

**Results** A total of 767 (92.9%) men were included in the study. The mean age was 26.5 (SD 8.3) years old. Prevalence of Chlamydia infection was 13.1% (95% CI 10.7% to 15.5%) and gonorrhoea was 18.4% (95% CI 15.7% to 21.1%). Coinfection prevalence was 4.4% (95% CI 2.95% to 5.85%) in men who sought attendance in STI clinics. Factors identified as associated with *C trachomatis* were younger age (15–24) (OR=1.4 (95% CI 1.01 to 1.91)), present urethral discharge (OR=4.8 (95% CI 1.52 to 15.05)), genital warts (OR=3.0 (95% CI 1.49 to 5.92)) and previous history of urethral discharge (OR=2.4 (95% CI 1.11–5.18)). Variables associated with gonorrhoea were younger age (15 to 24) [OR=1.5 (95% CI 1.09–2.05)], presence of urethral discharge [OR=9.9 (95% CI 5.53–17.79)], genital warts [OR=18.3 (95% CI 8.03–41.60)] and ulcer present upon clinical examination [OR=4.9 (95% CI 1.06–22.73)]. **Conclusions**—These findings have important implications for education and prevention actions directed towards men at risk of HIV/STD. A venue-based approach to offer routine screening for young men in STD clinics should be stimulated.

**P1-S1.09 TRENDS IN THE AETIOLOGY OF SEXUALLY TRANSMITTED INFECTIONS AND HIV COINFECTIONS AMONG STI PATIENTS ATTENDING ALEXANDRA HEALTH CENTRE, JOHANNESBURG, SOUTH AFRICA (2007–2010)**

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D Lewis, C Ricketts, N Bhojraj, G de Gita, P Magoo, I Venter, L Mshibe, A Vezi, E Muller, F Radebe. *NICD/NHLS, Sandringham, South Africa*

**Objectives** To determine trends in the relative prevalence of aetiologies of urethral discharge (UDS), vaginal discharge (VDS) and genital ulcer (GUS) syndromes, and in the seroprevalence of syphilis, HSV-2 and HIV.

**Methods** Consecutive male (UDS/GUS) and female (VDS/GUS) patients were enrolled at Alexandra Health Centre, Johannesburg from January to April each year during 2007–2010. Urethral swabs (UDS), endocervical swabs/vaginal smears (VDS), genital ulcer swabs/smears (GUS) and sera (all) were collected with written informed consent. Real-time PCR assays were used to detect *Neisseria gonorrhoeae* (NG), *Chlamydia trachomatis* (CT), *Trichomonas vaginalis* (TV) and *Mycoplasma genitalium* (MG) from UDS/VDS swabs, and herpes simplex virus (HSV), *Treponema pallidum* (TP) *Haemophilus ducreyi* (HD) and *Chlamydia trachomatis* L1-3 (LGV) from ulcer swabs. Slides were stained for bacterial vaginosis/candidiasis (BV/CA, VDS) and granuloma inguinale (GI, GUS). Sera were tested for syphilis (rapid plasmin reagin, RPR; Omega Diagnostics), for HSV-2 (HerpeSelect IgG; Focus Diagnostics) and for HIV (Determine; Abbott Laboratories).  $\chi^2$  for linear trend analyses were undertaken with summary data (Prism v.2, GraphPad Software).

**Results** 928 UDS, 805 VDS and 455 GUS patients were recruited overall. Trends in the relative prevalence of most syndrome aetiologies were non-significant between 2007 and 2011—NG (UDS, 71%–79%; VDS 11%–17%), CT (UDS, 20%–25%; VDS, 27%–37%), MG (UDS, 10%–13%; VDS, 11%–14%), BV (VDS, 30%–36%), CA (VDS, 26%–31%), HSV (GUS, 53%–75%), TP (GUS, 4%–7%), HD (GUS, 0%–2%), LGV (0%–2%). There were no cases of GI. There was, however, significant decreasing trends for TV detection among UDS (4%–13%,  $p=0.003$ ) and VDS (19%–34%,  $p=0.001$ ) patients. Serologically, VDS patients had a decreasing trend in RPR seropositivity (1–8%,  $p<0.001$ ) and, importantly, HIV coinfections decreased among both UDS (29%–39%,  $p=0.011$ ) and GUS (60%–75%,  $p=0.032$ ) patients. Non-significant variations in seropositivity were observed for RPR tests among UDS (1%–3%) and GUS (4%–11%) patients, for HSV-2 among all groups (UDS, 50%–60%; VDS, 74%–84%; GUS, 81%–87%), and for HIV among VDS (48%–59%) patients.

**Conclusions** These data suggest significant decreases in the prevalence of HIV coinfection in UDS/GUS patients and of trichomoniasis as a cause of UDS/VDS. Though the HIV trends are

encouraging for men, the lack of a similar trend for women with VDS is of public health concern.

**P1-S1.10 MICROBIOLOGICAL SURVEILLANCE FOR SEXUALLY TRANSMITTED INFECTIONS IN WINDHOEK AND OSHAKATI, NAMIBIA (2007)**

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<sup>1</sup>S Tobias, <sup>2</sup>S Shonhiwa, <sup>1</sup>F Norbert, <sup>3</sup>O Oke, <sup>4</sup>C Ndjavera, <sup>4</sup>S Chikukwa, <sup>5</sup>F Radebe, <sup>5</sup>D Lewis. <sup>1</sup>Ministry of Health & Social Services, Windhoek, Namibia; <sup>2</sup>I-Tech Namibia, Namibia; <sup>3</sup>WHO, Namibia; <sup>4</sup>Namibian Institute of Pathology, Namibia; <sup>5</sup>NICD/NHLS, South Africa

**Background** A microbiological survey was undertaken to enable review of Namibia's syndromic management-based STI treatment guidelines (1999).

**Methods** This Government-approved survey took place at Katutura Health Centre (Windhoek) and Oshakati Intermediate Hospital over 9 months in 2007. Consecutive patients with urethral discharge (UDS), vaginal discharge (VDS) and genital ulcer (GUS) syndromes gave verbal consent to provide anonymous samples for the following tests—(i) real-time PCR (RT-PCR) for *Neisseria gonorrhoeae* (NG), *Chlamydia trachomatis* (CT), *Trichomonas vaginalis* (TV), *Mycoplasma genitalium* (MG) (UDS, urethral swabs; VDS, endocervical swabs) (ii) RT-PCR detection of herpes simplex virus (HSV), *Treponema pallidum* (TP), *Haemophilus ducreyi* (HD), *Chlamydia trachomatis* L1-L3 (LGV) (ulcer swabs), (iii) Giemsa staining of ulcer smears for granuloma inguinale (GI), (iv) Gram staining of vaginal smears for Candida (CA) and bacterial vaginosis (BV), (v) NG culture and determination of ciprofloxacin and ceftriaxone minimum inhibitory concentrations (MIC) by E test (urethral swabs), and (vi) HIV ELISA (blood). All patients were provided with STI syndromic treatment, offered same-day HIV counselling and testing, and partner notification was discussed. Data analysis was performed in STATA v10 and the  $\chi^2$  test used to assess difference by survey site.

**Results** 199 UDS, 200 VDS and 199 GUS episodes were surveyed among 598 patients (293, Windhoek; 305, Oshakati). The relative prevalence of pathogens/conditions by syndrome was—(i) UDS—NG 87% (173), CT 9% (18), TV 5% (9), MG 2% (4), (ii) VDS—NG 5% (9), CT 8% (15), TV 15% (29), MG 4% (8), BV 65% (127), CA 17% (33), and (iii) GUS—HSV 49% (97), TP 3% (5), LGV 2% (2), GI 0.5% (1), HD 0% (0). Syndrome-specific HIV prevalence was 36% (62) for UDS, 29% (57) for VDS and 53% (91) for GUS. Ciprofloxacin resistance (MIC=1) was detected in 28 (24%) of 118 viable NG isolates; all isolates were deemed susceptible to ceftriaxone. Ciprofloxacin resistance was significantly higher in Oshakati compared to Windhoek (48% vs 5%,  $p<0.001$ ).

**Conclusions** The survey highlighted the importance of gonorrhoea, genital herpes, HIV-coinfection and, in Oshakati, the high prevalence of ciprofloxacin resistant NG. As a result of this survey, Namibia's STI guidelines were revised in 2008 by adding acyclovir to existing GUS treatment and replacing ciprofloxacin with oral cefixime as treatment for presumptive gonorrhoea.

**P1-S1.11 PREVALENCE OF TRICHOMONAS VAGINALIS, CHLAMYDIA AND GONORRHOEA IN WOMEN AT THE MIAMI-DADE COUNTY HEALTH DEPARTMENT STD CLINIC**

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<sup>1</sup>H Tookes, <sup>1</sup>N Hirsch, <sup>1</sup>C Diaz, <sup>2</sup>O Ponomareva, <sup>1</sup>J G Castro. <sup>1</sup>University of Miami Miller School of Medicine, Miami, USA; <sup>2</sup>Miami Dade County Health Department, Miami, USA

**Background** Miami, Florida, has the highest rate of HIV diagnoses in the USA (70.3 per 100 000 people), accounting for 1218 of the 41 269