2012–121, 2013–114 and 2014–109. The modelled Ct incidence for 2015 increased to 114/1000 py. The screening rate fell from a high of 85% in 2011 to a low of 71% in 2012, with subsequent improvement to 81% in 2015.

Conclusion Reported *Ct* incidence in Army women is related to the actual infection rate and the percentage of at-risk women screened. *Ct* surveillance programs must review medical report and screening data to improve burden estimates. Incidence projections help assess the magnitude of observed surveillance changes and identify the probable number of missed infections.

P3.168 EVALUATION OF THE POINT-OF-CARE XPERT® CT/NG AND OSOM® TRICHOMONAS RAPID TESTS AGAINST THE ANYPLEX™II STI-7 DETECTION ASSAY

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Introduction Syndromic management of sexually transmitted infections (STIs), as practised in most poorly resourced countries misses out asymptomatic infections. Affordable nucleic acid amplification tests (NAATs) are needed for accurate STI diagnosis and treatment.

Methods As part of a cohort study assessing a diagnostic STI care model among young South African women presenting for syndromic care, we evaluated the clinic-based point-of-care (POC) tests Xpert CT/NG and OSOM Trichomonas Rapid Test against the laboratory-based Anyplex II STI-7, a multiplex real-time PCR assay which detects *Chlamydia trachomatis* (CT), *Neisseria gonorrhoeae* (NG), *Trichomonas vaginalis* (TV), *M. genitalium* (MG), *M. hominis* (MH), *U. urealyticum* (UU) and *U. parvum* (UP) in a single reaction. All positive and discordant results were confirmed with a third molecular assay, the FTD STD9.

Results Vaginal swabs taken from 247 women were assessed in parallel. 238 of 247 (96.4%) results were in agreement comparing Xpert and Anyplex. All nine discrepant results were positive for CT on Xpert but negative on Anyplex. FTD STD9 confirmed three positive and six negative results. The sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) of Xpert for CT against the two assays was 100%, 97.1%, 86.0%, 100%, respectively; and for NG 100%, 99.6%, 92.3%, 100%. The sensitivity, specificity, PPV and NPV of OSOM for TV against the two assays was 77.8%, 100%, 100%, 99.2%. In addition to the CT, NG and TV detection, the Anyplex identified a prevalence of 4.8% MG, 33.5% MH, 19.1% UU and 51.4% UP in this population.

Conclusion The overall performance of Xpert CT/NG against laboratory-based assays was comparable. A lower PPV may lead to some overtreatment, however, in a high burden STI and HIV region, where STIs are often asymptomatic, the high sensitivity and specificity are reassuring. The widened spectrum of Anyplex targets highlights the high burden of *Ureaplasma* and *Mycoplasma* species in this setting, whose clinical significance need further exploration.

P3.169 HUMAN LEUKOCYTE ANTIGEN (HLA) B*18 AND PROTECTION AGAINST MOTHER- TO-CHILD HIV TYPE1 TRANSMISSION

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Introduction Human leukocyte antigen (HLA) molecules regulate the cellular immune system and may be determinants of infant susceptibility to human immunodeficiency virus type 1 (HIV-1) infection. Molecular HLA typing for class I alleles was performed on infants followed in a Kenyan perinatal cohort.

Methods Early HIV-1 infection status was defined as infection occurring at birth or month 1, while late infection via breast milk was defined as first detection of HIV-1 after 1 month of age. Likelihood ratio tests based on a proportional hazards model adjusting for maternal CD4 T cell count and HIV-1 viral load at 32 weeks of gestation were used to test associations between infant allelic variation and incident HIV-1 infection. Among 433 infants, 76 (18%) were HIV-1 infected during 12 months of follow-up.

Results HLA B*18 was associated with a significantly lower risk of early HIV-1 transmission [relative risk (RR)=0.26; 95% confidence interval (CI) 0.04–0.82], and none of the 24 breastfeeding infants expressing HLA B*18 who were uninfected at month 1 acquired HIV-1 late via breast milk. We observed a trend toward increased early HIV-1 acquisition for infants presenting HLA A*29 (RR=2.0; 95% CI 1.0–3.8) and increased late HIV-1 acquisition via breast milk for both Cw*07 and Cw*08 (RR=4.0; 95% CI 1.0–17.8 and RR=7.2; 95% CI 1.2–37.3, respectively).

Conclusion HLA B*18 may protect breast-feeding infants against both early and late HIV-1 acquisition, a finding that could have implications for the design and monitoring of HIV-1 vaccines targeting cellular immune responses against HIV-1.

P3.170 WOMEN, HARM REDUCTION AND HIV

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Introduction This paper compares and contrasts number of partners and condom use behaviour for female sex workers and a sample of women working in other economic activities, with both samples drawn from the large informal settlement of Kibera, Nairobi.

Methods As expected, univariate analysis revealed much higher numbers of overall sexual partners and higher levels of condom use among female sex workers compared to Kibera women in other occupations. An unexpected finding, however, was that female sex workers with a romantic partner had significantly fewer sexual partners per unit time than female sex workers without such a partner.

Results This finding held for multivariate analysis, with negative binomial regression analyses showing that having a romantic partner was significantly associated with reductions