

P03 - Adolescent sexual health

P03.01 AGE OF FRIENDS AND NORMS ABOUT SEXUAL BEHAVIOUR ARE ASSOCIATED WITH HIV AND HSV-2 STATUS AMONGST YOUNG SOUTH AFRICAN WOMEN IN THE HPTN 068 STUDY

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Introduction Friends can be an important influence on HIV and sexual health via connexions to sexual partners, influential sexual behaviour norms, or provision of social support. In this study from rural South Africa, we examined associations between the characteristics of young women's friendships and their risk of Herpes Simplex Virus Type 2 (HSV-2) and HIV infection.

Methods In 2011–2012, we tested 2325 13–20 year-old young women participating in the HPTN 068 study baseline for HIV and HSV-2 and we collected descriptions of 5 friendships. We used logistic regression to analyse associations between HIV and HSV-2 and generated friendship net summary measures of the 5 friends' socio-demographic characteristics and the number of friends perceived to have had sex. We excluded those HIV positive and reporting never having had sex from the HIV analyses, as likely perinatal infections (n = 37).

Results Adjusted for participant and friendship net socio-demographic characteristics, each additional friend at least one year older than the participant was associated with raised odds of HIV (adjusted Odds Ratio = 1.45, 95% Confidence Interval 1.09–1.93, p = 0.014) and HSV-2 (aOR = 1.45, 95% CI 1.22–1.73, p < 0.001). Each additional friend perceived to have ever had sex also raised the odds of HIV (aOR = 1.32, 95% CI 1.04–1.68, p = 0.020) and HSV-2 (aOR = 1.21, 95% CI 1.06–1.38, p = 0.005).

Conclusion We found evidence that the ages of young women's friends and her perceptions of their sexual behaviour increase her risk for HSV-2 and HIV infection. While further longitudinal research would assist in disentangling causal relationships, the extent to which policies or programmes influence age-mixing and young people's normative environments, for example in school classes and youth groups, should be examined.

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P03.02 STI AND HIV KNOWLEDGE, PREVALENCE AND RELATED BEHAVIOUR AMONG YOUNG FEMALE TRADERS IN AN URBAN SLUM IN LAGOS NIGERIA

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Background Globally, sexually transmitted infections are responsible for a high burden of morbidity and mortality and the complications of improperly managed infections are felt years after the event. It has also been linked to development of cancers. In sub-Saharan Africa, poverty, gender inequality and unemployment puts young females at risk. This study was carried out to assess STI and HIV knowledge, prevalence and related behaviour among young female traders in Mushin community Lagos, Nigeria

Methods A cross-sectional descriptive study was conducted using interviewer-administered questionnaires among female trader's 15–24 years of age who sell wares in garages in an urban slum. Sample size of 290 was calculated. Simple random sampling was used to select divisions of garages. Data was analysed using Epi info version7, association was established using chi square at p < 0.05.

Results The mean age for the females was 21 ± 2.39. Majority were single (63.8%), had at least a secondary school education (82.8%) and had heard of STIs. The main source of information was friends/family (41.9%) and media (41.2%). Approximately half of the respondents had good knowledge regarding transmission, prevention, symptoms and types of STI. 13.8% reported symptoms of STI in the six months preceding the study mainly itching, discharge and painful urination. Most practiced self-medication (85.0%) and did not use condoms while having symptoms (80.0%). Less than 40% had been tested for HIV, mainly to know their status. Among sexually active traders 32.4% tested with their main partner and 44.9% know the HIV status of their sexual partners. Married traders (p = 0.002), older females (0.009) and those with at least a secondary school education (p < 0.000) were more likely to have been tested for HIV.

Conclusion Young female traders in this study had poor knowledge, high prevalence of STI and engage in risky behaviour.

P03.03 SEROPREVALENCE OF *CHLAMYDIA TRACHOMATIS* (CT) IN AMERICAN CHILDREN AND ADOLESCENTS – IMPLICATIONS FOR VACCINE DEVELOPMENT

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Background CT remains the most prevalent sexually transmitted infection in developed and developing countries. Prevention of infection is an ideal application for a vaccine program. Similar to the HPV vaccine, the timing of immunisation for a future CT vaccine should optimally precede sexual debut. However, there are limited epidemiologic studies of CT infection in an unselected paediatric and adolescent population since universal screening and treatment of pregnant women was implemented in the US in 1993.

Objective To determine current seroepidemiology of CT infection in children in a US inner city population.

Design/methods Anonymized serum samples were obtained from children in 2 hospitals in Brooklyn, NY from 2012–2015. CT IgG was determined using EIA (Ani Labsystems). The following age strata were used: 11–12, 13–14, 15–16, 17–18, 19–20 y.

Results 512 sera were included in the final analysis. Mean age 17 y. There were 192 (37.5%) males and 320 (62.5%) females. CT antibody was first detected at 16 y and 18 y for females and males, respectively. The prevalence per age-cohort were: Females: 11–14 y-0, 15–16 y- 3.64%, 17–18 y -15.9%, 19–20 y -14.75%; Males: 11–16 y- 0, 17–18 y- 8.51%, 18–20 y- 9.33%.

Conclusions The prevalence of antibody was higher in girls than their male counterparts, mirroring national trends based on NAATs. Antibody was first detected in females at 16 y and males at 17 y, reflecting sexual debut. Prior data from this cohort found antibody in% infants < 1 y, which disappeared between 1 and 16 y. The delay in male antibody detection may be due to later exposure and/or anatomical and physiological factors between the sexes. These data are critical in informing potential CT vaccine strategies. Future studies using a larger sample size and other populations will allow more precise estimates of age and gender-specific prevalence.

P03.04 THE IMPACT OF UNIVERSAL CHLAMYDIA TRACHOMATIS (CT) SCREENING DURING PREGNANCY ON SEROEPIDEMIOLOGY OF CHLAMYDIAL INFECTION IN AMERICAN CHILDREN, 1991–2013

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Introduction CT remains the most prevalent sexually transmitted infection in developed and developing countries. Prenatal screening and treatment of pregnant women has resulted in a dramatic decrease of perinatal CT I infection (conjunctivitis, pneumonia) in the US. Before the implementation of screening, ~50% of infants born to mothers with CT infection developed chlamydial conjunctivitis and/or pneumonia. However, there have been no studies of the incidence of perinatal CT infection, including seroepidemiologic studies, following the implementation of screening and treatment as recommended by the CDC in 1993.

Methods Anonymized banked serum and prospectively collected samples from children in Brooklyn, NY, were tested for CT IgG using the MIF assay. Serum samples were divided into 2 groups: 1: collected from 1991–1995, 2: from 2001–2013. Pts with C. pneumoniae (CP) infection (culture and/or antibody) were excluded.

Results 491 serum samples were identified (age range 0–20), 71 samples were excluded due to evidence of CP infection. 34% of subjects <10 y in group 1 (pre-universal screening) had IgG against CT, while there were no positives in group 2 (post-universal screening), $p < 0.0001$. Children >10 y had a prevalence of 32% in group 1 and 3.48% in group 2, $p < 0.0001$.

Conclusion Children <10 yr in group 1 (pre-screening) had relatively high rates of seropositivity, which were likely due to perinatal infection. This antibody was not due to CP, as sera from children with CP infection were excluded. The significantly lower rates in group 2 (post-screening) confirm that prenatal screening and treatment of pregnant women has been effective

for prevention of CT infection in infants. Persistence of antibody after perinatal infection may have implications for CT vaccine use in countries where prenatal screening and treatment has not been implemented.

P03.05 CHLAMYDIA RE-TESTING AT SEXUAL HEALTH CLINICS HAS INCREASED BUT FURTHER INITIATIVES ARE NEEDED FOR YOUNG PEOPLE

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Introduction Chlamydia is the most commonly notified infection in Australia; most diagnoses are in young people, and re-infections are common. Re-infection leads to onward transmission and increases the risk of reproductive morbidity and HIV transmission. Guidelines recommend re-testing 3 months following treatment to detect re-infections. We assessed trends in re-testing after a chlamydia diagnosis in Sexual Health Clinics (SHCs) in New South Wales (NSW) over a 5-year period and factors associated with re-testing.

Methods Routine patient data from 2009 to 2013 were extracted from 33 SHCs. A Chi-2 test was used to assess time trends in the proportion re-tested in 2–4 months following a chlamydia diagnosis and also 2–12 months, in a range of risk groups. Multivariate logistic regression was used to determine demographic, risk behaviour and clinic factors associated with re-testing at 2–4 months, adjusting for clinic clustering.

Results Overall 8,646, chlamydia diagnoses were analysed and 1,281 (15%) were re-tested in 2–4 months (23% of GBM, 25% of sex workers, 12% of young heterosexuals aged <30 years), with a significant increase over time (13% in 2009 to 18% in 2012, $p < 0.01$). In a broader time frame of 2–12 months, re-testing was higher at 26% (42% of GBM, 41% of sex workers, 20% of young heterosexuals) with a modest increase over time (25% to 30%, $p < 0.01$). Factors associated with re-testing in 2–4 months were: being GBM (adjusted odds ratio (aOR) = 1.65, 95% CI: 1.44–1.90, $p < 0.01$), current sex work (aOR = 2.04, 95% CI: 1.65–2.52, $p < 0.01$), attending the clinic >5 times (aOR: 3.11, 95% CI: 2.62–3.70, $p < 0.01$) and people attending clinics with SMS reminders (aOR = 2.25, 95% CI: 1.16–4.37, $p = 0.01$).

Conclusions Re-testing at 2–4 months after a chlamydia diagnosis increased over time, but remains low. GBM and sex workers were more likely to be re-tested, perhaps because they were attending anyway. Attending clinics with SMS reminders increased the likelihood of re-testing. Additional strategies, such as home-collection, may be needed to increase re-testing in young heterosexuals.

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