

infections of rectal GC and CT were found giving an incidence rate of 91.2 per 100 person years. The incidence rate was highest when consecutive visits were within 30 days (241.8 per 100 person years, HR 0.83, $p=0.00$). There were no significant associations of incidence of rectal gonorrhoea and chlamydia with demographic and behavioural characteristics (Abstract O1-S10.05 table 1).

Conclusions A high prevalence of asymptomatic rectal gonorrhoea and chlamydia was observed along with a high incidence rate of these infections among high-risk MSM in India. The persistence of high prevalence of asymptomatic infections remaining even after presumptive treatment at the first visit calls for a review of the periodicity of presumptive treatment in similar clusters of MSM. Consistent condom use and partner treatment need to be re-emphasised.

O1-S10.06 HIV/STI PREVALENCE AMONG MEN WHO HAVE SEX WITH MEN IN 4 CITIES, CHINA AND ASSOCIATED RISK FACTORS FOR HIV INFECTION

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Objectives The data on STIs control and HIV prevention is limited among MSM population. To examine STIs control strategies for HIV prevention in a community-based cohort of HIV-negative MSM, community intervention trial was conducted between 2009 and 2011. This report mainly discussed baseline survey results.

Methods This study was conducted in MSM community of four mid-sized cities from Jul. to Sep. 2009. All participants were recruited through venue-based recruitment, complemented by peer referral using snowball method, Questionnaire were completed in STD clinics or VCT centers. Blood samples were collected for HIV, syphilis and HSV-2 tests, and urine sample for CT/NG PCR tests.

Results 35.3% participants self-identified as homosexual and 44.7% bisexual. The most popular way to seek male sexual partners was internet (38.4%). 15.9% of participants had provided or acquired sex services with male, while 19.1% of respondents reported unprotected anal intercourse (UAI) in the last sex services. 3.8% of participants had experienced sadism & masochism (SM). In past 6 months, 80.8% of participants had anal sex with man and 29.0% reported UAI during the last intercourse. 38.5% of participants reported having had sex with woman and only 45.2% of those reported using condom during the last intercourse with woman. 18.0% of participants involved in commercial sex services had taken drugs such as methamphetamine, Ketamine and MDMA. 10.6% of participants was HIV infection. 34.4% of participants is TP-ELISA positive results indicated a history of syphilis infection, and 20.9% were both positive results of ELISA and TRUST indicated active syphilis. 3.0% of participants were tested as NG infection, 6.8% was CT infected, and 16.2% were HSV-2 infected. Significant factors associated with HIV infection were self-reported STD infection history [AOR=2.1, 95% CI: 1.29% to 4.26%], syphilis infection [AOR=2.70, 95% CI: 1.81% to 4.04%], and HSV-2 infection [AOR=3.07, 95% CI: 2.09% to 4.50%].

Conclusions MSM have been potential bridge-population for HIV/STIs from most-at-risk population to general population. Intervention activities should target the internet, sexual social networks, and certain subpopulations such as those taking drugs in commercial sex services or infected with STIs. Friendly and high-quality STIs service should reach to MSM who do not attend STD clinics. Campaigns are urgent not only to boost individual condom use but also to create culture for condom use in MSM community.

Epidemiology oral session 11: Various topics of special interest

O1-S11.01 TIME EVOLUTION OF THE FRACTION OF NEW HIV INFECTIONS DUE TO PRIMARY INFECTION AMONG HIGH RISK GROUPS IN SOUTHERN INDIA

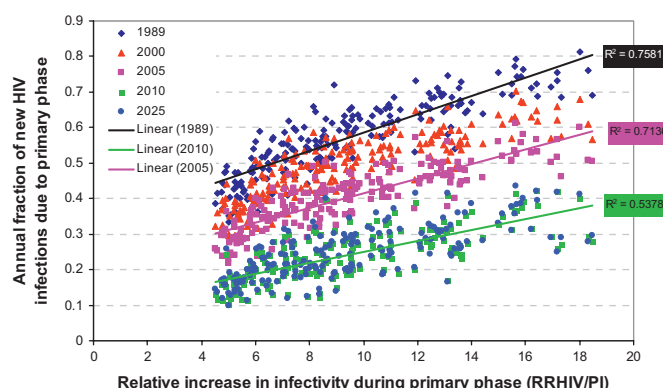
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Background HIV infectivity is considerably higher during primary infection (PI: first few months after infection). PI is believed to be an important biological driver of HIV transmission at the population level, which has implication for prevention. We aimed to estimate the contribution of PI to HIV spread among high-risk groups in southern India.

Methods We used incidence predictions from a bespoke dynamical model of HIV transmission among FSW/clients parameterised and fitted to district-specific behavioural data and HIV/STI prevalence estimates, within a Bayesian framework. Multiple rounds of cross-sectional survey data from among FSW/clients of Mysore and Belgaum, carried out as part of the evaluation of Avahan, the India AIDS initiative, were used to inform plausible parameter ranges and estimate HIV prevalence. Assumed risk of HIV infection (RRHIV/PI) during PI was elevated by 4.5- to 19-fold compared to asymptomatic infections (based on systematic review) and lasted for 3 to 6 months. The annual fraction of new HIV infections (AF) due to primary infection was estimated over time from the 196 and 796 posterior parameter sets fitting Mysore and Belgaum data, respectively.

Results The median AF (overall: clients+FSW) declined from 57.3% (min=34, max=82)% in 1987 (assumed start of epidemic) to 49% (29,70)% in 2000, 43.7% (25,65)% in 2004, 23.8%/24.3% (10/10, 42/43)% in 2010/2025 for Mysore (Abstract O1-S11.01 figure 1). Similar AF estimates were obtained in Belgaum and for FSWs and clients separately in both districts. The univariate association between AF and RRHIV/PI declined slightly over time (Abstract O1-S11.01 figure 1). In multivariate regression analysis, RRHIV/PI (slope=0.027), duration of the whole infectiousness period (slope=-0.014) and duration of primary infection (slope=0.587) were significantly associated with AF early in the epidemic (1988) ($R^2=0.833$, p value<0.001). However, the AF in 2025 was also associated with number of years selling sex by street-based FSW (slope=-0.020, p value=0.042) and number of years buying sex by high-activity clients (slope=-0.004, p value=0.055) ($R^2=0.684$).



Abstract O1-S11.01 Figure 1 FSW and clients combined Mysore.