In 2008 we introduced an email service whereby patients are seen once a year with interim results checked and emailed to them. We report on a review of the Connect email service.

Methods Individuals who had ever registered with the email service and their current status were identified from our prospective clinical database. Reasons for 'exiting' or 'pausing' the service were identified by a case notes review. A service evaluation was carried out via staff and patient surveys.

Results Since October 2008, 888 individuals have registered with our email service: 89.8% male (n=797); median age 48 (range 22–84). At the time of review (Oct 2016) 550 (550/2370 = 23% of total cohort) were under active email follow-up. In eight years, 171 (19.3%) have 'exited' the email service - reasons included: co-morbidities (46.2%); ARV switch/start (18.7%); patient choice (12.9%) and non-attendance/adherence (11.1%). A further 167(18.8%) has been 'paused', mainly due to co-morbidities (58.1%); ARV switch/start (20.4%) and research (16.2%). Non-attendance/adherence was more common in younger patients while co-morbidities predominated among older patients (aged >50). In the staff survey, barriers for enrolling patients on Connect included 'difficulty letting go' of regular appointments, email access and confidentiality concerns.

Discussion As the email service is an integral part of HIV care in our unit, understanding why patients leave Connect and barriers to enrolment will enable continued effectiveness of the service.

UG4 THE PREDICTIVE VALUE OF TRIAGE QUESTIONNAIRES IN A SEXUAL HEALTH CLINIC

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Introduction To assess the effectiveness of self-completed triage forms in eliciting symptomatic status and predicting subsequent diagnoses.

Methods Consecutive patients attending a GUM clinic 3/10/16–7/10/16. Data from self-completed patient triage forms were extracted and correlated with clinician findings documented in electronic patient records at the visit. Fisher's Exact was used to calculate association.

Results 339 patients were included of whom 56.6% were female. Median age was 29 years (14–84) and 86.4% identified as heterosexual (n=293). 54.6% of patients (n=185) indicated symptoms on the triage forms c.f. 58.7% (n=199) documented as symptomatic by clinicians. Clinicians and patients agreed on symptomatic status in 85.3% (289/339) of cases. 57.7% (n=71) of symptomatic women reported lower abdominal pain (LAP), inter-menstrual/post-coital bleeding (IMB/PCB) or dyspareunia on triage forms which were subsequently documented by clinicians on 66.2% (41/71) of occasions. These symptoms were not significantly associated with a diagnosis of PID, or other infections, when documented by clinicians or patients ($p<0.05$). Patient and clinician documented 'change in vaginal discharge', 'lumps on genitals' and 'genital blisters or sores' were significantly associated with candidiasis and bacterial vaginosis ($p<0.05$), genital warts ($p<0.05$), and genital herpes ($p<0.05$) respectively. Patient and clinician reported dysuria was significantly associated with NSU in men and UTI in women ($p<0.05$).

Discussion There was a high level of concordance between patients and clinicians regarding symptomatic status. Specific symptoms, when included in triage, are effective predictors of associated diagnoses with the exception of LAP, IMB/PCB and dyspareunia which appear to be non-specific.

UG5 DESIGNING, DELIVERING AND EVALUATING A TEACHING TOOLKIT FOR PRE-EXPOSURE PROPHYLAXIS IN MEN WHO HAVE SEX WITH MEN

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Introduction Research on the knowledge of PrEP in healthcare workers including third sector workers is limited, and their knowledge will be vital to future national rollout. The aim of this study was to design and evaluate a teaching toolkit on PrEP to educate healthcare professionals and third-sector workers.

Methods A 20 minute powerpoint teaching toolkit was designed and delivered to sexual health workers, third sector workers and medical students. A questionnaire was used to evaluate the toolkit, including perceived knowledge pre-toolkit, immediate post-toolkit, and >1-week post-toolkit.

Results 42 participants took part in teaching sessions. There was a 36% increase in mean perceived participant knowledge scores (maximum = 25) immediately after teaching (23.69), and a 26% increase >1-week after teaching (21.93) – when both are compared with a prior mean score of 17.45. This change in perceived knowledge increased significantly both immediately post and >1-week post when compared with pre-toolkit ($Z = -5.351$, $p = <0.001$; $Z = -3.189$, $p = 0.001$). Immediately after, 42/42 (100%) participants agreed they had some knowledge of the monitoring and tests for PrEP in comparison to 21/42 (50%) pre-teaching ($Z = -4.753$, $p = <0.001$). Overall 39/42 (93%) of participants strongly agreed it provided a good overview of PrEP, with 35/42 (84%) thinking it would help them to provide answers to those seeking to use PrEP.

Discussion Perceived knowledge of PrEP increased following toolkit use and importantly was sustained >1-week post-toolkit when compared with prior knowledge. Toolkits such as this can help educate future PrEP advocates.

UG6 A RETROSPECTIVE COHORT STUDY OF TREATMENT OUTCOMES AMONG HIV POSITIVE INDIVIDUALS WITH EARLY SYPHILIS AT A SINGLE HIV CLINIC

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Introduction Guidelines for the treatment of early syphilis recommend benzathine penicillin G (BPG) for all patients regardless of HIV status. Concerns of HIV-positive patients developing asymptomatic neurosyphilis have prompted some to prescribe a neuropenetrative regimen of procaine penicillin (PP) with probenecid. There is heterogeneity in prescribing and the debate surrounding this issue is amplified by the global probenecid shortage. One centre in the UK has

historically treated patients with PP regardless of syphilis stage. We compared serological response, adherence and tolerance among these patients compared with those receiving alternative regimens.

Methods A retrospective analysis of HIV positive individuals with early syphilis infection. Response to treatment was defined by ≥4-fold decline in VDRL titer within 13 months.

Results 197 patients were diagnosed with primary(24%), secondary(50%) or early- latent(26%) syphilis between 2012-2015. 102(52%) received PP, 26(13%) BPG, 38(19%) doxycycline for 28 days and 4(2%) amoxicillin plus probenecid. For 27(14%), treatment regimen was unknown. Of those who completed PP, 91% had serological response, BPG 65%, doxycycline 79%. Four patients on PP switched due to non-adherence. Of the PP patients median age 42, CD4 576 and 80% were on antiretroviral therapy. This did not differ greatly between those who achieved serological response and those who did not.

Abstract UG6 Table 1 Demographics and follow up of patients divided by treatment regimen

	PP (%)	BPG (%)	DOXY (%)	AMOX+P (%)
No. of patients started treatment	102 (52)	26 (13)	38 (19)	4 (2)
No. of patients completed treatment	94 (92)	26 (100)	34 (89)	4 (100)
Serological Response	86 (91)	17 (65)	27 (79)	3 (75)
Serological Failure	3 (3)	1 (4)	3 (8)	1 (25)
Lost to Follow up <13 months	5 (5)	8 (31)	4 (11)	0
No. of patients did not complete treatment	8 (8)	0	4 (11)	0
Serological Response	7 (88)		3 (75)	
Serological Failure	1 (12)		1 (25)	
Switched Treatment Regimen	4 (4)	0	1 (3)	0
BPG	1 (25)	0	1 (100)	0
Doxycycline	3 (75)	0	0	0
Serological Response	4 (100)	0	1 (100)	0
Age				
Median	42	44	38	54
Range	25–46	29–68	27–58	40–63
Syphilis Infection				
Primary	24 (24)	9 (35)	7 (18)	1 (25)
Secondary	47 (46)	12 (46)	25 (66)	1 (25)
Early Latent	31 (30)	5 (19)	6 (6)	2 (50)
CD4 at Diagnosis				
Median	576	654	534	728
Range	126–1223	170–2384	274–847	404–1146
On ART at Diagnosis				
Yes	82 (80)	21 (81)	30 (80)	4 (100)
No	20 (20)	5 (19)	8 (20)	0

PP=procaine penicillin plus oral probenecid; BPG= benzathine penicillin G; DOXY= doxycycline; AMOX+P= amoxicillin plus oral probenecid; HART=HIV antiretroviral therapy

Discussion We demonstrate good adherence and tolerance of PP. There was a superior serological response to treatment in this group but a large loss to follow up among those treated with BPG. Further statistical analysis may identify factors associated with serological failure. Prospective studies exploring co-infection are required.

Poster Presentations

Bacterially Sexually Transmitted Infections

P001 WHAT IS THE EVIDENCE THAT PREVIOUS AZITHROMYCIN TREATMENT FOR CHLAMYDIA OR GONORRHOEA IS ASSOCIATED WITH NEISSERIA GONORRHOEAE AZITHROMYCIN RESISTANCE?

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Introduction The prevalence of azithromycin resistance in *Neisseria gonorrhoeae* (NG) including high-level resistance (HL-AziR NG) is increasing in England. It has been suggested that exposure to azithromycin at sub-optimal doses may facilitate development of azithromycin resistance in NG. We investigated whether treatment history for non-rectal chlamydia (CT) or NG (as proxies for azithromycin exposure) in GUM services was associated with susceptibility of NG to azithromycin.

Methods Descriptive and negative binomial regression analyses of azithromycin Minimum Inhibitory Concentration (MIC) data from 4608 NG isolates collected by the Gonococcal Resistance to Antimicrobials Surveillance Programme (GRASP) 2013–2015 (matched to GUMCADv2 data on CT/NG diagnoses) were performed. Descriptive analyses of previous CT/NG among 56 HL-AziR NG isolates (MIC>256 mg/L) were also performed (2013–2016).

Results Modal azithromycin MIC was 0.25mg/L (1 dilution below the resistance breakpoint) in those with and without history of CT or GC. There were no differences in MIC distribution by previous CT/NG, nor by time since most recent infection (CT: p=0.97; NG: p>0.99). Among patients with HL-AziR NG, 4 (8%) were treated for CT and 4 (8%) for NG in the previous year, compared with 9% and 13% respectively for all GRASP patients.

Discussion There was no evidence of an association between previous CT/NG treatment in GUM services and subsequent presentation with an azithromycin-resistant strain. However, 46% of CT diagnoses occur in non-GUM settings therefore further research is needed to explore whether an association with azithromycin exposure in other settings and for other conditions exists.

P002 ASSESSING THE IMPACT OF INDIVIDUALISED TREATMENT: AN INDIVIDUAL-BASED MATHEMATICAL MODELLING STUDY OF ANTIMICROBIAL RESISTANT NEISSERIA GONORRHOEAE TRANSMISSION, DIAGNOSIS AND TREATMENT IN MEN WHO HAVE SEX WITH MEN

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Introduction Antimicrobial resistant (AMR) gonorrhoea is a global public health threat. In London, diagnoses in men who