

non-specific reactivity on HIV Western blot. Specificity and NPV for the antibody component was 99.5% (99.0–99.7) and 99.9% (99.6–100.0) and for the antigen component was 99.8% (99.4–99.9) and 99.6% (99.1–99.8), respectively.

**Conclusion** Antibody and antigen component specificity was consistent with the rapid test package insert; whereas sensitivity was lower, notably in those with recent infections. Hence, identifying patients at risk of recent infection is vital so that conventional laboratory serology is performed. A formal assessment of test performance in seroconvertors is warranted.

#### 015.5 PERFORMANCE CHARACTERISTICS OF SD BIO LINE RAPID HIV-SYPHILIS DUO TEST KIT FOR SIMULTANEOUS DETECTION OF HIV AND SYPHILIS INFECTIONS

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**Background** Human immunodeficiency virus (HIV) and *Treponema pallidum* share modes of transmission. Congenital syphilis is a significant cause of stillbirth, prenatal death and serious neonatal infections. We sought to evaluate rapid test kit for HIV-syphilis dual detection to improve diagnosis and enable accurate management towards achieving the renewed zeal of eradicating syphilis and congenital syphilis.

**Methods** Six hundred and eighty serum specimens from HIV discordant couples in a clinical trial, tested for syphilis infection by RPR with reactive specimens confirmed by TPHA, were used for this evaluation. HIV status was determined by Uni-Gold™ and Determine™ HIV rapid kits and all positive samples confirmed by two HIV Enzyme immunoassay test. These specimens were blindly retested using the HIV-Syphilis Duo kit.

**Results** Of 698 samples evaluated 139 (20%) were RPR positive and 346 (50%) were HIV positive. Among the RPR positive, 85 (61%) were TPHA positive. None of 559 RPR negative samples tested syphilis positive on HIV-Syphilis Duo kits. Of the 85 RPR positive-TPHA positive samples, none tested syphilis negative on the HIV-Syphilis Duo kit. All RPR positive-TPHA negative samples tested syphilis negative on the HIV-Syphilis Duo kit. Sensitivity and specificity was: both 100% for syphilis detection and; 99.71% and 100% respectively for HIV detection. On this sample set the Sensitivity of Determine™ and Uni-Gold™ was 96.82% and 98.27% respectively while the Specificity was 93.75% and 99.43% respectively. HIV-Syphilis Duo kit detected 5 early HIV infections that were missed out by Determine™ and Uni-Gold™ at least one month prior to a seroconversion visit.

**Conclusion** HIV-Syphilis DUO test kit performed better compared to RPR for syphilis and Determine™ for HIV detection. It was equivalent to TPHA for syphilis and Uni-Gold™ for HIV detection. Its implementation in antenatal clinics/VCTs will present an added opportunity for simultaneous diagnosis of HIV and syphilis.

#### 015.6 MOLECULAR SURVEILLANCE OF NEISSERIA GONORRHOEAE PENICILLIN RESISTANCE: INFORMING EMPIRIC PRESCRIBING POLICY IN WESTERN AUSTRALIA

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Against the worldwide trend, there remain populations in the remote regions of Western Australia (WA) where the efficacy rates for penicillin may be above the World Health Organisation (WHO)

95% guideline for *N. gonorrhoea* drug selection. Oral amoxicillin (3g) with probenecid (1g) is used empirically in these regions. The majority of gonorrhoea diagnoses in our laboratory are performed by PCR with culture-based antimicrobial resistance surveillance limited by the lack of a representative number of isolates. We therefore implemented a world-first comprehensive molecular gonococcal surveillance of penicillin resistance in our remote populations.

We tested all *N. gonorrhoeae*-PCR positive cases from August 2011 to July 2012 (n = 1235) using a PCR assay targeting the penicillinase-producing *N. gonorrhoeae* (PPNG). This represented approximately 60% of the 2092 notified WA gonorrhoea cases but 91% of cases from the remote regions. Of these regions, the Kimberley PPNG rate was 0.7%, the Pilbara 4.0%, the Goldfields 10.3%, and the Mid West 0% compared to Perth, the state capital city with 12(8–16)%. When adjustments were made for chromosomal-mediated penicillin resistance (additional 3.4%), the Kimberley and Mid West regions remained below the 5% WHO resistance threshold for penicillin. In addition, a review of the Pilbara and Goldfields regions found PPNG only in the major regional centres.

Based on this data, continuation of amoxicillin with probenecid in the Kimberley region with its reintroduction into the Mid West was recommended. In the Pilbara and Goldfields amoxycillin with probenecid could be continued in remote communities but empiric treatment in the regional centres and of non-locals should employ intramuscular ceftriaxone therapy, as for other parts of WA. Our study shows that molecular surveillance of gonococcal antimicrobial resistance directly from clinical specimens is feasible and could be extended to include other targets conferring resistance to other antibacterials such as ceftriaxone.

### 0.16 - STI-Potpourri: Chlamydia, HPV and special populations

#### 016.1 THE BEHAVIOURAL IMPACT OF CHLAMYDIA TESTING AND ATTITUDES TOWARDS TESTING AMONG YOUNG ADULTS IN ENGLAND

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**Background** In England, the National Chlamydia Screening Programme aims to control chlamydia infection in young adults (aged 15–24 years old) through opportunistic testing. This study aimed to investigate the impact of testing on young adults' subsequent healthcare seeking and sexual behaviour. Young adults' attitudes to chlamydia and chlamydia testing are important barriers to screening, and thus questions on attitudes to testing and reasons for not testing were included.

**Methods** A cross-sectional web-based anonymous survey of 1,521 young adults aged 16–24 resident in England was conducted using a nationally representative research panel. The impact of chlamydia testing on subsequent behaviour, and attitudes towards chlamydia testing, were assessed by asking respondents to use a Likert scale to score how well they agreed with a series of statements.

**Results** Just under half (46%; 695/1,521) of respondents had been tested for chlamydia previously: of whom 14% (94/695) reported ever having received a positive result. Those tested (n = 695) reported a positive impact on subsequent healthcare seeking behaviour (e.g. 68% agreeing that they were more likely to test again), and a smaller impact on sexual behaviour (e.g. 40% agreeing that they were more likely to use condoms consistently). Having positive attitudes towards chlamydia testing was associated with a higher likelihood of having been tested (OR 4.9; 95% CI 3.9–6.1). Of those sexually active but not tested (32%; 488/1,521), 70% did not consider themselves to be at risk.