

highest rate followed by county group 2. However, for gonorrhoea and P&S syphilis, county group 2 had the highest rate for both Blacks and Whites, followed by county group 1 (see Abstract P1-S5.43 table 1). In the regression analysis, gonorrhoea rates were significantly higher (+12%, $p < 0.05$) in counties in which black household income is below the national average and white household income is above the national average than in counties in which black and white household incomes are both below the national average.

Conclusions Although other studies have demonstrated the association between income, race and STD rates, our race-income categorisation provides several new insights. Most importantly, the grouping of counties that we developed allows us to examine not only the association between STD incidence and income, but also the association between STD incidence and disparities in income. Racial disparities in income were associated with racial disparities in STDs. Specifically, when there is disparity in median household incomes for Blacks and Whites, rates of gonorrhoea and P&S syphilis for each race are higher than when there is more equity in the median household income.

P1-S5.44 **STD RATES IN THE EIGHT AMERICAS: "DISPARITIES IN THE BURDEN OF SYPHILIS, GONORRHOEA, AND CHLAMYDIA ACROSS RACE AND COUNTY"**

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Background The purpose of this study was to examine rates of three STDs (primary and secondary syphilis, gonorrhoea, and chlamydia) in eight subpopulations (known as the eight Americas) defined by a small number of sociodemographic and geographical characteristics.

Methods A list of the race-county combinations comprising each of the eight Americas was obtained from the corresponding author of the original eight Americas project, which examined disparities in mortality rates across the eight Americas. Using county-level STD surveillance data, we calculated syphilis, gonorrhoea, and chlamydia rates (new cases per 100 000) for each of the eight Americas.

Results STD rates varied substantially across the eight Americas. STD rates were generally lowest in America 1 (Asian and Pacific Islanders in selected counties) and America 2 (Northland low-income rural white) and highest in America 6 (Black Middle America), America 7 (Southern low-income rural black), and America 8 (High-risk urban black) see Abstract P1-S5.44 Table 1.

Conclusions The disparities in STD rates we observed across the eight Americas were akin to the disparities in mortality rates and life expectancy reported by the authors of the original eight Americas study. Although disparities in STDs across the eight Americas are generally similar to the well-established disparities in STDs

Abstract P1-S5.44 Table 1 STD rates (new cases per 100 000) in the Eight Americas, 2008

America	Primary and secondary syphilis	Gonorrhoea	Chlamydia
1. Asian	1.4	14.5	100.6
2. Northland low-income rural white	0.3	9.2	125.5
3. Middle America	2.7	30.0	172.4
4. Low-income whites in Appalachia and the Mississippi Valley	1.1	23.8	139.4
5. Western Native American	2.9	80.9	820.7
6. Black Middle America	14.5	475.3	1,063.6
7. Southern low-income rural black	15.3	482.2	1,109.4
8. High-risk urban black	25.3	507.2	1,155.9

across race/ethnicity, the grouping of US race-counties into the eight Americas does offer additional insight into disparities in STDs in the USA. The high STD rates we found for Black Middle America relative to Middle America are consistent with the assertion that sexual networks and social factors are more important drivers of racial disparities in STDs than differences in sexual behaviours.

P1-S5.45 **ABSTRACT WITHDRAWN**

Epidemiology poster session 5: Transmission dynamic: Income disparities

P1-S5.46 **ASSESSING THE RELATIONSHIP BETWEEN SEXUALLY TRANSMITTED INFECTION RATES, ETHNIC GROUP AND SOCIO-ECONOMIC DEPRIVATION IN ENGLAND**

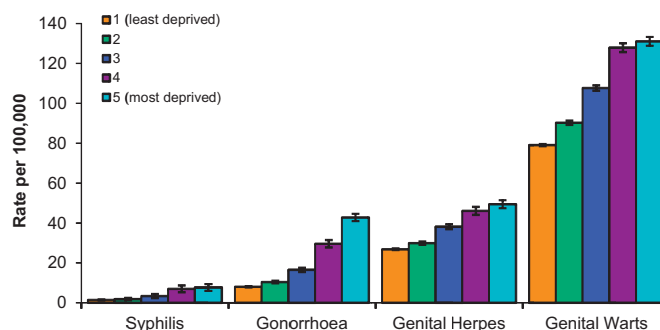
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Background Disparities in the distribution of sexually transmitted infections (STIs), especially gonorrhoea, across ethnic groups in England are well recognised. Socio-economic deprivation (SED) is also a known determinant of poor health outcomes and is often more common in ethnic minorities, but it has not previously been possible to assess the relationship between ethnic group, SED and STI rates at the national level. We used data from a new national patient-level STI surveillance system to investigate the interplay between SED and ethnicity on population-level rates of STIs in England.

Methods Data on patients diagnosed with syphilis, gonorrhoea, genital herpes and genital warts from all genitourinary medicine (GUM) clinics in England in 2009 were obtained through the GUM Clinic Activity Dataset (GUMCAD). Rates of STI diagnoses by ethnic group and deprivation quintile were calculated. Deprivation was measured using the Index of Multiple Deprivation for England for each lower-level super output area of residence.

Results In England in 2009 the rate of syphilis and gonorrhoea was over five times higher (7.7/100 000 vs 1.4/100 000 and 42.8/100 000 vs 8.0/100 000 respectively) in the most deprived areas than in the least deprived areas but there was less difference for genital herpes (49.4/100 000 vs 26.8/100 000) and warts (131.1/100 000 vs 79.0/100 000) (see Abstract P1-S5.46 figure 1). The highest crude rates of acute STI diagnoses were among black ethnic communities although the magnitude varied by STI. The rate of gonorrhoea in black communities was over eight times higher than in white ethnic groups (171/100 000 vs 20/100 000), however, for genital warts rates in black ethnic communities were only 1.5 times higher than those in white ethnic groups (194.5/100 000 vs 130/100 000). Asians had the lowest rates for all four infections.



Abstract P1-S5.46 Figure 1 Rates of diagnoses of STIs by deprivation quintile using the Index of Multiple Deprivation, England, 2009.