Background Patient-initiated partner notification (PN) is a cornerstone of STD control in resource-limited public health systems. We conducted a randomised, controlled trial of two new tools to support PN among MSM: anonymous, internet-based notification systems and patient-delivered partner referral cards.
Methods We screened 1,625 MSM for syphilis in Lima, Peru between 2012–2014. Enrollment was limited to MSM with symptomatic primary or secondary syphilis (n = 133) and/or latent syphilis diagnosed by RPR/TPPA (n = 406; Seroprevalence: 25.0%). After enumerating all recent partners and providing details of their three most recent partners, 370 participants were randomly assigned to four intervention arms: 1) Standard PN Counselling (Control) [n = 94]; 2) Counselling and Referral to Internet PN (www.inspot.org) [n = 95]; 3) Counselling and Provision of 5 Partner Referral Cards [n = 97]; or 4) Counselling with both Internet PN and Partner Referral Cards [n = 84]. Self-reported notification of recent sexual partners was assessed by CASI among the 354 participants who returned for 14-day follow-up.
Results The median age of participants enrolled was 27 (IQR: 23–34), with a median of 3 partners (IQR: 1–5) in the past month and a baseline HIV seroprevalence of 64.1%. Participants referred to internet PN (Arms 2 and 4) or provided with printed partner referral cards (Arms 3 and 4) were more likely to have notified ≥1 partners at 14-day follow-up than participants who received only PN counselling (OR: 2.26 [95% CI: 1.33, 3.82] and 1.94 [95% CI: 1.15, 3.27], respectively). The fraction of all recent partners notified was significantly greater in the Internet PN (56.5%, $p < 0.001$) and Referral Card (50.8%, $p = 0.006$) arms than the Control arm (35.3%).
Conclusions Internet notification systems and printed partner referral cards provide inexpensive, effective tools to support patient-directed PN, significantly improving notification by Peruvian MSM with syphilis. Additional research is needed to optimise use of different PN technologies in specific partnership contexts.

O07.2 CAN HUMAN PAPILLOMAVIRUS (HPV) BIOMARKERS HELP PREDICT PATTERNS OF ANAL HIGH-GRADE SQUAMOUS INTRAEPITHELIAL LESION (HSIL) DETECTION IN HOMOSEXUAL MEN?

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Background Homosexual men suffer a disproportionally high burden of anal cancer for which persistent anal HSIL is the precursor. A range of biomarkers that potentially will enhance the performance of cytology-based HSIL screening are being investigated. We evaluated the role of biomarkers in predicting the development and clearance of anal HSIL.
Methods The Study of the Prevention of Anal Cancer is a Sydney-based three-year prospective study of anal HPV infection in homosexual men aged ≥35 years. At each visit all men undergo liquid-based Pap test (ThinPrep©), followed by high-resolution anoscopy-guided biopsy. In this analysis, residual baseline PreservCyt samples underwent HPV E6/E7 mRNA testing (NucliSENS EasyQ, BioMerieux) and p16/Ki67 dual staining (CINtec PLUS, Roche). Anal HSIL was defined as having either anal intraepithelial neoplasia grade 2/3 on histology and/or HSIL on cytology.
Results By February 2015, 302 men had completed one-year of follow-up, with a median age of 49.5 years and around a quarter (27.8%) were HIV-positive. The prevalence of anal HSIL at baseline was 37.4%. Among 179 men who did not have HSIL at baseline, 29 (16.2%) developed HSIL at one year. In those who tested positive to HPV16/18 E6/E7 mRNA or p16/Ki67, 43.3% and 38.5% developed incident HSIL respectively, compared with 11.8% and 8.7% in those who tested negative to that biomarker (Risk Ratio (RR): 3.68, 95% CI 1.99–6.82 and 4.42, 95% CI 1.54–12.70, respectively). Among men with prevalent HSIL, 44 (38.9%) had no HSIL detected after one year. Those negative for HPV16/18 E6/E7 mRNA were twice as likely to have no HSIL at one-year (53.5% vs 28.1%, RR: 1.90, 95% CI 1.18–3.08).
Conclusion Anal HSIL is a very dynamic condition, with high incidence and high rates of non-detection at subsequent visits. Biomarkers of HPV activity can help predict incidence and subsequent non-detection, and thus potentially allow more targeted therapies.
Disclosure of interest statement AEG has received honoraria and research funding from CSL Biotherapies, honoraria and travel funding from Merck, and sits on the Australian advisory board for the Gardasil HPV vaccine. CKF has received honoraria, travel funding and research funding from CSL and Merck, sits on the Australian advisory board for the Gardasil HPV vaccine, and owns shares in CSL Biotherapies. SMG has had grant support from CSL Bio and GlaxoSmithKline, and lecture fees from Merck, GlaxoSmithKline and Sanofi Pasteur; in addition, has received funding through her institution to conduct HPV vaccine studies for MSD and GlaxoSmithKline and is a member of the Merck Global Advisory Board as well as the Merck Scientific Advisory Committee for HPV. RJH has received support from CSL Biotherapies and MSD. All other authors declare that they have no conflicts of interest.

O07.3 DETECTION OF HEPATITIS C VIRUS (HCV) IN SEMEN FROM HIV-INFECTED MEN WHO HAVE SEX WITH MEN (MSM) DURING ACUTE HCV INFECTION

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Introduction The mechanism (s) and bodily fluid (s) involved in the recently identified epidemic of sexually transmitted HCV in HIV-infected MSM are unclear. HCV is present only intermittently and at low levels in semen from men with chronic HCV-infection, however little is known of the dynamics of seminal HCV during acute HCV-infection.
Methods HIV-infected MSM with acute and chronic HCV-infection were prospectively enrolled into an IRB-approved study. Three paired semen and blood specimens were collected at 2-week intervals. HCV viral load (VL) was quantified using an automated RT-PCR assay platform (Abbott).
Results Paired semen and blood specimens were obtained from 33 HIV-infected MSM (21 with acute-HCV and 12 with chronic-HCV). Sixteen (27%) of 59 semen specimens had detectable HCV VL, with 11 (33%) men having at least one