abuse may require the assistance and coming together of different specialities in the hospital.

Case history: A seven year old girl presented to the Dermatology and Venereology OPD of a tertiary hospital in New Delhi, India with chief complaints of vaginal discharge for last 4 years. The vaginal swab(s) on Gram stain revealed numerous pus cells with GNDC, intracellular as well as extracellular. The child was treated based on clinical suspicion of gonorrhoea. However, RCUT put up from suspected colonies on modified Thayer Martin medium was positive for *Neisseria meningitidis*. In addition, *crgA* gene PCR from DNA extracted from the swab as well as the isolate was positive for *N. meningitidis* while *opa*-gene PCR for *N. gonorrhoeae* was negative. Although she was initially treated for suspected gonococcal infection, the clinical diagnosis was refuted by the results of culture and PCR.

Discussion & conclusion: The findings of the present case emphasise the importance of careful culture techniques for isolation of organisms & their correct identification which is the cornerstone of appropriate therapy. It also drives home the necessity of using lactose in Rapid Carbohydrate Utilization Test (RCUT), which is crucial to differentiate between *N. meningitidis* and *N. lactamica*. It is also important for the laboratory (especially one that is considered a referral laboratory) to have capacity to perform molecular tests to confirm or refute presumptive findings, as was done in the present case. This observation stresses that an interdisciplinary approach appears to be a valuable tool for evaluating such children.

P2.009 PROPOSAL FOR CASE DEFINITIONS FOR *CHLAMYDIA TRACHOMATIS* TREATMENT FAILURE

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Background *In vivo* antimicrobial resistance in *C. trachomatis* is still to be confirmed however there have been anecdotal reports of treatment failure. Traditionally failure has been attributed mostly to re-infection and/or non-compliance with treatment regimens. Clinical and behavioural information collected from a cohort of patients persistently infected with *C. trachomatis* was used to propose a case definition for treatment failure to aid patient management.

Methods Patient information was collected using a detailed clinical questionnaire. Patients were assigned to categories of most to least likelihood of treatment failure based on their self-declaration of sexual contact since initial diagnosis. Analysis and comparison within and across these categories of the clinical management and patient behaviour was performed.

Results Recruitment from a number of different settings resulted in referral of thirty-nine patients who fell into five categories based on their sexual behaviour since initial diagnosis (Table 1). Twenty declared no sexual contact (category 1), and a further thirteen declared contact that was considered low risk of re-infection (categories 2–4). The remaining six patients either did not provide enough information for accurate categorisation or had had unprotected sexual contact with a partner of unknown history (category 5) and so were excluded from further analysis.

Conclusion Using the information collected we propose a case definition of probable treatment failure for *C. trachomatis* as a patient with (a) at least two consecutive positive *C. trachomatis* specific tests e.g. NAATs, (b) full compliance with all treatment regimens prescribed in line with current national guidelines including any recommended abstinence periods and (c) no unprotected sexual contact since initial diagnosis; and confirmed failure as (a), (b), (c) and two courses of treatment with the same antimicrobial. In addition confirmation of ongoing viable infection by tissue culture methods where possible should be considered to allow antimicrobial susceptibility testing.

Abstract P2.009 Table 1 **Categorisation of the sexual behaviour of patients who had persistent C. trachomatis infections**

Category 1	no sexual contact since initial diagnosis	20
Category 2	protected sexual contact only	4
Categories 3 & 4	unprotected sexual contact with a regular partner who had also tested positive and had been treated or a partner that did not test positive (cat 3) or unprotected oral sex only (cat 4)	9
Category 5 & Outliers	unprotected sexual contact with a partner of unknown history (cat 5) or patients with unknown sexual contact behaviour since initial diagnosis (outliers)	6

P2.010 PERFORMANCE OF XPERT® CT/NG ASSAY USING RESIDUAL PROBETEC ET SYSTEM™ RECTAL SAMPLES

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Background Nucleic acid amplification testing (NAAT) is the optimal method for detection of *Chlamydia trachomatis* (CT) and *Neisseria gonorrhoeae* (GC), but no commercial tests are cleared by the US Food and Drug Administration for use with rectal swabs. The objective of this study was to evaluate the Xpert® CT/NG assay using residual ProbeTec ET rectal samples.

Methods 150 samples previously tested using the ProbeTec ET System and the APTIMA COMBO 2® Assay for the detection of CT and GC were tested using the Xpert® CT/NG. The rectal swabs were collected from volunteers aged 18–64 years, who reported having had at least one episode of anal receptive intercourse. APTIMA COMBO 2® Assay was used as the gold-standard for the present analysis as it was found to be superior to ProbeTec.

Results From the 150 samples, ProbeTec ET detected 23 (15%) CT positive and 16 (11%) GC positive. Xpert® CT/NG detected an additional 11 CT and 2 GC which were not detected by the ProbeTec ET System, for a total of 34 (23%) positive CT and 18 (12%) positive GC. All samples that were true negatives for CT or GC by ProbeTec ET System were also negative by Xpert® CT/NG. The diagnostic sensitivity and specificity of the CT test was 58% and 100% for ProbeTec and 85% and 100% for Xpert® CT/NG, respectively, compared to the Aptima COMBO 2®. The diagnostic sensitivity and specificity of the GC test was 70% and 100% for ProbeTec and 78% and 100% for Xpert® CT/NG, respectively, compared to the APTIMA COMBO 2®.

Conclusions Xpert® CT/NG is superior to the ProbeTec ET System for the detection of CT and GC from rectal swabs. Further studies to assess the sensitivity and specificity of the Xpert® CT/NG system using the swab collection kits designed for this system are warranted.

P2.011 INTEREST OF THE CEPHEID XPERT CT/NG ASSAY TO RAPID DETECTION AND DIFFERENTIATION OF CHLAMYDIA TRACHOMATIS (CT) AND NEISSERIA GONORRHOEAE (NG) URO¬GENITAL INFECTIONS

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Objectives Neisseria gonorrhoeae (NG) and Chlamydia trachomatis (CT) are sexually transmitted infections (STIs). Most infections are asymptomatic, representing an important reservoir for transmission. Without treatment, complications such as infertility may occur. Moreover, 33% of CT/NG co-infection rate has been reported. Since 2010, combined screening of CT and NG by PCR in asymptomatic population has been recommended by the French Health Authority. Thus, the aim of this study was to assess the interest of the new Cepheid Xpert® CT/NG Assay, a real-time PCR test for the automated and rapid detection and differentiation of CT and NG genomic DNA, in population with systematically screening such as induced abortion.
Methods Between July and November 2012, 634 urogenital samples were received in our laboratory to detect CT and/or NG infections with the Xpert CT/NG assay.
Results Of the 634 samples included in this study, 61 (9.6%) were CT positive, 19 (2.9%) were NG positive. Among the 61 CT positives, 10 (1.6%) were positive for both CT and NG. Concerning the 177 samples performed in case of induced abortion, 27 (15.3%) were CT positive, 9 (5.1%) were NG positive and 5 (2.8%) were positive for both pathogens.
Conclusion The results revealed a global prevalence (9.6%) of CT infections, this percentage being higher in women screened for induced abortion. Although, many clinicians tend to only request testing for CT, our results demonstrate the value of the detection of both CT and NG by Xpert CT/NG. This new test allows a more rapid, accurate detection and optimises the management of STIs by clinicians. Finally, the screening of asymptomatic population helps also to reduce the transmission and is a more cost effectiveness alternative in screening settings.

P2.012 CLINICAL CARE PATHWAYS USING CHLAMYDIA AND GONORRHOEA TESTS ARE EVOLVING: POINT OF CARE NUCLEIC ACID AMPLIFICATION TESTS MAY REDUCE GENITOURINARY MEDICINE SERVICE DELIVERY COSTS

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Background We aimed to explore new patient pathways using a chlamydia/gonorrhoea (CT/NG) point of care nucleic acid amplification tests (POC NAAT), and estimate and compare the costs of the new pathways to the current pathways using standard laboratory-based NAAT testing.
Methods A qualitative and quantitative approach was used. Focus groups were conducted with four sexual health clinics in the UK. They mapped out current pathways in which a CT/NG test was used, and then constructed new pathways using a POC NAAT. These pathways were then costed using a model built in Excel, and the cost of the current and POC NAAT pathways compared.
Results Pathways using a POC NAAT for asymptomatic and symptomatic patients and CT/NG only tests were shorter and less expensive than most of the current pathways (average savings of £6–8 per pathway if the POCT costs £18 per test). Clinicians identified several potential benefits to introducing the test including faster time to treatment, more accurate diagnosis of symptomatic patients, and therefore less syndromic management, which is likely to result in better care for patients. Several theoretical risks and limitations were identified in the workshops although these were not assessed in the study.
Conclusion A point of care test could be introduced to services and reduce current costs, and may mean more appropriate and quicker care for positive patients.

P2.013 LYMPHOGRANULOMA VENEREUM CASES IDENTIFIED IN PATIENTS ATTENDING A STD OUTPATIENTS CLINIC IN ITALY

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Background Lymphogranuloma venereum (LGV) is a systemic sexually transmitted infection caused by *Chlamydia trachomatis* (CT) serovars L1-L3. In the recent outbreaks the classic clinical presentation with inguinal syndrome is giving way to anorectal primitive syndrome in men having sex with men (MSM). Here we report about 6 cases of LGV identified during 2012.
Methods A prospective study was performed with 78 rectal specimens obtained from MSM attending the STD Outpatients Clinic of S. Orsola Hospital, Bologna. All the patients were enrolled because having unsafe receptive anal sex intercourses. Samples were tested by Versant CT/GC DNA 1.0 (Siemens). Genotyping was performed with RFLP method for *ompl* gene, using *AluI* and *DdeI* as restriction enzymes.
Results We found a total of 11 rectal swabs positive for CT. RFLP analysis showed 6 L2 genotypes and 5 non-LGV genotypes (3 were E, and the others H and J).

The five non-LGV infected patients showed no symptoms. On the contrary, at the enrollment perianal ulcers, proctitis and painful lymphadenopathy were found in three LGV cases, whereas perianal ulcers and proctitis in the remaining three ones.

Before the correct diagnosis the patients had been investigated for several months for a broad range of other conditions, including traumatic warts, and/or gastroenteric syndromes. Three patients had undergone endoscopic procedures and ultrasound scans.

All the LGV cases presented at least one more sexually transmitted infection. Treatment with doxycycline (100 mg b.i.d. for 21 days) was successful. At control, case 1 had a positive result for *Neisseria gonorrhoeae* in his rectal swab, thus demonstrating his high risk sexual behaviour.
Conclusion A firm diagnosis and early treatment of LGV can prevent the development of serious sequelae. Since the ulcerative nature of LGV may facilitate transmission and acquisition of other STDs, enhanced surveillance systems and strengthened case ascertainment would be desirable.

P2.014 DEVELOPMENT AND ANALYTICAL PERFORMANCE OF NEW CT/NG NUCLEIC ACID AMPLIFIED TEST (NAAT)

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Background Moderately complex NAATs that can provide fast, actionable results could reduce the burden of *Chlamydia trachomatis* (CT) and *Neisseria gonorrhoeae* (NG) infections. The Xpert® CT/NG Assay is a recently FDA-cleared, moderately complex assay for the detection of CT and NG in patient collected vaginal swabs, endocervical swabs, and male and female urines with a turnaround time of 87 minutes.
Methods Primers and probes were designed against specific CT and NG candidate genomic targets and screened for exclusivity with genomic DNA extracted from non-trachomal Chlamydia/Chlamydophila and non-gonococcal Neisseria species. For inclusivity, genomic DNA extracted from the 15 CT serovars and 230 geographically diverse NG strains was used. A multiplex assay, running on the GeneXpert platform, was designed to detect one CT target, two independent unique NG targets and two control targets. Analytical reactivity and specificity were determined by testing whole

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