understanding the full burden of disease among them has been challenging as direct estimates of Men who Have Sex with Men (MSM) numbers in the general population have been largely unavailable. We describe the population of Men who Have Sex with Men (MSM) in New York City, compare their demographics, risk behaviours, and new HIV and primary and secondary (P&S) syphilis rates with those of men who have sex with women (MSW), and examine trends in disease rates among Men who Have Sex with Men (MSM).

Methods Population denominators and demographic and behavioural data were obtained from population-based behavioural surveys during 2005–2008. Numbers of new HIV and P&S syphilis diagnoses were extracted from citywide disease surveillance registries. We calculated overall, age- and race/ethnicity-specific case rates and rate ratios for Men who Have Sex with Men (MSM) and MSW, and analysed trends in Men who Have Sex with Men (MSM) rates by age and race/ethnicity.

Results The average prevalence of same-sex behaviour among sexually active men during 2005–2008 (5.0%; 95% CI 4.5 to 5.6) differed by age (peaking at 8% among 40–49-year-old men) and race/ethnicity (2.3% among non-Hispanic black men; 7.4% among non-Hispanic white men). Compared to MSW, Men who Have Sex with Men (MSM) differed significantly on all demographics and reported a higher prevalence of condom use at last sex and of HIV testing, but also more sex partners; 38.4% of Men who Have Sex with Men (MSM) and 13.6% of MSW reported ≥3 partners in the last year ($p<0.001$). Men who Have Sex with Men (MSM) HIV and P&S syphilis rates were 2526.9/100 000 and 707.0/100 000, each of which was over 140 times MSW rates. Rates were highest among young and black Men who Have Sex with Men (MSM) (See Abstract LBO-1.5 table 1). Over 4 years, HIV rates more than doubled and P&S syphilis rates increased sixfold among 18–29-year-old Men who Have Sex with Men (MSM) to reach 8870.0/100 000 and 2900.4/100 000 in 2008, respectively.

Conclusions The substantial population of Men who Have Sex with Men (MSM) in NYC is at high risk for transmission of sexually transmitted infections given high disease rates and ongoing risk behaviours. There is significant overlap between HIV and P&S syphilis epidemics in NYC with the relatively small subgroups of young and non-Hispanic black Men who Have Sex with Men (MSM) disproportionately affected. Integration of HIV and STD case data would allow for better identification and characterisation of the population affected by these synergistic epidemics. Intensified and innovative efforts to implement and evaluate prevention programs are required.

LBO-1.6 EFFICACY OF THE QUADRIVALENT HPV VACCINE TO PREVENT ANAL INTRAEPITHELIAL NEOPLASIA AMONG YOUNG MEN WHO HAVE SEX WITH MEN

doi:10.1136/sextrans-2011-050119.6

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Introduction Most anal cancers are associated with HPV, particularly HPV 16. The incidence of anal cancer is increased among men who have sex with men (MSM) compared with the general population. Screening and treatment of anal intraepithelial neoplasia (AIN), the anal cancer precursor, are not yet standard of care, and prevention efforts are needed to reduce the incidence of anal cancer. We tested the quadrivalent HPV vaccine to determine its ability to reduce the incidence of AIN/anal cancer.

Methods 598 MSM aged 16–26 years with five or fewer lifetime sex partners were randomised to receive vaccine or placebo at enrolment, month 2 and month 6. Subjects underwent detailed anogenital exams and HPV sampling from the penis, scrotum, perineal/perianal and anal canal at enrolment, month 7 and at 6-month intervals afterwards. Efficacy analyses were performed in a per-protocol (PPE) population (sero-negative and DNA-negative from day 1 through month 7 to the relevant vaccine HPV type) and in all enrolees in an intent-to treat (ITT) analysis. Median follow-up of the PPE population was 2.5 years (post-dose 3).

Results Vaccine efficacy against HPV 6/11/16/18-related AIN and anal cancer in the PPE population was 77.5% (95% CI 39.6 to 93.3) (5 vaccine cases vs 24 placebo cases). Efficacy against high-grade AIN (AIN 2+) was 74.9% (95% CI 8.8 to 95.4). In the ITT population the efficacy was 50.3% (95% CI 25.7 to 67.2) and 54.2% (95% CI 18.0 to 75.3), respectively. No anal cancer was seen in either treatment group.

Conclusions These results demonstrate that the quadrivalent HPV vaccine is efficacious in preventing AIN related to HPV 6/11/16/18 in MSM subjects naïve to vaccine HPV types at enrolment, as well as in an ITT population. The quadrivalent HPV vaccine may be a useful measure to reduce the incidence of anal disease in at-risk populations.

Late breaker poster session

LBP-1.01 THE INTERDICTION PROJECT: AN INNOVATIVE PROGRAM FOR HIV + PERSONS TO REDUCE HIV AND STD CO-INFECTION AND IMPROVE HIV TREATMENT OUTCOMES PHASE II

doi:10.1136/sextrans-2011-050119.7

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Background/Objectives STD/HIV field investigations and the initial findings of Interdiction Project reveal that some persons with HIV infection have unprotected sex, multiple anonymous sex partners, and don't disclose their HIV status. Consistent condom use is low; recurrent co-infection with STDs and HIV transmission to sex partners is high. The Interdiction Project is a clinic-based, individual-level HIV intervention that combines linkage for treatment adherence/risk reduction education and testing with ongoing monitoring of patient care and epidemiologic data system. This project targets HIV positive persons who present with a new STD or history of unprotected sex.

Methods This is a prospective STD intervention follow-up study of 69 patients referred by HIV/AIDS and STD clinic providers and STD/HIV investigation specialist. Project staff conducted initial HIV/AIDS and STD transmission prevention and treatment monitoring knowledge plus risk assessment, intensive practical STD and HIV/AIDS health education, condom negotiation, condom skill training, sex partner elicitation for rapid HIV testing and linkage to care. STD and STD morbidity rates 18 months prior to follow-up were compared to 18 months of follow-up after referral. We analysed follow-up data to determine the STD rates, undetectable HIV viral loads and how Interdiction Project may help reduce the spread of HIV and STD co-infections.

Results Initial findings revealed high STD morbidity since HIV diagnosis and 26 clients had 48 STDs before referral. Overall STD rate was 50.7% (35/69) at referral, 14% consistent condom use always but 96% intend to use condoms and sex partner HIV positivity rate was 30% (6/20). HIV genotype resistance was 34% (14/41). At 18 months of follow-up, significant overall STD morbidity rate reduced from 74.3% to 25.4%, RR 0.34 (95% CI 0.22 to 0.52) and RR of STD reduced from 72.5% to 23.2%, RR 0.32 (95% CI 0.20 to 0.50). Achieving higher perfect knowledge score from pre- to post-education knowledge assessment correlated with reduction in STD and STD morbidity. Significant STD rates reduction was noted for many risk categories. Clients who had undetectable viral load on HAART increased from 50% (17/34) at referral to 88.2% (30/34) at 6–9 months and 77.4% (24/31) from 13 to 18 months of follow-up.

Sex Transm Infect: first published as 10.1136/sextrans-2011-050119.6 on 10 July 2011. Downloaded from http://sti.bmj.com/ on April 10, 2024 by guest. Protected by copyright.