O06.5 PERIODIC PRESUMPTIVE TREATMENT FOR VAGINAL INFECTIONS MAY REDUCE CHLAMYDIA AND GONORRHOEA INCIDENCE: A SECONDARY ANALYSIS FROM THE PREVENTING VAGINAL INFECTIONS TRIAL

[1,2]JE Balkus*, [3]O Anzala, [3]J Kimani, [4]J Schwebke, [5]J Lee, [3]E Kabare, [2,3]RS McClelland. [1]*Fred Hutchinson Cancer Research Center*; [2]*University of Washington*; [3]*University of Nairobi*; [4]*University of Alabama at Birmingham*; [5]*University of Arkansas for Medical Sciences*

10.1136/sextrans-2015-052270.113

Background Women with bacterial vaginosis (BV) are at increased risk for sexually transmitted infections (STI), including *Chlamydia trachomatis* (CT) and *Neisseria gonorrhoeae* (GC). Among women participating in a randomised trial of periodic presumptive treatment to reduce vaginal infections, we assessed the intervention effect on incident CT and GC infections.

Methods Non pregnant, HIV-uninfected women aged 18–45 from the US and Kenya were randomised to receive intravaginal metronidazole 750 mg plus miconazole 200 mg or matching placebo for 5 consecutive nights each month for 12 months. Genital specimens were collected every other month. Baseline specimens were tested for CT/GC during the trial and follow-up specimens were tested after trial completion using the Aptima Combo-2 assay. Baseline STIs were treated according to local guidelines. Poisson regression models were used to assess the intervention effect on the outcomes separately and as a combined endpoint.

Results Of 234 women enrolled, 221 (94%) had specimens available for analysis (intervention n = 110; placebo n = 111). Baseline CT and GC prevalence was 7% (n = 16) and 1% (n = 3), respectively, and similar by arm. Among 205 CT- participants, there were 21 incident CT infections during 179.6 person-years (CT incidence = 11.7/100 person-years), with lower CT incidence in the intervention arm versus placebo (7.8/100 person-years versus 15.6/100 person-years; incidence rate ratio [IRR] = 0.50, 95% CI 0.20–1.23). Among 218 GC- participants, GC incidence was 7.2/100 person-years (14 infections during 93.3 person-years) and also lower in the intervention arm (5.2/100 person-years versus 9.3/100 person-years; IRR = 0.56, 95% CI 0.19–1.67). Results were consistent when CT/GC was assessed as combined endpoint (IRR = 0.57; 95% CI 0.27–1.19).

Conclusions This intervention, which significantly reduced BV over 12 months, may also reduce women's STI acquisition risk. The small sample size in this secondary analysis precluded detection of significant associations, but generated point estimates for reductions in STIs that could inform the planning of future STI prevention trials

Disclosure of interest statement R. S. M. has received honoraria for invited lectures and consulting as well as donated study product for this trial from Embil Pharmaceutical Company. R. S. M. currently receives research funding from Hologic/Gen-Probe. J. E. B. received honoraria from Symbiomix, Inc for consulting and donated reagents from Hologic/Gen-Probe. J. S. has received consultancy payments from Akesis, Hologic, Symbiomix, and Starpharma, and has grants/pending grants from Akesis, BD Diagnostic, Hologic, Cepheid, Quidel, Symbiomix, Starpharma, and Viamet. All other authors declare that they do not have a commercial or other association that might pose a conflict of interest.

O06.6 HIGH PREVALENCE OF CHLAMYDIA AND GONORRHOEA AMONG PATIENTS WITH GENITAL ULCER DISEASE IN ZIMBABWE: POTENTIAL IMPLICATIONS FOR SYNDROMIC MANAGEMENT

[1]M Mungati, [1]O Mugurungi, [1]A Machiha, [2]M Tshimanga, [3]P Kilmarx, [1]J Nyakura, [2]G Shambira, [3]E Gonese, [3]A Herman-Roloff, [4]V Kupara, [5]D Lewis, [6]H Handsfield, [7]C Rietmeijer*. [1]*Ministry of Health and Child Care, Harare, Zimbabwe*; [2]*University of Zimbabwe, Department of Community Medicine, Harare, Zimbabwe*; [3]*US Centers for Disease Control and Prevention, Harare, Zimbabwe*; [4]*ZICHIRE, Harare, Zimbabwe*; [5]*The University of Sydney, Western Sydney Sexual Health, Sydney, Australia*; [6]*University of Washington, Seattle, USA*; [7]*Rietmeijer Consulting, Denver, USA*

10.1136/sextrans-2015-052270.114

Background Syndromic management of genital ulcer disease (GUD) as recommended by the Zimbabwe Ministry of Health and Child Care, includes antibiotics against *Treponema pallidum* (TP: benzathine penicillin), *Haemophilus ducreyi* (HD: erythromycin), and herpes simplex virus (HSV: acyclovir). However, these medications are not recommended to treat co-infections with *Neisseria gonorrhoeae* (NG: ceftriaxone or kanamycin) and *Chlamydia trachomatis* (CT: doxycycline or azithromycin) and, unless a person with GUD is simultaneously diagnosed with genital discharge syndromes (GDS), NG and CT co-infections will not be treated according to guidelines.

Methods In an ongoing study, we enrolled men and women with GDS or GUD syndromes in 6 clinics with high STI prevalence in Zimbabwe. In addition to testing ulcer secretions for TP, HD, and HSV by multiplex polymerase chain reaction (National Institute of Communicable Diseases, Johanneburg), all patients had urine (males) or vaginal swabs (females) tested for NG and CT by nucleic acid amplification (GeneXpert®).

Results To date, 302 patients have been enrolled for whom testing is complete, including 106 GUD and 196 GDS patients. NG and/or CT infections were present in 19/52 (36.5%) female GUD patients and 13/54 (24.1%) male GUD patients, compared to 26/96 (27.1%) female GDS patients and 68/100 (68.0%) male GDS patients. Of 32 GUD patients infected with NG (N = 24) and/or CT (N = 17), including 9 dual infections, only 4/18 (22%) of women and 4/14 (29%) of men met objective criteria for simultaneous GDS syndromic management.

Conclusion In our study, urethral or vaginal GC and/or CT infections were present in 30% of patients with GUD, of whom three quarters would not have been treated according to recommended syndromic treatment guidelines for sexually transmitted infections. Our study methods and findings should be relevant for Zimbabwe and other countries that are using a syndromic approach to STI control.

O07 - Sexual behaviour and STI in men who have sex with men

O07.1 NEW AND TRADITIONAL NOTIFICATION TOOLS IMPROVE PARTNER NOTIFICATION OUTCOMES AMONG MSM WITH SYPHILIS INFECTION IN LIMA, PERU

[1]Jesse Clark*, [2]Catherine Oldenburg, [1]Eddy Segura, [3]Jessica Rios, [3]Manuel Villaran, [3]Javier Salvatierra, [3]Pedro Gonzales, [4]Deb Levine, [3]Jorge Sanchez, [3]Javier Lama. [1]*David Geffen School of Medicine, University of California, Los Angeles*; [2]*Harvard University School of Public Health*; [3]*Asociacion Civil Impacta Salud Y Educacion*; [4]*ISIS, Inc*

10.1136/sextrans-2015-052270.115

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?

[1]F Jin*, [1]IM Poynten, [2,3]AM Cornall, [2,3]Samuel Phillips, [4]J Roberts, [4]A Farnsworth, [5,6]RJ Hillman, [1,7]DJ Templeton, [2,3]SM Garland, [8]CK Fairley, [1]AE Grulich, [2]SN Tabrizi, on behalf of the SPANC Study Team. *[1]The Kirby Institute, University of New South UK; [2]Royal Women's Hospital, University of Melbourne; [3]Murdoch Childrens Research Institute, Melbourne; [4]Douglass Hanly Moir Pathology, Sydney; [5]Western Sydney Sexual Health Service, University of Sydney; [6]St Vincent's Hospital, Sydney; [7]RPA Sexual Health, Royal Prince Alfred Hospital, Sydney; [8]Melbourne Sexual Health Centre, Melbourne, Australia*

10.1136/sextrans-2015-052270.116

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

[1]S Turner*, [2]M Yip, [3]D Smith, [3]S Weibel, [4]W van Seggelen, [1]A Foster, [1]T Morey, [4]Z Barbati, [4]A Branch, [4]D Fierer. *[1]James Cook University School of Medicine; [2]Monash School of Medicine; [3]University of California; [4]Icahn School of Medicine at Mount Sinai*

10.1136/sextrans-2015-052270.117

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