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**Background** Detection of sexually transmitted infections (STIs) in HIV-1 positive (+) men is essential to ensure appropriate treatment and to reduce HIV and STI transmission. We evaluated the baseline prevalences of *Chlamydia trachomatis* (CT), *Neisseria gonorrhoeae* (NG), *Trichomonas vaginalis* (TV), *Mycoplasma genitalium* (MG) and high risk human papillomavirus (HR-HPV) infections in HIV-1+ men.

**Methods** HIV-1(+) men from three southern California (CA) sites (n = 179) and from one New York (NY) site (n = 254) were screened using APTIMA TMA assays (Hologic/Gen-Probe Inc.) for CT, NG, TV, MG, HR-HPV (with HR-HPV genotyping for HPV-16 and HPV-18/45). Specimen types tested (1–3 per subject) were collected between 11/2010 and 9/2012 and included urine for CT (n = 356), NG (n = 357), TV (n = 357), MG (n = 357), throat for CT (n = 86), NG (n = 178), TV (n = 172), MG (n = 179), HR-HPV (n = 172) and rectal for CT (n = 263), NG (n = 263), TV (n = 255), MG (n = 263), HR-HPV (n = 251). Prevalences were calculated by patient and by specimen types.

**Results** Overall, 218/433 (50.4%) of the subjects were positive for an STI; 6.2% having > 1 STI; 4.9% had 2 STIs (HPV/MG, HPV/CT, HPV/NG, MG/CT, MG/NG, CT/NG), and 1.4% had 3 STIs (HPV/MG/CT, HPV/MG/NG, MG/CT/NG). Pathogen prevalence by specimen site and patient are listed below:

**Abstract P3.244 Table 1**

By Specimen	Pathogen Prevalence (%)					Any STI
	CT	NG	TV	MG	HPV	
Rectal	4.6	3.8	0.0	7.6	55.8	14.1
Urine	0.8	0.3	0.0	4.5	Not tested	1.4
Throat	3.5	2.8	0.6	1.7	4.7	2.3
By Patient	4.2	3.5	0.2	8.8	55.7	50.4

Genotyping of 127 HR-HPV+ specimens determined that 25.2% contained HPV-16; 10.2% HPV-18/45, 6.3% HPV-16 and HPV-18/45, and 58.3% were negative for HPV-16, 18 or 45.

**Conclusions** The overall high prevalence of STIs, often multiple STIs per individual, suggests the need to expand screening for multiple STIs in all anatomic sites. Rectal specimens demonstrated the most STIs, especially HPV. Mycoplasma, a pathogen that is not usually tested for, was the most common bacterial STI.

**P3.245 SEXUALLY TRANSMITTED INFECTIONS (STI) IN HIV-POSITIVE PATIENTS IN THE AUSTRALIAN HIV OBSERVATIONAL DATABASE (AHOD)- A PROSPECTIVE COHORT STUDY - RATIONALE AND RESULTS AT BASELINE**

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**Background** STI may be markers of at-risk sexual behaviours, and in persons with HIV probably also increase infectiousness and risk of HIV transmission, even with viral suppression by antiretroviral drugs (ARV). However, estimates of STI in this group have proved problematic, and there are few longitudinal studies able to accurately measure incidence.

**Methods** In 2010, we established a cohort of individuals from ten sexual health clinics that were already enrolled in AHOD. We calculated diagnosis rates for four STI (Chlamydia, gonorrhoea, infectious syphilis, anogenital warts) from 2005–2010, and true incidence rates from 2010–2011.

**Results** At baseline (2010), the cohort (n = 520) did not differ markedly from the rest of AHOD (n = 1668). There was a gradual increase in chlamydial infections, from 3.4/100person-years(py) (95% CI 1.9–5.7) in 2005, to 6.7/100py (95% CI 4.5–9.5) in 2011, with a substantial peak in 2010, 8.1/100py (95% CI 5.6–11.2). The cases were evenly distributed between urethral (49%) and rectal (51%) infections. Similarly, gonococcal infections increased, with a peak in 2010 (4.7/100py, 95% CI 5.6–11.2), but rectal (63%) out-numbered urethral (37%) infections. Infectious syphilis showed several peaks, the largest in 2008 (5.3/100py, 95% CI 3.3–8.0). The incidence of genital warts declined from 7.5/100py in 2005 (95% CI 4.8–11.3) to 2.4/100py in 2011 (95% CI 1.1–4.5).

**Conclusions** The incidence of chlamydial and gonococcal infections, and infectious syphilis was higher than previous estimates in Australia. The incidence of genital warts was lower. Ongoing incidence data will assess relationships between STI, HIV-viral load, immunodeficiency, ARV and STI treatment, and patient characteristics.

**P3.246 PREVALENCE OF STI/HIV AND ASSESSMENT OF RISKY BEHAVIOURS AMONG SEX WORKERS**

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**Background** HIV biological and behavioural surveillance has been conducted repeatedly in Armenia starting from the year of 2002. The most recent STI/HIV integrated biological and behavioural surveillance (IBBS) was conducted in Armenia in 2012. Populations for conducting the surveillance were defined depending on the epidemiological situation, and current data on HIV prevalence in different populations. Sex workers (SWs) were involved in this surveillance.

**Methods** IBBS among SWs was conducted in three biggest cities of Armenia, respondent driven sampling (RDS) was used. The sample size in Yerevan, capital was 300 with mean age of 35.5.

**Results** HIV prevalence among SWs in Yerevan was 1.3%, syphilis - 4.3%, trichomoniasis - 22.5%, gonorrhoea - 6.6%.

The indicator of knowledge about HIV prevention was 35.4% (34% in 2010). Condom use with non-commercial partners was low. Only 40% of SWs (30.1% in 2010) used condoms at last sex with non-commercial partners, and 27.4% (30.8% in 2010) used condoms consistently. 90% of SWs (92.9% in 2010) used condoms at last sex with clients and 80% (88.5% in 2010) used condoms consistently.

67.8% of SWs had sex with non-commercial partners in the past 1 year. On average, one SW has 4.8 clients per week, 18 clients per month.

The percentage of SWs tested for HIV in the past 12 months was only 37.5%. Percentage of SWs exposed to HIV prevention programmes made 49.2%.

**Conclusion** Condom use with non-commercial partners was rather low among SWs, which creates a risk of further spread of HIV infection not only within this group, but also outside it. Though HIV prevalence among SWs was comparatively low, STI prevalence among them was high, which proves their risky behaviour. As appears from the above, the services on HIV prevention and STI management for SWs should be expanded and optimised.

**P3.247 SYNDROMIC APPROACH OF STI CASE MANAGEMENT AND TREATMENT STRENGTHENING THE NATIONAL STI PROGRAMME AND HIV PREVENTION EFFORTS IN KSA**

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**Background** Sexually Transmitted Infections (STI) are treated and managed in approximately 445 hospitals and 2170 Primary Health Care (PHC) centres in Saudi Arabia. Syndromic approach to STI treatment was introduced in 2010 at all PHCs for strengthening the national HIV programme STI unit.

**Methodology** STI case reporting from PHC and hospitals are to their respective administrative Sectors, then to the Regional Centre, from where it is sent to the STI unit of the National AIDS Program at Riyadh, MOH. The National AIDS Program (STI unit) holds the central registry of all STI cases reported in the Kingdom. Analysis of STI data collected over 3 years (2010–2012) has been carried out.

### Results

1. A total of 116,293 cases have been treated by clinical and syndromic approach at PHC and hospitals in the last 3 years, 85.5% being Saudi nationals. Majority of the STI cases treated are amongst females (85.65%). To a large extent the clinical cases at hospitals are backed by laboratory etiological diagnosis. The incidence of STI is 150 per 100,000 population (0.15%).
2. The total number of STI cases treated has increased since the introduction of syndromic case approach, comprising 68.3% of the total STI cases.
3. The urethral discharges and non-vesicular genital ulcers comprise 29.1% of the total STI (45,260 numbers) cases treated in 2012.

**Conclusion** Urethral discharge and non-vesicular genital ulcers indicate recent infection. Presence of STI is well known to increase the risk of HIV acquisition and transmission by a factor of ten. Treatment of urethral discharge and non-vesicular genital ulcers has thus averted HIV transmission in approximately a third of STI clinic attendees. Introduction of Syndromic approach to STI treatment since 2010 as a national strategy has strengthened STI treatment services even in remote PHCs.

### P3.248 THE EVOLUTION OF SEXUALLY TRANSMITTED INFECTION IN ROMANIA

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**Objective** to analyse the evolution of incidence of some sexually transmitted infections (STI) in Romania in the transition period.

**Methods** The study is based on data recorded at Dermato-venereological Center Bucharest. We had in view to evaluate the evolution of incidence of syphilis, gonorrhoea, *Chl. trachomatis* genitaly infections and HIV infection/AIDS and to identify the main factors implicated in this evolution.

**Results** In 2011 were recorded 2.209 new cases of syphilis. The incidence of syphilis has risen steadily from 7.1‰ in 1986 to 19.8‰ in 1989 and to 58.5‰ in 2002 and decreased to 10.34‰ in 2011. The incidence of congenital syphilis was also increasing, from no cases in 1986 to 423 cases in 2001 and (after introduction of new criteria in 2004) decreased to 10 cases in 2011. Paradoxically, the incidence of gonorrhoea is decreasing, from 57.4‰ in 1986 to 35.7‰ in 1989 and to 2.46‰ in 2011 (546 cases). In 2011 133

new cases of *Chl. trachomatis* genitaly infections were reported (0.62‰). Since the outset of epidemic were registered 17.435 cases with HIV infection/AIDS; the prevalence of HIV infection in patients with STI tested at Dermato-venereological Centre Bucharest is around 0.51% (1.59% in 2011).

Those at greatest risk for STD are the young, economically deprived, residents of the inner city. **Comments:** STI are a public health problem of major significance in Romania. Between mains factors that promote the increasing of STI (the incidence of gonorrhoea and *Chl. trachomatis* genitaly infections is underestimated due the unrelevance of all cases) are the modification of sexual behaviour, prostitution, degradation of socioeconomic condition, and deficiencies in health behaviour.

### P3.249 FACTORS ASSOCIATED TO SYPHILIS IN PREGNANT WOMEN IN VENTANILLA-CALLAO, PERU

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**Background** One of the main pregnancy complications in Peru is syphilis, a disease with severe complications that can be prevented through early diagnosis and treatment. The objective of this study was to estimate the factors associated with syphilis infection among pregnant women in the district of Ventanilla – Peru in 2012.

**Methods** The Project WawaRed “Getting connected for a better maternal and child health” involved the implementation of an electronic health record (EHR) for maternal health, linked to SMS messages sent to pregnant women and tailored to their health profile and gestational age. A crossover study was performed using data collected via the EHR on 2012. Clinical and laboratory data from pregnant women attending one of 16 different health centres in Ventanilla were analysed. These included test results for a rapid syphilis test carried out in their first antenatal care visit.

**Results** A total of 4915 pregnant women were included. The mean of age and age at first intercourse were 26.0 (95% CI: 25.8–26.2) and 17.3 (95% CI: 17.2–17.4) respectively. The prevalence for syphilis was 1.4 (95% CI: 1.1–1.7) and for HIV was 3.0 (95% CI: 1.4–4.6). There were 2 patients co-infected with HIV and syphilis. The factors analysed were: age, level of education, marital status, number of pregnancies, history of abortion, age at first sexual intercourse and contraceptive methods used. This study showed that pregnant women who use an intrauterine device (PR:4.9, p = 0.02) as a contraceptive method as opposed to condom were at higher risk for syphilis, while older age at sexual debut was associated to a lower risk for syphilis (PR:0.88, p < 0.01).

**Conclusion** Delayed sexual debut and condom use are once again identified as forms of preventing STI, and should be important components of family planning programmes.

### P3.250 EARLY DIAGNOSIS OF ACUTE HIV INFECTION IN STI CLINIC PATIENTS AND PATIENTS WITH POSITIVE SYPHILIS SEROLOGY

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**Background** We sought to determine if pooled nucleic acid testing (pNAT) for HIV RNA would identify early HIV infections in stored samples collected in 2008 from Edmonton (Canada) patients who were: (1) Seronegative for HIV antibody (HIVAb-) at the STI clinic, and (2) Seropositive for syphilis (syphAb+) with no history of a positive HIV test.