P204 SERODISCORDANCE AND SEX PARTNER CONCURRENCY: EVIDENCE FOR RACIAL DISPARITIES IN HIV AMONG GAY AND BISEXUAL MEN (MSM)

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Background There are extreme racial disparities in HIV infection among MSM in the U.S. These disparities may in part be explained by racial differences in the transmission potential (i.e. mixing between infected and uninfected individuals) and structure (i.e. density) of sexual networks. The objective was to determine whether the association between HIV serodiscordance and sex partner concurrency differed by race among MSM sex partner dyads.

Methods Data came from the Understanding Sexual Health in Networks Study, an ongoing longitudinal cohort among MSM ages 18–45. Participants completed an egocentric sexual network survey with questions about 3 most recent sex partners in the past 3 months. An HIV serodiscordant partnership was defined as a dyad with a positive status index and a negative or unknown status partner or vice versa. Summary statistics, chi-squared tests, and logistic regressions adjusted for the nested structure of the data were used for hypothesis testing.

Results 163 MSM reported on 354 (median: 3, range: 0–3) sex partnerships. MSM were 63.2% Black (BMSM), on average 29.4 (SD 5.96) years old, and 33.6% reported condom use at last sex. There were no differences in age or condom use by race. Among partnerships, index BMSM (vs. non-BMSM) were more likely to report serodiscordant partnerships (48.8% vs. 14.4%, p-value<0.001) but not sex partner concurrency (87.4% vs. 77.8%, p-value 0.29). Among BMSM, sex partner concurrency was significantly associated with 4.97 higher odds (95% CI: 2.26, 10.91) of having a serodiscordant partnership, and this association was not significant among non-BMSM.

Conclusion Among BMSM dyads, we found evidence of the necessary and sufficient causes for HIV transmission including mixing between infected and uninfected individuals (i.e. serodiscordance) combined with dense sexual network structures (i.e. sex partner concurrency) and we did not find this evidence among non-BMSM dyads. These factors may help explain persistent racial disparities in HIV.

Disclosure No significant relationships.

P205 HIV NON-B SUBTYPES IN SAN FRANCISCO: MIGRATION BUT LITTLE LOCAL TRANSMISSION

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Background Several HIV non-B subtypes and recombinants have been documented at low frequencies in the US. We characterized the viral diversity, epidemiology, and extent of local transmission and migration of non-B subtypes in San Francisco.

Methods Viral sequences from patients in care at local public and private health providers (2000–2016) were matched to the San Francisco Department of Public Health HIV/AIDS case registry. Phylogenies were reconstructed for the *pol* region of subtypes A1, C, D, G, CRF01_AE, CRF02_AG, and CRF07_BC sequences, with reference sequences from the LANL HIV database. Local transmission and global migration frequencies were compared based on phylogenetic topology. Epidemiologic associations between non-B subtypes and patient characteristics were assessed by multivariate logistic regression.

Results Of the 11,382 viral sequences subtyped, 10,669 were matched to 7,236 registry cases. Fourteen non-B subtypes and CRFs were observed. Among registry cases, 141 (2%) had non-B subtypes or CRFs, and 72 (1%) had unnamed recombinant forms. The proportion of non-B subtypes increased over time. Of the 146 non-B transmission linkages identified, 104 (71%) appeared to represent migration from outside the study dataset, of which 86 (83%) had no close linkage to US reference strains. Twenty-six cases (18%) appeared to be local transmission, clustering with other sequences in this analysis. Of the 77 registry cases born outside of North America, 54 (70%) were phylogenetically linked to the case's region of birth. Cases with non-B subtypes or CRFs were associated with Asian/Pacific-Islander race/ethnicity (aOR=3.17; p<0.001), non-US birth country (aOR=11.02; p<0.001) and HIV diagnosis after 2009 (aOR=4.81; p<0.001).

Conclusion Non-B subtypes were present at low but increasing frequency in San Francisco. Local transmission of non-B subtypes appeared to be limited, as most non-B infections were likely acquired outside the US. Knowledge of subtype diversity can provide a better understanding of HIV global migration patterns, and inform treatment and prevention efforts.

Disclosure No significant relationships.

P206 THE SPECIFIC CONTRIBUTION OF EACH DATA SOURCE IN A POPULATION-BASED ADMINISTRATIVE DATA COHORT FROM MANITOBA, CANADA

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Background In the development of administrative data case-definitions for HIV, it is important to understand the contribution of each data source to prevalence estimates, especially as it pertains to generalizability of methods.

Methods HIV case-definitions were constructed from four population-based databases available in Manitoba: physician claims, hospital discharge, pharmaceutical dispensations, and provincial laboratory tests. Performance was assessed using sensitivity, specificity, positive/negative predictive value (PPV & NPV), and Youden's index (YI). Cases identified by HIV case-definitions, and those reported to public health surveillance

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were compared using annualized incidence. The distribution of those flagged as HIV-positive was compared by database.

Results

The best performing case-definition (YI 0.71) was two or more HIV diagnoses in two years in physician claims, or in hospital discharge abstracts; or 14 or more HAART dispensations in two years; or one positive HIV laboratory. Sensitivity, specificity, PPV and NPV was 82.3% (95%CI: 79.1%-85.5%), 86.8% (95%CI: 84.9%-88.7%), 74.1% (95%CI: 70.6%-77.6%), 91.4% (95%CI: 89.8%-93.1%), respectively. Annualized incidence (2009–2015) calculated from this case-definition was 7.4/100,000 persons (95%CI: 6.8–8.1)]; annualized incidence calculated from surveillance data was 7.7/100,000 persons (95%CI: 7.1–8.3). Approximately 76% of cases would have been flagged through a positive laboratory; 43% through pharmaceutical claims; 34% through physician claims; and 11% through hospital abstracts. 95% of cases would have been flagged through the combination of laboratory and pharmaceutical databases. Only 4% of cases were flagged in all four data sources.

Conclusion Although the combination of four databases produced the most complete prevalence snapshot, laboratory data was the most important contributor. The combination of laboratory and pharmaceutical databases would have identified the predominant majority of cases in our sample. Findings can be used to inform the construction of administrative data cohorts where the availability of population-based data sources may be more limited.

Disclosure No significant relationships.

P207 BURDEN OF OPHTHALMIA NEONATORIUM AMONG BABIES OF PLHIV AT A DISTRICT HOSPITAL IN KUMASI, GHANA

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Background Ophthalmia neonatorium, also called neonatal conjunctivitis is a complication of *Neisseria gonorrhoeae* and *Chlamydia trachomatis* infections characterized by copious eyes discharge of newborn babies of infected untreated genital women. We examined babies born of women to determine the prevalence of ophthalmia noenatorium.

Methods This descriptive retrospective study reviewed the records of 257 babies aged 3 days to 14 days, of lactating women accessing care at the STI Clinic of the Suntreso Government Hospital in Kumasi Ghana from January to August 2018. Socio demographic characteristics as well as the clinical records and pregnancy details of the babies and mothers respectively were collected. Data was analysed using SPSS version 16.

Results 56 (26.5%) of the 257 babies were from HIV positive mothers who have been on ART for over 2 years. 61.5% (158/257) of the babies had uneventful delivery while 38.5% (99/257) were delivered through caesarean section on account of breach presentation and foetal distress. 47.3% (122/257) of the mothers were symptomatic for vaginal discharge. A total of 211 (82.1%) of the babies were diagnosed and received syndromic treatment for Ophthalmia neonatorium. Of this number 20.4% (43/211)) were babies of HIV positive mothers and represented 76.8% (43/56) of the total number of babies of the HIV positive mothers. The study found a significant association (p, < 0.000) between babies with Ophthalmia neonatorium (98/122) and symptomatic mothers as well as HIV infection ($p<0.001$).

Conclusion HIV infection is a risk factor for sexually transmitted infections Ophthalmia neonatorum remains a significant contributor to morbidity among babies born to Persons living with HIV. HIV positive women in the reproductive age group may have to be screened and treated for sexually transmitted infections in order to prevent further transmission to babies.

Disclosure No significant relationships.

P208 TESTING AND TREATING GENITAL AND EXTRA GENITAL BACTERIAL INFECTIONS IN HIV INFECTED PATIENTS: LESSONS LEARNED

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Background Current evidence supports the screening of *Neisseria gonorrhoeae* (NG) and *Chlamydia trachomatis* (CT) in symptomatic disease in all sites with risk for carriage. The purpose is to increase the accuracy of diagnosis and prevent missed asymptomatic infections. This study aims to describe the incidence and aetiology of urethritis, proctitis and ulcers and compliance to additional screening.

Methods Retrospective study of three major syndromes diagnosed in a cohort of HIV positive patients (2430 patients) followed in a tertiary care hospital between July 2017 and June 2018.

Results We identified 86 patients with symptomatic infections. Most of them were in men who have sex with men. Twenty-nine (34%) of these infections were urethritis. Almost half (48%) were by NG, with 3 (10%) additional NG infections detected in the anus and 6 (21%) in the oropharynx. CT caused 7 cases (21%) and in 2 cases it was detected exclusively in other sites. For all urethritis cases, 13 (48%) weren't screened for NG/CT in the anus or oropharynx. Half of NG cases did not make a cure test. There were 17 proctitis: 6 (35%) by NG and 9 (53%) by LGV CT. Nine patients (53%) didn't perform partner screening. Finally, there were 25 diagnosis of ulcers (23 genital; 2 oral). Eleven (44%) had no identifiable cause and 8 (32%) were primary syphilis. Of all cases, 11 (44%) had no screening at other risk sites. More than half of the partners (68%) were screened.

Conclusion The prevention of these infections through screening of all at risk sites, NG cure tests and partner screening can be challenging: it is time consuming, there may be limited interested in the treated patient for cure tests and the partners may be unknown or unwilling to be tested if asymptomatic.

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