



# 9th Annual Conference of the Children's HIV Association (CHIVA)

Friday 22 May 2015

Stamford Court  
University of Leicester



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Badges must be worn at all times in order to gain access to the lecture theatre, exhibition and dining areas

## Venues and locations

**All locations are at Stamford Court, University of Leicester unless otherwise stated**

Registration	Stamford Court <i>Side entrance</i>
Lecture Theatre	Gilbert Murray
Catering, Exhibition & Poster Presentations	Hospitality Lounge
CHIVA Dinner	Chutney Ivy

## Executive Committee

Dr Steven Welch	<i>Chair</i>	Birmingham Heartlands Hospital
Dr Anton Tan	<i>Honorary Treasurer</i>	North Manchester General Hospital
Dr Amanda Williams	<i>Honorary Secretary</i>	North West London Hospitals NHS Trust
Dr Srini Bandi	<i>Conferences Chair</i>	Leicester Royal Infirmary
Miss Michelle Overton	<i>Local Host</i>	University of Leicester
Dr Alasdair Bamford		St Thomas' Hospital, London
Dr Jolanta Bernatoniene		Bristol Royal Hospital for Children
Dr Tomás Campbell		Newham Psychological Services, London
Dr Katja Doerholt		St George's Hospital, London
Miss Emily Hamblin		National Children's Bureau
Mrs Ailsa Pickering		Royal Victoria Infirmary, Newcastle
Dr Fiona Thompson		Northampton General Hospital

**6 CPD Credits**

RCPCH accredited

## Introduction

### *Dear Colleague*

We are pleased to announce the **9th Annual Conference of the Children's HIV Association**. The conference is to be held at the University of Leicester and we are pleased that Michelle Overton has been able to accept our invitation to be our Local Host at the conference.



We would like to thank all our speakers who have agreed to present their work at this conference. I am certain that their experience and expertise will benefit all who are in attendance.

We are excited that the Annual Conference programme in 2015 will include two sessions focusing on Sexual Health Training. In addition, there will be lectures looking at treatment guidelines, talking to young people about HIV, and psychological standards. One of the highlights of the conference will be the CHIVA Youth Committee session, which will provide an update on the summer camp and the work of the CHIVA projects team.

We feel sure that these sessions will prove to be very topical as well as raise some interesting points to be debated and discussed. The CHIVA AGM will be held prior to lunch and I would encourage all members to attend this meeting as it provides a forum to present any points which they may have to the CHIVA officers and members of the Executive Committee.

We hope very much that you will all enjoy the conference and find it of relevance to both your educational and your practical needs.

Best wishes

**Dr Steven Welch**

*Chair*  
 Children's HIV Association

# Programme

## 9th Annual Conference of the Children's HIV Association (CHIVA)

Friday 22 May, 2015

Stamford Court · University of Leicester

CONFERENCE LOCAL HOST

Michelle Overton *University of Leicester*

0845–1600 Registration and exhibition open at Stamford Court

0900–0910 **Welcome** *by the Chair of the Children's HIV Association (CHIVA)*  
 Dr Steven Welch *Birmingham Heartlands Hospital*

**Welcome** *from the Conference Chair*  
 Dr Srin Bandi *Leicester Royal Infirmary*

**Welcome** *from the CHIVA Youth Committee*

### **CHIVA Sexual Health Training Session 1**

*Chairs:* Dr Alasdair Bamford *St Thomas' Hospital, London*  
 Dr Srin Bandi *Leicester Royal Infirmary*

0910–0940 **Adolescent sexual health and the media**  
 Dr Sophie Khadr *UCL Institute of Child Health, London*

0940–1005 **Top tips on taking a history**  
 Dr Aseel Hegazi *St George's Hospital, London*

1005–1040 **Update on female genital mutilation (FGM)**  
 Ms Hoda Ali *Ealing Hospital, London*

1040–1100 Morning coffee

### **CHIVA Sexual Health Training Session 2**

*Chairs:* Dr Anton Tan *North Manchester General Hospital*  
 Dr Amanda Williams *North West London Hospitals NHS Trust*

1100–1135 **Update on sexually transmitted infections (STIs)**  
 Dr Selena Singh *St Thomas' Hospital, London*

1135–1210 **Safeguarding, exploitation and sexual assault**  
 Dr Annette Langseth *The Haven, London*

1210–1250 **Let's talk about sex**  
 Ms Magda Conway and Ms Amanda Ely *CHIVA Projects*

1250–1310 **CHIVA AGM**

1250–1350 Lunch and Posters

# Programme

## Oral Research Presentations Session

*Chairs:* Dr Jolanta Bernatoniene *Bristol Royal Hospital for Children*  
 Dr Fiona Thompson *Northampton General Hospital*

- 1350–1400 **Abstract O1**  
 Neurocognitive function in perinatally HIV-infected young people and HIV-negative siblings in England  
 Dr Ali Judd *MRC Clinical Trials Unit at UCL, London*
- 1400–1410 **Abstract O2**  
 Teachers' awareness of HIV and the needs of children affected by HIV  
 Dr Steven Welch *Birmingham Heartlands Hospital*
- 1410–1420 **Abstract O3**  
 Malignancy in HIV-positive young people  
 Dr Colin Ball *King's College Hospital, London*
- 1420–1430 **Abstract O4**  
 Maternal autonomy vs infant advocacy: when parents decline HIV testing  
 Dr Tom Holiday *North West London Hospitals NHS Trust*

## Janssen Invited Lecture

*Chairs:* Dr Jolanta Bernatoniene *Bristol Royal Hospital for Children*  
 Dr Fiona Thompson *Northampton General Hospital*

- 1430–1500 **Treatment Guidelines – what's new?**  
 Dr Alasdair Bamford *St Thomas' Hospital, London*

## CHIVA Plenary Session 1

*Chairs:* Dr Katja Doerholt *St George's Healthcare NHS Trust*  
 Mrs Ailsa Pickering *Royal Victoria Infirmary, Newcastle*

- 1500–1520 **Talking to young people about HIV**  
 Mrs Sheila Donaghy *St George's Hospital, London*
- 1520–1540 **CHIVA Projects and Youth Committee Update**  
 Ms Magda Conway *CHIVA Projects*

1540–1600 Afternoon tea

## CHIVA Plenary Session 2

*Chairs:* Dr Tomás Campbell *Newham Psychological Services*  
 Miss Emily Hamblin *National Children's Bureau*

- 1600–1630 **Life after CHIPS: CHIPS and AALPHI update**  
 Ms Marthe Le Prevost *MRC Clinical Trials Unit at UCL, London*
- 1630–1700 **Psychology services in paediatric HIV: making connections or filling the gaps?**  
 Ms Debbie Levitt *Royal Free Hospital, London*  
 Mrs Diane Melvin *Imperial College Healthcare NHS Trust, London*
- 1700–1705 **CHIVA Awards Ceremony and Close**  
 Dr Amanda Williams *Chair of the Children's HIV Association (CHIVA)*

## Conference Information

### Conference venue

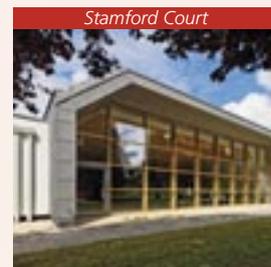
#### University of Leicester

Stamford Court · Manor Road · Leicester LE2 2LH

Telephone: 0116 233 1680

[www.leicesterconferences.co.uk](http://www.leicesterconferences.co.uk)

Stamford Court is a premier conference centre set in the heart of landscaped Edwardian gardens. The venue has purpose-built meeting and conference facilities and CHIVA is delighted to be able to use these for our annual conference in 2015. Ample parking is available for delegates on a complimentary basis. The venue is a short taxi ride from Leicester mainline train station.



### Registration

The registration fee includes access to all scientific sessions, the exhibition area, lunch and refreshments throughout the day.

### Delegate badges

Badges must be worn at all times to gain access to the lecture theatre, dining and exhibition areas.

### Continuing Professional Development (CPD)

The Royal College of Paediatrics and Child Health (RCPCH) has approved this event for CPD credits, in accordance with the current RCPCH CPD Guidelines. The entire conference has been allocated 6 CPD credits. Medical staff in career grade posts who are enrolled with one of the Royal Medical Colleges for Continuing Professional Development will be entitled to receive CPD credits at the rate of one CPD credit per conference hour (exclusive of travel, refreshments, pharmaceutical-supported sessions and social events). Please be advised that the attendance list of the conference will be forwarded to the Royal College of Paediatrics and Child Health upon request.

### CHIVA Dinner

#### Chutney Ivy Restaurant & Bar

Leicester LE1 1TR

Telephone: 0116 251 1889

[www.chutneyivy.com](http://www.chutneyivy.com)

A CHIVA Dinner has been organised at 2000 for the evening of **Thursday 21 May** at the Chutney Ivy Restaurant in Leicester.

The evening will begin with a short drinks reception, and then dinner and entertainment. It is anticipated that the evening will give delegates the opportunity to socialise before the conference and to be *in situ* for the start of the conference programme the following morning.



#### Programme of Events

2000–2030	Drinks Reception
2030–2200	Dinner
2200–0000	Music and dancing

### Accommodation

Please note that the registration fee does not include accommodation. If you have not already done so, you can arrange accommodation by contacting the conference headquarter hotel, the **Ramada Encore Leicester City Centre**, directly.

# Conference Information

## Posters

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All poster boards will be numbered and poster presenters should use the board displaying the number allocated to their poster. All poster presenters should be available by their poster for the final 30 minutes of the lunchtime session for potential discussion with delegates and poster judges. The poster judges will review the posters and subsequently select the winner of the CHIVA/Mediscript Best Poster Presentation Award which will be announced at the Prizes and Awards Ceremony at 1700.

## Oral research presentations

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Oral research presenters are reminded to ensure they bring their oral research presentation slides to the conference in addition to sending them to the Conference Organisers in advance. Any slides must be passed to the audio-visual technicians in good time for their session. The CHIVA Best Oral Presentation prize will be awarded at the Prizes and Awards Ceremony at 1700.

## Scholarships

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### CHIVA Community Registration:

CHIVA Community Registrations have been awarded to four UK-based community registrants to assist them to attend the conference. For those applicants selected, all registration fees are paid by CHIVA.

### CHIVA Registration Scholarships

These have been made available to assist delegates who have financial constraints preventing them from attending the conference. Up to five awards have been made available, to cover the conference registration fee.

## Awards

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### CHIVA Best Oral Research Presentation Award

CHIVA will make an award for the best oral research presentation at the 9th Annual Conference of CHIVA. The presentation of the award will be made during the Awards Ceremony at 1700 in the lecture theatre. It is requested that all presenters of oral research presentations be available in the lecture theatre at this time in case their presentation is selected, enabling them to collect their award in person.

### CHIVA/Mediscript Best Poster Research Presentation Award

In recognition of the collaboration between Mediscript and CHIVA over the years, Mediscript is supporting an award for the best poster presentation at the 9th Annual Conference of CHIVA. The presentation of the award will be made during the Awards Ceremony at 1700 in the lecture theatre.

It is requested that all poster presenters be available in the lecture theatre at this time in case their presentation is selected, enabling them to collect their award in person.

## Exhibition

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The exhibition represents an integral element of the conference, providing participants with an excellent platform for networking as well as an opportunity to gain further insight into cutting-edge technology, the latest healthcare solutions and services.

## Plenary Speaker Biographies

**Hoda Ali** has undergone FGM. At age seven she was cut in Somalia. By age 12 she experienced her first of many acute hospitalisations due to complications from FGM; stagnant infected menses had caused pelvic inflammatory disease. Hoda had been unable to menstruate as a result of the small hole left after FGM. After many surgical procedures in Somalia, Djibouti and Italy, she first started menstruating at age 17. Medical complications from FGM continued to impact on her life: infections, adhesions, subfertility, IVF, miscarriage and finally the medical advice that the risk to internal organs was too great, and that IVF could no longer be pursued. Hoda is a survivor of FGM who voices the pain, comforts the victims and campaigns to protect the girls. Hoda trusts in life and a future, and gives hope to FGM survivors.

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**Alasdair Bamford** is a doctor specialising in Paediatric Infectious Diseases and Immunology currently working at the Evelina London Children's Hospital. He is joint first author on the 2015 PENTA Treatment Guidelines, a CHIVA Trustee and Chair of the CHIVA Guidelines Subcommittee. He has recently completed his PhD in Paediatric HIV Immunology, which was a collaborative project including St Mary's Hospital, Imperial College London and the Institute of Child Health.

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**Srini Bandi** is a Consultant Paediatrician with an interest in Paediatric Infectious Disease at Leicester Royal Infirmary. He is the lead for Paediatric HIV and TB Services in Leicester. Srini is the Lead Clinician for East Midlands Paediatric HIV Network. He has been a member of the CHIVA Executive Committee since 2012 and is Chair of the Conferences Subcommittee.

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**Magda Conway** has worked with children, young people and families living with HIV for the last 12 years. For five of these she was the UK Policy Lead for this group, producing research, guidance and advocacy. She is now a freelance consultant, primarily working for the Children's HIV Association, managing a portfolio of work from direct support with children and families, through to writing guidance and training programmes. Prior to this, Magda worked with and looked after children, ran community development projects, and worked in HIV/sexual health promotion and teenage pregnancy reduction.

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**Sheila Donaghy** has worked in Paediatric HIV for the last 19 years at St George's Hospital, London. Her interests are around adherence to medication, and in talking to children about their HIV. Sheila has jointly written the CHIVA guidance on talking to children about HIV with Diane Melvin.

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**Aseel Hegazi** is a Consultant in HIV Medicine and Sexual Health at St George's University Hospital in London.

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**Sophie Khadr** is a Consultant Paediatrician and Clinical Lead for the London Sexual Assault Referral Centres, the Havens, at King's College Hospital NHS Foundation Trust.

## Plenary Speaker Biographies

**Annette Langseth** is a Paediatrician with an interest in Adolescent Medicine. During her paediatric training, she has worked as a Sexual Offences Examiner at one of the three London Havens. The Havens are Sexual Assault Referral Centres. At the Havens Annette sees children, adolescents and adults who have been sexually assaulted. She and her colleagues provide advice, forensic examination and follow-up care including counselling, tests and treatment.

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**Marthe Le Prevost** is a Senior Research Nurse at the MRC Clinical Trials Unit at UCL. She has over 15 years' academic and clinical experience working in Paediatric HIV. She is responsible for the design, co-ordination and delivery of the Adolescent and Adults Living with Perinatal HIV Cohort (AALPHI). Marthe has been awarded an MRC studentship to carry out her PhD at the London School of Hygiene and Tropical Medicine where she is carrying out a mixed-methods study looking at the experiences and outcomes of perinatally HIV-infected young people transitioning to adult care.

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**Debbie Levitt** is a Chartered Psychologist working in the Medical Specialties Directorate at the Royal Free London NHS Foundation Trust. She has specialised in working with children and families for over 25 years. Debbie currently works across the lifespan and is Lead in the Paediatric and Antenatal HIV Psychology Service. She is an active member of the UK Paediatric HIV Psychology Group (PHP) and is on the executive of the HYPNet (HIV Young Persons Network) representing PHP. Debbie has a long involvement in Primary Care and runs a Specialist Psychology Service for doctors and medical students working in the health service. She is also involved in the supervision and training of trainee psychologists.

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**Diane Melvin** is a Clinical Psychologist who recently retired from working with the Family Clinic team at St Mary's Hospital in London. This was a post held for over 20 years. Her lecture, entitled Psychology services in paediatric HIV: making connections or filling the gaps?, is being presented on behalf of the Paediatric HIV Psychology (PHP) group: a forum in which psychologists working within the UK and Ireland with children, young people and their families living with HIV can share ideas and practice. The standards to be presented have been produced by the PHP to highlight key aspects of care which psychology can provide to Paediatric HIV using a framework developed in other chronic childhood conditions.

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**Selena Singh** is a final year SpR in GU Medicine and HIV at Guy's & St Thomas' Hospitals. Throughout her training she has been interested in the sexual and reproductive health of adolescents and young adults. She has also worked in the HIV Young Persons' Clinic at St Thomas'. Selena is a member of HYPNet and has participated in audits with this group which have been presented at both BHIVA and CHIVA. She is the SpR representative for the BASHH Adolescent Sexual Interest Group.

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**Steven Welch** is a Consultant in Paediatric HIV and Infectious Diseases at Heartlands Hospital, Birmingham and has been Chair of CHIVA since 2011. Steven is a member of the PENTA Steering Committee, and is jointly in charge of PENTA's training activities. His current priority is securing the future of children's HIV services under the new NHS commissioning arrangements.

## O1

### Neurocognitive function in perinatally HIV-infected young people and HIV-negative siblings in England

A Judd<sup>1</sup>, A Nunn<sup>1</sup>, M Le Prevost<sup>1</sup>, K Sturgeon<sup>1</sup>, DM Gibb<sup>1</sup>, A Arenas-Pinto<sup>1</sup>, D Melvin<sup>2</sup>, C Foster<sup>2</sup> and A Winston<sup>2</sup>

<sup>1</sup>MRC Clinical Trials Unit at University College London, London, UK; <sup>2</sup>Imperial College London, London, UK

**Background:** Perinatally HIV-infected (PHIV+) children, particularly those with a CDC C diagnosis, perform less well than controls in some neurocognitive tasks, but studies often have small sample sizes and unsuitable control groups. Little is known about neurocognitive function of PHIV+ young people.

**Methods:** We analysed baseline data from the Adolescents & Adults Living with Perinatal HIV (AALPHI) cohort of 270 PHIV+ aged 13–21 and 80 HIV- sibling controls aged 13–23 in England. Participants completed 12 tests (Cogstate ADHD, Color Trails 1&2, Wechsler Adult Intelligence Scale 4th ed coding, pegboard) covering 6 domains. We calculated z-scores by domain, a summary z-score (NPZ-6) across the 6 domains, and the proportion <1 standard deviation (SD) below the population mean in ≥2 domains (Frascati criteria). T-tests/ANOVA compared means and  $\chi^2$  proportions.

**Results:** 160(59%) and 55(69%) of PHIV+ and HIV- were female, 225(83%) and 57(71%) were black African, and median age was 16[IQR 15,18] and 16[14,18] years respectively. In PHIV+, 218(81%) were on ART, and 68(25%) had a CDC C diagnosis. In both PHIV+ and HIV-, mean z-scores were >0 for executive function, information processing speed and attention/concentration, and <0 for learning, memory and fine motor skills, though all were within +/-1SD of normative scores (Table). PHIV+ z-scores were higher for information processing speed ( $p=0.02$ ) and worse on learning ( $p=0.006$ ) and memory ( $p=0.016$ ) than HIV-. For learning and memory, scores were particularly low in PHIV+ with CDC C ( $p=0.017$ ,  $p<0.001$  respectively, data not shown). Mean(SD) NPZ-6 scores were 0.23(0.68) in PHIV+ and 0.18(0.5) in HIV- ( $p=0.543$ ), and 67(24.8%) of PHIV+ v. 19(23.8%) of HIV- were <1SD below the population mean in ≥2 domains ( $p=0.846$ ). Further analyses will investigate potential predictors.

Table: Scores by domain in PHIV+ and HIV-

Domain	z-score mean(SD)		p
	PHIV+	HIV-	
Executive function	0.96(1.58)	0.65(0.93)	0.081
Info. processing speed	0.96(1.38)	0.56(1.21)	0.019
Attention/concentration	0.56(1.14)	0.63(1.17)	0.657
Learning	-0.44(0.89)	-0.13(0.92)	0.006
Memory	-0.5(0.84)	-0.24(0.81)	0.016
Fine motor skills	-0.17(1.76)	-0.38(1.13)	0.321

**Conclusions:** Global cognitive scores were similar in PHIV+ and HIV- but concealed differences in individual cognitive domains. PHIV+ z-scores were lower than HIV- in learning and memory tasks, and poorer in those with CDC C, but indicated only mild difficulties. The true impact on day-to-day life is unclear and needs further investigation.

## O3

### Malignancy in HIV-positive young people

S Herbert<sup>1</sup>, A Barbour<sup>2</sup>, A Judd<sup>3</sup>, E Jungmann<sup>4</sup> and C Foster<sup>5</sup>

<sup>1</sup>Derby Hospitals NHS Foundation Trust, Derby, UK; <sup>2</sup>St George's Hospital, London, UK; <sup>3</sup>MRC Clinical Trials Unit at University College London, London, UK; <sup>4</sup>Mortimer Market Centre, London, UK; <sup>5</sup>Imperial College Healthcare NHS Trust, London, UK

**Background:** Malignancies (AIDS and non-AIDS defining) occur at higher rates in adults with HIV but data is limited in young people. As children with HIV survive into adulthood, the length of immunosuppression raises concerns regarding malignancy risk, and presentation may differ from adults. We identified malignancies in HIV infected young people through the HIV Young People's NETWORK (HYPNET) and the Collaborative HIV Paediatric Study (CHIPS), to identify common features enabling future management and raise awareness in health professionals.

**Methods:** Adult and paediatric HYPNET members and the CHIPS database identified HIV positive young people aged 13–24 years with a malignancy diagnosed between 2000 and 2014. Anonymised data on demographics, malignancies, CD4, VL, antiretroviral therapy (ART), adherence outcomes (HIV and malignancy) and offer of sperm/egg storage were collected.

**Results:** 15/70 centres reported 31 cases. CHIPS identified a further 8 cases. Of these 39, 15(38%) had acquired HIV sexually; median age 24 [IQR 21.5,24.0]yrs; 11 were Kaposi's sarcoma (KS) and 4 lymphoma; Further data was not available from contributing centres. 22 acquired HIV perinatally (PaHIV); 17(77%) male, median age at malignancy diagnosis 17 [13.5,18.9]yrs; 16(73%) were lymphoma (5 Hodgkins), 3 KS, 1 disseminated adenocarcinoma, 1 astrocytoma, 1 hepatocellular carcinoma (HBV coinfectd). In 2 lymphoma cases route of transmission was unknown. For PaHIV at malignancy diagnosis; median CD4 count was 423 [289.8,592.5], nadir CD4 200 [132,389]. 11/19 with available data had a detectable VL. Median number of prior ART regimens was 2 [2,5], with 7/14 (50%) with data having at least 2 class resistance. 9/20 had an AIDS diagnosis prior to the malignancy diagnosis. Median time from presentation to diagnosis was 8 weeks [4,10], 9/14 had a definite or possible delay in diagnosis. 2/20 patients who received chemotherapy had egg/sperm storage. Median follow-up post malignancy was 50 [18.8,88.5]. Malignancy outcomes: 9/14 achieved remission at 1 year, 3 had active disease. 2 died. 9/20 had >5 year current survival. 13/14 patients were undetectable on ART (6 no data) at last follow-up.

**Conclusion:** Lymphoma was the predominant malignancy in PaHIV, while KS predominated in those with sexually acquired HIV. VL suppression prior to malignancy diagnosis was poor, but malignancy and HIV outcomes appear good. Adherence support and prompt investigation of symptoms is paramount in this group.

## O2

### Teachers' awareness of HIV and the needs of children affected by HIV

S Welch<sup>1</sup>, M Conway<sup>2</sup>, S Nicholson<sup>3</sup> and J Forni<sup>3</sup>

<sup>1</sup>CHIVA and Heartlands Hospital, Birmingham, UK; <sup>2</sup>CHIVA, Bristol, UK; <sup>3</sup>ViiV Healthcare, London, UK

**Background:** Stigma and discrimination continue to be a real issue for people living with HIV (PLWH). This is particular pertinent to children and young people where school environments can be challenging. Sensitivity of teachers towards the issues faced by young PLWH is essential. Lack of awareness of such issues can lead to inadvertent problems and significant personal distress for PLWH and their families. Pupils have been excluded from schools after non-consented disclosure of their HIV status.

This study was designed to investigate UK secondary school teachers' awareness of HIV and understanding of the needs of children affected by HIV.

**Methods:** Five hundred secondary school teachers in the UK participated in a 15-minute online survey between 26 September and 20 October 2014. They were questioned about their knowledge about HIV transmission, confidentiality considerations, their experience of dealing with students with or affected by HIV, available educational resources and school policy regarding HIV and pupils.

**Results:** Knowledge regarding HIV transmission routes was poor, with over half of teachers (52%) believing that HIV can be transmitted through sharing a razor or via spitting or biting. Nearly half of all teachers (47%) believed that children/young people acquire HIV through sex or injecting drug use (IVDU). A third of teachers (33%) surveyed were either unsure about confidentiality requirements for HIV or believed that there are none. Fifty eight percent of respondents were not aware of any guidance or materials for teachers about how to manage the needs of students with or affected by HIV. However, three-quarters (75%) of the surveyed teachers believed that it was the collective responsibility of all school staff members to look after the pastoral needs of students with or affected by HIV.

**Conclusion:** This research demonstrates significant knowledge gaps in HIV transmission and confidentiality requirements in secondary school age groups. This ambiguity can lead to inadvertent problems such as unauthorised HIV disclosure. Encouragingly most teachers believe that they are responsible for providing pastoral care. There is therefore an opportunity to improve teachers' knowledge and confidence to effectively support students with or affected by HIV.

This study was sponsored by ViiV Healthcare and carried out by Ipsos MORI

## O4

### Maternal autonomy vs infant advocacy: when parents decline HIV testing.

T Holiday, A Williams and B Williams

North West London Healthcare NHS Trust, UK

We examine the case of a child born in another centre in England to an undiagnosed HIV positive mother. The child was known to paediatric services from infancy for management of an unrelated chronic disease and thought to have no additional co-morbidities. At the age of five, a series of three admissions over the course of three months with recurrent pneumonia prompted investigation for immunodeficiency, including an HIV test. At the point of diagnosis, the patient had WHO stage three disease and a CD4 count of  $20 \times 10^6$  per litre (2%). The mother had previously refused antenatal HIV testing.

National data suggest that up to two-thirds of cases of vertically acquired HIV transmission occur in infants of women who are undiagnosed at delivery; half of whom have refused antenatal HIV testing. The 2014 British HIV Association guidelines for management of HIV in pregnancy state that women who decline the initial offer of HIV testing should be re-offered screening at 28 weeks gestation. The Children's HIV Association guidelines states that where babies are born to mothers who have declined all HIV testing in pregnancy, antibody testing of the infant as soon as possible after birth is strongly recommended with full safeguarding considerations, in the best interests of the child. It should be noted that antibody testing of the child is de facto testing of the mother and it is not clear what judgement what would made in the event of an application for a court order for testing of the child.

If a mother cannot be persuaded to test for HIV, her right to autonomy clashes with the ethical principles of beneficence/non-maleficence for the baby. It is clearly in a child's best interests to receive interventions to reduce the chance of being HIV uninfected. Members of the multi-disciplinary team often have opposing views, as some will support the right of the mother to decline testing. However, many paediatricians, who must always place the welfare of the child as paramount, feel that in a high-risk scenario compulsory testing of the child post-delivery, even against the parents' wishes, should be considered in the best interests of the child.

We use this example as a platform to discuss issues surrounding refusal of HIV testing in pregnancy. We outline the rights of both parents and children with regard to HIV testing and look at legal precedent and frameworks in place to protect the at-risk child.

P1

**Efavirenz toxicity in paediatrics: a single centre cohort**

E Wynberg<sup>1</sup>, S Walters<sup>2</sup>, T Poola<sup>2</sup> and C Foster<sup>2</sup>

<sup>1</sup>Imperial College, London, UK;

<sup>2</sup>Imperial College Healthcare NHS Trust, London, UK

**Background:** The adverse effects of efavirenz (EFV) in adults are well documented, however less data are available for children. EFV is the preferred NNRTI in WHO Guidelines from 3 years, with adult dosing of 600 mg from 10 years or 40kg. However optimal EFV dosing in adults is currently being questioned, with 400 mg providing suppressive antiretroviral therapy (ART) in recent studies. We therefore audited EFV use in a single-centre paediatric cohort.

**Methods:** Retrospective case note audit of children and adolescents commencing EFV-based ART aged 3 to 17 years, between 1998 and 2014. Patients who transferred care were excluded. Anonymised data collected in Excel included; demographics, ART, hepatitis/TB co-infection, previous psychiatric or neurological diagnoses, viral load (VL), CD4 count and therapeutic drug monitoring (TDM) where available. Adverse events classified as early (<8 weeks EFV), mid (2–6 months) or late (>6 months).

**Results:** 51 children commenced EFV therapy between 1998 and 2014. 24/51 (47%) were female and 30/51 (59%) Black African origin. 5 had HBV co-infection and 1 active TB. Median age starting EFV was 9.1 yrs (IQR 7.2–12.4) with a median duration of EFV exposure of 4.4 yrs (IQR 1.1–7.4). 41/51 (80%) achieved sustained VL suppression, 10 (20%) developed virological failure with NNRTI resistance. 16/51 (31%), half female, reported one or more side effect attributed to EFV: CNS (10), gynaecomastia (7: 5 male) hypercholesterolaemia (2), rash (1), lipodystrophy (1) and raised liver enzymes (1). CNS toxicity included one or more of; psychosis (1), extreme tiredness (4), reduced concentration (3), headaches (2) and mood change (2). Toxicity occurred; early in 3 (19%), mid in 4 (25%) and late in 9 (56%) precipitating a switch off EFV in 14/16 (88%) after a median of 24.5 months (IQR 10–70.5) exposure. TDM was available in 6/16, all on 600mg EFV; one toxic level (>4,000 ng/ml), 5/6 in the therapeutic range. In the 14 patients who switched off EFV due to toxicity median weight at start 42.4 kg (IQR 34.6–43.9) and stopping 48.2 kg (IQR 43.8–55.7). EFV dosing was appropriate for weight in all 16.

**Conclusion:** More than a quarter of adolescents receiving EFV-based ART switched due to toxicity with only 1 documented toxic plasma level. Over half were CNS-related with potential effects on psychological well-being and educational attainment. Further paediatric studies are required to optimise EFV dosing maintaining efficacy whilst minimising toxicity.

P2

**Clinical outcomes for severely immunosuppressed young adults with perinatally acquired HIV infection**

M Islam, D Davies, T Wan, C Foster and S Fidler

Imperial College London, London, UK

**Background:** Median survival from historical cohorts of adults living with HIV presenting with CD4 <200 cells/mm<sup>3</sup> in the pre-antiretroviral (preART) era was 11.6 months. Extrapolation of survival data from horizontally infected adult cohorts may not be appropriate for young people with perinatally acquired HIV (PaHIV). Anecdotal experience suggests a different survival pattern amongst young adults with PaHIV transitioning care with CD4 <200 cells/mm<sup>3</sup>. We sought to explore this within a PaHIV transition cohort.

**Method:** Retrospective case note review of young adults with PaHIV attending a single UK centre between January 2006 and December 2014. Eligible participants were over 16 years; recorded CD4 <200 cells/mm<sup>3</sup> at transition or in adult care. Outcomes measured included survival, new AIDS defining illnesses and hospitalisations. The length of time spent with a CD4 <200 cells/mm<sup>3</sup> was recorded as a comparison to the preART era survival in adults.

**Results:** Of 38 cases; 20 (53%) were female; 33 (87%) Black African origin and a current median age of 22 years (IQR 20–23). 3/38 (8%) patients died, at a median of 36 months (range 28–98) after first CD4 <200 cells/mm<sup>3</sup>. Causes of death; end stage HIV wasting, gram negative sepsis with end stage HIV and atypical mycobacteria. Of the remaining 35 patients, 20 ever achieved virological suppression on ART and a CD4 count >200 cells/mm<sup>3</sup> at latest follow up. 15 have failed to suppress despite enhanced adherence support, with current CD4 count <200 cells/mm<sup>3</sup>. All have potentially suppressive ART options, 3/15 have triple class HIV-1 associated resistance mutations. 15/35 (43%) have survived for a median of 27.5 months (range 3–60) with a CD4 <200 cells/mm<sup>3</sup>. 22/35 (63%) have required adult inpatient care, with an average admission rate of 2.43 admissions per person (range 0–32). 11/35 acquired one or more new opportunistic infections PCP (5), MAI (4), oesophageal candidiasis (4), CMV (1).

**Conclusion:** From this small cohort of young adults with perinatally acquired HIV it appears the median survival with significant immunosuppression, is enhanced compared to historical adult cohorts; 36 versus 11.6 months respectively. However survival comes with a significant cost to both patients and the NHS, with new opportunistic infections and recurrent hospital admissions. This observation warrants further investigation within collaborative cohort studies and comparative adult populations in the era of ART.

P3

**Fertility amongst perinatally infected women attending a young adult service**

S Ayres, S McDonald, C Foster and S Fidler

Imperial College NHS Trust, London, UK

**Background:** The impact of perinatally acquired HIV infection (PaHIV) and exposure to ART through childhood and puberty on female fertility is unknown. General population, UK female infertility rates <30 years old are estimated at 2–5%. We audited fertility outcomes for young women with PaHIV attending a single UK centre.

**Methods:** Case note review of all PaHIV infected young women in care between 2006–2014. Fertility problems were defined as; confirmed infertility or failure to conceive (>2 year). Data collection included nadir CD4, smoking, years on ART, BMI and STI's.

**Results:** Of 59 women, current mean age 22 years (range 18–30), 41/59 black African, 19/59 ever smoked, mean BMI 22.6. 10 pregnancies occurred in 6 women resulting in 8 live births, 1 termination and 1 ectopic pregnancy. 8 of 59 women (13.6 %) have a diagnosis of infertility, mean BMI 21.6, mean nadir CD4 count 395. 7/8 ever received ART, mean duration 8.4 years at latest follow up, 6 with current VL<20c/ml and 7/8 CD4 >350. 3/8 had primary ovarian failure, one with streak ovaries. 5/8 had secondary infertility; tubal obstruction and multiply ovarian cysts (1), polycystic ovaries (2) and continuing investigation (2). Of these 5, three had a prior STI; Chlamydia (2) and Gonorrhoea (1).

**Conclusion:** Whilst this is a very small cohort, there appears to be a higher than anticipated level of fertility issues amongst an emerging cohort of PaHIV infected young women that warrants further investigation within collaborative cohort studies.

P4

**What do young adults with perinatally acquired HIV think about onward HIV disclosure interventions? A survey of attendees at a London transition service**

M Evangelini<sup>1</sup>, C Foster<sup>2</sup>, G Frize<sup>2</sup> and S Fidler<sup>3</sup>

<sup>1</sup>Royal Holloway, University of London, Surrey, UK; <sup>2</sup>Imperial College Healthcare NHS Trust, London, UK; <sup>3</sup>Imperial College London, London, UK

**Background:** An important challenge for young people with perinatally acquired HIV (PaHIV) is onward disclosure (disclosing their HIV status to others). There is little onward disclosure guidance for young people with PaHIV or professionals working with this population and no published disclosure interventions for PaHIV. Increasing onward disclosure to friends, family and partners may enhance social support, improve self-esteem and wellbeing, facilitate antiretroviral adherence and decrease onward HIV transmission.

**Methods:** Anonymised survey of young people with PaHIV attending a specialist transition service in London to inform the development of a behavioural onward disclosure intervention. Paper based questionnaire assessing: HIV disclosure difficulty, interest and desirable features of a future HIV disclosure intervention (e.g., format, sex, peer support), and barriers to HIV disclosure.

**Results:** 57 young people, median age 21 (range 17–28) years, 26 female, completed the survey. Thirty six of 57 (63%) either agreed or strongly agreed that onward disclosure was difficult. Twenty one of 57 (37%) were not interested in taking part in a future intervention, 25 (44%) were unsure, and 11 (19%) expressed interest. There was no correlation (r=0.04) between perceived HIV disclosure difficulty and interest in a future intervention. Group (23/57) and mixed individual and group formats (21/57) were preferred. Most were keen on mixed sex groups (52/57) and peer worker involvement both within and outside of the intervention (54/57). Barriers to HIV disclosure included; attitudes (e.g., 'I do not want to tell anyone I'm HIV positive'), normative beliefs (e.g., 'My friends or family would not want me to take part in a course') and control beliefs (e.g., 'I would not trust other people taking part in the course to keep my HIV status secret').

**Conclusion:** Perinatally infected young people experience significant difficulties in disclosing their HIV status to others but are ambivalent about receiving structured disclosure interventions. Efforts to develop HIV disclosure interventions should engage with young people to address (a) HIV disclosure barriers and (b) barriers to taking part in disclosure interventions. Designing interventions with features that are preferred by young people (e.g., group or mixed format, mixed sexes and with peer worker involvement) is likely to enhance the acceptability and uptake of future HIV disclosure interventions.

## P5

## Should pregnant women with unknown HIV status be offered rapid HIV testing in labour?

J Downie<sup>1</sup>, H Mactier<sup>2</sup> and RM Bland<sup>1,3</sup><sup>1</sup>Royal Hospital for Sick Children, Glasgow, UK<sup>2</sup>Princess Royal Maternity Hospital, Neonatal Unit, Glasgow, UK<sup>3</sup>Africa Centre for Health and Population Studies, South Africa

**Background:** Mother-to-child transmission (MTCT) is the main cause of HIV infection in children. Data from The BHIVA National Study of HIV in Pregnancy in Childhood has demonstrated that with the implementation of guidelines including antenatal testing, early antenatal ART and birth planning, immediate neonatal testing and ART and appropriate infant feeding advice has reduced MTCT rates in the UK are now 0.5%.

Despite international guidelines and recommendations, infants are still delivered to women with an unknown HIV status, or women who were HIV-negative early in pregnancy but have not been re-tested near delivery and may have sero-converted. Studies from Africa have demonstrated sero-conversion rates during pregnancy as high as 20%. Rapid HIV tests produce quick (10–20 minutes) and accurate results. This prompt diagnosis is important, particularly in settings where conventional HIV tests can take up to two weeks to be reported and has important implications for testing women late in pregnancy or during labour.

**Methods:** PubMed and the Cochrane Library were searched in May 2013. Studies from all countries were included. All citations were screened by the author and a total of 23 were found. Citations found relevant in the first screen were evaluated by review of full text reports. A total of five studies were relevant.

**Results:** The diagnostic accuracy of rapid tests is excellent, with specificity and sensitivity higher than 99%. Within maternity settings there have been reports of decreased sensitivity of rapid HIV test performance (87.5–94.5%). HIV detection may be improved if a second rapid test is used.

The use of rapid testing is particularly relevant in low and middle income countries, where advance testing infrastructures are lacking. However, even in these resource-rich settings there is clear evidence that rapid testing is cost-effective and feasible for high-risk and hard to reach groups.

Evidence supports women's acceptability of rapid HIV testing. UK studies have shown that up to 85% of women have found rapid HIV testing acceptable.

For women with an unknown status, clinical trials have shown that knowledge of HIV status, and subsequent intervention can reduce MTCT of HIV by as much as 50%.

**Conclusions:** • Globally, women continue to present in labour with an unknown HIV status; • Early diagnosis of HIV in a pregnant woman significantly reduces the rates of MTCT of HIV; • Sero-conversion in pregnancy may lead to undiagnosed HIV in the mother and transmission to the infant; • Rapid HIV tests have high sensitivity and specificity and are feasible to use in labour or late in pregnancy; • Rapid HIV testing is acceptable and cost-effective; • Rapid HIV testing should be available in all maternity units.

## P7

## Audit of hepatitis B testing in parents and children of those with coinfection in the family HIV clinic

SY Chan

The Jefferiss Wing, St Mary's Hospital, Imperial College Healthcare NHS Trust, UK

**Background:** The BHIVA adult hepatitis guidelines recommend that patients are screened for hepatitis B (HBV) at diagnosis, those who are not immune should be vaccinated. Those who are vaccinated should have annual or biannual hepatitis B s antibody screening and those who are immune continue to have annual screening for HBV. There are also recommendations for antiretroviral treatment of those with co-infection, as well as recommendations for hepatocellular carcinoma screening. Department of health guidelines recommend that children of those with HBV coinfection should be screened and vaccinated.

**Methods:** Single centre retrospective case notes audit of all parents attending a family HIV clinic over one year and audit of children of co-infected parents.

**Results:** Of a cohort of 67 parents attending the family clinic (60 female/ 7 male), all had some form of testing for hepatitis B. 14/67 (21%) were naturally immune to HBV, 11/67 (16%) were hepatitis B core antibody negative with surface antibody <10. 6/67 (9%) were vaccinated with S antibody 10–100, 29/67 (43%) had S antibody >100, 3/67 (4%) had not had enough tests to determine their status and 7/67 (10%) were co infected. Of the 11 patients who were core antibody and s antibody negative, 3/11 had s antigen testing within the past year.

Table showing monitoring of parents with HBV coinfection and vaccine status of their children:

NNRT: backbone of parent	Hepatitis A status of parent	Last Alfa feto protein test of parent	Last liver ultrasound scan of parent	HBV viral load <50 of parent? (IU/ml)	Child attending clinic vaccinated for HBV?	Surface antibody level of child (mIU/ml)
Truvada	Immune	6 months	None	No	Yes	>100
Truvada	Immune	6 months	2 years	Yes	Yes	>100
Truvada	Immune	None	None	Yes	Yes	>100
Truvada	Immune	6 months	6 months	Yes	Yes	>100
Truvada	Immune	None	None	No	Yes	>100
Truvada	Immune	12 months	12 months	Yes	Yes	>100
Truvada	Immune	18 months	18 months	Yes	Yes	>100

**Conclusion:** There are very good levels of hepatitis B testing and vaccination in parents attending the family clinic. All HIV positive children of those with coinfection had been screened and vaccinated although it was not possible to determine the vaccination status of their other HIV negative children. Monitoring of parents who are not immune to HBV could be improved as well as the monitoring of some patients with coinfection.

## P6

## Changing incidence of perinatally acquired infection in an era of changing antiretroviral therapy to HIV-infected pregnant women in Eastern Cape, South Africa

JS Lambert, Kuan K<sup>1</sup>, Carty C<sup>4</sup>, Goldswain C<sup>5</sup>, Harper K<sup>5</sup>, Sidloyi L<sup>4</sup>, Weyer L<sup>4</sup>, Lambert J<sup>1,2,3</sup>, Adler H<sup>2</sup>, Boon G<sup>5</sup><sup>1</sup>School of Medicine and Medical Sciences, University College Dublin, Dublin, Ireland;<sup>2</sup>Department of Infectious Diseases, Mater Misericordiae University Hospital, Dublin, Ireland;<sup>3</sup>Rotunda Hospital, Dublin, Ireland<sup>4</sup>The Relevance Network, Johannesburg, South Africa<sup>5</sup>Department of Pediatrics, Frere Hospital, Eastern Cape, South Africa

**Background:** By the end of 2003, WHO estimates indicated between 204,000 and 297,000 women living with HIV/AIDS gave birth annually, resulting in an estimated 61,000–89,000 cases of children with HIV exposure in South Africa. In 2002, the South African government commenced a Prevention of Mother To Child Transmission (PMTCT) programme which was subsequently amended in 2004, 2008 and 2010 with upscaling of antiretroviral medication from Nevirapine single dose to HAART.

The objective of this study was to evaluate changing trends in HIV perinatal infections in East London from 2004–2013. The aim of this study is to determine whether upscaling of antiretroviral treatment successfully resulted in the PMTCT of HIV.

**Methods:** A retrospective cohort study was conducted involving the Cecilia Makiwane Hospital and the FRERE Hospital in East London, South Africa. Data on the incidence of paediatric HIV cases ages 0–2 years were obtained from an electronic database. Data of a total of 747 patients [378 male (50.6%) and 369 females (49.4%)] were charted and plotted by incidence and year.

**Results:** Initially a rising trend was noted in 2004 with 26 incidences, peaking in year 2007 with 106. Following a decrease to 90 in 2008, the trend rebounded in 2009 to 103 before decreasing again in 2013 (58 cases).

**Conclusion:** While reductions in new cases overall were seen, perinatally infected children continue to be a significant problem. An increase in new maternal HIV infections and higher birth rate likely explains these trends, and nonetheless modest decreases represent a success of more robust antiretroviral treatments that have been implemented in HIV infected pregnant women in our cohort. Further analysis of this cohort and changing demographics of women in our study are under way.

## P8

## A tale of Cushing's, ritonavir and football trials

The Family Clinic and A Lenko<sup>1</sup>, A Tappin<sup>2</sup>, M Hussey<sup>3</sup><sup>1</sup>ICHT, UK; <sup>2</sup>Portsmouth Hospital, UK; <sup>3</sup>Poole Hospital, UK

**Background:** Vernal keratoconjunctivitis is an inflammatory condition leading to corneal epithelial breakdown, sight threatening complications and is typically treated with topical steroids. Ritonavir (rtv) is a potent cytochrome p450 CYP3A4 inhibitor with most corticosteroids metabolised via this pathway. Iatrogenic Cushing's syndrome following co-administration of corticosteroids with rtv is widely described, but with minimal data for intra-ocular steroids and manufacturers of dexamethasone 0.1% eye drops advise that 'systemic adsorption is minimal'.

**Case Report:** 15 yr old boy of Gambian origin with severe vernal keratoconjunctivitis and visual impairment, diagnosed with HIV infection in 2009; CD4 10 cells/μL. He suppressed on nevirapine based ART but subsequently failed with a K65R, Y181C, Y115F, H221Y and an X4 tropic virus. He resuppressed on lopinavir/rtv, raltegravir and zidovudine, then simplified to darunavir/rtv+combinir, reconstituting to a CD4 of 940 cells/μL. He continued dexamethasone 0.1% drops bd, a steroid sparing trial of cyclosporin eye drops having failed.

In February 2015 he presented with a 3x5 mm corneal epithelial defect of the left eye. A corneal scrape was culture negative for bacteria and fungi. He received hourly topical cefuroxime 0.3% and gentamicin drops and after two weeks hourly topical dexamethasone 0.1% was commenced. Discussions with HIV specialist pharmacist prompted review for steroid toxicity. He had a moon face typical of Cushing's syndrome, serum cortisol <18 nmol/L (200–800) with normal blood pressure, glucose, bone, and renal function. The epithelial defect was slow to heal and to avoid further toxicity, an inferior punctal plug inserted and a botulinum toxin ptosis performed to protect the corneal epithelium and provided an optimal environment under which rapid epithelial healing has occurred. Topical steroids were reduced to tds and a cortisol deficiency crisis pack and training arranged to cover his national football trials. A DEXA scan and short Synacthen test are awaited.

**Conclusion:** We report a case Cushing's syndrome in an adolescent on ritonavir boosted ART receiving concomitant hourly dexamethasone eye drops. The case strongly suggests that ritonavir, through CYP3A4 inhibition, was responsible for significant accumulation of systemic levels of dexamethasone and highlights the need for vigilance in prescribing topical steroids in this setting. His archived resistance prevents the use of rtv-sparing ART.

P9

**Routine opt-out HIV testing in the emergency department: feasible and acceptable**

J Ellis<sup>1</sup>, M Hempling<sup>1</sup>, A Zielicka-Hardy<sup>2</sup>, G Fida<sup>3</sup> and W Majewska<sup>3</sup>

<sup>1</sup>St George's Healthcare NHS Trust, London, UK;

<sup>2</sup>NHS Wandsworth Public Health Department, London, UK;

<sup>3</sup>Courtyard Clinic, St George's Healthcare NHS Trust, London, UK

**Background:** Routine HIV testing in non-specialist settings has the potential to significantly reduce late diagnoses. We report a 3 month pilot exploring feasibility and acceptability of HIV testing in an Emergency Department (ED) at a busy London teaching hospital.

**Methods:** Between March–May 2012, all patients aged between 18–65 years attending the ED, were offered opt-out HIV testing by ED clinical staff. Patients were given information leaflets on HIV, including how to obtain results. Multivariable models were run to determine predictors for offering (feasibility) and accepting (acceptability) an HIV test. Information regarding reasons for not offering an HIV test and reason for patients declining was also recorded.

**Results:** During the study period 24,171 patients aged 18–65 were seen in the ED. Data was collected from a convenience sample of these patients who underwent serological investigation (5,657). The mean age was 38 years; 57% female and 27% white. 48% were offered HIV testing, of which 65% accepted. Patients 47 years were more likely to be offered HIV testing, particularly those aged 28–35 (aOR:1.65, 95%CI:1.42–1.92). Male patients were more likely to accept (aOR:1.34, 95%CI: 1.14–1.58). 'Recent HIV test' (38%) and 'I do not want to know (my status)' (31%) were the commonest reasons for declining a test. One new HIV diagnosis was made.

**Conclusion:** Our experience demonstrates that routine HIV testing in the ED is feasible and acceptable. However to make HIV testing effective and part of routine clinical care, considerable clinical leadership, staff training and additional resources are required.

P10

**Review of the neurocognitive consequences of HIV infection in children & adolescents**

T Campbell

Head of Psychology & Health, East London Foundation Trust, UK

**Background:** Globally, an estimated 3.4 million children are living with HIV, yet little is known about the effects of HIV and antiretroviral treatment (ART) on the developing brain, and the neurodevelopmental and behavioural outcomes of perinatally HIV-infected (PHIV) adolescents.

**Method:** I will review the general literature on neurodevelopmental outcomes in PHIV children and adolescents but will pay specific attention to children and adolescents in the UK. I will summarise the current evidence on behaviour, general cognition, specific domains, hearing and language, school performance and physical disabilities due to neurological problems.

**Results:** Evidence suggests that PHIV children do not perform as well as controls on general cognitive tests, processing speed and visuo-spatial tasks, and are at much higher risk for psychiatric and mental health problems. Executive functioning difficulties are common amongst adolescents with potentially serious implications for effective coping for the future especially with regard to ART adherence. Children with AIDS-defining diagnoses are particularly at risk for poorer outcomes. A striking finding is the lack of published data specific to the adolescent age group (10–25 years), particularly from resource constrained countries, which have the highest HIV prevalence. In addition, extreme heterogeneity in terms of timing and source of infection, and antiretroviral experience limits our ability to summarize findings of studies and generalize results to other settings.

**Conclusion:** The neuro-cognitive implications of HIV infection may be subtle but may have a negative additive effect over the course of the development of the HIV+ child. I will conclude this presentation with some practical advice for clinicians with regard to identification and mitigation of the neurocognitive consequences.

P11

**Lamivudine monotherapy as a safe option for HIV infected children with challenging circumstances? New evidence from a large South African cohort**

V Linder<sup>1</sup>, C Goldswain<sup>1</sup>, JS Lambert<sup>2</sup>, V Jackson<sup>3</sup>, G Boon<sup>1</sup>, K Harper<sup>1</sup>, C Carty<sup>4</sup>

<sup>1</sup>Eastern Cape Department of Health, Paediatrics, East London, South Africa;

<sup>2</sup>Mater Misericordiae University Hospital, Infectious Diseases, Dublin, Ireland;

<sup>3</sup>The Rotunda Hospital, Clinical Audits and Surveillance, Dublin, Ireland;

<sup>4</sup>The Relevance Network, Johannesburg, South Africa

**Background:** HIV-infected children in resource-poor settings comprise a unique population who require antiretroviral therapy (ART) in careful consideration of social and structural barriers to compliance. Given these aggregate challenges and emerging research into treatment options, we further investigated the efficacy of lamivudine monotherapy (LM) as a surrogate treatment in anticipation of 2nd and 3rd line therapies.

**Methods:** A retrospective review of all eligible LM events (≥6 months) from a cohort of two linked health facilities in the Eastern Cape Province, South Africa was undertaken. Events were disaggregated according to absolute CD4 count at initiation (Group 1: >200cells/μL, n=64; Group 2: ≤200cells/μL, n=10). Study endpoints were defined as a decline of absolute CD4 ≤200 cells/μL (Group 1), WHO stage 3 or 4 event (Groups 1 & 2), or initiation of 2nd or 3rd line (Groups 1 & 2).

**Results:** 74 eligible LM events were identified among 71 HIV positive children (58% male; median age at LM 9.7 years and median LM duration 11.5 months). CD4 decreases and measured WHO stage 3 or 4 events did not yield overall significance between groups (Table 1). No deaths were recorded.

	All LM Events (n=74)	Group 1: Baseline CD4 >200 cells/μL (n=64)	Group 2: Baseline CD4 <200 cells/μL (n=10)	P Value
Male	43 (58)	38 (59)	5 (50)	0.576
Age at LM initiation years (median, IQR)	9.7 (5.5-11.8)	9.0 (6.4-11.2)	11.9 (10-14.4)	0.013
Duration of LM months (median IQR)	11.5 (7.1-17.4)	12.9 (7.4-17.9)	7.1 (5.1-9.1)	0.126
Final CD4, cells/μL (IQR, final prior to switch or last on LM)	429 (212-593)	47 <sup>a</sup> (325-632)	29 (16-59)	<0.0001
Patients with overall decrease in CD4 (n, %)	64 (89)	58 (91)	6 (75)	0.185
Patients with >25% decrease in CD4 (n, %)	50 (73)	44 (76)	6 (100)	0.325
Patients switched to 2nd/3rd line therapy (n, %)	17 (23)	11 (17)	6 (60)	0.003
Stage 3 or 4 event on LM (n, %)	6 (8.1)	5 (7.8)	1 (10)	0.814

[Table 1. Characteristics for LM initiated patients]

**Conclusions:** LM offers a promising alternative approach to ART management in young patients with an absolute CD4 >200 cells/μL pending availability and/or willingness to adhere to 2nd or 3rd line therapies. In more immune compromised children, LM may be considered as a last option if either the child or caretaker has concerns about 2nd or 3rd line management, or has defaulted repeatedly.

P12

**Using point-of-care technology to enhance clinical quality and patient outcomes in resource-poor paediatric ARV settings**

Carty C<sup>1</sup>, Lambert JS<sup>2</sup>, Harper K<sup>3</sup>, Goldswain C<sup>3</sup>, Boon G<sup>3</sup>

<sup>1</sup>The Relevance Network, Johannesburg, South Africa; <sup>2</sup>Mater Misericordiae

University Hospital, Infectious Diseases, Dublin, Ireland; <sup>3</sup>Eastern Cape

Department of Health, Paediatrics, East London, South Africa

**Background:** In late 2011 a multidisciplinary team of clinicians, medical transcriptionists and health sector stakeholders undertook the process of digitising paper-based hospital records in two large paediatric HIV referral clinics in resource-limited settings South Africa. The project culminated in the largest standalone repository of validated data specific to paediatric clients (0–19 years) worldwide.

**Methods:** The concept evolved from the audit phase to a now-fully operational system of data collection using point-of-care technology for patient management. Using the software design life cycle model, clinicians informed the processes that would ultimately allow for the capture of key clinical variables in real time. Data extrapolations using targeted key word queries of the system enabled researchers to readily access disaggregate variables across clinical and social indicators.

**Results:** Over 2600 records have been digitized to date, of which 2395 have been migrated to the active system. Over 58000 patient visits are available dating back to 2004. Cohort data revealed ±30% more paediatric HIV patients (0–18 years) enrolled at site hospitals than initially estimated over, highlighting the need to properly quantify child cohorts. It also uncovered a sobering trend in loss to follow-up among adolescents. In contrast, findings confirmed that PMTCT efforts have resulted in demonstrable declines in new infants joining the cohort prospectively. Data from the program has assisted adherence counsellors with 'tracking' of patients who are lost to follow-up by mapping their last patient visit data to referral clinic sites and next ARV refill date, thus allowing for triage of more urgent cases. The value of point-of-care technology has resulted in clinician uptake and has allowed for capacity building for M.Med students undertaking government-mandated research.

**Conclusions:** The value set and mission of the project has resulted in key, quality partnerships with departmental leaders and staff, as well as researchers and the support service sector. The ideals of enhancing child specific services to impact overall quality of care for clients must be at the forefront of each step throughout the implementation of point-of-care technologies.





## Forthcoming Events

### 17th Annual Conference of the National HIV Nurses Association (NHIVNA)

18–19 June 2015  
Royal Armouries, Leeds

### Joint BHIVA/BASHH One-day Revision Course for the Diploma in HIV Medicine candidates

Thursday 9 July 2015  
London

### 19th Annual Resistance and Antiviral Therapy Meeting

Wednesday 16 September 2015  
London

### BHIVA General Medicine for HIV Physicians Course

Tuesday 13 October 2015  
NCVO, London

### NHIVNA Study Day

'... and how does that make you feel?'  
Working together to provide holistic HIV care

Wednesday 21 October 2015  
NCVO, London

### BHIVA Autumn Conference including CHIVA Parallel Sessions

12–13 November 2015  
QEII Conference Centre, London

### Prevention of Infant HIV Infection: aiming for zero transmission

marking World AIDS Day

Friday 27 November 2015  
Royal College of Obstetricians and Gynaecologists  
London

### European HIV Hepatitis Co-infection (EHHC) Conference

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19–22 April 2016  
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