

**Results** Of 10031 MSM attending MSHC, 58% (95% CI 57.4%–59.4%) (5655/9677) had hepatitis B surface antibody (HepBsAb), 11% (95% CI 10.0%–11.4%) (840/7888) had core antibody (HepB-cAb) and 4% (95% CI 3.0%–4.5%) (95/2577) had surface antigen (HepBsAg). The proportion decreased, with HepBsAb from 72% to 48% [P (trend) < 0.001], with HepBcAb from 12% - 8% [P (trend) = 0.039] and with either HepBsAb or HepBcAb, from 67% - 50% [P (trend) < 0.001] from 2002 to 2012 but no change for HepBsAg [P (trend) = 0.08]. Later year (2007–12) of being tested (adjusted odds ratio (AOR) 0.65, 95% confidence intervals(CI) 0.58–0.73), more partners in last 12 months (AOR 1.19, 95% CI 1.06–1.34) and previous HIV test being performed (AOR 1.63, 95% CI 1.43–1.81) were associated with immunity to hepatitis B. There incidence rate of hepatitis B (7 cases in 3540 per years of observation) in MSM over the period was 1.98 (95% CI 0.79 – 4.07) per 1,000 person years.

**Conclusion** The data suggest that the current level of immunity of about 50% has been sufficient to prevent any significant hepatitis B infection in the last 10 years. Maintaining adequate vaccination levels (≥ 50%) in MSM is important if outbreaks are to be prevented.

**P3.123 HEPATITIS C TESTING AND INCIDENCE IN HIV-POSITIVE MEN WHO HAVE SEX WITH MEN IN MELBOURNE, VICTORIA. A RETROSPECTIVE COHORT STUDY**

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**Background** Over the past five years there have been increasing reports of HCV transmission in HIV-positive men who have sex with men (MSM) globally. It is unclear whether this increase is due to increased transmission or increased detection (due to increased testing). This paper investigated reasons for increased HCV notification in HIV-positive MSM.

**Methods** HIV viral load test records between April 2006 and December 2011 were used to identify all HIV-positive patients attending three high MSM caseload clinics in Melbourne, Victoria. Their HCV test records were retrospectively linked over the same period. The following were determined: frequency of HCV testing; proportion of HIV-positive men tested for HCV annually; and HCV prevalence and incidence rate (per 100PY). Poisson regression calculated trends over time.

**Results** 3007 HIV-positive men attended the clinics; 2190 (73%) were tested for HCV at least once, with 250 (11.4%) testing HCV positive over the study period. The prevalence of co-infection declined significantly from 11.9% in 2006 to 7.4% in 2011 (p = 0.01). The number of HIV-positive men tested for HCV increased each year although the proportion tested remained the same (approximately 75%) and testing frequency did not change (average 1.4 test/person/year). 187 HIV-positive men were identified with HCV on their initial test and 63 incident infections were observed. HCV incidence among HIV-positive men was 1.55/100PY with no significant change over the study period.

**Conclusions** We found that HCV incidence in HIV-positive MSM remained stable and that prevalence decreased in HIV-positive MSM throughout the study period. Our results suggest the increase in HCV case notifications among HIV-positive men may be explained by an overall increase in HCV testing in this population. The steady increase in the number of HIV-positive MSM who remain well and consequently routinely tested for HCV may be contributing the increase in HCV notifications.

**P3.124 RISK FACTORS FOR HIV INFECTION AMONG MEN WHO HAVE SEX WITH MEN IN SEVEN CITIES IN COLOMBIA USING RESPONDENT-DRIVEN SAMPLING**

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**Background** Men who have sex with men (MSM) are increasingly recognised as the principal core group for HIV transmission in Latin America. In Colombia, factors associated with HIV infection have not previously been assessed.

**Methods** A secondary analysis was conducted using data from a bio-behavioural surveillance study among 2567 MSM ages 18 and older, recruited using respondent-driven sampling from seven cities in Colombia in 2010 (N = 333 to 488 across cities). The study used a face-to-face survey and biological testing to assess risk behaviours and HIV infection. Factors with a bivariate association with infection were estimated from the pooled sample using a multilevel logistic regression framework, including random effects for recruitment tree and immediate recruiter, fixed effects to control for unobserved differences across cities, recruiter-level controls to account for recruitment patterns, and probability weights to account for differential personal and city-level estimated network size.

**Results** Estimated HIV prevalence ranged from 5.8% in Pereira (95% confidence interval [CI] 2.7%–9.5%) to 23.7% in Cali (CI 17.6%–29.9%). Recruiter's HIV infection was moderately related to participant's HIV infection (OR = 1.5, CI = 0.9–2.5, P = 0.091). Clustering by recruiter, recruitment tree, and city explained 10%, 10% and 2% of variance in the HIV outcome, respectively. Factors associated with HIV (P ≤ 5%) included age ≥ 40 (OR = 2.9) and 25–39 years (OR = 2.5) compared to 18–24 years, meeting casual sex partners at saunas (OR = 2.6), previous sexually transmitted infection (STI) (OR = 2.1), current employment (OR = 1.9) and age of sexual debut < 18 years (OR = 1.4).

**Conclusion** The distribution of HIV infection among MSM in Colombia's largest cities suggests an ageing epidemic. HIV testing and prevention interventions should be intensified, target MSM at highest risk as well as younger age groups and STI infection to stem transmission early. Future analysis of this sample should also control for the hierarchical sampling structure and recruitment patterns.

**P3.125 INCREASING HIV INFECTION AMONG MEN WHO HAVE SEX WITH MEN IN SLOVENIA: SURVEILLANCE DATA FOR 2002–2011**

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**Background** HIV surveillance in Slovenia is based on universal mandatory reporting of HIV/AIDS cases, monitoring HIV infection prevalence among several sentinel populations and behaviour surveillance in several sentinel populations. Our objective was to present HIV surveillance data for men who have sex with men (MSM) in order to inform HIV prevention and control policies.

**Methods** We collected information on annual reported HIV cases, CD4 counts at diagnosis, HIV prevalence among male clients of STI outpatient services tested for syphilis and in a sentinel population of MSM, as well as proportion reporting "condom use" and "HIV testing last year" in the same sentinel population of MSM.

**Results** In 2011, 35 of all 55 newly diagnosed HIV cases were reported among MSM. During 2002–2011, the annual reported incidence rate of HIV diagnoses among MSM increased from 12.6 to 48.0 per million men aged 15–64 years. The proportion of new HIV diagnosis among MSM that were late (CD4 counts < 350/mm<sup>3</sup>) varied between the

lowest 39% in 2005 and the highest 62% in 2008. HIV prevalence in male STI patients tested for syphilis varied between the lowest 0.2% in 2005 and the highest 3.4% in 2008 and in MSM increased from 0% in 2002 to the highest 7.6% in 2011 (more than 5% for the first time). In the same sentinel population of MSM, the proportion reporting "condom use" increased from 47% in 2002 to 52% in 2011, and "HIV testing" varied between 27% in 2007 and 40% in 2009.

**Conclusion** The burden of HIV among MSM in Slovenia is disproportionately high and increasing. Promotion of safer sexual behaviour and HIV testing among MSM as well as positive prevention among MSM with diagnosed HIV infection are urgently needed.

### P3.126 SEX PARTNER MEETING PLACE TYPOLOGIES REPORTED BY NEWLY DIAGNOSED HIV-INFECTED MSM

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**Background** Men who have sex with men (MSM) are affected by HIV more than any other group in the US, accounting for more than half of all new HIV infections annually. Within this group, young Black MSM (13–24) have had the highest increase in new infections. Characterizing sex partner meeting places of newly diagnosed HIV-infected MSM by race and age may help to identify locations for targeted control strategies in the populations most at risk. Targeted HIV control strategies seek to prevent HIV transmission by focusing specifically on those most likely to transmit, i.e. those with new infections or high viral loads. The objective of this study was to describe sex partner meeting place typologies and their distribution by age and race among newly diagnosed HIV-infected MSM in Baltimore, Maryland.

**Methods** Using retrospective surveillance data of newly diagnosed HIV-infected MSM reported to the Baltimore City Health Department from 2009–2011, we identified the most frequently reported sex partner meeting place typologies and characterised their distribution by age and race.

**Results** Among 243 reports of newly diagnosed HIV-infected MSM, 91% (220) were interviewed, and 64% (141) of those interviewed provided information on their sex partner meeting places in the past 12 months. Among the 141, 45% reported a bar or club, 41% reported using the internet, and 20% reported other places such as street corner or school. Meeting sex partners via the internet was more frequently reported by younger ( $\leq 24$  years) compared to older MSM (49% vs. 34%, respectively) and Black compared to white MSM (43% vs. 28%, respectively).

**Conclusion** Among those who reported sex partner meeting places, young (vs. older) and Black (vs. white) MSM more frequently reported meeting sex partners via the internet. The internet may be an important location for targeted HIV control strategies especially among young Black MSM.

### P3.127 HIGH PREVALENCE OF ASYMPTOMATIC SEXUALLY TRANSMITTED INFECTIONS (STIS) IN HIV-INFECTED MEN WHO HAVE SEX WITH MEN (MSM) IN IRELAND: STRATEGIES TO IMPROVE SCREENING

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**Background** In Ireland the prevalence of STI's is steadily increasing while the number of new HIV-diagnoses in MSM has more than doubled in the past decade. International guidelines recommend annual STI screening for MSMs regardless of reported history, with

more frequent screening recommended for at-risk individuals. This study investigates prevalence of STIs in asymptomatic HIV-infected MSM in the largest HIV-centre in Dublin.

**Methods** A retrospective analysis was performed via electronic patient record review. Pharyngeal, urethral and rectal testing for Gonorrhoea (Gc) and Chlamydia (CT) was performed using validated nucleic acid amplification techniques.

**Results** Fifty HIV-infected MSM were included in the study (mean age [SD] 38 years [9], 66% Irish). Mean [SD] number of sexual partners in the preceding 12 months was 8 [13]. By subject report 10% were abstinent, 40% always used condoms, 42% used condoms inconsistently while 4% reported never using condoms. Thirty-nine (78%) were on HAART and 38 (97%) were virally suppressed.

Eight (16%) tested positive for an STI. Two (25%) were documented as having two concurrent STIs and two (25%) were not on HAART.

Gc was detected in all 8 positive screens (4 cases of rectal and 4 cases of pharyngeal Gc). There were 2 cases of rectal CT which occurred with a concurrent positive rectal Gc. Younger age [29 vs. 40 years,  $p < 0.001$ ] was the only independent predictor of positive STI screen.

**Conclusion** Sixteen percent of HIV-infected MSMs screened were diagnosed with an STI. 46% of HIV-infected MSM reported unprotected sexual activity. Recognising a need to optimise provision and delivery of STI screening, a pilot self-screening programme has been successfully introduced to our HIV-clinic. Our study highlights the importance of screening for asymptomatic STI's and the need for increased educational interventions targeting unsafe sexual-behaviour as a means of disease prevention.

### P3.128 DETERMINANTS FOR DECLINE IN HIV PREVALENCE AMONG HIGH-RISK MEN WHO HAVE SEX WITH MEN AND TRANSGENDER (MSM-T) IN SOUTH INDIA

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**Background** To evaluate the impact of *Avahan*, the India AIDS Initiative of the Bill & Melinda Gates Foundation, two rounds of integrated biological and behavioural assessment (IBBA) surveys were conducted in 2006–07 and 2009–10 among high-risk men who have sex with men (MSM-T) across 14 districts in south India to measure the prevalence of HIV and sexually transmitted infections (STIs), and related risk factors ( $n=4,300$  per round). We studied the determinants for decline in HIV prevalence among MSM-T.

**Methods** Random slope multilevel models were developed using logistic regression procedures to examine the effects of round, district level and individual variables on HIV prevalence among MSM. The model also controlled for baseline HIV prevalence.

**Results** HIV prevalence among MSM-T significantly reduced from 13.1% in round 1 to 11.4% in round 2 ( $p = 0.017$ ). MSM-T who were aged 25 and above, whose self-reported receptive sexual role (Kothi), who had male sexual clients, who were illiterate, who first had sex before age 15 and who ever used condoms, were significantly more likely to have HIV. Surprisingly, MSM-T who had paid a female partner were less likely to have HIV (OR: 0.71  $p = 0.008$ ). There was a statistically significant effect modification between round and syphilis, with a statistically significant decline in HIV prevalence between survey rounds among MSM-T without syphilis (OR: 0.73,