Methods Between 2009 to 2012 we analysed probes of 11250 individuals (patients and controls) processing the ProbeTecET® test (BD, USA). Of these 407 showed a positive result and were treated according to current guidelines. 33 patients tested negative, however, reported a persistence of discomfort such as burning sensations in the urethra, urethral discharge and occasionally conjunctivitis. These patients were additionally tested with the GenoQuick® CT (HAIN Lifescience, Germany), which specifically and simultaneously detects both, the MOMP-gene and the cryptic plasmide. Material was taken from urethral, cervical, rectal, pharyngeal, conjunctival smears and from the Douglas-space.

Results All 33 patients tested positive when processing the GenoQuick® CT. Thus 7.5% of infected patients were only identified processing an additional detection set.

Conclusion In our centre 7.5% of Ct infected patients were tested “false negative” when only the cryptic plasmide was analysed. These 33 patients were identified processing a more sensitive test system and subsequently were treated.

Background Young patients with repeat infections of Chlamydia trachomatis(Ct) are a key population for prevention as they indicate ongoing risk for spread and complications in women. We estimated the hidden key population, i.e. missed repeat testers and repeat positives, to effectively focus screening strategies.

Methods Data covered all youngsters (16–29 years, n = 42,894) in Eastern South-Limburg, the Netherlands (2006–2010) including all their genital Ct tests by any care provider. Using logistic regression, determinants (age, sex, socio-economic status (SES)) for not having performed a repeat test (in positives) and for having a positive repeat test (in repeat testers) were evaluated. Using Geographic-Information-Systems and spatial statistics (SaTScan purely spatial Poisson model, Bivariate Local Moran’s I), spatial clusters and correlations with SES of repeat (positive) tests were evaluated.

Results Overall 10,044 (25.4%) youngsters were tested and repeat positives were identified (423(44.8%)) more often older, ORperyear 0.96 95% CI 0.92–1.00, and male, OR2.26 95% CI 1.69–3.02). Of repeat testers, 111(21.3%) were repeat positive tests. We estimated who were never tested before (assuming 2.0% positivity and 21.3% wo-thirds of repeat positive patients are hidden to current care, some (–60%) because they are never tested. As they comprise a current care, some (–40%) because they missed a repeat test and others (–60%) because they are never tested. As they comprise a current care, some (–60%) because they are never tested. As they comprise a current care, some (–60%) because they are never tested. As they comprise a current care, some (–60%) because they are never tested.

Discussion Chlamydia IgG/IgA are detectable in vaginal mucosal material. IgG antibodies in serum and IgA in vaginal mucosa (both p<0.001), whereas this link was weaker for mucosa-IgG (p=0.03); for tubal pathology alone IgG/IgA antibodies in serum and IgA in vaginal mucosa (both p<0.001) in women in the fertility clinic, IgG in vaginal mucosal material had a stronger correlation with IgG in serum (p=0.02) than IgA in mucosa (p=0.06). Women with tubal pathology or Chlamydia history more commonly had IgG in serum and IgA in vaginal mucosa (both p<0.001), whereas this link was weaker for mucosa-IgG (p=0.03); for tubal pathology alone mucosa-IgA had a higher Kappa than serum-IgG (0.41 versus 0.36).

Comparison of Chlamydia trachomatis (CT) infections spread in Europe and in USA, and tendencies analysis shows an increase in the epidemic since last 10 years. In France, in 2006, a national survey carried out by phone and using a home-based sampling showed that CT infections and consequential PIDs plus the delayed appearance of infertility clinic, IgG in serum relate to tubal pathology and lower conception rates. The current ‘proof of principle study’ aimed to assess whether Chlamydia antibodies are detectable in easier, non-invasive vaginal mucosa samples, and if these could predict the risk for complications.

Poster presentations

**P3.024** COMPARISON OF CHLAMYDIA TRACHOMATIS ANTIBODIES IN VAGINAL MUCOSA AND SERUM IN WOMEN A FERTILITY CLINIC AND AN STI-CLINIC

1 V F van den Broek, J A Land, J E A M van Bergen, S A Morré, M A B van der Sande. 1,2Department of Obstetrics and Gynaecology, University Medical Centre, Groningen, The Netherlands; 1,2Department of General Practice, University of Amsterdam Medical Centre, Amsterdam, The Netherlands; 1Laboratory of Immunogenetics, Medical Microbiology and Infection Control, VU University Medical centre, Amsterdam, The Netherlands; 1Institute of Public Health Genomics, Department of Genetics and Cell Biology, Research Institutes CAPRI and GROW, University of Maastricht, Maastricht, The Netherlands; 1Julius Centre, University Medical Centre, Utrecht, The Netherlands

Background The common asymptomatic nature of Chlamydia infections and consequential PIDs plus the delayed appearance of any damaging effect thereof on the reproductive tract hamper timely interventions for individuals prone to complications. In infertile women, Chlamydia antibodies in serum relate to tubal pathology and lower conception rates. The current ‘proof of principle study’ aimed to assess whether Chlamydia antibodies are detectable in easier, non-invasive vaginal mucosa samples, and if these could predict the risk for complications.

Patients and Method We compared outcomes of Chlamydia antibody tests in serum and vaginal swabs in two groups: (a) 77 women attending a fertility clinic, of whom 25 tested positive for anti-chlamydia IgG in serum and (b) 107 women visiting an STI centre, including 30 Chlamydia PCR-positive subjects. The presence of IgG/IgA antibodies was compared (Kappa-test) and determinants investigated (regression).

Results In women in the STI clinic, active Chlamydia infections were linked to both IgG and IgA antibodies in serum (p < 0.001) and IgA in vaginal mucosa (p < 0.001), but not IgG in mucosa; mucosa-IgA correlated with IgG in serum (p < 0.001). In women in the fertility clinic, IgG in vaginal mucosal material had a stronger correlation with IgG in serum (p = 0.02) than IgA in mucosa (p = 0.06). Women with tubal pathology or Chlamydia history more commonly had IgG in serum and IgA in vaginal mucosa (both p < 0.001), whereas this link was weaker for mucosa-IgG (p = 0.03); for tubal pathology alone mucosa-IgA had a higher Kappa than serum-IgG (0.41 versus 0.36).

Discussion Chlamydia IgG/IgA are detectable in vaginal mucosal material. IgG antibodies in serum had stronger associations with current or past Chlamydia infections. However, IgA antibodies in vaginal mucosa also showed associations with (past) infection and complications. IgA presence in vaginal mucosa might indicate an on-going hidden Chlamydia infection in the upper genital tract, and warrants further epidemiological studies.

**P3.025** INTERNET TESTING FOR CHLAMYDIA TRACHOMATIS IN FRANCE IN 2012

1 B de Barbeyrac, D Rabih, S de Diego, C Le Roy, C Bébéar, N Lydie. 1University of Bordeaux, Bordeaux, France; 2Institut National de la Recherche Agronomique, Bordeaux, France; 3Institut National de Prévention et d’Education pour la Santé, Saint Denis, France

Chlamydia trachomatis (CT) infection spreads in Europe and in USA, and tendencies analysis shows an increase in the epidemic since last 10 years. In France, in 2006, a national survey carried out by phone and using a home-based sampling showed that CT