and improve understanding of disease burden and epidemiological trends, and of how this is changing in the context of the NCSP. Since it will collect data on all tests carried out regardless of setting, it will also provide a means of cross-checking and validating data on numbers of chlamydia screens reported through the other relevant systems currently in operation or due to be introduced, namely GUMCAD and GUMCAD-2.
7 Purpose and Scope

7.1 Standard Overview

The overall aim of the proposed dataset is to enable comprehensive collection of robust data from laboratories on all chlamydia testing carried out in England, in order to estimate population screening coverage rates at local level, and to contribute towards improved understanding of the epidemiology of the infection in England, and the impact that the NCSP has on this.

The dataset specified will be consistent with, and represent an improvement upon, current data collection through (a) the NCSP Chlamydia Core Dataset, which collects disaggregated data on all tests/screens carried out in healthcare and non-healthcare sites which are registered with the Programme, and reported using a NCSP form; and (b) the non-GUM, non-NCSP data return, which collects aggregated data from laboratories on chlamydia testing activity and diagnoses among those aged 15-24 years performed outside of GUM clinics and not reported to the screening programme. It is envisaged that once CTAD is implemented, collection of these two datasets will be discontinued.

The CTAD dataset specified is consistent with and complementary to GUMCAD (the Genitourinary Medicine Clinical Activity Dataset, DSCN 04/2008, SD5) and GUMCAD-2 (Amd 85/2010; currently undergoing ISB approval), which collect data on STI diagnoses and services carried out in GUM clinics and Enhanced Sexual Health Services; and to SHRAD, the Sexual and Reproductive Health Activity Dataset (DSCN 14/2010), which will capture contraception and other sexual and reproductive health (SRH) activities. All GUMCAD, GUMCAD-2, SHRAD and CTAD data items will be compliant with NHS Data Dictionary terminology in order to ensure standardisation of definitions and format of each data item. An application has been made to the NHS Data Dictionary for any data items in CTAD which are not currently included in the NHS Data Dictionary. Where data items between the two systems overlap, the same NHS Data Dictionary data element will be used. Together these four datasets will form the basis for comprehensive reporting on STI testing and diagnoses in healthcare and non-healthcare community settings across England. Please see Section 8: Business Justification for further details.

7.2 Purpose

CTAD is a disaggregate, patient level dataset and will collect data on all NHS commissioned chlamydia tests from laboratories within England. CTAD serves as a short-term, tactical solution to provide comprehensive data on chlamydia testing coverage with a minimal resource burden on laboratories. The four main aims of the dataset are to:

(i) Monitor population coverage of chlamydia testing at local level in England, using a comprehensive single data source;
(ii) Monitor rates of and trends in chlamydia diagnoses, as well as estimating repeat testing and re-infection rates;
(iii) Provide data to help monitor Chlamydia Screening Programme implementation at national and local level;
(iv) To contribute towards improved understanding of the epidemiology and burden of disease of chlamydia in England, and the impact the National Chlamydia Screening Programme (NCSP) is having on this;

This information will be used:
- To inform public health response and policy formulation;
- To contribute towards monitoring and evaluation of the Chlamydia Screening Programme at local and national level
- To monitor the effectiveness of policies introduced as part of the National Strategy for Sexual Health and HIV;
- For performance management at PCT, LA, SHA and national level, particularly in relation to delivery of the current national VSI target for chlamydia screening test uptake, and any future targets;
- To generate sexual health-related community health profiles at the Local Authority Level;
- For better planning and management of services at local level;
- To adapt and refine interventions, as appropriate.

The proposed dataset will be a quarterly disaggregated data extract of all chlamydia tests carried out using nucleic acid amplification (NAAT) testing. In 2003, the NAAT test platform was recommended by the Health Select Committee (HSC) for the detection of genital *Chlamydia trachomatis*, a recommendation endorsed by the English Chief Medical Officer. Use of NAAT tests for detection of chlamydia is specified by BASHH (The British Association for Sexual Health and HIV). NAATs have been shown to be considerably more sensitive and specific than other tests currently available, and are estimated to be >95% sensitive and specific (SD7). For this reason, prior to implementation of the NCSP, funding was provided for NHS laboratories to convert to use of NAATs testing, so that all chlamydia testing for the NCSP is now carried out using this technology.

The CTAD extract will include data on laboratory ID, test ID, patient ID, NHS number, NHS number status indicator, gender, DOB, ethnicity, postcode of residence, postcode of GP, national GP code, postcode of testing service, PCT of testing service, specimen type, testing service type (type of setting where testing carried out), NCSP clinic code, tests dates and test result. All specified fields will be mandatory, apart from the following data items which will allow a null value: Patient ID; NHS number; DOB; NCSP clinic code; Specimen date; Date result authorised. All other data items must be reported in full using the relevant codes for ‘Not Known’ where appropriate. A summary of the dataset and items to be collected can be seen in Table 4 below. Please refer to the CTAD Standard Specification Document for further details on data item coding.

CTAD will enable unified reporting of all chlamydia testing and diagnosis data, obviating the need to combine data from disparate sources, simplifying and streamlining information flow and improving data completeness and quality. CTAD will provide more robust data and more accurate estimates of testing activity from all age groups and all testing sources, and thus of population coverage of screening, than is currently possible using existing datasets.
Table 4: Format for the CTAD extract

<table>
<thead>
<tr>
<th>Position</th>
<th>Field Name</th>
<th>Description</th>
<th>NHS Data Dictionary Data Element</th>
<th>Variable Length</th>
<th>Example ²</th>
<th>Mandatory Data Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lab_ID</td>
<td>Laboratory ID code</td>
<td>LABORATORY IDENTIFIER CODE</td>
<td>AN(5)</td>
<td>XXXXX</td>
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</tr>
<tr>
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<td>AN(20)</td>
<td>V669157</td>
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</tr>
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<td>LOCAL PATIENT IDENTIFIER</td>
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</tr>
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<td>Unique number assigned by NHS to all registered patients</td>
<td>NHS NUMBER</td>
<td>AN(10)</td>
<td>1234567890</td>
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</tr>
<tr>
<td>5</td>
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<td>Status of the unique number assigned by NHS to all registered patients</td>
<td>NHS NUMBER STATUS INDICATOR</td>
<td>AN(2)</td>
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<td>Mandatory</td>
</tr>
<tr>
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<td>Gender</td>
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<td>AN(1)</td>
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<td>AN(10) CCYY-MM-DD</td>
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<td>POSTCODE OF USUAL ADDRESS</td>
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<td>Date specimen taken</td>
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<tr>
<td>18</td>
<td>Receipt_Date</td>
<td>Date specimen received by laboratory</td>
<td>SAMPLE RECEIPT DATE</td>
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<td>2007-10-31</td>
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</tr>
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<td>Date result was authorised at the laboratory</td>
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<td>AN(10) CCYY-MM-DD</td>
<td>2007-10-31</td>
<td>Optional</td>
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<td>Result of chlamydia test</td>
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<td>AN(2)</td>
<td>02</td>
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</tr>
</tbody>
</table>

*Refers to the horizontal position of the field within CSV format (AN = Alpha-numeric, Number in brackets denotes the string length.) ²Example of field content, also used to illustrate extract format expected (see figure 2)
7.2.1 Rationale and Justification for CTAD Data Items

Disaggregate format of the data

Currently, data on the number of chlamydia tests carried out in under 25 year-olds, which are not from GUM clinics and are not performed as part of the screening programme (non-GUM, non-NCSP tests), are reported by laboratories in aggregated form (SD2, SD3). We propose the collection of data in disaggregated form. This will have several advantages:

(i) It will alleviate the current workload of laboratories / PCTs / CSOs. Once CTAD is implemented, it will no longer be necessary to complete the current aggregated non-GUM, non-NCSP data return, which is currently carried out by laboratories, CSOs and/or PCTs, depending on the area. The aggregated return requires data manipulation and collation procedures, including de-duplication, which can be time-consuming, and may not always be successfully achieved (SD3; SD8).

(ii) It will result in higher quality, more comparable data from laboratories, since data manipulation, collation and validation procedures will be carried out using standardised procedures at HPA level.

(iii) It will provide sufficient detail to undertake important epidemiological analyses. The types of analyses to be undertaken include:
   a. Counting the actual number of patients screened and testing positive for chlamydia.
   b. Analysing testing behaviour, testing practices and positivity rates over time for chlamydia by geographical area of residence, and by key patient characteristics including age, sex and ethnicity.
   c. Presenting data on population coverage of screening by patient characteristics and area of residence.
   d. Analysis of infection status by patient characteristics and area of residence.
   e. Monitoring of repeat testing and repeat chlamydia infection rates.

None of these analyses would be possible with aggregated data.

Collection of local and unique patient identifiers, including NHS number

‘De-duplication’ is the identification and removal of duplicate tests (a) carried out on the same sample, or (b) on samples from the same individual carried out within a specified time interval indicating the same episode of infection. This process is required to avoid ‘double-counting’ of tests carried out on the same person. A process whereby tests carried out over time in the same individual can be identified is also necessary, in order to be able to analyse repeat testing and re-infection rates.

These processes require, as a minimum, a unique patient identifier within the laboratory where the testing is being carried out, in order to be able to identify samples from the same individual (the Local Patient Identifier Number in the CTAD dataset, Table 4). There are however two potential disadvantages to the use of local patient ID number. Firstly, this ID number is not always unique (i.e. a given patient may be assigned more than one ID number over time, depending on the source of the ID number and whether it is generated by the laboratory IT system) (CTAD Pilot Phase 1 Report, SD9). Secondly, due to the high mobility of the target group for the NCSP (under 25 year-olds), sampling and testing of the same individual may take place in different sites and in different laboratories over time. This is supported by findings from the NCSP that a significant proportion of chlamydia tests are carried out in PCTs other than the PCT of residence of the individual.

Thus, in order to be able to identify tests carried out in the same individual over time, and across laboratories, an identifier unique to the patient is highly desirable. Rates of repeat testing and re-infection can also be estimated if a patient unique identifier is available. These latter data are of great importance for monitoring and evaluation of the screening programme, as well as for use in accurate mathematical modelling of rates of testing needed to control the infection. This is
particularly the case given recently published research findings indicating the need for repeat screening of young women in order to prevent development of pelvic inflammatory disease\textsuperscript{11}.

For these reasons we propose the collection of the NHS number, a unique patient-based identifier, where this is available. Use of the NHS number is in the process of being mandated in different sectors of the Health and Social Care Services, and its use has already been mandated for all systems and communications of patient data in Primary Care General Practice (DSC Notice 31/2008) and Secondary Care Services (DSC Notice 32/2008).

Within the NCSP, currently around 10\% of NCSP form data returns are identified with a NHS number. In 2010, over 40\% of testing was performed in health settings where NHS number is readily accessible (CASH, GP, termination of pregnancy, obstetric and gynaecological services) – see Table 3), and can often be automatically added to an electronic form.

The CTAD Phase 2 pilot found that data completeness for NHS number ranged from 13\% to 41\% across laboratories, with the exception of the private laboratory involved in the pilot study which had a completeness of just 0.01\% (SD10). Excluding results form the private laboratory, this proportion is already considerably higher than that of NSCP returns, and is likely to increase over time as use of the NHS number in data transfer and linkage within the NHS becomes more routine. In cases where the NHS number is not collected, patient ID and date of birth will be used as patient identifiers for de-duplication and analysis of repeat testing rates.

With respect to information governance and confidentiality issues, there is a precedent, as stated above, since NHS number is currently a data item collected as part of the NCSP Chlamydia Core Dataset. For the purposes of CTAD, an application was submitted to NIGB including the plans to collect NHS number, as part of the HPA’s annual submission. Approval for CTAD by NIGB has now been obtained (SD11).

**Collection of gender and date of both (DOB)**

Chlamydia is the most commonly diagnosed bacterial STI among young sexually active people, and it occurs much more frequently in younger age groups, due both to biological and behavioural factors. Infection rates peak in 15-19-year-old women (3,242 cases per 100,000 females) and 20-24-year-old men (1,857 reported cases per 100,000 males) as reported in England by GUM clinics, the NCSP and the non-NCSP, non-GUM dataset in 2009\textsuperscript{12}. This difference is at least in part due to sexual mixing patterns between different age groups of men and women. For this reason the NCSP targets men and women aged up to 25 years. Among men there is some evidence suggesting that prevalence remains high up to the age of 30.

Due to the strong association of chlamydia infection with age in both men and women, it is important to be able to calculate the number of patients tested, and the proportion testing positive, by age and gender. This will give insight into the profile of people being tested and into the epidemiology of chlamydial infection.

Analyses of the age and gender profile of those being tested for and diagnosed with chlamydia, combined with data on area of residence, and ethnicity, will enable monitoring of the extent to which services are targeting young adults appropriately. This in turn will enable assessment of


inequalities in access to services. This type of information will give valuable insights into patterns of provision of sexual health services and their efficacy (e.g. whether or not significant testing is occurring among older age groups who are much less at risk; differences in age and gender profiles by area of residence).

Date of birth will be collected from the laboratories, and converted to age in months and years at the HPA. DOB will also be useful as an additional variable for de-duplication processes, also to be carried out at the HPA.

**Ethnicity**

There is strong evidence that access to healthcare and health outcomes, including sexual health outcomes, vary considerably by ethnic group. For example, in some areas rates of gonorrhoea are 10 times higher in black Caribbeans compared with whites, while NCSP data indicate that chlamydia positivity rates are higher among some black and mixed ethnicity groups. Data on ethnicity are key in order to (a) assess which population sub-groups have greatest need / poor sexual health; (b) monitor inequalities in screening and treatment for STIs including chlamydia; (c) commission and plan appropriate services; (d) develop targeted and culturally appropriate health promotion campaigns; and (e) assess the effectiveness of local and national health prevention messages and public health policy. GUMCAD-2 will contain ethnicity data, as well as data on chlamydia screens carried out within primary healthcare settings. However more than half of screens carried out in the NCSP are carried out in non-primary healthcare settings and so ethnicity data would not be available for these tests if not collected through CTAD.

Unlike the other data items included in CTAD, ethnicity is not currently routinely recorded on laboratory databases. For this reason, the CTAD Phase 1 pilot did not request ethnicity data from laboratories. The only exceptions to this in relation to chlamydia are the few laboratories which currently enter the NCSP core data items (this is usually carried out by the Chlamydia Screening Offices), including ethnicity, which is one of the NCSP Chlamydia Core Dataset items, and is recorded in about two thirds of cases.

However, the Health Protection (Notification) Regulations 2010 (SD12), which came into force on 6th April 2010, state that for statutorily notifiable diseases, laboratories must report ethnicity when making notifications to the relevant body, including when notifying causative agents found in human samples to the Health Protection Agency. This would suggest that laboratory IT systems will be enabled to store and report ethnicity data for some diseases, implying that this could perhaps be extended to diseases that are not notifiable, including Chlamydia trachomatis. The CTAD Phase 2 Pilot showed that ethnicity was available for 7 of the 11 data extracts and completeness varied between 2.6% to 51.1% (SD10). We therefore propose that ethnicity be included in the CTAD dataset, but expect data to include a high proportion with unknown ethnicity.

**Collection of postcode data for mapping of geographical areas**

A central objective of collection of the CTAD dataset is to enable estimation of population screening coverage rates at local geographical level, for monitoring the success of the NCSP in terms of reaching the VSI screening coverage targets set by the Department of Health. Also, the availability of chlamydia testing and positivity rates by area of residence would enable SHAs and healthcare providers to relate chlamydia testing and prevalence rates to geographical location. This would improve our understanding of the epidemiology of chlamydia in England, as well as of the implementation of the screening programme. Furthermore, analyses of NCSP data from 2008 indicate an association of chlamydia with deprivation, with higher rates in populations in more

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deprived areas, as well as higher rates of screening\textsuperscript{14}. It will be important to monitor these associations over time as the programme expands its coverage, as well as to focus services on those most at risk. Analysis of the proportion of people testing positive for chlamydia by socio-demographic factors will provide further insight into the epidemiology of the infections, and the need, for example, for further targeting of preventive measures geographically or by patient characteristics.

Currently local population coverage rates are calculated at the level of PCT of residence for assessment of the VSI targets. However, it is planned that PCTs will be phased out by April 2013 and that new geographical health boundaries will exist. The collection of postcode of residence, postcode of GP and postcode of testing service will allow mapping by the HPA to future geographical health boundaries once reconfiguration is known, such as mapping to local authority (LA), lower super output area (LSOA) etc. LSOAs are a new geography for the collection and analysis of small area statistics. A key principle is that they will not be subjected to frequent boundary changes. They are more robust for statistical comparisons such as historic trend analysis, since they avoid problems caused by NHS reorganisation and are of a consistent size (LSOAs have a minimum population of 1000 residents and a mean of 1500). LSOAs can be mapped to any health and political boundary (although increasingly they will diverge from electoral wards) and to ‘Indices of Deprivation’.

Postcode of residence is already collected by some laboratories and the number doing so is growing as IT systems develop. Area of residence (e.g. PCT, LA, LSOA) will be mapped from patient postcode (defined as POSTCODE OF USUAL RESIDENCE in the NHS Data Dictionary). Initially, our preferred option was that this mapping procedure be conducted at the local laboratory level using a “Gridall” postcode look-up file, so obviating the need for transmission of postcode data to the HPA. However, in phase 1 of the CTAD pilot some of the laboratories were not able to map postcode to PCT, and for others, data manipulation was required. Altering all laboratory IT systems within England to incorporate this mapping procedure would be a significant piece of work. We therefore suggest a more pragmatic and efficient solution, that laboratories transmit postcode of residence data to the HPA. A precedent and working model for this procedure exists inasmuch as the NCSP Chlamydia Core Dataset submitted to the HPA contains postcode, and this is used to automatically assign PCT, LA and LSOA of residence to test records on record import (~1 million records per year currently).

Since postcode of residence is not available for all records, instructions for completion of the current aggregated laboratory data return used to inform the VSI state that when postcode of residence of the person being screened is not available, this should be attributed using the PCT of the GP followed by the PCT of the testing service where the sample was taken (SD3). CTAD will therefore also collect postcode of GP and postcode of testing service, both for attributing to postcode of residence as necessary, as well as to analyse cross-boundary flows, which are important for understanding patterns of healthcare usage as well as potentially for cross-charging. Data from the NCSP indicate substantial cross-PCT boundary flow of persons to access services for chlamydia testing and treatment.

The phase 1 pilot (SD9) showed that GP postcode and testing service postcode were not always available from laboratories. In the case of GP postcode not being available, laboratories may collect national GP codes which can be used to map to PCTs/LAs. In the case of testing service postcode not being available, some laboratories automatically mapped testing service PCT from local location codes used within the lab. The Phase 2 Pilot therefore collected both GP postcode

and national GP codes, as well as both testing service postcode and testing service PCT, to assess which data items are more complete and which would be most useful and feasible to collect in the final dataset.

The CTAD Phase 2 Pilot shows that postcode of residence was available for 14% to 71.8% of all tests and was successfully mapped to PCT, LA and LSOA by the HPA on receipt of the data. Completeness of postcode of GP, postcode of testing service and PCT of testing service varied between laboratories but using all four variables to create an “Attributed PCT of Residence” variable combined available information from four variables and hence maximised the number of tests which could be assigned to a geographical area (SD10).

**Collection of NCSP clinic code and testing service type**

The NCSP uses a unique identifier for each participating healthcare and community screening setting, known as the NCSP clinic code. These codes are requested from the Health Protection Agency by CSOs as new venues sign up to chlamydia screening, and are assigned via a web-based facility. All NCSP clinic codes are categorised into 16 different venue types:

1. GUM
2. Community Sexual Health Services
3. General Practice
4. Pharmacy
5. Chlamydia Screening Office
6. Gynaecology & fertility services
7. Antenatal & Obstetric services
8. Termination of pregnancy (ToP)
9. Military settings
10. Educational settings
11. Occupational health
12. Prison
13. Remote testing
14. Youth services
15. Outreach
16. A&E, minor injuries, NHS Walk in Centres and Hospitals

The NCSP currently collect clinic code through the core dataset (see Table 1). This information is useful for commissioning purposes and also to compare chlamydia testing coverage and positivity rates between venue types. For these reasons it is proposed that CTAD will also collect NCSP clinic code. This information will also enable assessment of screening rates in specific clinical settings, including obstetrics and gynaecology settings.

Chlamydia tests performed outside the NCSP will not have an NCSP clinic code, but it would still be useful to know the type of testing venue for the reasons mentioned above. It has been proposed that testing service type will therefore also be collected as a CTAD variable. The CTAD Phase 1 Pilot (SD9) showed that laboratories would not be able to provide testing service type by all 16 categories currently used by the NCSP. Consultation with the NCSP identified a simplified coding of testing service type, using the following seven categories:

- **01 GUM** - Testing done in genitourinary medicine clinics reported to GUMCAD.
- **02 Reproductive and Sexual Health Services** - Testing done in family planning services/CASH services/Community Contraceptive Services excludes contraceptive services within general practice. Includes young person’s sexual health services e.g. Brook clinics and SexSense. This also includes pre-instrumentation screening e.g. IUDs
where undertaken at CASH services and postal kits handed out at community sexual health services.

- **03 General Practice** - Testing done in general practice. Includes post kits handed out at the general practice.
- **04 Pharmacy** - Testing done in community pharmacies. Includes post kits handed out at the pharmacy.
- **05 ToP** - Testing done in termination of pregnancy services at all stages – medical and surgical. Includes all providers NHS and private including for example BPAS (British Pregnancy Advisory Service), Marie Stopes, and Pregnancy Crisis Centre. This also includes post kits handed out at termination of pregnancy centres.
- **XX Other** - Any other testing service type which does not fit into categories 1 to 5 e.g. chlamydia screening offices, antenatal and obstetric services, military, education, occupational health, prison, youth services, outreach, A&E, minor injuries, NHS walk in centres and hospitals.
- **99 Not known** – Testing service cannot be identified.

The NCSP currently monitors performance locally by proportion of tests and screening coverage in core service (defined by the NCSP as Reproductive and Sexual Health Services, General Practice, Pharmacy and Termination of Pregnancy) so it was important to include these core services in the coding. A category for GUM was added as this is a distinct venue type and all other testing venues should be categorised into “Other”. For consistency, the definitions used for codes 1 to 5 above are the same as those currently used by the NCSP.

**Collection of date result authorised**

The collection of the data item ‘date result authorised’ is to provide information on turnaround times for test results, which is a quality assurance indicator for the NCSP. As described in the NCSP Core Requirements (**SD13**), currently a quality assurance survey is carried out once a year and monitors a number of quality assurance items, including testing turnaround times; data on testing turnaround times are currently provided by CSOs. The CTAD Phase 2 Pilot indicated that date result authorised variable was available for 99.6% to 100% of tests (**SD10**).

### 7.3 Scope

#### 7.3.1 What will the proposed standard be used for?

- To inform public health response and policy formulation;
- To contribute towards monitoring and evaluation of the Chlamydia Screening Programme at local and national level
- To monitor the effectiveness of policies introduced as part of the National Strategy for Sexual Health and HIV;
- For performance management at PCT, SHA and national level, particularly in relation to delivery of the current national VSI target for chlamydia screening test uptake, and any future targets;
- To generate sexual health-related community health profiles at the Local Authority Level;
- For better planning and management of services at local level;
- To adapt and refine interventions, as appropriate.

#### 7.3.2 Who is the subject?

The dataset will include all individuals tested for chlamydia in all NHS settings (as part of the NHS National Chlamydia Screening Programme and tests occurring outside of the Screening Programme), and
in non-healthcare community settings (as part the NHS National Chlamydia Screening), in England. These settings include:

- Genitourinary medicine clinic services (Level 3 sexual health services).
- Other DH-commissioned sexual health services (Level 2 / Enhanced sexual health services [ESRH]).
- All other healthcare settings where screening for chlamydia is carried out, including GP practices and pharmacies.
- All other non healthcare community settings where screening for chlamydia is carried out, including: prisons, educational establishments, community outreach venues, youth clinics, etc.

7.3.3 Who will use it?

- Staff at healthcare settings providing sexual health services
- Staff at non-healthcare community settings where chlamydia screening is provided
- Staff involved in all aspects of implementation, management and monitoring of the National Chlamydia Screening Programme
- The Health Protection Agency for the purpose of monitoring and reporting rates of, and trends in, testing coverage and diagnoses of chlamydia.
- PCT/LA, SHA and DH staff and other health professionals concerned with planning service provision and managing performance.
- NCSP stakeholders
- Academics involved in sexual health research.
- Laboratories in England carrying out NHS-commissioned chlamydia testing

7.3.4 How will it be used in routine existing working practices?

The dataset is intended to be a mandatory standard. The typical scenario for collection and use of CTAD data items is: A laboratory is sent a specimen to be tested for *Chlamydia trachomatis*. Basic patient demographic details and information regarding the test (i.e. specimen type, information about the testing service, test result) are registered for the sample in the laboratory’s IT system (or transmitted electronically from the test site to the laboratory). Within each laboratory, these data constitute basic test records. These data are the sources for submitting the quarterly disaggregate data return to the Health Protection Agency.

Once CTAD data have been submitted to the HPA, they will be processed and analysed to provide statistics on numbers of and trends in chlamydia testing coverage and positivity (proportion of positive tests among those being tested), analysed by geographical area and patient socio-demographic characteristics. These data will be distributed to the Department of Health, and to HPA Local and Regional Services for further distribution within the local NHS. Laboratory and PCT/LA specific reports will be generated and distributed. Data will also be published on the HPA website.

7.3.5 Where will it be used?

It will be used at the Health Protection Agency, at PCT/LA, SHA, NCSP and DH level, as well as in all laboratories testing urine, genital, rectal or pharyngeal specimens for *Chlamydia trachomatis* using NAATs.
7.4 Out of Scope

The following are out of the scope of this submission:

- Tests for *Chlamydia suis* and *Chlamydia muridarum*.
- Conjunctival samples.
- Chlamydia testing performed in laboratories outside England.
- Private testing for chlamydia (tests commissioned by the NHS and sent to a private laboratory will be included). Of note, we do not believe that private chlamydia tests are currently a major source of total testing volume.
- Detailed behavioural risk factor data (i.e. sexual orientation and behaviour).
- Data for monitoring patient and partner management, including treatment and partner notification. This data is currently collected by the NCSP through quarterly aggregate data returns and annual audits, according to standard procedures, with defined NCSP performance standards (see NCSP core requirements, SD13).
- Clinical audit / treatment efficacy issues. Patient and partner management standards and procedures used by the NCSP are those defined by the British Association for Sexual Health and HIV (see NCSP core requirements, SD13).
- Quality assurance of laboratory testing for chlamydia.

7.5 Performance Characteristics

Currently, there are three data returns managed by the HPA that collect data on chlamydia testing and diagnoses in England: (1) the Genitourinary Medicine Clinic Activity Dataset (GUMCAD) return from GUM clinics; (2) the National Chlamydia Screening Programme data return on NCSP screens performed in registered healthcare and community settings; and (3) the non-NCSP non-GUM data return, which reports aggregated data from laboratories on chlamydia testing among those aged 15-24 years performed outside GUM clinics and not reported to the NCSP. These datasets are currently used to assess chlamydia testing coverage and diagnoses.

Accurate data on all screening tests carried out for chlamydia in England are key to monitor the current VSI targets and assess the effectiveness of chlamydia control strategies. The existing data sources are however not wholly adequate for accurately monitoring chlamydia testing activity and population coverage. As discussed in detail in Section 6 of this application, the proposed chlamydia testing and diagnosis dataset (CTAD) will provide more robust data and more accurate estimates of testing activity from all age groups and all testing sources, and thus of population coverage of screening, than is currently possible using existing datasets. Table 5 below lists the data items to be collected by CTAD and what will be achieved by each item.

The data extract was specified through a collaborative partnership between the HPA, the Department of Health, NHS laboratory stakeholders, National Chlamydia Screening Programme personnel and Advisory Group members; through the Chlamydia Testing Activity Dataset project Steering Group (SD14). NHS laboratory stakeholders confirm that most laboratories routinely record most of the data items specified in the CTAD. NHS Data Dictionary (DD) standards were used to define the variables to be recorded and extracted, where possible (Table 4). Where necessary, applications have been made to the NHS DD to incorporate the variables not currently specified in the DD. CTAD proposes the collection of a subset of variables which are already collected by the NCSP Core Dataset, which has NIGB and ROCR approval; and GUMCAD, which has ISB and ROCR approval.

CTAD has undergone two phases of piloting - the first an initial fact finding phase in five laboratories and a more extensive second phase in ten laboratories. The pilots demonstrated that the required variables are in most cases recorded in laboratory data management software or
can be generated from data recorded in these systems and can be securely transmitted to the HPA in electronic format. The CTAD Phase 2 Pilot demonstrated that laboratories are able to recode, reformat, and extract basic CTAD data for submission to the HPA without laboratory IT suppliers making any changes to the laboratory IT systems. Ability to supply additional variables differed across laboratories and it will take time to improve on this situation. See CTAD phase 1 and 2 pilot reports - SD9 and SD10.

Table 5. Objectives of collecting each CTAD data item

<table>
<thead>
<tr>
<th>Data Item</th>
<th>Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory ID</td>
<td>To uniquely identify each laboratory submitting a CTAD data extract</td>
</tr>
<tr>
<td>Test ID</td>
<td>To uniquely identify each chlamydia test submitted by a laboratory.</td>
</tr>
<tr>
<td>Patient ID</td>
<td>To uniquely identify patients within a laboratory over time – this will be used to identify duplicate and repeat tests within a patient.</td>
</tr>
<tr>
<td>NHS Number</td>
<td>To uniquely identify patients within England over time – this will be used to identify duplicate and repeat tests within a patient.</td>
</tr>
<tr>
<td>NHS Number Status Indicator</td>
<td>To provide information on the data quality of NHS number.</td>
</tr>
<tr>
<td>Gender</td>
<td>To monitor trends in chlamydia testing and diagnoses by gender; to monitor inequalities in access to services by gender.</td>
</tr>
<tr>
<td>Date of birth</td>
<td>To calculate the age of the patient being tested, in order to monitor trends in chlamydia testing and diagnoses by age group; to monitor inequalities in access to services by age group; to act as an additional patient identifier to identify duplicate and repeat tests within a patient.</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>To monitor trends in chlamydia testing and diagnoses by ethnic group; to monitor inequalities in access to services by ethnic group.</td>
</tr>
<tr>
<td>Postcode Residence</td>
<td>To monitor trends in chlamydia testing and diagnoses at local geographical level; to assess population testing coverage rate at local geographical level; to act as an additional patient identifier to identify duplicate and repeat tests within a patient.</td>
</tr>
<tr>
<td>Postcode GP</td>
<td>To act as a proxy for patient area of residence when postcode of residence is missing; to maximise the attribution of tests to a local geographical area.</td>
</tr>
<tr>
<td>GP Code</td>
<td>To act as a proxy for patient area of residence when postcode of residence is missing; to maximise the attribution of tests to a local geographical area.</td>
</tr>
<tr>
<td>Postcode Testing Service</td>
<td>To act as a proxy for patient area of residence when postcode of residence is missing; to maximise the attribution of tests to a local geographical area.</td>
</tr>
<tr>
<td>PCT Testing Service</td>
<td>To act as a proxy for patient area of residence when postcode of residence is missing; to maximise the attribution of tests to a local geographical area.</td>
</tr>
<tr>
<td>Specimen Type</td>
<td>To monitor trends in chlamydia testing and diagnoses by specimen type.</td>
</tr>
<tr>
<td>Testing Service Type</td>
<td>To monitor trends in chlamydia testing and diagnoses in specific testing venues.</td>
</tr>
<tr>
<td>NCSP Clinic Code</td>
<td>To monitor trends in chlamydia testing and diagnoses in specific chlamydia screening venues.</td>
</tr>
<tr>
<td>Specimen Date</td>
<td>To calculate the age of the patient at the time the specimen was taken.</td>
</tr>
<tr>
<td>Receipt Date</td>
<td>To monitor trends in chlamydia testing and diagnoses over time; to be used by laboratories to identify all chlamydia tests within a calendar quarter in order to submit quarterly data extracts.</td>
</tr>
<tr>
<td>Date Result Authorised</td>
<td>To monitor testing turnaround times for quality assurance purposes.</td>
</tr>
<tr>
<td>Chlamydia Test Result</td>
<td>To monitor rates and trends in chlamydia diagnoses</td>
</tr>
</tbody>
</table>
8 Business Justification

8.1 Strategic Fit

8.1.1 Criteria under which the proposed information standard is submitted

The CTAD return will be the only fully comprehensive routinely available dataset providing information on coverage of testing, and on chlamydia diagnoses, to inform assessment of the public health control of chlamydia in England.

The data return will be submitted to the Health Protection Agency. The HPA will publish the data on their website and in reports, and will also distribute local data to PCTs/LAs, SHAs, laboratories, NCSP stakeholders, the Department of Health and HPA local and regional services.

It is planned, subject to the Health and Social Care Bill, that the HPA will be abolished and staff transferred to a new body, Public Health England (PHE), which will be part of the Department of Health. The Department of Health are currently working to develop an Intelligence and Information Strategy for PHE to ensure that national data sets for sexual health, including the national collection, analysis and publication of CTAD data, are part of this strategy. Preliminary discussions between the HPA and the NHS Information Centre (IC) regarding potential transfer of surveillance data collected by HPA/PHE to the national data repository that is to be managed by the NHS IC are underway.

Potential future linkages of CTAD with other relevant datasets (e.g. HES) may also be possible in the future.

8.1.2 Business justification

The value of the data will be in the provision of comprehensive data and accurate estimates of chlamydia testing activity from all age groups and all testing sources. The value of currently collected routine datasets is limited for providing a complete picture of chlamydia testing activity in England due to issues of comparability of data sources, validation of aggregated data returns, and the potential for under-reporting and duplication (please see Section 6 for more details). CTAD will obviate the current need to coordinate and compile heterogeneous data from multiple sources, thereby simplifying and streamlining information flow and improving data completeness and quality. Using this dataset it will be possible to identify national, regional and local trends in chlamydia testing activity and the burden of infection. The dataset will thus contribute to a substantial improvement in the monitoring and surveillance of chlamydia testing coverage and diagnoses.

A more detailed rationale for the dataset is given in Section 6 Background and Customer Need, and for each of the data items in Section 7.2.1. Please also see Section 8.5.1 for a more detailed discussion of the strategic vision for sexual health data collection and how CTAD fits into this.

8.1.3 When are the NHS and/or social care organisations required to adhere to the proposed information standard by?

The proposed dataset would be mandatory by April 2012, following issue of the ISN. Laboratories would be encouraged to return the CTAD quarterly disaggregate data from September 2011 onwards but there would be a six-month lag period until April 2012 when full implementation would be mandatory (see section 10.1 Implementation Plans). Data will be submitted retrospectively,
dating back to January 2010 for validation and purposes of cross-comparison with existing datasets.

It is proposed that for a period of three to six months the collection of the NCSP Core Dataset and the non-NCSP non-GUM aggregated laboratory returns would continue in parallel with collection of the proposed CTAD dataset, in order to monitor quality issues, and to compare and validate information collected in the returns.

8.1.4 Review of Central Returns (ROCR) Submission Plan (NHS only) / Strategic Information Group for Adult Social Care (SIGASC) Submission Plan (Social Care only)

An application to ROCR has been made and a response is expected by June 2011. The dataset already has ministerial support - please refer to SD15 for email correspondence from the Parliamentary Under Secretary of State for Public Health to the DH. It is also worth noting that the National Chlamydia Screening Programme already has ROCR approval for the core data return (SD16).

8.2 Relationship to the National Programme for IT (NPfIT)

In its initial implementation the data collection and return will be completed using existing systems within NHS laboratories. NHS Data Dictionary (DD) standards were used to define the variables to be recorded and extracted within CTAD. Where necessary, applications have been made to the NHS DD to incorporate those variables not currently specified in the DD.

The CTAD Phase 2 Pilot report confirms that existing systems are able to support the collection of the data required (SD10).

8.3 Operational Fit

8.3.1 Concept of Operation

The CTAD extract will be submitted quarterly directly by laboratory staff, using existing laboratory software systems, to the HPA. Data will be electronically submitted to the HPA in CSV format. The extract will be a single comma delimited CSV file where each chlamydia test is represented as a single row of data. The format of the CSV file is presented in Table 4. An example of the field content is also shown to illustrate how the data should appear in the CSV file (Figure 1).

Figure 2. Example of CSV format for one row of CTAD data

<table>
<thead>
<tr>
<th>Lab_ID, Test_ID, Patient_ID, NHS_number, NHS_Number_Status_Indicator, Gender, DOB, Ethnicity, Postcode_Residence, Postcode_GP, GP_Code, Postcode_Testing_Service, PCT_Testing_Service, Specimen_Type, Testing_Service_Type, NCSP_Clinic_Code, Specimen_Date, Receipt_Date, Date_Result_Authorised, CT_Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>XXXX, V669157, PAT123, 1234567890, 01, 1, 1980-09-01, A, SW27 3WW, SW27 3LL, Y00001, SW27 3SS, 5E1, 01, 03, 5A1FA, 2007-10-29, 2007-10-31, 2007-11-02, 02</td>
</tr>
</tbody>
</table>
XML (Extensible Markup Language) would be the preferred data format for CTAD. However, the CTAD Phase 1 Pilot demonstrated that not all laboratories were able to produce data in XML format (SD9) and the collection of data in CSV format will therefore represent a low-cost, pragmatic, interim solution. The HPA is currently investigating the use of XML formats for data reporting, including for the existing GUMCAD data extract. In the future, once this process has been established, CTAD will move to XML formatting with a planned move by April 2013. This is supported by the Technology Office (see Appendix B).

The comma separated file (*.csv) will be submitted by laboratories to the HPA in Colindale electronically. For the purposes of the pilot CyberArk (a web based secure document gateway) was used to transfer the data to the HPA. In future it is envisaged that data will be returned to the HPA through the secure document HIV and STI Department web portal, on the HPA website. This gateway enables organisations to distribute any types of files to previously identified users in a secure manner across the Internet. Connection to the web portal requires a login account name and password, which will be available from the project administrator at the Health Protection Agency, Colindale. The browser supports the Secure Sockets Layers (SSL) method of communication and passwords are regularly changed. The HIV and STI Web Portal user guide can be found in SD17.

The CTAD database will be a stand-alone application. A *.csv file is the current preferred format as it is a flat file, and is the most common format for exporting and importing into databases. File sizes are usually quite small, and can be exported from a variety of software programmes and can also be exported as excel (*.xls) files.

Analysis
The HIV and STI department at the HPA will produce timely outputs of data at local, regional and national levels. Reports of chlamydia testing rates and diagnoses by area of residence, as well as patient cross-boundary flows, will be developed and agreed by the project Steering Group, the HPA Sexual Health Programme Board Data Sub-Group and the National Chlamydia Screening Programme team at the HPA. These are likely to include the following:

- Numbers and rates (population coverage) of chlamydia tests for each calendar quarter and area of residence, stratified by gender and age group. This report will be used to provide data for the current Vital Signs indicator.
- Numbers and rates of positive tests / diagnoses of chlamydia for each calendar quarter and area of residence, stratified by gender and age group (ethnicity). This report will be used to provide data for the proposed new chlamydia indicator to be introduced in 2012.
- Numbers and rates of positive tests / diagnoses of chlamydia for each calendar quarter and area of residence, stratified by type of testing service
- Rates of positive tests of chlamydia by level of deprivation (calculated using LSOA of residence) and type of testing service.
- Rates of repeat testing for chlamydia by age group, sex and area of residence.
- Rates of re-infection amongst people being screened/tested for chlamydia by age group, sex and area of residence.

Time period: The reports will cover quarterly and annual periods
Frequency: Reports will be produced quarterly and annually. Data should be received from participating laboratories within six weeks after the end of each surveillance period, and reports distributed in a timely manner thereafter. Annual reports will summarise each full calendar year’s data and present time trend analyses.
8.4 Impact and Implications

8.4.1 Implications to stakeholders

Impact on the laboratories

The main burden on laboratories concerns extracting CTAD data from existing laboratory systems. Data items to be collected for CTAD already flow from chlamydia testing services to laboratories; according to the NHS laboratory stakeholders consulted, most laboratories already routinely collect and record most of the data items detailed in CTAD, including the eight data items which are not currently included in the NHS Data Dictionary. The CTAD dataset has been purposefully designed to meet its objectives whilst imposing minimum additional workload on laboratories. Since most of the data items in CTAD are already collected and stored routinely in laboratories, there should be little significant impact on laboratory staff in terms of recording data; however the laboratories will need to recode and/or reformat some data items.

Results from the Phase 2 Pilot indicated that laboratories were able to produce the majority of the data items by running a query on existing data, without the need for IT software modifications, suggesting that the cost to laboratories should be minimal. The Phase 2 Pilot demonstrated that laboratories are able to recode, reformat, and extract basic CTAD data for submission to the HPA. Ability to supply additional variables differed across laboratories and it will take time to improve on this situation. The Phase 2 Pilot has provided evidence that mapping of PCT/LSOA and de-duplication of the data by the HPA are feasible, and hence will avoid the workload associated with asking laboratories to do this.

Results from the Phase 2 Pilot estimated that it would take a maximum of 4 person days per year per laboratory to prepare and upload 4 quarterly data extracts (see Phase 2 Pilot Report - SD10). This equates to 696 person days per year across approximately 174 laboratories in England. Requirements for on-site training for collection of data are also expected to be minimal. Training will be necessary with respect to (i) ensuring data are coded according to the NHS Data Dictionary standard and are of sufficient quality, and (ii) how to extract and transmit the data to HPA. The HPA, with the CTAD Steering Group, including the Department of Health and NHS laboratory stakeholders, have already produced detailed technical guidance for laboratory staff on producing data required for the CTAD for the pilot (SD18). Information from SD18 has now been incorporated into the full CTAD Standard Specification document and this will be circulated for roll-out. It is possible that CTAD may alleviate the current workload of some laboratories. Once CTAD is implemented, it will no longer be necessary to complete the current aggregated non-GUM, non-NCSP data return, which in some cases is currently carried out by the laboratory. The non-GUM, non-NCSP dataset is a quarterly data return submitted to the HPA by all PCTs within England. The aggregate nature of the data requires data manipulation and collation procedures, including PCT mapping and de-duplication, which can be time-consuming and may not always fully achieved by all laboratories (SD1, SD3, SD8). The collation of this dataset is done by PCT, laboratory or local chlamydia coordination office staff. In addition, in three SHAs (the East of England, London and the West Midlands) a full-time staff member is employed to compile the non-GUM, non-
NCSP data. CTAD represented a substantial reduction in the workload associated with the non-GUM, non-NCSP data return for laboratory, PCT or CSP staff.

Impact on patients
Most laboratories already record the information which will be used to generate the CTAD for each test sample they receive and process. Therefore implementation of CTAD is likely to have minimal direct impact on patients. The patient information leaflet currently given to those being screened (SD19) contains information about reporting of data collected on the NCSP form to the Health Protection Agency. In terms of patient information, the NCSP dataset is a subset of the CTAD dataset, and, if approved, a similar patient information leaflet could be developed for all those tested for chlamydia.

Impact on HPA and NCSP Data management
The main additional burden of CTAD on the HPA will be in the short term, particularly with respect to setting up a database to store and process CTAD data, and rolling out the standard if it gains ISB approval. The infrastructure for importing, storing and analysing sexual health data has already been developed for GUMCAD and will be used as a model for CTAD database development. Funding has already been secured by the HPA from the DH for a programmer for database development.

It is envisaged that if CTAD is approved and once it is implemented, the NCSP Chlamydia Core dataset return, and the non-NSCP, non-GUM return, will be discontinued, after a period of overlap to allow for validation and continuity of data flows. Standardised CTAD outputs will be developed in line with current NCSP outputs, and with GUMCAD / GUMCAD-2 outputs. Capacity to process and analyse CTAD data will be provided by staff currently working on data entry, processing, analysis and production of reports using NCSP and aggregate laboratory data. Because data will be automatically uploaded into the HPA database, the HPA will no longer require data entry staff for the non-NCSP non-GUM returns.

As is currently the case with the data returns described above, all providers who are late in submitting CTAD returns or who have submitted erroneous returns will be routinely followed up by the HPA to ensure that as complete a dataset as possible is reported. Fewer staff will be required for this than currently, since there will be a single data return.

Impact on NCSP Chlamydia Screening Offices (CSOs)
The Chlamydia Screening Offices (CSOs) located in 100 programme areas in England are currently responsible for entry of data submitted on NCSP forms and transmission of these data to the HPA. If collection of data via this system is discontinued, as is envisaged, this will represent a substantial decrease in workload for the CSOs. In 2009-10 for example, over 1.2 million tests\(^\text{15}\) were reported to the HPA through this route. It has been estimated that the NCSP core data return takes an average of 0.63 person days per week for each PCT to provide the data. For all 151 PCTs in England this corresponds to 95.8 person days per week (4982 days per year) in total across England. The estimate of 696 days a year for CTAD would therefore be a substantial reduction in burden.

Impact on data users
CTAD will enable robust analyses of chlamydia testing and diagnoses by area of residence, gender and age group, as well as analyses of patient cross-boundary flows. Automated quarterly reports will allow local providers of chlamydia testing, PCTs, LAs, SHAs, laboratories, the Department of Health, NCSP stakeholders and respective HPA regional and national teams to:

\(^{15}\)http://www.chlamydiascreening.nhs.uk/ps/assets/pdfs/data/VSI_PCT/VSI_by_PCT_Apr09_Mar10.pdf
• Accurately monitor population coverage rates of chlamydia testing, and enable more precise monitoring of progress towards the chlamydia Vital Signs Indicator, which requires high quality data on all patients tested for chlamydia based on area of residence.
• Produce residence-based data on chlamydia diagnoses by level of deprivation (calculated using LSOA of residence) and type of testing service. These data are required to assess local chlamydia testing practices and to monitor the progress of chlamydia control measures.
• Analyse rates of repeat testing for chlamydia by age group, sex, and area of residence.
• Analyse rates of chlamydia re-infection amongst those undergoing testing by age group, sex, and area of residence.
• Contribute towards understanding of rates of chlamydia re-infection

Without implementation of CTAD, current data reporting routes would continue whereby stakeholders lack comprehensive, high quality data on chlamydia testing rates and diagnoses by PCT or LA of residence, to inform local planning, intervention and control activities.

8.4.2 Analysis of replacement of existing standards

It is envisaged that if CTAD is approved and once it is implemented, the NCSP Chlamydia Core dataset return, and the non-NSCP, non-GUM return will be discontinued.

8.5 Known Standards

8.5.1 Existing standards with a related purpose and scope

Currently there are three data returns managed by the HPA that collect data on chlamydia testing and diagnoses in England. These are: (1) the Genitourinary Medicine Clinic Activity Dataset (GUMCAD) return from GUM clinics; (2) the National Chlamydia Screening Programme data return, a disaggregate dataset (the NCSP Chlamydia Core dataset) of screens carried out in healthcare and non-healthcare sites registered with the NCSP and recorded on NCSP-approved forms; and (3) the non-NCSP non-GUM data return, a manually entered aggregated laboratory dataset. This return reports numbers of chlamydia tests and diagnoses among those aged 15-24 years performed outside GUM clinics and not reported via the NCSP. The GUMCAD dataset is maintained by the HIV and STI Department at the HPA, while the latter two datasets are maintained by the NSCP team. Together, these datasets are currently used to assess chlamydia testing coverage and numbers of diagnoses.

As discussed in detail in Section 6 of this application, these systems are not wholly adequate for accurately monitoring chlamydia testing activity and population coverage, due to issues of data comparability, validation of aggregated data returns, and the potential for under-reporting and duplication. The implementation of CTAD will enable collection of all chlamydia testing and diagnosis data, from all test sources, regardless of age. It will obviate the need to combine data from disparate sources, thereby simplifying and streamlining information flow and improving data completeness and quality.

As described in Section 6, GUMCAD-2 is currently undergoing ISB approval for the reporting of data on STI testing and diagnoses from all services offering STI testing (Enhanced Sexual Health Services). While GUMCAD-2 will thus contain most of the data items defined in the proposed CTAD return (apart from NHS number – see Table 6 below), it will not suffice as a comprehensive data source for chlamydia testing.
GUMCAD and GUMCAD-2 will collect more detailed socio-demographic and clinical data on chlamydia testing carried out in GUM and Enhanced Sexual Health Services settings, thereby providing additional information not collected by CTAD for a subset of tests. These data returns will complement each other to provide comprehensive data on chlamydia which will be used to monitor access to and uptake of services with regards to testing for chlamydia.

Table 6: Data items currently collected by the NCSP Core Dataset (reported on NCSP-approved forms); data items collected in GUMCAD and to be collected in GUMCAD-2; data items to be collected through CTAD (universal laboratory reporting)

<table>
<thead>
<tr>
<th>NCSP variables</th>
<th>Core Dataset</th>
<th>CTAD</th>
<th>GUMCAD &amp; GUMCAD-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinic code</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Local Patient Unique ID</td>
<td>Within-lab only</td>
<td>Within-clinic only</td>
<td></td>
</tr>
<tr>
<td>NHS number</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Gender / sex</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Date of birth</td>
<td>Yes</td>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>Postcode of residence</td>
<td>Yes</td>
<td>No (PCT of residence only)</td>
<td></td>
</tr>
<tr>
<td>Date of attendance</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Specimen type</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Type laboratory test</td>
<td>Only NAATs reported</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Chlamydia test result</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Reason for test</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>New sexual partner in last 3 months</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>2+ sexual partners in last 12 months</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

In terms of overall strategy for collection of data on STIs/HIV and sexual health, we do not envisage that a laboratory reporting requirement similar to CTAD would emerge for other STIs or HIV in the near future. This is because, unlike chlamydia, the vast majority of testing for other STIs, and HIV, takes place in commissioned sexual health service settings, and would therefore be covered by GUMCAD and GUMCAD-2 reporting.

On the other hand, it is possible that significant changes to the implementation of the NCSP could take place in the next few years, and indeed to the delivery of other sexual health services. For this reason we plan to carry out a review of the implementation and utility of CTAD and other datasets (including GUMCAD and GUMCAD-2) collected by the HPA for surveillance of STIs/HIV and sexual health, in the light of service and other developments, following an appropriate period of implementation. At that point, and as appropriate, the utility of continuation of collection of CTAD, and the potential necessity of changes to datasets and methods of collection, will be
assessed. In the meantime, we view CTAD as an opportunistic, pragmatic and low-cost means of rapidly collecting routine data necessary for current monitoring of the implementation of the NCSP.

8.5.2 Assessment to include or eliminate

It is foreseen that CTAD will replace reporting of the NCSP Chlamydia Core dataset return, and the aggregated non-NCSP non-GUM return, as the main source of comprehensive chlamydia testing information. Through CTAD collection of comprehensive data on all chlamydia testing will be streamlined, obviating the need for combining data from different sources and ensuring more accurate and complete data are collected.

8.6 Interdependencies

8.6.1 Existing or planned standards

This standard will complement and be consistent with data definitions as used within the existing NCSP core data return, GUMCAD and GUMCAD-2.

SNOMED-CT, the 'Systematized Nomenclature of Medicine Clinical Terms', is the standard clinical terminology used by the NHS in England. However, SNOMED-CT is not routinely used by laboratories and is not coded as part of standard Laboratory Information Management Systems across England. Laboratories would not be able to supply SNOMED-CT coded data at present as part of the CTAD dataset. However, work is being carried out on the NLMC (National Laboratory Medical Catalogue) to code all pathology testing and once a code is created and agreed on, a SNOMED CT code is then applied for. The HPA is currently piloting the National Pathology Exchange laboratory-to-laboratory messaging system, between Colindale and Manchester laboratories, which will be able to translate pathology codes against the NLMC (and eventually SNOMED CT codes). The project is still in the initiation stage but CTAD developers are working with the NLMC and SNOMED-CT, so that CTAD will be compliant with these coding systems in the future.

The Head of Information Standards (Microbiology Services Laboratory Network) at the HPA is involved in this pilot and has agreed to be on the CTAD implementation group.

There are no other known or planned interdependent standards.

8.6.2 Projects, programmes or organisations

As part of the process of developing CTAD, the developers have worked closely with the National Chlamydia Screening Programme, the Genitourinary Medicine Clinic Activity Dataset (GUMCAD) and GUMCAD-2 teams, NHS laboratory stakeholders, PCTs and the Department of Health, in order to ensure consistency of data definitions and requirements, and to allow meaningful cross-comparisons of data.

8.7 Consultation and Support
The CTAD standard was extensively consulted on, developed and piloted. Below lists the stakeholders involved in CTAD:

- National Chlamydia Screening Programme
- The Health Protection Agency (HPA), specifically the Head of the STI section, epidemiologists (nationally and regionally) and Regional Information Managers.
- Local sexual health leads (through the HPA Sexual Health Data Subgroup)
- NHS and HPA laboratories
- The Department of Health
- CTAD Pilot sites - these have been involved in testing at the two phases of piloting.
- National Information Governance Board
- Software suppliers

The development of the standard included an initial consultation on 5th December 2008 when a CTAD Steering group was set up (including representatives from the HPA, NCSP, NHS laboratory stakeholders and the DH). The CTAD Steering group met regularly during the CTAD development process for consultation and updates on CTAD progress and milestones reached was communicated between meetings via email. CTAD Steering Group members can be found in SD14.

Pilot sites were recruited, with a total of 11 pilot sites involved over both phases of the pilot. Follow-up and feedback to all pilot sites was carried out throughout the piloting process via e-mail and telephone calls. The Phase 1 and 2 Pilot Reports (SD9 and SD10) provide results from piloting; Phase 1 was completed in February 2010 and Phase 2 in April 2011. Technical Guidance (SD18) was shared with laboratories involved in both the Phase 1 and Phase 2 pilots and updated accordingly following feedback from laboratories. Information from SD18 has now been incorporated into the full CTAD Standard Specification document and this will be circulated for roll-out.

The main laboratory IT suppliers (Clinisys, Apex, Telepath, Sunquest, Ultra) were contacted and informed about CTAD. Results from the Phase 1 and Phase 2 pilots indicated that laboratories were able to extract CTAD data where available in systems for the majority of the data items by running a query on existing data, without the need for IT software modifications. Laboratory software suppliers were not required to make changes to laboratory IT systems in the pilots to produce the CTAD extract (SD10).

During the CTAD development process a CTAD Briefing Document, with an accompanying Frequently Asked Questions section, was produced and published on the NCSP website. Interested persons are referred to this document for more information on CTAD and to answer common questions on the development of the dataset.

A CTAD Implementation Group will be set up to co-ordinate the roll out of the standard should it be approved; the proposed group consists of the existing members of the Steering Group, in addition to the following:

- Representatives from the major laboratory software suppliers i.e. Clinisys (WinPath and Labcentre) and Isoft (Telepath and Apex).
- A representative from the British Association for Sexual Health and HIV (BASHH) Information Group
- Head of Health Intelligence and Standards at the HPA nationally and regionally

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16 http://www.chlamydiascreening.nhs.uk/ps/assets/pdfs/data/CTAD_Briefing_Document_and_FAQs.pdf
- Head of Information Standards (*Microbiology Services Laboratory Network*) at the HPA
- Sexual Health Commissioners
- Representatives from the Royal College of Pathologists / the Association of Medical Microbiologists

Terms of Reference will be drawn up for the CTAD Implementation Group to describe the purpose and structure of the group and what will be expected of members.
9 Technical architecture

Figure 3: Flow diagram showing the development process for the standard

Output
CTAD: provision of a comprehensive, unified chlamydia testing data source from laboratories within England to the HPA, Colindale.

Testing Phase
Dec 2008: A CTAD Steering Group is formed (including representatives from the HPA, NCSP, NHS laboratory stakeholders and the DH)

Pilot sites recruited (pilot consisted of 2 phases)
Return data to HPA for analysis.

Pilot report written, assessing feasibility of CTAD (SD9, SD10).

Implementation
- CTAD database and data upload development by the HPA.
- For CTAD data flow see Figure 4 under Section 10.7.

CTAD approved by ISB and ISN issued.

ISB Application for CTAD approval

Need for a comprehensive chlamydia dataset to monitor chlamydia and the impact of the NCSP

Reporting of Non-NCSP Non-GUM data (2008) following Chlamydia Testing Activity Survey

NCSP testing coverage targets:
- Local Delivery Plan (2007)
- Vital Signs Indicator (2008-2011)

NCSP was established (2003) offering opportunistic chlamydia screening for 15-24 years old. NCSP core dataset collected.


NCSP core dataset collected.
Reporting of Non-NCSP Non-GUM data (2008) following Chlamydia Testing Activity Survey
NCSP testing coverage targets:
- Local Delivery Plan (2007)
- Vital Signs Indicator (2008-2011)
NCSP was established (2003) offering opportunistic chlamydia screening for 15-24 years old. NCSP core dataset collected.

Testing Phase
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- For CTAD data flow see Figure 4 under Section 10.7.

CTAD approved by ISB and ISN issued.
10 Implementation

10.1 Implementation Plans

The implementation of the dataset should be relatively simple and only minimal training requirements are expected. 20 data items need to be reported, most of which are already stored by laboratory systems. Laboratory staff will need to recode or reformat certain data items and details of the coding and format expected is outlined in the Standard Specification document. CTAD will be managed and directed by the HPA in direct consultation with the Department of Health, under the guidance of the project Steering and Implementation Groups. Stakeholders will be closely involved in the roll out, through the Implementation Group.

Implementation of the proposed dataset would commence from September 2011, after the ISN has been issued (see table 7 below). The issue of the Advance Notification to all NHS and NHS-commissioned laboratories in England was delayed due to waiting for NIGB approval before communicating widely about CTAD (NIGB approval was granted in April 2011). Following advice of the ISB, the Advance Notification will not be issued at this stage. Instead, if approved, the ISN will be issued following CTAD approval and this will help to prepare laboratories for CTAD implementation. Laboratories would be given a six-month lag period for full implementation. Timescales for implementation are likely to vary by laboratory (in terms of IT system and staff). Retrospective CTAD data will be required from laboratories from January 2010 onwards. Retrospective data collection should be possible since most data items are already routinely collected by laboratories.

The Phase 2 Pilot Report (SD10) collected data retrospectively and hence is a representation of the minimum level of data quality and this should improve with time. To facilitate implementation and to improve data quality, four recommendations were made in the Phase 2 Pilot Report:

1. HPA guidance on completing the CTAD return should be issued to all laboratories prior to implementation

The HPA have produced comprehensive guidance for laboratory staff, which covers data items collected, data item format and coding and transmission of data to the HPA (please see CTAD Standard Specification document). Prior to implementation the HPA will send a letter to SHAs, PCTs and laboratories in England alerting them to the proposed new standard, how data collection will be organised and who they should contact for further information. CTAD guidance documentation will be distributed along with the letter. All key reference material will be available on the NCSP and HPA websites, covering:

1. Notification and preparation to implement
2. CTAD Standard Specification
3. Support for implementation

2. There should be a sufficient resource at the HPA to co-ordinate all aspects of CTAD implementation, as well as for responding to all queries from laboratory staff

There are sufficient resources at the HPA to co-ordinate all aspects of CTAD implementation, as well as for responding to all queries from laboratory staff; the Health Protection Agency has secured funding for four staff posts dedicated to CTAD – two scientists, a database developer...
and an administrator. The HPA will also offer daily support as part of the CTAD helpdesk – dedicated staff members available to answer telephone calls and response to emails.

There are approximately 174 NHS laboratories within England but not all of these carry out testing for chlamydia. The exact number performing chlamydia testing is currently unknown; however 138 laboratories report non-GUM, non-NCSP aggregate data to the HPA and 127 laboratories report chlamydia tests to LabBase (voluntary laboratory reporting of positive tests to the HPA). To prepare for implementation the HPA plan to conduct a laboratory questionnaire to identify all laboratories not involved in the pilot study which carry out chlamydia testing. Information will also be collected on capacity to collect, store and supply CTAD data items to the HPA. Throughout the period of roll out, the HPA (and the CTAD Implementation group) will liaise with PCTs, the NCSP and laboratory staff to ensure the new dataset is implemented.

3. There should be sufficient resources at HPA regional offices to assist laboratories with data recoding / creation of translation tables where necessary

Staff at regional HPA offices should be available to help support implementation and to respond to data queries. Regional HPA staff will be provided with all relevant documentation to be able to provide advice to regions and offer solutions for problems. Regional HPA staff already have working relationships and regular contact with local laboratories and also have knowledge of local laboratory IT systems. Regional HPA staff may already have some existing data translation tables which could be used or modified to assist laboratories with producing CTAD data items in the required format. Building on existing relationships with laboratories and utilising regional expertise will help to improve data quality. Regional HPA offices will also be able to act as a link between local laboratories and the national HPA team at Colindale, as is already the case for existing sexual health datasets including GUMCAD.

4. There should be regular meetings of the Steering and Implementation Groups during implementation to discuss issues and resolve problems

The Steering and Implementation Groups will meet regularly during implementation to discuss issues and the expertise of the group members will be utilised to offer advice and resolve common problems.

We also plan to set up a buddy system for laboratories with the same IT providers or to pair pilot laboratories with non-pilot laboratories, so that laboratories are provided with contact details of other laboratories so that they can get in touch to overcome common problems and provide each other with advice and examples of good practice. HPA staff will also provide regular feedback reports with advice and tips on how to improve data quality and completeness, based on experience and feedback from participating laboratories.

The proposed milestones for the implementation of CTAD are shown below in Table 7.

Table 7. Key milestones for implementation

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Proposed dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIGB approval for collection of CTAD</td>
<td>April 2011</td>
</tr>
<tr>
<td>ROCR approval for collection of CTAD</td>
<td>June 2011</td>
</tr>
<tr>
<td>ISB approval process</td>
<td>June 2011</td>
</tr>
<tr>
<td>Information Standards Notice (ISN) notification issued</td>
<td>July 2011</td>
</tr>
<tr>
<td>Communication to SHAs, PCTs etc., advising of ROCR and ISB</td>
<td>July/August 2011</td>
</tr>
</tbody>
</table>
approval, and ministerial mandation and ISN advising them to work with laboratories to ensure they are able to submit the CTAD dataset

| Implementation letter and CTAD guidance documentation issued to laboratories. | July/August 2011 |
| All key reference material to be available on NCSP and HPA website, covering: | July/August 2011 |
| 1: Notification and preparation to implement;  |
| 2. CTAD Standard Specification |
| 3: Support for implementation |
| Set up implementation group | August/Sept 2011 |
| Implementation of CTAD within all laboratories carrying out chlamydia NAATs testing in England. Data will be submitted retrospectively from January 2010. | From Sept 2011 onwards. All laboratories must implement by April 2012. |

The process of implementation will be evaluated by assessing progress against the proposed timeframe. The HPA will monitor the number of laboratories able to submit a CTAD data extract 6 months after the ISN is issued and follow up any outstanding laboratories. During implementation, the need to change the data standard to XML format will also be taken into account.

The Post-Implementation/Maintenance Review will include an assessment of implementation; information governance and clinical safety concerns and issues, and actions taken to mitigate them; a summary of issues and lessons learned and suggested improvements to development methodology. The Post-Implementation review will also assess the guidance given to laboratories, in the form of the CTAD Standard Specification document, and will make any updates as necessary.

The HPA will carry out a review of the implementation and utility of CTAD and other datasets (including GUMCAD and GUMCAD-2) collected by the HPA for surveillance of STIs/HIV and sexual health, following an appropriate period of implementation. At that point, and as appropriate, the utility of collection of CTAD, and the potential necessity of changes to datasets and methods of collection, will be assessed.

10.2 Governance Issues

The governance structure will include the members of the Steering and Implementation Groups, namely the HPA, the DH, NHS laboratory stakeholders, NCSP stakeholders, representatives from key software suppliers, a representative from BASHH and PCT sexual health commissioners.

Local Data Governance

Local data collection, storage and data sharing arrangements are governed by PCT governance leads and Caldicott Guardians who will be consulted on system implementation and local reporting via the Implementation Group. HPA will also provide detailed information governance guidance.

National Data Governance
In terms of information governance, there are no new issues that arise from the implementation of the standard. The HPA has permission to handle data under section 251 of the NHS Act 2006 (previously section 60 of the Health and Social Care Act 2001); this is renewed annually by the Ethics and Confidentiality Committee of the National Information Governance Board (NIGB). For the purposes of CTAD, an application to NIGB was made, including plans to collect NHS number, as part of HPA’s annual submission. Approval from NIGB for CTAD data collection has now been obtained, including the collection of NHS number and patient postcode of residence (SD11). The HPA have experience of handling confidential patient information and appropriate protocols to safeguard confidentiality of stored data are already in place.

Data collection and use by the HPA is strictly defined, and information management at the HPA is carried out according to Caldicott principles of data protection and confidentiality. The HPA has a policy on publication of small cell sizes and risk of deductive disclosure. This policy was developed by a team led by the HPA Caldicott Guardian in response to the ONS guidance on presentation of data on small cell sizes. This team has also developed the public information leaflet on how HPA uses patient data. HPA has recently liaised with DH for clarification on some emerging issues around the publication of small cell sizes. The aim is to make high quality informative information available without jeopardizing patient confidentiality.

As part of informing the public about use of data the HPA has produced a leaflet\(^\text{17}\) which is sent to all GP surgeries and clinics where patients are seen, for display. The HPA leaflet was developed as a generic document covering the entire range of infections reported to the HPA, including healthcare associated infections, gastrointestinal infections, respiratory infections etc. The leaflet specifically refers to the use of STI data by the HPA. Further information regarding safeguarding confidentiality of patient information is listed on the HPA website\(^\text{18}\) or if required can be obtained from the HPA’s Caldicott Guardian, Dr Fortune Ncube (fortune.ncube@hpa.org.uk).

### 10.3 Migration Issues

CTAD is a new dataset from laboratories in England; no national chlamydia data has previously flowed from these services. Therefore no data migrations are required as a direct result of the changes to this return. Data will be collected retrospectively from January 2010. As previously stated, most CTAD data items are routinely collected and stored by laboratories in England. Some data items within CTAD are new within the NHS Data Dictionary and will be added before CTAD implementation. Minimal training requirements are anticipated but laboratory staff may need some training on how to recode or reformat data.

### 10.4 Costs and Funding

The CTAD dataset has been kept as simple as possible in order to meet its objectives whilst keeping extra workload and therefore resources needed by laboratories to a minimum. Most data items collected through CTAD are either data items already known to be recorded, or items which

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\(^{17}\) [http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1194947352367](http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1194947352367)

\(^{18}\) [http://www.hpa.org.uk/HPA/ProductsServices/InfectiousDiseases/ServicesActivities/1200055707560/](http://www.hpa.org.uk/HPA/ProductsServices/InfectiousDiseases/ServicesActivities/1200055707560/)
can be derived from information routinely collected, by laboratories in England. Therefore little or no additional recording burden is envisaged. Some additional effort will be required by laboratory staff to code and extract the data for CTAD and to submit this to the HPA. The Phase 1 and Phase 2 Pilot has already demonstrated that the cost to laboratories is minimal, with laboratories being able to produce the majority of the data items by running a query on existing data.

The main laboratory IT suppliers (Clinisys, Apex, Telepath, Sunquest, Ultra) have been contacted and informed about CTAD. Results from the Phase 1 and Phase 2 Pilots indicated that most laboratories were able to produce the majority of the data items required by running a query on existing data, without the need for IT software modifications. Laboratory software suppliers were not required to make changes to laboratory IT systems in the pilots to produce the CTAD extract.

Results from the Phase 2 Pilot estimated that it would take a maximum of 4 person days per year per laboratory to prepare and upload 4 quarterly data extracts. This equates to 696 person days per year across approximately 174 laboratories in England. This estimate represents a substantial reduction in burden compared to the existing NCSP core dataset.

It is anticipated that there will be a learning period during which laboratory staff will need training to familiarise themselves with the coding system and transmission of data for CTAD. The HPA will provide support through the CTAD team at the HPA and through site visits where necessary. It is anticipated that the person burden days estimated from the pilot will be reduced once CTAD is implemented and it becomes routine for laboratories to extract the data.

CTAD aims to replace both the NCSP core dataset and the non-NCSP, non-GUM dataset (after a period of overlap to allow for validation and continuity of data flows) which would represent a substantial decrease in workload for staff and hence a reduction in associated costs. The NCSP core dataset is a disaggregate dataset which is currently submitted for all 151 PCTs, by CSO staff. Discontinuation of data collection via this system will represent a substantial decrease in workload as it has been estimated that the NCSP core data return takes an average of 0.63 person days per week for each PCT to provide the data. For all 151 PCTs in England this corresponds to 95.8 person days per week (4982 days per year) in total across England. The estimate of 696 days a year for CTAD would therefore be a substantial reduction in burden.

The non-NCSP, non-GUM dataset is a quarterly data return submitted to the HPA by all 151 PCTs within England. The aggregate nature of the data requires data manipulation and collation procedures, including PCT and local authority mapping and de-duplication, which can be time-consuming and may not always be fully achieved by all laboratories (SD1, SD3, SD8). The collation of this dataset is done by PCT, laboratory or CSO staff. In addition, in three Strategic Health Authorities (the East of England, London and the West Midlands) a full-time staff member is employed to compile the non-NCSP, non-GUM data. CTAD would thus represent a substantial reduction in the workload associated with the non-NCSP, non-GUM data return for laboratory, PCT or CSO staff and would free up staff capacity in these settings.

An amount of central funding has been secured in the spending review to support collection of CTAD by the Health Protection Agency, including funding for a programmer for database development. The NCSP at the HPA already manages several datasets related to chlamydia testing. All necessary infrastructure to collect CTAD is already in place at the HPA hence the burden to the HPA is therefore predicted to be minimal.

CTAD aims to replace both the NCSP core dataset and the non-GUM, non-NCSP dataset which would represent a substantial decrease in workload and hence a reducing in associated costs – see section 8.4.1 for more details.
Please see Cost/Benefit analysis (SD20) for more information.

10.5 Safety

The HPA governance policies will help ensure safety of the proposed data collection. There are no safety issues relating to patient clinical safety. Protecting data confidentiality will be strictly in accordance with the recently published BASHH and other relevant standards.

Data quality will be maximised by the use of extensive validation processes. Further data quality checks will also be undertaken annually to ensure good compliance with variable completion (i.e. to ensure that ‘not known’ information is limited). These will also be the subject of targets in HPA business planning.

By providing more meaningful information to inform local planning, delivery and control purposes, this standard will therefore enhance the safety of individuals and the population at large.

Please see Clinical Safety Reports (SD21) for further information.

10.6 Maintenance plan

Laboratories will be asked to supply data six weeks after the end of each calendar quarter. Until data quality has been validated, Chlamydia Screening Offices and laboratories will be asked to continue to submit NCSP returns and non-NCSP non-GUM returns respectively, in order to enable cross-checking and validation of figures produced. It is anticipated that parallel submission of these returns and CTAD would be required for two quarters. This is essential to ensure continuity of data flows. Reports summarising the submitted data, including information on data completeness and data quality, will be fed back to each laboratory on a quarterly basis. Quality checks undertaken will include:

- Whether or not a return has been received within six weeks.
- Comparison of numbers of chlamydia tests and diagnoses performed in GUM clinics, the NCSP and outside these two settings based on CTAD, GUMCAD / GUMCAD-2, NCSP and non-NCSP non-GUM returns.
- For those variables with a ‘Not known’ option, the proportion of entries containing ‘Not known’ information.
- Distribution of all tests and diagnoses by PCT/LA of residence, gender and age group.

As is the case with the chlamydia datasets currently held at the HPA, late submissions or erroneous returns are routinely followed up to ensure as complete and accurate a dataset as possible is collected. This practice will continue with CTAD.

In addition, overall quarterly summary reports of data quality will be submitted to the CTAD Steering and Implementation Group members, software providers, and respective PCTs/LAs for ongoing monitoring of data quality.

The Health Protection Agency has secured funding for four staff posts dedicated to CTAD – two scientists, a database developer and an administrator. A feedback mechanism will be in operation via the availability of a CTAD-specific email and CTAD helpdesk number – this will capture feedback from users, suggestions for improvement, requests for changes etc. Key points raised via the feedback mechanism will be taken to the CTAD Steering Group for decision. The
technical guidance provided to laboratory staff through the CTAD Standard Specification will also be updated where necessary and re-circulated to staff.

The Phase 2 pilot demonstrated considerable variability in the ability of laboratories to provide complete CTAD datasets with high levels of variable completion, and we therefore anticipate that this will be the case once the dataset is implemented in all laboratories carrying out chlamydia testing. In addition, it should be noted that the pilot data was requested retrospectively and as such can be viewed as a minimum of what can be expected once prospective implementation of CTAD begins. We will aim to make full use of the expertise of laboratories which achieve high levels of data quality and completeness, through the mechanisms discussed above as well as by providing regular feedback reports to laboratories detailing their own performance against that of other laboratories. Where necessary, site visits and intensive supervision will be provided.

From a strategic point of view, it is possible that significant changes to the implementation of the NCSP could take place in the next few years. We would aim to carry out a review of the implementation and utility of CTAD and other datasets (including GUMCAD and GUMCAD-2) collected by the HPA for surveillance of STIs/HIV and sexual health, following an appropriate period of implementation. At that point, and as appropriate, the utility of collection of CTAD, and the potential necessity of changes to datasets and methods of collection, will be assessed. In the meantime, we view CTAD as an opportunistic, pragmatic and low-cost means of rapidly collecting routine data necessary for current monitoring the implementation of the NCSP.
10.7 Conformance

Figure 4. Data flow diagram for CTAD
The HPA are developing an automated data upload and validation routine. The validation routine will check to ensure that the data submitted conform exactly to the specified standard. The CTAD data extract must be in CSV format and must comply with the data format and coding outlined in Figures 2 to 4 in the CTAD Standard Specification document. Records will be rejected if any mandatory data item has a null value. All mandatory data items must be reported in full using the relevant codes for ‘Not known’ where data are missing, as detailed in Figure 4 of the CTAD Standard Specification document. There are 6 data items that will allow a null value and hence are optional data items: Patient ID; NHS number; DOB; NCSP clinic code; Specimen date; Date result authorised.

The system will be developed so that an error report detailing which row and field contain errors is presented to the sender. The user will need to make any necessary changes and data will be resent to the HPA and it will go through the whole validation process again.

The automated data validation routine will run also run data quality checks and validation measures including:

- The proportion of each data item completed (the tabulation of entries which do not contain the option “Not known” or are not blank).
- Convert date of birth to age and check age range is between 0 and 120 years.
- Check that date result authorized is after or on the same day as specimen receipt date and that specimen receipt date is after or on the same day as date specimen taken.
- Use Postcode of Residence, Postcode of GP and Postcode of Testing Service to map PCT and LSOA.
- Check the proportion of records with attributed PCT of residence (attributed PCT variable created using Postcode of Residence or if missing using Postcode of GP, Postcode of Testing Service or PCT of Testing Service, in that order).
- Proportion of tests with a positive, negative, equivocal, insufficient or inhibitory result, stratified by specimen type.
- Check the proportion of records which are exact test duplicates; matching on all data items, and proportion of repeat tests.

Laboratories are requested to provide data within six weeks of the end of each calendar quarter. Reports summarising the submitted data, including information on data completeness and data quality, will be fed back to each laboratory and associated PCT on a quarterly basis. Quality checks will be undertaken as stated above.

As is currently the case with the NCSP core dataset and the non-GUM, non-NCSP returns, late and erroneous returns will be routinely followed up by the HPA to ensure as complete and accurate a dataset as possible.
10.8 Evaluation

10.8.1 Guidance material

The HPA produced a CTAD Technical Guidance document for use in the pilots (please see SD18), explaining which data variables should be included in the data extract, how they should be coded and how data should be transmitted to the HPA. This document has been used for both phases of the pilot and updated following feedback from laboratories. Information from SD18 has now been incorporated into the full CTAD Standard Specification document and this will be circulated for roll-out. The CTAD Standard Specification document will be updated post-implementation as necessary following feedback from users.

10.8.2 Data quality

The HPA are developing an automated data upload and validation routine. The validation routine will check to ensure that the data submitted conform exactly to the specified standard. Data that do not conform to the standard will be rejected. The system will be developed so that an error report detailing which row and field contain errors is emailed automatically to the sender. The database will not accept files containing errors.

Laboratories will be requested to provide data within six weeks of the end of each calendar quarter. Reports summarising the submitted data, including information on data completeness and data quality, will be fed back to the laboratories and PCTs/LAs on a quarterly basis. Quality checks will be carried out as stated above in Section 10.7.

As is currently the case with the NCSP core dataset and the non-GUM, non-NCSP returns, late and erroneous returns will be routinely followed up by the HPA to ensure as complete and accurate a dataset as possible.
APPENDIX A

Sponsor Statement(s)

19 May 2011

Information Standards Board for Health and Social Care (ISB)
1st Floor
Princes Exchange
Princes Square

Dear Paul

I am writing to again support the Data Set Change Notice for the Chlamydia Testing Activity Dataset (CTAD).

As previously set out, CTAD will enable comprehensive chlamydia testing coverage from all settings to be measured at national, regional and local levels. This will be a major step forward in surveillance of this infection which is the most prevalent STI in England. In guidance published by the European Centre for Disease Control (ECDC) *Chlamydia Control in Europe*, chlamydia is described as a significant public health problem. The report provides guidance for policy makers in the EU on implementing chlamydia control strategies. In terms of surveillance, the report highlights that "monitoring chlamydia and measuring the effectiveness of control measures requires effective national surveillance systems to be in place. At present, there is considerable variation in chlamydia surveillance policies between EU Member States, making inter-country comparisons difficult. In some countries, all diagnosed cases of chlamydia are reported, while in others, only cases from certain settings are reported (e.g. in the UK, there are different systems for recording chlamydia diagnoses in specialist STI clinics, the chlamydia screening programme and primary care)." Implementing CTAD will enable us to implement the ECDC’s recommendation on national surveillance systems in England.

At national level and local level high quality, timely sexual health data is data is essential to inform policy, commissioning and use of resources. CTAD will increase efficiency and reduce costs of monitoring chlamydia testing and diagnosis in all settings. This is particularly important at a time when the NHS needs to make considerable efficiency savings.

As you will know, it is planned, subject to the Health and Social Care Bill, that the HPA will be abolished and staff transferred to a new body Public Health England (PHE) that will be part of the Department of Health. We are working with colleagues developing an Intelligence and Information Strategy for PHE to ensure that national data sets for sexual health, including the
national collection, analysis and publication of CTAD data is part of this strategy.

Please let me know if you require any further information

Yours sincerely

[Signature]

Andrea Duncan
Programme Manager Sexual Health and HIV

Direct line: 0207 972 4514
Email address: andrea.duncan@dh.gsi.gov.uk
APPENDIX B

NHS Connecting for Health - Technology Office Statement

Chlamydia Testing Activity Dataset (CTAD) – Draft/Full stage

As the Director of Data Standards and Products responsible for a large number of data standards published nationally for the NHS, and on behalf of the Technology Office, I am happy to support the Chlamydia Testing Activity Dataset (CTAD) - Draft/Full stage, subject to the condition that Extensible Markup Language (XML) format shall be implemented in full by April 2013 at the latest.

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Nicholas Oughthbridge BSc FBCS CITP
Acting Director - Data Standards and Products

Technology Office
Department of Health Informatics Directorate