STIs and HIV: Time for protection

ABSTRACT BOOK
Treatment of STIs in the pre-antibiotic era
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Background: Invited Speaker - President IUSTI 1995-1999
Materials-Methods: Recognised Authority on History of Venereology

Results: A Precise history of Treatment before antibiotics
A concise account is given from Roman times, through Arab medicine and Europe before the Scientific Revolution of 19th. C to all STIs where there are accounts of therapy. But it is only with the growth of a scientific approach to therapy that any rationale rather than empiricism comes to treatment of STIs. In particular syphilis treatment was long and by modern standards horrific but despite that still was a common disease. "For one pleasure, a thousand pains" "Physicians of the utmost fame, Were called at once but when they came Thay answered as they took their fees, there is no cure for this disease."

Conclusion: It is worth further research - pharmacology of ancient, folk, native remedies especially in treatment of gonorrhoea and urethritis.

Immunisation research needs to be extended-1 to the failed 19th. C concept of syphilisation.
-2- Why were enormous amounts of gonorhoea vaccine used in 1930s if no use- further research needed?
-3-Many viral STIs have had some form of remedial therapy in the past - have us moderns missed anything useful?
-4- Why are we constantly forgetting education of the young public?

Keywords: STIs, Treatment

The epidemiology, pathogenesis, and diagnosis of vulvovaginal candidosis
Macit Ilkit

Background:
Materials-Methods:

Results:

Conclusion:
Vulvovaginal candidosis (VVC) is the second most common cause of vaginitis (17-39%) after bacterial vaginosis (22-50%), in terms of vaginal complaints in the primary care setting. VVC is not a reportable disease and is often diagnosed without mycologic confirmatory tests and treated with over-the-counter medications; thus, actual incident rate is unknown. The condition manifests itself in two forms: acute and recurrent. Acute VVC (AVVC) is defined as having sporadic or infrequent episodes (<=3 episodes per year), with mild-to-moderate symptoms caused by Candida albicans, which is responsive to all forms of antifungal therapy (including short-course) in immunocompetent women. Recurrent VVC (RVVC) is defined as >=4 culture-verified symptomatic episodes of VVC within one year, and is usually caused by azole-susceptible C. albicans.

Candida spp. can be present as either a commensal organism or a pathogen in the vagina, and dogma dictates that changes in the host vaginal environment are necessary for the organism to induce pathological effects. Notably, colonisation of the vagina requires yeast adherence to vaginal epithelial cells. C. albicans adheres in significantly high numbers to such cells compared with non-C. albicans Candida species. In addition, mannose-binding-lectin (MBL) is an epithelial-cell associated host protein that binds to Candida mannann, activates complement, and thus inhibits Candida growth. Reduced levels of MBL and genetic polymorphisms in the MBL gene were found in women with RVVC. Host damage can result from microscopic, macroscopic, clinically apparent, or clinically unapparent events.

Reliable diagnosis of VVC requires a correlation of clinical features with mycological evidence. The mycological methods used for diagnosis currently include demonstration of Candida sp. or spp. in vaginal swabs using vaginal pH measurement, microscopic examination, fungal culture, and antigen tests.

Keywords: Vaginitis

Trichomonas vaginalis genital infections: progress and challenges
Laura Hinkle Bachmann

Background: Trichomonas vaginalis (TV) is the most prevalent curable sexually transmitted infection in the United States and worldwide. Most TV infections are asymptomatic and the accurate diagnosis of this infection has been limited by lack of sufficiently sensitive and specific diagnostic tests, particularly for men.

Materials-Methods: A PubMed search was conducted of all TV literature published between 1/9/04 and 7/5/2012. Pertinent abstracts and articles were reviewed.

Results: Advances in TV diagnosis have led to a greater appreciation of the burden of trichomoniiasis in the general population and the biological and epidemiological interactions between TV and HIV. Effective alternatives to the 5-
nitroimidazole drugs are needed for patients with drug allergy and nitroimidazole resistant TV infections. Optimal treatment regimens in men and women require additional evaluation using newer diagnostic tests to define therapeutic endpoints. Clinicians may consider screening in those at high risk of infection. Emerging data demonstrating the high prevalence of TV in the general population and interactions between TV and HIV suggest that additional research efforts should be directed at determining the possible benefits of enhanced screening for this important pathogen.

Conclusions: Trichomoniasis is an extremely common, often asymptomatic, sexually transmitted infection that has been associated with potentially serious sequelae. Though significant advances have been made in recent years regarding this pathogen, important challenges remain.

**Keywords:** Trichomonas vaginalis

**[IS-04]**

**Self-sampling in the diagnosis of recurrent vulvovaginal candidosis**  
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Background: the diagnosis of recurrent vulvovaginal candidosis (RVC) in daily practice is far from optimal. Both under- and overdiagnosis occur frequently. We have therefore embarked on a study to determine the accuracy and feasibility of self-sampling in patients suspected of having RVC

Materials-Methods: 277 of 441 patients with symptoms suggestive of RVC, presenting at the vulvar clinic of the Erasmus MC Dermatology department during a 8-year period (January 2000-December 2007), were instructed to perform weekly self-sampling for a period of upto 8 weeks. Demographic characteristics, medical history, physical examination, culture results and treatment efficacy were analysed.

Results: when only considering the results of the culture taken at the first consultation, 17.1% (20/117) of RVC cases could be confirmed. Positive cultures from self-sampling confirmed another 97 cases (82.9%). Sensitivity of a single Candida culture ranged from 18% to 53%, depending on the cut-off level of growth intensity of the yeast recovered. Specificity ranged from 97-100% and the positive predictive value ranged from 92-100%. The number of positive cultures was not associated with the duration of earlier vaginal complaints.

Conclusion: the diagnosis of RVC can be improved dramatically by self-sampling, enabling a sooner start of adequate treatment. Multiple positive cultures were not associated with disease of longer duration or more severe disease.

**Keywords:** recurrent vulvovaginal candidosis, self-sampling

**[IS-05]**

**A longitudinal study of the vaginal microbiome and HPV detection**  
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Background: Vaginal bacterial communities produce antimicrobial products such as lactic acid and bacteriocins which help prevent colonization by STIs. Prior work has demonstrated that the vaginal microbiota cluster into six community state types (CSTs). Four are dominated by Lactobacillus iners, L. crispatus, L. gasseri, L. jensenii, and two lack significant numbers of lactobacilli (termed CST IV-A and IV-B). CST IV-A is characterized by diverse anaerobic bacteria and CST IV-B has higher proportions of genus Atopobium. We sought to describe the relationship between vaginal microbiota and HPV detection in a longitudinal study.

Methods: Thirty-two reproductive-age women self-collected mid-vaginal swabs twice-weekly for 16 weeks (n=937 samples). Participants reported behaviors on daily diaries. Vaginal bacterial communities were determined by pyrosequencing of barcoded 16S rRNA genes (V1-V2 region). Each swab was tested for 37 types of human papillomavirus (HPV) DNA using the Roche HPV Linear Array genotyping test. Poisson regression with robust error variance was used to estimate the relative risk for HPV detection associated with the vaginal microbiome which was sampled 3 days prior.

Results: Participants had an average of 29 (range 25-33) samples tested for HPV, with point prevalence ranging from 58-77% and 16-week period prevalence of 84%. Controlling for confounding factors, CST dominated by L. iners, CST IV-A and CST IV-B were associated with greater risk of HPV detection compared to L. crispatus-dominated samples (RR 1.71, 95% CI: 1.42-2.06; RR: 1.60, 95% CI: 1.27-2.01; RR: 2.01, 95% CI: 1.66-2.43, respectively). L. gasseri was protective (RR: 0.34, 95% CI: 0.17-0.70).
Conclusions: Vaginal microbiota dominated by L. iners and low-lactobacillus CSTs were associated with increased HPV detection. Future studies on a species-level or strain-level may reveal genomic heterogeneity between bacteria and may reflect capacities to provide protection from infection or control of latent infection. Probiotic development may help prevent HPV infection and reactivation.

**Keywords:** vaginal microbiome, human papillomavirus (HPV)

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**[IS-06]**

**Office microscopy as an aid to diagnose vaginal disease**

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Progressively, fresh wet mount microscopy has disappeared from most physician’s offices. There is many reasons for this. First of all, it is easy to obtain vaginal culture results and antibiogram, providing modern doctors the idea that treatment can be prescribed in an evidence based way. Secondly, non-culture dependent technologies found their way to the genital diagnostic area, nowadays delivering rapid results of formerly undetectable or difficult to detect microorganisms like mycoplasmata, Chlamydia and Atopobium vaginae. Finally, the diagnosis of bacterial vaginosis(BV) has been refined and standardized by the lab-based Gram stain.

However, if patients get treatment according to the antibiogram of cultured organisms, most will get antibiotics for innocent enteric bacteria that are part of normal flora, leading to at times severe and recalcitrant candidosis. Furthermore, sending of samples to the lab implies deferral of diagnosis and treatment. Alternatively, try-out medication is given without diagnosis; the worst option of all, but, unfortunately, one that is chosen all too often.

Hence, it is crucial to do a bigger effort to obtain an adequate and complete diagnosis before the patient leaves the office, in order to perform proper and timely treatment. The most appropriate tool to achieve this goal is the use of a phase contrast microscope, to study the vaginal microflora with a droplet of saline (wet mount). All of cases with bacterial vaginosis, aerobic vaginitis and mucopurulent cervicitis can be diagnosed, and most cases of Trichomonas and candida infection or colonisation. Also, the infection-related preterm birth risk can be assessed during pregnancy, by grading the lactobacillary flora.

Different than a few decades ago, modern microscopy has regained great potential to give complete and professional care. Training in microscopy is nor complicated, nor very time-consuming, but requires skillful teaching, and, most importantly, a change of attitude in most teaching facilities.

**Keywords:** lactobacillary grades, aerobic vaginitis

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**[IS-07]**

**Subclinical and latent HPV-infections**

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Human papillomavirus (HPV) are associated with spectrum of diseases, from benign vulgar verruca, genital warts, to malignanat cervical, vulvar, anal or penile cancer. HPV is known to induce three different manifestations: clinical, subclinical, and latent infection. **Clinical anogenital lesions** are defined as those visible to the naked eye, without any enhancing techniques. Using peniscopy after application of 3-5% acetic acid, applied for 5-10 minutes, **subclinical lesions** can be classified as flat (at skin level), papular (raise slightly above the surface in circumscript area), and classic condylomata (grossly recognizable protuberance with finely pointed epithelial excrescences). **Latent infections** are defined by presence of HPV DNA in areas with no clinical or histologic evidence of HPV infection. **Subclinical** lesions show histological evidence of HPV infection, either by presence of koilocytosis, or less frequently, intraepithelial neoplasia. **Latent infections** are defined by presence of HPV dna in areas with no clinical or histological evidence of HPV infection. They are probably the most common form of anogenital HPV infection, regardless of HPV type, and they present ”reservoir” for HPV. The infectivity from subclinical/latent HPV infection is not known, since its transmission studies are difficult to perform, and there are yet no consistently reliable diagnostic methods available for routine use.

**Keywords:** subclinical HPV infection, latent HPV infection

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"**Educational program for sexually responsible behaviour among adolescents for the prevention of cervical cancer**"

**Dubravko Lepusic**

Aktiva; KB"Sestre milosrdnice"

**Background:**

Sexually active adolescents face serious health risks associated with unprotected sexual intercourse. These include human papillomavirus (HPV), sexually transmitted diseases (STDs) and unwanted pregnancy. Behaviours
particularly relevant to HPV transmission are: early age of sexual debut, poor contraceptive/condom use, multiple sexual partners, certain sexual practices and the use of substances such as alcohol and drugs.

Materials-Methods:
Taking epidemiological anamnesis and educational program for adolescents

Results:
Our study was aimed at a young population to educate them about Human Papillomavirus and sexually responsible behaviour. We organized multimedia presentations. The name of the project was „Knowledge is pleasure“. Adolescents actively joined in the projects, by making their own web sites, scene performances, poems, posters and lectures, all with sexually responsible behaviour themes. Lectures were short (each 20–30 min) accompanied by discussion. Each lecture was given in the form of a Power Point presentation. By organizing multimedia presentations the interest of this population to attend would be greater. Questions asked after the lecture were those usual for that age. They asked about the ways of contracting HPV and other STDs, medical treatment of partners, the use of contraceptives and about vaccinations. Conclusion: The most effective prevention of sexually transmitted diseases is a stable, harmonious relationship, with a faithful partner. A necessary condition prior to the onset of sexual intercourse is a physical and mental maturity of both partners. For systematic prevention of sexually transmitted infections in this moment it is necessary to introduce effective sexual education in schools starting from primary school, develop interdisciplinary cooperation between social and medical sciences, including all experts. Still the best and most important education comes from a healthy family as the core of our society.

Keywords: adolescents, sexually responsible behavior

[IS-09]

The sense and non-sense of the HPV-DNA typing
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Human papillomavirus (HPV)-associated genital pathology represents one of the major problems among STIs mostly due to the high recurrence rate, difficult eradication and oncogenic potential. Besides, the young, sexually active population in the generative period is mostly affected. As the very careful and friendly-orientated manner of taking the medical history and clinical examination is rather important in order to obtain the exact data, the clinical variations might range from clinically invisible or poorly visible, "asymptomatic" lesions to the bizarre forms of giant condyloma of Buschke-Löwenstein type. In spite of the fundamental importance of the clinical examination itself, we wanted to identify the HPV DNA type in these lesions. Over the last years, different diagnostic tools have been used for the patients with HPV genital infection including pathohistology and peniscopy in some cases. However, the results were not always precise enough whether the lesion is HPV-induced or not. Thus, we wanted to evaluate the significance of viral tests (PCR, hybridization) for HPV-induced, clinically visible lesions (condylomata acuminata, condylomata plana, Buschke-Löwenstein) in men. According to our results, HPV DNA 16 and 18 have been isolated from "benign" HPV-associated genital lesions in 20% of patients, i.e. more than it is usually expected. Besides, HPV DNA typing is a precious diagnostic tool if the oncogenic lesions are suspected, as these types of lesions might sometimes mimic the "benign" changes and the treatment might be, accordingly, started too late. Therefore, the diagnostic approach to the HPV genital infections needs to be complex including HPV DNA typing in men, as well, whenever it seems appropriate. We definitely consider HPV detecting and typing of male genital HPV lesions the important part of the diagnostic procedure, treatment and follow-up.

Keywords: HPV, typing

[IS-10]

Management of genital warts: The role of sinecatechins
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HPV is one of the most common sexually transmitted infections among women and men. HPVs associated with external genital lesions have been divided into low-risk and high-risk HPV types. Manifestations of genitoanual HPV infection comprise latent infections, subclinical infections and clinically benign genitonal warts related to low-risk HPVs. Vulvar and penile cancer as well as the precursor lesions VIN and PIN have been associated in about 40 to 50 % of cases with high-risk HPVs. About half of vulvar and penile cancers are developing in association with chronic lichen sclerosus and are HPV negative. Genitoanual warts harbour in > 90% HPV 6 and HPV 11. About 20-
44% of these benign lesions show coinfections of HPV6, HPV11 and high risk HPV types with HPV 16 the most frequently detected type. Diagnosis of genitoanal warts requires exclusion of other sexually transmitted conditions, malignant squamous cell neoplasias and precursor lesions. Every atypical lesion has to be biopsied. Pigmented lesions have to be excised entirely and investigated histologically. Despite some recent hopeful therapeutic developments such as topical imiquimod and sinecatechins (green tea derivatives) therapy of genitoanal warts remains a medical problem. Both physician- and self-administered therapies are not fully satisfactory. The main progress achieved with imiquimod and sinecatechins, however, has been lowering the recurrence rate of genitoanal warts.

The increasing incidence and burden of disease clearly support the quadrivalent VLP HPV 6, 11, 16 and 18 vaccine for primary prevention of HPV-associated neoplasias including genitoanal warts in both genders. Benefit of vaccination has been already noticed in decreasing numbers of genitoanal wart diagnoses in Australia about 1-2 years after initiating vaccination of young women at a high vaccination rate of about 70%.

Keywords: HPV, sinecatechins

[IS-11]

HPV vaccination - five years out: what is next?
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Anogenital warts (condylomata acuminata) are the most common HPV lesions, however, during the last decade the other HPV-associated exaggerated lesions such as condylomata plana, penile, scrotal, and anal intraepithelial neoplasias, as well as the penile, urine bladder and prostate cancer have been studied a little bit more extensively. In general, the focus of scientific interest concerning the HPV infections has recently evolved from sexually transmitted diseases (STD) to different skin disorders such as seborrheic keratoses, skin cancers, psoriasis and beyond, not to speak about the laryngeal papillomatosis, and/or oral and tonsillar cancers. However, the "banality" of anogenital warts should not be underestimated providing that the high risk HPV DNA 16 and 18 can be isolated (PCR) from "benign" HPV-associated genital lesions (anogenital warts) in 10-20% of patients, i.e. more than it is usually expected. On the other hand, the presence and the recalcitrant course of HPV DNA 6 and 11 associated diseases represent a significant physical and psychological problem for both men and women.

A prophylactic vaccine that targets types mentioned above should thus substantially reduce the burden of the large spectrum of the HPV-associated clinical diseases for both men and women. The results of the most recent studies have clearly shown that a quadrivalent HPV vaccine (6, 11, 16, and 18) was generally well tolerated and effectively prevented acquisition of infection and clinical diseases caused by common HPV types. Still not an ideal situation with the HPV-diseases so far, but the large implementation of the most recent and consistent scientific facts should be essential step in the near future!

Keywords: vaccine, implementation

[IS-12]

Quadrivalent HPV vaccination – exceeding expectations
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Background: The Australian national HPV vaccination program for young women aged 12-26 years commenced in mid-2007. We assessed the population effect of the program on genital warts diagnosed in sexual health clinics.

Materials-Methods: We calculated the proportion of patients diagnosed with genital warts using data from 2004 to 2011 from eight large sexual health clinics across Australia. The analysis was restricted to first-visit Australian-born patients. Trends were assessed with Poisson and chi-square tests.

Results: Between 2007 and 2011 there were large declines in the proportions of <21 year old women (92.6%, p<0.01) and 21-30 year old women (72.5%, p<0.01) diagnosed with genital warts. Only 13 women aged <21 years were diagnosed with genital warts in 2011 and no cases of genital warts were seen in women who reported being vaccinated. There was no significant decline in the proportion of >31 year old women with warts after 2007 (21.1%, p=0.99).

Among heterosexual men between 2007 and 2011 there were significant declines in the proportion of <21 year olds (82.0%, p<0.01) and 21-30 year olds (51.4%, p<0.01) diagnosed with warts. In >30 year old men there was a non-significant decline (15%, p=0.47). There was a significant decline in warts in men who have sex with men (MSM) after 2007 (33%, p=0.01).

Conclusion: The marked decline in young women diagnosed with genital warts indicates the direct benefit of the vaccine program, with indirect benefit for young heterosexual men through herd immunity. The decline in MSM is probably due to successful triaging of asymptomatic MSM into clinics for STI screening, bloating the denominator.
The disappearance of genital warts in vaccinated women suggests that virtually all genital warts may be due to HPV 6 or 11.

**Keywords:** human papillomavirus; vaccination; population impact; genital warts

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**Bacterial vaginosis: sequelae and management**

*Peter Greenhouse*

Bacterial Vaginosis (BV) is not an infective process, but represents an increase in growth and concentration of mostly anaerobic organisms following alterations in the hormonal, nutritional and chemical milieu of the vagina. Many adverse medical outcomes – Pelvic Inflammatory Disease (PID), uterine instrumentation sepsis and premature membrane rupture (PPROM) – are unquestionably associated with BV, but whether these are true sequelae of BV is debatable. It is more likely that other infective organisms and processes coexist, which coincidentally result in BV, which itself indicates the presence of something more significant. This is best illustrated by the PID – Douching – BV dilemma: which came first?

Although metronidazole or clindamycin are recommended in all PID treatment guidelines, regimes without a specific anaerobicide (e.g. Ofloxacin alone, Ceftriaxone/Azithromycin) have proven success in mild-to-moderate PID. Anti-anaerobic regimes must be used in severe PID with abscess formation, but causal organisms are usually E.Coli or other respiratory / gut aerobes, not anaerobes.

In pregnancy, intravaginal treatments and antibiotic regimes containing metroniazole alone are ineffective at preventing PPROM, yet systemic Erythromycin, Azithromycin and Clindamycin treatment reduces fetal loss: The latter is the recommended treatment for BV (RCT evidence), which suggests an alternative aetiology, probably chlamydial.

Uncomplicated BV is treated easily with oral or vaginal metronidazole or clindamycin, and can also be cleared by acidic gels which contain glycogen.

Women who have frequently recurrent BV require a more complex, holistic approach, as most will have BV in the early follicular phase, probably triggered by menstruation. Conventional management with prophylactic or repeated metronidazole (literally *ad nauseam*), lactobacilli or acidic gels is unsatisfactory. Treatments which reduce menorrhagia – Azithromycin for endometritis, IUD removal – and induce oligomenorrhoea – IUS insertion, depoprovera, tri-cycle contraceptive pill – are more likely to succeed by treating the underlying cause, rather than the symptom.

**Keywords:** Bacterial Vaginosis
Molecular typing of penicillinase producing *Neisseria gonorrhoeae* to identify outbreaks within the United Kingdom

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**Background:** In 2007, 7.9% of isolates submitted to the national Gonococcal Resistance to Antimicrobials Surveillance Programme (GRASP) were penicillinase producing *Neisseria gonorrhoeae* (PPNG), an increase from 3.4% in 2006. The present study was conducted to identify whether a PPNG outbreak occurred in the UK in 2007 accounting for this increase.

**Materials-Methods:** PPNG isolates from 2004 – 2007 (n=290) were typed using *Neisseria gonorrhoeae* Multi Antigen Sequence Typing (NG-MAST), which differentiates strains according to variation in two hypervariable loci, porB and tbpB.

**Results:** Overall, 249 PPNG isolates referred to GRASP from 2004 – 2007 were typed and 123 different sequence types (ST) were observed with no ST persisting across all four years. Two clusters of isolates sharing the same ST were identified. In 2005, 53.3% of isolates were ST 5288 found mainly in heterosexual males and females (87.5%) all in London with 66.6% being of black ethnicity. In 2007, 21.6% of isolates were ST 1479, all of which were isolated from men who have sex with men (MSM) of white ethnicity, with 93.8% living in the London or South east region. The number of different STs found in each year was similar except for 2006 where a greater number of STs was observed with 34 STs identified in 43 isolates.

**Conclusion:** Molecular typing of PPNG isolates has identified two possible outbreaks not apparent from the original GRASP data amongst heterosexuals of black ethnicity in 2005 and amongst MSM of white ethnicity in 2007. This study highlights the benefits of molecular typing for surveillance programmes and aids in identifying strains of *N. gonorrhoeae* circulating within different communities.

**Keywords:** *Neisseria gonorrhoeae*, molecular typing

The 2012 IUSTI ECCG report on the diagnosis and management of *Neisseria gonorrhoeae* infections in Europe

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The European Collaborative Clinical Group (ECCG) was inaugurated at the 26th International Union against Sexually Transmitted Infections (IUSTI) Congress in Riga, Latvia 2011. The ECCG is a network of over 100 Sexually Transmitted Infection and Genitourinary Medicine specialists who have come together to conduct questionnaire based research across the European Region. This work will amongst other outcomes direct guideline development.

Gonorrhoea infection rates across Europe have generally remained relatively stable at near historic lows especially when discounting the wide scale adoption of nucleic acid testing protocols that have generated increased detection. Resistance testing of clinical isolates is currently being carefully monitored through a number of laboratory initiatives. Such work has shown that the number of options for treating gonorrhoea infection is becoming limited and clinicians can no longer rely upon an oral regimen to achieve cure. The minimum inhibitory concentrations (MICs) for 4th generation cephalosporins are rising and the recent demonstration of high dose ceftriaxone resistance in a European patient may soon mark the end of single drug outpatient therapy. The ECCG felt that an urgent review of the clinical management of gonorrhoea is necessary to determine whether clinicians have adapted their prescribing practice in light of the changing resistance data.

The ECCG 2012 project looks at the clinical management of gonorrhoea, its clinical diagnosis and first line treatment choices for confirmed or suspected infections. The project will see whether clinicians provide single dose therapies, the range and doses of antibiotics used and whether tests to confirm resistance profiles and cure are
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Background:
Lambeth has exceptionally high levels of sexually transmitted infections (STIs) including genital *Chlamydia trachomatis*. Modelling studies suggest that screening 35% of people age 16-25 will lead to a fall in the prevalence of Chlamydia infection. We would like to demonstrate that it is possible to test large numbers of young people in General Practice when a mix of interventions and a GP-Champion are being used.
Materials-Methods:
Data on age, gender, venue and chlamydia result for tests on under 25s in Lambeth from 2003-11 were obtained from the Health Protection Agency. We were interested in the number and percentage of tests coming from general practice, the number of practices screening more than 10% of their practice cohort of 15-24 year olds and positivity rates in comparison to other screening venues.
Results:
Tests done in general practice increased from 23 in 2003-4 to 4813 in 2010-11. 51 of 52 general practices in Lambeth signed up to a Local Enhanced Service, of which 32 practices tested more than 10% of the target cohort. In 2011 46% of tests came from GPs. More young men, 48%, were tested in General Practice than in any other community clinic. Positivity rate: 5.8% in men and 6.0% in women.
Conclusion:
General Practice has great potential for Chlamydia screening. With the right support and incentives, it is likely that over a third of the target group would be screened.
Keywords: Chlamydia screening primary care

Understanding trends in genital chlamydia trachomatis: the Australian example
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Background: Rising chlamydia notifications have led some western countries to launch national chlamydia screening programs. This has resulted in even more notifications as the more you test the more you diagnose. This study aimed to compare these population-based notification data with sentinel surveillance data in order to understand the actual trends in genital chlamydia infection in Australia.
Materials-Methods: Data from 18 sexual health services and the national notification scheme were analysed. A Chi-square test assessed trends in chlamydia positivity among young heterosexuals tested from 2006-2010 and logistic regression was used to determine correlates of positivity.
Results: In Australia, during 2006-2010, 64 588 heterosexuals aged 15-29 years attended the sexual health services for the first time and the chlamydia testing rate was consistently >80%. Chlamydia positivity increased by 8.3% in heterosexual males (from 13.2% in 2006 to 14.3% in 2010; p-trend=0.04) and by 15.9% in females (from 11.3% in 2006 to 13.1% in 2010; p-trend<0.01). Independent correlates of chlamydia positivity in sexual health service patients were being aged 15-24 years, residing in a regional/rural area, being Aboriginal or Torres Strait Islander, being a non-Australian-resident, and attending in 2010 compared with 2006. Over the same period the population-based notification rate increased by 43% against a background of >100% increase in testing.
Conclusion: Sentinel surveillance shows a moderate increase in chlamydia prevalence in young heterosexuals, in contrast to the steep increase suggested by notifications in Australia. This highlights the caution needed in interpreting chlamydia trends without a testing denominator, and shows that notifications alone can be misleading.
Disclosure of Interest Statement: The surveillance study was funded by the Australian Government Department of Health and Ageing from 2007 to 2010, as part of the national Chlamydia Pilot Program.
Keywords: Chlamydia, Prevalence

Comparative effectiveness research for detection of Chlamydia trachomatis among women in a clinical setting: point-of-care tests vs. nucleic acid amplification tests
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Keywords: gonorrhoea, resistance
Background: Point-of-care (POC) tests that provide rapid test results for the detection of chlamydia at the index visit, can dramatically reduce the time between testing and receipt of treatment, as well as increase the overall treatment rate. The objective was to conduct comparative effectiveness research (CER) and determine the cost-effectiveness of a promising new point-of-care (POC) chlamydia test compared with nucleic acid amplification testing (NAAT), and to determine the characteristics that would make a POC test most cost-effective.

Materials-Methods: A decision tree was constructed to model Chlamydia screening visits to a sexually transmitted disease clinic by a hypothetical cohort of 10,000 women. The model incorporated programmatic screening costs, treatment costs, and medical costs averted through prevention of pelvic inflammatory disease (PID) and its sequelae. Parameter values and costs were estimated for each node in the decision tree based on primary data, published data, and unpublished health data.

Results: For the base-case scenario (POC sensitivity of 92.9%; 47.5% of women being willing to wait 40 minutes for test results; test cost of $33.48), POC was estimated to save $5050 for each case of PID averted compared with NAAT. One-way sensitivity analyses indicated that POC would dominate NAAT if the POC test cost were <$41.52 or if POC sensitivity were 87.1%. In a probabilistic sensitivity analysis (Monte Carlo simulations, 10,000 iterations), 10.8% of iterations indicated that the POC strategy dominated the NAAT strategy. The mean incremental cost effectiveness ratio indicated that the POC strategy would save $28 in total and avert 14 PID cases.

Conclusion: An accurate chlamydia POC test is likely to prevent more PID cases and be cost-effective compared with traditional NAAT. The POC test sensitivity, cost, and proportion of women willing to wait for the POC test result are key elements to determining the cost-effectiveness of any new POC test strategy.

Keywords: Chlamydia trachomatis, Comparative effectiveness research (CER)

[OP-06]

A clinical case of multidrug treatment failure in inguinal lymphogranuloma venereum (LGV)

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A 47-year old homosexual man attended our clinic with a 45 day history of anal pain and lymphadenitis. He reported unprotected anal intercourse 2 months previously, no travel and a negative STI history including HIV.

Clinical examination found enlarged bilateral, tender lymph nodes; 3x3 cm in size. Anoscopy showed a mucopurulent exudate with blood (LGV was detected by means of a NAAT). After 21 days of doxycycline 200 mg/day for 21 days, the rectal symptoms had improved but lymphadenopathy persisted (confirmed by progressive inflammation on ultrasound). After a ten day trial of azithromycin (1 g/day) lymph node aspiration revealed a microscopically purulent liquid that was positive for LGV. Azithromycin was then continued at a lower dose for another ten days (0.5g/day). At this time point tests were negative for rectal LGV but the lymph nodes had progressed to fluctuant bubos with surrounding cellulitis. Clinical failure to both drugs was suspected and therapy was instituted with moxifloxacin 400 mg/day for 12 days. After 7 days of moxifloxacin the patient developed a thin discharging inguinal sinus (from where Chlamydia trachomatis was detected). One month after cessation of antibiotic therapy the patient no longer had any external signs of inflammation and discharge from the bubos.

Chlamydia trachomatis is naturally sensitive to tetracyclines (the recommend drug for LGV), macrolides and fluoroquinolones. The rectal LGV was cured with doxycycline but lymphadenopathy worsened despite an extended 20-day azithromycin regimen. It is not clear up to what extent moxifloxacin contributed to patient’s recovery. The patient was fully compliant with treatment and reinfection was excluded. Although a more virulent strain might have been implicated it is possible that the antibiotics did not work effectively on the nodal disease for unknown reasons. Clinicians must be vigilant to the evolving faces of LGV.

Keywords: LGV, treatment failure

[OP-07]

Increasing prevalence of macrolide resistant Mycoplasma genitalium infection

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Background: Mycoplasma genitalium (M. genitalium) is a sexually transmitted infection (STI) which causes urethritis, cervicitis and pelvic inflammatory disease. Since 2007, patients attending Olafsklinikken, Oslo for an STI screen have been tested for M. genitalium. The propensity of M. genitalium to develop macrolide resistance has previously been
documented. Current first line treatment for non-gonococcal urethritis (NGU) is 1g azithromycin, and it has been suggested that is driving the development of resistance by selecting for one or more mutations in 23S rRNA. Data from a previous patient cohort in 2007 showed a 21 % treatment failure rate following 1g of azithromycin. Perceived increasing treatment failure rates stimulated a new study to examine the current prevalence of transmitted resistant strains.

Materials-Methods:
Samples from 100 randomly selected new attendees testing positive for M. genitalium in 2011 were studied for the presence of 23S rRNA mutations. Azithromycin treatment failure rates in these individuals were correlated with data for pre-existing mutations.

Results:
The study showed a 30% rate of 23S rRNA macrolide resistance mediating mutations in the pre-treatment samples. There was a strong correlation with persisting infection and the presence of pre-existing 23S rRNA mutations, and eradication in the absence of resistance mutations in the initial samples.

Conclusion:
From our data, it appears that azithromycin treatment failure of M. genitalium is becoming more common. Since use of this antibiotic for the empirical treatment of NGU may be driving the development of macrolide resistance, changing first line treatment of NGU to doxycycline may reduce this selection pressure. Routine testing for macrolide resistance may allow identification of individuals who are likely to experience treatment failure (and should receive second line treatment earlier). This may also reduce the transmission of resistant strains and the likelihood of complications due to sub-optimally treated infection.

Keywords: resistance, treatment failure

A case of Nodular Syphilis masquerading as Primary Cutaneous Marginal Zone Lymphoma
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Background: We describe a 66-year-old HIV-negative man diagnosed with primary cutaneous marginal zone lymphoma (PCMZL) on skin biopsy. On failing to respond to conventional chemotherapy he was found to have positive syphilis serology, and following anti-treponemal therapy symptoms resolved.

Case History: The patient developed a sudden onset, non-pruritic, subcutaneous nodular rash, affecting the trunk and limbs, without any systemic symptoms. His past medical history included ischaemic heart disease, and recent onset mild cognitive impairment.

Skin biopsies were diagnostic of PCMZL, albeit without the characteristic clonal IgH gene rearrangement seen in 75% of PCMZL.

Staging whole body CT showed no lymphadenopathy and a marginally enlarged spleen.

After 4 cycles of Rituximab chemotherapy and oral prednisolone made little difference to the rash the original diagnosis was reviewed and infectious mimics considered. Borrelia serology was negative, but Rapid Plasma Reagin (RPR) was positive at titres of 1:32, Treponema Pallidum Particle Agglutination assay (TPPA) was 1:>128 and syphilis IgM was negative.

Lumbar puncture showed raised CSF protein at 696 mg/L, normal CSF glucose, lymphocyte count 21cells/uL, neat RPR, with TPPA 1:>128.

He was treated with 2.4g procaine penicillin IM daily with oral probenicid 500mg q.d.s for 17 days, to treat neurosyphilis. His rash faded and cognitive function subjectively improved, although neurology follow up is ongoing.

His wife, his only sexual partner for 10 years tested syphilis negative

Conclusion: We can assume the initial diagnosis of PCMZL was incorrect, and the plasma cell infiltrates thought to represent a lymphoproliferative disorder on histology were in fact syphilitic.

A small number of similar cases have been reported, where nodular syphilitic rashes have been mistaken for conditions such as lymphoma, Sweets syndrome and lichen planus.

This case emphasises the reputation for syphilis as the great mimic and underlines the importance of it as a differential diagnosis in cutaneous lymphoma

Keywords: Syphilis, lymphoma

Giant condylomata acuminata transforming into squamous cell carcinoma
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Background: Giant condyloma acuminata of Buschke Loevenstein is a proliferative, locally invasive, rapidly growing carcinoma-like tumor of the anogenital region with no metastatic potential and with histologic similarity to
ordinary condyloma acuminatum.

Materials-Methods: The authors are presenting eleven cases patients with giant condyloma acuminata. Tissue samples were investigated by Real Time PCR method for DNA HPV, histologically and immunohistochemically (intermediate cytokeratin filaments EA1/EA3, anti PCNA (proliferating anti-nuclear cell antigen), p53).

Results: In all patients were identified HPV, in seven patients HPV 6, in three patients HPV 11 and in one patient HPV 16. In five of the patients, giant condyloma acuminata were transforming into the invasive squamous cell carcinoma, invading the anogential region and metastasizing mostly into the pelvic bones.

Conclusion: Important is interdisciplinary collaboration between dermatovenereologists, gastroenterologists, urologists and gynecologists and early beginning of the therapy. Very important is genotypisation of the HPV type. The best prevention against HPV infections is vaccination. 

Keywords: HPV - giant condylomata

[OP-10]

Condyloma acuminata, treatment with Liquid Nitrogen and TCA
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Abstract: Condyloma acuminata is the infection caused by Human Papilloma virus. Condyloma acuminata are soft, skin colored, fleshy warts, can appear solitary or in a group and can be both small and large. They appear in the vagina, on the cervix, around the external genitalia and rectum, in the urethra and anus. The warts can also appear in nasal, oral and laryngeal form and occasionally occurs in the throat. The disease is highly contagious. The incubation period may take from one to six months Sexually transmitted diseases affect the sexually active population being in the reproductive age group and usually are being transmitted in venereal form. For treatment of genital warts, clinician and patient choose treatment based on morphology and distribution of lesions. During our studies have found that from 226 patients with CA 182 were male and 44 were female. Patients were aged 1-58 years. Treated with liquid nitrogen and own 196 of them were 159 male and 37 female. Treated with TCA were 30 persons, of whom 23 males and 7 females. Treatment with Liquid Nitrogen the majority of patients was extended after 10-15 mal treatment and subjective feeling easily tolerated by patients. Treatment with TCA was the majority of patient successful after first treatment, and the smallest number have had a need to be treated to three times, associated with more severe subjective feeling. Treatment with Liquid Nitrogen is boring, and TCA, although associated with more severe subjective feeling accepted as the most efficient method by patients. • In total 14 patients smoker treatment was prolonged and resistant to two types of therapy. • Relapse after treatments were more often in the group of patients treated with Liquid Nitrogen to 3% of patients. 

Keywords: Genital warts and treatment

[OP-11]

Declining inpatient treatments for genital warts among young Australians after a national HPV vaccination program
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Background: Australia introduced a national human papillomavirus (HPV) quadrivalent vaccine program for 12–13-year-old girls in mid 2007, with a catch-up program for 14–26-year-old women till 2009. Since, sentinel surveillance has shown a large decrease in proportion of vaccine-eligible women diagnosed with genital warts at outpatient sexual health services. This analysis assessed trends in inpatient treatments for genital warts.

Materials-Methods: Data on in-patient treatments of warts in men and women were extracted from Medicare (Australian universal health insurance scheme) website. We used χ2 statistics to determine trends in inpatient treatments before and after 2007, stratified by age groups and anatomical site.

Results: Between 2000 and 2011, 6014 15–44-year-old women underwent inpatient treatments for vulval/vaginal warts. In women aged 15-24 years (eligible for vaccination in 2007), there was no trend in number of treatments before 2007(p=0.73); however, there was a 85% decline after 2007(p<0.01). In women aged 25-34 years, there was 24.2% decline before 2007(p<0.01) and 33.3% decline after 2007(p<0.01); and in 35–44-year-old women there was no decline(p=0.97). In 2000-2011, a total of 936 15–44-year-old men underwent treatment for penile warts, and 3398 men for anal warts. There was a 200% increase in penile wart treatments in men aged 15-24 years before 2007(p<0.01) and 70.6% decline after 2007(p<0.01). In 25-34-year-old men there was no decline before 2007(p=0.27) and 59% decline after 2007(p<0.01). There was no decline in men aged 35-44 years(p=0.11). There was no decline in anal warts treatments in men.

Conclusion: This is the first study to look at impact of vaccine program on treatment of severe cases of genital warts. The marked decrease in numbers of vulval/vaginal wart treatments in youngest women is attributable to the vaccine program; moderate decrease in in-patient treatments for penile warts in men probably reflects herd immunity.

Keywords: human papillomavirus, quadrivalent vaccine
Do genitourinary clinicians know how often genital herpes simplex virus type 1 recurs and advise their patients accordingly?

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Background: Studies have shown that, following their primary episode, patients with genital HSV1 will have a median of 1 recurrence in the first year and 0 recurrences in the second year. Recurrences have not been associated with short-term stress or the menstrual cycle. The aim of this study was to evaluate the accuracy of advice about HSV1 prognosis given by genitourinary medicine clinical staff in level 3 GUM services.

Methods: A prospective qualitative evaluation of 22 English level 3 GUM clinic consultations using a professional patient (PP) was performed. 9 consultations were with nurses, 10 with health advisors, and 3 with doctors. Clinical leads gave permission for their unit’s participation, but exact details were not shared. A PP visited each unit as a patient new to the area seeking advice for a scenario of an HSV1 diagnosis at another clinic and requesting further information. Field notes were made during the consultation, and a written transcript and audio notes immediately after.

Results: 41% of clinicians gave prognostic advice consistent with published evidence – to expect 0-2 recurrences in their lifetime. 18% said it was unknown how often genital HSV recurs, 14% gave no advice on recurrence rate, and 9% gave ranges of recurrence rates up to every few weeks. 27% said recurrence rate was individual and was hard to estimate. Triggers of recurrences were discussed frequently, with 41% advising that recurrences were linked with stress, 14% with menstruation and 58% with low immunity.

Conclusion: Advice about genital HSV1 prognosis was highly variable, and much was not in line with published findings. Many clinicians gave no meaningful advice or gave highly inaccurate statements about how often to expect a recurrence. This study shows that patients are given inaccurate information about their prognosis, which may affect their ability to manage their disease process.

Keywords: herpes simplex virus type 1, recurrences

Do genitourinary clinicians advise their patients to disclose their diagnosis of herpes simplex virus type 1 to sexual partners?

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Background: Recently in the UK a 14-month prison sentence was given in the Golding versus the Crown Prosecution Service case, after Golding pleaded guilty to infecting an ex-partner with genital herpes. This case is now under appeal. The aim of this study was to evaluate the quality of advice about HSV1 disclosure to sexual partners given by genitourinary medicine clinical staff in level 3 GUM services.

Methods: A prospective qualitative evaluation of 22 English level 3 GUM clinic consultations using a professional patient (PP) was performed. 9 consultations were with nurses, 10 with health advisors, and 3 with doctors. Clinical leads gave permission for their unit’s participation, but exact details were not shared. A PP visited each unit as a patient new to the area seeking advice for a scenario of an HSV1 diagnosis at another clinic and requesting further information. Field notes were made during the consultation, and a written transcript and audio notes immediately after.

Results: 9% of clinicians gave no advice on disclosure, 5% discouraged disclosure, 32% neither encouraged nor discouraged disclosure, and 55% encouraged disclosure. Of those promoting disclosure, 50% advised disclosure only to long-term partners, 25% advised disclosure prior to any sex with a partner, and 17% advised using condoms until disclosure had occurred. 18% felt that a negative reaction from the partner indicated that the relationship was “not meant to be”. 36% advised telling a partner it was “a cold sore in the wrong place” and 32% advised saying “I had/tested for herpes”.

Conclusion: Advise surrounding disclosure of HSV1 to sexual partners is extremely variable, with large numbers of clinicians failing to advise disclosure. This may expose patients (and their clinicians) to potential prosecutions in the future, especially until the current legal stance on herpes transmission in the UK is clarified.

Keywords: herpes simplex virus type 1, disclosure
Managing Herpes simplex virus susceptible pregnant women in serodiscordant couples – do genitourinary medicine physicians and obstetricians provide similar advice?

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Background: Strategies to limit the transmission of herpes simplex virus (HSV) to susceptible women in pregnancy are to a major extent untested and unproven. British Association for Sexual Health and HIV (BASHH), Royal College of Obstetrics and Gynaecology (RCOG) and European guidelines all provide limited advice on managing serodiscordant couples. Other than abstinence from sex none of these strategies have been proven to reduce transmission risk.

Method: A questionnaire consisting of case-scenarios regarding management of HSV susceptible pregnant women in serodiscordant couples was distributed to genitourinary medicine (GUM) physicians and obstetricians at 6 national meetings. The first case assessed knowledge of current guidelines regarding primary HSV. The data of those who responded correctly was analysed for a further case-scenario exploring the transmission advice given to a couple - the male partner with a recurrent episode of HSV-2 and the female partner being seronegative and 18 weeks pregnant.

Results: 113 participants completed the survey, of which the data of 56 demonstrating knowledge of current guidelines were analysed (37 GUM physicians, 19 obstetricians). 53% of obstetricians and 35% of GUM physicians would not advise abstinence from sex if condoms were constantly used. 91% of all participants would advise the use of condoms to protect against transmission, in line with BASHH and RCOG guidelines. 68% of participants would advise the use of antiviral treatment for the infected male partner during the recurrent episode. 47% of obstetricians would not advise suppressive therapy compared with 30% of GUM physicians. 64% of participants would advise serological testing for the female partner.

Conclusion: Management of serodiscordant couples is highly variable and needs clarification. Currently there is a lack of clear guidance with GUM physicians and Obstetricians in the UK managing these couples differently. Inconsistent advice may lead to confusion and loss of confidence in clinicians for patients.

Keywords: herpes simplex virus, pregnancy

Do genitourinary medicine clinicians follow guidelines for offering patients treatment for genital herpes simplex virus type 1?

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Background
Guidelines indicate best practice for HSV management including the indications for therapy in recurrent episodes. The aim of this study was to evaluate the quality of advice about therapy following a primary episode of HSV1 given by genitourinary medicine clinical staff in level 3 GUM services.

Methods
A prospective qualitative evaluation of 22 English level 3 GUM clinic consultations using a professional patient (PP) was performed. 9 consultations were with nurses, 10 with health advisors, and 3 with doctors. Clinical leads gave permission for their unit’s participation, but exact details were not shared. A PP visited each unit as an asymptomatic patient new to the area. The PP gave a history of a laboratory confirmed first episode of genital HSV1 three weeks earlier at another clinic, and requested further information. Field notes were made during the consultation, and a written transcript and audio notes immediately after.

Results
48% of clinicians encouraged experiencing the recurrence without aciclovir treatment and 43% gave advice on self-care during a recurrent episode including salt-water bathing. Suppression therapy for recurrent disease was discussed in 65% of consultations. 45% gave advice on timing of the first aciclovir dose, although in 40% of these aciclovir would have been started over 48 hours after the episode commenced. 30% of clinicians attempted to issue aciclovir for the next recurrence of whom only 14% gave advice on dosage or frequency, and this was for suboptimal treatment of a recurrence.

Conclusion
Advice regarding therapy for genital HSV1 is highly variable. Large numbers of clinicians encourage patients to use aciclovir for all recurrences, do not offer advice on self-care or experiencing the 2nd episode without treatment, and dispense drugs without providing dosing advice. Variation in treatment may result in some patients receiving suboptimal care and ongoing problems in managing their disease process.
Keywords: herpes simplex virus, treatment

[OP-16]

**Controversies in the management of recurrent herpes simplex virus in pregnancy – a conflict of interests?**

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**Background:** Rates of neonatal herpes vary worldwide. Although the UK has the lowest reported international rate of neonatal herpes it often relies on evidence from high-risk countries to formulate some practice guidelines. Two principal UK guidelines exist on the management of HSV in pregnancy- British Association for Sexual Health and HIV guideline and the Royal College of Obstetrics and Gynaecology guideline.

**Materials-Methods:** A questionnaire was distributed to GUM physicians and Obstetricians at 6 local, regional and national specialist meetings. The questionnaire consisted of case-scenarios regarding management of pregnant women with GH. Case 1 assessed knowledge of current guidelines regarding primary HSV. Data of those who responded correctly was further analysed for additional scenarios, one assessing which guideline they followed for the management of RGH at term.

**Results:** 113 participants completed the survey. In line with current guidelines, 97 answered that primary HSV at term indicated a Caesarian section (CS). Of these, 37 GUM practitioners would advise CS at 38 weeks, complying with BASHH guidance. Of these 37, 73% would follow BASHH guidelines regarding delivery mode in active RGH (recommending CS), the remaining 27% recommending vaginal delivery consistent with RCOG guidelines. Amongst the 16 Obstetricians only 5 advised CS. Comparing the Obstetricians and GUM practitioners showed a statistical significance (p=0.005) in the management of RGH with lesions present at term.

**Conclusion:** There is considerable divergence in opinion regarding appropriate management of RGH at delivery. Variance between GUM practitioners and Obstetricians may be due to differing pressures on management. Consensus for management of GH across Europe with differing vertical transmission rates may not be possible but advice within countries should be uniform to limit patient anxiety occurring if differing management strategies were to be proposed by different experts. In addition it avoids unnecessary medicolegal wrangling when occasional neonatal cases occur.

**Keywords:** recurrent genital herpes, controversy in pregnancy

[OP-17]

**Combined phosphoproteomic and transcriptomic investigation into the molecular mechanism of hiv-tat and antiretroviral induced neuronal apoptosis in hiv-associated dementia**

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**Background:** HIV-Associated Dementia (HAD) affects 90%+ of HIV patients in South Africa. Symptoms include an array of cognitive and motor function deteriorations. There is very limited understanding of the mechanism of disease and there are no rapid, reliable diagnoses for HAD. The incidence of serious HAD cases has decreased in South Africa since the implementation of Highly Active Antiretroviral Therapy (HAART) but despite this, the incidence of mild cognitive impairment has increased. There is currently no universally accepted mechanism of HIV-Dementia onset and development.

**Materials-Methods:** SH-SY5Y neuroblastoma cells metabolically labelled using SILAC were treated with relevant concentrations of HIV-Tat or single or combinations of antiretrovirals (ARV). Protein was extracted, phospho-enriched and pre-fractionated using various methods and digested. The resultant peptides were identified using an EASY-nLC with the LTQ Orbitrap Velos mass spectrometer. High quality RNA was purified and analysed using the affymetrix platform. Proteomic data analysis was performed using a combination of Proteome Discoverer V1.3 and an in-house software platform.

**Results:** By investigating the structure and composition of active and inactive HIV-Tat, we have developed a reproducible model of HIV-Tat induced neuronal apoptosis. Additionally, we determined the toxicities of eight commonly used ARV's singularly and in various combinations. Both these models were used to generate extensive gene expression and phosphoproteomic data. During this analysis, we have identified several pathways activated by HIV-Tat and ARV treatment, many of which are supported by literature.

**Conclusion:**
We have generated large sets orthogonal and complimentary data which have identified many interesting and seemingly relevant pathways which we need to further validate using targeted MRM/SRM mass spectrometry methods.

**Keywords:** HIV-encephalitis, proteomics

[OP-18]

**Construction of site selected phage library and characterization of anti-V3 scFvs from Indian clade C HIV-1 infected patient**

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**Background:**
Production of human monoclonal antibodies that shows broadly neutralizing activity is needed for the prevention of HIV-1. Here we have produced eight different human scFvs against the V3 region of HIV-1 envelope.

**Materials-Methods:**
A V3 specific phage library was constructed from the EBV transformed B cells of clade C HIV-1 infected patient whose plasma exhibited good neutralization potential against a panel of viruses. Diversity of constructed phage library was analysed by DNA fingerprinting of 10 randomly selected clones from the unselected library using BstN1 enzyme. One round of biocapping was done against HIV-1 consensus V3C and V3B peptides. scFvs were then characterised for their binding, specificity and expression profile

**Results:**
DNA fingerprinting analysis of clones from unselected library showed that ninety percent of clones in library were distinct. Thirty clones were randomly selected after first round of biocapping and they were checked for their binding to V3C and V3B peptides. Nine clone showed binding in phage ELISA and showed unique DNA fingerprint pattern on agarose gel. Soluble expression of the selected scFvs were checked by SDS-PAGE and confirmed by Western blot. All the nine anti-V3 scFvs showed cross-reactivity against both the V3 peptides. Distribution of VH gene segments used by these anti-V3 scFvs were different, 56% (5/9) of scFvs used VH4, thirty 33% (3/9) VH5 and 11% (1/9) used VH3 gene usage. In light chain IGKV1 and IGKV3 were most preferentially used gene segments

**Conclusion:**
This is the first study to generate human anti-V3 scFvs against HIV-1 clade C. Further characterization of these scFvs for their neutralization potential and epitope mapping will provide in depth understanding of the antigenic properties of HIV unique to the Indian Clade C viruses, a prerequisite for designing a polyvalent vaccine against a broad spectrum of HIV-1 isolate.

**Keywords:** HIV-1, scFv

[OP-19]

**Unique vaginal microbiota (VMB) which include an unknown Mycoplasma-like organism (Mnola) are associated with Trichomonas vaginalis (TV) infection**

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**Background:** TV prevalence is highest in women with intermediate Nugent scores (INS). We hypothesized that the VMB in TV-infected women would differ from that in TV-uninfected women.

**Materials-Methods:** Vaginal samples from 30 women with TV by culture were matched by NS to 30 women without TV. Equal numbers of normal (NNS), INS and BV (BVNS) cases were included. The VMB was assessed using 454 pyrosequencing. The complete Mnola 16S rRNA sequence was obtained by PCR amplification using general bacterial primers in specimens with high Mnola abundance, cloning amplicons into E. coli, and sequencing.

**Results:** Principal component analysis of the pyrosequencing data showed divergence of the VMB in TV-positive and TV-negative patients among NNS and INS women but not among BVNS women. Heat map analysis revealed a cluster (A1) of TV-infected women with high abundances of Mycoplasma hominis and a cluster (A3) with very high abundances of Mnola. All of these cases had either NNS or INS. Overall Mnola was present in 63% of TV-infected cases and 3% of TV-uninfected cases. Phylogenetic analysis of the 16S rRNA gene sequence placed Mnola within the Mycoplasma genus though not closely related to known human Mycoplasma spp.

**Conclusions:** The VMB of subsets of women with TV are unique and are characterized by increased abundances of *M. hominis* or a newly discovered *Mycoplasma*-like organism, Mnola. Studies have shown that women with BVNS are at increased risk for acquiring TV. We have shown here that cluster A1 and A3 VMB are exclusively associated with TV. Thus it appears possible that following initial infection of some women with BVNS, TV effects significant changes in the VMB resulting in NNS or INS. Testing this hypothesis and determining the clinic significance of these findings should be the focus of future research.

**Keywords:** Trichomonas vaginalis, vaginal microbiota
Etiology of non-gonococcal urethritis in men and its association with degree of urethritis

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Background: The most common causes of non-gonococcal urethritis (NGU) are Chlamydia trachomatis and Mycoplasma genitalium, which together account for about 40-50% of cases. Ureaplasma urealyticum is regarded to cause 10-20% of NGU, but the precise role of this species is unclear. The aim of this study was to investigate microbiological causes of urethritis in a well defined male population.

Materials-Methods: Men, with and without symptoms, attending the Olafia STI clinic were recruited. Patients were examined for microscopic urethritis using urethral smear stained with methylene blue. The grade of urethritis was subtyped as negative (0–4 polymorphonuclear leucocytes per high power field (PMNL/HPF)), mild (5–9 PMNL/HPF), moderate (10–30 PMNL/HPF) and severe (>30 PMNL/HPF). First catch urine was sampled and analyzed using NAAT for the following microorganisms: C. trachomatis, M. genitalium, U. urealyticum, Ureaplasma parvum, Mycoplasma hominis and Trichomonas vaginalis.

Results: 363 high risk men were included in the study, 223 were symptomatic (66% had urethritis) and 140 were asymptomatic (54% had urethritis). The prevalence in percent in symptomatic and asymptomatic was, respectively: C. trachomatis 21.7 and 7.9%, M. genitalium 8.1 and 0.7%, U. urealyticum 13.0 and 13.6%, T. vaginalis 0.9 and 0%, M. hominis 3.6 and 7.1% and U. parvum 10.8 and 21.4%.

Conclusion: There was a strong association between the level of urethritis and the microbiological findings for C. trachomatis and M. genitalium, as most of them had a severe urethritis regardless symptoms. A high percentage of U. urealyticum had no or severe urethritis.

Keywords: mycoplasma genitalium, ureaplasma urealyticum

HCV antibody testing in French STD clinics: a multicentric study

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Background:
In 2010, Saint Louis Hospital’s STD centre (Paris, France) reported 2 remarkable findings in its 2009 HCV screening figures: high local prevalence (1.2% vs 0.84% in the general French population (GFP)) and high number of patients with no identifiable risk factor (RF) (48% vs 15-30% in the GFP). We investigated whether such was the case in other STD clinics throughout the country.

Materials-Methods:
All results of HCV antibody assays from 9 departments between 01/01 and 37/12/2009 were retrospectively analyzed. Positive patients’ files were searched to make sure they were not previously aware of their serostatus and to investigate their RFs.

When information was missing, patients were accessed by telephone.

Results:
Overall 23,654 tests were performed, 155 (0.65%) were positive. Eighty-five (55.48%) previously ignored their serostatus. The main RFs were intravenous / intranasal drug use and being from a highly endemic country, both in 32 patients (37.2%). No RF was found in 24 (27.9%).

Conclusion:
In 2004, HCV prevalence in France was 1.3 times higher than our observed positivity rate. This is in line with 2004-2009 surveillance data; across France the number of HCV tests increased while the positivity rate decreased, suggesting RF-based targeted testing became less stringent over the period.

A positive test was more often a first-hand discovery in this study than in the GFP (55.48 vs 43%). This suggests more targeted testing based on review of patient history (less re-testing of known HCV carriers).

In this study, the proportion of patients without an identified RF reached 27.9%, which is close to that quoted in the literature (30%). The current French RF- restricted screening programme would therefore exclude a third of all potential HCV positive attendees at STD clinics. This study also highlights the importance of investigating for potential alternative RFs.

Keywords: HCV, screening
Screening for HBV in HIV patients - linkage to treatment and management
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Background: In the public awareness HCV infection seem to be more recognized than Hepatitis B (HBV) infection. We aimed to determine the seroprevalence of HBV and the influence of immunodeficiency to Hepatitis B antibodies in HIV infected patients.

Materials-Methods: During the period 2005-2012 a total of 56 HIV patients were screened for HBV serological markers at baseline, including hepatitis B surface antigen (HBsAg), antibody to HBsAg (anti-HBs), and antibody to hepatitis B core antigen (anti-HBc). Medical records were reviewed before and after the implementation of a HBV vaccination to patients who are not immune or infected.

Results: From all enrolled patients, 5 (9%) had chronic form of HBV and 51 (91%) of them were tested negative for HBsAg. 7 patients got a repeat course of 3 vaccinations in the time when 6 of them had CD4 count <350 c/µL (4 receiving ART), and only 1 patient had CD4 count 660 c/µL. Postvaccination testing for all 7 patients for HBV surface antibody showed negative anti-HBs. Of 51 patients who tested negative for HBV marker, 11 (21%) developed anti-HBs, 15 (29%) developed isolated anti-HBc. After a 7 year follow-up, 9 patients had changes in HBV serological markers. Of 17 patients (33%) who tested positive for antibody to HBsAg at baseline, 65% developed anti-HBs, and 82% developed isolated anti-HBc.

Conclusion: Our results showed that HBV serological status must be systematically and regularly assessed, and systematic HBV vaccination must be proposed. Immunization with hepatitis B vaccine is recommended for all HIV-infected patients without immunity to HBV. Still, this patient population has relatively poor HBV vaccine responses. Explanation associated with this may include low CD4 cell count and uncontrolled HIV replication. However, postvaccination testing for HBV surface antibody is recommended and vaccine non-responders should undergo repeat immunization with a full series.

Keywords: HBV, HIV

A regional study on the infectious infertility of Iraqi males from 1980 to 2012
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Background: The prevalence and main causes of male primary and secondary infertility were estimated since 1980 till now when a series of wars and sanctions occurred. 3600 males were attended our clinics and laboratories from Nineva, Salahaldeen and Kirkuk governorates.

Materials-Methods: 3600 males suspected to be infertile were tested for seminal fluid analysis and azoospermia, oligospermia, oligozoospermia, asthenozoospermia, teratozoospermia and oligoteratoasthenozoospermia were classified. Infection of male genital tract was assessed as the presence of greater than 1000 bacteria per ml of semen according to WHO criteria. Infectious agents were isolated and identified according to conventional as well manufacturer instructions of materials utilized.

Results: The present study revealed that the oligoteratoasthenozoospermia was the most prevalent (41.7%) of the 3600 patients studied. 5.6% of males were with normal picture of semen. The frequencies of azoospermia, oligospermia, oligozoospermia, asthenozoospermia and teratozoospermia were 11.4, 2.2, 17.2, 10 and 11.9% respectively. The highest incidence (76.1%) of male infertility was recorded during the period 2003 to 2012. 1980 to 1990 and 1991 to 2002 showed 6.2 and 17.7% of infertility of the total examined. The total counts of leucocytes in semen was also elevated among patients group of 2002 to 2012 to reach 4800 x 1000/median. Escherichia coli, Streptococcus faecalis, Staphylococcus aureus, Proteus mirabilis, Niesseria gonorrhoea, Treponema pallidum, Chlamydia trachomatis and ureaplasma urealyticum were identified. N. gonorrhoeae and T. pallidum were unexpectedly decreased in their frequencies since 1980 to 2012. C. trachomatis and U. urealyticum incidences were increased with the time of study. Other bacteria were isolated in different patterns.

Conclusion: The present study revealed that male infertility highly elevated during wars and sanctions as adverse conditions leading to disturbance of social, economical and psycological status of man life. The elevation of infertility and associated infections which mostly chronic were highly affected the population growth. It was economically costy and represented a health and social disaster concerning patients, their partners and relatives in our society. Stress of wars and sanctions highly affected the physiological, hormonal as well immunological parameters related to fertility infections and sexual desire.

Keywords: male, infertility
The prevalence and clinical manifestation of sexually transmitted infections among the men who have sex with men and heterosexuals
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Background: The prevalence and clinical manifestation of sexually transmitted infections (STI) were studied among the men who have sex with men (MSM), and were compared to heterosexuals.

Materials-Methods: 31 patients were examined who reported MSM activity in the questionnaires and who had visited an STI clinic. The control group consisted of 31 heterosexual males who had visited an STI clinic.

Results: Syphilis was found in 2 (6.5%) MSMs and in 2 (6.5%) heterosexuals; among MSM hepatitis B was found in 3 patients (9.7%), hepatitis C in 4 patients (12.9%), and HIV infection in 2 patients (6.5%). These infections were not detected in any of heterosexuals.

Genital warts were detected in 2 (6.5%) MSM and in 2 (6.5%) heterosexuals.

The following infections were found in genital samples: gonorrhea – in 4 MSM (12.9%) and in 1 heterosexual (3.2%), trichomoniasis in 2 (6.5%) MSM and in 1 (3.2%) heterosexual, chlamydia trachomatis infection in 5 (16.1%) and in 3 (9.7%), mycoplasma infections in 3 patients (9.7%) and in 6 (19.4%), respectively.

Among MSM, infections were detected at the same time in the urethra and rectum in 3 patients (17.6%), only in the urethra in 9 (53%), and only in the rectum in 5 (29.4%). Rectal testing of 8 patients detected proctitis in 1 patient, anal genital warts in another, and asymptomatic disease in 6 (75%).

Conclusion: The following characteristics of the prevalence and clinical manifestation of the STI among MSM and heterosexuals can be detected: a higher prevalence of the STI in MSM compared with heterosexual males; a higher level of blood infections and isolated infection of the extragenital area among MSM.

Keywords: MSM, STI

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High Prevalence of Potentially Contributing Co-existent Conditions Among Women with Increased Numbers of Sexual Partners
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Background: Only a small proportion of women have more than 1-2 sexual partners per year however these women play a critical role in community STI rates.

Methods: We are conducting a prospective case-control study in our STI Clinic comparing women acknowledging >4 sexual partners (>4SPs) in the preceding year to women who have had only a single sexual partner (1PW) over the same period. All participants are tested for a spectrum of STIs and evaluated using a detailed demographic and behavioral survey which assesses a number of potential co-morbid conditions which might modify STI risk.

Results: To date we have enrolled 28 >4SPs and a comparison group of 24 1PW. Age ranges were similar. Over 68% of >4SP participants were black compared to 100% of 1SP women. Women in the >4SP group were more likely to participate in extra genital (oral/rectal) sexual activity (74% vs. 13%). Potentially co-morbid conditions were more common in >4SP women including tobacco smoking (82% vs 29%), injection drug use (14% vs 0%), and self-reported crack cocaine use (39% vs 0%). Women in the >4SP group were also more likely to have been incarcerated (39% vs 17%) and to have been victims of intimate partner violence (54% vs 8%). Rates of treatable STI conditions (gonorrhea, chlamydial infection, trichomoniasis or clinic attendance as an STI contact) were present in 50% of the >4SP group and 16% of 1SP women.

Conclusion: These data confirm the high prevalence of STIs in women with >4 sexual partners and suggest that women with increased numbers of sexual partners represent a group in which there are multiple co-morbid health conditions which may create an environment likely to sustain continuing risk for STI acquisition and transmission.

Keywords: STI, Women Sexual Partners

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Differences of associated factors to unprotected anal intercourse among MSM according to type of partner
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Background: HIV rates are rising in MSM in Western Europe, not because of greater risk-taking behaviour but because HIV is so prevalent in the community.

Objective: to identify associated factors to unprotected anal intercourse (UAI) with steady (SP) and occasional
partners (OP) among MSM participating in the ITACA Cohort.

Materials-Methods: From December 2008 MSM aged 18+ attending BCN Checkpoint to request an HIV test and found to be positive were asked to participate in the ITACA Cohort. Demographic and epidemiological data were systematically collected by peer interviews at baseline and 12 months follow-up. For the purpose of this analysis only baseline data are used. Dependent variable was: have had some UAI in last 6 months. Associations were assessed with adjusted Odds Ratio (ORa) using both univariate and multivariate regression models.

Results: Until October 2010, 3,228 MSM were included in the cohort. In last 6 months, 50.5% of participants had a SP and 66.1% of them reported UAI. Among those with OP (84.8%), the prevalence of UAI was 33.7%.

In adjusted models, UAI with OP was associated with having group sex (1.39), not using lubricant (1.69), not having SP (1.68), used 2+ drugs (1.59) and not identifying as homosexual (1.36). UAI with SP was associated with: a HIV- partner (1.87), 1+ year partner (2.03), tested previously (1.40), UAI with OP (2.03), any STI (1.84) or sex under the effect of 2+ recreational drugs (1.47).

Conclusion: Consuming recreational drugs and having a SP are respectively risk and protective factors for UAI. The number of previous tests and knowing the partner is HIV– is associated with UAI, suggesting that access to testing and serostatus allows MSM within steady relationships to modulate sexual behavioural according to their risk. Cohorts like ITACA enable monitoring of risk factors to be performed which is crucial to design more specific preventive strategies.

Keywords: Men who have sex with men, unprotected anal intercourse

[OP-27]

Risk assessments tools (RATs) to detect earlier infection in men who have sex with men (MSM) - screening workload is dependent on how your RAT is put together

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Background: High-risk sexual behaviour is increasing in European society, especially amongst men who have sex with men (MSM), attributing to rising rates of HIV and STIs. In response to this changing epidemiology a number of bodies are developing MSM screening guidelines, however impact on service workload of such strategies has not been modeled. We wished to investigate variability of impact applying discreet risk assessment screening tools (RAT) for MSM has on service workload and earlier STI diagnosis in a UK level 3-service [L-3S].

Materials-Methods: A validated risk questionnaire was distributed to MSM attending a large provincial L-3S over a 3-month period comprising two discreet RATs. One based on 2010 screening guidelines from Australian STIs in Gay Men Action Group (STIGMA) and another developed in-house observing a wider range of risk behaviours. It also explored prior screening frequency and new STI diagnoses in the past 12-months. Both RATs were considered equal and applied to the data indicating MSM engaging in such behaviours to 3-6 monthly screening intervals. Projections were made to the larger MSM population attending during 2011.

Results: 126/357 completed the questionnaire, 89 were identifiable. There was no statistically significant difference between STI rates (p=0.18) and HIV diagnoses (p=0.62) between identifiable questionnaire respondents and other MSM attendees. Demographic analysis showed the sample group was representative of the larger cohort. In 2011 applying 3-monthly screening STIGMA guidelines for the 793 MSM whom attended, generated a 134% and 122% increase in screens of STIs and HIV currently done respectively. Combining RATs increases the workload further by 27% and 29% respectively and increases the possibility for earlier diagnosis.

Conclusion: The variation in workload generated by different RAT designs should be of urgent concern. Our work supports earlier modeling data that wider screening is likely to enable earlier STI and HIV diagnosis.

Keywords: Risk assessment tools, MSM
**[OP-28]**

**Sexual Exchange and Cross-Border Trade: Implications for the Spread of HIV/AIDS in Nigeria**

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In West African Countries borders create opportunities for informal networks of trade and exchanges. Most of the women involved in this cross-border trade operate without official permit. Thus, they engaged in transactional sex with those who may facilitate their movement across borders. In such situations, they are powerless to negotiate safe-sex and become vulnerable to sexually transmitted infections including HIV. The study examines sexual relations in cross-border trade with implications for HIV spread in Nigeria.

The study was carried out at Seme, a border town between Lagos, Nigeria and Republic of Benin. Qualitative method was used to collect information for the study. Forty Women who are Cross-Border Traders were used for FGDs, stratifying them into 4 Sessions based on the type of goods, age, and years of experience. In-depth interviews were used to collect information from 10 drivers and 30 security agents.

The study reveals that 75% of women are married and mainly from urban centres. Some of these women used sex as a means of negotiation with boarder officials to avoid their goods being confiscated, while others have extramarital affairs with some of the officials for financial gains and protections. None of these women used condoms during their last sexual intercourse preceding the survey. It was discovered that more than 68% of the respondents have had about HIV/AIDS but believed that they are not at risk of infection due to their ignorance. Lengthy absences from home make security agents and drivers demand for sex as gratifications instead of the monetary terms.

The study concludes that the observed sexual relationships may act as conduit for HIV and STI into both Nigeria and Benin as these create sexual networks that may stretch over a wide geographical area. There is need for mobile education programmes targeted at this high risk group.

**Keywords:** Sexual, Cross-border

**[OP-29]**

**Partnership factors associated with inconsistent or absence of condom use in heterosexual partnerships**

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**Background:** Although decisions to use condoms are made within a partnership, concerning two partners, partnership factors have not been well studied. We examined whether inconsistent or absence of condom use is associated with participant and partnership characteristics.

**Methods:** Heterosexual individuals were recruited from the sexually transmitted infections (STI) outpatient clinic of the Public Health Service of Amsterdam, the Netherlands, from May to August 2010. Participants completed a detailed questionnaire about sexual behavior with the last four partners in the preceding year. Participant and partnership determinants associated with inconsistent or no condom use in steady and casual partnerships were identified.

**Results:** 2144 individuals were included; 54.7% were female, the median age was 25 (IQR 22-30) years and 79.9% were Dutch. Participants reported 2387 steady and 4014 casual partnerships; condom use was inconsistent or absent in 2056 steady and in 2671 casual partnerships. In multivariable analysis of steady partnerships, inconsistent condom use was significantly associated with the partnership characteristics ethnic concordance (aOR 1.48; 95% CI 1.11-1.99), longer duration (p<0.001), higher number of sex acts within a partnership within the last year (p<0.001), practicing anal sex (aOR 1.69; 95% CI 1.09-2.61), and sex-related drug use (aOR 1.69; 95% CI 1.28-2.22). In casual partnerships, significant associations were found with age difference (P=0.022), ethnic concordance (aOR 1.33; 95% CI 1.14-1.56), longer duration (P=0.001), higher number of sex acts (P <0.001), practicing anal sex (aOR 2.16; 95% CI 1.51-3.09), sex-related drug use (aOR 1.54; 95% CI 1.32-1.79), ongoing partnerships (aOR 1.39; 95% CI 1.08-1.79), and concurrency (aOR 0.83; 95% CI 0.72-0.97).
Conclusion: Among heterosexual STI clinic attendees in Amsterdam, partnership factors, i.e., duration, number of sex acts, anal sex, drug use, ethnic concordance, and age difference, are important determinants of inconsistent condom use. Partnership factors are important to consider when studying risk behaviour in heterosexual individuals.

**Keywords:** heterosexuals, condom use

[OP-30]

**Break the Chain (BTC) to lower the Community Viral Load (CVL) amongst men who have sex with men (MSM) in Switzerland**

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**Background:**
HIV infections have increased among MSM (men who have sex with men) since 2002. The main objective of the FOPH's 2011 Urgent Action Plan is to stop the spread of HIV during Primary HIV-infection (PHI). Key findings of a mathematical model indicate that PHI sustains the high number of infected MSM. Reducing the CVL (less individuals with PHI in that community) would result in less infections.

**Materials-Methods:**
On World AIDS Day 2011, the FOPH published a brochure for MSM on sexual health with complete information of the current situation. The first 3 months of 2012 were used to inform and motivate for BTC in April 2012. The campaign itself was elaborated by Checkpoint Zurich, together with PR-specialists, using a participatory approach: it called upon all MSM to break infection chains by not letting HIV infections happen during April. MSM were free in their choice as how to contribute to the goals of the campaign, whether through consistently practicing safer sex, or by abstaining from certain sexual practices. After one month of BTC, men were to be tested for HIV if they want to participate in unprotected sex with their steady partners.

**Results:**
If new infections stopped during April, virtually all infections which occurred before would be detectable in May. Good counselling should considerably reduce the further spread of HIV of those tested, which would lower CVL. Evaluation of BTC will be published by December 2012, an interim report on the baseline survey is available in August.

**Conclusion:**
After the 2008 "Mission Possible"-campaign, the curve of the epidemic changed. If BTC worked even better, it should be considered that BTC is undertaken once a year across Europe at the same time. The EMIS-study indicates that MSM travel a lot, and therefore their (sexual-)networks are international

**Keywords:** Primary HIV Infection, Community Viral Load

[OP-31]

**Civil society involvement in STI prevention and care in Kyrgyzstan**

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**Background:**
Sentinel surveillance data from 2007 - 2009 reported the following syphilis prevalence (%) in different Most at Risk Population Groups (MARPs): intravenous drug users (IDU) – 11.8, 12.8, 12.7; sex workers (SW) – 34.9, 32.5, 31.3; men-who-have-sex-with-men (MSM) – 23, 13, 10.7; prisoners – 16, 17.2, 15.4. There is a lack of access to STI services for the MARPs due to:
- Stigmatization and discrimination
- High costs for medical services
- No official registration and documents
- Lack of information on STI

**Materials-Methods:**
Since 2002, Civil Society (CS) were involved in STI prevention and care (psycho-social support, referrals and adherence) and in establishing user-friendly clinics/cabinets (n=14) funded by donors.

**Results:**
During last years, 45 CS organizations actively collaborated with the Republican Dermatovenerological Centre (RDC) to decrease the spread of STI and HIV among MARPs. All services provided ensured confidentiality, were anonymous, and user-friendly. All services also routinely offered counselling, voluntary HIV and STI testing and condom distribution. All attending patients were examined and tested for syphilis, gonorrhoea, trichomoniasis.
Clients of the User Friendly Clinic at RDC (% of all clients):
SW 657 (33.9%)
IDU 592 (30.6%)
MSM 326 (16.9%)
PLHIV 88 (4.6%)
Released prisoners 16 (0.01%)
Others/family members 253 (13%)

Most of the clients (83%) were 20-39 years of age and 56% were men. Doctors and CS outreach workers visited the spots (saunas, closed disco clubs, needle and syringe exchange points, and temporary living places for MARPs) during evening and night time. STIs were diagnosed among SWs – 87.6%, IDUs - 60.4%, MSM – 16.4%, HIV counselling was provided for 1909, and 1082 were tested (four HIV positive identified).

Conclusion:
To decrease the STI spread among MARPs it is crucial to support CS interventions and to involve them in public health services. This includes supporting of user-friendly services through CS referrals, outreach/social support/advocacy and STI user-friendly clinics.

Keywords: Most at Risk Population Groups (MARPs), user-friendly clinics
IUSTI
27th Europe Congress
6-8 September 2012
Antalya - Turkey

POSTER PRESENTATIONS
[PP-01] Changing pattern of sexually transmitted diseases (STDs) in Farwaniya region of Kuwait
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Background: Data on patterns/epidemiology of STDs from the Gulf countries including Kuwait is sporadic and limited. This hospital based study was conducted to determine the current pattern of STDs in the Farwaniya region of Kuwait.

Materials-Methods: Patients presenting with history, and signs and symptoms suggestive of an STD to the Farwaniya hospital dermatology department and its satellite clinics from April 2011 to March 2012 were studied. Detailed history, clinical examination and relevant laboratory work-up was conducted in each patient.

Results: 1267 patients (1222 M, 45 F) of STDs were seen. Their age ranged from 16-55 years (males) and 22-45 years (females). Urethral discharge (UD) was the most common complaint (723), followed by growths/papules involving the genital/pubic/perianal area (276), and genital ulcers (196). Pain in the pubic region, dysuria without discharge, pain inside the urethra and testicular pain/discomfort were reported by a small number (43). Two patients had a generalized rash and genital ulcers. Twenty-seven patients were referred by the Pre-marriage check-up (PMC) center for VDRL test, with no signs and symptoms. Majority of the patients were expats. History of recent travel abroad was found in 110 patients. Etiological evaluation revealed gonorrhea (386), chlamydia trachomatis (CT) urethritis (65), both gonorrhea and CT (99), non-specific urethritis (89), genital or perianal warts (258), mollusca (18), genital herpes (127), chancroid (54), primary syphilis (12), and secondary syphilis (2) patients each respectively. Latent syphilis was diagnosed in 7 patients (5 M, 2 F) among those referred from PMC.

Conclusion: The pattern of STDs in Farwaniya, Kuwait seems to be changing in comparison to a previous study. Gonorrhea is still the most common STD encountered, whereas the incidence of viral STDs such as genital warts and genital herpes has increased. Syphilis seems to be making a comeback.

Keywords: sexually transmitted diseases, Kuwait

[PP-02] Harmonizing surveillance for syphilis of unknown duration in Europe
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Background Syphilis is a systemic communicable disease caused by Treponema pallidum. On the basis of clinical findings and duration of infection, the disease has been divided into a series of overlapping stages, which are used to guide clinical management and reporting. Syphilis of unknown duration is an imprecise stage usually classified as late latent. This classification can be problematic for use in surveillance as a number of cases may be due to probable infectious syphilis.

Material and Methods
Revision of European (IUSTI-2008 and UK-2008) and American (CDC-2010) guidelines, and European (ECDC-2008) and American (CDC-1997) Case definitions for surveillance purposes of syphilis.

Results
European and especially American clinical guidelines consider syphilis of unknown duration with high nontreponemal test (NTT) titers (i.e.,>1:32) as infectious for purposes of partner notification and presumptive treatment of exposed sex partners. Only CDC-1997 has a separate surveillance definition for syphilis of unknown duration as a subcategory of latent syphilis for cases that do not meet the criteria for early latent syphilis and the patient is aged 13-35 years and has a NTT titre >=1:32.

Conclusion
Epidemiologic monitoring of syphilis in Europe requires the reporting of all patients with primary, secondary and early latent syphilis. With the resurgence of syphilis a substantial number of cases with latent syphilis of unknown duration (at high risk of exposure and with high NTT titres) are not reported even though they can be assumed to have infectious syphilis. Harmonizing surveillance for latent syphilis of unknown duration is a requisite nowadays in order to know more precisely the epidemiological pattern and the impact of interventions against syphilis in Europe.

Keywords: syphilis, surveillance
**[PP-03]**

Seroprevalence of HIV and Syphilis Infections Among Blood Donors in the Turkish Population

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Background:
We aimed to determine the rates of human immunodeficiency virus (HIV) infection and syphilis positivity in donated blood over a certain period in Istanbul, the largest city in Turkey.

Materials-Methods:
The results of screening of 647,874 blood donations from The North Marmara Regional Blood Centre in Istanbul between 1 January 2011 and 31 December 2011 for HIV and syphilis were analysed retrospectively. Enzygnost HIV Integral II combo (SIEMENS) (Germany) for HIV, Enzygnost syphilis (SIEMENS) (Germany) for syphilis were used as screening tests. The tests were repeated in duplicate in all reactive donations. The tests which gave duplicate positive reactions were applied confirming tests. HIV positivity was confirmed by Western blot. As confirming tests, INNO-LIA HIV ½ Score (INNOGENETICS) for HIV, Anti Treponema pallidum IFFT (IgG, IgM) (EUROIMMUN) for syphilis.

Results:
The overall seroprevalence of HIV, and syphilis was 0.005%, and 0.19% respectively.

Conclusion:
Among blood donors in Turkey, the overall seroprevalence of HIV and syphilis was 0.001% and 0.09% respectively was similar to that found in 2003. According to the current results, there is not a significant increase in HIV and syphilis infections.

**Keywords:** human immunodeficiency virus (HIV), syphilis

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**[PP-04]**

The risk of chlamydia infection by social and lifestyle factors – a study based on survey data among young adults in Stockholm, Sweden

Charlotte Deogan

Karolinska Institutet, Stockholm

Background: The objective was to analyse associations between demographic, socioeconomic, lifestyle factors and risk of chlamydia infection among young adults (20-29 year old) in Stockholm County, Sweden.

Materials-Methods: The study was based on the Stockholm Public Health Survey of 2006 (n=4278). Demographic exposures included sex, age and country of birth. Socioeconomic exposures included parental and individual's educational level, individual's income level and employment status. Lifestyle exposures included Body Mass Index, mental health, alcohol consumption and partnership status. Possible associations were analysed by logistic regression.

Results: The risk of chlamydia infection increased with reduced age, was higher among individuals having parents with and having own high school education compared with university education, and among those being employed, unemployed or on sick-leave/pre-retirement compared to students. The risk of chlamydia infection was also increased among individuals reporting high alcohol consumption and among those not living with a partner. With exception of parental education and partnership status, the above reported risks remained strong and statistically significant after mutual consideration of demographic, socioeconomic and lifestyle factors.

Conclusion: Indicators of risk proneness, especially in settings with generally little educational ambition or possibility, should be considered in STI prevention.

**Keywords:** chlamydia trachomatis, risk

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**[PP-05]**

Promoting collaboration of state and civil society organizations to scale up access to quality STI services for key populations - experience from Ukraine

Ivan Mironyuk

Chief Doctor, Zakarpattia Oblast AIDS Center, Uzhgorod, Ukraine

Background:
From 2007 onwards transmission of HIV infection in Ukraine has been predominantly sexually. To combat this trend implementation of effective systems to diagnose and treat sexually transmitted infections (STIs) among key populations driving the epidemic are required.

Given the characteristics of key populations, regional peculiarities of the situation (group size estimates, their sexual and substances use behavior), and infrastructure of the organizations that provide services, effective implementation of unified models of services is not possible and requires the use of a differentiated approach.

Materials-Methods:
To improve the effectiveness of diagnosis and treatment services of STIs for key populations in different local conditions, different models of diagnosis and treatment of STIs were introduced to ensure maximum coverage of vulnerable groups with high-quality services. Five models of passive and active outreach to the clients were tested and introduced, including: (1) self-reference, (2) referral through NGOs, (3) referral through NGOs with case management, (4) outreach by a trusted physician and (5) outreach by a mobile clinic. These adopted models help
to reduce the incidence of STIs and, consequently, reduce the risk of HIV infection.

Results:
From 2008 to 2012 more than 95 NGOs and 104 health care facilities provided diagnostic services and treatment for key populations based on the five models in Ukraine. 30 771 cases of STIs were diagnosed and 29 992 cases of STIs were treated in key populations.

Conclusion:
Each outreach model has its positive and negative aspects, imposing various requirements for personnel and logistics. The preferred model in each case was determined by taking into account regional peculiarities of the situation to ensure maximum coverage of key populations with complete package of quality services for diagnosis and treatment of STIs. Implementation and combination of several models can greatly increase the effectiveness of the program as a whole is the most effective.

**Keywords:** STI, HIV

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**Gonococcal necrotizing fasciitis and acute purulent gonitis in non-AIDS immune-compromised patients**

Tritan Kalo1, Sabahet Dedja2, Shkëlqim Kurti1, Klodiana Shkurti1, Arben Pilaca1, Petrit Biberaj2, Dorina Stamboliu1, Dhimitër Kraja1

1Service of Infectious Diseases, University Hospital Center "Nënë Tereza", Tirana, Albania
2Polyclinic of Specialities Nr. 2, Tirana, Albania.

Background: Sexually transmitted diseases, aside of their classical clinical manifestations within and in vicinity of genital organs might be accompanied in several cases, especially in immune-compromised patient, with septicemia and secondary localizations of the said infections in distance from those organs.

Materials-Methods: The aim of that study is to describe the diagnostic and the evolution of two extra-genital manifestations of Neisseria gonorrhoea infection, observed between May – November of 2011, in two Diabetic Type II non-hospitalized patients. The first one, a male patient, developed a Necrotizing fascitis of his left leg at the eighth day of evolution of an untreated acute purulent urethritis, and the second one, a female patient, developed an Acute purulent gonitis of her left leg at the seventh day of evolution of an untreated purulent cervicitis. N. gonorrhoea has been isolated in both of them from genital and purulent secretions of their involved tissues.

Results: The diagnosis of Necrotizing fascitis in the first patient was based on clinical signs and ultrasound findings, and the diagnosis of Acute purulent gonitis in the second patient was based on clinical signs and X-ray findings. The laboratory findings show: WBC > 17.000/mm³ (dominated by granulocytes), Fibrinogen > 640 mg/dl, Alkaline phosphates > 160U/L, Reactive C protein > 240mg/dl, ESR >45 mm/hour. Both of patients had clear signs of an untreated STD such as purulent urethritis and purulent cervicitis. The N. gonorrhoea isolated in both patients was sensible to Cephalosporins, Cephalosporins and Quinolones. A successful combination of two antibiotics, Doxycycline & Ciprofloxacin, has been used for twenty days in both cases, aside of concomitant surgical treatment of the said lesions.

Conclusion: N. gonorrhoea infections might involve in the immune-compromised patients, several extra genital tissues and organs by causing different complications of them such as: Necrotizing fascitis and Acute purulent gonitis.

**Keywords:** Acute purulent gonitis, Necrotizing fasciitis

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**Clinical validation of a multiplex diagnostic assay for ten sexually transmitted infections**

Scott Mckewon1, Natalie F. Mcgrath1, James McKenna3, Maria G. Pulvirenti1, Colum Mcerlean1, Claire Deane1, John V. Lamont1, Ciara Cox1, Peter V. Coyle2, Martin A. Crockard1

1Randox Laboratories Limited, Crumlin, United Kingdom
2Regional Virology Laboratory, Royal Victoria Hospital, Belfast, United Kingdom

Background: Due to the significant public health risk that sexually transmitted infections (STIs) and related complications represent worldwide, efficient means of detecting these infections has become increasingly important. Most commercially available STI tests are uniplex or duplex assays, whereas simultaneous detection of several STIs would save on sample, time and cost. This study reports the clinical validation of a multiplex diagnostic assay to rapidly screen for the presence of ten STIs simultaneously, from urine and swab samples.

Materials-Methods: The STI Multiplex Array (Randox Laboratories Limited) was validated using bacterial cultures and residual clinical DNA samples to determine sensitivity and specificity. The protocol involves amplifying DNA using highly sensitive primers which allow multiplex PCR, followed by spatial separation and detection using Evidence biochip array technology. Results are reported as positive or negative for each of the pathogens. The assay includes controls for the extraction, amplification and biochip steps of the assay to eliminate the risk of misreporting results. The clinical data was validated on three lots of reagents to confirm batch to batch reproducibility.

Results: Assay clinical sensitivity and specificity was >90% for all commonly tested STIs when compared to routinely performed uniplex assays from an NHS hospital (see table). Of the samples which tested positive for an infection, 20% harboated at least one additional infection, highlighting the need to screen for multiple pathogens to ensure all infections are detected and treated.

Conclusion: This STI Multiplex Array produces consistently high clinical sensitivity and specificity for all pathogens. Simultaneous screening for multiple STIs using this assay identifies viral, protozoan and bacterial pathogens. This
allows identification of co-infections which may otherwise remain undiagnosed. This improvement in diagnosis allows treatment to be tailored to all pathogens encountered which may reduce broad spectrum antibiotic use and, in turn, reduce build-up of antibiotic resistance.

**Keywords:** Sexually Transmitted Infections, Multiplex

### STI Assay clinical sensitivity and specificity

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<th>STI</th>
<th>True positive</th>
<th>False positive</th>
<th>True negative</th>
<th>False negative</th>
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<th>Specificity (%)</th>
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<td>236*</td>
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</table>

*HD was confirmed using culture strains due to rare occurrence.

Assay clinical sensitivity and specificity was >90% for all the commonly tested STIs when compared to routinely performed uniplex assays from a NHS hospital. Of the samples which tested positive for an infection, 20% harboured at least one additional infection, highlighting the need to screen for multiple pathogens to ensure all infections are detected and treated.

**[PP-08]**

### Clinical utility of a nucleic acid amplification test for Trichomonas vaginalis in a targeted London sexual health clinic population

**Melissa E O Perry, Kim Erasmus, William Tong, John A White**

**Guys and St Thomas’ NHS Foundation Trust, UK.**

**Background:** Trichomonas vaginalis (TV) is uncommon in the UK with only around 6000 reported infections annually, mostly in women from Black ethnicities in London. The true prevalence within sexual health clinics is likely underestimated due to insensitive diagnostics. Nucleic acid amplification tests (NAATs) can double the detection rate for TV. We explored the clinical utility of a TV NAAT in a targeted London sexual health clinic population at high risk for TV.

**Materials-Methods:** From October 2010 we used the APTIMA TV transcription-mediated amplification (TMA) assay for routine testing in selected patients: all men and women of Black African/Caribbean/British ethnicity, as well as women diagnosed with bacterial vaginosis (BV), presumptive urinary tract infection or TV by wet mount. Men with non-gonococcal urethritis and TV contacts were also tested. TV TMA was performed on APTIMA Combo2 samples taken for gonorrhoea/Chlamydia testing.

**Results:** A total of 823 TV TMA tests were done (442 men, 381 women) with 55 positives (6.7% overall prevalence). Of the 14 (3.2%) TV-positive men, 10 had urethral symptoms and 4/10 had positive urethral wet mounts.

Of the 41 (10.9%) TV-positive women, 33 were symptomatic and 32/40 had positive wet mounts. Thirteen of the women had a history of recurrent BV. The sensitivity of wet mount in asymptomatic women was only 42%.

**Conclusion:** The male and female prevalence of TV in this targeted population was 3.2% and 10.9%, respectively. The majority of TV cases were of Black Caribbean/Black British Caribbean ethnicity, or reported sexual contact with a Black Caribbean partner, suggesting a distinct ethnic clustering of this infection. TV TMA testing improved clinical and microscopic detection rates, especially in asymptomatic patients. Further study using TV NAATs for targeted and general screening within the UK is warranted.

**Keywords:** Trichomonas vaginalis, nucleic acid amplification test
[PP-09]

**Performance of the APTIMA COMBO 2® (AC2) Assay for detection of Chlamydia trachomatis (CT) and Neisseria gonorrhoeae (GC) on the PANTHER® Instrumentation System**

Andrew Worlock, Jennifer Reid, Craig Hill, Marilyn Vi, Jimmykim Pham, Craig Clark
Gen-Probe Incorporated

**Background:** The AC2 Assay (Gen-Probe Incorporated) is a nucleic acid amplification test (NAAT) for the detection of CT and GC in urogenital samples. The AC2 Assay is currently cleared by the FDA for use on the DTS and TIGRIS instrumentation systems. This study was conducted to compare the performance of the AC2 Assay with urine specimens using the new PANTHER system and the TIGRIS system.

**Materials-Methods:** A Comparison study, a Reproducibility Study, and a Clinical Study were conducted on urine specimens. In the Comparison Study, a 340-member panel of clinical urine specimens (including "low positive" panels) was tested with the AC2 Assay on PANTHER (at 3 sites) and on TIGRIS (at 1 site) systems. In the Reproducibility Study, a 6-member panel of clinical urine specimens was tested with the AC2 Assay on PANTHER and TIGRIS systems at 3 sites. In the Clinical Study, female and male urine specimens collected from low and high prevalence sites were tested with AC2 on PANTHER and TIGRIS systems at 3 sites. Agreement was calculated in all studies.

**Results:** The Comparison Study demonstrated >=98.8% agreement between the PANTHER and the TIGRIS Systems. The reproducibility study demonstrated >=95.4% agreement with the expected results on both instrument Systems. The Clinical Study demonstrated a high level of agreement (>97.9% for CT and >94.3% for GC) between the PANTHER and the TIGRIS Systems for male and female urine specimens.

**Conclusions:** AC2 Assay performance using the PANTHER System is comparable to the TIGRIS System when testing urine specimens from males and females.

**Keywords:** chlamydia, gonorrhoeae

[PP-10]

**Use of the APTIMA® HPV mRNA assay for ASC-US (atypical cells of undetermined significance) triage or adjunct cervical cancer screening; results of the CLEAR trial**

Thomas Wright1, Mark Stoler3, Janel Dockter2, Jennifer Reid1, Craig Hill3, Damon Getman3, Cristina Giachetti3

1Columbia University, NY, USA
2University of Virginia, Charlottesville, VA USA
3Gen-Probe Incorporated, San Diego, CA USA

**Background:** Testing for high-risk HPV DNA is more sensitive but less specific than cytology. Testing for high-risk HPV mRNA has been shown to be as sensitive but more specific than HPV DNA testing and may be more useful for both ASCUS (atypical cells of undetermined significance) triage and screening. The APTIMA HPV (AHPV) assay detects HPV E6/E7 mRNA from 14 high-risk HPV genotypes. We report here the results for the Clinical Evaluation of APTIMA HPV mRNA (CLEAR) U.S. Clinical trial using the AHPV assay as a triage method for women with ASC-US cytology diagnosis and as an adjunctive method for cervical cancer screening of women >=30 years of age with normal Pap cytology results.

**Materials-Methods:** In a pivotal, prospective clinical trial, 13,495 women undergoing routine Pap screening were enrolled from 19 U.S. sites. Of these, 10,871 women aged >=30 years with normal cytology were enrolled in the study’s adjunct arm and 1345 women with ASC-US cytology were enrolled in the ASC-US triage arm. ThinPrep specimens were tested with AHPV and the Hybrid Capture 2 (HC2) assays. The HPV results were compared with disease status based on adjudicated histology review of colposcopic biopsies.

**Results:** ASCUS Study: The clinical sensitivity estimates for AHPV were similar to those of HC2 for CIN2+ and CIN3+ detection. AHPV specificity was significantly higher than that of HC2 for <CIN2 and <CIN3 detection. Adjunct Study: Risk of CIN2+ was significantly greater in AHPV-positive vs. AHPV-negative women and similar to the relative risk estimate for HC2.

**Conclusions:** These results support the use of high-risk HPV E6/E7 oncogenic mRNAs as markers for cervical disease, and demonstrate the high sensitivity and improved specificity of the APTIMA HPV assay as compared to HPV DNA testing in the triage of ASC-US cytology results or as an adjunctive screening method.

**Keywords:** HPV, cervical

[PP-11]

**Chlamydia Trachomatis: trends and facts for young adults between 15 and 34 years old living in Belgium, 2007-2010**

Ruth Verbrugge, Dominique Van Beckhoven, André Sasse
Institute of public health, Brussels, Belgium

**Background:** The increase in reported Chlamydia trachomatis (CT) infections has triggered analyses on notification rate (NR), testing rate (TR) and test positivity rate (PR). Clinic based screening opportunities exist, only reimbursed if <= 20 year.
Methods: 58% of the laboratories of microbiology report 70% of the CT cases using ECDC case definition. We analyze trends by age and gender between 2007 and 2010, corrected for the activity coverage. The number of tests are collected by the national health insurance agency. Population data are obtained by Eurostat. Results: NR is the highest in women, up to 316/100000 for the 20-24 yr old women in 2010. In men, the highest NR is found in 20-24 year old age group: 112/100000 in 2010. The increase in NR (2007-2010) in the 15-29 year old age groups is proportional with TR while PR remains stable. The increase in NR can be due to health seeking behavior, opportunistic screening and/or increasing incidence. TR increases with 66% in men and 28% in women, mostly in the 15-19 year old group (+120% and +36% respectively), but remains the lowest in latest group (resp. 0.22% and 1.82% in 2010), even with screening reimbursement. TR is the highest in the 20-24 and 25-29 age groups (resp. 0.80% and 0.87% in men; 4.30% and 3.91% in women, 2010). Conclusion: Groups with the highest PR (11.37% in men; 15.65% in the youngest women) are hardly tested. Programs for this target group should be developed, including partner notification. Clinic based screening activities should be continued and enlarged towards the 15-20 year old adolescents. Enlarging the current reimbursement criteria with CT testing for people with high risk sexual behavior to the age of 34 years should be considered. The CT sensibilisation campaign toward the 15-24 year old population should be continued and evaluated.

**Keywords:** Chlamydia, young adults

### Notification rate, testing rate and positivity rate for Chlamydia Trachomatis in young adults, Belgium, 2007-2010

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<td>F</td>
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<td>-9%</td>
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**Overview of trends in NR, TR and PR for CT by age group and by gender between 2007 and 2010 in Belgium**
C. trachomatis serovar distribution among patients attending State Scientific Centre for Dermatovenereology (Moscow)

Ksenia I. Plakhova, Margarita R. Rahmatulina, Natalia V. Frigo, Olesya S. Kogushnaya
State Scientific Centre for Dermatovenereology, Ministry of Health Care of Russian Federation

The aim was to study the distribution of the C. trachomatis serovars among patients with genital C. trachomatis infection attending State Scientific Centre for Dermatovenereology (Moscow, Russia).

Materials-Methods: Nucleotide sequencing of variable domains within the ompA gene included 30 specimens obtained from biological material (urethral and cervical swabs) of patients (men and women) diagnosed with genital chlamydial infection.

Results: Nucleotide sequences of the ompA gene in the studied group of patients revealed the following distribution of C. trachomatis serovars: serovar E was detected in 46.67% (14) of cases, serovar G - in 16.67% (5) cases, serovar F - in 10.0% (3), serovar D - 6, 67% (2), serovar K - at 6.67% (2), serovar J in 6.67% (2) and serovar I - at 3.34% (1), serovar B - to 3.34% (a).

When sequencing the gene ompA in 2 cases (serovar D) has been found non-significant change of T to A at position 547.

A strain of C. trachomatis serovar G, obtained from woman with C. trachomatis associated pelvic inflammatory disease, had the mutations in the gene ompA, which lead to amino acid substitutions in the protein chain as follows: G to A substitution at position 1003, G to A substitution at position 487, and G on C in position 700.

Conclusion: Obtained C. trachomatis strains related to eight different C. trachomatis serovars, including with respect to rare serovars I and B. The most frequent serovars were E, G and F, with a predominance of serovar E.

Keywords: C. trachomatis, serovars

Cytokines in blood plasma of patients with genital C. trachomais infection

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Aim: To explore the levels of cytokines (IL-2, IL-4, IL-6, IL-8, IFN-gamma) in blood plasma of women with genital chlamydial infection of the lower urogenital tract, pelvic organs, tubal infertility and healthy individuals to identify possible risk factors for complications of genital C. trachomatis infection.

Materials-Methods: The material for the study were serum samples obtained from 40 women with genital chlamydial infection of the lower parts of the urogenital tract (Group 1) and pelvic (Group 2), 20 women with tubal infertility (Group 3, comparison) and 20 healthy women (Group 4, control). The concentration of cytokines was determined by ELISA using commercial kits.

Results: The level of IL2, IL4, IL6, IL10 and IFN-gamma in the blood plasma of the patients majority (85 to 96%) was determined at the level of the minimum values (from 0 to 1 m / ml). It is impossible to adequately interpret this data. The exception was the cytokine IL-8, which level was determined in a significant number (at 76.3%) of patients in the range of 1 to 10 pg / ml and above. The average level of IL-8 in blood plasma for Group 1 was 2, 366 pg / ml (± 0.4689), Group 2 - 4,751 pg / ml (± 1,523), Group 3 - 4,387 pg / ml (± 1, 461), Group 4 - 1, 414 pg / ml (± 0.4463). In patients with pelvic chlamydial infection and tubal infertility level of IL-8 was significantly higher than in patients with chlamydial infection of the lower urogenital tract and healthy individuals (p <0.05).

Conclusion: These data may indicate a possible role of IL-8, one of the main of pro-inflammatory cytokines in the pathogenesis of inflammation of the pelvic organs, leading to the development of reproductive malfunction.

Keywords: C. trachomatis, cytokines

Lymphogranuloma venerum (LGV): case presentation

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Background:: Lymphogranuloma venereum (LGV) is a sexually transmitted disease, with sporadic occurrence, caused by very invasive serotypes L1, L2, L3 of Chlamydia trachomatis bacterium. These are different from the serotypes that cause genital chlamydial infection. Lymphogranuloma venereum is manifested in three clinical forms; 1- genital lesions, 2- inguinal lymphadenitis, 3 proctocolitis. LGV is more frequent in males. The main risk factors are numerous sexual partners.

Purpose: Presentation of a case with relapsed LGV.

Case presentation: A 52 year old married heterosexual male presented with fever of 38.5 -39°C, lethargy, bilateral tender inguinal lymphadenopathy (size of 2 to 3cm) and ulceration and lymphangitis of the genitals. 6 years ago whilst in Greece the patient had a similar clinical episode (left inguinal lymphadenitis, genital ulcers) for which he was admitted to hospital and treated with surgical drainage and antibiotics. He claims to not have known the cause of his condition but admits to numerous partners. We performed biological, immunological, radiological, and histo-pathological tests and therefore excluded most causes of inguinal lymphadenopathy except for LGV. The patient was treated with surgical intervention (drainage) and antibiotherapy (doxycycline). He began to improve after 3-4 days, and recovered after 12-14 days. Treatment continued for 21 days. We hypothesise that both events are caused by the same agent.
Conclusions:
LGV diagnosis is based on epidemiological data, clinical findings, laboratory results and exclusion of the other possible causes of inguinal lymphadenopathy.
LGV should be considered as a possible diagnosis in diseases that occur with genital ulcers, inguinal lymphadenopathy, proctocolitis.
Complete healing is expected especially when treatment is started quickly, however re-infection or relapse can happen.
Key words: LGV, chlamidia, doxycycline

Keywords: chlamidia, doxycycline

[PP-15]

**Relationship with the presence of an IUD and sexually transmitted diseases**
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²Sarıkamis Military Hospital, Department of Infectious Diseases and Clinical Microbiology, Kars, Turkey

Background: Sexually transmitted diseases (STDs) are among the most common infections worldwide. Generally most STDs are asymptomatic, and some forms of contraceptive methods such as intrauterine device (IUD) can increase these infections. Use of an IUD has been associated with genital tract infections. The frequency of these infections and the relationship with IUD were aimed in this study.

Materials-Methods: Retrospectively 980 sexually active women presented with vaginal discharge. 207 of these had a clinical diagnosis made and were included in this study. Infections were classified according to patient symptoms, clinical findings and the anatomical level like bacterial vaginal infections, mycotic vaginal infections, mixed vaginal infections, cervicitis, endometritis and pelvic inflammatory disease (PID). IUD users were identified among women diagnosed with infections. The incidence of infections and their relation to the IUD were evaluated.

Results: The mean age of participants was 32.37±6.06 (15-53). Classification by type of infections and incidence in patients using an IUD, in 207 patients were in table 1. There was significant difference between the endometritis and the use of IUD (p<0.005). The most common infection was endometritis in patients using an IUD. Mycotic vaginal infections and cervicitis were not found in patients using an IUD.

Conclusion: IUD was monitored as a risk factor for bacterial infections. Nulligravid or multiparous women at high risk for STDs are not appropriate IUD candidates.

Keywords: Sexually Transmitted Diseases, Intrauterine Device

<table>
<thead>
<tr>
<th>Table 1. Classification by type of infections in patients and incidence in patients using an IUD</th>
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<tbody>
<tr>
<td><strong>Type of infections</strong></td>
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</tr>
<tr>
<td>Bacterial vaginal infections</td>
</tr>
<tr>
<td>Mycotic vaginal infections</td>
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<tr>
<td>Mixed vaginal infections</td>
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<tr>
<td>Cervicitis</td>
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<td>Endometritis</td>
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<td>PID</td>
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[PP-16]

**An Audit into the management of Chronic Prostatitis in a GUM setting**
Mohamed Abdulcadir, Alice Rebecca Knowles, Sandia Mandalia, Simon Barton
Chelsea and westminster hospital- HIV/GUM

Background:
Prostatitis can be a disabling condition with pain in the urogenital region often combined with urinary and sexual dysfunction. Chelsea and Westminster Hospital runs a dedicated specialist clinic for prostatitis within the GUM clinic setting. From December 2002 until December 2011, a total of 1208 patients were referred and assessed. In this audit we examine the demographics of our chronic prostatitis population, investigate the commonly isolated micro-organisms and compare the management of our chronic prostatitis patients to the national BASHH guidelines.
Materials-Methods:
By retrospectively reviewing case notes data was collected on the demographic profiles including age, sexual orientation and HIV infection. Symptoms were assessed pre and post treatment using the NIH-CPSI (NIH- chronic prostatitis symptom index). All patients had standard investigations including a sexual health screen, digital rectal examination, urinalysis, urine culture and semen culture. The two-glass test for expressed prostatic secretions was used to investigate whether there was a bacterial component in patients with chronic prostatitis symptoms.

Results:
Of the 80 patient’s diagnosed with chronic prostatitis the mean age was 38.1 with a standard deviation of 8.9. 69 (87%) were Caucasian. 44 (55%) were heterosexual and the rest were homosexual with no bisexual patients. 38% of patients suffered from depression. 95% of patients received antibiotics. 67% of those prescribed antibiotics were given Ciprofloxacin. 63 (79%) of patients had pain and 62 (65%) had urinary symptoms. Of the 80 confirmed having prostatitis, 64% had a complete resolution of their symptoms, 24% had a partial resolution, 12 % were referred to other services.

Conclusion:
An organised approach to patients who present with Prostatitis in a GUM clinic is essential. When comparing to the BASHH auditable outcome measures our specialist clinic was able to meet these in 100% of cases because initial referral predominantly came from GUM clinic which we believe is optimal practice.

Keywords: Prostatitis, Audit

[PP-17]

A case co infected with HIV and neurosyphilis and Jarich-Herxheimer reaction
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Background:
Materials-Methods:
Results:
Conclusion:
Authors aim is to present a case co-infected with HIV and Neurosyphilis associated with Jarich-Harxheimer reaction during the treatment. A 44 year old male was hospitalized in Department of Infectious Diseases UHC after a consultation in the outpatient clinic. He complained of an all over body rash similar to psoriasis. He had pus under his nails, for that reason he was treated with Piperacillin + Tazobactam 4.5 g x 3. 24 hours after treatment he had high fever 39-40 grade, headache, joint pains and malaise. Before this antibiotic treatment he had no history of fever or joint pains. He was diagnosed HIV + since 2000. His entire body including: palms and soles was covered with non-pruritic red circular papulosquamous lesions; under his hands and feet nails he had pus. Skin biopsy revealed numerous plasma cells similar with secondary syphilis. VDRL and RPR tests were positive. FTA-ABS was reactive. CD4 366, HIV- VL 11200. CNS involvement Result: CT scan normal; LCS: 65 cells, high proteins level and normal glucose and lactate. All clinical, virology exams were normal. He was treated with Levofloxacin 750 mg x2 for 10 days, micro-surgical and local treatment. Benzypenicilline 2.4 mega UI i/m every week for 3 weeks. 10 days after treatment the local rash was reduced and he felt better. Conclusion: Patient with secondary syphilis being treated with antibiotics are at risk of developing a Jarich-Herxheimer reaction like our patient. Secondary syphilis rash may mimic psoriatic lesions and other exanthemas in HIV patients.

Keywords: HIV, Neurosyphilis

[PP-18]

Enhanced therapy for infectious syphilis: a longitudinal retrospective analysis of cure rates and associated factors
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Background: The treatment of early infectious syphilis with a single dosage of benzthine penicillin G, 2.4 million units IM has an estimated failure rate of 5-20%. Enhanced therapy with three dosages of benzathine penicillin G has been under consideration, particularly in the HIV-1 infected population.

Materials-Methods: The serological outcome of a total of 379 patients with primary and secondary syphilis treated either with standard versus enhanced therapy was retrospectively analyzed. Treatment success was defined in accordance with CDC guidelines, allowing for dynamics of cure rates over time and associated factors.

Results: Data was available for 249 patients; 98% (139/142) achieved serological cure with a single dosage, 92% with enhanced therapy (P = 0.033). In HIV-1 infected individuals, cure rates were 88% after a single dosage
compared to 97% after three dosages ($P = 0.18$). A four-fold decrease of VDRL titers was achieved within a median of 102 days after treatment initiation (SD = 2). Patients over 40 were 5.5 times (OR = 5.523, 95% CI = 1.431 - 21.321; $P = 0.013$), patients with low baseline VDRL titers ($<=$ 1:32) were 4 times (OR = 4.247, 95% CI = 1.213 - 14.866; $P = 0.024$) more likely to experience serological failure.

Conclusion: An enhanced treatment regimen has no beneficial effect on serological cure rates in infectious syphilis with the exception of HIV-1 infected individuals. Serological outcome is associated with age and baseline VDRL titers.

**Keywords:** infectious syphilis, enhanced therapy

**[PP-19]**

**Syphilis co-infection among HIV infected MSM-s**

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**Background:** In 2008 and 2009 rising number of symptomatic secondary syphilis (palmoplantar rash, headaches, hepatic involvement, low grade fever) among HIV infected MSM-s was observed. To diagnose the latent syphilis, a regular (twice yearly) syphilis testing among patients receiving combined antiretroviral therapy was introduced. Materials-Methods: 750 HIV infected men who have sex with men (MSMs) are provided combined antiretroviral treatment at our center. Syphilis tests were performed yearly twice parallel with the viral load tests, by treponema diagnostic tests (TPHA), and in positive TPHA cases were followed by a specific VDRL (detection of antiphospholipid antibodies)test.

**Results:** Acute, symptomatic secondary syphilis, (including neurosyphilis) and latent secondary syphilis was diagnosed. HIV infected MSM-s were tested in 2010, 2011 and 2012 (until June) 373, 720, and 526 of whom TPHA positive were 120 (32%), 241 (33%) and 180 (34 %) respectively. VDRL positive syphilis was diagnosed in 2010, 2011 and 2012. 38, 31 % (1 neurosyphilis, 13 symptomatic secondary syphilis, 24 latent secondary syphilis), 87, 32 % (2 neurosyphilis, 29 symptomatic secondary syphilis, 56 latent secondary syphilis) and 57, 32 % (1 neurosyphilis, 19 symptomatic secondary syphilis, 37 latent secondary syphilis) respectively.

**Conclusion:** The higher number of sexual partners (with unprotected sex) among HIV infected MSMs is associated with a risk of latent asymptomatic secondary syphilis co-infection, and the risk of neurosyphilis. The regular syphilis testing accompanied with the change of the sexual behavior could result effective prevention to stop the syphilis epidemic among HIV positive MSM-s.

**Keywords:** acute, latent syphilis

**[PP-20]**

**Epidemiological and clinical manifestations of syphilis over a two year period in albania**

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2Institute of Public Health, Tirana

**Background:** The aim of this study is to document some epidemiological and clinical manifestations of syphilis among patients with and without concurrent HIV infection over a two years period in Albania.

**Materials-Methods:** This is a descriptive retrospective study of all adult cases with syphilis followed at Infectious Disease Service, University Hospital Center of Tirana, between February 2010 – March 2012. Diagnosis was based on a positive RPR/VDRL and TPHA tests. Serological follow up of treatment response was not able to be performed. Results: 23 patients with syphilis were seen during the study period. Among them, 15 cases (65%) presented concurrent HIV infection, 20 cases were male (87%) and mean age was 40 years (range 16-76 years). 8 cases had a history of anal sex.

Primary syphilis was diagnosed in 5 cases (22%) (3 cases HIV positive), secondary syphilis was diagnosed in 8 cases (35%) (5 cases, HIV positive) and latent syphilis was diagnosed in 10 cases (43%) (7 cases, HIV positive).

3 patients with concurrent HIV infection presented an overlapping pattern of stages, primary and secondary syphilis. Neurosyphilis was not observed. One female pregnant patient without HIV infection was diagnosed with secondary syphilis at her 12 weeks of gestation. Primary syphilis with concurrent HIV presented with more than one ulcer and with a longer duration of chancre. Among those with concurrent HIV infection, treatment was based on 3 doses of benzathine penicillin regimen in 12 cases, with a mean duration of therapy 3.5 weeks. Among those without concurrent HIV infection, treatment was based on 3 doses of benzathine penicillin in 4 cases, with a mean duration of 2 weeks.

Conclusion: More intensive treatment and repeated serological screening is needed for HIV/syphilis co-infected Albanian patients.

**Keywords:** syphilis, Albania
**Socio-economic conditions of Roma children as a risk factor for sexual abuse and STI**

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**Background:**

Roma constitutes an ethno-linguistic minority in Albania located mainly in peripheral areas of cities and rural areas. This community is comprised of approximately 120,000 inhabitants. According to a World Bank report, socio-economic and health conditions of this community constitute a major problem, with considerable consequences observed among them.

We present a case that belongs to this community, a 15-year-old boy, abandoned by both parents after their divorce, homeless, with no income. Having suffered these social conditions he had fallen prey to sexual abuse. He was diagnosed with an condylomata acuminata and treated with podophyllin by the family doctor. The local situation became worse and he was referred to University Hospital Center, where diagnosis of secondary syphilis was established. His history began one month previously, exactly a week after the sexual abuse, with some ulcers around his anal region as well as ulcers on the glans penis, burning and frequent urination.

Objectively, in the glans penis was an ulcerative lesion and in perineum and around the anal region elements similar with condyloma lata were observed. The blood examinations, nervous and cardiovascular system findings were normal. Serology for HIV, herpes 1, 2 was negative, VDRL, RPR, and TPHA positive.

He was treated successfully with Ceftriaxone 1 g x 2 daily and Doxicycline 100 mg x 2 daily, vitamin therapy for ten days.

**Conclusion:** Socio-economic conditions of abandoned children are usually the reason of sexual abuse, infecting them with sexually transmitted infections.

**Keywords:** Syphilis

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**Syphilis in expectant mothers in the Hungarian National STD Center: Pregnancy outcomes**

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National STD Diagnostic and Therapy Center; Department of Dermatology, Venerology and Dermato-oncology, Semmelweis University, Budapest, Hungary

**Background:** Syphilis (sy) in pregnancy may induce abortion, still birth, preterm birth and congenital sy, and therefore the early detection of the infection is essential. The aim of this study is to summarize our experiences on the occurrence, clinical and serological characteristics, pregnancy outcomes and the effectivity of the prenatal screening programme in Hungary.

**Materials-Methods:** Retrospective clinical and statistical analysis of sy in pregnancy in the National STD Center between 2006 and 2011. The diagnosis was based on the results of RPR, TPHA/TPPA, TpELISA tests completed with Treponema pallidum IgM Western blot.

**Results:** Although prenatal sy screening is mandatory during the first trimester in our country, only 24 women from the total of 58 syphilitic pregnant women were discovered in the first trimester, 21 in the second trimester, 8 in the third trimester, 5 at delivery. Six women had secondary sy, 46 early latent, 6 late latent sy. The women were treated with parenteral penicillin-G or in case of penicillin allergy with oral azithromycin. There was a four-fold decrease in serological titers in every case.

**Outcomes:** Seven patients underwent interruption by their own request, 37 treated mothers delivered healthy infants, 3 mothers had missed abortion, 3 had still birth, and 1 preterm birth was registered. Three newborns had symptoms of congenital sy, and in all these cases the first serological tests of the mothers were done immediately before delivery. Four cases were lost for follow-up.

**Conclusion:** Prenatal care is compulsory in Hungary, however, women with lower socioeconomical status escape the routine RPR and TPHA/TPPA screening tests. The epidemiologic data suggest that within a distinct Hungarian population congenital sy is still an emerging medical and epidemiological problem, and therefore sy screening tests in the first trimester should be repeated in the third trimester.

**Keywords:** syphilis, pregnancy
Cervical cancer in Croatia: the importance of public education campaigns for cervical cancer prevention

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In Croatia, invasive cervical cancer (ICC) continues to be the eighth most common malignancy in women. In 2009, there were 369 newly detected ICC cases and 114 related deaths (age-standardised rates for incidence -14.5/100 000 and mortality -3.9/100 000). Although the opportunistic screening by Pap smear has been conducted since the 1950s, Croatia continues with unfavourable trends in ICC mortality compared to other European countries. A downward ICC incidence trend was recorded between 1970 and 1991 but this has reversed upwards. The highest incidence rates of ICC and CIN III are reported in age groups 40-59, 80-84 and 30-34, respectively. The Croatian National Program for Early Detection of Cervical Cancer planned to start in 2012. It is envisaged that Pap smears for women aged 25-64 will be performed once every 3 years. It will also include public education (targeting young people) on sexually transmitted infections (STIs) concentrating on HPV infections as they are the major cause of ICC.

In the meantime, during the European Cervical Cancer Prevention Week, the Croatian League Against Cancer regularly organizes Mimosas Day, using this fragile symbol of female solidarity to remind women all around Croatia of the importance of cervical cancer education, vaccination and regular screening, thus raising public awareness in this matter to achieve better protection against STI, higher vaccination coverage, and larger (at least 80%) response to gynaecological screening. The result is a 15% increase in gynaecologic visits in Zagreb during the first 3 months following the campaign, which certainly contributes to a reduction of cervical cancer in Croatia.

Keywords: public education campaigns, cervical cancer

Assessment of recurrence rates of genital warts after cryotherapy

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²General Hospital of Pancevo, Dermatovenereological Department, Pancevo, Serbia

Background: Cryotherapy is a form of local therapy, which leads to physical changes in genital warts. Cryotherapy leads to epidermal/dermal cellular necrosis, dermal edema and the cessation of circulation. Cryotherapy is an effective and an inexpensive method and can be used in pregnancy. Therefore, it is frequently applied in the treatment of genital warts. Recurrence rates after cryotherapy of genital warts vary according to the literature from 17% to 59%.

Materials-Methods: Fifty patients with genital warts, which are localized in the genital area, were treated with cryotherapy (liquid nitrogen) once a week. Therapy was continued until the complete remission, but not longer than six weeks. Recurrence rates were evaluated first, second, third and sixth month after the therapy. Results: After the treatment with liquid nitrogen there was complete remission in 70% of patients. In 9.5% of these patients recurrence occurred one month after the therapy; in 38.1% two months after the therapy; in 42.9% three months month after the therapy and 47.6% six months months after the therapy. Conclusion: Cryotherapy is an effective method in the treatment of genital warts but with a significant rate of recurrence. The other therapeutic methods lead to recurrence as well and that’s why it is important to spread education and prophylactic measures among young people.

Keywords: genital warts, cryotherapy

Frequency of distribution and variation of anal HPV genotypes and correlation with lifestyle and sexual behaviors among HIV infected and non infected MSMs.

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Background: Anal cancer is one of the leading causes of death due to a non-AIDS defining illness. Most of these cancers are associated with high risk HPV (HR-HPV) infection. No previous research has been performed on anal HPV infection in a Hungarian MSM population before. We evaluated incidences of cytological abnormalities and different genotypes, known and suspected risk factors, and compared cervical and anal patterns.

Materials-Methods: After obtaining informed consent, cervical and anal cytobrush samples were taken and HPV genotyping with PCR (Roche Linear Array HPV genotype) was performed. Sexual histories were taken from each patient and sexual behavior, socioeconomic factors, drug use, and other known and suspected risk factors were assessed. Risk assessments on this cross sectional cohort study were made by Chi-squared and odds ratio were calculated.

Results: HPV was detectable from 258 cervix 39.9%, and from 92 anal examination 39.9%. 51% of cervix sample
had only 1 genotype. In contrast 15% of anal samples had only 1 HPV genotype. 88.8% of anal samples HR, and 75.0% of anal samples had LR HPV genotype. From HIV infected group 44% had other known sexually transmitted diseases (syphilis, gonorrhea, hepatitis B or C). Anal bleeding during sex (OR:1,66), fisting (OR1,18), passive role (OR:1,14) were independent risk factors for HR-HPV after analysis. 57% of patients had more than 100 sexual partners.

Conclusion: Hungarian MSM population is severely co infected with HPV and HR-HPV. Smoking and high risk sexual behaviours are strong predictors for acquiring HR-HPV co infections. Early male vaccination program might give the chance in preventing this potentially carcinogenic infection.

Keywords: HR-HPV, sexual behavior

[PP-26]

Levels of re-engagement among patients diagnosed with genital herpes, during the years following diagnosis
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Background: HSV2-related disease can vary in severity. Recurrence rates may be high, and even mild disease may be associated with high levels of psychosexual morbidity and transmission concerns. Guidelines advise that clinicians discuss therapeutic options with patients at an early stage, and ensure that they realise that therapy to manage/limit the impact of disease is available at any time. Clinicians may be concerned about the extent to which such a policy may impact on their workload; evidence suggests that many are less than candid about the possible prognosis/therapeutic options when counselling patients.

We aimed to determine the levels of patient re-engagement with services during the years following a diagnosis of genital herpes.

Materials-Methods:
Patient records dating from 2006 onwards, from a specialist herpes clinical service, were reviewed. The frequency of visits in every year following diagnosis, was calculated. Associations were explored between additional variables (age, gender, ethnicity) and rate of re-engagement.

Results:
2004 patients were diagnosed between January 2006 and the end of May 2011; 47.0% made no further visits to the herpes clinic, while 53.0% returned for a consultation. Of the patients that re-engaged, over half (56.7%) consulted only once; 16.8% consulted twice, while 8.6% and 5.6% returned three and four times respectively.

Conclusion:
A substantial proportion of patients diagnosed with herpes infection do not return for a further consultation. The number remaining continuously engaged is small, and in our study, rapidly declined with time. Reasons for remaining on therapy for extended time periods were principally due to severe symptomatic disease, rarely transmission concerns. Therapy, when given for transmission-related anxiety, was usually only requested for a limited duration.

We conclude that an "open door", easily accessible therapeutic service does not result in high levels of clinic attendance/usage, even in a free at point of contact health service.

Keywords: herpes, treatment

[PP-27]

Hepatitis B seroconversion determined by in the pregnant Turkish population
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3Sarıkamış Military Hospital, Department of Infectious Diseases and Clinical Microbiology, Kars, Turkey

Background: The aim of this study was to detect the seroprevalence of antibodies to hepatitis-B of pregnant women who applied for pregnancy follow up.

Materials-Methods: This retrospective study was performed between January 2006 and June 2009 in Gulhane Military Medical Academy, Haydarpasa Training Hospital, Department of Obstetrics and Gynecology. 1372 pregnant women who were between 19 and 47 years-old were included in the study. Their serology tests, namely hepatitis-B virus surface antigen (HBsAg), antibody against hepatitis-B virus surface antigen (anti HBs), were retrospectively analyzed. Also, the relation between seropositivity and age based groups were assessed.

Results: The mean age of participants was 28.87±4.542 (19–47). The percentages of seropositivity of Hepatitis-B virus surface antigen and antibody against Hepatitis-B virus surface antigen are 2.3% and 24.9%, respectively. There is statistically significant difference between the increasing age and the seropositivity to only Hepatitis-B virus surface antigen antibody.
Prevalence of hepatitis B virus, hepatitis C virus and syphilis in patients testing for sexually transmitted diseases: Five year results from a military hospital

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Background: Hepatitis B virus (HBV), hepatitis C virus (HCV) and syphilis may cause fatal chronic diseases. Our aim is to evaluate HBV, HCV and syphilis positivity among patients testing for STDs (sexually transmitted diseases) at a Military hospital that serves the whole of Turkey.

Materials-Methods: Retrospectively 3150 patients were screened for STDs. 160 patients had positive serology and were included in the study. The serology tests included were: HBV surface antigen (HBsAg), HCV antibody and Venereal Disease Research Laboratory (VDRL). Sexual histories, Alanine Aminotransferase (ALT) and Aspartate Aminotransferase (AST) were assessed in patients with positive serological tests.

Results: The mean age of seropositive participants was 22.20 ± 1.52 (20-28). The numbers and percentages of seropositivities for HbsAg, anti HCV and VDRL were 154 (96.3%), 5 (3.1%) and 1 (0.6%), respectively. ALT and AST mean values were 65.9 (±96.3) IU/ml and 45.7 (71.3) IU/ml, respectively. Mean ALT mean values were significantly higher in the seropositive group. 96 (60%) patients did not have any risk factors, 52 (32%) patients had never had any sexual contact and 12 (7.5%) patients gave a history of unprotected sexual intercourse.

Conclusion: Unprotected intercourse was an important risk factor for these infections. The frequency of HBV infection takes the first place in our study. Being a vaccine to protect against this infection and the initiation of the vaccination program in the newborn period, have important implications for public health. Lesions in people with syphillis facilitates HIV transmission, and so screening for HIV and other STD’s should be performed.

Keywords: hepatitis B virus, hepatitis C virus, syphilis, sexually transmitted diseases

Prevalence of hepatitis B virus and hepatitis C virus in patients who have suspicion of sexually transmitted diseases: Two years results from state hospital at Kars, Turkey

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2Kafkas University Hospital, Department of Family Medicine, Kars, Turkey
3Sarıkamis Military Hospital, Department of Infectious Diseases and Clinical Microbiology, Kars, Turkey

Background: Hepatitis B virus (HBV) and hepatitis C virus (HCV) are of great concern because of their prolonged viraemia and carrier or latent state. They also cause fatal, chronic and life-threatening disorders. This study aimed to determine the seroprevalence of HBV and HCV positivity among patients who have suspicion of sexually transmitted diseases over a period of two years at Kars State Hospital, Turkey.

Materials-Methods: A retrospective analysis of 6573 patients who have suspicion of sexually transmitted diseases (STDs), covering the period between september 2010 and july 2012 was conducted and 387 patients whose serology were positive were included in the study. Their serology test, namely HBV surface antigen (HBsAg) and antibody against HCV were evaluated. In addition Alanine Aminotransferase (ALT) and Aspartate Aminotransferase (AST) was evaluated in patients with positive serological tests.

Results: The mean age of seropositive participants was 36.03±13.7 (6-79). The numbers and percentages of seropositivities for HbsAg and anti HCV were 372 (96.1%) and 17 (3.9%), respectively.

The percentages of males and females were 68% and 32% in seropositive patients, respectively. Antiviral therapy was started to 32 patients with high liver enzymes and 18 patients with active hepatitis inflammation.

Conclusion: Sexually active people have risks of disease, and which should be managed to avoid serious and preventable infections. Primary avoiding of STDs starts with changing the sexual behaviors of people at risk for infection. Especially health care workers must do preventive medicine. It is also providing education and counseling at the same time. Vaccinations against hepatitis B should be promoted since the sexually active people have been shown to be specifically at risk for these infections.

Keywords: Hepatitis B and C virus, Sexually Transmitted Diseases

HIV & STI Prevention Policy Among Militaries: The Tunisian Experience

Nejib Doss
Tunisian Directory of Military Health

Background: Even if the prevalence of HIV is very low in Tunisia, we started a prevention policy against HIV and STI since 1992 but with temporarily actions when we sent Tunisian peacekeepers to Comobdia, Ruwanda, Somalia and Congo.
Materials-Methods: Our strategies on STI- HIV prevention in military environment, which means our road map consists in:

- Training sessions for the health personnel in the different barracks and military schools.
- the medical staff in the different barracks organize sessions of sensitization all over the year
- Awareness sessions for the young militaries because they are identified as a high risk population for contracting HIV and other STIs. About 7000 militaries took part in these sessions per year; and every young soldier will attend at least one awareness session during the military service (12 months)
- Provision of condoms for free and promotion of its use. We have 210 machines which provide condoms in the different barracks and military schools and the use of condoms is increasing which is one of our aims.
- Epidemiological follow-up of the STD in the military environment and finally to implement mechanisms of monitoring and evaluation.

Results: Epidemiological Data:
- 400 – 500 STI per year
- Condyloma acuminate: 70 to 80%
- Gonorrhea: 15%
- HIV: 60 to 70 new cases per year

Conclusion: training, information, education are the pillars of each policy against the infectious diseases and other diseases too. We urge the military organizations around the world to combat HIV and AIDS as a common threat.

Keywords: Prevention - STI- HIV

The Effect of Health Education on Knowledge and Attitude of Male high - School Students about HIV / AIDS

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¹EDC(Educational Development Center ), Faculty of Medicine, Babol University of Medical Sciences, Babol, Iran
²Nursing & Midwifery, Faculty of Nursing and Midwifery ( Amol ), Mazandaran University of Medical Sciences, Amol, Iran
³Health Education & Health Promotion, Faculty of Health, Yazd University of Medical Sciences, Yazd, Iran

Background:
Presently the AIDS epidemic has attracted much attention internationally. Adolescents have been identified as ‘at risk’ groups. The first step in Health Education is giving knowledge to individuals especially those who are in ‘at risk’ groups. Thus, the present study was performed to assess the level of knowledge and attitude in students, and to evaluate the effectiveness of Health Education interventions.

Materials-Methods:
This is a case – control study ( quasi - experimental ) and before–after type. The study population consisted of second year all male high-school students in Amol city. The sample size was 250 and individuals were selected via a random stratified sampling method. A 3 part self - administered questionnaire was used to collect data.

Results:
This study was conducted on 250 second year male high–school students. The most important source of data collection was TV and radio ( frequency = 58.4%) and the lowest rate was school books (frequency = 2.8%). Scores of knowledge and attitude in the control group ( no under educational intervention) did not increase and is lower than the case group (under educational intervention ) p < 0.001. While scores of knowledge and attitude in case group (under educational intervention) has shown considerable change and is much higher than control group (not under educational intervention ) p < 0.001.

Conclusion: The results of this survey highlights the importance of education through TV and radio. On the other hand, educational interventions about HIV/AIDS also show significantly statistical effects. The expanded use of Health Education programs is therefore recommended through TV and radio. It is also necessary for male high-students especially second years to pass a course of Health Education about HIV/AIDS in school.

Keywords: Knowledge, Attitude

Voluntary & Confidentially Counseling and Testing Center in Albania

Redona Dudushi¹, Silva Bino¹, Roland Bani¹, Marjeta Dervishi¹, Flora Balla¹, Elina Mukaj¹, Shpetim Qyra¹, Klajdi Topulli¹, Besiana Xhani², Luljeta Alla¹

[PP-31]

[PP-32]
Background: Albania has a low prevalence of HIV. Voluntary and confidentially counselling and testing (VCCT) centres were opened in Albania to increase the national response to HIV/AIDS and to prevent the spread of infection. In Albania in 2007 twelve VCCT centres were open in prefecture level to counteract low rates of voluntary testing for HIV/AIDS, to provide pre and post-test counselling and to highlight the social, political and economic plight of this disease.

Materials-Methods: Monthly report from the 12 VCCT centres, annual report from the Reference centre, annual report of the National Program of HIV/AIDS

Results: 485 cases is the total number of infected person. In the year 2011 there were 72 new confirmed HIV cases, of which 40 cases were diagnosed with AIDS. 199 cases is the total number of AIDS cases. There have been 93 cases who have died from AIDS in total. 7 of whom died in 2011. From total number of HIV infected individuals 339 were male and 146 female. From the 72 new diagnoses in 2011, 52 were male and 20 female. 16 positive cases with HIV were diagnosed in pairs.

The commonest affected age group was those who were 25-44 years old. The introduction of the VCCT between 2007-2011 has increased the numbers of individuals who have been tested and counselled for HIV at a national level. 98% of the clients tested & counselled in VCCT cited their reason for testing was because of participating in unprotected sexual acts. Less than 1% were intravenous drug users. 86% of individuals tested were married. 81.6% of individuals tested had risky behavior within the country, and 18.3% abroad. 17% have completed higher education, 64% secondary education, 8% have no education. The most affected age group are 30-39 years old. 87% of persons tested show symptoms of general anxiety. Less than 1% of persons show symptoms of AIDS phobia

Conclusion: Increase the number of testing/counseling for HIV.
Increase the level of understanding HIV/AIDS and fighting social stigma

Keywords: VCCT- Voluntary & Confidentially Counseling and Testing Centre in Albania

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<tr>
<th>Year</th>
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<tr>
<td>2008</td>
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</tr>
<tr>
<td>2010</td>
<td>1496</td>
</tr>
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<td>2011</td>
<td>2106</td>
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</table>

[PP.33]

**Monitoring condom use and risk management among men who have sex with men in Slovenia: time location sample (TLS)**

Miran Solinc
SKUC, HIV/STI prevention, Ljubljana, Slovenia

Background:
Increased incidence rates of HIV infections and other sexually transmitted infections have been reported among men who have sex with men (MSM) in Slovenia since 2006. The aim of this study was to examine the level of condom use and estimating risk management in oral and anal sexual practices among MSM who frequented gay venues in Ljubljana in 2010.

Materials-Methods:
The study enrolled men that were at least 18 years of age and had been involved in sexual contact with another man in the last 12 months. Structured questionnaires were self-administered by participants (n=401).

Results:
43% of MSM reporting the use of a condom the last time they had anal sex with a male partner in the last 6 months (N=390).

Monitoring risk management by estimating risk related to unprotected oral sex or to unprotected anal sex gave us the following results; receptive unprotected oral intercourse with ejaculation in mouth during the last six months was reported by 26.6% of respondents with casual partner compared with 50.7% with steady partner. 62.6% and 32.0% of respondents reported unprotected anal sex during the last six months with steady partner and occasional partner respectively.

Conclusion:
The study showed very important and relevant data that MSM are using risk management strategies to certain extent and levels of condom use are higher when having sex with casual partners. Data also showed that the risk of HIV infection and other STIs through oral sex is usually underestimated.

The data suggest that MSM should be widely informed about effective approaches in risk management and be encouraged to adopt and use them in sexual practices.

Keywords: MSM, Slovenia
Combining STI testing and counseling with VCT as a model for reducing shame and stigma in Macedonian society
Rumena Krastovska, Milena Stevanovik, Zorica Ljubicic, Katerina Spasovska
Department for Treatment and Psycho-social Support for PLHIV; VCT Center; University Clinic for Infectious Diseases and Febrile Conditions, Skopje, R.Macedonia

Background: Macedonia is a country with a low prevalence of HIV and an increasing number of sexually transmitted infections (STI). Until now, there was no comprehensive clinic for STIs and the country doesn’t practice sexual education programs at school. We aimed to identify opportunities for collaboration of VCT with STI testing and counseling as an effective model for accessibility to SRH services.

Materials-Methods: Wide-ranging approaches were undertaken during the study including qualitative, quantitative and desk research methods. From January 2010-December 2011, structured questionnaires about HIV status, sexual behavior and symptoms of STIs were compared with the epidemiological situation of STIs in Macedonia.

Results: From all 344 clients using VCT service, 46% reported having ever been tested for HIV and only 12.5% reported knowing their Hepatitis B and C serostatus. Of those who came to test for HIV, 15% had some STI problem. Among all respondents with a STI, 58% had a diagnosis of an STI and 42% did not know which STI they had. 62 % of them treated the infection (even though they didn’t know what they had) and 19% had symptoms of an STI in the moment of providing counseling and testing for HIV. 68% of those clients who reported STI were referred to various services for prevention or treatment of STI. Compared with data from 2010 the Institute for Public Health in Macedonia reported 50 cases of STIs and 12 cases of HIV. In 2011, 231 cases of STIs and 9 HIV cases were reported.

Conclusion: Most of the clients report lack of information, shame to speak about SRH and lack of services as reasons for not getting screened for STIs/HIV. Combining VCT with STI testing may be important in scaling up prevention, early diagnosis and treatment of HIV/STI.

Keywords: HIV/STI, VCT service

Chlamydia prevention in Sweden – a case study of potential key factors in successful preventive response
Charlotte Deogan, Cecilia Moberg, Lene Lindberg, Anna Månsdotter
Karolinska Institutet

Background: After a continuous increase of Chlamydia trachomatis (chlamydia) in Sweden, a general reduction in reported cases was seen in 2009. The number of cases of chlamydia varied largely between geographical regions. The aim of the present study was to identify potential key factors of successful regional prevention of chlamydia and other sexually transmitted infections (STIs).

Materials-Methods: A multiple case study was performed including seven Swedish counties. Data was collected via surveys and interviews with key informants, county council registry data, survey data on condom use, and surveillance data on reported cases of chlamydia. In a case comparison, factors of prevention structure and prevention activities were identified and rated as strengths or weaknesses compared to norm of performance. Potential key factors were identified by examining prevention strengths corresponding to high condom use and decrease of chlamydia cases.

Results: Differences were found in prevention structure and activities across counties. Identified potential key factors identified were; adequate investments in STI prevention, suitable organizational structure, strong leadership, managing regional STI-networks, research connection, multiple local collaborations with health care and community, high testing coverage and, strategic risk approach.

Conclusion: The national as well as the regional action plans show little concern for the underlying structure of STI-prevention. Greater consideration to the structure of prevention may benefit the outcomes of STI-prevention activities.

Keywords: chlamydia prevention, strategy

To describe sexual and risk behaviour in under 16 year olds newly attending our integrated Sexual Health Service in a community setting
Nisha Pal, Clare Elliott, Jane Ashby
Berkshire Healthcare NHS Foundation Trust. Garden Clinic, Upton Hospital, Slough, Berkshire, United Kingdom.

Aim: To describe sexual and risk behaviour in under 16 year olds newly attending our services.

Methods: Computer databases were used to identify the last 100 under 16 yr olds who newly attended the sexual health services from January to December 2011. Patient records were reviewed and clinical, social, sexual and reproductive data was collated using excel.

Results:
Age of the attendees ranged from 13-15 yrs; 95% were girls. 98% reported heterosexual orientation. Fraser competence was documented as present in 100% of attendees. Vulnerability factors were assessed in all attendees. Age at coitarche ranged from 9 years of age upwards. 94% were already sexually active and 91% reported unprotected sexual intercourse. Other than condoms, no other forms of contraception were in use prior to clinic visit. Contraception was discussed with 100% of attendees and 47% commenced contraception at first visit. 6% had at least one previous unplanned pregnancy. 10% of attendees were diagnosed with at least one sexually transmitted infection at the first visit. 6% reported non consensual sex of which 2/6 were reported to the Police. 45% reported sexual partners over age 16. 15% had social services or other agencies input.

Conclusions:
High rates of under age sexual activity and unsafe sex were observed in this group of young people attending clinic for the first time, with high burden of sexually transmitted infections identified and unplanned pregnancies observed. This highlights a need for earlier interventions, as often sexual risk had already occurred prior to the young people attending clinic.

Keywords: Sexual behaviour in under 16 yr olds.

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<tr>
<td>White other</td>
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<tr>
<td>Black African/Caribbean</td>
<td>6</td>
</tr>
<tr>
<td>Asian</td>
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<table>
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<th>PRIMARY REASON FOR ATTENDANCE</th>
<th>% OF ATTENDEES</th>
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<tr>
<td>Emergency contraception</td>
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<td>Sexual Health Screen</td>
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<td>Termination of pregnancy</td>
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Contemporary Music and Adolescent Sexual Risk: Implications for Sexually Transmitted Infections in Metropolitan Lagos, Nigeria
Adeyemi Ezekiel Oluwagbemiga
Department of Sociology, Faculty of Social Sciences, Lagos State University, Ojo Lagos Nigeria

Background:
Successful reduction of sexually transmitted infections among adolescents requires a clear understanding of impact of music on sexual behaviour. Music power lies in its ability to penetrate into the soul and manipulate feelings. Despite these, protection of younger adolescents from the risk of sexual activity generated by music lyrics has not been well documented in Nigeria. The study therefore examines the impact of 12 top popular music on the adolescent sexual behaviour and its implications on STIs

Materials-Methods:
Quantitative and qualitative data were collected. Multi-stage random sampling procedure was employed in the administration of 300 copies of questionnaire. For qualitative data, four focus group discussions and 10 In-depth interviews were conducted to collect information from within the study population. The quantitative data collected were subjected to three levels of analysis. Information from qualitative data were transcribed and organized under broad headings that depict different aspects of the discussions

Results:
From the study it was observed that 82% of the respondents have had sexual intercourse while 62% frequently listen to romantic and sexual lyrics. There is a significant relationship between types of music ($p< 0.001$), and
ever had sex. Only 10% use condom in their last sexual intercourse preceding the survey. Some of the risky sexual behaviour includes gang rape, "sexual tournament" by male adolescents, use of sex toys for stimulations, concurrent partners and multiple partnerships. Forty six percent have contracted STIs while less than ten percent seek medical attention. Partners age at first intercourse, time spent listing to music, types of music, place of residence are the predisposing factors for likelihood of having sex.

Conclusion:

Music plays a significant role in adolescent sexual initiations, there is a need to use the same medium to preach abstinence in a friendlier manner. This will reduce STIs among the adolescent

**Keywords:** Music, STIs

[PP.38]

**Comparison of prevalence and type of psychiatric disorders in patients with human immunodeficiency virus infection, chronic hepatitis B and chronic hepatitis C and evaluation of related factors: cross sectional study**

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¹Izmir Katip Celebi University, Ataturk Training and Research Hospital, Infectious Diseases and Clinical Microbiology Department, Izmir, Turkey

²Izmir Katip Celebi University, Ataturk Training and Research Hospital, Psychiatry Department, Izmir, Turkey

Background: Psychiatric disorders are commonly seen in the course of infectious diseases. Although this has been most studied with human immunodeficiency virus (HIV), hepatitis B and C virus infections, comparison studies are lacking. Aim of this study was to compare frequency and type of psychiatric disorders in patients with HIV infection, chronic hepatitis B (CHB) and chronic hepatitis C (CHC) and to evaluate related factors.

Methods: Patients with HIV infection (n=20), CHB (n=22) and CHC (n=20) and 20 control subjects were recruited for the study. Using questionnaire knowledge on HIV, HBV and HCV infection was assessed. For psychiatric evaluation Structured Clinical Interview for DSM-IV (SCID-I), Hospital Anxiety and Depression Scale (HADS) and Brief Cognitive State Examination (BCE) were used.

Results: Psychiatric disorders were found in 59% of the patients. Prevalence was higher in patients with CHC (75%) than patients with HIV infection (60%) or CHB (35%). Number of patients with more than one psychiatric disorder and impairment of cognitive functions were also higher in the CHC group. Overall depression was the most frequent disorder (41%) and was found in 60%, 45% and 25% of patients with CHC, HIV infection and CHB, respectively. Severity of anxiety and depression was significantly higher and social support was lower in HIV infected patients. Psychiatric disorders were associated with low knowledge score on the questionnaire study, being in the first 2 years after the diagnosis and not receiving specific treatment for the infection.

Conclusion: Identification and treatment of psychiatric disorders in patients with HIV, CHB and CHC is important because the prevalence is high and they can serve as barriers to medical care and adherence to medical treatment.

**Keywords:** infectious diseases, psychiatric disorders

[PP.39]

**Quality of life of people with HIV/AIDS receiving antiretroviral therapy in Albania**

Besjiana Xhani¹, Jonida Naska², Arben Pilaca¹, Klodiana Shkurti¹, Arjan Harxhi¹, Valbona Gashi¹, Shkelqim Kurti¹, Elda Qyra¹, Redona Dudushi³, Dhimter Kraja¹

¹Department of Infection Disease, University Hospital Center of "Mother Teresa" Tirana, Albania

²Psychosocial Service, University Hospital Center of "Mother Teresa", Tirana, Albania

³Institute of Public Health Albania

Background: Assessments of quality of life profile in our subjects.

Materials-Methods: Administration of the questionnaire WHOQOL - HIV BREF was accomplished randomly with 40 people (100 people are under ARV treatment ) diagnosed clinically in phase II and III of AIDS (24 females, 16 males) mean age 41 years (19, 76), disease duration 3.5 years. In total about 53% of subjects were in the age group 30-45 years old. This study was conducted during September - December 2010 at Department of Infectious Diseases at University Hospital Centre "Mother Teresa", Tirana.

Results: Based on quantitative and qualitative analysis the final score for quality of life for all domains included in the study was 39 percent. The higher value was found for psychological, physical and social relations with an average of 42 percent. Domain of personal faith has the lowest rate with 32 percent. A determinant factor related to our results is associated with level of education (57% had elementary education). Also 83% of our subjects clinically had AIDS, they hadn’t information about their HIV serostatus. 65% of our subjects are infected by sexual relations and 13% of them are gay.

Conclusion: Subjects diagnosed with HIV / AIDS in Albania started ARV treatment in stage B or C of disease. The majority of patients interviewed were hopeless for the future according to their quality of life. As antiretroviral medications become more available in these areas, community members and care providers can help clients realize the possibility of living well with HIV/AIDS, and can work with clients to improve functional ability and control symptom intensity to improve quality of life.

**Keywords:** Quality of life ARV Serostatus Living well
[PP-40]

Negative impact of disclosure of HIV positive status by the press in Albania
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1Department of Infection Disease, University Hospital Center of "Mother Teresa" Tirana, Albania
2Public Health Institute of Albania

Background: AIDS is a disease that takes first place in international mass media. People worldwide have learned more about AIDS from TV, radio and the written press. The role of media has had a positive impact on society about the education of the population regarding this disease, but "unconsciously" it may also cause the opposite effect.

Materials-Methods: In this paper a case study is used as qualitative methodology. Full evaluation of the case is done in all it's medical, social and psychological dimensions.

Purpose: To assess the effect and the consequences of disclosure of the HIV positive status of a person in the public press.

Results: Mr X a 35 year old bisexual single male was diagnosed HIV positive in 2005 at the hospital of infectious diseases. In 2008 he was initiated on ARV therapy, and between then and 2010 he had numerous prolonged hospital admissions (2-3 episodes per year). He was a national celebrity, and in 2008 an Albanian newspaper published an interview with him and disclosed his HIV status. He was identified by name, surname and a photo. After this he remained homeless, unemployed and abandoned by society.

He died in hospital in 2010 under medical and social worker care, abandoned from family and friends.

Conclusion: Based on this case, state institutions, NGOs must need to act and to protect the right of confidentiality status and human dignity. The media must be careful to respect human rights and the confidentiality status more then the others. It is necessary to develop information campaigns, health education, legal and continuous efforts to avoid discrimination of this target group.

Keywords: Case study media discrimination

[PP-41]

Health care professionals' general level of knowledge about sexually transmitted diseases, approach to these patients and legal aspects of medical services
Ümit Savaşçı1, Yaşam Kemal Akpak2
1Sarkamis Military Hospital, Department of Infectious Diseases and Clinical Microbiology, Kars, Turkey
2Sarkamis Military Hospital, Department of Obstetrics and Gynecology, Kars, Turkey

Background: In this study, we examined, health care professionals (HCPs)' level of knowledge about sexually transmitted diseases (STDs) and approach to these patients in terms of medical ethics and medical law.

Materials-Methods: This study was a descriptive study that included Sarkamıs Military Hospital's HCPs. We asked HCPs to fill out a form on their own without specifying their name. HCPs were asked 28 questions to measure their level of knowledge about STDs and about approaches to patients with STDs.

Results: 40 males (80%) and 10 females (20%), a total number of 50 HCPs were included in the study. The percentages of nurses, doctors, laboratory technicians, health managers, medical technicians and service staffs were 18%, 22%, 6%, 16%, 20% and 18%, respectively. Mean age was 32.4±4.5. The answer to the question of "which STDs do you know of?" was answered as AIDS by 62%. The percentages of the other responses were, 22% gonorrhea, 10% syphilis, 4% hepatitis B, 2% hepatitis C, respectively. The question of "How did you learn about the details of STDs?" was answered as from school by 56%. 50% of the married HCPs answered as "single partner" and the other married 50% HCPs answered as "condom" when questioned about STD protection methods. Single HCPs answered the same question as condom by 81.3%. 64.7% of doctors and nurses answered yes to question of "Do you want to have legal rights not to medically interfere with patients who have STDs". 35.3 % of the other HCPs answered yes to this question.

Conclusion: The majority of the population learned information about STDs during the school education and this training should be given more weight. In this study, condom awareness was found to be at a good level. Legal arrangements should be made about medical interfere to patients who have STDs.

Keywords: Health care professionals, sexually transmitted diseases

[PP-42]

Screening for hazardous alcohol consumption in an STI clinic - a sevice evaluation
Nicola Lynn Thorley1, Nalin Hettiarrachchi1, Peter Nightingale2, Keith Radcliffe1
1Whittall Street Clinic, University Hospital Birmingham, Birmingham, England
2Queen Elizabeth Hospital, University Hospital Birmingham, Birmingham, England

Background: The UK's National Institute for Health and Clinical Excellence (NICE) public health guidance (2010) recommends screening all patients attending sexually transmitted infection (STI) clinics for excessive alcohol intake. We conducted a survey in an inner-city clinic to assess the acceptability of an alcohol screening questionnaire, rate of hazardous drinking and success of referral to a specialist alcohol service (Aquarius). In the
UK, STI clinics are reimbursed for each attendance by a national tariff, Payment by Results (PbR), currently £138 per new attendance. We estimated the cost of introducing screening and brief intervention into an STI clinic to assess the feasibility of providing such a service.

**Materials-Methods:** The questionnaire included demographical information and a validated alcohol screening tool, alcohol use disorders identification test (AUDIT). Harmful and hazardous drinkers were offered referral to Aquarius. Based on NICE cost analysis, we estimated the cost for delivery of screening and brief intervention per clinic attendee, and expressed these as a percentage of the PbR tariff.

**Results:** 227 (72%) patients accepted the offer of screening, of whom 34% were hazardous drinkers, and 2.6% consented to referral to Aquarius, but failed to attend. We estimated the cost range per case to screen and deliver a 5 minute brief intervention at £3.62 - £9.19 or 2.6 - 6.7% (mean 4.7%) of the current PbR tariff.

**Conclusion:** Opportunistic alcohol screening identifies high rates of hazardous drinkers and is acceptable to patients, but onward referral by untrained staff to an external specialist alcohol service is unacceptable to patients. In the absence of extra resources for screening and delivery of brief intervention, it is unlikely that STI clinics in the UK will be able to afford the extra cost; however further research into the cost-effectiveness of screening and delivery of brief interventions within clinics is required.

**Keywords:** Alcohol, Screening

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**Condom related behavior among gay men in Kyrgyzstan**

Chinar Bakirova¹, Maxim Bratuhin²  
¹AntiAIDS Association  
²Public Association Pathfinder

**Background:**

Abstract is based on two researches into MSM behavior made in 2005 and in 2011. In 1998 the Kyrgyz government took an important step forward in decriminalizing homosexual behavior. The concerned article in the Law was repealed. To date there is no adequate data on HIV among homosexually active men in the Kyrgyz Republic.

Information about the behavior of MSM is an important defining element in building effective programs to prevent the spread of HIV. Behavioural data plays an important role in complex systems of HIV infection, improving the planning of programs.

**Materials-Methods:**

Survey of a representative sample. Survey instrument - a questionnaire, adapted to local conditions. The survey was performed directly by the staff of partner organizations in the field. Consultations on the goals and objectives of the research, and interpretation of the data was provided by Anti AIDS Association. The study involved 140 people from: Bishkek, Kara-Baltaand and Osh. The sample was formed by a non-random target by a “snowball”.

**Results:**

Socio-demographic characteristics of MSM.  
Alcohol and drugs use.  
Sexual activity.  
Availability of condoms and lubricants.  
STIs, HIV and knowledge associated with them.  
Level of discrimination

**Conclusions:**

1. Take steps to ensure the target groups will be achieved.  
2. Improve the contents of the program and ensure project staff serve as role models for the promotion of safer sex.  
3. Change the practice of isolation of STI infected men.  
4. Stop any research without the involvement of qualified staff and improve research capacity.  
5. Involve relevant technical expertise in the area of working with MSM and emancipation of sexual minorities  
6. Develop a research component in order to be able to assess trends and to conduct STI/HIV prevalence studies of representative anonymous samples  
7. Fostering a more conducive environment for project implementation in the area of HIV/AIDS prevention and care is important.  

**Keywords:** Kyrgyzstan, discrimination
The cultural context and influence on the process of HIV testing among MSM and LGBT community in Tajikistan

Haetjon Aliev, Kiromiddin Gulov, Vladimir Bashkatov

Equal opportunities

Background: Tajikistan is a small country, with its own peculiarities and mentality, which may be difficult to change. Features of work among the LGBT community are very complicated because of stigma and discrimination in society.

Methods: Three substudies were conducted in the research period: a questionnaire, a period of pre-test counselling and HIV testing, and focus group testing after receiving HIV results. The results of the questionnaire are shown below.

Results: The results showed that the level of awareness of HIV and safe sex among MSM/LGBT communities is very low. Only ten percent (n=36) of the 348 surveyed were aware of HIV; 90% (n=312) were unaware. Seventy-nine percent (n=303) had not used condoms in the preceding 12 months; 14% (n=26) had used condoms consistently; 7% (n=19) used condoms sometimes. Reasons cited for not using condoms included affordability, perception that it is sinful to use a condom, inavailability of condoms, and parents in the pocket. Twenty percent (n=68) had taken a HIV test in the preceding 12 months. Reasons cited for not HIV testing were as follows: cost [38%, n=134], being unaware of testing sites [29%, n=102], not believing in HIV [27%, n=97]. Fifteen participants (4%) did not cite a reason.

Conclusion: These results show that levels of awareness of HIV, testing and safe sex amongst high risk MSM/LGBT groups in Tajikistan is extremely poor. Cultural attitudes strongly influence HIV risk perception and behaviour.

Keywords: HIV

HIV/AIDS Testing and Antenatal Care: Implications for Mother-To-Child Prevention in Nigeria

Olaide Aderonke Adedokun, Oluwagbemiga Ezekiel Adeyemi

Lagos State University, Ojo, Lagos Nigeria

Background: Voluntary testing and counselling (VTC) for HIV/AIDS is widely accepted as an effective HIV prevention and control strategy. That more than three-quarters of HIV infection in children occur through mother-to-child transmission, during pregnancy, labour and delivery or through breastfeeding has also been widely reported. VTC during antenatal care is therefore most useful for the prevention of mother-to-child transmission and reduces both infant and maternal mortality. This study examines the level and pattern of HIV testing during antenatal care in Nigeria and the implications of this for the prevention of mother-to-child transmission.

Materials-Methods: The 2008 Nigerian Demography and Health Survey data was utilized. Multistage analysis was used to explore the relationship among the identified variables.

Results: Preliminary analysis of the data revealed that 31% of the respondents ever tested for HIV during antenatal care in a healthcare facility and only 36% of those who breastfed their babies later were tested for HIV during antenatal care. Education of mothers, knowledge of HIV, place of delivery and place of residence are significantly associated with HIV testing. Also, Partner’s level of education, attitudes towards domestic violence, final say on health and household decision-making exert positive influences and were independent predictors of the likelihood of embracing VTC during antenatal care.

Conclusion: The study concludes that the level of VTC is still very low in Nigeria. There is therefore an urgent need to step up the level of awareness and acceptability of VTC through efforts that must actively involve women, health practitioners in various settings, religious organisations, men as husbands, partners and community leaders, to ensure that the time for protection of the future generation is now.

Keywords: HIV/AIDS, Mother-to-Child Prevention

Using Minimum Package of Prevention Interventions (MPPI) to Improve Health-Seeking Behaviors and Reduce HIV infections among Most-At-Risk-Populations (MARPs) in Rural Communities of North Central Nigeria

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Background: Despite 30 years of serious interventions on HIV/AIDS, there remains a stunning gap in prevention efforts especially towards the Most-At-Risk-Populations (MARPs). Although they represent a small proportion of the population, but they contribute largely to new infections due to their high mobility and risky behaviors. This paper presents the strategic interventions on the MARPs in rural communities of Kwara State Nigeria using
Materials-Methods: Management Sciences for Health (MSH), a USAID funded project trained 47 (22 males, 25 females) participants on comprehensive use of Peer Education (PE) and MPPI services to improve health-seeking behavior among MARPs such as transport workers, uniform service men, out-of-school youth etc. They were equipped with necessary knowledge and skills on PE and MPPI services. These participants stepped down the training to peers (cohort of 10-20) using modules from the National prevention manual three times a month. Activities of the peer educators were tracked and documented using the National Prevention Intervention Tracking Tool (PITT).

Results: After 4 months of interventions, number of persons accessing HIV testing and counseling increased from 85 (34 males, 51 females) to 192 (78 males, 114 females) people (125.9 % increment). More females accessed services than male which corroborates with the wide believe that females have better health-seeking behavior than males. Also, risk perception among study population changed as condom access and use increased from 10% to 85%.

Conclusion: Effective implementation of MPPI using peer educators provides information, increases access and reduces HIV risky behaviors among MARPs. It also encourages health-seeking behaviors especially among women which translate to the reduction of new infections among family members, communities and countries. Government and non-governmental organizations should therefore focus more interventions on MARPs as this would help prevent new infections especially from mother-to-child.

Keywords: MPPI, PITT

[PP-47]

Prevalence of Human Immune-Deficiency virus positive in patients who have suspicion of sexually transmitted diseases: Seven year results from Gulhane Military Hospital

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³Sarıkamış Military Hospital, Department of Obstetrics and Gynecology, Kars, Turkey

Background: According to Republic of Turkey Ministry of Health, only one Acquired Immune Deficiency Syndrome (AIDS) and also one Human Immune Deficiency Virus (HIV) positive patients were present in 1985 but 80 AIDS and 619 HIV positive patients were identified in 2011. In total, 4303 HIV positive cases were identified in Turkey.

Materials-Methods: This retrospective study was performed between 2005 and 2012 in Gulhane Military Hospital, Department of Infectious Diseases and Clinical Microbiology. Patients who have suspicion of sexually transmitted diseases (STD's), were screened and 38 patients whose serology were HIV positive were included in the study.

Results: The mean age of seropositive participants was 28.5±10.4 (20-65). Of the total 38 HIV positive patients enrolled in the study, 37 (97.4%) patients were male and 1 (2.6%) patient was female. Tendency to sexual behavior of these patients, 33 (86.8%) patients were heterosexual and 5 (13.2%) patients were homosexual. Family history about HIV was found in only one patient. Coinfections with HCV and HBV were observed 2 (5.3%) and 1 (2.6%), respectively in seropositive patients. According to patients' medical histories; having used illegal intravenous drugs in 7 (18.4%) patients, having had a tattoo in 5 (13.2%) patients, having had sex with people in high-risk groups in 31 (81.6%) patients, having had a history of blood transfusion in 2 (5.3%) patients and having had a surgical intervention in 1 (2.6%) patient, were observed. 14 (36.8%) patients were diagnosed after the symptoms had started.

Conclusion: Unlike the former information, heterosexual transmission is the most common route of HIV infection worldwide. Community screening is very important and must be widespread because of cases are diagnosed too late. Effective HIV prevention methods not only give information, but also improve skills and provide access to basic goods such as condoms, sterile injecting equipment and sterile tattoo needles.

Keywords: Acquired Immune Deficiency Syndrome (AIDS), Human Immune Deficiency Virus (HIV)

[PP-48]

Seroprevalence of human immunodeficiency virus and syphilis infections among healthy blood donors at the Gulhane Military Hospital in Ankara, Turkey

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³Gulhane Military Hospital, Department of Transfusion Medicine, Ankara, Turkey

Background: In this study, we aimed to find out the seroprevalence of HIV and Treponema Pallidum among the healthy blood donors, at the Gulhane Military Hospital in Ankara, Turkey.

Materials-Methods: This retrospective study was conducted between January 2005 and July 2012 at the blood transfusion centre of Gulhane Military Hospital. Whole blood donors and apheresis donors were screened for
Background: Ukraine has one of the most severe HIV epidemics in Europe, with an estimated 350,000 people living with HIV and 1.1% HIV prevalence among adults aged 15-49 years. This is the second highest in Europe (as of the end of 2009 according to UNAIDS Global Report). The epidemic remains concentrated in high-risk groups. Estimated size of risk groups is the following: IDU (injecting drug users) 290 000, FSW (female sex workers) 78 000, and MSM (men who have sex with men) 95 000. 48 470 HIV testing and 4 979 STI testing were conducted on 01.01.2008. 38 medical institutions conducted STI treatment in 2008. The major task was an improvement of the efficiency of the prevention programs and to increase coverage of 'at risk' groups through the prevention programs.

Methods: The implementation of innovations to the comprehensive package of preventive services: especially IDUs and commercial sex workers, CSW) at national and regional levels:
1. Combi tests (HIV/Syphilis/Viral Hepatitis B and C simultaneously)
2. Testing and counseling in 15 mobile clinics
3. Hepatitis B coreantibody testing before vaccination against viral hepatitis B
4. Testing for Gonorrhea and Chlamydia and complex sexually transmitted infection (STI) treatment
5. Obtaining of Substitution Therapy and TB prevention.

Conclusions: Perspective development of preventive services located in one NGO for 'at risk' groups is possible only with use of the comprehensive package and addition of the country's innovations depending on the epidemiological situation.

Keywords: Comprehensive package, HIV\STI preventive programs

[PP-49]

Improving efficiency of the HIV\STI preventive programs as a result of implementation of a comprehensive package of services for groups at risk
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ICF "International HIV/AIDS Alliance in Ukraine"

Background: Blood transfusion can be life-saving intervention when done correctly so that voluntary donors should be encouraged and their screening should be made compulsory at each health institution. It is important to follow the current guidelines to screen every donor for transfusion transmissible infections to decrease the incidence of deadly diseases. In this study, we observed that the results of screening tests should be verified with confirmation tests. Also blood donors who thought themselves healthy, were found to be a carrier of infection in fact.

Keywords: Blood donors, Transfusion transmissible infections

[PP-50]

HIV pseudovirus assay for viral fitness and entry inhibition
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Background: Replication levels of recombinant HIV constructs (pseudovirions) that carry the glycoproteins of wild-type HIV isolates on a generic viral background correlated with their natural isolates indicating that the glycoproteins contribute to viral fitness. The aim of this study was the analysis of receptor binding properties of different HIV isolates, and evaluating the anti-HIV effect in vitro of chemically modified pyrimidine nucleotides UD29 and its derivatives.

Materials-Methods: To produce pseudovirions, different HIV-1 glycoprotein genes were amplified and cloned into the eukaryotic expression vector pCI resulting in a set of env expression plasmids. Plasmids carry HIV gag-pol genes and firefly luciferase (pGJ3-luci) or green fluorescence protein (pGJ3-eGFP) as reporter genes. Plasmids were also constructed. Pseudovirions were produced by transfecting both pEnv and pGJ3-luci/eGFP plasmids into HEK293T cells. In transfected cells phenotypical mixtures of constructs (pseudoviruses) form. Expression of reporter genes was observed by measuring the luciferase activity or detecting eGFP expression. Cell lines, expressing CD4 and CCR5 or CXCR4 selectively or both, were used for the determination of pseudovirus tropism. UD compounds were added prior and at the time of infection of cells with HIV pseudovirions (m.o.I: 2).

Results and Conclusion: Low and high entry fitness were observed with viruses of the same genetic clade, R5- and X4-tropic strains, and in different target cell lines of human and rodent origin. UD31 showed the most prominent
antiviral effect in the concentration of 5 µg/ml. As UDs inhibit the glyceraldehyde-3-phosphate dehydrogenase (GAPDH), results suggest that this thiolated nucleozide may interfere with the function of the essential –SH groups of CD4 molecule, and may function as an entry inhibitor for HIV. The wide range of entry fitness suggests that the glycoproteins play a significant role in viral replication. This should be taken into consideration to produce entry inhibitors and/or an effective HIV vaccine. (Supported OTKA 81367)

Keywords: HIV pseudovirion, entry inhibitor

[PP-51]

Evaluation of time for non-genitourinary medicine physicians to diagnose HIV infection in patients presenting with HIV-related illness – has anything changed in the last decade?

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Background: Many patients are not diagnosed with HIV until they present with AIDS-defining illnesses. The aim of this study was to assess the length of time for non-genitourinary medicine (GUM) physicians to diagnose HIV when patients presented with an HIV-related illness.

Methods: Retrospective case note review of all patients diagnosed with HIV between 1st January 2010 and 31st December 2011 at 3 large hospitals on the south coast of England. Patients diagnosed by GUM physicians, General Practitioners prior to admission, during antenatal screening, or transferred from other centres with an HIV diagnosis were excluded.

Results: 37 new HIV diagnoses were made in non-GUM settings (24 male, 13 female). 27 patients were diagnosed while an acute inpatient, and 10 as outpatients. The mean age was 43 years (range 23-69). 57% were Caucasian and 27% were black African. 57% had acquired HIV infection heterosexualy and 37% were men who have sex with men. 59% had advanced disease (Centers for Disease Control category C) at the time of diagnosis, and the most common AIDS-defining illness was Pneumocystis pneumonia (30%). 32% were diagnosed by respiratory physicians and 19% by acute medicine physicians. Median time to diagnosis was 1 day with an interquartile range of 0-4 days. 81% of diagnoses were made within 7 days of first presentation, and there were no significant differences between inpatients and outpatients in median time to diagnoses.

Conclusion: A study in 2002-2003 involving the same 3 hospitals found a median time to diagnosis of four days, with 70% of diagnoses being made within seven days. Our study shows that the time to HIV diagnosis by non-GUM physicians has significantly improved in the past decade. This could be due to wider dissemination of national guidelines promoting HIV testing and increased awareness of clinical indicator illnesses among non GUM physicians.

Keywords: HIV, diagnosis

[PP-52]

Introduction of, and small changes to, an electronic patient record significantly improve uptake of HIV testing

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Background: The BASHH MEDFASH Standards for the Management of STIs 2010 recommend that 100% of GUM patients should be offered an HIV test with a minimum uptake of 60% at their first STI screen. The aim was to assess whether the introduction, and then modification, of an electronic patient proform for HIV testing (EPP) resulted in an increase in uptake of HIV testing in a level 3 GUM service.

Methods: Retrospective case note review of new and rebook (not attended in the past 3 months) patients attending a level 3 GUM service in October 2007 (paper patient record kept), October 2010 (following introduction of an EPP with a prompt for HIV test offered), and April 2012 (following changes to the EPP with prompts for reasons for declining an HIV test and advising the offering of point of care testing (POCT) to needle-phobic patients).

Results: 772 patients were seen in October 2007, with 562 (72.8%) accepted HIV testing. 1141 patients were seen in October 2010, with 891 (78.1%) accepting HIV testing (p-value 0.009). 922 patients were seen in April 2012, with 798 (86.6%) accepted HIV testing (p-value <0.0001). Of 124 patients declining HIV testing in April 2012, the most common reason was the patient feeling that they were not at risk of HIV (17.7%). Of those declining HIV testing 43.6% had symptoms of, or had been in contact with, another STI.

Conclusion: The introduction of the EPP with a prompt for HIV testing has improved uptake of testing, further improved by small changes to the EPP requiring staff to explore patients’ decision making in greater detail. There is still considerable scope for improvement, but this study shows that ongoing assessment of and small changes to EPPs can result in statistically significant improvements in patient care.
**Confirmed recent HIV infection in a patient with a high avidity index test**

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Background: HIV has a well recognised latent period between infection and symptom development that poses difficulties to public health monitoring and surveillance. The Health Protection Agency (HPA) has developed a Recent Infection Testing Algorithm (RITA) based on avidity testing to identify recent infections. An avidity index <80% is consistent with likely infection in the 4-5 months prior to sample collection. This can be used to estimate timing of HIV transmission and guide partner notification. HIV avidity tests have been extensively validated but only act as an approximate indication of recent seroconversion, therefore the results should be evaluated with care.

Materials-Methods: We present a case report of a recent HIV diagnosis with two high avidity test results indicating established infection.

Results: A 43 year old Caucasian man who sleeps with men (MSM) presented in January 2012 after a positive screening syphilis dried blood spot test. HIV testing of this sample was reported as negative. He recalled a previously treated episode of syphilis and further review of his confirmatory serology was consistent with this. He represented in April 2012 and a repeat HIV test was performed, subsequently testing positive. The patient recalled a flu-like illness in February following an episode of risk, possibly indicative of seroconversion. Two avidity tests were performed in April and May 2012 which showed results of 90.4% and 99.7% respectively. Retrospective retesting of his January blood spot confirmed the previous HIV negative result and retrospective sampling of his January syphilis confirmatory serum sample was also negative for HIV on antibody/p24 antigen testing and HIV PCR.

Conclusion: Avidity testing was established to detect early HIV infection, however this case report highlights the possibility of missing recent infection. It is important to evaluate the avidity test results carefully and always in the context of a patient’s clinical data.

**Keywords:** Avidity

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**Development of the specialized HIV\STI\hepatitis prevention services for MSM in Ukraine**

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Background: Ukraine has the second highest rate of new HIV diagnoses in Europe. Since 2008, the main mode of HIV transmission has been sexual. The driving forces of the epidemic process are Injecting Drug Users, Sex Workers and MSM. The situation with HIV among IDUs has stabilized and in the last 5 years there has been a downward trend in this group. There is a real danger that the MSM will be the main source of the epidemic.

The estimated number of MSM in Ukraine ranges from 200 to 250 thousand people.

Materials-Methods: There are 20 NGOs In Ukraine working with MSM and providing the HIV\STI \hepatitis counseling, testing and cooperating with health care institutions in the providing of treatment. In the many cities were created the special routes of mobile clinic to the places with the most concentration of MSM.

Results: Since 2008, 24,262 HIV tests and consultation for MSM have been carried out in the NGOs and mobile clinic.

768 positive results have been discovered.

3 866 gonorrhea tests for MSM have been carried out in the NGOs and mobile clinic.

3871 Chlamydia tests for MSM have been carried out.

The number of the the STI positive results obtained during screening testing and counseling among MSM has increased in 2011-2012.

3000 MSM have visited the 15 mobile clinics.

656 MSM have been vaccinated against viral hepatitis B.

Conclusion: The further development of specialized services for MSM, support of the NGOs working with MSM, and the increasing of the number of special integrated clinics for MSM should become one of the priorities of the HIV\STI prevention programs in Ukraine.

**Keywords:** HIV\STI \ hepatitis prevention, specialized services for MSM
Toxicity Related Antiretroviral Drug Treatment Modifications in Individuals Starting Therapy in Croatia: a Cohort Analysis of Time Patterns, Gender and other Risk Factors

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Background: Antiretroviral treatment (ART) modifications can occur for a number of reasons, including adverse drug effects. We investigated gender differences and other risk factors for ART toxicity modifications (ATM) during the first three years after initiation of ART in a closed cohort of patients in Croatia.

Materials-Methods: We conducted a cohort study of ART naïve adults who started treatment in the period 1998-2007 in Zagreb. We calculate differential toxicity rates by the Poisson method. In multivariable analysis, we used a marginal discrete-time logistic regression model for repeated events for the outcome of modification due to drug toxicity.

Results: Of 321 patients who started ART; median age was 40 years, 19% were women, baseline CD4 <200 cells/mm³ in 71% and viral load >100,000 c/mL in 69%. There were 24 deaths. Overall 124 (39%) patients had >=1 ATM, and there were 176 episodes of ATM. The following toxicities caused ATM more often: lipoatrophy (22%), gastrointestinal symptoms (20%) and neuropathy (18%). Of individual drugs zidovudine was more frequently discontinued for toxicity reasons in women than in men (RR, 2.71, 95%CI 1.23-5.99). In multivariable analysis women were at greater risk for ATM (average HR, 1.89, 95%CI 1.27-2.81) because of the toxicity occurring during the first 3 months of therapy (HR, 3.08). Individuals taking an NNRT-based regimen compared to those taking a PI-based regimen had a higher average HR of ATM during the first three months of therapy (1.92, 95%CI 1.12-3.30). Individuals receiving ABC3TC and ZDV3TC had a lower average HR of ATM compared to patients on D4T3TC (0.21 and 0.41 respectively). Older age was also associated with ATM (average HR, 1.23 per 10 years).

Conclusion: We found that factors related to ATM significantly vary over follow-up time and that female gender was an important risk for ATM.

Keywords: antiretrovirals, toxicity

Poor adherence to ARV and TB drugs a fatality in HIV patient

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Background: The objective is to present TB as one of the most serious opportunistic infections in HIV positive patients. A 48 year old male was admitted with severe sepsis to the infectious diseases department at The University Hospital Center. His complaints were: high fever, headache and cough, back pain, and hip and chest especially on the right side.

Three years previously he had been diagnosed with HIV and pulmonary TB, and was started on antiretroviral therapy (ART) and a TB regimen. The patient self-discharged all treatment three months prior to his admission, because of clinical improvement and stomach pain.

On examination there was swelling and flexion on right hip region. The laboratory results were: CD4 25 cell, HIV Viral Load 3x10⁵ copy/ml. PPD reaction, culture and direct microscopy of bronchial secretions were positive for BK. WBC 13500 with lymphocytes (50%), mild anemia and sedimentation rate was 38mm/h. Culture of blood and urine were negative.

X-ray showed massive pneumonia in the right side and destructive lesion on the fifth lumbar vertebral body. Thoracic and abdominal CT scan showed massive pneumonia, hilar lymphadenopathy, spondylodiscitis in the fifth lumbar vertebra and a ilio- psoas abscess.

He started TB drugs, antibiotics, symptomatic treatment and surgical drainage, but deteriorated clinically. Ten days after intensive treatment he died from sepsis from TB infection.

Conclusion: This was a severe case of TB co infection in an HIV infected individual, whose poor adherence to TB and ARV drugs was the cause of his death.

Keywords: HIV, TB
**Alcohol use disorder screening in HIV patients in a genitourinary medicine clinic**

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**Background:** Alcohol consumption is associated with chronic health problems, sexual disinhibition, excess morbidity and mortality, and significant cost to the National Health Service (NHS). The National Institute for Health and Clinical Excellence (NICE) guidance, Alcohol-use Disorders: Preventing Harmful Drinking, recommend alcohol screening for people who regularly attend genitourinary medicine (GUM) clinics. The British HIV Association (BHIVA) guidelines for the treatment of HIV-1 positive adults with antiretroviral therapy recommend that patients should be asked about alcohol use. This audit looked at the use of the Alcohol Use Disorders Identification Test (AUDIT-C) within the HIV population of a metropolitan GUM clinic.  

**Materials-Methods:** Over a four month period, HIV positive patients attending care were assessed for alcohol use disorders using the AUDIT-C questionnaire. Patients with a score >4 were provided with verbal advice about alcohol and risk reduction. Data was collected on demography, sexually transmitted infection (STI) testing and diagnosis.  

**Results:** 263 notes were reviewed. A completed AUDIT-C score was performed in 252 patients (95.8%), mean age 40, 84.4% male, 71.9% men who sleep with men (MSM). No patient declined screening. A score greater than 4 was found in 133 patients (52.8%) and alcohol was subsequently discussed with 129 of these patients (97%). The provision of an NHS Drink Smart Guide (DSG) providing alcohol self help was offered to 78 patients and accepted by 35 (44.9%). Fifty two STI screens were performed and 17 infections were found in 13 people. Of these 13 people with infection, 9 (69.2%) had AUDIT-C scores of greater than four.  

**Conclusion:** This audit shows that alcohol screening had high acceptability within a GUM setting. Increasing alcohol has been associated with STI exposure and compromised immunity, and is thus important in the management of HIV patients.  

**Keywords:** Alcohol

**Cerebral toxoplasmosis in patients with acquired immunodeficiency syndrome (AIDS) in Albania**

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**Background:** Studies done in developing countries have shown that the major causes of neurologic disorders in HIV/AIDS patients are Central Nervous System infections. The aim of this retrospective study is to describe some epidemiological, clinical, diagnostic and therapeutic characteristics of cerebral toxoplasmosis (CT) in HIV positive patients in Albania.  

**Materials-Methods:** We studied retrospectively the characteristics of 13 patients diagnosed with CT which were collected after reviewing the medical records of 134 HIV/AIDS patients hospitalized from 2001 to 2012 at University Hospital Center of Tirana.  

**Results:** More than two thirds of cases were male (77%) and mean age was 44 years. CT was the first HIV/AIDS related diagnostic event in 7 cases. The nadir level of CD4+ in 8 cases was less than 50cell / µL. The clinical manifestations were: fever 61.53%; headaches 84.61%; vomitus 84.61%; ataxia 53.84%; convulsions 46.15%; hemi-paresis 38.46%; cerebellar signs 46.15%; hemisensorial deficits 53.84%; cranial nerve disturbances 69.23%; meningism 38.46%; mental alterations 69.23%; stupor 53.84%; coma 61.53%. Imaging studies showed that 38.46% of them had only one lesion and in 3 of them, 60% edema was present. 7 other cases, (53.84%) had multiple lesions and in 5 of them, 71.42% edema was present. The location of the lesions was: basal ganglion (unilateral/bilateral) 69.23%; cortico-medullary junction 7.69%; temporal lobe 15.38%; frontal lobe 46.15%; parietal lobe 38.46%; occipital lobe 30.76%; corpus callosum 7.69%; peritrigonal region 15.38%. Mortality resulted 61.54% with a mean time from hospitalization to death 3.5 days. First choice therapy was based on Cotrimoxazole. Glucocorticoids were used concomitantly almost in all cases.  

**Conclusion:** Due to advanced disease at time of first HIV diagnosis, CT is associated with high mortality and morbidity. Early diagnosis of HIV infection and related diseases and adequate prophylaxis and treatment of opportunistic infection are recommended.  

**Keywords:** Cerebral toxoplasmosis, Albania

**The effect on Neisseria gonorrhoea screening rates in an integrated clinic following the introduction of dual nucleic acid amplification tests (NAATS)**

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2Wexham Park Hospital, Slough, UK  

**Background:** Nucleic acid amplification tests (NAATS) to detect Neisseria Gonorrhoea (GC), allow less invasive sampling and are more sensitive than culture. Aptima combo 2 (AC2) has a high specificity but positive predictive value can be low
in low prevalence populations. GC diagnoses may be lower in an integrated family planning (FP) and genitourinary (GU) clinic compared to those primarily providing GU care.

**Aim:**
To investigate whether the introduction of GC NAATS into an integrated clinic has increased rates of GC screening and detection.

**Methods:**
All patients having a GC screen 4 months prior to and following NAATS introduction were identified by laboratory databases. Notes were reviewed for those diagnosed with GC. Information regarding patient demographics, symptoms and risks were gathered (see Table).

**Results:**
Pre-NAATS: 2307 symptomatic and asymptomatic patients were screened with GC culture of which 20 (0.87%) were positive.

Post-NAATS: 3444 symptomatic and asymptomatic patients were screened with AC2 of which 43 (1.25%) were confirmed positive for GC. 217 of the symptomatic patients were also cultured and 18 (8.3%) were positive.

Of the 43 positive NAATS tests, 20 patients were also culture positive; 10 were culture negative, 1 grew Neisseria meningitidis (isolated in the throat) and 12 had no culture taken. All of the NAATS positive, culture negative individuals had symptoms, signs or high risks for GC. All patients with positive cultures were NAATS positive.

**Conclusions:**
Following the introduction of NAATS, the proportion of patients screened for GC significantly increased and the number of GC diagnoses doubled. This may be due to better acceptability and uptake of screening, including those attending for FP care. NAATs identified more cases of GC than culture alone. There was only one case of possible false positive. This provides reassuring data to support use of NAATS in this setting.

**Keywords:** neisseria gonorrhoeae, nucleic acid amplification test

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**Table 1: Demographics of those patients diagnosed with GC**

<table>
<thead>
<tr>
<th></th>
<th>PRE-NAATS</th>
<th>POST-NAATS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO. OF PTS ATTENDING (re-attendees not included)</td>
<td>9296</td>
<td>9197</td>
</tr>
<tr>
<td>NO. OF GC SCREENS CARRIED OUT (% screened of those attending)</td>
<td>2307 (25)</td>
<td>3444 (37.4)</td>
</tr>
<tr>
<td>NO. OF POSITIVE GC TESTS (%)</td>
<td>20 (0.87)</td>
<td>43 (1.25)</td>
</tr>
<tr>
<td>AGE (years) (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;30</td>
<td>12 (60)</td>
<td>23 (53)</td>
</tr>
<tr>
<td>31-40</td>
<td>5 (25)</td>
<td>9 (21)</td>
</tr>
<tr>
<td>&gt;41</td>
<td>3 (15)</td>
<td>11 (26)</td>
</tr>
<tr>
<td>SEX (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>11 (55)</td>
<td>30 (70)</td>
</tr>
<tr>
<td>Female</td>
<td>9 (45)</td>
<td>13 (30)</td>
</tr>
<tr>
<td>MEN WHO HAVE SEX WITH MEN (MSM) (% of men)</td>
<td>5 (45)</td>
<td>11 (37)</td>
</tr>
<tr>
<td>RACE (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White European</td>
<td>11 (55)</td>
<td>32 (74)</td>
</tr>
<tr>
<td>Black (UK)</td>
<td>1 (5)</td>
<td>1 (2)</td>
</tr>
<tr>
<td>Black African</td>
<td>3 (15)</td>
<td>1 (2)</td>
</tr>
<tr>
<td>Black Caribbean</td>
<td>2 (10)</td>
<td>4 (9)</td>
</tr>
<tr>
<td>Asian other</td>
<td>3 (15)</td>
<td>5 (12)</td>
</tr>
<tr>
<td>SYMPTOMS SIGNS OF GC (%)</td>
<td>13 (65)</td>
<td>23 (53)</td>
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</table>
AIDS At A Young Age With Multiple Opportunistic Infections
Selçuk Kaya, Iftihar Köksal
Karadeniz Technical University, School of Medicine, Department of Infectious Diseases, Trabzon, Turkey.

Background: Opportunistic infections are one of the most important prognostic determinators in AIDS patients.

Materials-Methods: A newly diagnosed 26-year-old male Human Immunodeficiency Virus (HIV) patient was admitted to our hospital with cough productive of phlegm, sweating, lethargy and weight loss over the previous 2 months. At high resolution computed tomography (HRCT), infected bronchiectasis with thickened walls accompanied by millimetric centrilobular nodules was identified in both lungs. Serum CD4 level was 2.7. The patient was started on levofloxacin together with efavirenz and emtricitabine+tenofovir. No lessening of symptoms took place in the days that followed. Pneumocystis jiroveci tested positive in an induced sputum specimen collected from the patient using polymerase chain reaction (PCR). TMP-SMX was given in therapeutic dose for 21 days and there was a significant improvement in symptoms under this treatment. Two months later, the patient was re-admitted to our department with lethargy, impaired vision, confusion, stuttering and forgetfulness and a preliminary diagnosis of central nervous system infection, malignancy and drug complications. Magnetic resonance imaging (MRI) of the brain revealed contrast stained irregular ring shaped multiple lesions in the right cerebral hemisphere and left basal ganglia. Edema was observed around the lesions, and cerebral toxoplasmosis was suspected. Since pyrimethamine+sulfadiazine+folinic acid is unavailable in Turkey, high-dose TMP-SMX and anti-edema treatments were initiated.

Results: Following a gradual decrease in symptoms and a significant improvement in the central lesions at control MRI, the patient was discharged on the 50th day.

Conclusion: The fact that many newly diagnosed HIV/AIDS cases in Turkey appear in an advanced stage, as with the majority of our cases, is a significant indication that HIV/AIDS is diagnosed inadequately/late. Development of opportunistic infections in these patients is directly correlated with level of serum CD4, and careful differential diagnosis of infectious and non-infectious diseases is required in these patients, especially in the presence of neurological symptoms.

Keywords: HIV, Opportunistic infections

Plasmablastic lymphoma in an HIV patient managed with local radiotherapy and antiretroviral therapy
Christopher James Ward, Sameena Ahmad
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Background: Plasmablastic lymphoma (PBL) is an aggressive subtype of non-Hodgkins B-cell lymphoma associated with chronic HIV and low CD4 counts. It predominantly affects the oral cavity, gastrointestinal tract and lymph nodes. It is Epstein Barr virus (EBV) associated and is treated with intensive chemotherapy often combined with radiotherapy. Prognosis is poor with median survival 14 months. The use of highly active antiretroviral therapy (HAART) in PBL has been associated with a trend towards improved survival.

Materials-Methods: We present a case of PBL treated solely with HAART and short course local radiotherapy, without chemotherapy.

Results: A 64 year old Caucasian man who has sex with men (MSM) was diagnosed HIV positive in May 2010 following a seroconversion illness. In April 2011 he presented with a tender 2cm right posterior cervical lymph node with no associated weight loss, night sweats or fevers. A CT scan revealed low volume lymphadenopathy in the chest and abdomen. A lymph node biopsy showed EBV positive plasmablastic lymphoma and a PET scan detected tracer in lymphadenopathy on both sides of the neck, axillae, lower pelvis and groin. An excisional node biopsy of the right cervical node confirmed involvement by PBL. The patient was commenced on antiretroviral therapy and achieved a 2 log viral load reduction by 2 weeks and viral suppression by 4 weeks. Following HAART initiation, the patient commenced treatment with daily local radiotherapy for 3 weeks in October 2011. He has subsequently remained well, asymptomatic and disease free.

Conclusion: Chemotherapy is the hallmark of treatment in PBL and this case report presents a patient treated without intensive chemotherapy managed on HAART and local radiotherapy only. Age over 60 and lack of treatment with chemotherapy have been associated with poor prognosis, however this patient remains well and disease free 9 months after completing treatment.

Keywords: Lymphoma
Human immunodeficiency virus–associated fever of unknown origin (FUO) in Albanian adult patients; etiology, CD4 count & prognosis

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7University Hospital Center "Mother Teresa", Service of Statistic, Tirana-Albania

Background:
HIV/AIDS associated FUO is a frequent cause of hospital admissions and deaths. There was no study on HIV/AIDS associated FUO in Albania.

Materials-Methods:
This retrospective study was conducted in the University Hospital Centre "Mother Teresa"of Tirana, Albania from January 2007- December 2010. We did the chart-review of febrile HIV-AIDS adult patients admitted to the hospital and cases that fulfilled the specific criteria of FUO, published by Durack and Street in 1991, were identified. Data were statistically analyzed.

Results:
Out of 147 febrile HIV/AIDS patients 83 case of FUO (56.4%) were identified. There were 12 (14.5%) woman and 71 men (85.5%), the mean (±SD) age was 42.2 ± 12.1 years (range from 15–71).
Patients were known as HIV/AIDS subjects in 54 cases (65%). There were 28 cases (96.5%) in AIDS stage, among 29 cases firstly diagnosed as HIV/AIDS during admission in the hospital. AIDS was defined in 76 cases (91.5%).
The mean CD4 cell count among 71 patients (CD4 wasn't measured in 12 cases) was 112.8 cell/mm³ (range from1–633). The CD4 cell count was lower than 100 cell/mm³ in 44 cases (61.9%) and in 61 cases (86%) CD4 was <200 cell/mm³.
The etiology of fever was identified in 62 cases (74.6%). A single etiology was determined in 37 cases (59.6%). Multiple etiologies were found in 25 (40.3%) of 62 cases.
Infections were predominant, followed by neoplasia. Pneumocystis carinii pneumonia (PCP) 22 (26.5%), tuberculosis (TBC) 21(25.3%), CMV 7(8.4%), Toxoplasma 4 (4.8%), Leishmaniasis 3 (3.6%), fungal infections (not histoplasmosis) 5 (6%), bacterial 5 (6%).
Malignancies were identified in 15 cases (18%), represented by Kaposi's Sarcoma in 11 (13.2%), lymphoma in 4 cases (4.8%).
Death rate was 14 (16.8% lethality).

Conclusion:
HIV/AIDS associated FUO is a challenge. FUO occurs most often in the late stage of HIV infection, accompanied by low levels of CD4 and associated with high rate of deaths.

Keywords: HIV/AIDS, FUO

Prevalence features of sexually transmitted infections and HIV in Ukraine

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Background: The prevalence of HIV and sexually transmitted infections (STIs) in Ukraine is one the highest in Europe. Untreated STIs considerably facilitate the risk of HIV infection.

Materials-Methods: The data of STI and HIV prevalence among different population groups in Ukraine over the last some years were analyzed.

Results: During the observation of the HIV epidemic from 1997 to 2011, 206,160 persons were infected with HIV. 47,999 cases of AIDS and 25,353 cases of death from AIDS were registered. 21,177 new cases of HIV infection were reported in 2011. The reported number of patients with AIDS increased by 57 % to 9,189 persons. 3,736 people died from AIDS associated diseases. The leading part in the dynamic of this epidemic process is played by the most-at-risk groups – commercial sex workers and injection drug users. The prevalence of STIs and HIV differs among various population groups. STIs are reported in 0.41% of the general population and in 2.86% among risk groups. During examination, the most widespread STI was candidiasis (17%) in the patients from risk groups, Syphilis, chlamydia and trichomoniasis were detected in 11-14 %. Gonorrhea, genital herpes, mycoplasmosis were observed in 5.8-6.6 %. Among the general population syphilis was detected in 4.1% of patients with an STI, gonorrhea in 5.6 %, chlamydia in 17.1 %, trichomoniasis in 52 %, and mycoplasmosis in 21.2 % of cases.
Conclusion: It’s necessary to use special approaches for the medical care (active screening, treatment and preventive maintenance) of patients from risk groups which differs to the care for the general population.

Keywords: HIV, STI

[PP-64]

**Indicator conditions in HIV diagnosis and desensitization for the treatment of neurosyphilis: A case report**

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Background: The aim of this case report is to emphasize the significance of indicator conditions in HIV diagnosis, and to review penicillin desensitization process in a penicillin hypersensitive patient.

Case: A 49-year-old male patient with chronic hepatitis B presented with painful and pruritic disseminated lesions. Physical examination revealed vesicular, ulcerative and crusted lesions on the right scapular, axillary, bilateral inguinal areas as well as the face and the scalp. White blood cell count was normal, except for slight monocytosis and C-reactive protein was mildly elevated. The patient was diagnosed with disseminated zoster and acyclovir 10 mg/kg x 3 was initiated with a good clinical response to treatment.

Serologic examination revealed that the patient was HIV and syphilis positive. CD4 count was 220 cells/mm³ and the viral load was not available. The patient complained of severe headache. Biochemical examination of the cerebrospinal fluid (CSF) revealed increased pressure, Pandy reaction 1+, white cell count 30 cells/mL, protein 47 mg/dL and glucose 60 mg/dL (concurrent blood glucose 113 mg/dL). Cranial computed tomography scan was not conclusive. CSF VDRL was positive with a titer of 1:2; RPR was not available. Serum VDRL, RPR and Treponema pallidum total antibody EIA tests were positive. CSF nucleic acid amplification tests for cytomegalovirus, herpes simplex virus, Mycobacterium tuberculosis, enteroviruses and JC virus were negative and CSF culture did not yield any bacterial pathogen. Since the patient had a history of penicillin hypersensitivity 30 years ago, desensitization was planned and was performed without any complication. The patient was successfully treated with crystalline penicillin 4 million units six times a day for 21 days.

Conclusion: HIV infected patients may have multiple infections. Patients with indicator conditions such as syphilis should be tested for HIV. Desensitization is a difficult but necessary procedure for the successful treatment of neurosyphilis cases with penicillin hypersensitivity.

Keywords: HIV infection, neurosyphilis

[PP-65]

**A difficult diagnosis: central nervous system lymphoma in an HIV positive patient**

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Background: To report that opportunistic disease diagnosis may be difficult and require sophisticated investigations.

Case: A 31-year old male patient was diagnosed with HIV during routine premarital screening. He was asymptomatic with a very low CD4 count (3 cells/mm³) and a high viral load (53,068 copies/mL). Treatment with tenofovir disoproxil fumarate/emtricitabin plus lopinavir/ritonavir was initiated. One month later, he presented with severe headache and difficulty in speaking and comprehension. Cranial magnetic resonance imaging (MRI) was undertaken, and during the procedure, he had a 20-minute long seizure with tonic and clonic convulsions. Cranial MRI revealed two lesions: one 1.2 cm in the left temporal region and the other 0.8 cm in the right occipital region, with peripheral contrast enhancement and signal changes compatible with oedema. The result was reported as Toxoplasma or Tuberculoma. Trimethoprim 5 mg/kg TID with sulphamethoxazole (TM-SMX) was started. Lumbar puncture was inconclusive. Cerebrospinal fluid examination did not reveal any pathogen and serum anti-Toxoplasma gondii antibody was negative. While the patient’s symptoms did not ease with two weeks of TM-SMX treatment, he responded to anti-oedema treatment. Finally, the patient underwent brain biopsy, which revealed a large diffuse B cell lymphoma of the central nervous system (EBV positive). He received two sessions of chemotherapy and 20 days of radiotherapy and remains in remission.

Conclusion: Sophisticated diagnostic methods are required in HIV patients with inconclusive conventional diagnostic tests.

Keywords: Central nervous system lymphoma, AIDS
Non Venereal Lesions of The Genital area
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Background: many lesions of the genital area are misdiagnosed as venereal diseases. this fact may explain the
delayed diagnosis of some diseases.

Materials-Methods: we reviewed all the genital lesions seen in the department of dermatology of the military
hospital of Tunis during the last decade (2002-2011).
We pointed out the non venereal lesions which were classified according to their aetiology: infectious,
inflammatory, drug reactions, allergy and tumoral.

Results: One hundred ninety seven cases of genital lesions were collected and analyzed. One hundred three cases
had venereal affection and 94 cases had non venereal disease.

Conclusion: The goal of this study is to make practitioners aware about the different types of genital lesions which
can be mistaken for a venereal disease. We hope that this will reduce delays in diagnosis and speed up treatment.
Keywords: genital ulcers; squamous cell carcinoma

An outline of the history of the treatment of veneral diseases
Barbara Anna Gasior Chrzan
Barbara Anna Gasior-Chrzan, Dept. of Dermatology, Institute of Clinical Medicine, University of Tromsoe, Norway

It is not quite clear when veneral diseases came to Europe. Since the Columbus trip to America in 1492 syphilis
began to spread widely and became a major epidemiological and social problem. The effective treatment for
veneral diseases was not known in that time. Various curious methods were used. Treatment was often more
dangerous than the disease itself. An outline of the history of the treatment of veneral diseases will be presented.
Keywords: venera history

Profuse Genital Molluscum Contagiosum: A case report
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department of Dermatology - Military Hospital of Tunis - Tunis - Tunisia

Background: Molluscum contagiosum (MC) is a common viral skin infection caused by the molluscipox virus. It
affects most commonly children, but also sexually active persons. In adults, MC is regarded as a sexually
transmitted infection and it’s frequently associated with immunosuppressive conditions especially AIDS.
Nevertheless, certain healthy persons can be affected.

Materials-Methods: A healthy 25-year-old soldier presented with a 6 months history of numerous pearly, waxy and
dome shaped papules of about 5mm in diameter with central umbilication, scattered over the genital area. The
patient had a history of unprotected sex and multiple sexual partners.
The venereal disease research laboratory tests including syphilis, HIV and B viral hepatitis were negative. We
retained the diagnosis of genital MC and the patient was treated by cryotherapy.

Results: Unlike children in which MC can be localized almost anywhere on the body, the genital area is
characteristically involved in adults and is usually due to a sexually transmitted infection. Extragential appearance,
as well as giant and agminate varieties, which are rare, are more typically seen in persons with
immunosuppressive condition. Clinically, the presentation doesn’t differ from children’s MC. Spontaneously, lesions
may take six months to five years to disappear; therefore, some experts recommend treatment of anogenital
lesions to reduce the risk of sexual transmission, prevent autoinoculation, and increase quality of life. A variety of
treatments are available, however, few have strong evidence to support their use. The most commonly used
treatments are cryotherapy, curettage and carbon dioxide laser.
Conclusion: A variety of treatments of MC are available, however, few have strong evidence to support their use.
The most commonly used treatments are cryotherapy, curettage and carbon dioxide laser.
Keywords: Mollusca contagiosa

The knowledge, attitude and behavior of HIV/AIDS patients’ family toward their patients
before and after counseling
Behnam Honarvar
Health Policy Research Center (HPRC), Shiraz University of Medical Sciences, Shiraz, Iran
Background:
Acquired immunodeficiency may impose considerable consequences on patients’ family behaviors toward them. The objective of the present study was to investigate whether a counseling program at Behavioral Counseling Center in the city of Shiraz, Iran could change the attitude, knowledge and behavior of patients’ family members.

Methods:
125 HIV/AIDS patients’ family members were interviewed, using a valid and reliable questionnaire before and after performing counseling sessions at Behavioral Counseling Center. The findings were analyzed using nonparametric tests.

Results:
The age of the participants was 40±13 years. Sixty five percent were female, 63% married and 79% educated. Forty four percent of participants had spousal relations hips with their patients. Their knowledge about the main routes of HIV transmission were 9.76 ± 2.59 and 10.64±0.88 before and after counseling, respectively (P=0.028). Supportive behaviors of families toward their patients reached to 79% after counseling compared with 44 % before that (P=0.004). Belief to isolate the patients and the practice of this approach at home dropped from 71% to 15% and from 29% to 7% after counseling, respectively (P<0.05). In 30% of participants fear of getting HIV from patients was not changed by counseling, and 24% of patients’ spouses did report to avoid protected sex with their HIV infected husbands even after taking part in the counseling program (P>0.05).

Conclusion:
Ongoing counseling for HIV/AIDS patients’ families at Behavioral Counseling Center of Shiraz did advance their knowledge about AIDS and improved their attitude and behavior toward their patients. However, the counseling program did not show remarkable success in some aspects such as the removal of fear about HIV spread in the family or the change of the patients’ wives attitude to have protected sex with their HIV infected husbands.

Keywords: HIV/ AIDS family, counseling

Lipid abnormalities in a Turkish cohort of HIV positive patients
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³Department of Internal Medicine, Faculty of Medicine, Ege University, İzmir, TURKEY

Background: Hyperlipidemia is among major complications of antiretroviral treatment. Lipid abnormalities and consequently cardiovascular diseases are common among the general population in Turkey due to poor lifestyles. The aim of this study was to investigate the cardiovascular conditions in HIV positive patients at baseline and the effect of antiretroviral treatment on cardiovascular disease risk.

Materials-Methods: The study included 86 HIV positive patients who were followed-up in the Department of Clinical Microbiology and Infectious Diseases, Faculty of Medicine, Ege University. The medical records of the patients were reviewed retrospectively and blood pressure, smoking and alcohol consumption, serum total cholesterol (TC), triglyceride (TG), high-density lipoprotein (HDL), low-density lipoprotein (LDL), and glucose levels at baseline and at the last two visits were recorded. Framingham risk scores at baseline and at the last two visits were calculated for each patient. Electrocardiograms at the last visit were were reviewed by a cardiologist. The baseline parameters were compared with those recorded at the last two visits. The amount changes in TC, TG, HDL and LDL levels compared to baseline were compared using the McNemar-Bowker and McNemar tests. The changes in the same values according to ART use was analyzed with Pearson’s Chi-Square test. The overall mean values of TC, TG, HDL and LDL at baseline and the last two visits were compared with Independent-samples T-test and Paired samples T-test.

Results: The study included 19 female (22.1%) and 67 male (77.9%) patients. At baseline, 65 patients (75.6%) were naive, 13 cases (15.1%) were already on antiretroviral treatment and 8 patients (9.3%) had started but stopped treatment. At the last visit, 73 patients (84.9%) were on treatment. The changes in biochemical parameters at the last two visits compared to baseline are shown in Table 1.

Conclusion: Antiretroviral treatment has adverse effects on the lipid profiles of HIV positive patients; patients should be closely monitored for lifestyle interventions and lipid lowering agents

Keywords: HIV infection, lipid abnormalities
<table>
<thead>
<tr>
<th></th>
<th>Baseline mean (mg/dL)</th>
<th>Mean of the last two visits (mg/dL)</th>
<th>p value (Paired samples t-test)</th>
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<tr>
<td><strong>Overall</strong></td>
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<tr>
<td>Total cholesterol</td>
<td>180,15</td>
<td>202,60</td>
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<tr>
<td>Low density lipoprotein</td>
<td>106,89</td>
<td>123,80</td>
<td>p&lt;0.001</td>
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<td>37,66</td>
<td>42,41</td>
<td>p&lt;0.001</td>
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<tr>
<td>Triglyceride</td>
<td>211,25</td>
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<td><strong>Antiretroviral initiated patients</strong></td>
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<tr>
<td>Total cholesterol</td>
<td>173,08</td>
<td>205,47</td>
<td>p&lt;0.01</td>
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<tr>
<td>Low density lipoprotein</td>
<td>105,54</td>
<td>126,83</td>
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