

**Introduction** Lymphogranuloma venereum (LGV) continues to be difficult to diagnose and can lead to significant sequelae. Since 2011, all rectal specimens testing positive for *Chlamydia trachomatis* were tested for LGV serovars, leading to a greater number of LGV cases (mean, 21 cases/year for 2011–2014). In 2015, case reports of LGV doubled to 42 cases. We sought to characterise LGV cases reported in BC since 2011, and assess possible reasons for the 2015 increase.

**Methods** Demographic and behavioural information about all LGV cases reported in BC from January 1, 2011 to December 31, 2015 were identified. Provincial laboratory data were reviewed for potentially missed cases. LGV cases were categorised by reporting year (i.e., 2011–2014 and 2015) and analysed using the chi-square test or Fisher's exact test. LGV percent positivity was calculated as the number of LGV cases over the number of positive rectal chlamydia.

**Results** From 2011–2014, 83 cases were reported versus 42 in 2015. All were among men who have sex with men (MSM). The median age for cases was 46 years and 44 years for 2011–2014 and 2015, respectively ( $p=0.26$ ). HIV co-infection was similar in both periods (54/83 in 2011–2014, 25/42 in 2015,  $p=0.61$ ). Of those known to be co-infected with HIV, the majority had undetectable viral loads (34/54 in 2011–2014 and 18/25 in 2015). There was a decrease in the proportion of cases who identified as Caucasian from 2011–2014 to 2015 ( $p=0.004$ ) and an increase in proportion of asymptomatic cases, although not statistically significant ( $p=0.06$ ). Percent positivity was 7.1% and 7.2% in 2011–2014 and 2015, respectively.

**Conclusion** The similar case characteristics and percent positivity during both periods, and increase in proportion of asymptomatic cases, suggest that increased screening for rectal sexually transmitted infections may be the reason for the observed increase in LGV cases. Further evaluation is needed to understand LGV trends, particularly among HIV-positive MSM who are disproportionately affected by LGV.

### P3.105 MATERNAL SYPHILIS IN BRITISH COLUMBIA, CANADA: 2010 TO 2016

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**Introduction** From 2010 to 2016, syphilis rates have tripled among women in British Columbia (BC), Canada. We sought to characterise maternal syphilis cases in BC to identify areas to strengthen syphilis prevention programming.

**Methods** Virtually all syphilis tests in BC are performed at the provincial laboratory. Positive tests are reviewed by centrally-located expert clinicians who diagnose, stage, and recommend treatment. Demographic and treatment information of syphilis cases (primary, secondary, early and late latent) diagnosed in pregnant women (or within 90 days after delivery) from January 2010 to July 2016 were reviewed and descriptive analyses performed. We assessed prenatal syphilis screening based on the prenatal flag on the laboratory requisition and compared

against the number of live births reported by BC Vital Statistics.

**Results** From 2010 to 2015, 2 83 168 syphilis tests were done as part of prenatal testing, compared with 2 64 496 live births. From 2010 to July 2016, there were 45 maternal syphilis cases reported (18 early latent, 27 late latent—of note, syphilis screening by EIA commenced July 2014). The majority of cases (38/45) lived in Greater Vancouver; median age 30 years (range: 20–46). 27, 13, and 3 cases were diagnosed in the first, second, and third trimester, respectively; 2 were diagnosed post-partum. Treatment information was available on 44/45 cases: 42 cases received  $\geq 2$  penicillin injections and 2 received doxycycline. Being born outside Canada or having a partner in a developing country was the most common risk factor identified ( $n=13$ ). One case reported sex trade work, 4 reported having casual sex ( $>4$  partners), and 4 reported substance use. Few cases (6/34) reported  $\geq 2$  partners in the last year.

**Conclusion** Most maternal syphilis cases are diagnosed by first trimester prenatal screening, but a few remain diagnosed post-partum. Increasing efforts to engage early for those born in high syphilis incidence countries (or whose partners remain in such countries) and repeat screening may be areas for focus.

### P3.106 UPTAKE OF HOME-BASED POINT-OF-CARE SYPHILIS & HIV TESTING AMONG MALE PARTNERS OF PREGNANT WOMEN IN WESTERN KENYA

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**Introduction** Few men are tested for syphilis or HIV during their partners' pregnancy, a period of high HIV transmission risk and preventable adverse pregnancy outcomes. Offering home-based STI education and point-of-care (POC) testing of syphilis to couples can support HIV programs to reduce transmission of sexually transmitted infections and adverse pregnancy outcomes.

**Methods** We assessed male partner uptake of paired POC syphilis and HIV tests within a randomised controlled trial (RCT) of 600 pregnant women and their male partners in Kenya. Married or cohabiting women were unaccompanied and attending a clinic-based first antenatal visit at recruitment. Participating men received a couple home-based visit with testing during pregnancy or at 6 months postpartum. We also evaluated whether the addition of syphilis testing has an effect on the uptake of HIV testing among men.

**Results** From September 2013 to June 2014, male participation in home-based visits was 85% among women remaining enrolled (260 during pregnancy, 240 postpartum). Paired testing was offered to subsets of 80 and 230 men during pregnancy and postpartum. In both groups, test uptake was high: 1) For syphilis, 91% men agreed to test during pregnancy and 96% agreed postpartum; 2) For paired syphilis and HIV testing, 91% of men tested for both during pregnancy and 98% tested postpartum. Third, adding syphilis testing did not

adversely affect home-based male partner HIV testing during pregnancy among 260 men, as HIV test uptake was 96% before (of 180), 95% after (of 80) syphilis test introduction, and remained 2-times greater than clinic-based HIV testing alone within the RCT (39%). Finally, men intended to seek clinic treatment if they received a positive test result during pregnancy and postpartum (94% and 95%, respectively).

**Conclusion** Men were likely to accept both syphilis and HIV tests when offered at home without adversely affecting HIV testing approaches. POC diagnostics can work well outside facilities and increase testing of male partners who rarely accompany women to antenatal clinics.

**P3.107 RATES OF PRIMARY AND SECONDARY SYPHILIS BY STATE AND RACE/ETHNICITY AMONG MEN WHO HAVE SEX WITH MEN: UNITED STATES, 2014**

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**Introduction** Men who have sex with men (MSM) accounted for 61.1% of reported primary and secondary (P and S) syphilis cases in the United States in 2014. Of P and S syphilis cases among MSM with known race/ethnicity, 94.7% were either White (40.3%), Black (32.2%), or Hispanic (22.2%). To examine rates of P and S syphilis among racial/ethnic categories of MSM, national and state-level estimates of the number of MSM of each race/ethnicity are needed.

**Methods** We calculated race/ethnicity-specific rates of P and S syphilis among adult MSM (age  $\geq 18$ ) in 49 states that reported sex of partners and race/ethnicity for syphilis cases in 2014. Case counts of P and S syphilis were from national case report data, which are submitted from states to CDC. For rate denominators, we amended our previously published method to produce stratified estimates and 95% confidence intervals (CI) for seven racial/ethnic groups: Hispanic MSM of any race and non-Hispanic MSM who were White; Black; American Indian; Asian; Pacific Islander; or multiple races.

**Results** The rate of reported P and S syphilis among MSM in the US was 255.4 (95% CI: 229.1–284.7) per 1 00 000 in 2014. The rates of P and S syphilis per 1 00 000 among the three racial/ethnic groups most represented among MSM cases were 170.0 (151.1–191.0) for White MSM, 286.4 (250.1–329.5) for Hispanic MSM, and 604.3 (525.0–700.8) for Black MSM, the highest of all racial/ethnic groups. Asian MSM had the lowest rate at 106.9 (91.4–125.4) per 1 00 000. Comparing the 3 most-represented racial/ethnic groups, the rate was highest among Black MSM in 37 states, Hispanic MSM in 7 states, and White MSM in 5 states. Of states with  $\geq 100$  cases among Black MSM, South Carolina had the highest rate at 1,398.1 (941.6–2,119.0) per 1 00 000.

**Conclusion** These are the first race/ethnicity-specific estimates of P and S syphilis rates among MSM for states with reported sexual behaviour of cases. Although more cases of P and S syphilis were reported among White MSM in 2014, the rate among Black MSM was higher than White or Hispanic MSM in most states and was over 3.5 times that of White MSM in the US.

**P3.108 ANTIRETROVIRAL THERAPY USE DURING PREGNANCY AND ADVERSE BIRTH OUTCOMES AMONG HIV-INFECTED WOMEN IN LOW AND MIDDLE-INCOME COUNTRIES: A SYSTEMATIC REVIEW**

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**Introduction** Children born to HIV-infected women are at increased risk for adverse birth outcomes including preterm birth (PTB) and low birthweight (LBW). While antiretroviral therapy (ART) during pregnancy drastically reduces risk of vertical HIV transmission, LBW and PTB among HIV-exposed infants remains elevated. Exposure to certain ART regimens *in utero* may increase risk of adverse birth outcomes, in particular protease inhibitor (PI)-based regimens. Given the high burden of LBW and PTB in low- and middle-income countries, and efforts to increase ART use by HIV-infected pregnant women, it is critical to understand the precise effects of ART on adverse birth outcomes.

**Methods** We conducted a systematic review of the effects of different ART regimens used during pregnancy on LBW or PTB in low and middle income-countries. We searched electronic databases Medline, COCHRANE, Web of Science and SCOPUS, and CPCIS for relevant papers published on or before 10 April 2016.

**Results** Our final review included 19 studies and assessed many ART regimens. Results were often heterogeneous. We observed no clear pattern for the effect of PI-based highly active antiretroviral therapy (HAART) on PTB compared to no therapy, or compared to non-PI-based HAART. We similarly saw no clear trends for the effect of non PI-based HAART on LBW compared to no therapy. In contrast, PI-based HAART was generally protective against LBW when compared to non-PI-based HAART and no therapy, and non PI-based HAART was generally associated with an increased risk of LBW when compared to monotherapy. Results were similar in unadjusted studies and those that controlled for maternal disease severity and other confounders.

**Conclusion** There is a wide array of ART regimens used by HIV-positive pregnant women in low- and middle-income countries, as well as the heterogeneity of results related to the adverse birth outcomes of PTB and LBW. Nonetheless, we found that PI-based HAART was generally protective against LBW when compared to non-PI-based HAART.

**P3.109 POINT-OF-CARE TESTING FOR SEXUALLY TRANSMITTED INFECTIONS IN HIV PREVENTION TRIALS**

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**Introduction** Accurate HIV risk assessment is essential when screening volunteers for HIV prevention studies. STI testing plays a key role, but has traditionally been conducted in central laboratories resulting in reporting delays, which can impact on screening and enrolment decisions, and on participant care during follow-up. Here, we outline the