in serovar prevalence between men and women were detected. Finally, significant differences (p=0.035) were detected when serovar distribution among patients with or without coinfection was studied: patients with an infection due to D/Da had the highest coinfection rate (75.0%), whereas coinfection rates among patients with serovars F, E, and G were 57.1%, 37.5%, and 29.2%, respectively see Abstract P3-S1.07 table 1.

Conclusions The present study contributed to increase the knowledge on serovar distribution of *C trachomatis* in Italy.

P3-S1.08 ARE THERE ACCEPTABLE ALTERNATIVES TO SYNDROMIC MANAGEMENT FOR THE DIAGNOSIS OF SEXUALLY TRANSMITTED INFECTIONS IN HIV POSITIVE KENYAN WOMEN?

doi:10.1136/sextrans-2011-050108.408

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Background Control of sexually transmitting infections (STIs) is an important aspect of HIV prevention and care. Syndromic management for vaginal discharge, despite a recognised low sensitivity and specificity, is widely employed for STI management among HIV-1 infected women in resource-limited settings. In this pilot study, we evaluated the incremental increase in sensitivity and specificity of multiple, low-cost diagnostic strategies for non-ulcerative STIs diagnosed among HIV-1 infected women receiving care in Kenya.

Methods This cross-sectional study was done among a cohort of HIV-1 infected women enrolled at Family AIDS and Care and Treatment Services (FACES) clinics in Kisumu, Kenya. During their routine clinic visit, participants reported any health complaint and later were asked about general vaginal symptoms (brief symptom ascertainment) and specific complaints of pruritis, odour and discharge (detailed symptom ascertainment). Clients were then examined for cervicitis and vaginal discharge, followed by specimen collection for STI testing. Results of *Chlamydia trachomatis* and *Neisseria gonorrhoeae* nucleic acid amplification test and *Trichomonas vaginalis* (TV) by wet mount was used as the gold standard for sensitivity and specificity calculations.

Results Of the 155 women who were screened between the ages of 23–53 years, the prevalence of *N gonorrhoeae* was 1.9% (3/155), TV was 6.4% (10/155) and no cases of *C trachomatis* were detected. See Abstract P3-S1.08 table 1.

Conclusions Syndromic management had a very poor sensitivity for detecting STIs in HIV-1 infected women. The addition of specific questions about STI-related symptoms improved STI detection rates, while a speculum exam led to greater sensitivity and specificity. The feasibility and effectiveness of alternative approaches such as routine use of speculum exams, and point-of-care testing for *T vaginalis* should be explored to improve the management of STIs among HIV-1 infected women in similar low-resource settings.

Abstract P3-S1.08 Table 1 Sensitivity and specificity of multiple diagnostic strategies for STI diagnosis among HIV-1 infected women receiving care at FACES

Evaluation technique N=155	Per cent positive results	Sensitivity for any STI*	Specificity for any STI*	Positive predictive value
Self report (current standard of care)	3% (5)	0 (0)	97% (137)	0 (0)
Intensified symptom ascertainment, brief	26% (40)	23% (3)	75% (107)	8%
Intensified symptom ascertainment, detailed	26% (40)	31% (4)	75% (106)	10%
Gynaecologic exam	9.0% (14)	46% (6)	94% (134)	46%

*Includes *N gonorrhoeae, C trachomatis* and *T vaginalis*.

P3-S1.09 VALIDATION OF COBAS® 4800 HPV AND CT/NG TEST IN CLINICAL SAMPLES

doi:10.1136/sextrans-2011-050108.409

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Background Roche cobas® 4800 system performs sample preparation, real-time PCR amplification and detection using an internal control in a single tube. The cobas® 4800 human papillomavirus (HPV) test is a multiplex assay that can detect HPV 16, HPV 18 and 12 other high-risk (12-HR) carcinogenic HPV genotypes. We compared this HPV test with the Linear Array (LA) HPV genotyping assay (Roche Molecular System). Therefore, this system can simultaneously detect *Chlamydia trachomatis* (CT) and *Neisseria gonorrhoeae* (NG) in urine and swab specimens, and it was evaluated and compared with routine techniques in our clinical laboratory.

Methods 462 clinical samples collected in PresevCyt® liquid media were used for the HPV test study and compared using cobas® 4800 HPV test and LA-HPV. There were also included 688 clinical samples for CT and NG testing (206 urine samples only and 241 urine and swab specimens respectively) and compared with a real-time PCR assay for CT and bacteria culture for NG.

Results For the HPV analysis, 439 out of 462 samples examined (95%) showed positive (160 cases) and negative (302 cases) concordat results; the remaining 3 (0.65%) were invalid by the cobas® 4800 system. The positive samples were distributed: 26 samples of HPV 16, 4 of HPV 18, 110 of 12-HR and 20 samples with mixed infection (15 were 12-HR+HPV 16, four 12-HR+HPV 18 and one HPV 16+18). For CT/NG total analysis, there were only three invalid samples (0.43%) and only 4 (0.58%) discordant results. For the 206 urine samples, there were 19 CT positive, eight NG positive and two mixed CT and NG infections. These positive samples were from male with Chlamydia contact, urethritis and persons who was to STI control. For urine and swab specimens (241 of each), there were a total correlation between both types of samples. In total, there were 5% of positive samples corresponding to 13 CT positive, two NG positive and four mixed CT and NG infections. These positive samples presented clinical manifestations as urethitis or were women to get in touch with Chlamydia infected person.

Conclusions the cobas® 4800 system is an easy system for cervical HPV screening and to detect simultaneously CT and NG in a single tube. These test and our lab techniques correlated well in this analysis. Moreover, in the case of CT/NG test the correlation between urine and swab specimens was total, therefore to use urine as clinical sample to detect these two bacteria could be easier than to use swab specimens.

P3-S1.10 USING ELECTRONIC MEDICAL RECORD DATA TO GUIDE EXPEDITED PARTNER THERAPY IMPLEMENTATION IN AN URBAN STD CLINIC SYSTEM, 2009

doi:10.1136/sextrans-2011-050108.410

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Background Expedited partner therapy (EPT) is the practice of providing treatment without a clinical assessment to sex partners of

patients with a diagnosed STD. EPT is legal for *Chlamydia trachomatis* (CT) infections in New York State. To guide EPT implementation at New York City STD (NYC STD) clinics, we estimated potential EPT use and EPT treatments to dispense.

Methods We analysed electronic medical record data for heterosexual patient visits to NYC STD clinics in 2009. To estimate potential EPT use, we measured: proportion clinic patients with presumptive diagnosis of mucopurulent cervicitis (MPC); nonspecific urethritis (NGU); contacts of both who tested positive for CT; patients with laboratory-confirmed genital CT infection; and proportion treated on day of visit. To guide policy on EPT treatments to dispense, we measured the median number of sex partners reported by CT-infected persons in the previous 3 months. To determine whether to route CT contacts to a physician (MD) visit (full STD evaluation) or an express visit (EV), we assessed STD diagnoses among CT contacts.

Results Among clinic patients with presumptive diagnoses of MPC, NGU, and contacts of both, CT prevalence was MPC, 14% (293/2144); MPC contact, 15% (38/257); NGU, 23% (1553/6744); and NGU contact, 17% (113/677). Of 40 099 patients tested for CT, 13% (5402/40 099) had a laboratory-confirmed CT infection. Of those, 79% (4288/5402) had been treated presumptively on day of visit. Males (n=4551) and females (n=3186) reported a median of two and one sex partners, respectively. Of 3561 contacts with CT diagnosis, 2339 (66%) were asymptomatic on day of visit and were routed to EV. Of those, 936 (40%) had >1 diagnosis other than CT; 22% of those (205) had a diagnosis of herpes simplex virus, human papillomavirus, trichomoniasis, or bacterial vaginosis.

Conclusion EPT is recommended only for heterosexual patients with laboratory-confirmed CT diagnosis because CT-prevalence was low among patients presumptively diagnosed with either MPC or NGU and their contacts. Approximately 20% of CT-infected persons qualify for EPT; the majority of CT-infected persons are treated on day of visit. EPT-eligible patients should be offered up to three treatments for sex partners. Asymptomatic CT contacts reporting they have taken EPT should be routed to EV; those who report not taking EPT should be routed to an MD visit regardless of symptoms. Symptomatic CT contacts should receive an MD visit.

P3-S1.11 PER CENT ADDITIONAL TEST POSITIVE FOLLOWING POSITIVE COMBO 2 CHLAMYDIA (CT) AND GONORRHOEA (GC) SPECIMENS: ASSESSING THE IMPACT OF PREVALENCE

doi:10.1136/sextrans-2011-050108.411

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Background The positive predictive value (PPV) of a screening test (ST) is a function of prevalence and ST specificity and is expected to decrease with decreasing prevalence unless ST specificity approaches 100%. Consequently, an additional test (AT) following positive STs may be indicated if prevalence is low. Our objective was to determine the impact of CT and GC prevalence on per cent AT positive following positive STs by Gen-Probe Combo 2 CT and GC using data from public clinics in the state of Mississippi.

Methods Based-on CDC's electronic prevalence monitoring databases from 2005 to 2007, we stratified 126 clinics (with >400 females tested) served by Mississippi State Public Health Laboratory (MSPHL) based on ST positivity. We calculated the per cent AT positive among 6553 CT ST positive and 1841 GC ST positive specimens. We further examined the impact of the quantitative Combo 2 GC results (relative light units (RLU)) for a sample of 508 specimens from clinics with low (<2.0%, family planning) and high (>6.0%, STD) ST positivity by abstracting the RLU values from hard copy records.

Results Per cent CT AT positive declined significantly (p<0.0001) from 96.3% for specimens from clinics with >10.0% ST positivity to 90.9% for specimens from a single clinic with <6% ST positivity (see Abstract P3-S1.11 table 1). GC ST positivity was <6% for 109 (87%) of the clinics. In spite of the lower GC ST positivity, the per cent GC AT positive was also >90%, ranging from 95.4% for GC ST positivity <2% to 97.7% for GC ST positivity 3.0%–4.0%. However, the per cent GC AT positive was not associated with GC ST positivity (p=0.17). Discordant GC AT results were confined to GC ST positive specimens with RLU <1 million (results not shown). The per cent of ST specimens with RLU <1million and the per cent AT negative among these lower RLU positives were also not associated with clinic ST positivity (p=0.14 and p=0.78, respectively).

Abstract P3-S1.11 Table 1 APTIMA additional test results among women by clinic Combo 2 positivity and organism Mississippi—2007

Organism	Clinic Combo 2 % positivity	APTIMA AT result: Retested #	Positive: #	Positive: %	Positive: 95% CI	p Value
CT	<6.0	11	10	90.9	58.7 to 99.8	<0.0001*
	6.0–<8.0	281	261	92.9	89.2 to 95.6	
	8.0–<10.0	799	745	93.2	91.3 to 94.9	
	10.0+	5462	5262	96.3	95.8 to 96.8	
	Total	6553	6278	95.8	95.3 to 96.3	
NG	<2.0	196	187	95.4	91.5 to 97.9	0.17*
	2.0–<3.0	459	442	96.3	94.1 to 97.8	
	3.0–<4.0	392	383	97.7	95.7 to 98.9	
	4.0–<6.0	177	171	96.6	92.8 to 98.8	
	6.0+	617	599	97.1	95.4 to 98.3	
	Total	1841	1782	96.8	95.9 to 97.6	

*Cochran-Armitage trend test.

Conclusions Performing APTIMA CT or GC ATs added little to Combo 2 ST PPV, although the decrease in per cent AT positive with decreasing ST positivity observed in this study raises concern about Combo 2 PPV at CT prevalence levels lower than 6%. The lack of impact of GC prevalence on GC ST RLU or AT results is unexpected and might indicate that the Combo 2 ST PPV is very high even at the lower GC prevalence. In other words, most negative GC AT results are false rather than true negatives and the patients should be treated.

P3-S1.12 HIGH CONCORDANCE OF TEST RESULTS OF THE *CHLAMYDIA TRACHOMATIS* DETECTION AND GENOTYPING KIT COMPARED TO THE COBAS AMPLICOR CT/NG TEST

doi:10.1136/sextrans-2011-050108.412

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Background Improving diagnostic methods for the detection of *Chlamydia trachomatis* (CT), including genotyping, can contribute to control of CT by acquiring knowledge on epidemiology, transmission, sexual networks and pathogenicity. In the present study, we have compared the performance of the *Chlamydia trachomatis* detection and genotyping (Ct-DT) kit (Labo Bio-medical Products BV, Rijswijk, The Netherlands) with the COBAS Amplicor CT/NG (Roche Diagnostics Systems, Basel, Switzerland) in a well described female population consulting a sexually transmitted infection (STI) clinic.

Methods Self obtained vaginal swabs (SVS) were collected from females visiting a STI clinic. The presence of *Chlamydia trachomatis*