

**P3.080** **PREVALENCE OF C. TRACHOMATIS, N. GONORRHEAE, T. VAGINALIS, C. ALBICANS, SYPHILIS, BACTERIAL VAGINOSIS & HIV IN A POPULATION OF WOMEN WITH SYMPTOMS OF LOWER GENITAL INFECTIONS IN BOGOTÁ, COLOMBIA 2010**

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**Objectives** To determine the prevalence and aetiology of lower genital tract infections (LGTIs) in symptomatic women of reproductive age and describe the risk factors.

**Methods** Cross sectional study. Symptomatic women who consulted at three ambulatory care centres in Bogotá, Colombia. Exclusions: pregnancy, hysterectomy, antibiotics in the previous 7 days. Samples were obtained for etiologic diagnosis using gold standard tests for: bacterial vaginosis (VB) by Nugent's criteria; blood agar culture for *Candida* and a wet smear and In pouch™ culture for *T. vaginalis*. PCR for *C. trachomatis* (CT) and *N. gonorrhoeae* (NG), and serologic tests for syphilis (RPR, TPHA) and HIV.

**Results** 1385 women were recruited from February to December 2010. 115 (8.3%) of them were sexual workers. A LGTI was confirmed in 731 (52.7%); 560 (40.4%) had an endogenous infection and 170 (12.3%) a sexually transmitted infection (STI). The most frequent aetiology was VB in 549 (39.6%), followed by candidiasis in 153 (11%). CT was detected in 134 (9.7%), NG in 19 (1.4%), *Trichomonas* by wet smear in 11 (0.8%) and by culture in 8/634 (1.2%), syphilis in 12 (0.8%) and HIV in 1 case. The risk factors of STI are: sex workers (OR: 2.0, CI 95% 1.2 – 3.3), younger age ( $28 \pm 7.8$  vs.  $32 \pm 8.9$  (mean  $\pm$  SD), no health insurance (23.5 vs. 15.4%) and alcohol users (OR: 2.6 (95% CI: 1.4 – 4.5)) Conclusions: 52.7% of women who consult for symptoms of LGTIs an aetiology can be identified, being BV the most common and Chlamydia the most frequent STI. Almost the same number of women (47.3%) has no specific aetiology identified, even with the use of gold standard diagnostic technology. This information should be used by policy makers and clinicians for prioritisation of prevention and diagnosis of LGTIs and use of syndromic management

**P3.081** **TIME TO SEXUALLY TRANSMITTED INFECTIONS AFTER NEGATIVE STI TESTING AMONG YOUNG ADULTS**

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**Background** Recommendations for the frequency of STI screening in high-risk populations are limited by lack of data about when infections occur following a negative screening test.

**Methods** Participants (18–29 years of age; women [N = 192] and men [N = 156]) in a 12-week study of incident STI were recruited from a county STI clinic. Self-collected vaginal samples (women) and urine samples (men) were obtained weekly at participant's home. Nucleic acid amplification tests (NAAT) were used for diagnosis of *C. trachomatis*, *N. gonorrhoeae*, and *T. vaginalis* infections. Infections diagnosed at enrollment were treated immediately. Based on cumulative diary reports of partner-specific sexual behaviours, an exposure variable was created to indicate vaginal exposure with only one partner, or with more than one partner. Time to infection was modelled using Kaplan-Meier curves; group differences were

assessed via logrank test. Logistic regression was used to assess factors associated with infection status at the study completion.

**Results** 146/192 (76%) women and 126/156 (81%) men were uninfected at enrollment. At 4 weeks post-enrollment, 16% of women and 8% of men had at least one STI. At 8 weeks post-enrollment, about 23% of women and 10% of men were infected. Overall, 54/192 (28%) women and 19/156 (12%) men had at least one STI during the 12-week followup. Survival curves differed significantly by gender ( $p = 0.0003$ ). In a multivariable logistic model, women had significantly higher odds of STI (odds = 3.3,  $p = 0.004$ ), controlling for infection status at enrollment and monogamy status. Gender remained significant in models including number of partners during the follow-up period.

**Conclusion** In high STI-risk populations, rescreening of initially negative persons identifies high subsequent infection rates, especially among women. Early rescreening (e.g. within 3 months) of any tested person would significantly increase identification of reinfections among initially positive and treated as well as new infections among those previously testing negative.

**P3.082** **INCIDENCE OF CONGENITAL SYPHILIS IN PARAGUAY**

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**Background** The objective was to determine the incidence of congenital syphilis cases in the public health sector of Paraguay in 2010.

**Methods** observational, descriptive, retrospective study of newborns of the services of the country's public health sector excluding the Chaco region. The sample was obtained through two stage cluster sampling. The unit of analysis are the newborns.

**Results** Of 6739 newborn registries examined, 69 met the criteria for definition of congenital syphilis case. The incidence of congenital syphilis was 10.23 per 1000 live births. 73.9% of the mothers of the children with congenital syphilis had attended the prenatal check-ups. In 37.7% of pregnant women syphilis was diagnosed less than a month before childbirth followed by 26.1% that were diagnosed during labour and did not receive treatment. Two of the 69 newborns died.

**Conclusion** Congenital syphilis continues to be an important public health problem in Paraguay. The majority of the women with children with congenital syphilis attended prenatal check-ups, indicating missed opportunities for the health services. The high incidence of the congenital syphilis is an indicator of the quality of the health services and this highlights the need to consider syphilis among the priority problems in Paraguay, and to intensify actions for its control.

**P3.083** **IS THE SYPHILIS INCIDENCE DECREASING IN GEORGIA?**

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**Background** The epidemiology of syphilis in Georgia has traditionally been determined by socio-economic factors such as low solvency of Georgian population, urban migration, level of financing of STI prevention programmes etc. This study reports on the epidemiology of syphilis in Georgia over the period of 2000–2011.

**Methods** Analysis of 12 years data on syphilis incidence provided by the National Center for Diseases Control and Public Health, Tbilisi, Georgia.

**Results** In 2000 morbidity due to syphilis was 20.3, while in 2002 it reached 31.2 per 100,000 inhabitants. However, in 2011 the incidence had decreased to 11.0 per 100,000 inhabitants. The most affected age group is persons aged between 20–29 years and the infection has been slightly more prevalent among men (67% of all registered cases) than among the women. Over the recent four years, though, syphilis has become more prevalent among the 30–39 years old men. The incidence is also higher in urban areas. Since 2000 latent syphilis prevails, comprising 83% of all syphilis cases and primary syphilis steadily decreases, e.g. in 2010–2011 constituting only 7–8% of all diagnosed cases. During these years, neurosyphilis constituted 0.5–1.2% of all syphilis cases. In 2000 12 cases of congenital syphilis were registered, compared to 16 cases in 2012.

**Conclusions** The incidence of syphilis remains high in Georgia and epidemiological trends are well coinciding with those in many other countries of Eastern Europe. The high incidence of newly detected latent vs. primary syphilis may indicate a suboptimal surveillance, diagnostics and management of STI patients. A correlation between the availability of the financed STI programmes and increasing incidences of syphilis was also noted.

**P3.085** **SYPHILIS ON THE RISE IN GERMANY - IS IT TEMPORARY OR A NEW TREND?**

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**Background** Since 2001, laboratories in Germany are required to notify newly diagnosed cases of syphilis directly to the Robert Koch-Institut (RKI). The number of syphilis cases doubled 2001–04 to over 3000/year, remained stable until 2008 and decreased in 2009. Syphilis cases rose by 10% in 2010 and 22% in 2011. We analysed preliminary syphilis surveillance data from 2012 to assess whether this rise is continuing in 2012.

**Methods** Laboratories anonymously notify syphilis diagnoses to RKI and physicians complete laboratory findings with clinical information. Potential double notifications were identified by comparing available demographic data, diagnosis date, antibody titers, and clinical information. Syphilis was defined as: direct detection by microscopic or histological examination; positive screening test plus confirmation tests and VDRL/KBR activity, detection of IgM antibodies or clinical information consistent with syphilis. We described syphilis cases by month of diagnosis, age, sex and area of residence. If available, we analysed the data by transmission category.

**Results** Overall, 4380 cases were reported in 2012 (until 31.01.2013), corresponding to an 18.3% rise compared to 2011. The overall incidence was 5.3 per 100,000 inhabitants, with highest incidences in Cologne (28.0), Munich (22.7) and Berlin (20.6). The median number of monthly notified cases increased from 253 in 2010 to 374 in 2012. Notified cases increased in 12/16 federal states. Of notified cases, 93.1% were from men. The increase in 2012 was higher in women (26.7%) than men (17.8%). The likely mode of transmission was available for 72.8% of cases; of these, 75.7% were men who have sex with men (MSM) and in 16.4% heterosexual transmission was reported.

**Conclusion** Syphilis cases continue to increase since 2010, which is mainly attributable to MSM in large cities. Consistent condom use, early diagnosis and treatment are important to minimise the risk of syphilis and subsequently potential HIV transmission.

**P3.086** **CHANGING PATTERNS OF SYPHILIS IN ASIA-PACIFIC**

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The pattern of STIs has changed dramatically world over in the last 2 decades. Syphilis had decreased significantly till 90s, but

re-emerged with alarming intensity in last decade. Of about 12 million new cases of syphilis annually globally, 90% occur in developing countries of which about 4 million are in Asia.

We analysed the pattern of syphilis in various Asian countries and possible factors leading to this change in the last 2 decades.

In China, syphilis increased from 0.2/100,000 cases in 1993 to 5.7/100,000 in 2005 and congenital syphilis had an annual increase of > 71%. High risk groups like CSWs and MSMs had syphilis 1 in 5–10 cases. In Singapore, it had risen from 10/100,000 cases in 1979 to 29/100,000 in 1986. Female prostitutes, reduced herd immunity, decreased penicillin use, greater population movement and decreased surveillance were main contributory factors to this change. Infectious syphilis increased from 3.1/100,000 in 2004 to 6.6/100,000 in 2007 in Australia. Blood donors in India had increased seroprevalence of syphilis. Also it was the commonest ulcerative STI seen 46% male inmates in a Delhi gaol in 1999. Similarly, 37% transsexuals in Karachi, Pakistan in 1999 and 20% in Indonesia had syphilis, where as 23% HIV drug users had syphilis in Bangladesh. In South-east Asia and Western Pacific region also syphilis has increased in the last decade mainly due to booming sex industry, travel and tourism, migration of workers and poor control measures. However syphilis has decreased from > 17/100,000 in 1993 to < 2/100,000 cases in 2008 in Thailand and from 11/100,000 in 1998 to 3/100,000 in 2007 in Malaysia primarily due to strict control measures which lead to decline of other STIs and HIV also. Early recognition of cases, their adequate treatment and effective control measures are warranted to control syphilis.

**P3.087** **PREVALENCE AND ASSOCIATED RISK FACTORS FOR SEXUALLY TRANSMITTED INFECTIONS AT CHILDBIRTH, IRELAND, 2005–2010**

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**Background** Sexually transmitted infections (STI) have been increasing across Europe and have resulted in increasing rates among women of childbearing age.

**Methods** A retrospective cohort study was performed to derive population-based rates of STIs reported during hospitalisation for delivery between 2005 and 2010 in Ireland. ICD-10-AM codes from hospital discharge records were used to identify STI cases. Due to small numbers, unadjusted relative risks (RR) and corresponding 95% confidence intervals (CI) stratified by age were computed to assess the strength of association between maternal risk factors and STI diagnosis.

**Results** 415 of 403,642 childbirth hospitalisations included a diagnosis for a STI. Venereal warts were the commonest reported infection (62.4 per 100,000), followed by syphilis (24.3 per 100,000) and anogenital herpesviral infection (13.4 per 100,000). Women aged < 25 years were nearly four times as likely (RR 3.90; 95% CI 3.21–4.74) to have a STI diagnosis at delivery than women aged ≥ 25 years. When stratified by age, relative to married women, single women < 25 years of had a 2-fold risk of having a STI, whereas single women ≥ 25 years of age had 3-fold risk. Over the six-year period, annual syphilis rates ranged from 13.8 to 32.9 per 100,000 maternities. The stillbirth rate was substantially higher in women diagnosed with syphilis.

**Conclusions** Demographic patterns in STI risk observed from hospital discharge charts were in line with international STI surveillance. The high annual rates of syphilis observed within this well defined, universally screened cohort suggest that syphilis rates are underreported in the general population and underscore the importance of future studies examining congenital syphilis.