O1

A decade of chlamydia in Leeds: comparative analysis of demographic and geospatial risk factors at the onset of chlamydia screening

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Objective: To compare the demographics of chlamydia in Leeds in 2003–2004 with 1994–1995.

Methods: Laboratory data for all chlamydia diagnoses in Leeds in 2003-2004 were compared to 1994–1995.

Results: For persons aged 15 to 54, total annualised positivity rates increased 4-fold from $159.0/10^6$ in 1994/5 by ELISA (95% CI 150.4 to 167.9) to $644.8/10^6$ in 2003/4 by SDA (95% CI 627.4 to 662.5). This increase was the same for both sexes; peak age groups remained 15–19 for women and 20–24 for men. Ethnicity data (Genitourinary Medicine (GUM) diagnoses only) showed a persistent relative risk of 10 for black as opposed to white ethnic groups. In 2003/4, GUM diagnosed 42% of chlamydia positives compared with 80% in 1994/95. 51% were diagnosed in the community: General Practice (39%), Contraceptive services (7%) and Chlamydia Screening Project (5%). A positive female was 4.5 times more likely than a positive male to be diagnosed in a non-GUM setting. Analyses of setting-specific positivity rates and geospatial distribution are underway.

Conclusions: Chlamydia continues to show a wide geospatial distribution with increased risk in under-25s and black ethnic groups. Women are now diagnosed mostly in community settings and efforts will need to be concentrated on partner notification to reduce transmission.

O2

Free availability of postal testing kits for chlamydia in colleges of further education as an alternative to nurse-led clinics: a prospective crossover intervention trial

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Three models of testing and treatment for chlamydial infection in students attending four FE colleges in Lothian, SE Scotland were compared in a prospective crossover intervention trial as part of the 'Healthy Respect' health demonstrator project. Part-time nurse-led clinics were compared over two consecutive academic years with the use of postal testing kits, distributed either under supervision by trained non-healthcare staff or freely available from distribution points. 316 tests for chlamydia were carried out, 65% in women and 35% in men. Chlamydia prevalence in those tested on site was the same as that detected by postal testing (11.6% (14/121) vs 12.3% (24/195), $\chi2=0.04$; $P>0.05$). Treatment rate was 100% and contact details were obtained in all cases. Free distribution of postal testing kits generated a lower percentage return rate than supervised distribution (15% (157/891) vs 25% (38/152), $\chi2=9.07$; $P=0.026$) but results in a greater number of students being tested. Although all methods were successful in accessing men for testing, postal testing kits carried no additional advantage over clinics. Free distribution of postal testing kits detects a greater number of infections than alternative models with comparable outcomes but reduced manpower requirements.

O3

The management of *Chlamydia trachomatis* in genitourinary medicine clinics: a national audit in 2004

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Aim: To undertake the first national audit of the management of *Chlamydia trachomatis* in genitourinary medicine (GUM) clinics in the UK.

Methods: A retrospective case note review. Non-Consultant Career Grade Doctors working in GUM clinics were each asked to complete ten data collection forms.

Results: One thousand six hundred and seventy forms were completed (from 830 males and 840 females with chlamydia) during the audit period of January to March 2004. Ninety nine per cent (1647) were treated appropriately. Seventy six per cent (1261) were followed up, of which 12% (154) required re-treatment. Seventy one per cent (1186) were managed appropriately within four weeks and 942 partners (0.56 per index case) were managed satisfactorily within four weeks of the initial partner notification interview. Partner notification outcomes were significantly more successful when the index patient was followed up ($P<0.0001$). Outcome standards were not associated with age, gender or sexuality, but were significantly associated with ethnicity ($P<0.004$).

Conclusion: GUM clinics are delivering high quality care and evidence based national outcome standards are being met.

O4

Compliance with novel 'partner interventions' amongst male sexual partners of women with *Chlamydia trachomatis*

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Aim: To explore novel approaches to partner notification and treatment in view of suboptimal rates of contact tracing for chlamydia (~25%) reported by Scottish GUM clinics.

Methods: Women diagnosed chlamydia-positive at either a hospital gynaecology clinic (termination of unwanted pregnancy) or a community family planning clinic, or a GUM clinic in Edinburgh, were randomised to one of three strategies of partner intervention: (i) contact tracing by a GUM health Adviser (ii) postal testing kit for partner(s) to post urine sample for chlamydia testing, or (iii) patient delivered partner medication (PDPM) whereby woman is given 1G of azithromycin to give to sexual partner(s). Ethical Committee approval was obtained.

Results: Thus far, 101 women have been recruited and randomised to: 33 contact tracing (33 partners), 33 postal testing (36 partners) and 35 PDPM (38 partners). There was no significant difference between groups in terms of the percentage of partners known to have complied with the intervention: 28% contact tracing, 28% postal testing and 32% PDPM.

Discussion: These preliminary results suggest that postal testing and PDPM may be similar to standard contact tracing in terms of proportion of sexual partners known to be tested/treated.

O5

Comparison of virus culture and TaqMan real-time polymerase chain reaction (PCR) for detection of genital herpes simplex virus (HSV) infection

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Aim: To compare the detection rates of HSV with virus culture and TaqMan PCR.

Methods: 134 patients with lesions suggestive of genital herpes attending the GUM clinic in Plymouth were recruited in the study. Two swabs were taken simultaneously by holding them together and sent for virus culture and PCR.

Results:

Table: HSV detection by virus culture and PCR

	Culture (n=134)	PCR (n=134)
HSV 1	29 (21.64%)	37 (27.61%)
HSV 2	25 (18.65%)	49 (36.56%)
Negative	74 (55.22%)	48 (35.82%)
Unable to perform test	6 (4.47%)	0 (0.0%)

Overall 40.29% and 64.17% of the specimens were positive for either HSV 1 or 2 by culture and PCR respectively. Notably the yield was higher with virus type 2 than type 1. There was no discrepancy in virus type as determined by culture and PCR. There was no patient with PCR negative but culture positive for the virus. There were 6 patients where culture could not be done due to contamination, of which 2 were HSV type 1, 2 were HSV type 2 and 2 were negative by PCR.

Conclusion: The PCR is significantly more sensitive in detecting HSV (more sensitive for type 2 than type 1 virus) compared to culture.

O6

Do people with genital herpes tell their sexual partners? The influence of stigma

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Objectives: To assess the nature and effect of stigma on disclosure of genital herpes diagnosis to sexual partners.

Methodology: Quantitative data regarding disclosure were collected using a questionnaire survey which included the hospital anxiety and depression scale captured on likert scales. In addition qualitative data were collected on 10% of these subjects using semi-structured interviews.

Results: Seventy-one patients responded to the questionnaire and the in clinic response rate was 91%. The point prevalence of moderate to severe anxiety in this sample was 32%. 54% discussed genital herpes with all their sexual partners and 44% did so before first sexual contact. Qualitative interview identified herpes related stigma associated with non-disclosure of diagnosis to sexual partners. Disclosure of diagnosis to sexual partners tended to occur within the context of established relationships.

Conclusion: The reaction to a diagnosis of genital herpes and the decision to disclose or not is influenced by cultural understanding of the infection as well the value of the relationship in which the disclosure may occur. Our study demonstrated that stigma is a barrier to disclosure of genital herpes diagnosis. Management strategies aimed at encouraging disclosure to sexual partners must address stigma.

O7

Has young people's knowledge and use of contraceptive services increased since the introduction of the Teenage Pregnancy Strategy? Findings from the Teenage Pregnancy Strategy Evaluation

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Aim: To investigate young people's knowledge and use of contraceptive services over four years of the Teenage Pregnancy Strategy.

Methods: Random location sample of young people aged 13–21 years (n=8877) were surveyed using Computer Assisted Personal Interviews between October 2000 and June 2004.

Results: 82% of young women and 69% of young men knew a place they could visit for information about sex. Knowledge that contraception is freely available has increased. However, the proportion reporting they had obtained contraceptive advice prior first sexual intercourse has declined over the last four years. The service most frequently cited by young women for accessing supplies was general practice (54%) and for young men was the commercial sector (54%), but young men's use of general practice and specialist contraceptive services has increased. This was particularly evident in local authorities rated as 'high quality' in terms of effort put into sexual health services (Teenage Pregnancy Unit data). Young people living in more deprived areas and those under 16 were more likely to use designated young people's services.

Conclusion: There has been some success in increasing knowledge and use of services, but it may be too early to observe any positive changes in outcomes.

O8

Correlation of erectile dysfunction (ED) severity as perceived by UK healthcare professional compared to the International Index of Erectile Function score (IIEF): results from the Erectile Dysfunction Observational Study (EDOS)

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Introduction: EDOS is a pan-European, observational study assessing effectiveness, satisfaction and treatment patterns of ED therapies.

Design and method: Patients initiating and changing treatment for ED were recruited. All types of ED treatments were allowed. ED severity was assessed using the IIEF-erectile function (EF) domain score and physician's perception of severity according to the clinical history.

Results: In the UK 93 investigators enrolled 1,362 patients. Investigators were GPs (84.4%) but also Urologists (4.4%), Andrologist (2.2%), Sexual therapists (1%) and others (7.8%). The mean age was 57.2 years (range 18-86). 58% (n=782) of men had symptoms of ED between 1 and 5 years. ED aetiology: organic -37%; psychogenic –16%; mixed – 47%. Investigators rating of ED severity: 34% severe, 57% moderate, 8% mild. According to the IIEF-EF domain score*, 42% of men had severe ED, 26% had moderate and 24 % had mild ED. Moderate ED was the commonest categorisation of ED severity when severity was assessed by investigators however within that category patients with both severe and mild ED existed according to the IIEF score.

Conclusion: Actual numbers of men with severe ED may be under-reported without the use of tools such as the IIEF questionnaire.

*IIEF-EF domain score categories: Normal (26–30), Mild (17–25), Moderate (11–16), Severe (1–10).

O9

Antiretroviral therapy in a new public sector antiretroviral treatment centre in Ghana: patients' presentation and response

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Objective: To review presentation of 200 patients and their response after 6 months of antiretroviral therapy (ART) attending the new ARV clinic in Komfo Anokye Teaching Hospital.
Methods: Prospective observational study of first 200 ART patients.
Results: Family Health International's START program in partnership with the National AIDS Control Program/Ministry of Health and DFID have scaled up the delivery of ART in Ghana. In its first year this clinic enrolled 1738 patients and started over 600 on treatment. All received 2NRTI+1NNRTI except one (2NRTI+1PI). 188 were ART naïve. 128 had a regime containing AZT (M=58), 21 later switched to d4T because of anaemia. 71(M=25) started on d4T. Efavirenz was given to 101(M=71), nevirapine to 95(M=11). No cases of nevirapine induced hepatitis were recorded. 8 were switched from nevirapine to efavirenz on developing tuberculosis. Mean (median) CD4 count increased by 166(158) from 125(123) cells/mm^3 and weight increased from 50.7(50) to 58.0(58) Kg. 4 deaths were recorded. 15 patients defaulted follow up by more than 3 months. More than 80% of patients reported greater than 95% adherence on every follow up visit over the period. Further data on this cohort will be presented.
Conclusion: Effective and safe ART is achievable when scaling up.

O10

Targeting points for further intervention: a review of HIV infected infants born in Ireland in the 5 years following introduction of antenatal screening

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Aim: 'Opt-out' AN screening, in Ireland since Jan.'99, has 95%–99% uptake. Vertical transmission rates are <2%. We sought to identify intervention targets to reduce ongoing transmission.
Methods: HIV+ pregnant women are referred to the paediatric service. Maternal and infant data are prospectively gathered.
Results: From 01/1999–12/2004, 11 infected infants were born. There were 527 HIV+ pregnancies and 2 postnatal diagnoses. 2/11 infants were born to the women diagnosed postnatally (1 pregnancy seroconversion, 1 missed screening). Of the remaining 9, 4/9 women who booked at (36 weeks received ≤3 weeks ART. 5/9 booked <36 weeks; 1 received <1 week ART & delivered at 33 weeks. 4 received >4 weeks ART (3 cART, 1 ZDV); adherence was poor in 1 (delivery VL >10,000 copies/ml), 1 with undetectable VL had 24 hours ROM, in the remaining 2 (1 ZDV monotherapy & delivery viral load <400 copies/ml, 1 cART from 20/40 & delivery VL 53 copies/ml), infant HIV-PCRs were positive ≤5 days suggesting in-utero transmission. All 9 women & infants received IP-ZDV and postnatal ART respectively (6 triple, 3 monotherapy).
Conclusion: There remain identifiable targets for intervention (pre-conceptual screening, early booking, repeat tests for at-risk women, adherence support). The problem of early in-utero transmission remains.

O11

Evaluation of nelfinavir-based mother-to-child transmission regimens

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Background: Sub-therapeutic levels of nelfinavir in pregnancy, at standard dosing, have been reported. This study examines viral response, resistance and outcome in a cohort of women receiving combivir/nelfinavir(standard doses) in pregnancy.
Methods: 47 pregnant women with a pre-treatment CD4> 300×10^6/l were prescribed combivir/nelfinavir in the 3rd trimester. All received at least 6 weeks treatment (range 6–12, mean 11 weeks) and discontinued post-partum. All women returned for genotypic resistance testing after treatment cessation.
Results: Viral load at 36 weeks: 26/47[55%] <50cpm; 18/47[38%] >50<1000cpm (mean 154cpm) and 3/47[6%] >1000cpm (mean 2160cpm). Mean pre-treatment VL 3,761cpm in <50 group versus 39,535cpm in >50 group. Adherence issues were identified in 4/26(15%) with 36 week VL<50cpm; 1/18(5.5%) with VL>50<1000cpm and 1/3(33%) with VL> 1000cpm. No drug A/Es were reported. No primary PI resistance mutations were identified after treatment cessation. 1 baby acquired HIV (maternal VL<50cpm, membranes ruptured >24hrs).
Conclusion: At standard nelfinavir dosing almost half the cohort failed to achieve virological suppression <50cpm, suggesting that routine TDM should be considered. Despite this, the absence of PI mutations after treatment cessation suggests that short-term nelfinavir use may not be detrimental to future maternal ART options.

O12

Increased psychosis in HIV-1-infected sub-Saharan African immigrants

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Background: Psychiatric morbidity in HIV has been well documented in western populations, but not in sub-Saharan African [SSA] immigrants.
Aim: To assess psychological morbidity in HIV positive SSAs, and evaluate illness-related variables on presentation.
Method: Retrospective review of patient notes.
Results: Of a cohort of 324 [229 female, 95 male], 24 patients were referred to the Department of Psychological Medicine. This referral rate is 7.4%, compared to 5.9% [67/1138] in the non-SSA cohort. Diagnosis of depression was associated with increasing HIV disease progression and was made in 12 [50%] of patients, predominantly in females [75%, 18/24]. Psychosis was diagnosed in 5 [25%]; cases occurring within three months of HIV diagnosis. 3 of these patients [60%] had an AIDS defining illness. Anxiety and adjustment disorders accounted for 7 [29%]. Some cases were related to violence/sexual assault that had resulted in HIV acquisition. Organic brain disease accounted for 2 referrals.
Conclusion: This study confirms the hypothesis that SSA immigrants are at increased risk of psychological morbidity. The incidence of psychotic illness was notably high. We believe that cultural beliefs and the influence of immigration are important factors in both the rate and type of psychological morbidity.

O12a

Sexual behaviour and risk of ongoing transmission in symptomatic patients attending genitourinary medicine clinics

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Background: Delayed access to services and sexual contact while symptomatic may increase STI transmission.

Aim: To determine the extent of ongoing sexual contact in symptomatic patients, whether symptoms influence sexual behaviour at this time, and the impact of symptom resolution on health care seeking.

Methods: A questionnaire was administered to approximately 8000 patients in 8 sexual health clinics and linked to preliminary clinical data.

Results: 38.8% of men and 42.9% of women with acute symptomatic STI continued sexual intercourse after symptoms began, by contrast with 46.3% of men and 61.2% of women with no acute STI. Among symptomatics, 7.7% of men and 0.7% of women had had more than one sexual partner. Symptom duration was (7 days at clinic visit in 64.3% of men and 66.7% of women with an STI, of whom 22. 4% of men, and 42.9% of women had self-treated. 22.4% of men and 36.7% of women with STI would no longer seek care if symptoms resolved.

Conclusions: Our data reinforce the need for rapid access to diagnostic and treatment services, for all patients and not just 'high risk' groups. Health promotion should emphasize the need for individuals to seek rapid care and cease sexual activity when an STI is suspected.

O13

Overseas travel, high-risk sexual behaviour and STI transmission risk among British adults: results of a national probability survey of sexual attitudes and lifestyles

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Aim: To identify factors associated with acquiring new sexual partners while overseas.

Methods: National probability survey of 12,110 men and women aged 16–44 years, resident in Britain in 2000. Sociodemographic, health-related, travel, sexual behaviour and attitudinal data collected by computer-assisted-self-interviewing.

Results: 14.7% of men and 7.8% of women reported new sexual partner(s) while abroad in the past 5 years. The mean (standard deviation) number of new partnerships while abroad in this period was significantly greater for men: 3.7 (12.8), than women: 2.0 (4.8). 49.5% of new partners originated from the UK; 37.2% from other European countries. Mixing was also assortative by country of birth, with partners tending to be from the UK or, if not UK born, their own birth region, than elsewhere. Reporting new partnerships abroad was significantly associated with a range of demographic and risk behaviours including younger age, non-married status, greater partner numbers, paying for sex, same-sex partnerships, and unsafe sex in the past 4 weeks.

Conclusion: Although travellers who have sex abroad select partners from their own geographic regions, their higher prevalence of sexual risk behaviours at home and abroad place them at greater risk and in need of targeted sexual health promotion.

O14

High-risk sexual behaviour among London gay men: no longer increasing?

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Aim: To examine changes in sexual behaviour among London gay men between 1998–2004.

Methods: Nearly 5000 gay men using gyms in central London were surveyed annually between 1998-2004 (range 498–834 per year, response rate 50–60%). Information was collected on HIV status and unprotected anal intercourse (UAI) in the previous 3 months. High risk sexual behaviour was defined as UAI with a casual partner of unknown or discordant HIV status.

Results: Of the 4934 men, 774 (15.7%) were HIV positive, 3099 (62.8%) were HIV negative, 1061 (21.5%) had never been tested for HIV. Median age was 35 years. Between 1998–2001 the overall percentage of men reporting high risk sexual behaviour with a casual partner increased from 6.7% to 15.2% (P<0.001). Between 2001–2004, however, the percentage of men reporting high risk sexual behaviour with a casual partner remained stable (annual figures, 15.2%, 15.5%, 16.1%, 14.7%, P=0.8). A similar pattern was seen for HIV positive, negative and never-tested men when examined separately.

Conclusion: The percentage of London gay men reporting high risk sexual behaviour with a casual partner has remained stable since 2001, although it increased significantly between 1998–2001. Addressing this elevated level of risk will present a challenge for sexual health promotion.

O15

Risk factors for the acquisition of HIV in individuals known to have recently seroconverted

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Background: People who have recently acquired HIV could play a key role in onward transmission if they have unprotected sexual intercourse (UPSI) with multiple partners whilst having a high viral load and/or other sexually transmitted infections (STI).

Aims: To describe recent sexual behaviour in people who have recently acquired HIV.

Methods: Cross sectional survey, 2002–4. Incident HIV was defined as an evolving HIV antibody response, HIV PCR-DNA positive/antibody negative, and/or HIV antibody positive with a negative test within 6 months. A detailed sexual behaviour questionnaire was completed at diagnosis.

Results: Five women and 50 men were recruited. Two of the women reported casual sex in the previous 3 months, neither used condoms consistently. 49 men were MSM; 19 reported sex for money; and 17 had UPSI with >10 casual partners in the preceding 3 months. Condom use was inconsistent in 91% receptive and 93% insertive anal intercourse with casual partners. High levels of recreational drug use occurred. 2/55 viruses appeared phylogenetically related, (i.e. not a sexual network). 14 had a concomitant STI at seroconversion.

Discussion: High-risk sexual activity is highly linked to those diagnosed with incident HIV. Without immediate behaviour change onward transmission in such individuals is likely.

O16

A prospective study of post-exposure prophylaxis (PEP) following non-occupational exposure to HIV in the UK

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Aim: To describe recent trends in PEP use for non-occupational exposures to HIV (NONOPEP), across 10 UK GUM/HIV clinics.
Methods: Individuals attending 10 GUM/HIV clinics receiving NONOPEP between 11/2002 and 11/2004 were prospectively recruited. Demographic, behavioural and clinical data were collected at baseline, 4–6 weeks, 3 and 6 months.
Results: 212 individuals have been recruited: 89% male, 74% men who have sex with men (MSM), 79% of white ethnicity, average age 32 years (range 18-64). 91% received PEP following high-risk sexual exposures, 22% with regular partners. 42/156 (27%) MSM and 13/22 (60%) women receiving PEP reported unprotected intercourse (anal/vaginal respectively) with an HIV positive partner. All cases received PEP in accordance with BASHH guidelines. Follow-up rates to date are low: 4–6 weeks (57%); 3 months (35%); 6 months (28%). Of the 128 followed-up: 86% completed the 4-week PEP course, 75% adhered fully and 56% experienced mild-moderate side effects. During the study period numbers prescribed NONOPEP increased by 98% (range 60%–1400%); with the greatest increase occurring in London (172%) in the later part of 2004.
Conclusions: The demand for NONOPEP is increasing, particularly in London and among MSM. The reasons for low follow-up rates are unclear and need to be addressed.

O17

Trends in transmitted genotypic antiretroviral resistance in primary versus longstanding HIV infection

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Background: It is well recognised that a significant minority of individuals with primary HIV infection (PHI) harbour transmitted antiretroviral resistance (TAR). Whilst most clinicians perform resistance testing in individuals diagnosed with PHI, only 6% diagnosed with non-PHI were tested pre-treatment in the 2002/3 BHIVA audit, despite guidelines to the contrary.
Objectives: To compare trends in prevalence of genotypic TAR among individuals diagnosed at PHI and non-PHI.
Methods: Analysis of TAR (including only major, significant mutations) in 450 treatment-naïve individuals, classified as PHI or non-PHI by year of diagnosis, from 2000–2004.
Results: Genotype results were available in 147/149 (99%) and 127/301 (42%) of the PHI and non-PHI group respectively. To account for possible testing bias in non-PHI, re-analysis assuming no resistance in those untested (58%) is shown(1).

	2000	2001	2002	2003	2004
PHI	17%	21%	12%	15%	7%
Non-PHI (max)	14%	17%	9%	8%	15%
Non-PHI (min)(1)	12%	4%	3%	5%	10%

Conclusion: TAR remains of significant clinical importance despite high levels of effective viral suppression. We demonstrate that rates remain stable and furthermore are comparable in individuals diagnosed at non-PHI as well as PHI. All new HIV diagnoses should have baseline resistance testing performed irrespective of time since infection.

O18

The longevity of HIV-specific CD4 T-helper responses and clinical outcome following short course antiretroviral therapy in primary HIV infection

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Background: Antiretroviral treatment at HIV seroconversion has been associated with the preservation of HIV-specific CD4+ T-cell responses ordinarily lost without intervention. The longevity and clinical relevance of this is unknown.
Aims: To compare the immunological outcome of receiving short course ART (SCART) at Primary HIV (PHI) with rate of decline in CD4 count and this with a natural history cohort (CASCADE).
Methods: Seroconversion was identified by an evolving HIV antibody response, HIV PCR-DNA positive/antibody negative or HIV antibody positive with negative test within 6 months. Patients were offered SCART and followed monthly. HIV-specific CD4 T-cell frequencies were determined by interferon-γ ELISPOT analysis.
Results: Of 105 subjects followed prospectively for 3 years, 90 chose SCART at PHI. Longitudinal data on 16/105 subjects over 4 years, showed 7/14 receiving SCART had maintained HIV-specific CD4+ T-helper responses compared to 1/2 who did not receive SCART. All were CCR5 delta 32 negative. There was no relationship between T-helper responses, CD4 count, and pVL. We report a more rapid decline in CD4 count compared with CASCADE.
Discussion: Despite the preservation of HIV-specific CD4 T-helper responses in 50% of treated seroconverters no correlation with CD4 count or clinical progression was observed.

O19

Late diagnosis and consequent short-term mortality of individuals sexually infected with HIV: England and Wales, 2002

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Aims: To determine factors associated with late diagnosis of individuals, sexually infected with HIV, and the impact this had on short-term mortality.
Methods: Analysis of national HIV/AIDS case reports of new diagnoses linked to CD4 cell counts from the CD4 Surveillance Scheme. Outcomes were late diagnosis (CD4 <200 cells/mm^3) and short-term mortality (death within a year of diagnosis).
Results: 38% of 3,596 individuals sexually infected with HIV (with CD4 counts at diagnosis) were diagnosed late. Late diagnosis affected 26% of homosexual men, 49% of heterosexual men and 40% of heterosexual women (22% where diagnosis was antenatal). Late diagnosis increased with age. Black Africans were diagnosed later than white individuals (although not evident after stratifying by other factors). There were 137 (2.6% of 5,200) deaths within a year of HIV diagnosis. Short-term mortality was 6.2% for individuals diagnosed late and 0.5% for others (excluding pregnant women for whom it was 0.4% overall). Early diagnosis could have markedly reduced short-term mortality and all mortality in 2002.
Conclusions: Continued late diagnosis, particularly of older and heterosexual individuals, means missed opportunities to start therapy early and to prevent further transmission, and an approximate 10 times higher risk of death within a year of diagnosis.s

O20

Therapeutic vaccination with HIV-1 whole killed vaccine is associated with immune modulation in HAART-naïve, asymptomatic HIV-infected individuals

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Background: Use of agents increasing natural immune response to HIV to delay initiation of antiretroviral therapy is being considered. Immunogenicity of REMUNE®, a gp120-depleted, whole-killed HIV-1 vaccine consisting of HIV antigen in Incomplete Freund's Adjuvant (IFA), was assessed in antiretroviral-naive HIV-1 infected subjects.
Methods: HAART-naïve asymptomatic subjects with HIV-1 RNA 10,000-40,000 copies/mL and CD4 400-800 cells/ul received three injections of REMUNE® (*N*=19) IFA (*n*=11), or saline (*n*=10) at weeks 0, 12, and 24.
Results: Median absolute CD4 counts remained stable through week 28 in REMUNE(r) patients (baseline=534 cells/ul; week 28=560 cells/ul) but declined in both saline (baseline=497 cells/ul; week 28=388 cells/ul) and IFA (baseline=549 cells/ul; week 28=431 cells/ul) treated subjects. Possible effect of REMUNE® on thymopoiesis was evidenced by increases in naïve (CCR7+/RA+), central memory (CCR7+/RA-) CD4 T cells, serum IL-7 and decrease in effector memory (CCR7-/RA-) CD4 T cells in the REMUNE® group. These changes were not observed in saline or IFA subjects. HIV specific CD8+ IL10-producing T cells (ICC) were diminished at week 28 in REMUNE® patients.
Conclusions: Immunotherapy with REMUNE® may be associated with changes in circulating lymphocytes phenotype and reduction of type 2 cytokines. Data from larger cohorts of patients is required to assess clinical significance.

O21

Discordant responses to HAART in ARV-naïve HIV infected individuals

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Aim: Evaluate virological and immunological responses to HAART.
Methods: 12 month treatment outcome was defined as successful (TS=VLBLD+>50CD4 cell rise), discordant immunological response(DIR=VLBLD+<50CD4 cell rise), discordant virological response(DVR=+VL+ >50CD4 cell rise) and failing (TF=+VL+<50CD4 cell rise). 24 month data and disease progression were obtained.
Results:

	All	TS	DIR	DVR	TF	*P*=
Number(%)	1141	757(66.4)	186(16.3)	98(8.6)	100(8.8)	
Baseline CD4(cells/µL)	175	157	264	151	225	<0.001
VL(copies/ml)	71,138	88,792	29,791	101,818	67,091	<0.001
Rate of CD4 decline preHAART (cells/mL/month[95%CI])		9.7 [9.1–10.3]	4.8 [3.7–6.0]	9.5 [7.9–11.0]	4.7 [3.3–6.2]	<0.001
24 month outcome N(%)	755	548(72.6)*	85(11.3)	65(8.6)	57(7.5)	*<0.05
Disease Progression(%)	6.3	4.6*	8.9*	4.2	9.4	*0.02

Conclusions: 24.9% experience DR at 12 months, affected by age, CD4 count, VL and rate of CD4 decline. DIR and DVR have a good treatment outcome at 24 months. <50 CD4 rise is more predictive of DP than a positive VL.

O22

Discordant CD4 and viral load responses in patients starting HAART in the UK Collaborative HIV Cohort (CHIC) Study

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Objectives: To examine the impact on survival and disease progression of a discordant CD4:viral load (VL) response at 8 and 12 months after starting HAART in the UK CHIC Study.
Methods: Patients with VL<50 copies/ml at 8m and 12m were divided into those with a rise in CD4 from baseline of <100 (discordant response) or >100cells/mm^3 (non-discordant response). Incidence rate ratios (IRR) for the effect of a discordant response on mortality and AIDS were calculated using multiple Poisson regression.
Results: 6120 ART-naïve patients started HAART of whom 1205 had baseline and follow-up CD4/VL data and VL<50 at 8m, and 1089 at 12m, of whom 494 (41%) and 351 (32%) had discordant responses respectively. Discordant responses were associated with an increased risk of death at 8m (6 deaths in the discordant group, 4 in the non-discordant; IRR=2.23; 95% CI [0.63,7.89]) and 12m (7 vs. 4; IRR=3.94 [1.15,13.46]), but a discordant response had little effect on the incidence of AIDS (312 and 282 events from 8m and 12m respectively).
Discussion: Many patients have sub-optimal increases in CD4 count after starting HAART. Discordant responses at 12 and possibly 8 months may be associated with poorer outcome, although few deaths were reported in this cohort study.

O23

The effect of year of treatment and NA backbone on durability of NNRTI-based regimens

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Introduction: Several cohort studies have suggested increased potency of efavirenz when compared with nevirapine but the 2NN study failed to show this difference. Two possible confounding factors are year of treatment and NA backbone. We evaluate the effect of these factors on NNRTI based regimen success in a large prospectively collected cohort.
Methods: ART naïve individuals starting NNRTI with dual NA backbone were identified between 1/1/1998–1/7/2004. Treatment failure was defined as switch/discontinuation of NNRTI or documented virological failure (2× VL>500 copies/ml).
Results: 994 patients were identified, 72.7% efavirenz and 27.3% nevirapine. There were no significant differences in gender, age, baseline VL or CD4 count. In univariate analysis, efavirenz was associated with significantly greater virological success (p<0.001). Multivariate analysis showed DDI/TFV(HR6.57, 95%CI 3.88–11.13) and DDI/D4T (HR1.49, 95%CI 1.00–2.22) to be significant independent predictors of failure. Univariate analyses showed the likelihood of success to be almost two fold increase per year (HR1.96, 95%CI 1.81–2.13) since 1998. When controlling for NA backbone and stratifying by year of therapy, there was no significant difference between treatment with nevirapine or efavirenz.
Conclusion: We have shown in a large NNRTI-experienced cohort, that although in univariate analysis efavirenz appears to have a higher success rate, this is explained by differences in backbone and year. This may explain differences between reported cohort studies and the 2NN study.

O24

Therapeutic drug monitoring (TDM) of efavirenz (EFV): a tool to predict virologic outcome in HIV-patients on first line once daily (OD) antiretroviral (ARV) therapy?

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Aim: To investigate the usefulness of TDM of EFV in ARV-naïve patients starting an OD regimen containing ddI/EFV and tenofovir (TDF) or 3TC.
Methods: EFV TDM was performed prospectively following ARV initiation with blood samples collected at weeks 4 and 12. Concentrations of EFV were determined by HPLC in plasma, samples collected 10–15h post-evening-EFV dose. For samples >15h, concentrations were back extrapolated to 12h by linear regression.
Results: Samples from 66 patients (9 females, median age 37years, baseline median CD4+ and mean viral load 174cells/mm^3 and 5.01log$_{10}$-copies/ml) were analysed (n=132). Median EFV-[C] were 1569 (range 354-11611) and 1705 (466-13351)ng/ml week 4 and 12. Among responders, 17 had at least one EFV-[C] lower than the suggested effective-[C] (MEC) of 1000ng/ml. Of the 5 non-responders, 3 had EFV-[C]<1000ng/ml (despite 100% adherence assessed by MEMSCAPS). Coefficient of variation in EFV-[C] was 90% at week 4 and 12. Subjects with higher (>1100ng/ml) EFV-[C] at week 4 and 12 were more likely to show virologic response (<50 copies/ml) at week 12 (p<0.001, ROC method).
Conclusion: Our prospective analysis confirms the association between EFV-[C] and virologic response but with wide variability in EFV-[C], suggesting a role for EFV TDM in naïve patients.

O24a

Predictors of current CD4⁺ T-cell response among patients receiving subcutaneous recombinant interleukin-2 (RIL-2) in ESPRIT (evaluation of subcutaneous Proleukin(r) in a randomized international trial)

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Aim: To examine predictors of current CD4+ response in patients on the rIL-2 arm of ESPRIT.
Background: ESPRIT is an international, phase III, open-label, randomized trial comparing the effects of subcutaneous rIL-2 and no rIL-2 on disease progression and death in HIV-1 patients with absolute CD4+ counts ≥300/µl at baseline who are taking combination antiretroviral therapy (ART).
Methods: Baseline and rIL-2 cycling characteristics of patients randomized to rIL-2 were analysed. Logistic regression determined the independent predictors of CD4⁺ increase >200/µl above baseline at 35 median months of follow-up.
Results: Analysis was based on 1,977/1,998 (99%) of patients receiving rIL-2. At their most recent follow-up examination, 876 (44%) had CD4⁺ increase >200/µl while 1,101 (56%) had CD4⁺ increase ≤200/µl from a median baseline CD4+ of 470/µl and 460/µl respectively. More patients with CD4+ increase >200/µl had baseline viral load <50 copies/ml (83% versus 77%; OR=1.8, 95%CI 1.4–2.3, p<0.001); and had completed (4 cycles of rIL-2 (67% versus 48%; OR=2.2, 95%CI 1.8–2.7, p<0.001). Age, duration of ART, nadir CD4⁺, baseline CD4⁺, gender, and stage of HIV disease at baseline were not significantly associated with CD4+ increase >200/µl above baseline. The results were similar for the UK subset of patients.
Conclusion: More rIL-2 cycles and undetectable viral load at baseline were associated with a better CD4+ response.

O25

Evidence for sexual transmission of HCV in recent epidemic in HIV-infected men in South-East England

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Aims: To characterise the mode of acute HCV transmission in HIV-infected individuals using linked molecular and clinical epidemiological analysis.
Methods: Patients enrolled had a seroconversion to anti-HCV + and positive HCV PCR within 9 months. The E1/E2 region of the HCV genome from each patient's serum was amplified with RT-PCR and sequenced. Using PAUP* software, a phylogenetic tree was constructed from the amplified sequences, comparing them with unrelated E1/E2 sequences. A case-control study using a questionnaire instrument to determine transmission factors was performed using HIV mono-infected controls from each clinic's database, matching for age, length of HIV infection and HAART.
Results: 90 HIV-positive homosexual males (mean age 36 yrs) with acute HCV have been identified. Phylogenetic analysis of 55 E1/E2 sequences reveals multiple monophyletic clades signifying that several independent HCV lineages (clades) are co-circulating in this population. The largest clade involves 21 patients. Preliminary factors identified more commonly in cases (n=23) vs controls (n=48) are: unprotected receptive and insertive anal intercourse (P<0.001), mucosally traumatic practices including fisting (P<0.001) and use of sex toys (P<0.001), group sex (87% Vs 52.3%, P=0.01), and sexual activity while feeling the effects of drugs (100% Vs 64%, P<0.003).
Conclusions: Mucosally traumatic sexual factors are significantly associated with the recent transmission of HCV.

O26

Is the treatment of acute hepatitis C in HIV-positive individuals effective?

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Objective: To evaluate the effectiveness of treatment of acute hepatitis C infection in HIV-1 positive individuals.
Design: Open label, prospective study.
Methods: Patients diagnosed with acute hepatitis C by positive HCV antibody test had sequential HCV RNA levels measured at 0, 4, 12, 24, 32 and 48 weeks. If HCV RNA positive at 12 weeks patients were offered pegylated interferon alpha-2b 1.5µg/Kg/week + weight adjusted ribavirin for 24 weeks. Patients with increasing HCV RNA VL were offered treatment earlier.
Results: 50 male homosexuals, mean age 37yrs, were identified: 44 via newly abnormal LFT's, 4 from sexual contact with HCV positive partner and 2 at HIV seroconversion. 12 individuals became HCV RNA -ve spontaneously. This was significantly associated with a high baseline median CD4+ lymphocyte count (P=0.029), CD4+ lymphocyte count >500 (P=0.017) and lower HCV RNA VL (P=0.017). 27 patients accepted treatment, 16 (59%) of whom had a sustained virological response (SVR). This was associated with a higher peak mean ALT (P<0.001) but not with genotype.
Conclusions: SVR rates in HIV positive patients treated acutely for hepatitis C are lower than in HIV negative subjects. A high percentage of individuals seroconvert spontaneously.

O27

Does nadir CD4 count in HIV-HCV co-infected patients predict HCV treatment response to pegylated interferon (p-IFN) and ribavirin (RBV)?

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Introduction: Response rates of 26–46% have been reported to p-IFN and RBV in HIV-HCV in published studies. None of these studies have investigated the role of nadir CD4 count in predicting response.
Aim: to evaluate treatment outcomes and predictors of response, particularly nadir CD4 counts
Methods: All HIV-HCV patients (n=59) who commenced treatment for chronic HCV at two centres were included in this analysis. Baseline demographics, HCV and HIV related factors were collated. Data was entered and analysed on SPSSv10.0.
Results: Patients were predominantly male (86%), Caucasian (87%), and on antiretrovirals (ARV) (69%). 32% were IVDU and 39% were MSM. 44% were genotype 2/3. Median age was 40yrs, baseline CD4 count was 468x106/l and nadir CD4 count was 220×10^6/l. Median baseline HCV-VL was 1.5X106IU/l. 56% had an end-of-treatment-response (Genotype (G) 1/4:33% & G2/3:86%) and 42% had a SVR (G1/4:24%&G2/3:65%). Predictors of response were nadir CD4 count (P=0.04) and genotype(P=0.008). No other factors predicted response including age, sex, type of p-IFN (2A/2B) or duration of HCV therapy. 19% discontinued therapy.
Conclusion: This analysis demonstrates SVRs comparable to controlled studies in HIV-HCV co-infected patients. In addition to genotype, nadir CD4 predicted response to HCV therapy. This merits investigation in larger datasets.

O28

Hepatitis C infection is not associated with systemic HIV-associated non-Hodgkin's lymphoma: a cohort study

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Aim: HIV-associated immunosuppression increases the risk of non-Hodgkin's lymphoma (NHL). The hepatitis C virus (HCV) has been implicated in the development of B cell lymphomas, and HCV is common in HIV-infected individuals, we compared the incidence of systemic NHL during HIV infection compared with HIV and HCV co-infection.
Methods: Data were extracted from a prospectively collected database for all patients entering our cohort in the HAART era. To compare lymphoma risk in HIV mono-infected and co-infected individuals, person years at risk (PYAR) was estimated from cohort entry to i) end of study period, ii) NHL development, iii) last recorded visit or iv) date of death. Data were analysed using the Genmod with loge link and Poisson error distributions; all P values are two-sided. All NHL cases were biopsy-proven and primary CNS lymphomas were excluded.
Results: Out of 5,832 individuals studied during the era of highly active anti-retroviral therapy (HAART), 102 patients were diagnosed with systemic NHL. The incidence of systemic NHL was 6.9/104 patient years in co-infected individuals compared with 7.1/104 patient years if HIV mono-infected (P=0.9).
Conclusion: In this immunocompromised patient population, there was no association between HCV infection and an increased risk of lymphoma.

O29

Inhibition of hepatitis B virus replication by small interfering RNA expressed from viral vectors

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Aim: To investigate the potential of RNA interference (RNAi) for the treatment of Hepatitis B virus (HBV) infection.
Methods: An RNAi sequence active against the HBV surface antigen (HBsAg) was expressed from a polymerase III expression cassette. Therapeutic use of RNAi demands a suitable delivery system. Hence, the expression cassette was inserted into two vector systems, one based on the Prototype Foamy Virus (PFV), the other, Adeno-Associated Virus (AAV). Both are non-pathogenic and capable of integration into cellular DNA. The vectors containing the HBV targeted RNAi molecule were introduced into a cell line stably expressing HBsAg (293T.HBs) and one which secreted infectious HBV virions (HepG2.2.15).
Results: We identified an RNAi sequence active against HBsAg. Further, we demonstrated knockdown of HBsAg by approximately 90%, compared with controls in 293T.HBs cells transduced by shRNA-encoding PFV and AAV vectors. This reduction has been observed up to 5 months post-transduction in single cell clones. Both vectors successfully inhibited HBsAg expression from HepG2.2.15 cells, even in the presence of HBV replication.
Conclusions: This work is the first to demonstrate that delivery of RNAi by viral vectors has therapeutic potential for chronic HBV infection and establishes the ground work for the use of such vectors *in vivo*.

O30

Is there a relationship between Familial Mediterranean Fever (FMF) host polymorphisms and paradoxical reactions (PR) in tuberculosis (TB)?

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Aims: The inflammatory condition FMF is associated with polymorphisms in the human pyrin gene. Its expression is upregulated by cytokines similar to those implicated in TB related PR. We sought to ascertain if patients with these polymorphisms are at an increased risk of PR compared to HIV + subjects (known risk factor for PR).
Methods: MEFV exon 2 restriction length polymorphism for Q148 was analysed in blood from subjects with active TB enrolled in a prospective study of PR. Analysis was performed using SPSS 10.0.
Results: 42 subjects were assessed – 17 (41%) HIV+. (24%) experienced PR. 9/42 (21%) expressed the Q148 mutation of which 4/10 (40%) had PR. 5/32 (16%) without PR were Q148 mutation+ (P=0.18). PR occurred in 5/17 (29%) HIV= and 5/25 (20%) HIV-subjects (P=0.71). The odds ratio (OR) for developing PR with Q148 was 3.6 (95%CI 0.40-7.0;P=0.48).
Conclusion: In our cohort PR appeared to be more strongly associated with Q148 polymorphisms than HIV status. This requires confirmation in a larger study.

O31

Identifying the key beliefs influencing uptake and adherence to HAART: final results of a 12-month prospective, follow-up study

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Objective: To examine the utility of a necessity-concerns framework in explaining uptake and adherence to HAART.
Methods: Patients attending Brighton clinics from 2000–2003 who were not taking HAART were referred to this study by their HIV doctor. Of 322 patients recruited, 153 were recommended HAART. Validated questionnaires investigating beliefs about personal necessity of HAART and concerns about adverse effects were completed following a treatment offer. Those who subsequently accepted HAART (n=120) were followed up after 1, 3, 6 and 12 months of treatment.
Results: Necessity (odds ratio (OR), 6.7; 95% Confidence Interval (CI), 2.5–18.0) and concerns (OR, 0.12; 95% CI, 0.03- 0.42) predicted uptake independently of clinical variables. Adherence was initially high but tailed off significantly by six months (P<0.001), and low adherence was predicted by changes in beliefs about HAART over time. Further analyses revealed how patients' perceptions of need and concerns about HAART derived from their interpretation of symptoms and personal beliefs about HIV that may conflict with the medical view.
Conclusion: This study has identified the key factors influencing patients' decisions about HAART and can inform the design of evidence-based interventions to facilitate informed patient choice in relation to HAART, with implications for clinical care.

O32

Stopping combination therapy whilst travelling: is there a reason for great concern?

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Aim: To investigate whether stopping HAART during travelling is of concern.
Methods: Questionnaire based survey of HIV positive individuals attending the HIV outpatient clinic detailing history of travel.
Results: 12% (26/216) of individuals had stopped HAART whilst travelling. 35% had a CD4 count of 200 or less. The regular HIV physician was informed in 46% and only 30% had HIV inclusive travel insurance. At the time of stopping 19 % were on a triple nucleoside, 44% a PI and 38% an NNRTI regimen. Individuals were twice more likely to stop a PI regimen than an NNRTI regimen, 15% versus 7%. 65% had prior drug resistance. 50% reported 'entering a country with HIV restrictions' as the main reason for stopping, 39 % 'fear of being found out' and 23 % side-effects from tablets. Stopping had a clear relationship to ethnic background: white 11%, Black 30%, Asian 0%. 31 % had to end their journey prematurely (versus 7 % who continued HAART), 50% had to see a doctor abroad (versus 18 %) and 62% needed to see a doctor on return (versus 27%).
Conclusion: A significant proportion stop HAART at low CD4 counts and are at greatly increased risk of developing medical problems. Development of drug resistance is a real concern.

O33

Switching from a thymidine analogue to tenofovir (TDF) achieves similar resolution of lipoatrophy and better reduction in lipids than switching to abacavir (ABC). Results of the RAVE study, a UK multi-centre open-label randomised controlled trial

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Methods: 105 HIV+ adults with moderate/severe lipoatrophy and HIV-RNA <50 on HAART containing d4T (n=71) or AZT (n=34) were randomised to switch the thymidine analogue to open label ABC 300mg bd (n=52) or TDF 300mg od(n=53). Patients had to have no documented resistance to ABC or TDF and/or no treatment history suggestive of such resistance. Analyses were performed on an intent-to-treat basis ignoring treatment changes
Results: Limb fat by DEXA was similar for the two groups at baseline. Comparisons of results at baseline and at 48 weeks are given below. Limb fat increased significantly in both groups (P<0.01) but with no difference between the groups (P=0.36). CT scan showed reductions in visceral fat and increases in subcutaneous fat that were similar for both groups (P=0.32 & P=0.78 respectively). Viral load suppression was similarly maintained by ABC and TDF(P=0.16). Ten patients discontinued study drug, 1 on TDF, 9 on ABC (3 with hypersensitivity reactions). Changes in cholesterol and LDL significantly favoured TDF (P=0.01 & 0.05 respectively). A pre-planned subanalysis of response according to thymidine analogue will be presented.
Conclusions: Switching from a thymidine analogue to tenofovir achieves similar resolution of lipoatrophy, better reduction in lipids, and fewer treatment discontinuations than switching to abacavir.

O34

3-dimensional surface laser scanning and psychological assessment: objective evidence for the use of polylactic acid implants in HIV-associated facial lipoatrophy

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HIV-associated lipoatrophy is a physical condition which is associated with significant psychosocial morbidity. This study shows aesthetic and psychological improvement with facial injections of Polylactic acid (PLA) (NewFill(R)).
Methods: 50 patients with HIV-associated facial lipoatrophy had PLA implants into their cheeks. All patients were assessed with 3 dimensional (3D) facial laser scanning, psychological questionnaires (Derriford Appearance scale, HADS, Rosenberg self esteem scale) and clinical photography and examination prior to treatment. All patients received 4 or 5 sets of treatment. The first 30 patients had 3D scans and clinical photographs before each treatment. All assessment measures were repeated every 6 months until 1 year after treatment.
Results: Pre-treatment 3D laser scans were used as baseline (0mm). Mean surface projection improvements were 0.8mm after 1 treatment, 1.4mm after 2 treatments, 1.8mm after 3 treatments, 2.3mm after 4 treatments and 2.6mm after 5 treatments. Post treatments scans at 6 months (2.8mm) and 12 months (2.8mm) showed persisting changes. There were significant improvements in all Psychological and clinical measures.
Conclusion: PLA implants improve the physical changes of HIV-associated facial lipodystrophy. Physical and psychological measures show objective improvements with treatment which persist for a year following treatment.

O35

What is the cost of switching an anti-retroviral therapy (ART) from an HIV-centre perspective?

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Aim: To estimate costs associated with switching an ART for reasons of Virological-Failure or Modification (non Virological-Failure: i.e. toxicity, non-adherence) in the UK setting.
Methods: Treatment-resource pathways associated with (i) maintaining (VL<50copies/ml), or (ii) switching ART, were developed from surveying staff at three HIV-centres (2 London, 1 outside London). Direct resource costs for HIV-centre medical personnel (e.g. physician, nurse, pharmacist, dietician) and laboratory tests (e.g. viral-load, CD4, biochemistry, genotype, TDM) were included from an NHS perspective. Total costs for each scenario (i and ii) were calculated from valuating the resources consumed using representative NHS unit-costs. The difference between these total costs was the cost of switching ART. Further analyses investigated the impact of centre-specific costing and costs over a one-year period. Costs for overheads, capital, lost ARTs, concomitant treatment/investigations for Virological-Failure- or Modification-related adverse events (e.g. diarrhoea, rash) were excluded.
Results: The mean (lower-upper range) costs across 3 centres of switching ART for Virological-Failure or Modification were £787(£730–£889) or £534(£367–£618), respectively.
Conclusion: This is the first study to estimate the cost of switching ART in the UK, a frequently overlooked element in costing HAART strategies. This resource utilisation model provides a methodological framework for HIV units to determine the cost impact of switching patients.

O36

Extent of underdosage of antiretroviral therapy in HIV-infected children

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Aims: To explore the extent of, and contributing factors to, underdosing of antiretroviral therapy (ART) drugs in children with HIV infection in the UK and Ireland.
Methods: We evaluated ART doses prescribed to children aged 2–12 years in the Collaborative HIV Paediatric Study (CHIPS) (January 1997–December 2003, to be updated to November 2004). Underdosing was defined relative to current recommended doses (CRD) in 2004 Paediatric European Network for the Treatment of AIDS (PENTA) guidelines in order to evaluate 'dosage-adequacy' based on current best evidence.
Results: The CHIPS cohort included 78% (757) of diagnosed HIV-1-infected children; 73% had received ART drug(s). Children were underdosed for 40.5% of their time on ART. Most commonly underdosed ART drugs were efavirenz and nelfinavir. Prevalence of underdosing reduced over calendar time, particularly for nelfinavir and nevirapine, concordant with changes in prescription guidelines. Accordingly, newer drugs such as kaletra were underdosed least. Reasons for underdosing included failure to increase doses with growth; limitations of drug formulations; rounding-down calculated doses; and, for certain drugs, dosing using weight-bands or mg/kg for dose calculations, rather than as recommended in prescription guidelines.
Conclusions: Largely unwittingly, we have greatly underdosed HIV-infected children on ART over the past 7 years.

O37

Enhanced surveillance for lymphogranuloma venereum (LGV) in England

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Aim: To raise awareness and improve the diagnosis and surveillance of LGV in England.
Methods: In October 2004 the Health Protection Agency (HPA) launched an enhanced surveillance alert following outbreaks of LGV among men who have sex with men (MSM) presenting with proctitis in western Europe. Case definition is confirmation of C. trachomatis by RT PCR in a rectal or urethral specimen and presence of an LGV serovar, L1, L2 or L3 by genotyping. Clinicians provide additional clinical and behavioural data on confirmed cases.
Results: By end Jan 2005, 29 cases of LGV were confirmed: 22 (76%) from London and the remainder from major towns across the UK. Epidemiological data for 19 cases confirmed: All 29 are MSM; 17 (89%) HIV positive; 18 reported anorectal symptoms; seven had systemic symptoms; and two inguinal LGV symptoms. Concurrent STIs were reported for 8/19(42%) patients and 4(21%) of whom were hepatitis C antibody positive. Probable country of acquisition was reported for 15 men, five identified mainland European countries, and 10 within the UK.
Conclusion: The HPA alert, Terence Higgins Trust publicity campaign, and improved diagnostic tests, have increased community and professional awareness about LGV, case ascertainment, and confirmed in-country transmission of this rare disease.

O38

An outbreak of lymphogranuloma venereum in London in 2004

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Introduction: Lymphogranuloma venereum (LGV), [*Chlamydia trachomatis* (CT) – serovars L1–3] is rare in the UK. There has been a recent resurgence of LGV (serovar L2) in Western Europe, with outbreaks in several European cities among homosexual men (MSM); who are predominantly HIV positive and many also co-infected with hepatitis C (HCV).
Methods: All CT positive rectal samples identified by culture and polymerase chain reaction (PCR) at UCLH during 2004 were genotyped for presence of an LGV serovar and a clinical notes review was undertaken.
Results: 20 CT positive samples were identified. So far, 10/15 samples typed have been identified as LGV (L2). The earliest case of LGV identified is from April 2004. All those with LGV were MSM, 9/10 lived in London, age range 24–47 years, 9/10 were HIV positive, 2/10 co-infected with HCV and 9/10 had symptomatic proctitis. 1/10 had inguinal lymphadenopathy and 1/10 reported constitutional symptoms at diagnosis.
Discussion: Up to 18th January 2005 there were 23 confirmed cases of LGV in the UK including 10 from our centre. Retrospective testing has shown its presence in the UK since April 2004. Clinicians should be aware of LGV in the UK population particularly its presentation as proctitis among HIV positive MSM.

O39

Syphilis outbreak in commercial street sex workers in east London

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Background: An outbreak of infectious syphilis was identified in street commercial sex workers (SCSWs) in Hackney, East London in early 2004.
Objective: To describe the epidemiology of the outbreak and measures taken from April–December 2004.
Methods: A multidisciplinary team (MDT) based around an existing outreach service provided a targeted service for STI screening and treatment. SCSWs were identified at outreach or during drop-in sessions. Meals were provided as an incentive for attending the GU clinic with outreach workers.
Results: Of 24 SCSWs identified, 14 (58%) were found to have positive treponemal serology (4 secondary, 6 early latent and 4 late latent syphilis) Treatment was with either Benzathine penicillin (4), azithromycin (3), doxycycline (2) or azithromycin and doxycycline (4). Coexistent STIs were identified in 10 (42%). 92% used crack or heroin.
Discussion and Conclusions: Outbreak management in this population is challenging: an MDT approach is crucial in identifying/treating syphilis to prevent onward transmission. High prevalence of syphilis was detected. Azithromycin was preferred by SCSWs; possible resistance problems were minimised by addition of doxycycline. As contact tracing is difficult, public awareness was heightened through local newspaper articles. Real-time rapid syphilis tests (Abbotts) were introduced to screen at source for SCSWs who decline attending GUM clinics.

O40

Syphilis PCR use for diagnosis of early syphilis audited against routine serological testing

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The incidence of syphilis in the UK is increasing. Real-time Polymerase Chain Reaction (PCR) assays were designed using gene targets used with previously published PCR assays for the detection of syphilis we audited the use of the PCR against routine serological testing. Swabs taken from ano-genital or oral ulcers where either herpes or syphilis was suspected and tested by syphilis PCR using both the Light Cycler and Taqman assays. Samples were initially refrigerated at 4 degrees centigrade and transferred to sterile 1.5ml tubes for storage at -80 degrees centigrade. Batches of samples were then tested. DNA was extracted by Qiagen DNA extraction method. 135 samples from 111 patients were analyzed from July 2003–December 2004. In the statistical analysis only one sample was analyzed per patient. 14 samples were PCR positive by both methods, 1 sample positive only by Light cycler and 1 by Taqman assay only. In 2 samples which were PCR positive, syphilis serology was positive but not felt to be consistent with recent or active infection. Of the PCR negative samples 5 had serology consistent with active or recent syphilis infection. Sensitivity was 70.1% and specificity for both PCRs to be positive was 97.8%. Given problems with conventional serological testing for syphilis PCR provides a useful addition.

O41

Opa-typing can subdivide NG-MAST sequence types of *Neisseria gonorrhoeae* into epidemiological relevant groups

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Aims: To opa-type all ciprofloxacin resistant (MIC≥ 1mg/l) and intermediate resistant (MIC≥ 0.05 <1mg/l) isolates submitted to SNGRL in 2002 that had a non-unique sequence type by NG-MAST. To assess the concordance between opa and NG-MAST sequence types. To determine if epidemiological information supports any subdivision of NG-MAST sequence types resulting from opa-typing.
Methods: 74 isolates were opa-typed and the results compared with NG-MAST sequence type and epidemiological data. These 74 isolates were selected on the basis of NG-MAST sequence typing of 106 isolates with reduced susceptibility to ciprofloxacin (89 resistant and 17 intermediate resistant) submitted to SNGRL in 2002: there were 12 clusters containing 2–32 isolates each (74 isolates in total) and 32 unique sequence types.
Results: The 74 isolates were divided into 20 opa-types. Seven of the NG-MAST sequence types were concordant with single opa-types, but the remaining five sequence types (ST147, ST314, ST304, ST203, ST211) were subdivided into 2–5 opa types. The largest NG-MAST cluster, ST147, containing 32 isolates, could be subdivided into five opa-types. Differences in patient sexual preference, and geographical location were apparent for some of the opa-type subgroups.
Conclusions: Opa-typing can subdivide NG-MAST clusters into subgroups, some of which are supported by epidemiological data.

O42

HIV-1 antibody avidity testing to identify recent HIV seroconverters

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Objective: Antibody avidity, a measure of the tightness of antigen-antibody fit, is low in early infection and increases as IgG responses mature. Our aim was to determine whether the avidity index for HIV antibodies can be used as a new serological marker to identify recent seroconversion among newly diagnosed HIV-positive persons.
Methods: Serum samples were tested for HIV antibodies by manual EIA (Ortho Diagnostics). Two aliquots were tested in parallel and in duplicate or triplicate wells following either the standard EIA protocol (=reference) or a modified protocol requiring an additional wash with 8M urea in PBS to dissociate low avidity antibodies (=test). The avidity index was calculated by dividing the averaged reference optical density (OD) value by the test averaged OD value.
Results: Among newly diagnosed HIV-positive persons, 17 patients had a clinical history suggestive of a recent infection. Their median baseline CD4 cell count was 620 cells/µL (range 520–1000). The serum samples collected at the time of diagnosis showed an avidity index consistently ≤0.60 (median 0.40, range 0.2–0.60). Among the 17 patients, 9/17 showed reference OD values increasing from low to high in follow-up samples, consistent with a recent infection; the remaining 8/17 had a strongly positive reference EIA but were confirmed as recently infected by Western blot. All 17 patients had detuned EIA result (STARHS) consistent with infection acquired within the previous 5–6 months. The avidity index was monitored in follow-up samples collected at various time points after HIV diagnosis. Avidity increased over time and was 1.0 by day 30.
Conclusions: A HIV-1 avidity index =0.60 reliably identified HIV-1 infection acquired within the previous 30 days and was more sensitive in identifying a recent infection than a low reactivity in the screening EIA test.

O43

No recent increase in mortality among HIV-diagnosed individuals with long exposure to therapy: UK 1987–2004

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Aim: To determine whether mortality rates have increased in cohorts of HIV infected individuals with long treatment exposure.

Methods: Analysis of national HIV surveillance data to examine all-cause mortality rates of HIV-infected cohorts – grouped by year of diagnosis. Mortality rates were calculated as the percentage of HIV-diagnosed individuals that died within 0,1,2,etc. years of diagnosis – approximated to calendar years.

Results: The number of deaths fell from 1,530 in 1995 to 409 in 2001 but is likely to exceed 500 for the first time since 1997 in 2003. Mortality rates of cohorts diagnosed between 1987 and 1995 fell from an average of 7.5% per year before 1996 to 2.1% in 1997 and then continued to decline to 0.9% in 2002. Cohorts diagnosed between 1996 and 2002 experienced an average drop of 82% in mortality rates from the year of diagnosis to the following year, and then a slow but continued decline. There was no evidence of an increase in mortality rates in recent years in any of the 'year of diagnosis' cohorts.

Conclusions: HAART dramatically cut mortality rates in 1996 and continues to postpone death in individuals who were diagnosed with HIV in the early 1990s and those newly diagnosed since 1996.

O44

How salvageable are the K65R and L74V mutations?

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Aim: To investigate subsequent virological response to HAART in patients with a K65R or L74V mutation.

Methods: Data were extracted for all patients entering our cohort since January 2000. We identified all those with either mutation, analysed subsequent HAART regimens and calculated % chance of viral suppression (<50 copies/ml). Results are divided according to whether subsequent therapy included ddI/ABC or TFV/3TC for individuals with L74V/K65R respectively and whether or not therapy included a PI.

Results: 52 and 91 patients with K65R/L74V respectively had >6/12 follow-up. The numbers and percentage achieving undetectability with first subsequent therapy are illustrated below.

	NRTIs	PI-regimen	Non-PI
L74V	ABC	13/20 (65%)	11/21 (52.4%)
	ddI	8/11 (72.7%)	2/7 (28.6%)
	ABC/ddI	1/3 (33.3%)	0/4
	No ABC or ddI	14/19 (73.7%)	1/6 (16.7%)
K65R	TFV	7/7 (100%)	1/3 (33.3%)
	TFV/3TC	3/4 (75%)	
	No TFV	25/30 (83.3%)	4/8 (50%)

Conclusion: The K65R mutation appears to be highly salvageable with a PI-based regimen, whether or not the backbone includes TFV, and less so with non-PI HAART. There is a trend for less success salvaging the L74V whether or not this includes a PI.

O45

Triple class antiretroviral agent resistance in a large UK cohort – prevalence and risk factors for acquisition

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Introduction: Individuals harbouring triple class resistant virus constitute one of the major treatment challenges of the HAART era. This study examines the prevalence of triple class resistance and factors influencing its acquisition

Methods: Patients with genotypic tests demonstrating resistance to the three main antiretroviral classes were identified from a large clinical database. Data were scrutinised to identify risk factors for acquisition of triple class resistance.

Results: 7715 resistance tests from 3476 patients have been collected. 231(6.7%) individuals had triple class resistance defined as ≥3 mutations, constituting ≥1 mutation from NRTI, NNRTI and PI class at any time point.170 (73.6%) had exposure to mono or dual agent antiretroviral therapy in the pre-HAART era.16 patients (6.9%) had documented non-adherence.14(5.6%) experienced adverse side-effects.5 patients(2.2%) underwent unstructured treatment interruption.1(0.4%) had concurrent illness and 1 treatment naïve individual (0.4%) had acquired a multi-resistant virus at the time of seroconversion.

Conclusion: The need for salvage therapy is best prevented by limiting acquisition of triple class resistance.Three class resistance exists at a low level in our population. 73.6% of individuals received incompletely suppressive therapy in the pre-HAART era.Non-adherence, unstructured treatment interruption, side-effects eliciting non-adherence, concurrent illness and acquisition of resistant virus were all implicated in the development of multi-drug resistance.

O46

Virological and clinical outcomes in patients with multi (three)-class drug resistant (MDR) HIV in the UK

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Aim: To evaluate predictors of survival and virological response in patients with MDR HIV in the UK HIV Drug Resistance Database.

Methods: Poisson and linear regression were used to determine factors associated with survival and HIV viral load (VL) response 24-48 weeks after MDR diagnosis.

Results: 628 patients; 85.3% males; median age 43 years; median CD4 and VL at MDR diagnosis 238 cells/mm^3 and 4.15 $\log_{10}$ copies/ml; median number of any inactive drugs 12; median time on ART 4.5 years. There were 54 deaths after MDR diagnosis (median follow-up 23.9 months). Estimated probability of death was 3%, 8% and 13% by 12, 24 and 36 months respectively. 250 patients changed regimen after MDR diagnosis. In adjusted analysis, higher VL and lower CD4 at MDR diagnosis were significantly associated with increased risk of death (P=0.03, <0.001). Change in regimen and lower number of inactive drugs were significantly (P<0.01) associated with a decreased risk of death. In patients changing therapy after MDR, genotypic sensitivity score of the new regimen was significantly associated with decrease in VL after 24 weeks, (P=0.02) but not the risk of death (P=0.11).

Conclusion: Active management of patients with MDR HIV-1 is associated with delayed time to death, and resistance test guided therapy confers virological benefit.

O47

CD4 counts and the risk of lymphoma in individuals with HIV in the UK

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Aim: To describe the incidence of and risk factors for lymphoma in the HAART era in the UK CHIC Study.
Method: Poisson regression analyses determined the associations between lymphoma and the following variables: sex, exposure, ethnicity, viral load, current and nadir CD4 count, receipt of HAART.
Results: 106/13729 (0.8%) patients had lymphoma (59 NHL, Burketts, immunoblastic or equivalent, 23 primary cerebral and 24 type unknown). At lymphoma diagnosis, patients were aged from 25–73 (median 38) years, had a median CD4 count of 169 cells/mm^3, and 52 (49.1%) had received HAART. 80 (75%) were homo/bisexual with 76 (72%) white and 13 (12%) black African. Compared to individuals with a CD4>500 cells/mm^3, the rate was highest in those with a current CD4<50 cells/mm^3 (relative rate 9.46, 95% CI: 3.4, 26.1, P=0.0001) and decreased as the CD4 count increased. The trend with nadir CD4 count was similar. There were no significant relationships with sex, exposure, ethnicity, age or previous HAART. After adjusting for the most recent CD4 count, the nadir count was not significantly associated with the risk of lymphoma.
Conclusion: The risk of lymphoma is increased at low CD4 counts, although the nadir CD4 does not contribute further to this risk.

O48

A prognostic model to predict survival in systemic aids related non-Hodgkin's lymphoma

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Background: The established International Prognostic Index (IPI) for lymphomas has not included patients with systemic AIDS-related non Hodgkin's lymphoma (ARL). As this remains an important cause of morbidity and mortality in individuals infected with the human immunodeficiency virus (HIV), we wished to establish the most appropriate prognostic index for use in these patients.
Methods: Multivariate analyses of 215 patients with ARL were used to examine criteria for survival. Cox's proportional hazards regression analysis determined the prognostic significance of clinico-pathological variables.
Results: In multivariate analyses of the entire cohort, CD4 count, prior AIDS diagnosis, Burkitt's lymphoma and IPI risk group were significant variables. Regression modelling for patients diagnosed in the era of HAART reveals 2 independent predictors of mortality: IPI risk group and CD4 count. These identified four risk strata with one year survivals of 82%, 47%, 20% and 15%.
Conclusions: For patients with ARL in the era of HAART, an accurate prognostic score can be established by combining the IPI with CD4 count. As patients presenting with ARL and a low CD4 count have a poor prognosis, this can be used to guide therapeutic options.

P1 ■

Improving access and managing patient flow in a busy inner city, sexual health clinic

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Background: Rates of STIs and GUM attendances continue to rise. Novel ways of improving access and quality are needed. We report the impact of changes to service delivery on patient flow and transit times.
Methods: Detailed demand and capacity analyses were performed. We undertook process mapping to better understand our system with a view to improving patient flow. We designed a 'Slot System' to spread demand throughout the day. The service remains 'walk-in' but each day is divided into hourly slots and a fixed number of patients are seen each hour. Activity and patient transit times were recorded throughout. Data was analysed using run (SPC) charts and control (I or xMR) charts.
Results: Patient attendances have remained stable. Mean transit time decreased from 1hr 38 minutes (upper control limit (UCL) 3hrs 48 minutes) to 1 hr 13 minutes (UCL 2hrs 56). The proportion of patients waiting more than 4 hours reduced by 90%.
Conclusion: Improvements to service have been measurable. We have established that better analysis and management techniques can have as large an impact as simply spending resources on more of the same. Continued work to reduce waiting and transit times will further improve service quality with the ultimate aim of reducing local sexual ill-health.

P2a ■

Releasing capacity through reduction in follow-ups

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Presenting on behalf of the Six-Sigma Group: S Barton, S Bhaduri, C Bowman, E Carlin, S Dawson, P Greenhouse, TC Harry, M Kingston, E Morgan, C O'Mahony, J Ross, M Weir

Background: Patients wishing to access GUM clinics have endured long waiting times due to excess demand. Follow-up:new case ratio has dropped from 2.2:1 in 1990 to 1.3:1 in 2003.
Method: 12 Centres formed a project team to challenge current practice and seek ways of reducing the ratio. Using the six-sigma management tool, the team identified opportunities for reducing the ratio. Six-sigma uses a 5-stage process 'DMAIC': Define-Measure-Analyse-Improve-Control. All follow-up patients attending the 12 centres during 19–23.04.2004 were analysed against a set proforma.
Results: Group base line ratio was 0.7:1 ($p<0.02$). 3 main reasons were identified where further reduction was deemed possible: results policy, Chlamydia/non-gonococcal urethritis and warts. Aim was to reduce by 80% in each of the three areas; a potential group mean of 0.47 was identified as a target to work towards. Groups mean ratio was 0.5:1–(31.12.2004)
Conclusion: The follow-up:new ratio can be significantly reduced thus releasing much needed capacity. The six-sigma management tool ensures that patient processes, which contribute to the ratio, are properly evaluated and opportunities for improvement identified. It also ensures that effective controls are in place to ensure that the quality of care is not compromised. The completion date for the project is March 2005. Final data will be available at the conference.

P2 ■

Turning the tide – effectively managing increasing demand for GU services

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Background: Since the late 1990s GUM services have witnessed unprecedented increases in demand due to rising STI rates, changes in sexual behaviour and greater public awareness. The situation has been exacerbated by attempts to meet Sexual Health Strategy targets within constrained resources. Without compromising quality of clinical care, we modernised services within existing resources.
Methods: Following multidisciplinary consultation, service provision changes were implemented: redesign of appointment system, using an advanced access model, prioritising symptomatic patients; improving laboratory/clinic IT links to facilitate 'no-news is good-news' results system (including HIV results); introducing telephone follow-up for NSU/chlamydia; increased use of text-messaging for results/recall/appointment reminders.
Results: There was a reduction in follow-up to new-episode ratio from 2.11 in 2001 to 0.86 in 2004. Between 2001 and 2004 chlamydia diagnoses increased by 89%, and syphilis by 455%. HIV testing rates improved: 93% patients offered a test in 2004 with uptake of 65%, compared to 76% and 48% respectively in 2001.
Conclusion: By reconfiguring services the need for follow-up appointments declined, whilst maintaining access for symptomatic patients. Patient and staff satisfaction improved, with reduced waiting times and predictable workload. These modernisation efforts increased efficiency without compromising quality of care, although additional resources are required to address asymptomatic disease.

P3 ■

Experience with the Test not Talk (TNT) clinic for asymptomatic men

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Aim: Evaluation of a screening clinic for asymptomatic men.
Methods: Audit of the first year of TNT services.
Process: The receptionists asked male patients calling for an appointment: 'Do you just want a check up or do you have symptoms'. Check up only patients were offered a TNT appointment. In the clinic patients received written information, a symptom/risk self-assessment questionnaire saw a nurse and were offered first void urine (gonorrhoea-culture, chlamydia-SDA) and blood tests (syphilis-EIA, HIV-EIA). Symptomatic, high risk patients or patients who want to talk were referred to the next GUM clinic. Results were communicated by letter or phone.
Results: 39 clinic sessions were offered and 337 of 468 possible appointments were made. Of the 303 men who attended (median age of 23) 264 were new to our service, 161 classified themselves as white UK and 257 as asymptomatic. Symptoms and risk factors acknowledged were: genital pain:10, dysuria:10, urethral discharge:0, skin problems:18, MSM:10, IVDU:2, >1 partner in the last 3 months:118.
248 underwent full STI/HIV screening and 22 new STI diagnoses were (chlamydia:20, gonorrhoea:1, late latent syphilis:1). All patients with STIs were effectively treated.
Conclusion: Screening by receptionists identified patients suitable for a high volume, and low cost screening.

Large Poster ■ Standard Poster ●

P4

Do GUM patients want chaperones?

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Background: The GMC and Royal Colleges recommend that we offer chaperones to all patients for intimate examinations. Only 10% of genitourinary medicine (GUM) clinics have a policy regarding chaperones. The policy in the 2 clinics studied is to offer each patient a chaperone before their examination. Little data is available from the patient perspective.
Aim: To identify patients' wishes concerning offer and provision of chaperones in a GUM clinic.
Methods: Anonymous questionnaire given to patients after their examination at two GUM clinics in London.
Results: 600 questionnaires were completed. Results of 336 showed: mean age 29 (range 16–61), M:F 51%:49%. 158 (47%) were offered a chaperone at this visit, of whom 20 (12%) said yes, 128 (80%) declined (8% no response). 167 (50%) weren't offered a chaperone, of whom 143 (80%) didn't want to be offered one. 12% (40) of respondents said they would like a chaperone at their next visit. The patients preferred method of being offered a chaperone was to be asked during the consultation (48%,55/114). Full results will be presented at the conference.
Conclusion: This study shows the majority of patients do not want a chaperone, but if offered one, this should be during the consultation.

P5

Finding out what primary care wants from GUM and delivering it

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Aim: To support primary care delivery of STI services according to GPs' requirements.
Methods: Questionnaire survey to prioritise interventions deliverable with existing resources.
Results: A brief questionnaire was sent to each of 709 GP principals and practice nurses (PNs) in 127 practices in Lothian in October 2003. Overall return rate was 58%. At least one questionnaire was returned from 95 practices (75%). To improve STI care 42% prioritised improving existing services, 36% developing peripheral services and 18% improving support for GPs. Changes that GPs and PNs thought would most help them to manage STIs and refer appropriately were an STI management protocol, a telephone helpline, and a website. A GP liaison group was formed and developed and published an STI management protocol as its first priority, with a navigable web-based version launched in November 2004. The protocol directed GPs to a helpline that was incorporated into the existing nurse triage service. Other findings are guiding the further development of STI services.

P6

HIV workload and patient complexity ratings

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Aim: To investigate changes in HIV activity between 2000 and 2003 and introduce a patient complexity model to monitor HIV casemix and outcomes.
Methods: Identified patients seen at a single centre between 1/1/2000 and 31/12/2003.
Results: The number of patients increased by 35% from 1524 in 2000, to 2057 in 2003. Total outpatient visits increased by 53% from 13,637 in 2000, to 20,808 in 2003 and the mean number of visits per patient increased from 8.95 to 10.12. Day case visits decreased by 6% while inpatient visits increased by 19%. Plotting actual data against predictions from the 1999 York report indicated that actual patient population and outpatient activity are much increased on previous expectations. Non-complex patients increased by 47% from 1146 in 2000, to 1682 in 2003 and patients of varying complexity increased by 15% from 338 in 2000, to 389 in 2003.
Conclusion: Rising patient numbers have led to a huge increase in workload. Activity/casemix trends among Trusts must be monitored on a regular and comparable basis so that we can be better prepared for future growth and diversity as well as the changing commissioning needs of Trusts for the particular cohort of patients for whom they provide care.

P7

HIV admissions in a south London teaching hospital

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Introduction: The incidence of HIV is rising in the UK with 63,000 cases reported by the end of 2003. About 14,300 cases are estimated to be unaware of their diagnosis. Despite improved testing and effective treatment, new and known HIV patients still present with advanced disease or AIDS-defining illnesses (ADI's). We aim to describe the admission demographics at our inner city unit.
Methods: We conducted a retrospective analysis of 140 admissions at St Thomas' Hospital from September 2003 to September 2004. Data on age, sex, ethnicity, length of stay, new versus old diagnosis, CD4 count, viral load (VL), ADI's and bacterial infections were collected and analysed on Microsoft Access.
Results: 70% of all patients were male, 39% white, 39% black (91% of these African). 30% of all patients were new HIV diagnoses. Of these, 80% had a CD4 Count <200, 40% a CD4 count <50, 52% a VL >100000, 64% an ADI. 52% of all cases were already on HAART. Of these, 52% had a detectable VL, 43% a CD4 <200, and 25% an ADI.
Discussion: Our study showed that a significant proportion of HIV admissions are late presenters with preventable morbidity. Improved testing and public awareness remain a priority.

P8

Are we a happy lot? Evaluation of a walk-in GU service

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Background: GU clinics nationally have experienced dramatic increases in clinic attendances and strategies for managing demand and access are constantly being explored. Prior to March 2003 the clinic offered a walk in service in the mornings and appointments only in the afternoon, but this had to be reviewed in view of perceived imbalance between a.m./p.m. sessions, high DNA rates in the afternoon, loss of lunchtime educational and training opportunities by over-running a.m. sessions. In April 2003 walk in service was extended to the afternoons with appointments late morning and in the late afternoon.

Discussion: A pre and post-implementation patient and staff satisfaction exercise was undertaken in March 2003 and in June 2003, which indicated that the new system benefited staff and patients. Satisfaction rates were up by 15–20% for both groups. Details of this will be presented. However, since 2003 an increase of 5% has been observed. The impact of this further increase on patient and staff satisfaction has been evaluated.

Conclusion: Increase in demand with no corresponding growth in resources has precipitated a considerable decrease in the satisfaction levels for both staff and patients, and will be discussed. Walk in STI service, though a viable option, needs adequate long-term resources.

P9a

Recognising the potential of non-registered nurses to increase capacity – another phase in modernising GUM Services

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Aim: To identify a 'New' way of screening for asymptomatic men. To evaluate the feasibility of using non-registered clinicians to deliver a fast-track 'mini-screening' service.

Method: All male 'walk-in' patients between August-October 2004 were given a leaflet explaining suitability for 'mini-screen', as well as information regarding tests and procedures. Mini-screen comprised of a first catch urine for chlamydia (BD-Probetest) and serological tests for syphilis and HIV. Screening was undertaken by trained non-registered nurses using a standard proforma. All positive diagnoses followed-up as per clinic policy.

Results: 58 patients opted for 'mini-screen', (49%) had previously attended. 51 eligible, 7 referred back to clinician. 49/51(96%) consented for syphilis and HIV serology, all negative. 8 (16%) chlamydia positive, all successfully recalled, and one contact per index case treated. All documentation had been completed correctly. Mini-screen patients spend less time in the clinic as compared to other walk-ins (38:140min).

Conclusion: Rapid STI screening is feasible within GUM for asymptomatic patients. This service is comparable to the chlamydia-screening programme – indeed more value added as patients get offered tests for syphilis and HIV. Rapid screening services improve the 'patients process', and releases capacity of registered clinicians to see symptomatic patients.

P9

Does a closed appointment system improve access?

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Introduction: Patients attending all GU clinics were recently asked to complete a HPA survey regarding time taken to obtain an appointment. In North Worcestershire (where routine appointments can only be made 48 hours in advance), the result was 43% of patients could obtain an appointment within 48 hours (West Midlands average was 28%). Is this figure anomalous or does it reflect genuine access?

Methods: Telephone calls were logged over a 3 month period recording whether a routine appointment was offered or not available.

Results: On average 143 calls regarding appointments were logged per week (range 113–166). 47% (range 38–57%) of callers/week were able to make routine appointments, 44% (range 27-59%) were unable to book and were asked to ring again (20% of these were male). 9% were offered appointments but declined attendance at time offered.

Conclusion: Call analysis correlated with the HPA survey results suggesting the closed 48 hour booking system may genuinely improve access although further research is required in this area.

P10

I'm OK

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Objective: To provide earlier access to asymptomatic patients for sexual health screening

Method: Currently those who are asymptomatic but wish to check their sexual health may have to wait for up to 3 weeks for an appointment. An audit of attendees at our clinic found that about 50% were asymptomatic patients. Whilst a triage system is in place for those who are symptomatic or have been in contact with an infection, we recognised that nothing existed for the asymptomatic worried as well. A weekly 'I'm OK' nurse led clinic designed to see only asymptomatic patients was funded by the PCT allowing 35 walk in slots. Tests for chlamydia, gonorrhoea, HIV, syphilis were taken, no microscopy was performed. Signs or symptoms of infection resulted in the patient being referred to a normal clinic session. Results were available by phone after 1 week. Those found to have an infection are asked to return to a normal clinic.

Results: Over initial two-month period overall asymptomatic chlamydia infection rate of 10%. Other infections found include HIV, syphilis, gonorrhoea.

Conclusion: Popular with patients. Encourages attendance. Enables rapid detection of asymptomatic infection.

P11

Improving access – Blush and create a new website (www.gumnewcastle.nhs.uk)

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Aim: To use non-recurrent Department of Health (DoH) funding to improve service access.
Methods: Commercial website redesign to provide information on: infections both by condition and symptoms (novel 'self-diagnosis' format) supported by graphic images; 'normal' genital variants; prevention – top ten tips, condom use, importance of partner notification; local UK clinics (via a link - www.playingsafely.co.uk). Also interaction with questions and answer section, guidelines/information leaflets for general practitioners, a fun section (games and e-cards linked to the site), staff section, password protected (with image and PowerPoint libraries). The site had to be: easy to update and monitor; compliant with NHS guidance and also attractive to the casual browser; accessible to the disabled.
Results: The site was built using Curo. A cartoon figure, 'Blush', and 'Sex is – ...' rotating banner headlines were produced to promote the site and our service. Clinic staff produced the information for the site and 'Mates' provided the condom use images. The site was launched in October by Newcastle Falcons Rugby Football Club and was supported by representation from the Sexual Health Unit, DoH amid local publicity. Further detail and information on feedback/usage will be presented.

P12

Time to use text appointment reminders in genitourinary medicine (GUM) clinics

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Aim: To determine patient preferences for GUM appointment reminders.
Methods: 350 questionnaires were distributed to consecutive GUM attendees.
Results: The response rate was 87%, 156 (52%) were female and the median age was 27 years (range 14–73). 268 (88%) patients considered appointment reminders a good idea. Reminders via text message were the most preferred option [203 (67%)] followed by phone call [105 (35%)], e-mail [81 (27%)] and letter [72 (24%)]. There was no association with age or gender. 254 (84%) considered automated voicemail reminders to mobiles as acceptable. Younger patients were significantly more accepting of voicemail reminders to their mobiles compared to either home or work (p=0.026)*. 301 (99%) preferred reminders 1–7 days in advance, 2–3 days being most popular [119 (39%)]. 99 (33%) patients preferred morning reminders, 52 (17%) afternoon, 48 (16%) evening, and 20% did not mind. 208 (68%) were accepting of reminders at weekends and 178 (59%) on public holidays. No association with age or gender was found.
Conclusion: Our clinic patients favoured reminder-texts to mobile phones, 2–3 days before appointments. Pilots in other specialties reduced DNA rates by 38%. We plan to pilot this service for chronic problem clinics, to reduce the high non-attendance rate.
*χ^2 test
DNA-did not attend

P13

Results by text – preferred by patients, transforming work patterns

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A city centre GU Medicine clinic changed the methods of sending results to patients following an initial patient questionnaire indicating that 85% of attenders had access to a text phone. Patients were encouraged to book a text message for results. One of two standard messages were sent: a negative text or a request to call the clinic. Options for results by letter, in person or by ringing a nurse telephone clinic were also available. The text service started in August 2004. A further patient questionnaire was performed to assess the acceptability of texting and other methods. 278 out of 300 questionnaires (93% response rate) were completed by new and rebook attenders. 80% of respondents agreed that results by text were acceptable, and 91% wanted contact for all results, positive or negative.

Method available	Considered best way of contact
Text patient	44%
Ring into nurse clinic	32%
Letter home	26%
Face to face with staff	25%

A review of the impact at December 2004 revealed over 250 texts sent per month. A reduction of over 60% in nurse-led telephone clinics workload freed clinical staff to develop new screening services. Secretaries saw an 85% reduction in results letter requests. The text messaging results service was acceptable to patients, released nursing time into clinic, and has modernised the approach to patient care.

P14

Mobile phone text messaging to give results to patients in a district general hospital genitourinary medicine clinic

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Aim: To assess efficiency of and patient satisfaction with giving results by text message in the setting of a busy DGH GUM clinic. No formal assessment of text messaging results service has been carried out before.
Methods: For one month patients who received results by text message were asked to give a score out of 5 for level of satisfaction.
Results: 373 results were text messaged to patients who were assessed as low risk of having an STI who had attended our GUM clinic. 329(88.3%) results were negative which were texted in an average time of 9.78 days so these patients did not need to phone or attend the clinic again. 125(37.9%) of these texted back and gave an average satisfaction score of 4.63/5. 44(11.7%) results were positive (C4a/ B1/ C10a/A4/E1A) and appointments were sent out in an average of 9.75 days, out of which 23(52%) attended the department. 18(78.2%) of these gave an average satisfaction score as 4.62/5. 1 negative result went to the wrong phone number due to this being recorded incorrectly in the notes.
Conclusion: Text messages are a safe way to give results and deliver a high level of patient and staff satisfaction.

P15

The National Sexual Health Strategy and the New General Practitioners' contract: poles apart or reconcilable?

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The National Strategy for Sexual Health describes services for patients at their General practice (level 1, essential) in enhanced community-delivered services (level 2) and in specialised services (level 3). General Practitioners have subsequently disputed that all level 1 services described in the Department of Health Sexual Health Commissioning Toolkit (CT) document are essential. The New GMS Contract is inconsistent with the National Strategy, designating Sexual Health as a National Enhanced Service. To date, the discrepancies between the National strategy and GMS contract have not been resolved at national level. This has contributed to delayed strategy implementation.

In order to overcome this impasse locally, GPs and GU consultants met to scrutinize each service element described in the CT and agree its assignment to essential, additional, enhanced or specialised level. This document, subsequently endorsed by the Local Medical Committee, will be displayed. It has enabled the local Sexual Health Advisory Board to place business plans before the Primary Care Trusts' Professional Executive Committees towards development of enhanced Sexual Health Services.

This is the first time, to our knowledge, that such a formal agreement has been reached, allowing real progress to be made in implementation of the National Sexual Health Strategy in Cornwall.

P16

The need of men's health clinics

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Introduction: Men's health issues include the commonest cancer (testicular) (TC) in young men (15–40 years). It has doubled in the last 20 years. Mortality =8%. The project investigates the need for services.

Methods: A cross-sectional self-administered anonymous questionnaire survey on 400 consecutive men >18 at a Regional Hospital (OPD) and a university campus (Unit) was done. Consent was obtained and information and contact details were given.

Results: Response rate 336/400 (84%)

Table: Some findings of study	OPD (200)	Unit (200)	Total (400)
Mean age	48	22	34
Aware age category TC (%)	31%	49%	41%
Examined by Dr for TC (%)	19%	15%	17%
Knew someone with TC	23%	30%	28%
Who would consult with lump: GP (%)	91%	89%	90%
STI clinic (%)	6%	7%	6%
Attended an GU/STD clinic (%)	7%	13%	9%
Treated for STI	8%	3%	5%
Men's Health Clinic wanted (%)	84%	70%	76%

Conclusion: 76% desired a male specific health clinic. Death rates are higher here than internationally (8% v 2%). Outside of GP, STI clinics are the preference site for consultation. In view of HIV being an increased risk factor for TC it seems appropriate that Sexual Health Clinics should add Men's Clinics.

P17

Overcoming the barriers to GP involvement in the diagnosis and management of HIV infection

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Background: As HIV care becomes more complex and encompasses cardiovascular and metabolic disorders, GPs need to play an increasing role in co-management. In conjunction with local GPs we established a primary care focused interactive two day course based upon the STIF model.

Methods: Attendees completed questionnaires before and after to assess current involvement in HIV care and confidence in co-management. Additionally, quantitative assessment of effect using laboratory data on numbers of HIV tests was performed.

Results: Of 46 participants, 16 were GPs of whom 7 had >20 HIV+ patients. Barriers to HIV testing identified most frequently were lacking knowledge about HIV and support services. After the course, all reported increased confidence in managing non-HIV related issues and HIV testing, with 13/16 more confident in managing HIV-related problems. Although HIV testing rates were unchanged after the course, some individuals did increase their testing rates with 3 new positive diagnoses made post-course.

Conclusions: A primary care focused course can enhance the role of GPs in co-management and may help reduce levels of undiagnosed HIV.

P18

Issues impacting on HIV service uptake by Africans in the UK

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Background: In Britain Africans with HIV access health services late in the course of their HIV disease compared to non-Africans. The factors behind late presentation are not yet fully understood. We wanted to identify the key issues affecting utilisation of HIV services in order to develop a questionnaire and topic guide for future research on this topic.

Aim: To identify key issues affecting the utilisation of HIV services by Africans in Britain.

Methods: Semi-structured interviews were conducted with key informants with extensive experience working with African communities, HIV and sexual health.

Results: Eleven interviews were conducted. Respondents felt there was high HIV awareness within African communities in the UK but this did not translate into perception of individual risk. Rumour, myth and the media perpetuate fear and misunderstanding about transmission and health services. Health is a low priority, and preventive medicine an alien concept for many Africans. Ignorance around entitlement to care and unfamiliarity with the NHS hinder access. Health services have not yet effectively engaged with African men.

Conclusions: HIV remains a much feared and stigmatised disease in African communities in the UK. More involvement from the African communities in the planning and implementation of health services is needed.

P19

The use of general practitioners amongst HIV-positive patients

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Background: With the introduction of HAART, the care of HIV patients has moved from acute care to the management of a chronic condition. The Royal Free operates an emergency clinic which caters for a variety of conditions, including non-HIV-related.

Method: 149 patients at the emergency clinic and 93 who attended out-patient's clinic completed a self-administered questionnaire on GP use.

Results: 186 (77%) were male, 50 (21%) Black African and 161 (67%) White. The median age was 38 years. 200/242 (83%) had GPs. Women were more likely to have a GP (96% of women, 79% men; p=0.0019), but there were no differences according to ethnicity, age, or routine appointment. 32/42 (76%) of those who did not have a GP felt the Royal Free met their health needs, and 20 (48%) felt their GP could not meet their health needs.

Of those with a GP, 128/200 (64%) have informed their GP of their HIV status. 137/200 (69%) had seen their GP in the last year. 40/70 (57%) who have not told their GP they are HIV-positive were worried about confidentiality in the practice

Conclusions: Although many HIV-positive patients have GPs, a proportion remains unaware of their patient's HIV status.

P20

A treatment advice clinic (TAC) for patients attending an HIV outpatient clinic: how does it operate and what do patients think?

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Background: Mortimer Market Centre provides care for over 1300 patients on HAART and approximately 20 patients start therapy each month. TAC offers appointments to patients advised to start/change therapy. Anecdotal evidence suggests TAC is beneficial. We evaluated the practicalities, performance and outcomes of the TAC service to determine patient benefit.

Methods: Qualitative and quantitative data were collected through 20 consultation observations, 20 patient interviews, database analyses and 100 retrospective case note reviews.

Results: Patients referred to TAC from their routine doctor will see one of two research nurses, two consultants or a pharmacist, for a one-hour booked session. Care pathway analysis revealed that though sessions were similar across treatment advisors, follow-up care varied depending on the approach and capacity of the advisor. It was felt that follow-up should be standardised and routinely offered to all patients initiating therapy. Patients outlined many benefits: appointment length, observing tablets to describe options, tailoring regimen to lifestyle, and telephone follow-up/support. Patients felt these factors helped improve adherence. Differences in clinical outcomes between TAC and non-TAC patients could not be determined.

Conclusions: Although evidence that TAC improves clinical outcomes is unavailable, there are clear benefits at the individual level suggesting investment in TAC is worthwhile.

P21

The role of the sexual health advisor (SHA) in a hospital-based HIV service

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Problem: No routine sexual health screening done in our HIV clinic; cohort of 587 HIV positive clients seen regularly between Genitourinary Medicine (GUM) and Infectious Disease (ID). Rise in local syphilis numbers. Unknown partner notification outcomes for HIV.

Intervention: SHA employed in January 2003, to assess sexual health needs of our clients. Aim is to review all patients at least annually by Sexual Health Advisor (SHA) within their routine outpatient clinic appointment for HIV, 71% of PN outcomes for April–June 03 were verifiable. Syphilis testing offered quarterly, data to 31st December 2004

Outcomes	
Sexual Health Assessment	483 (82%) of cohort
Referred to GUM for STI screening	223(46% of assessed)
Seen at GUM for STI screening	193 (86% of referred)
STI testing at HIV unit	19 (4%)
STI's diagnosed (n =52)	69 (11% of 483 assessed) (27% of 193 who tested)

STI Diagnosis: 69 chlamydia 20 (29%), gonorrhoea 10 (15%), HSV 14 (20%), PID 1 (1%), genital warts 24 (35%). Syphilis: 17 (routine testing).

Conclusion: SHA has increased uptake of STI tests and GUM attendance, yielding a significant number of diagnosis of STIs on this positive population. On going Audit to identify reasons for clients not seeing SHA.

P22

BRASH: assessing the first year of a new service

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Aim: To review the first year of the BRASH (Bloomsbury Reproductive and Sexual Health) Service for HIV-positive individuals attending a central London HIV treatment centre

Background: The BRASH service was set up in response to a demonstrated need for one-stop provision of sexual and reproductive healthcare for HIV-positive individuals in their treatment centre.

Methods: Retrospective computer and notes review of all BRASH clinic attendances.

Results: 36 clinics ran in the first year of the service, with a total of 180 appointments available of which 106 were booked. There was a 13% DNA rate, leaving 93 visits. 82 sets of notes were reviewed, 53 were new patients and 29 follow-ups. Equal numbers attended for advice on contraception (32%) as did for pregnancy planning (30%). 4 patients attended for advice on unplanned pregnancy, 1 opted to continue and 3 requested referral for termination. 6% attended for infertility and 4% to discuss sperm washing.

Conclusions: There was a good uptake of a new service specifically designed to meet the reproductive and sexual health needs of an HIV-positive individuals attending their treatment centre.

P23

CD4 cell count and starting ART: trends in six UK centres 1997-2002

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Aim: BHIVA and other treatment guidelines have become progressively more conservative in their recommendations on when to initiate antiretroviral therapy (ART). We examined the extent to which this has been followed in routine clinical practice in the six centres participating in the UK Collaborative HIV Cohort (UK CHIC) Study, which covers around one-third of all patients in the UK.

Methods: Each CD4 measurement between 1997 and 2002 was classified as resulting or not resulting in ART initiation, defined as within 3 months of sampling and before the next measurement. The probability of initiating ART was then estimated for each combination of individual calendar year and CD4 level (<200, 200–350, 351–500, >500 cells/mm^3).

Results: 6277 patients were included, of whom 3004 (48%) started ART. Between 1997 and 2002, the probability of starting ART following a CD4 count between 200–350 cells/mm3 gradually decreased from 34% to 16%, and from 15% to 4% at counts of 351–500 cells/mm^3. Preliminary analyses using longitudinal methods confirmed this trend.

Conclusion: There was a trend of deferring ART, which reflected changing BHIVA and other treatment guidelines. Further analyses are planned to examine the role of viral load and selected demographic factors on the initiation of HAART.

P24

What is the clinical significance of sustained low-level viraemia (SLLV) in patients on HAART?

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Background: The clinical significance and management implications of sustained low-level viraemia (SLLV) in patients on HAART remain poorly defined. We aimed to determine the incidence, virological- and immunological consequences of SLLV in a large cohort of patients receiving HAART.

Methods: The UK CHIC is an observational cohort of 16,593 HIV-infected individuals from 6 clinical centres in the UK. SLLV was defined as a viral load (VL) between 500–10,000 copies/ml for =6 months in patients who initially attained an undetectable VL (=500 copies/ml) on 2 consecutive occasions following initiation of HAART (n=6509).

Results: 270/6509 (4%) patients developed SLLV which was sustained for a median of 10.3 months (IQR=7.5, 15.5). Treatment was changed in 45% of cases. The median CD4 count at start of SLLV was 355 copies/ml (220, 500) with no significant change during SLLV. In 116 patients (43%) the VL increased to >10, 000; 127 patients (47%) regained an undetectable VL; and 27 patients (10%) had ongoing SLLV at the end of follow-up [median duration: 13.0 months (9.6, 18.0)]. 3 patients developed an AIDS event

Conclusion: A small proportion of patients on HAART have SLLV with no adverse immunological or virological consequences. The impact on the development of drug resistance need to be further evaluated.

P25

Long and strong: experience of first line therapy with nevirapine (NVP) in a cohort of antiretroviral (ART) naive HIV-positive patients

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Background: Concerns about potency and hepatotoxicity continue to influence prescribing of Nevirapine (NVP). We re-analysed and updated durability and tolerability data from a previous cohort analysis in HAART-naive patients who commenced a NVP-containing regimen.

Methods: Case note review. Kaplan-Meier methods were used to assess time to virological failure (viral loads >500 copies/mL on two consecutive occasions) and time to significant liver abnormality. Patients who stopped NVP and lost to follow up were considered as failures, but not those who switched an NRTI backbone for toxicity.

Results: 287 patients were included in the analysis. The median (range) baseline CD4 count and HIV-1 RNA were 200 (0–821) cells/μL and 54,494 (202–500,000) copies/mL. The median (range) follow up was 39 (1–76) months. 49 patients were lost to follow up. 34/287 (12%) experienced virological failure, 24/287 (8%) discontinued due to toxicity, hepatotoxicity occurred in only 4/287 (1.4%). 25/287 (9%) of patients chose to discontinue therapy.

Conclusion: This is the first cohort study providing long term durability and tolerability data in ART-naive patients commenced on NVP. Beyond the first six weeks, there was no significant hepatotoxicity related to NVP.

P26

The impact of fosamprenavir and lopinavir/r drug levels on virological outcome in patients on these drugs in combination

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Background: Fosamprenavir and lopinavir/r interact producing reduced drug levels compared to single PI therapy. We reviewed our cohort on this combination to see if their drug level had an impact on virological outcome.

Method: Case notes were reviewed. Data was collected on sex, age, ethnicity, CDC stage, antiretroviral history, drug history, CD4, viral load (VL) and trough concentration (Ctrough) results from therapeutic drug monitoring (TDM) for patients on fosamprenavir 700mg bd + lopinavir/r 3bd + ritonavir 100mg bd (T1, N=20) and those on fosamprenavir 1400mg bd + lopinavir/r 3bd (T2, N=12).

Results: 85% on T1 had TDM, 17.6% had C_{trough}< estimated minimum C_{trough} (EMC_{trough}); 66.6% with C_{trough}<EMC_{trough} responded virologically vs. 85.7% with C_{trough} >EMC_{trough}. 83.3% on T2 had TDM, 20% with C_{trough}<EMC_{trough}; 50% C_{trough} <EMC_{trough} responded virologically vs. 62.5% with C_{trough} >EMC_{trough}. All virological failures in both treatment groups had low lopinavir levels but adequate fosamprenavir levels. 82.4% on T1 responded virologically vs. 60% on T2. (p>0.05 for all comparisons.)

Discussion: Greater virological failure is associated with low drug levels, but this did not reach statistical significance and will be compounded by adherence. From this small review, we would recommend T1. Lopinavir levels appear key in determining response.

P27

Double-boosted protease treatment using atazanavir and lopinavir/ritonavir

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Background: Atazanavir (ATV) is a relatively new protease inhibitor (PI) drug and there is little data on its use combined with other PIs. We wanted to examine the efficacy of using it in combination with lopinavir/ritonavir (LOP/r) in treatment-experienced patients.
Methods and Results: From our database we identified 23 patients who received HAART containing ATV and LOP/r. Most recent viral load (VL) and CD4 count and those at time of first receiving this combination were noted. Median CD4 count at start of this combination was 494. Most recent median CD4 count was 522. 15/23 (65%) patients had a VL <50copies/ml on starting the combination and 22/23 (97%) had a VL <50copies/ml at end of study. The patient group were generally heavily pre-treated with 16/23 (70%) having received greater than 4 previous treatment combinations. Therapeutic drug monitoring was performed on 7 occasions for ATV and 3 occasions for LOP/r. All TDM results were within the therapeutic range for both drugs.
Conclusion: Treatment with this double-boosted PI combination is effective in patients pre-treated with multiple combinations.

P28

Safety and efficacy of atazanavir with low dose ritonavir in a clinic population

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Aim: To describe the use and outcome of Atazanavir/ritonavir (ATZ/r) in a HIV clinic population.
Methods: Retrospective case series of all patients starting ATZ/r between 26/01/04 and 31/10/04, follow-up to be extended. Data collected using a standardised proforma.
Results: 102 patients identified, 88 male: median (range) age 42 (20,73) years. Median prior antiretroviral therapy (ART): 6.4 (0–15.3) years. 6 were ART naive, 23 PI naive, 28 single PI, 51 multiple PI-experienced. Median follow-up: 135 (0,331) days. 12 (11.8%) discontinued ATZ/r: 4 jaundice, 5 depressed mood, 4 other. Of those with a detectable viral load at baseline (N=35), 19 (54%) had VL<50 at 12 weeks, median CD4 count rise 100×10^6/l (-140,830). Of those starting ATV/r with VL<50 copies/ml, none experienced viralogical failure. 14 (19%) had total cholesterol (TC) >6.5 mmol/l at baseline and 5 (8%) at week 12. Mean fall (95%CI) in TC in patients switching therapy :-0.43(–0.76,–0.09)mmol/l at 3 months, p=0.012. Median (range) total bilirubin at baseline: 9 (2,71) umol/l, rise by 12 weeks: 15 (–18,98) p<0.001. 61% patients with ART associated diarrhoea at baseline reported improvement.
Conclusions: ATZ/r was well tolerated in this clinic population and associated with significant falls in plasma cholesterol, resolution of diarrhoea in patients switching therapy. Severe mood change was seen in some patients.

P29

The effect of proton pump inhibitors on protease inhibitor plasma concentrations in the clinical setting

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Background: Recent reports indicate that coadministration of proton pump inhibitors (PPI) with atazanavir (BMS, *Dear Healthcare Provider Letter*, December 2004) or fosamprenavir (Ford SL *et al*, *Antimicrob Agents Chemother*, 2004, 49, 467–469) can decrease protease inhibitor plasma concentrations. The PPI interaction in the clinical setting was examined using requests received by the Liverpool TDM Service.
Methods: A retrospective analysis was performed on trough samples from adults receiving lansoprazole or omeprazole in ritonavir-boosted, twice-daily amprenavir/fosamprenavir (APV) or once-daily atazanavir (ATV) containing regimens. Plasma concentrations were compared to samples obtained during a similar time period from patients reported as not receiving a PPI.
Results: No difference in median plasma concentrations of either APV or ATV was noted in patients receiving a PPI. The proportion below target (APV 400 ng/ml, ATV 100 ng/ml) was not different between the groups for either drug.

	Group	n	Median [range] (ng/ml)	P value	Below target
APV	+PPI	19	1333 [307-3824]	0.320	2 (10.5%)
	-PPI	257	1070 [BLQ-15423]		9 (14%)
ATV	+PPI	14	764 [189-1668]	0.426	0
	-PPI	103	609 [BLQ-4584]		10 (9.7%)

Conclusions: These data highlight the limitations of a pre-selected, diverse cohort for investigating potential drug interactions. Only carefully designed pharmacokinetic studies can address these issues.

P30

Tipranavir (Tip)/T-20 containing salvage regime in highly treatment experienced HIV-infected patients

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Aim: to assess efficacy, safety and tolerability of Tipranavir/T-20 containing regimes in a clinic cohort.
Methods: Review of triple drug class experienced clinic patients who had failed previous Protease Inhibitor (PI) containing regimes and were receiving Tipranavir/T-20 with optimised nucleoside analogue (NA) backbone for a minimum of 3 months.
Results: 10 patients (9 male, 1 female) were identified. Median age 48 (range 35–61). 6 Caucasian and 4 Black African. Median time since diagnosis was 13 years (range 3–19), nadir CD4 16 (1–146) and the median number of prior ARV combinations 11 (6-13). 9 patients showed triple class resistance. Median exposure to Tipranavir/T-20 was 7 months (4–15).

	Pre Tip/T-20 (N=9)	3 months	6 months	9 months
CD4 (median)	45	101 (N=9	91 (N=8)	127 (N=3)
VL log (median)	5.05	2.90 (N=8)	2.48 (N=6)	70 (N=1)
1 log ↓		66% (6/9)	83% (5/6)	
VL<400		44% (4/9)	83% (5/6)	67% (2/3)

No grade 3/4 toxicities for lipids or LFTs were observed during the study time. All patients continue on therapy.
Conclusion: Tipranavir/T20 containing regimes with optimised nucleoside/nucleotide backbone is successful in highly treatment experienced HIV-infected patients. It is acceptable and well tolerated.

P31

P33

P32

P34