Methods Patients presenting with recurrent genital herpes were included in the study. After a complete clinical and laboratory evaluation, the patients were treated with acyclovir 1 gm twice daily orally for 3 days and followed up on days 3, 5 and 7 to determine the response to treatment and adverse effects.
Results There were 23 patients (21 males and 2 females, between 18–55 years of age), of which 22 complete the study. Nine (41%) of them had complete healing of the ulcer on day 3, whereas 17 (77%) and 20 (91%) had it by day 5 and 7 respectively. Mean percentage healing of ulcer was 77.95 ± 26.03, 90.00 ± 16.20 and 95 ± 7.07 on day 3, 5, and 7 respectively. Visual analogue score (VAS) showed complete improvement in VAS in 9 (41%) patients on day 3, 21 (95.5%) on day 5 and 22 (100%) on day 7. The mean time of complete improvement in VAS was 4.27 ± 1.16 days. Mean of percentage improvement in VAS was 80.45 ± 25.30 on day 3 and 100 ± 0.00 on day 7. Mean healing time of the lesions was 4.67 ± 1.87 days (range 3–10 days). There were no significant adverse effects of the therapy.
Conclusions The study demonstrated that oral acyclovir 1 gm twice daily is effective and safe for the treatment of recurrent genital herpes. There was rapid healing of lesions, which reduces morbidity, psychological distress and risk of transmission of infections to sexual partner. Further studies are however needed to confirm our results.

P10.19 CAN HSV-2 SEROPOSITIVITY BE USED AS A BIOLOGICAL MARKER OF SEXUAL BEHAVIOUR? FINDINGS FROM A SEROPREVALENCE SURVEY IN ENGLAND

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Introduction Reliable measures of sexual behaviour aid understanding of differences in sexually transmitted infections between groups or over time, but are often difficult or infeasible to collect. Antibody to herpes simplex virus type 2 (HSV-2) has been proposed as a marker of sexual behaviour. We investigated the seroepidemiology of HSV-2 in England to explore the use of HSV-2 as such a marker.
Methods Anonymised sera from 16–44 year-old participants in the Health Survey for England (HSE) in 2010 and 2012, a series of nationally-representative household surveys, were tested for anti-HSV-2 antibodies using the HerpeSelect2 IgG ELISA. Factors associated with seropositivity were investigated using logistic regression
Results HSV-2 seropositivity increased with age up to 15% (95% CI: 11%–19%) in women and 9% (6%–14%) in men aged 40–44 years. Seropositivity was higher in those with more sexual partners over the lifetime in women (1.4% in those with 0 vs. 14% in those with ≥10 lifetime sexual partners, p = 0.018) but not in men (5% vs. 7%, p = 0.683). There was no difference by number of partners in the last year or by recent condom use. Women of black or black British ethnicity had around 3-times higher odds of being seropositive than those of white ethnicity (24% vs. 10%, odds ratio [OR]:2.96, 95% CI: 1.16–7.54; p = 0.023). No difference by ethnicity was noted among men.
Conclusion Our findings suggest antibodies to HSV-2 may be a useful marker for number of lifetime sexual partners in women but not in men. There was less evidence to support the use of HSV-2 as a marker for recent sexual risk behaviour. These data can be used to power future analyses using HSV-2 as a marker of sexual behaviour in women. Although detailed analyses by ethnicity were limited by sample size, the differential risk of seropositivity by ethnicity is of interest and warrants further investigation.
Disclosure of interest statement The study was funded by the Health Protection Agency (now part of Public Health England). No pharmaceutical or diagnostic company grants were received in the development of this study.

P10.20 DIGITAL DROPLET PCR (DDPCR) QUANTIFICATION OF HUMAN T-LYMPHOTROPIC VIRUS TYPE-1 CLADE C IN PERIPHERAL BLOOD AND LUNG INFILTRATES OF INDIGENOUS AUSTRALIAN BRONCHIECTASIS PATIENTS

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Background Human T-cell Lymphotropic Virus type-1 (HTLV-1) infects an estimated 20 million people worldwide causing a fatal T- cell leukaemia and inflammatory conditions, such as HTLV-1-associated myelopathy, resulting from a dysregulated inflammatory response to the virus. HTLV-1 is highly endemic to remote indigenous communities in Central Australia where infection contributes to racial disparities in morbidity and mortality. HTLV-1 related complications are associated with elevated numbers of T-cells in which the HTLV-1 provirus integrates (HTLV-1 proviral load, PVL). Digital-droplet PCR (ddPCR) is capable of absolute quantification of PVL, offering low variability between assays with few cell numbers. We measured HTLV-1 PVLs from buffy coat cells (BCCs) of infected individuals, and bronchoalveolar lavage (BALs) infiltrates from a bronchiectasis patient to determine the range of HTLV-1 copies/cell relative to illness.
Methods All samples were from Alice Springs Hospital HTLV-1 cohort (8 BCCs, 1 BAL) and obtained following ethics approval and patient consent in first language. Genomic DNA was extracted from BCCs for ddPCR PVL quantification. HTLV-1 gag/tax primers and FAM/MGB probes were optimised using temperature gradient amplification. Samples were tested in duplicate relative to an internal reference gene standard, RPP30, or negative threshold controls that used VIC/MGB probe. QuantaSoft software was used for data analysis.
Results Of the 8 samples from BCCs, the PVL fell between 320 – 8,040 proviral copies per 10^6 cells. The BAL sample PVL was 1,110 DNA copies per 10^6 cells. The sensitivity (or limit of detection) of our ddPCR assay is 2 copies of proviral DNA per 10^4 cells.
Conclusion The ddPCR assay demonstrates extremely high sensitivity, low assay-variability and the capability to reliably quantify HTLV-1 PVL. This technique offers logistic advantages in studying relationships between PVL in HTLV-1 patient's BCCs and BAL.
Disclosure of interest statement No Conflicts of interest.

ISSTDR and IUSTI recognise the considerable contribution that industry partners make to professional and research activities. We also recognise the need for transparency of disclosure of potential conflicts of interest by acknowledging these relationships in publications and presentations.

No commercial contributions have been received for this research project.

P10.21 A STUDY ON THE USE OF IMIQUIMOD FOR THE TREATMENT OF GENITAL MOLLUSCUM CONTAGIOSUM AND GENITAL WARTS IN FEMALE PATIENTS

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Introduction The clinical effect of imiquimod stems from cytokine-induced activation of the immune system. A randomised study was conducted to study the efficacy and safety of daily applications of 5% imiquimod cream in female patients with external genital warts and MC.
Methods Patients were randomised to receive daily applications of 5% imiquimod cream for a maximum of 16 weeks. Before bedtime patients rubbed the study cream into clean, dry, lesional skin until it disappeared and washed the area with soap and water 8 ± 2 h after application. To investigate wart and MC recurrence, patients who had complete clearance of their baseline lesions at any time during the treatment period stopped treatment and entered a 12-week treatment free follow-up period. Patients were evaluated weekly for the first 4 weeks and every 2 weeks thereafter for the remainder of the 16-week treatment period as well as during the 12-week follow-up period.
Results The clearance rate of lesions was 75% in genital MC patients and 50% in patients with genital warts. Erythema was the commonest adverse reaction seen 24% patients with the use of 5% imiquimod. Other side effects were excoriation seen in 16% patients, erosions in 10% patients, excoriation in 6% patients and pain was seen in 4% patients.
Conclusions Nonspecific inflammation and dermatitis can occur during use of imiquimod for genital warts and molluscum.Fortunately, after completion of the therapy, the skin often heals with barely any scarring.
Disclosure of interest Nil.

P10.22 ENGINEERING HUMAN RHINOVIRUS SEROTYPE-A1 AS A VACCINE VECTOR

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Introduction Vaccination is the optimal long-term solution to the human immuno-defficiency virus (HIV) pandemic. A majority of new HIV infections result from mucosal transmission, highlighting the need for novel vaccines that primarily generate mucosal immunity. Like HIV, human rhinovirus serotype-A1 (HRV-A1, the common cold virus) is primarily transmitted via mucosal surfaces. This makes HRV-A1 a potential vector for mucosally targeted vaccines to generate robust protection against HIV at the vaginal and other distant mucosal surfaces, and systemically.
Methods Using recombinant technology, we inserted discrete overlapping fragments of HIV gag and full-length tat into the junction between genes that encode HRV-A1 structural and non-structural proteins to generate recombinant HRV-A1s (rHRV-A1s) encoding HIV Gag and Tat proteins.
Results Transfection of H1-HeLa cells with rHRV-A1s transcripts yielded infectious and replication-competent rHRV-A1s with similar growth characteristics as wildtype HRV-A1. We also confirmed that cells infected with rHRV-A1s stably expressed Gag and Tat (beyond 5 passages), of the correct sizes and mainly localised in the cytoplasm as revealed by western blot assay, reverse-transcription polymerase chain reaction and immunofluorescence. These results have been recently accepted for publication in Virus Research Journal (reference number: VIRUS96578, April 2015).
Conclusion To the best of our knowledge, this is the first time replication-competent and stable HRV-A1 vectors have been generated. The individual rHRV-A1gag/tat generated in this study have been mixed into a cocktail vaccine and administered intranasally to female Balb/C mice to evaluate its immunogenicity (animal experiments currently on-going). The protective efficacy of the resultant HIV-Gag-specific cell-mediated and Tat humoral responses will be documented in mice challenged intravaginally with chimeric rodent ecotropic murine leukaemia virus (EcoHIV). EcoHIV was developed by replacing the coding region of glycoprotein-120 (gp-120) of HIV strain NL4–3 with gp80 of EcoHIV to ensure that the chimeric virus infected murine cells only.
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P11 - Sexual behaviour and STI in men who have sex with men and transgender people

P11.01 SAME-SEX BEHAVIOUR AND EXPERIENCE MEASURED ON MULTIPLE OCCASIONS IN A BIRTH COHORT REVEALS HIGHER LIFETIME PREVALENCE THAN WOULD BE FOUND IN A CROSS-SECTIONAL STUDY

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Background Understanding sexual – including same-sex – behaviour is critical for appropriate policies to promote sexual health. While most information on current and past same-sex behaviour (SSB) is obtained from cross-sectional studies, the validity of information from these is not known. We have explored this in a cohort study in which questions on SSB were asked on multiple occasions over a prolonged age range.
Methods In the Dunedin Multidisciplinary Health and Development Study computer-presented questions on ever (and in the past year) having a same-sex partner (SSP), male anal intercourse (for men), and a same-sex experience (SSE) ("any contact you felt was sexual"), were asked of men on four occasions between ages 21–38, and of women on three occasions between 26–38. We have compared reports of lifetime SSP and SSE at age 38, with the summation of reports on all occasions.
Results Among men, at age 38, 12.4% reported ever a SSP, 5.2% ever male anal intercourse, and 14.9% ever a SSE. Based on responses from all the assessments, the respective proportions reporting these behaviours were 16.9%, 6.5% and 21.2%,