reasons for their increased risk is of importance in designing effective interventions. We sought to identify characteristics that might explain re-infection among these men.

Methods Between 2004–2010 the LGV Enhanced Surveillance system collected individual-level cross-sectional data on confirmed LGV episodes. We compared the baseline characteristics of men with repeat LGV episodes to men with a single reported episode and we report univariate logistic regression or Fisher's exact test where appropriate.

Results In the dataset 1215 individuals had a single reported infection and 62 had a known repeat infection. The mean age was 38 which did not differ between groups. Men with re-infection had higher prevalence of HIV than those with one episode (97% versus 79%, $P < 0.001$), concurrent hepatitis C (PCR) (19% versus 9%, OR 2.19, 95% CI 1.05, 4.59) and gonorrhoea infection (29% versus 16%, OR 2.16, 95% CI 1.21, 3.84). Repeaters were also more likely to be seen in a clinic in London (81% versus 68%, OR 2.00, 95% CI 1.05, 3.80) and they reported higher levels of unprotected sex including insertive and receptive unprotected sex. However, a high proportion of non-repeaters also reported unprotected sex and the difference was not statistically significant.

Conclusions LGV repeaters display characteristics traditionally attributed to core groups, but behavioural characteristics alone did not explain LGV re-infection among these patients. LGV repeaters have a high prevalence of STI co-infections which is of clinical and epidemiological relevance, and may suggest their position in the sexual network is contributing to the heightened risk for STI acquisition. Further research is needed to ascertain this.

P3.142 EPIDEMIOLOGY OF STI IN MEN HAVING SEX WITH MEN IN ITALY, 1991–2010

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Background In recent years, sexually transmitted infections (STI) have been increasing among men who have sex with men (MSM) in several industrialised countries. The objective of this study was to assess socio-demographic, behavioural and clinical characteristics of MSM with STI, in Italy.

Methods Data were obtained from the Italian Sentinel STI Surveillance System based on a network of 12 specialised clinical centres located in large cities (1991–2010). All MSM are offered HIV testing and serostatus is recorded.

Results Between 1991 and 2010, 85,073 STI cases were reported; 13,081 (15.6%) were diagnosed among MSM. The annual number of STI cases remained stable over time, whereas the proportion of MSM with STI increased from 11.2% in 1991 to 17.5% in 2010. The most frequent diagnoses among MSM were: genital warts (33.3%), primary and secondary syphilis (19.5%), and gonococcal urethritis (15.4%). The annual number of cases of primary and secondary syphilis remained stable until 2000 (about 24 cases/year) and then increased ten-fold in 2005 (No. 325) compared to 2000, with a slight decrease after 2005. Overall, among the 10,850 (82.9%) MSM with STI who underwent HIV testing, the HIV prevalence was 21.1%, showing a decrease during the study period from 28.1% in 1991 to 21.3% in 2010. Among the 2,288 HIV-positive MSM, 35.7% were new HIV diagnoses.

Conclusion The proportion of MSM with STI increased between 1991 and 2010. In 2010, compared to heterosexuals, HIV prevalence among MSM was eight times higher and the proportion of primary and secondary syphilis was six times higher.

These results stress the need for prevention campaigns targeted at reducing the spread of STI among MSM, and the need for an active proposal of HIV testing (including the opt-out approach) among STI patients.

P3.143 THE EPIDEMIOLOGY OF SEXUALLY TRANSMITTED INFECTIONS AMONG MEN WHO HAVE SEX WITH MEN IN MAINLAND CHINA: A META-ANALYSIS AND DATA SYNTHESIS

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Background HIV and syphilis prevalence has increased substantially among men who have sex with men (MSM) in China. This study aims to assess the magnitude in other sexually transmitted infections (STIs) among this population.

Methods Chinese and English peer-reviewed articles were searched from five electronic databases (PubMed, Embase, Wanfang Data, VIP Chinese Journal Database and China National Knowledge Infrastructure) up to Dec 2012. Pooled prevalence estimate for each STI from available studies were calculated. Odds ratios for STIs prevalence among MSM were compared with the adults in the general population and male sex workers (MSW).

Results Eighty-eight articles (11 in English and 77 in Chinese) with a total of 35203 MSM were included in this review. The national prevalence level of STIs between 2003 and 2011 were: 6.32% (3.54–11.02%) for chlamydia, 1.86% (1.27–2.73%) for gonorrhoea, 8.92% (7.75–10.24%) for HBV, 1.25% (1.00–1.55%) for HCV, 66.25% (57.38–74.10%) for any HPV genotype, 10.64% (6.24–17.57%) for HSV-2, and 13.45% (11.78–15.23%) for syphilis. MSM have consistently higher risk of STIs than the general Chinese population (chlamydia: OR = 1.43, 1.31–1.56; gonorrhoea: OR = 2.42, 1.63–3.59; HBV: OR = 1.97, 1.57–2.48; HCV: OR = 48.40, 6.38–367.09; syphilis: OR = 28.38, 28.38–31.14). However, as a subgroup of MSM, MSWs were 1.43 (1.31–1.56), 2.42 (1.63–3.59) and 2.26 (1.37–3.72) more likely to be infected with chlamydia, gonorrhoea and HCV than the broader MSM population.

Conclusion Prevalence levels of STIs among MSM in China are greater than levels in the general population and MSWs have greater prevalence of STIs compared with the broader MSM population.

P3.144 STD CLINICS SERVE AN ECONOMICALLY DISADVANTAGED SUBSET OF THE WIDER POPULATION OF MEN WHO HAVE SEX WITH MEN (MSM) WITH BACTERIAL SEXUALLY TRANSMITTED INFECTIONS (STI)

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Background U.S. STD clinics are closing. MSM are a priority population for STD treatment. We evaluated differences between MSM diagnosed with STI in an STD clinic and MSM diagnosed in other venues.

Methods We randomly sampled and interviewed MSM reported with gonorrhoea, chlamydial infection, or early syphilis in King County, Washington, 2007–2012. We weighted for interview non-response based on race, ethnicity, STI diagnosis, STD clinic diagnosis (vs. elsewhere), and year.

Results A total of 2,865 (38%) of 7,568 MSM cases were randomly selected, of whom 2107 (73.5%) were interviewed; 1275 (61%) interviewed men were STD clinic patients. STD clinic patients were less likely to have stable housing (91% vs. 95%, $p = 0.003$) or a college degree (34% vs. 44%, $p < 0.0001$), and more likely to be unemployed (28% vs. 23%, $p = 0.01$). Both groups were similar in terms of age, race, ethnicity, and HIV status. STD clinic patients were more likely to be diagnosed with gonorrhoea (57% vs. 47%, $p < 0.001$), to report a prior diagnosis of bacterial STI (68% vs. 55%, $p < 0.0001$), and to have sought care because of symptoms (45% vs.

39%) or a partner with an STD (27% vs. 8%, $p < 0.0001$), and less likely to be diagnosed with chlamydia (55% vs. 61%, $p = 0.007$). STD clinic patients reported having more partners (mean 16.3 vs. 11.7, $p = 0.0008$) in the prior year, and more methamphetamine (18% vs. 11%, $p < 0.0001$), Viagra (18% vs. 13%, $p = 0.006$) and popper use (26% vs. 19%, $p = 0.0004$). HIV-uninfected STD clinic patients were more often HIV-tested (84% vs. 78%, $p = 0.001$) at the time of STI diagnosis. HIV-infected MSM diagnosed in the STD clinic were less likely to have a primary HIV care provider than other MSM (80% vs. 96%, $p < 0.0001$).

Conclusion STD clinics serve an economically disadvantaged, high risk and disproportionately symptomatic subset of the larger population of MSM with bacterial STI.

P3.145 SCREENING FOR ANAL DYSPLASIA IN HIV POSITIVE AND HIV NEGATIVE MEN WHO HAVE SEX WITH MEN USING ANAL CYTOLOGY AND P16/INK4 IMMUNOSTAINING; A CROSSECTIONAL STUDY

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Background With legal acceptance of homosexuality in India, men who have sex with men (MSM) are increasingly being reported. Akin to cervical cancer in sexually active women, MSM are predisposed to anal cancers especially with co-infection of HIV. Further, screening of Papanicolaou stained anal smears in MSM can greatly reduce morbidity and mortality due to anal cancer; similar to cervical Pap screening in sexually active women. P16/ink4, a surrogate marker for oncogenic HPV coinfection, improves diagnostic accuracy for anal dysplasia. However, there are only two studies from Asia and none from India analysing anal dysplasia in MSM. This cross-sectional study endeavoured to assess the prevalence of anal dysplasia using Pap smears and p16 immunostaining amongst MSM in India.

Methods A total of 31 consecutive HIV positive and 34 HIV negative MSM ($n = 65$) were subjected to anal cytological evaluation with Pap stain and p16 staining. Chi-square test and coefficient of correlation were used for comparison.

Results Twenty four (36.9%) and thirty one (47.6%) patients were transgender and bisexual respectively. Eighteen (27.7%) had abnormal anal cytology which was higher in HIV positive as compared to HIV negative group (35% versus 20%, $p = 0.180$). Similarly, both low grade (25.8% vs 17.6%, $p = 0.549$) and high grade lesions (8.3% vs 4.8%, $p = 0.341$) were comparable in HIV positive and negative groups. A negative correlation of CD4

count at time of recruitment with degree of anal dysplasia was observed ($r = -0.073$, $p = 0.696$). A total of 13 (20%) smears were P16 positive with sensitivity, specificity, positive predictive value and negative predictive value of 72.3%, 100%, 100% and 92.3% respectively.

Conclusion Anal cytology should be used to screen for anal dysplasia in MSM irrespective of HIV status. Furthermore, addition of P16, with greater specificity for high grade lesions, will significantly improve diagnostic accuracy.

P3.146 RISING STI PREVALENCE AMONG MSM CLIENTS IN CALABAR, NIGERIA: A CALL FOR ACTION

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Introduction Evidence has shown that there are increasing rates of new HIV and other STI infections occurring among Men who have Sex with Men (MSM) in Nigeria, with the prevalence 3 times higher than the general population as reported by the 2011 National Integrated Bio Behavioral Surveillance Survey. The poor state of health care and support services hinders our effort to control the high rates of these new infections among MSM.

Methods The Initiative for Improved Male Health (IMH-Initiative) works to provide a safe space for young MSM living with HIV to access comprehensive palliative care and support, as well as referrals for other services through drama and dance competitions. An STI assessment was conducted in IMH-Initiative's Community Center in Calabar, for gay men and other MSM. An STI history was conducted for all clients who visited the community clinic specifically for HCT and STI counselling and referrals within a 5 month period, and their data were collated.

Results 61 MSM were diagnosed, and reported the following in the last 6 months. 49 were living with HIV. 46 had previous histories of untreated anal warts. 20 had previous histories of treated Gonorrhea by self medication and herbs. 21 had untreated boils and rashes around the genitals. 10 clients were living with HIV, and reported untreated penile and rectal gonorrhoea. All clients indicated that there were not comfortable discussing STI infections with staff of public hospitals.

Conclusion It is evident that a reasonable number of STI infections among MSM are not completely treated. This thereby increases the individual's risk of HIV infection, and cripples HIV prevention programming in Nigeria. HIV programmes targeting MSM must incorporate STI syndromic management, so as to increase access to non-stigmatised diagnosis and treatment of STIs. Also, access to STI drugs for clients cannot be overemphasised.

P3.147 PREVALENCE OF HIV/STIS AND RISK BEHAVIOR IN MEN WHO HAVE A SEX WITH MEN, BELIZE, 2012

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Background In Central America, the HIV epidemic is primarily concentrated in a few populations; including men who have a sex with men (MSM). The lack of reliable HIV prevalence estimates among MSM has impacted HIV programme planning targeting this population. In 2012, we conducted the first biological and behavioural survey among MSM in Belize.

Methods From January - July 2012, we used respondent-driven sampling to recruit MSM in four districts of Belize. Data was collected using a behavioural survey questionnaire administered through audio computer-assisted self-interview (ACASI). All participants were tested for HIV, syphilis and herpes simplex virus

Abstract P3.145 Table 1

Anal cytology results (HIV)			
Anal cytology	Overall (n = 65)	HIV positive (n1 = 31)	HIV negative (n2 = 34)
Low grade dysplasia	14(21.5%)	8(25.8%)	6(17.6%)
High grade dysplasia	4(6.15%)	3(9.6%)	1(2.9%)
Total	18(27.7%)	11(35.5%)	7(20.6%) $p = 0.180$

Abstract P3.145 Table 2

Anal cytology results (Transgender)		
Cytology	Transgender (n3 = 24)	Non-transgender (n4 = 41)
Low grade dysplasia	8(33.3%)	6(14.6%)
High grade dysplasia	2(8.3%)	2(4.8%)
total	10(41.7%)	8(19.5%) $p = 0.08$