Conclusions With the exception of one large network, RDS was not a particularly efficient way to screen for Ct/GC. Only one-fourth of those initially recruited by research staff in turn referred their social and sexual contacts. While social network testing has been adopted in the HIV testing realm, in the Ct/GC screening realm a focus on messages encouraging those who are tested to get their friends tested may have the greatest public health impact.

S14.5 *TREPONEMA PALLIDUM* σ24 REGULON AND ENVELOPE STRESS RESPONSE

doi:10.1136/sextrans-2011-050102.60

L Giacani, O Denisenko, M Tompa, B Molini, A Centurion-Lara. *University of Washington, Seattle, Washington, USA*

Background During syphilis infection, the envelope of *Treponema pallidum* is constantly exposed to the host environment and, therefore, the most likely target of the host defences against the invading spirochaete. The mechanisms that maintain *T pallidum* envelope integrity and functionality, particularly in response to host-induced stresses, are however poorly understood, and their elucidation would likely help identify important pathogenesis-associated molecules, perhaps related to *T pallidum's* ability to persist in the host despite a robust immune response. We hypothesised that in *T pallidum*, similarly to other Gram-negative pathogens, the transcription factor σ24 (σ24, encoded by the rpoE gene, TP0092) might be a key element in maintaining *T pallidum* envelope homeostasis. Putative σ24 binding motifs can be identified in silico upstream of several *T pallidum* genes that were experimentally shown to be involved in envelope stress response (ESR) in *Escherichia coli*. Furthermore, during early experimental syphilis σ24 is highly transcribed compared to other σ factors, and its expression increases even more as primary infection progresses. We therefore decided to investigate the possible role of σ24 in *T pallidum* ESR by identifying the components of the *T pallidum* σ24 regulon.
Methods *T pallidum* cells grown in rabbits were fixed after harvest to crosslink DNA-binding proteins to their target sequences in the chromosome. DNA sequences recognised by σ24 in vivo were isolated using chromatin immunoprecipitation in combination with high-throughput DNA sequencing (ChIP-seq) to identify bound DNA regions.
Results Thirty-nine DNA fragments targeted by σ24 were identified in the *T pallidum* chromosome. Seven of these target genes (lon-1, greA, ftsZ, prfB, htrA, and rpoE) were previously reported to be induced in response to envelope stress in *E coli*, suggesting that the *T pallidum* σ24 regulon is likely to be similar to that of other bacteria. Other putative target genes encode transporters, cell division proteins and a subset of motility and chemotaxis proteins.
Conclusions In *T pallidum*, σ24 seems to control genes involved in a variety of cellular processes, including maintenance of envelope homeostasis and barrier function. Additional putative σ24-dependent functions, apparently not directly involved in ESR, could as well be important in helping *T pallidum* adapt to the host environment during the infection.

S14.6 PREVALENCE AND PREDICTORS OF TRICHOMONAS INFECTION IN INCARCERATED WOMEN

doi:10.1136/sextrans-2011-050102.61

[1]A Nijhawan, [2]R Salloway, [3]S Andrea, [4]J Champion, [2]M Seadale, [2,5,6]K Chapin, [2,6]J G Clarke. *[1]Harvard Medical School, Boston, Massachusetts, USA; [2]Memorial Hospital of Rhode Island, Pawtucket, USA; [3]Rhode Island Hospital, Providence, USA; [4]Brown University, Providence, USA; [5]Miriam Hospital, Providence, USA; [6]Alpert School of Medicine at Brown University, Pawtucket, USA*

Background *Trichomonas vaginalis* is the most prevalent curable sexually transmitted infection in the United States and may lead to preterm delivery, infertility and increased HIV transmission. Illicit drug use, HIV infection and Black race have been associated with high rates of infection. Incarcerated women may be at especially high risk for infection, though few studies have examined routine screening for trichomonas in this population.
Methods Women >18-years-old entering the Rhode Island Department of Corrections between September 2009 and December 2010 were recruited to participate. All women submitted a self-collected vaginal swab for trichomonas culture and Transcription Mediated Amplification testing. Each participant completed a survey addressing demographics, symptoms, sexual behaviour, and substance use by audio computer-assisted self-interview. Data analysis was completed using multivariate logistic regression in STATA.
Results 288 women enrolled in the study, mean age was 28 years. 59% of participants were White, 17% Hispanic, 12% Black and 12% other races. Forty-three per cent reported vaginal symptoms and 54% reported illicit drug use in the 30 days prior to incarceration. Among all participants, the prevalence of trichomonas was 8.7% by culture and 12.5% by NAAT. The strongest predictors of infection included Black race (OR 4.1, 95% CI 1.4 to 12.0), cocaine use in the 30 days prior to incarceration (OR 2.5, 95% CI 1.1 to 5.7), and >3 year since last pap smear (OR 5.2, 95% CI 1.5 to 17.8). Vaginal symptoms and age were not significantly associated with trichomonas detection.
Conclusions Trichomonas infection is common in incarcerated women, especially among Blacks, recent cocaine users and those not receiving routine gynaecologic care. Infection was not predicted by symptoms or by age. Routine screening for trichomonas infection in high-risk populations may lead to increased detection and treatment.

S15 STI epidemiology in Europe: challenges for prevention and control

S15.1 SEXUALLY TRANSMITTED INFECTIONS IN EUROPE: COORDINATING THE EUROPEAN STI NETWORK

doi:10.1136/sextrans-2011-050102.62

M van de Laar. *European Centre for Disease Prevention and Control, Stockholm, Sweden*

Background Since 2008, the European Centre for Disease Prevention and Control is coordinating the enhanced STI surveillance in 30 EU/EEA countries. Each country was requested to nominate experts for collaboration and data submission to the European Surveillance System. Five STI are under surveillance, syphilis, congenital syphilis, gonorrhoea, chlamydia and LGV, as per Decision 2119/98/EC of the European Commission.
Methods Surveillance objectives and the set of variables for enhanced STI surveillance were agreed upon in the annual network meeting and training session to use the European Surveillance System for data submission. Data were collected for the period 1990–2009; two network meetings were organised for all 30 EU/EEA countries to discuss the preliminary results.
Results Chlamydia is the most frequently reported STI in Europe, accounting for the majority of all STI reports with 343 958 cases in 2009 (185 per 100 000 population). Chlamydia was reported more in women than in men and 75% were reported in young people (15 and 24 years). Chlamydia is increasing continuously over time. In 2009, 29 202 gonorrhoea cases have been reported (9.7/100 000) and nearly a quarter of all gonorrhoea cases were reported in MSM. For syphilis, 18 317 cases have been reported (4.5 per 100 000) and half of syphilis cases were reported in MSM. The overall trend in gonorrhoea and syphilis across the EU/EEA showed a notable decreasing trend in