ongoing quality assurance of syphilis testing; (4) procurement mechanisms supporting high-quality and affordable syphilis test kits and supplies; and (5) enhanced national reporting of syphilis cases.
Conclusion This first-ever Regional Guidance on syphilis testing will set standards on which future country assessments will be evaluated.

P09.37 SYPHILIS RAPID TEST VALIDATION FOR TREPONEMAL DIAGNOSIS IN GUATEMALA, 2013–2014

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Background International guidelines for syphilis testing recommend non-treponemal tests, and confirmation by more complex treponemal test such as *Treponema pallidum* haemagglutination (TPHA), enzyme-linked immunosorbent assay (ELISA) or others. Similar to HIV rapid tests, rapid treponemal tests can improve point-of-care testing in laboratories with limited capacities. We present main results of a validation for treponemal diagnosis performed in Guatemala.
Methods A syphilis rapid test laboratory validation was performed in two phases during 2013–2014. First stage was performed using frozen serums from National Health Laboratory and second stage was performed using whole blood from pregnant women from peripheral health services from Guatemala City. Four treponemal rapid tests were evaluated in the first stage: Determine TP (DetTP), SD Syphilis (SDSyp), Omega Visitect (OVis), and Rapid Syphilis (RSyp). Only two tests were evaluated in the second stage: DetTP and SDSyp. For confirmation, TPHA was used for diagnosis of treponemal antibodies in serum and treponemal ELISA for plasma.
Results A total of 460 serums were evaluated in first stage and 432 whole blood samples in second stage. Compared to TPHA, sensitivity ranged from 87.8% for RSyp to 99.2% in DetTP in serum and 100% for SDSyp and DetTP in whole blood. Specificity was lower, ranging from 74.8% for DetTP to 87.7% for SDSyp in serum and 100% for SDSyp and DetTP in whole blood.
Conclusion Rapid treponemal tests are a useful diagnostic tool in syphilis. Sensibility was high enough to be used as a screening test, with good results in whole blood samples. Low prevalence of syphilis in the validation contributed to poor positive predictive values. The use of a reverse algorithm might be useful for implementation of this test in Guatemala.
Disclosure of interest statement We declare that we have no conflicts of interest.

P09.38 SYPHILIS PREVALENCE AND RISK BEHAVIOUR AMONG PEOPLE LIVING WITH HIV IN MANAGUA, NICARAGUA: BSS-2009, BSS-2014 AND STI SENTINEL SURVEILLANCE (VICITS) 2014

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Background In Nicaragua, 9,739 HIV cases have been reported during 1987–2014. Two Central American Behavioural Surveillance Survey (BSS) among people living with HIV (PLHIV) to estimate prevalence of STI and risk behaviour have been conducted. Since 2012, the STI Sentinel Surveillance Strategy (VICITS) has offered STI diagnosis/treatment and behavioural intervention for PLHIV in public health sites. We present socio-demographic/behavioural and STI prevalence among PLHIV from BSS (2009 and 2014) and VICITS databases.
Methods For the BSS, we used a convenience sample of PLHIV seeking HIV services at Roberto Calderon Hospital (RCH) in Managua, from September–December 2009 and January–March 2014. For VICITS, PLHIV seeking services at RCH during 2014 were included. BSS information was obtained through Audio Computer-Assisted Self-Interview. VICITS data were abstracted from VICITS information system. Blood samples were collected for Syphilis testing according to national guidelines. Data were analysed using STATA v13.0.
Results Each BSS survey recruited 200 PLHIV (male 53.5% BSS-2009; 74.0% BSS-2014). VICITS recruited 146 PLHIV (85.7% male). Median age was 34 years old for all three data sources. One-third reported being married/living together in BSS-2009 and VICITS (44%, BSS-2014). Alcohol use in the last month was reported by 33.2% in BSS-2009 and 50% in BSS-2014 and VICITS. Condom use in the last sex with any partner was 60.0% in BSS-2009 and 75.5% in BSS-2014 and VICITS. Prevalence of syphilis was 11.6% (95% CI: 7.5–16.8) in BSS-2009, 10.0% (95% CI: 6.2–15.0) in BSS-2014 and 16.7% (95% CI: 8.1–19.8) in VICITS.
Conclusion Although socio-demographic/behavioural data of PLHIV in BSS and VICITS were similar, syphilis prevalence was higher among PLHIV enrolled in VICITS. Our results indicate that VICITS strategy can provide valuable information about sexual behaviour of PLHIV. Our findings suggest the use of programmatic data in lieu of complex and expensive surveys to monitor trends in STI prevalence and sexual behaviour.
Disclosure of interest We declare that we have no conflicts of interest.

P09.39 HIV/SYPHILIS PREVALENCE AND RISK BEHAVIOURS AMONG TRANSGENDER WOMEN AND MEN WHO HAVE SEX WITH MEN IN NICARAGUA: SENTINEL SURVEILLANCE AND STI CONTROL (VICITS), 2014

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Background Nicaragua has a HIV concentrated epidemic, with 9.7% among men who have sex with men and transgender women (MSM/TGW). Since 2011, Sentinel Surveillance and STI Control (VICITS) strategy has been implemented in public health clinics for key populations to provide STI diagnosis/treatment and behavioural change interventions. We describe risk sexual behaviours and HIV/syphilis prevalence among MSM/TGW who attended at least one of two VICITS clinics.
Methods We included in the analysis: Men, ≥18 years old (yo), who reported having sex with men in the last year, who attended one of the two selected VICITS clinics in Managua (Pedro Altamirano Hospital) or Granada (Sinforoso Bravo Hospital), from 1 January 2014 through 31 December 2014. Blood samples were collected for HIV and syphilis testing according to

national guidelines. Data analysis was performed using Stata v13.

Results A total of 712 MSM/TGW attended a VICITS clinic (91.4% MSM, 8.6% TGW) with 545 in Managua (484 MSM, 61 TGW) and 167 MSM in Granada. Median age was 21 yo, median age at first sexual intercourse was 15 yo in both cities; 94.6% of MSM in Granada and 71.8% of MSM/TGW in Managua reported receptive anal sex in the last 30 days. Granada reported highest alcohol use in the last month (75.5%). Condom use in the last sex was reported by 71.3% MSM/TGW in Managua and 93.8% MSM in Granada. HIV prevalence was 4.9% in Managua and 0.6% in Granada. Syphilis prevalence was 4.6% Managua and 0.6% in Granada.

Conclusion Managua showed higher prevalence of HIV and Syphilis and sexual risk behaviours in MSM/TGW than Granada. Our results show young people getting infected in both cities, underscoring the need to implement additional efforts to control HIV epidemic among this young key population in Managua and Granada.

Disclosure of interest statement We declare that we have no conflicts of interest.

P09.40 PREVALENCE OF CURABLE SEXUALLY TRANSMITTED INFECTIONS IN PREGNANT WOMEN IN LOW- AND MIDDLE-INCOME COUNTRIES FROM 2010–2015: A SYSTEMATIC REVIEW

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Introduction Globally nearly 17,000 children under 5 years of age die each day. Preterm delivery is the number one cause of under-5 year mortality. Curable sexually transmitted infections (STIs) in pregnant women, specifically syphilis, *Neisseria gonorrhoeae*, *Chlamydia trachomatis*, and *Trichomonas vaginalis*, have been shown to cause preterm delivery through premature rupture of membranes, preterm labour, chorioamnionitis and congenital infection. There is a strong likely causal association between antenatal STIs and preterm delivery. Treating curable STIs may decrease under-5 year mortality. Our objective was to conduct a systematic review and summarise curable STI prevalence estimates among pregnant women in low- and middle-income countries.

Methods PubMed was searched for studies reporting prevalence statistics for syphilis, *Neisseria gonorrhoeae*, *Chlamydia trachomatis*, and *Trichomonas vaginalis* infections among pregnant women in low- and middle-income countries. Studies published between 1/1/2010–3/1/2015 were included. Abstracts of all search results and the full text of all potentially eligible articles were reviewed.

Results 376 potentially relevant reports were identified. 76 studies met inclusion criteria, providing 116 point prevalence estimates for curable STIs in pregnant women, including a total of 3,594,777 women. The median value (range) of the estimates for each STI were as follows: syphilis, 1.9% (0–41.7%); *N. gonorrhoeae*, 1.6% (0–19.0%); *C. trachomatis*, 9.8% (0.1–41.3%); and *T. vaginalis*, 11.2% (1.0–32.3%). The median prevalence value of any STI was found to be 23.9% (10.3–33.7%).

Conclusion Prevalence rates of curable STIs in pregnant women in low- and middle-income countries range from low to high and vary by country. Median prevalence values, however, are high and suggest a large population-level burden of untreated curable infections in pregnant women. Interventions to screen and treat pregnant women in low- and middle-income countries to reduce preterm delivery and subsequent under-5 years of age mortality need urgent evaluation.

Disclosure of interest statement We have no disclosures to make.

P09.41 *CHLAMYDIA TRACHOMATIS* SCREENING AMONG PRETERM BIRTHS IN BRAZIL: AN EXPERIENCE FROM A UNIVERSITY HOSPITAL

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Background Premature birth (PPT) is a major determinant of neonatal morbimortality with adverse consequences for health. The causes are multifactorial, with intrauterine infection probably explains most of these outcomes. It is believed that infection with *Chlamydia trachomatis* (CT) is also involved in PPT and premature rupture of membranes. Our goal was to study the prevalence of CT in pregnant women and associated factors related to cases of PPT attended in an University Hospital in Vitoria, Brazil.

Methods A cross-sectional study performed among parturient who have preterm birth in a University Hospital from June 2012 to August 2013. Participants answered a questionnaire including demographic, behavioural, and clinical data. A sample of urine was collected and screened for CT using polymerase chain reaction.

Results The prevalence of PPT in the hospital during the period of the study was 26%. A total of 378 cases of PPT were registered, among them 323 women participated and were tested for CT, forty-five (13.9%) had a positive result. 31.6% was up to 24 years old and women infected by CT were younger than the others ($p = 0.022$). A total of 76.2% were married/living together, and CT was more frequent among the single ones ($p = 0.018$); 16.7% of women had their first sexual activity under 14 years old. The causes of prematurity were maternal-fetal in 40.9%, rupture of the membranes in 29.7% and premature labour in 29.4%. In multivariate analysis, being married was a protective factor for infection [OR = 12:48 (95% CI: 0.24–0.97)]. None of the other characteristics were associated with CT infection.

Conclusions This study shows a high prevalence of preterm birth and CT infection among parturient who have preterm birth. This high prevalence increases the need for defining screening strategies and assistance during the prenatal period.

Disclosure of interest statement There is no conflict of interest