



20th annual
ashmconference

Back-to-back with the Australasian Sexual Health Conference 15 – 17 September 2008

**Wednesday 17 to
Saturday 20 September 2008**

Perth Convention Centre, Western Australia



ashm
Australasian Society for HIV Medicine Inc



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Dear ASHM Members, friends and colleagues,

It is our great pleasure to welcome delegates to Perth, Western Australia for the 20th Annual ASHM Conference to be held from Wednesday 17 to Saturday 20 September 2008.

The ASHM Conference is Australasia's premier conference in the HIV, hepatitis and related diseases sector. It brings together the range of disciplines involved in HIV and hepatitis management, including basic science, clinical medicine, community programs, education, epidemiology, Indigenous health, international and regional issues, nursing and allied health, policy, primary care, public health and prevention, and social research.

We are pleased to announce that the 2008 ASHM Conference will again be run back-to-back with the Australasian Sexual Health Conference with one full day of overlap on Wednesday 17 September.

The Annual Consensus Conference is this year incorporated into the clinical stream of the main ASHM Conference program. The Australian Antiretroviral Guidelines sessions will be held on the afternoons of Thursday 18 and Friday 19 September. These sessions include evidence-based presentations from international and local experts on the latest research and developments in HIV treatment and provide the opportunity for discussion.

Take this opportunity to explore Perth. The conference venue is the Perth Convention Centre, within Perth CBD.

Levinia Crooks, Chief Executive Officer
Australasian Society for HIV Medicine

WELCOME LETTER

NATIONAL PROGRAM COMMITTEE

Convenor: John Dyer

Fremantle Hospital

Lisa Bastian

WA Health

Scott Bowden

Victorian Infectious Diseases Reference Laboratory

Peter Canavan

National Association of People Living with HIV/AIDS

Tony Cunningham

Australian Centre for HIV and Hepatitis Virology Research

Francine Eades

Aboriginal Health Council of WA

Jeffrey Grierson

Australian Research Centre in Sex, Health and Society (ARCSHS)

Andrew Grulich

National Centre in HIV Epidemiology and Clinical Research (NCHECR)

Vickie Knight

Sydney Sexual Health Centre

Johnson Mak

MacFarlane Burnet Institute

Lewis Marshall

Fremantle Hospital – Sexual Health Clinic

Darrel O'Donnell

New South Wales Health – AIDS and Infectious Diseases Branch

Heather Worth

National Centre in HIV Social Research

Tim Wotton

Australian Government Department of Health and Ageing

**Levinia Crooks, Marina Carman,
Nadine Giatras, Daliah Szwarc,
Nicole Robertson**

Australasian Society for HIV Medicine



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SECTORAL PARTNERS

The following organisations support the aims of the conference and encourage their members and associates to attend:

- AusAID
- Australasian Chapter of Sexual Health Medicine
- Australian Centre in HIV and Hepatitis Virology Research
- Australian Federation of AIDS Organisations
- Australian Government Department of Health and Ageing
- Australian Haemophilia Foundation
- Australian Research Centre in Sex, Health and Society
- Family Planning NSW
- Macfarlane Burnet Institute
- National Association of People Living with HIV/AIDS
- National Centre in HIV Epidemiology and Clinical Research
- National Centre in HIV Social Research
- NSW Health
- New Zealand AIDS Foundation
- Nossal Institute for Global Health
- Sexually Transmitted Infections Research Centre
- VicHealth

Many other organisations also contribute to the success of the ASHM conferences; we appreciate their support.

ENVIRONMENT POLICY

- ASHM implements a waste-reduction policy that addresses – Reduce, Reuse, Recycle. This is done before, during and after each conference
- ASHM reduces the number of printed materials by using electronic communication means wherever possible, including the website, email, online registration and abstract submission
- ASHM monitors final delegate numbers for an accurate forecast of catering requirements in order to avoid waste. Where possible, ASHM will organise leftover food to be picked up by local charities to distribute accordingly
- ASHM aims to research and prioritise purchasing items and equipment that support the use of recycled materials or can be recycled after use
- ASHM will aim to ensure that recycling bins are available onsite at all events
- ASHM will endeavour to minimise travel through the use of teleconferences instead of face-to-face meetings and holding meetings only when necessary
- ASHM encourages all conference stakeholders to consider the environment by suggesting the following: reduction in printing requirements; recycling conference materials; and reusing conference merchandise.



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REVIEWERS

First Name	Last Name	Organisation
Lisa	Bastian	WA Health
Holly	Beasley	Prison Health Services, Dept of Corrective Services
Timothy	Blackmore	Wellington Hospital / Clinical Leader Laboratories and Infection Control
Karen	Blyth	Victorian HIV Consultancy, The Alfred
Marcus	Bogie	AIDS Action Council of the ACT
Scott	Bowden	Victorian Infectious Diseases Reference Laboratory
Mark	Boyd	National Centre in HIV Epidemiology and Clinical Research
Graham	Brown	WA Centre for Health Promotion Research/Community (AFAO President)
Joanne	Bryant	National Centre in HIV Social Research
Chris	Burrell	Head of Division HIV/AIDS Research Laboratory
Allison	Cain	Royal Perth Hospital
Peter	Canavan	National Association of People Living with HIV/AIDS
Marina	Carman	ASHM - International Division
Stevie	Clayton	AIDS Council of NSW
Barry	Combs	Department of Health
Damian	Conway	Australasian Society for HIV Medicine
June	Crawford	National Centre in HIV Social Research
Levinia	Crooks	Australasian Society for HIV Medicine
Denise	Cummins	Redfern Community Health Centre
Philip	Cunningham	St Vincent's Hospital
Tony	Cunningham	Australian Centre for HIV and Hepatitis Virology Research
Elizabeth	Dax	National Serology Reference Laboratory
Erol	Digiusto	National Centre in HIV Social Research
Kate	Dolan	National Drug and Alcohol Research Centre
Greg	Dore	National Centre in HIV Epidemiology and Clinical Research
Gary	Dowsett	Australian Research Centre in Sex, Health and Society
Heidi	Drummer	Macfarlane Burnet Institute
John	Dyer	Fremantle Hospital
Barry	Edwards	Cambodian HIV/AIDS Education & Care
Suzanne	Fraser	National Centre in HIV Social Research
Martyn	French	Royal Perth Hospital
Rosemary	Ffrench	Macfarlane Burnet Institute
Roger	Garsia	Royal Prince Alfred Hospital
Paul	Goldwater	Women's and Children's Hospital
Jeffrey	Grierson	Australian Research Centre in Sex, Health and Society
Andrew	Grulich	National Centre in HIV Epidemiology and Clinical Research
Philip	Habel	Interchange General Practice
David	Harrich	Queensland Institute of Medical Research
Martin	Holt	National Centre in HIV Social Research

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REVIEWERS

First Name	Last Name	Organisation
Max	Hopwood	National Centre in HIV Social Research
Jennifer	Hoy	Alfred Hospital
John	Imrie	National Centre in HIV Social Research
Anthony	Jaworowski	Burnet Institute
John	Kaldor	National Centre in HIV Epidemiology and Clinical Research
Adeeba	Kamarulzaman	University of Malaya
Tony	Kelleher	St Vincent's Hospital - Centre for Immunology
Stephen	Kent	University of Melbourne
Alison	Kesson	The Childrens Hospital at Westmead
Vickie	Knight	Clinical Nurse Consultant Sydney Sexual Health Centre
Henrike	Korner	National Centre in HIV Social Research
Sue	Laing	Department of Health Western Australia
Stephen	Lambert	The University of Queensland
Sharon	Lewin	Alfred Hospital - Infectious Disease Unit
Sam	Libertino	Fremantle Hospital
Lisa	Maher	National Centre in HIV Epidemiology and Clinical Research
Donna	Mak	Notre Dame and Department of Health
Johnson	Mak	Burnet Institute
Limin	Mao	National Centre in HIV Social Research
Deborah	Marriott	St Vincent's Hospital
Lewis	Marshall	Fremantle Hospital
Dale	McPhee	National Serology Reference Laboratory
Graham	Mills	Waikato Hospital - Sexual Health Clinic
Christy	Newman	National Centre in HIV Social Research
Catherine	O'Connor	Livingstone Road Sexual Health Centre
Alan	Pithie	Christchurch Hospital - Infectious Diseases Department
Marian	Pitts	Australian Research Centre in Sex, Health and Society
Jeffrey	Post	Prince of Wales Hospital
Andy	Poumbourios	Macfarlane Burnet Institute
Patricia	Price	Royal Perth Hospital
Damian	Purcell	University of Melbourne - Department of Microbiology and Immunology
John	Quin	Bigge Park Centre Interferon Treatment Unit
Patrick	Rawstone	National Centre in HIV Social Research
Nigel	Raymond	Capital Coast Health
Vanessa	Read	Department of Corrective Services
Jacqui	Richmond	St Vincent's Hospital - Dept of Gastroenterology
Gary	Rogers	Secretariat of the Pacific Community
John	Rule	National Association of People Living with HIV/AIDS
Darren	Russell	Sexual Health Cairns Sexual Health Service



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First Name	Last Name	Organisation
Joe	Sasadeusz	Victorian Infectious Disease Service, Alfred Hospital
Cindy	Shannon	Shannon Consulting Services
David	Shaw	Royal Adelaide Hospital
Tuck Meng	Soo	Interchange General Practice
Chad	Stewart	Aboriginal Health Council of WA
Alan	Street	Royal Melbourne Hospital - Victorian Infectious Diseases Service
Gilda	Tachedjian	MacFarlane Burnet Institute
Mark	Thomas	Auckland Hospital - Adult Infectious Diseases Unit
Carla	Treloar	National Centre in HIV Social Research
Ashley	Watson	Canberra Sexual Health Centre
Jo	Watson	National Association of People Living with HIV/AIDS
John	Wilkinson	Westmead Hospital - Millennium Institute - Centre of Virus Research
Jon	Wills	Australian Research Centre in Sex, Health and Society
Ian	Woolley	Monash Medical Centre
Heather	Worth	National Centre in HIV Social Research
Edwina	Wright	Alfred Hospital
Rudyard	Yap	Palmerston North Hospital
John	Ziegler	Sydney Childrens Hospital

REVIEWERS



A heritage of rich scientific vision
A future of broad scientific scope

INNOVATIONS IN HIV CARE FOCUSED ON THE PATIENT

GlaxoSmithKline is proud to be a Gold Sponsor
of the ASHM 20th Annual Conference.

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**PROGRAM
AT A GLANCE**



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WEDNESDAY 17 SEPTEMBER

7.30am	Registration Opens				
8.00am - 9.00am	Arrival Coffee/Tea in Pavillion 1				
8.30am - 10.30am	ASHM Opening Ceremony and Plenary 1			9.00am - 10.30am	Sexual Health Plenary 5: A Mixed Bag of Jewels
	Riverside Theatre/Auditorium				Meeting Room 1,2,3
10.30am - 11.00am	Morning Tea in Exhibition & Poster Area in Pavilion 1				
11.00am - 12.30pm	Women Risk HIV - International		11.00am - 12.30pm	ACH2 Bench to Bed: 1	
	Riverside Theatre/Auditorium			Meeting Room 8	
11.00am - 12.30pm				11.00am - 12.30pm	Sexual Health Plenary 6: Drugs and Sex
					Meeting Room 1,2,3
12.30pm - 1.30pm	Lunch in Exhibition & Poster Area in Pavilion 1				
12.45pm - 1.15pm	Launch of the Annual Surveillance Report and the Annual Report of Trends in Behaviour from the National Centre in HIV Epidemiology and Clinical Research				
Meeting Room 8; Lunch will be provided there for attendees from 12.30pm					
1.30pm - 3.00pm	IDU - Domestic		1.30pm - 3.00pm	ACH2 Bench to Bed: 2	
	Riverside Theatre/Auditorium			Meeting Room 8	
1.30pm - 3.00pm				1.30pm - 3.00pm	Sexual Health Plenary 7: Out of Sight Out of Mind
					Meeting Room 1,2,3
3.00pm - 3.30pm	Afternoon Tea in Exhibition & Poster Area in Pavilion 1				
3.30pm - 5.00pm	Virology/Immunology		3.30pm - 5.00pm	Planning Requires Economic and Quality Review	
	Riverside Theatre/Auditorium			Meeting Room 8	
3.30pm - 5.00pm				3.30pm - 5.00pm	Sexual Health Conference Closing
					Meeting Room 1,2,3
5.15pm - 6.15pm	Circumcision: Crown Jewels			5.15pm - 6.15pm	Diagnostics and Assay Development
	Riverside Theatre/Auditorium				Meeting Room 1,2,3
7.30pm - 11.30pm	Joint Conference Dinner, 'Diamonds are Forever' - Bellevue Ballroom, Perth Convention Centre				
Sponsored by the Australian Government Department of Health and Ageing, WA Health, Gilead, GlaxoSmithKline, Boehringer Ingelheim and Merck Sharp & Dohme					

PROGRAM AT A GLANCE

WEDNESDAY 17 SEPTEMBER 2008

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PROGRAM AT A GLANCE

THURSDAY 18 SEPTEMBER

7.00am	Registration Opens						
7.30am - 8.45am	Breakfast Session - 'Meet the Experts' - Clinical Riverview 4			8.00am - 8.45am	Oral Poster Session - Social Research, International, Community, Indigenous Health Meeting Room 1,2,3		
8.00am - 9.00am	Arrival Coffee/Tea in Exhibition & Poster Area in Pavilion 1						
9.00am - 10.30am	HIV and Ageing Riverside Theatre/Auditorium						
10.30am - 11.00am	Morning Tea in Exhibition & Poster Area in Pavilion 1						
11.00am - 12.30pm	Hot Topics: Top Papers of 2008	11.00am - 12.30pm	Community Research into Practice	11.00am - 12.30pm	International: Global HIV Initiatives vs Local Response	11.00am - 12.30pm	Margaret Macdonald Memorial Session - Epidemiology Population
	Riverside Theatre/Auditorium		Riverview 4		Meeting Room 1,2,3		Meeting Room 8
12.30pm - 1.30pm	Lunch in Exhibition & Poster Area in Pavilion 1						
12.30pm - 1.30pm	ASHM AGM in Meeting Room 6; Lunch will be provided here to attendees						
1.30pm - 3.00pm	Australian Antiretroviral Guidelines: Consensus Session	1.30pm - 3.00pm	Social Research - Desire	1.30pm - 3.00pm	AusAID Session - Indonesia	1.30pm - 3.00pm	HIV Immunology
	Riverside Theatre/Auditorium		Riverview 4		Meeting Room 1,2,3		Meeting Room 8
3.00pm - 3.30pm	Afternoon Tea in Exhibition & Poster Area in Pavilion 1						
3.30pm - 4.55pm	Ian Thompson Memorial Session - Clinical Anti Retroviral Therapy	3.30pm - 5.00pm	Epidemiology - Morbidity and Mortality	3.30pm - 5.00pm	CALD Media	3.30pm - 5.00pm	Prevention and Treatment Issues for Older Gay Men - Sponsored by NSW Health and ACON
	Riverside Theatre/Auditorium		Riverview 4		Meeting Room 1,2,3		Meeting Room 8
5.00pm - 6.30pm	Policy: Australia's Response to HIV in Asia and the Pacific: New Partnerships and Collaborations	5.00pm - 6.30pm		5.00pm - 6.30pm	Response and Predictions in ART	5.00pm - 6.30pm	Adherence to Antiretroviral Therapy
	Riverside Theatre/Auditorium		Riverview 4		Meeting Room 1,2,3		
6.30pm - 7.00pm	Launch of the Prison Entrants' Blood Borne Virus Report in Riverside Theatre/Auditorium Sponsored by WA Health on behalf of the National Drug Research Institute						
Free Evening							

THURSDAY 18 SEPTEMBER 2008

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FRIDAY 19 SEPTEMBER

7.00am	Registration						
7.00am - 8.45am	Case Presentation Breakfast		7.45am - 8.45am	Oral Poster Session - Public Health and Epidemiology			
	Riverview 4			Meeting Room 1,2,3			
8.00am - 9.00am	Arrival coffee/tea in Exhibition & Poster Area in Pavilion 1						
9.00am - 10.30am	Plenary - Prevention						
	Riverside Theatre/Auditorium						
10.30am - 11.00am	Morning Tea in Exhibition & Poster Area in Pavilion 1						
11.00am - 12.30pm	Peter Meese Memorial Session - Clinical - Associated Conditions Complications	11.00am - 12.30pm	Indigenous Health	11.00am - 12.30pm	Epidemiology - Transmission/Acquisition	11.00am - 12.30pm	International: Where to for Testing and Counselling in Resource-Poor Settings?
	Riverside Theatre/Auditorium		Riverview 4		Meeting Room 1,2,3		Meeting Room 8
12.30pm - 1.30pm	Lunch in Exhibition & Poster Area in Pavilion 1						
1.30pm - 3.00pm	Australian Antiretroviral Guidelines: Consensus Session	1.30pm - 3.00pm	Social Research - Sexual Risk in Space and Time	1.30pm - 3.00pm	International: PNG	1.30pm - 3.00pm	Phillip Medcalf Memorial Session - Community, Health Choices and Communication
	Riverside Theatre/Auditorium		Riverview 4		Meeting Room 1,2,3		Meeting Room 8
3.00pm - 3.30pm	Afternoon Tea in Exhibition & Poster Area in Pavilion 1						
3.30pm	Exhibition Closes						
3.30pm - 5.00pm	Clinical - Toxicity	3.30pm - 5.00pm	Network Sex	3.30pm - 5.00pm	International - Harm Reduction in Asia	3.30pm - 5.00pm	Social Research - Lives Worth Living
	Riverside Theatre/Auditorium		Riverview 4		Meeting Room 1,2,3		Meeting Room 8
5.15pm - 6.30pm	Swiss Statement			5.15pm - 6.30pm	Media Event - HIV Epidemiology and Public Health Response in WA		
	Riverside Theatre/Auditorium				Meeting Room 1,2,3		
Free Evening							

PROGRAM AT A GLANCE

FRIDAY 19 SEPTEMBER 2008

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PROGRAM AT A GLANCE

SATURDAY 20 SEPTEMBER

7.00am	Registration						
7.30am - 8.45am	Breakfast Session - 'Meet the Experts' - Basic Science/Immunology						
	Riverview 4						
			7.45am - 8.45am	Oral Poster Session - Clinical, Allied Health and Basic Science			
			Meeting Room 1,2,3				
8.00am - 9.00am	Arrival coffee/tea in Foyer, Level 2						
9.00am- 10.30am	Clinical Epidemiology	9.00am- 10.30am	Social Research - Listen Up: International Perspective on Young People and HIV Risk	9.00am- 10.30am	Blood-Borne Viruses: Co-Infection	9.00am- 10.30am	Program Delivery
	Riverside Theatre/Auditorium		Riverview 4		Meeting Room 1,2,3		Meeting Room 8
10.30am - 11.00am	Morning Tea in Foyer, Level 2						
11.00am - 12.45pm	Plenary - HIV AND TB Coinfection and Conference Closing						
	Riverside Theatre/Auditorium						
12.45pm - 1.45pm	Lunch in Foyer, Level 2						
1.45pm	Conference Close						

SATURDAY 20 SEPTEMBER 2008

ACON Presents:

Prevention and Treatment Issues for Older Gay Men.

A sponsored ASHM conference session on differences in risk, behaviour and health promotion need in men over 40

Chairs:

Stevie Clayton
ACON

Geoff Honnor
NSW Health

Panellists:

Garrett Prestage
NCHECR

John Imrie
NCHSR

Dermot Ryan
ACON

Russell Westacott
ACON

Rob Lake
Positive Life NSW



Thursday 18 September 3.30pm – 5.00pm Meeting Room 8

The average age of seroconversions is increasing; people with HIV are living longer and more men in their 40s and 50s are becoming HIV positive. This 90 minute session brings together a range of researchers, service delivery and health promotion professionals to explore appropriate HIV prevention and health promotion responses for older gay men.

The session will include an examination of available data - both nationally and internationally - that highlight issues in relation to risk behaviour impacting on seroconversions amongst this group. Additionally, the session will explore aspects of sex cultures and the framing of prevention messages, specific interventions targeted to older HIV positive men, as well as explore the implications for an ageing GLBT community, including workforce development needs in the medical and aged care sectors.

Supported by a funding grant from:

acon BUILDING OUR COMMUNITY'S
HEALTH & WELLBEING

NSW HEALTH



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INVITED SPEAKERS



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CHRIS BURRELL

After graduation, Prof Burrell trained at Prince Henry and Prince of Wales Hospitals in Sydney and completed a PhD on virus replication at ANU. He then spent 8 years as Lecturer in Bacteriology at Edinburgh University and the Royal Infirmary, Edinburgh, where he led a research laboratory on hepatitis B and trained in clinical virology. He moved to IMVS in 1979, and since 1990 has been Professor of Virology in the University of Adelaide and concurrently head of the Infectious Diseases Laboratories, IMVS. His research interests have included the molecular biology and pathogenesis of virus infections, particularly hepatitis B, HIV and papillomavirus; diagnostic virology; virus epidemiology and prevention. He has been active in NHMRC since 1980's, and has been member or chair of various advisory committees in the Government and private sector.

MARTYN FRENCH

Clinical Professor of Pathology and Laboratory Medicine at the University of Western Australia and a Clinical Immunologist at Royal Perth Hospital and PathWest Laboratory Medicine, Perth, Australia. Martyn French has been interested in the management of patients with acquired and primary immunodeficiency disorders since 1980 and has conducted research on the immunology of HIV infection since 1986. He is currently a member of INSIGHT Network Immunology Group. He has participated in the Australian HIV clinical trials program since the late 1980s and is currently Chair of the Antiretroviral Working Group of The National Centre in HIV Epidemiology and Clinical Research. His particular area of expertise is disorders of immune reconstitution in HIV patients receiving antiretroviral therapy and he first described immune restoration disease in 1992. He is an author of over 170 publications and a member of the editorial boards of *AIDS* and *Clinical Immunology*.

PAUL GORRY

Head, HIV Molecular Pathogenesis Laboratory, Burnet Principal Fellow, Macfarlane Burnet Institute for Medical Research & Public Health. Associate Professor of Medicine, Monash University, Melbourne

Paul Gorry completed his PhD in 1998, which examined mechanisms controlling HIV replication in brain astrocytes. From 1999 to 2002 he undertook postdoctoral studies at the Dana-Farber Cancer Institute at Harvard Medical School in Boston, where he researched mechanisms contributing to neurotropism and neurovirulence of HIV and host factors contributing to HIV transmission and persistence. In 2002 he returned to the Burnet Institute to head the HIV Molecular Pathogenesis Laboratory. Paul is presently Principal Fellow of the Burnet Institute Faculty, Associate Professor in the Department of Medicine at Monash University, and Associate Professor in the Department of Microbiology and Immunology at the University of Melbourne. His major research interests are pathogenesis of CCR5-restricted HIV variants, structure-function relationships of the HIV Env glycoproteins, and HIV neuropathogenesis.

INVITED SPEAKERS



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INVITED SPEAKERS

ROY GULICK

Professor of Medicine at Weill Medical College of Cornell University, Director of the Cornell HIV Clinical Trials Unit of the Division of International Medicine and Infectious Diseases, and Attending Physician at the New York Presbyterian Hospital in New York City

Dr Gulick is Director of the Cornell HIV Clinical Trials Unit and Professor of Medicine at Weill Medical College of Cornell University in New York City. His research interests include designing, conducting and analysing clinical trials to refine antiretroviral therapy strategies and assess antiretroviral drugs with new mechanisms of action. He currently serves as Principal Investigator of the Cornell Clinical Trials Unit and as Chairman of the Optimization of Antiretroviral Therapy Committee of the AIDS Clinical Trials Group (ACTG), sponsored by the National Institutes of Health. He also serves as a board member of the International AIDS Society-USA and as a member of the Panel on Clinical Practices for Treatment of HIV Infection of the US Department of Health and Human Services. He is a member of the American Society of Clinical Investigation and the International AIDS Society and has presented at national and international meetings and published widely in the field of HIV/AIDS.

ADEEBA KAMARULZAMAN

Head, Infectious Diseases Unit, Department of Medicine, University of Malaya Medical Centre, Malaysia

Professor Adeeba Kamarulzaman is presently the Head and Professor of Infectious Diseases at the University of Malaya where she oversees the running of an HIV/AIDS tertiary referral and research centre in Kuala Lumpur.

In addition to her clinical and academic commitments, she has been actively involved in the community response to HIV/AIDS in Malaysia. As convenor of the Malaysian Harm Reduction Working Group of the Malaysian AIDS Council, she successfully led the advocacy for the implementation of harm reduction, including oral substitution therapy and needle syringe programs in Malaysia in 2005. In January 2006 she was elected President of the Malaysian AIDS Council, the umbrella organization for all AIDS NGOs in Malaysia. In this capacity, she has been further involved in advocating for and overseeing the implementation of community-based HIV/AIDS programmes across the country. She is presently the Chair of the TREAT Asia Steering Committee, and is a member of the Executive Committee and Advisory Boards of the International Harm Reduction Association and the International Harm Reduction Development, as well as the American Foundation for AIDS Research (amfAR). Additionally, she is an Executive Committee member of the United Nations Regional Task Force on HIV Prevention Amongst Drug Users, and a member of the United Nations Reference Group on HIV and Injecting Drug Use.



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ANTHONY KELLEHER

Associate Professor of Medicine at the University of New South Wales and Group Head of the Immunovirology and Pathogenesis Program of the National Centre in HIV and Epidemiology Clinical Research. He is also a Clinical Immunologist and Immunopathologist at Saint Vincent's Hospital, n Sydney, Australia.

Over the last 16 years Professor Kelleher has conducted extensive clinical and laboratory-based research into the immunopathogenesis of HIV-infection, particularly with regards CD4 and CD8 T-cell responses during primary infection and in long-term non-progressors. He has conducted studies describing the impact of various therapeutic interventions on these responses. These studies complement his interest in the impact of immune responses on viral evolution and escape. He has been responsible for the conduct of several trials of immunotherapeutics and has been involved with each of the prophylactic HIV vaccine trials so far conducted in Australia. He works collaboratively with other Australian and international groups in the USA, Europe and Thailand. This work has resulted in a large number of peer-reviewed publications. In 2007 he was awarded a National Health and Medical Research Council Practitioner Fellowship.

SIMON MALLAL

Director of the Institute for Immunology and Infectious Diseases at Murdoch University and Royal Perth Hospital, Western Australia.

Simon Mallal studied medicine at the University of Western Australia and has managed patients with HIV, auto-immune and allergic disease in Perth since 1987, and supervises the associated routine diagnostic immunology and molecular biology laboratory. He is a Clinical Immunologist trained in Internal Medicine and Pathology and completed a Post-Doctoral Fellowship in Infectious Diseases at the Johns Hopkins School of Medicine, Baltimore, Maryland.

He has had a longstanding research interest in the genes which influence the outcomes of HIV and other diseases. More recently, he has focused on the way viruses adapt to the immune system of the patient and the implications of this for HIV vaccine design and other newly emerging infectious disease threats. His group also studies the genetics and mechanisms by which drugs may cause severe side effects. Their discovery of a genetic test to predict those patients predisposed to develop a potentially life-threatening reaction to the important anti-HIV drug abacavir has been taken up globally and represents one of the first successful implementations of personalised medicine.

INVITED SPEAKERS

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INVITED SPEAKERS

GITA RAMJEE

Medical Research Council HIV/AIDS Lead Programme and HIV Prevention Research Unit Durban, South Africa

Gita Ramjee is the Director of the South African Medical Research Council's HIV Prevention Research Unit and Director of the HIV/AIDS lead program. She was awarded distinguished visiting professor by Tamil Nadu Medical University in Chennai, India. In 1988, she joined the Department of Pediatrics at the University of Kwazulu Natal to complete a masters degree, studying fungal diseases in malnourished children. She then completed her PhD in kidney diseases of childhood. In the early 1990s, she joined the Medical Research Council to work on HIV/AIDS, and in particular women-initiated HIV prevention options. She is well known for her work on HIV prevention trials. Her unit is the only one worldwide which conducted 4 Phase III and 1 Phase IIB trial of women-initiated prevention methods consecutively. She has authored over 50 peer-reviewed publications and serves as a reviewer for many international journals and research organisations. In 2006, she was a finalist in the science category of the Woman of the Year award in South Africa. She is an invited member of several societies in recognition of her contribution to the field of HIV prevention.

SARAH ROWLAND-JONES

Human Immunology Unit, John Radcliffe Hospital, Oxford, United Kingdom

Sarah Rowland-Jones qualified in medicine from the universities of Cambridge and Oxford, and trained in Infectious Diseases in London and Oxford. She began her research career in Oxford with Professor Andrew McMichael on the role of cellular immune responses to viral infections. Since 1995 she has led a research group in the Medical Research Council (MRC) Human Immunology Unit in Oxford, studying the role played by cytotoxic T-cells in determining the outcome of HIV infection, as well as dengue and influenza virus infections. A key focus of the work has been the study of immune responses to HIV in people with an unusually good outcome of their exposure to the virus. Since 2004 she has worked as Director of Research in the MRC laboratories in the Gambia, the UK's oldest and largest overseas research unit, which has led to a shift in her research focus towards understanding the pathogenesis of and immune response to HIV-2 infection in West Africa.

BRUNO SPIRE

Social Researcher, Marseilles, France

Bruno Spire got his MD degree in 1985 and his PhD in virology in 1990. In the early 1980s he worked in the laboratory at the Institut Pasteur with Françoise Barré-Sinoussi and participated in the first studies aimed at characterising HIV. In the 1990s he worked in HIV molecular virology on the role of the vif accessory gene. In 1999, he switched to social sciences and public health issues and focused on adherence to antiretroviral treatment, quality of life and risky behaviours of people living with HIV/AIDS. He has a permanent position at the French National Research Institute for Medical Research and leads his own group in the field of public health applied to HIV. Dr Spire is openly HIV-positive and is the new president of AIDES, the French community-based NGO.



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DAVID WILSON

Senior Lecturer, Curtin University of Technology, Perth

David has worked in the field of HIV prevention for over 20 years as an academic and practitioner. He is currently Acting Director and Lead Health Specialist in the Global HIV/AIDS Program of the World Bank. He holds an adjunct professorial position at the Centre for International Health at Curtin University of Technology in Perth, Western Australia. He has worked in over 50 countries in Africa, Asia, Eastern Europe, the Middle East and the Caribbean. He has also consulted on HIV prevention for several international agencies, including AusAID, DFID, EU, USAID, UNAIDS, UNICEF, USAID and the World Bank. His major research and applied interests are in the use of surveillance systems to characterise HIV epidemics, understand critical HIV/AIDS transmission dynamics and intervention priorities and to promote HIV prevention responses that are grounded in a thorough understanding of national and local HIV epidemics – an understanding of the “last 1,000 infections in a given context.

PIETRO VERNAZZA

Division of Infectious Diseases of a tertiary hospital in Eastern Switzerland, St. Gallen and President of the Swiss Federal Commission on AIDS

Pietro Vernazza trained in internal medicine and infectious diseases in St.Gallen, Switzerland and at the University of North Carolina at Chapel Hill. Since the early 1990s he focused his clinical research on co-factors of sexual transmission of HIV and in the past six years has begun to investigate options for simplified maintenance treatment with PI monotherapy for HIV. Dr Vernazza is a member of the Swiss HIV Cohort where he chaired the Scientific Board from 2001 to 2007. Since 2000 he has been head of the Division of Infectious Diseases of a tertiary hospital in Eastern Switzerland, St. Gallen. He is currently president of the Swiss Federal Commission on AIDS.

ROBIN WOOD

Director of the Desmond Tutu HIV Centre Institute of Infectious Disease and Molecular Medicine, University of Cape Town Faculty of Health Sciences Observatory, South Africa

Professor Robin Wood completed his undergraduate training at the universities of Oxford and London and carried out post-graduate training in internal medicine at the University of Cape Town, and infectious diseases training at Stanford Medical School, California. Since 1993 he supervised the first dedicated HIV clinic in the Western Cape at Somerset Hospital (Cape Town, South Africa). He has overseen the development of HIV care services within the public sector at secondary hospital, community health and primary health clinic levels.

Professor Wood is currently the Director of the DesmondTutuHIVCentre. He supervises the largest community ART clinic in the Western Cape and the TB/HIV Research programme in Masiphumelele, a local township. His major research interests are in the fields of infectious diseases and HIV. He has published widely in the areas of HIV management, tuberculosis interaction with HIV and new drug development.

INVITED SPEAKERS

MEMORIAL SESSIONS

ASHM has a commitment to ensure that at each annual ASHM Conference we honour the memory of those people who have contributed greatly to the sector. Four memorial sessions are held each year. These include: an Epidemiology Session on behalf of Margaret MacDonald; a Community Session on behalf of Phillip Medcalf; a Primary Care Session on behalf of Peter Meese; and a Clinical Medicine Session on behalf of Ian Thompson.

MARGARET MACDONALD

Dr Margaret MacDonald, a Senior Lecturer at the National Centre for Epidemiology and Clinical Research, died on 29 September 2003 after a very brief illness. She had made a substantial contribution to Australia's remarkable response to the threat of an HIV epidemic. Dr MacDonald was a nurse before developing her career as a public health researcher. She devised and established a series of inexpensive, timely and effective epidemiological monitoring techniques, especially for populations of injecting drug users. Her influence extended beyond Australia through this work. Dr MacDonald is best known for developing in 1995 an annual survey of demographic characteristics, drug consumption, risk behaviour, and hepatitis C and HIV serology. She had recently contributed substantially to the official evaluation of the Medically Supervised Injecting Centre in Kings Cross, Sydney. Despite her considerable contribution and international reputation, Dr MacDonald remained the same unassuming and self-effacing figure. Her work was influenced by a strong concern for social justice. Dr MacDonald had a wide range of interests and enjoyed many pursuits.

PHILLIP MEDCALF

Phillip Medcalf, President of NAPWA, died on 22 February 2003. In the Australia Day Awards of 2003, Phillip James Medcalf (deceased) was awarded the Medal of the Order of Australia for service to the community as a supporter and promoter of the interests of people living with HIV/AIDS. Phillip had been a volunteer in the sector since he retired from full-time work as the General Manager at Sydney Sexual Health Centre in 1996. From 1996, Phillip had state-based roles in PLWH/A (NSW), The AIDS Council of NSW and the Bobby Goldsmith Foundation as representative on the boards and committee membership of the NSW HIV Agencies Forum, and the NSW Rural HIV Conferences. In May 1999 Phillip joined the National Association of People living with HIV/AIDS (NAPWA) Executive Committee, nominating for Vice President after several years as a PLWH/A (NSW) representative to the national body. In 2001 Phillip became President of NAPWA, a position he held until his death. Over this period he also represented in a variety of national positions, including the Commonwealth World AIDS Day Committee, the NAPWA nominee on the Board of Governors of the AIDS Trust of Australia (ATA), and the Board of Directors of the Australian Federation of AIDS Organisations (AFAO).

He was also working in a part-time capacity at the Australasian Society for HIV Medicine (ASHM) from August 2000 to March 2002. In a year when he was the Executive Assistant to the Executive Officer of ASHM, he was also the NAPWA President and was invited to be part of the opening session of the 2001 ASHM Conference. Phillip leaves behind a legacy that was valued and appreciated by people all around Australia.

PETER MEESE

Dr Peter Meese, a physician in the Infectious Diseases Unit of the Alfred Hospital, Melbourne, died on 23 February 2000. He graduated from the University of Melbourne and began working at Middle Park Clinic in 1976.

Peter was a dedicated GP. His gifts of optimism, empathy and intelligence were available to all who consulted him. His patients had every confidence in him. Peter also worked very hard for advancement in his profession. He was affiliated with many medical organisations, but worked particularly hard in the pursuit of excellence in the field of HIV and Sexual Health and was a very active HIV/STI clinician and ASHM Member. Peter was a Senior Fellow of the Australasian College of Sexual Health Physicians, contributing articles and being involved in the examination process of its doctors. He was one of the editors of the Management Guidelines for Sexually Transmissible Infections. Peter was a long-term committee member and past chairman of the Venereology Society of Victoria and a past president of the National Venereology Council of Australia. He taught and examined the students of the Diploma of Venereology, and was always contributing to furthering the knowledge in the field of STIs. He was also an examiner for the Royal Australian College of General Practitioners.

Peter had worked in the Infectious Diseases Unit of the Alfred Hospital for almost a decade. He was instrumental in ASHM and the National Centre in HIV Epidemiology and Clinical Research. He was always involved in clinical trials - for the benefit of his patients. He made an invaluable contribution to this field of medicine.

IAN THOMPSON

Dr Ian Lyall Thompson FRCP FRACP, consultant physician and haematologist, died in Sydney in August 1989 at the age of 59. He was educated at Scots College, Sydney and the Faculty of Medicine of the University of Sydney. He became a member of the Royal College of Physicians in 1959 and subsequently a Fellow of the Royal College of Physicians and the Royal Australasian College of Physicians. In Sydney, his main appointments were consultant physician at Sydney Hospital, Crown Street Women's Hospital, St Luke's Hospital and later at St Vincent's Hospital, Darlinghurst, where he was consultant physician to the Haematology and HIV Medicine Units. Dr Thompson was known by all for his enormous breadth and depth of knowledge, his rapier-sharp wit and his ever-present sense of humour. A compassionate and disciplined man, he was dedicated to the care of his patients and as a diagnostician he was unsurpassed. He was a much-loved teacher of medical students and of physician trainees. He devoted an enormous amount of time to and unending support for his younger colleagues, encouraging them in the pursuit of their careers in medicine. But it is not only within medicine that he will be remembered - his great knowledge covered the fields of art, literature, music and travel. He was a consummate conversationalist and entertainer. His enthusiasm for life itself made him a truly remarkable man, for which he will always be remembered.

Gilead recognizes the urgent need for access to healthcare capacity as well as HIV medications worldwide, particularly in developing countries where the AIDS epidemic is devastating communities. We believe that the medicines we develop should be accessible to all patients who need them worldwide, regardless of income or location.

Our heart is in the right place.

We are undertaking the following initiatives locally and globally to help further expand access to our medicines and build healthcare capacity in resource-limited settings:

Gilead Access Program – to provide Viread® (tenofovir disoproxil fumarate) and Truvada® (emtricitabine/tenofovir disoproxil fumarate) at substantially reduced prices in many low and middle income countries. This has been ongoing since 2003.

Partnerships with Generic Manufacturers – Gilead has signed non-exclusive licenses with multiple Indian generic manufacturers to provide low cost high-quality generic versions of Viread® in 95 resource-limited countries, which are home to 95% of the world's HIV infected people.

The Gilead Foundation – focused on improving health infrastructure in the developing world.

A member of the Collaboration for Health in Papua New Guinea (CHPNG)*
– to create sustainability and capacity in HIV management in PNG and meet the needs identified by our primary stakeholders and partners – ASHM and NAPWA.

*Gilead, Boehringer Ingelheim, Merck Sharpe & Dohme, GSK, Pfizer Australia.

 **GILEAD** Advancing Therapeutics. Improving Lives.



20th annual
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Back-to-back with the Australasian Sexual Health Conference 15 – 17 September 2008

**Wednesday 17 to
Saturday 20 September 2008**

Perth Convention Centre, Western Australia

**GENERAL
INFORMATION**



ashm
Australasian Society for HIV Medicine Inc



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DISCLAIMER

All information disclosed in the Conference Program is correct at the time of printing. The Conference Secretariat reserves the right to alter the Conference Program in the event of unforeseen circumstances. All speakers were invited to contribute abstracts for inclusion in the Conference Handbook. Unfortunately, not all speakers were able to provide us with their abstracts at the time of printing. The Conference Secretariat accepts no responsibility for errors, misprints or other issues with abstracts contained in this handbook.

VENUE

Perth Convention Centre
21 Mounts Bay Road, Perth
Western Australia 6000
PO Box 7451, Cloisters Square, Perth
Western Australia 6850
Ph: +61 8 9338 0300
Fax: +61 8 9338 0309

The venue will host the conference sessions, poster presentations, the breakfast session, conference day catering, the trade exhibition and the Gala Dinner.

REGISTRATION DESK

All enquiries should be directed to the registration desk, located on Level 2 of the Perth Convention and Exhibition Centre. The desk will be open at the following times:

Wednesday 17 September 2008: 7.30am to 6.30pm
Thursday 18 September 2008: 7.00am to 6.30pm
Friday 19 September 2008: 7.00am to 6.30pm
Saturday 20 September 2008: 7.00am to 2.00pm

SPEAKER PREPARATION ROOM

A speaker preparation room will be located in Meeting Room 12. This room will be open at the following times:

Tuesday 16 September 2008: 3.30pm to 6.00pm
Wednesday 17 September: 7.30am to 6.00pm
Thursday 18 September 2008: 7.00am to 6.00pm
Friday 19 September 2008: 7.00am to 6.00pm
Saturday 20 September 2008: 7.00am to 12.00pm

All speakers must take their presentation to the speaker preparation room a minimum of four hours prior to their presentation or the day before if presenting at a breakfast or morning session.

EXHIBITION

An exhibition will be held in Pavilion 1 of the Perth Convention Centre.

The Australasian Sexual Health Conference exhibition concludes on Wednesday 17 September at 5.00pm.

The exhibition will open for the ASHM Conference on Wednesday 17 September 2008 at 8.00am and conclude on Friday 19 September at 3.30pm.

The exhibition will be open during the following hours:

Wednesday 17 September 2008: 8.00am – 5.00pm
Thursday 18 September 2008: 8.00am – 5.00pm
Friday 19 September 2008: 8.00am – 3.30pm

POSTER DISPLAY

Posters will be displayed, grouped in their disciplines, for the duration of the exhibition in Pavilion 1 of the Perth Convention Centre.

There are dedicated poster viewing times for each theme area. These are:

- Wednesday 17 September at 12.30pm - 1.30pm: Basic Science, Clinical Medicine, Community Program and Education Posters.
- Thursday 18 September at 12.30pm - 1.30pm: Epidemiology, Indigenous Health and International & Regional Issues Posters.
- Friday 19 September at 12.30pm - 1.30pm: Nursing & Allied Health, Primary Care, Public Health & Prevention and Social Research Posters.

INTERNET CAFÉ

The Internet café, proudly sponsored by Janssen-Cilag Tibotec will be available in Pavilion 1, at Booths 31 and 32. This will be available from Wednesday 17 September 2008 at 8.00am until Friday 19 September 2008 at 3.30pm.

JUICE BAR

A Juice Bar, proudly sponsored by Boehringer Ingelheim, will be available in Pavilion 1, at Booths 3 and 4. This will be available from Wednesday 17 September at 8.30am until Friday 19 September 2008 at 3.30pm.

GENERAL INFORMATION

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INFORMATION HUB

The Information Hub will be located on Level 2 next to the registration desk. Three computers will be available for:

- Completing an online conference evaluation survey
- Printing a certificate of attendance
- Viewing the Australasian Chapter of Sexual Health Medicine Mock Exit Assessment Presentation
- Viewing the abstract search database
- Viewing delegate lists

HIV PRESCRIBER CME POINTS

HIV s100 prescribers who are accredited in NSW/ACT/VIC will receive 5 Prescriber CME points for their attendance at the conference.

RACGP/RACP/ACHSHM: CME & MOPS POINTS

Application has been made to have attendance recognised for Quality Assurance & Continuing Professional Development. If you wish to claim CME points please ensure that you sign the attendance sheet at the Information Hub. You will be able to print a certificate of attendance at the Information Hub.

SMOKING

This conference has a no smoking policy.

MOBILE PHONES/BEEPERS

As a courtesy to all delegates and speakers, please switch off, or set to silent, your mobile phones and beepers during all sessions.

NAME BADGES

For security purposes, all attendees must wear their name badge at all times while in the conference venue. Entrance to the exhibition will be limited to badge-holders only. If you misplace your name badge, please advise staff at the registration desk.

PERSONAL MAIL

The conference organisers do not accept responsibility for personal mail. Please have all mail sent to your accommodation address.

EVALUATION SURVEYS

Evaluation Surveys will be available on-line at the Information Hub. We ask that all delegates complete this survey electronically to go into a prize draw to win two tickets for the Sydney Harbour Bridge Climb.

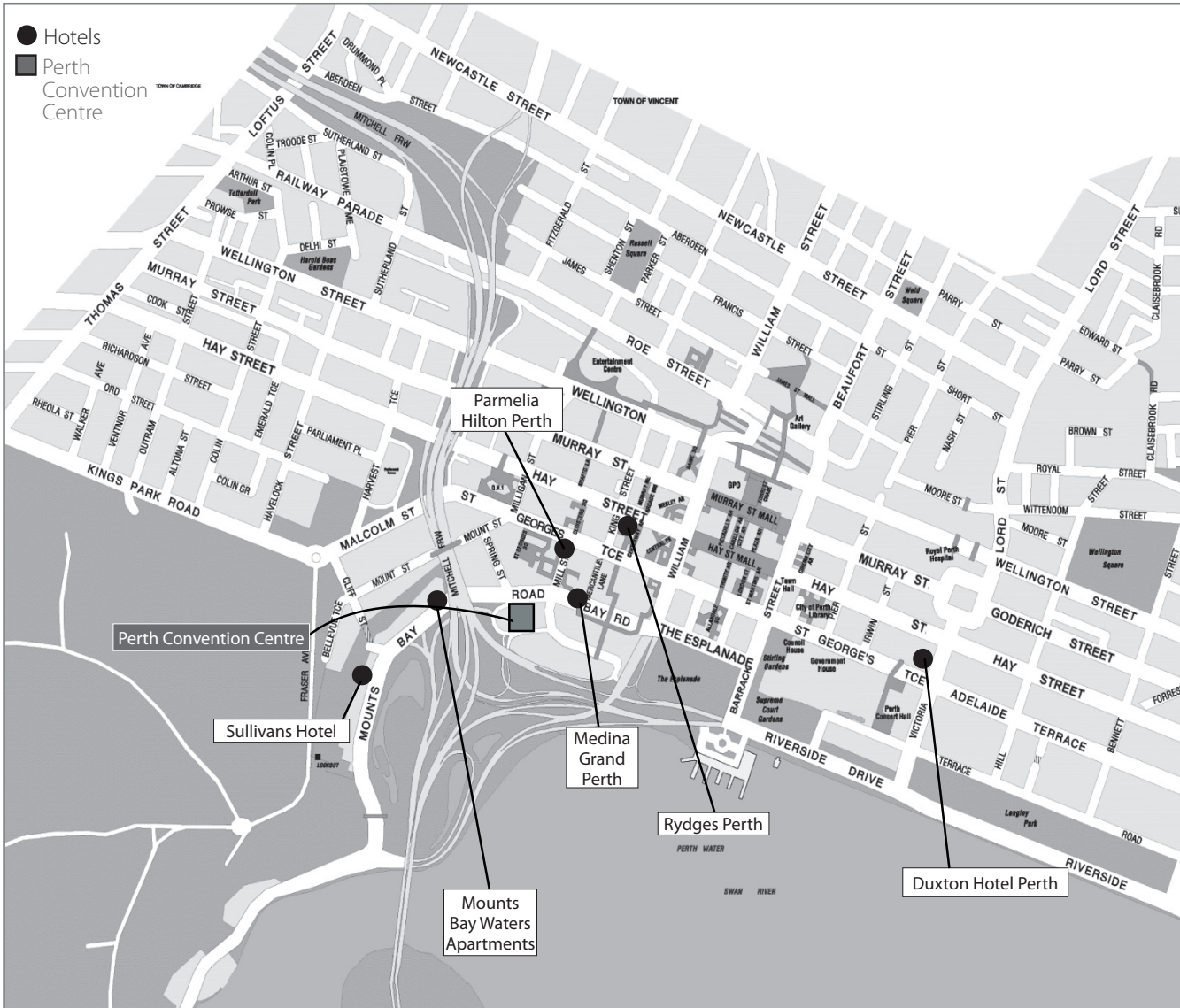
DELEGATE LIST

A delegate list will be viewable at the Information Hub.

LIABILITY/INSURANCE

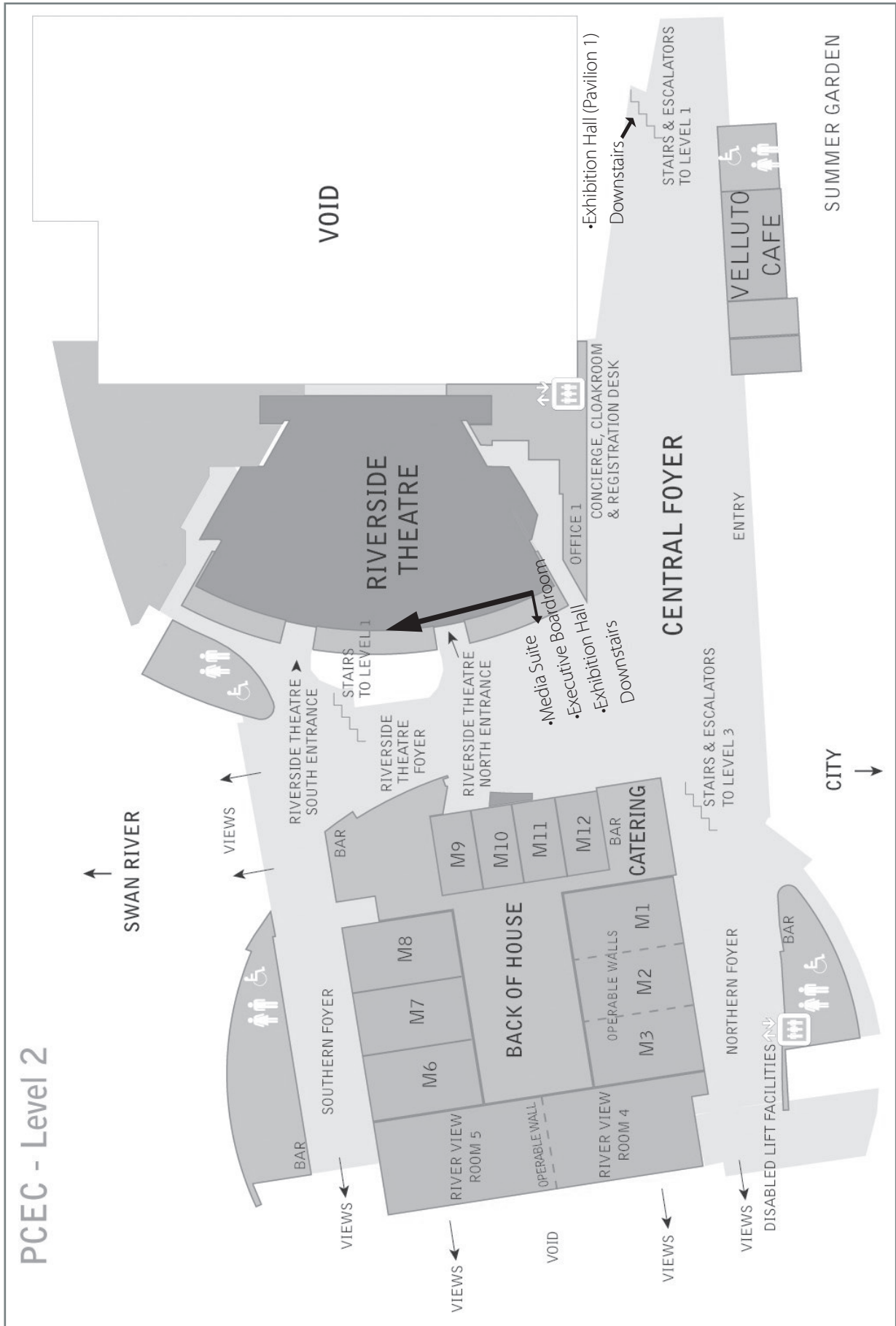
In the event of industrial disruptions or natural disasters ASHM cannot accept responsibility for any financial or other losses incurred by delegates. Nor can the Secretariat take responsibility for injury or damage to property or persons occurring during the conference or associated activities. Insurance is the responsibility of the individual delegate.

20th annual ashmconference



LOCATION MAP

VENUE FLOOR PLAN (PERTH CONVENTION CENTRE)





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CONFERENCE GALA DINNER

Wednesday 17 September 2008: 7.30pm to 11.30pm
Bellevue Ballroom, Level 3
The Perth Convention Exhibition Centre

The theme of the dinner is 'Diamonds are Forever'. Tickets will be required for entry to all associated events. All tickets will be given out on registration. No tickets for the Conference Gala Dinner are available on-site.

The dinner is supported by the Australian Government Department of Health and Ageing, WA Health, Gilead, GlaxoSmithKline, Boehringer Ingelheim and Merck Sharp & Dohme.

CASE PRESENTATION BREAKFAST

Friday 19 September 2008: 7.00am
Riverview 4, Level 2
The Perth Convention Exhibition Centre

Case presentations will be supported by brief literature reviews and open to audience questions. Breakfast will be served during this session. The best case presentation will be awarded a cash prize.

Tickets will be required for entry to all associated events. All tickets will be given out on registration. If you would like to purchase tickets to the Case Presentation Breakfast you may do so up until 12 noon on Wednesday 17 September at the registration desk.

The Case Presentation Breakfast is optional and is not included in any of the registration fees.

Ticket cost: A\$22.00 for all registrants.

TICKETS TO ASSOCIATED EVENTS

Tickets will be required for entry to all associated events. All tickets will be given out on registration. A no-refund policy operates for cancellation of function tickets.

MEDIA EVENT:

HIV Epidemiology and Public Health
Response in WA
Friday 19 September 2008: 5.00pm to 6.30pm

ASHM will be holding a media event in conjunction with the Western Australian Department of Health, exploring the impact of the Western Australian economic boom on HIV infection rates among WA's heterosexual population. This session will be held Friday 19 September 2008.

The session will feature a panel including: Paul Van Buynder, WA Public Health Division; Trish Langdon, WA AIDS Council; Don Baxter, Australian Federation of AIDS Organisations; and Darren Russell, Cairns Sexual Health.

Open to all delegates.

CONSENSUS CONFERENCE

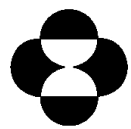
The Perth Convention Exhibition Centre

The Annual Consensus Conference is this year incorporated into the clinical stream of the main ASHM 08 Conference program. Previously, the Annual Consensus Conference has been held on the Saturday afternoon immediately following the close of the ASHM Conference. Feedback from previous years has suggested that attendance and participation would be maximised if the Australian Antiretroviral Guideline sessions were moved into the ASHM program.

This year, the Australian Antiretroviral Guidelines sessions will be held on the afternoons of Thursday 18 and Friday 19 September. These sessions include evidence-based presentations from international and local experts on the latest research and developments in HIV treatment and provide the opportunity for discussion.

Dr Roy Gulick is a member of the US Department of Health and Human Services (DHSS) Panel on Antiretroviral Guidelines for Adults and Adolescents and will represent DHSS at these sessions. The DHSS Guidelines for the Use of Antiretroviral Agents HIV-1 Infected Adults and Adolescents have been endorsed by Australia and form the basis on which the Australian commentary is developed. The Australian commentary to the latest Guidelines for the Use of Antiretroviral Agents in HIV-1 Infected Adults and Adolescents is available at: <http://www.ashm.org.au/aust-guidelines/>.

ASSOCIATED EVENTS



MERCK SHARP & DOHME

Finding better ways

- Silver Sponsor
- Conference Scholarship Supporter
- CD-Rom Handbook Sponsor



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Perth Convention Centre, Western Australia

**EXHIBITOR
DIRECTORY**



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EXHIBITION BOOTH LISTING

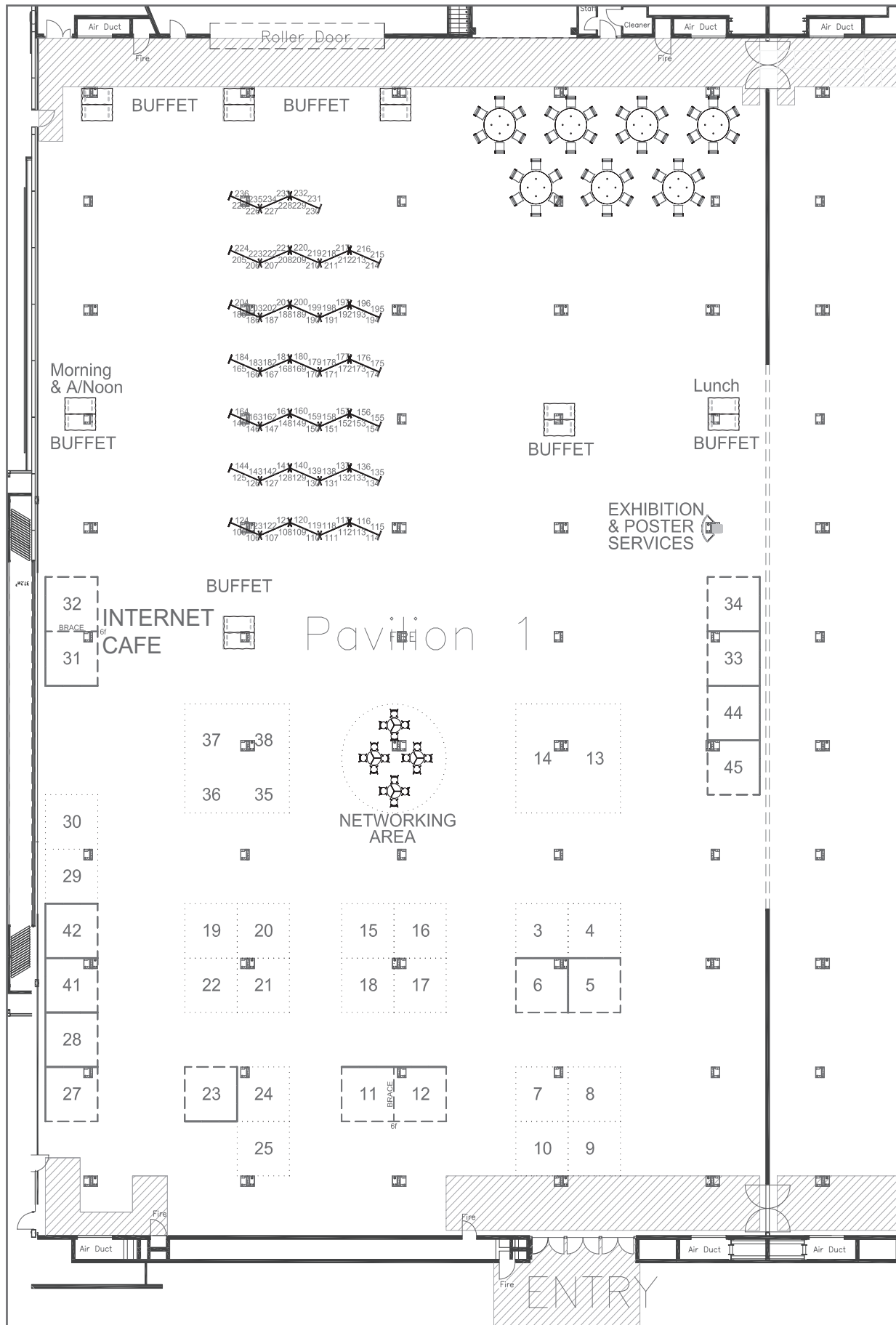
Company Name	Booth Number
Abbott.....	24,25
Australasian Chapter of Sexual Health Medicine	6
Australasian Society for HIV Medicine	11,12
Boehringer Ingelheim	3,4
Bristol-Myers Squibb	19,20,21,22
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Novartis	13,14
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The UnderView Collection - Glen Cowans	33
WA Health	23

The following organisations are exhibiting during the Sexual Health Conference and will be available to visit on Wednesday 17 September only.

CSL Biotherapies.....	45
Marie Stopes International.....	39
Qiagen.....	2

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EXHIBITOR FLOOR PLAN





ABBOTT (24, 25)

We are a global health care company devoted to discovering new medicines, new technologies and new ways to manage health. Our products span the continuum of care, from nutritional products and laboratory diagnostics through medical devices and pharmaceutical therapies including Kaletra, Humira and Reductil. Throughout our 100+ year history, Abbott people have been driven by a constant goal: to advance medical science to help people live healthier lives. It's part of our heritage. And, it continues to drive our work. Today, 65,000 Abbott employees around the world share the passion for "Turning Science Into Caring."



The Royal Australasian
College of Physicians
Adult Medicine Division

Australasian Chapter of Sexual Health Medicine

AUSTRALASIAN CHAPTER OF SEXUAL HEALTH MEDICINE (6)

The Australasian Chapter of Sexual Health Medicine is the professional body responsible for the education and training of doctors wishing to specialise in sexual health. It contributes to the professional development of other health professionals through its training courses, and the development and dissemination of guidelines and other educational products. It provides expert advice to government and other agencies on sexual health matters and its Fellows contribute to policy development at state and national level.

Australasian Chapter of
Sexual Health Medicine
145 Macquarie Street
Sydney NSW 2000
Australia

Ph: (+61 2) 9256 9643
Fax: (+61 2) 9256 9693
Email: sexualhealthmed@racp.edu.au



ashm
Australasian Society for HIV Medicine Inc

AUSTRALASIAN SOCIETY FOR HIV MEDICINE (11,12)

The Australasian Society for HIV Medicine (ASHM) is a peak representative professional body for medical practitioners and other health care workers in Australasia who work in HIV, viral hepatitis and related disease areas.

It was formed in 1988 (as the Australian Society of AIDS Physicians). It changed its name in 1989 to reflect a broader membership base and was incorporated in New South Wales in 1990. ASHM became a registered charity in 2003.

ASHM is a key partner in the Australasian and regional response to HIV, viral hepatitis and related diseases. It works closely with government, advisory bodies, community agencies and other professional organisations in Australia and the Asia Pacific region. It conducts broad education programs in HIV and viral hepatitis for medical practitioners, health care providers and allied health workers and manages programs of continuing medical education.

ASHM is governed by an elected voluntary board and managed by a secretariat. It receives support from the Australian Government Department of Health and Ageing, the Australian Government's Agency for International Development (AusAID), State and Territory Departments of Health and the private sector, and has established the ASHM Foundation which raises funds in support of educational activities. ASHM works on a range of issues affecting its members, including education and training, resources, HIV treatment, viral hepatitis, international/development issues and professional affairs. ASHM conducts an annual medical scientific conference. In addition, the ASHM conference division provides professional conference organisation to third parties.

Australasian Society for HIV Medicine (ASHM)
LMB 5057
DARLINGHURST NSW 1300
Australia
Ph: 61 2 8204 0700
Fax: 61 2 9212 2382
Email: ashm@ashm.org.au
Web: www.ashm.org.au



**Boehringer
Ingelheim**

BOEHRINGER INGELHEIM (3, 4)

Boehringer Ingelheim is committed to active involvement and practical answers for people living with HIV. The fight against HIV/AIDS extends to resource-poor settings, where Viramune® (nevirapine) has been donated to treat more than 1,000,000 mother-child pairs through 162 programmes in 59 countries through the Viramune Donation Programme.

Boehringer Ingelheim is also proud to be a member of the Collaboration for Health in PNG (CHPNG). The CHPNG is the initiative of a group of Australian pharmaceutical companies who are dedicated to making a philanthropic contribution towards improving the health and wellbeing, and political and social stability of Australia's nearest neighbour and is currently working with its partners to provide education and support to health care workers in PNG.

Contact:
PO Box 1969
Macquarie Centre
NORTH RYDE NSW 2113
Phone: 61 2 8875 8833
Fax: 61 2 8875 8712



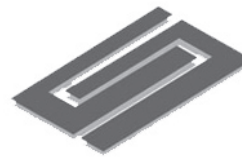
Bristol-Myers Squibb
Virology Division

BRISTOL-MYERS SQUIBB (19, 22)

Bristol-Myers Squibb is a global biopharmaceutical company with a mission to extend and enhance human life.

Operating in Australia since 1930, Bristol-Myers Squibb is dedicated to discovering and developing innovative and cost-effective medicines addressing significant unmet medical needs. The Bristol-Myers Squibb R&D organisation is working on treatments for cancer, atherosclerosis/thrombosis, diabetes, obesity, psychiatric disorders, Alzheimer's disease, hepatitis, HIV/AIDS, rheumatoid arthritis, and solid organ transplant rejection.

For many years Bristol-Myers Squibb has been a leader in the area of HIV/AIDS and currently provides Reyataz® (atazanavir sulfate) to thousands of Australians.



CARADATA

CARADATA (5)

CaraData is a successful Queensland based technology company that specialises in the development of health informatics software for use in the management and surveillance of sexual health, communicable diseases, HIV/AIDS, Hepatitis C and Family Planning clinics. CaraData's core product is SHIP – Sexual Health Information Program. SHIP has been designed to reduce the workload for Medical, Administration, Nursing and Laboratory staff and to support the transition to a full electronic patient record. SHIP is user friendly, flexible and adaptable to meet minimum data set requirements. In 2004 CaraData took over from Dickson Computer Services (DCS) where SHIP was first developed by CEO Bridget Dickson in 1992. Since then SHIP is now installed in more than 68 clinics throughout the world including Malaysia, New Zealand, Barbados, Ireland and six states in Australia – Queensland, New South Wales, Australian Capital Territory, Tasmania, Northern Territory and Western Australia. In 2005 CaraData established another branch over in Dublin, Ireland. Through this CaraData is able to provide 24/7 support to all its clients.

Contact Details:
Email: info@caradata.com
Ph: +61 7 5594 9328
Fax: +61 7 5571 5376
Web: www.caradata.com



GILEAD (15-18)

Gilead's mission is to advance patient care by developing ground-breaking therapeutics to treat life-threatening infectious diseases. We apply the best of biopharmaceutical science to create innovative medicines that bring new hope in the battles against HIV/AIDS (Truvada®, Emtriva®, Viread®), chronic hepatitis B (Hepsera®), and serious bacterial and systemic fungal infections (AmBisome®).

Company name: Gilead Sciences
Address: Level 1, 128 Jolimont Road, East Melbourne, Victoria, 3002, Australia
Phone: +61 (0)3 9272 4400
Fax: +61 (0)3 9272 4411

We look forward to seeing you at the Gilead Sciences booth at Sexual Health & ASHM.



GLAXOSMITHKLINE (7-10)

GSK Australia (GSK) is one of the largest research based pharmaceutical companies in Australia. GSK's vision is to "help people to do more, feel better and live longer".

The company's product portfolio is closely aligned with the country's key health priorities of asthma, immunisation, depression, diabetes, oncology, indigenous health and infectious diseases. GSK also supplies 25% of the world's medicinal opiate needs from its Australian operations.

GSK invests more than \$35 million a year in Australian research and development, confirming the company's place as one of the largest and most active innovators in the country.

Through a series of cooperative partnerships - with government, the scientific research sector and the broader Australian community - GSK makes a substantial contribution to important economic, social and health initiatives.



**Education Projects
The University of Queensland**

HIV & HCV EDUCATION PROJECTS THE UNIVERSITY OF QLD (28)

The HIV & HCV Education Projects is based within the School of Medicine, The University of Queensland and has been operating since the beginning of 1998. It is recognised at a state level, nationally and internationally as a centre of expertise in clinical education, facilitation, monitoring and evaluation, and resourcing.

Originally, the primary responsibility of the projects was to design, develop, implement and evaluate courses for medical practitioners who wished to prescribe HIV antiretroviral therapies in Queensland, Australia. This remains a core component of the organisation. By 2003, the HIV & HCV Education Projects was providing clinical education, facilitation, monitoring and evaluation, and resourcing in its three core domains of HIV, Sexual Health and Viral Hepatitis across a range of health disciplines, including medical practitioners, nurses, dentists, allied health and community health workers. By 2006 this expanded to include other domains.

School of Medicine-
The University of Queensland
288 Herston Road
HERSTON QLD 4006
Australia
Ph: 07 3346 4813
Fax: 07 3346 4757
Email: hivandhcvprojects@uq.edu.au

20th annual ashmconference



HIV CONSORTIUM (41)

The HIV Consortium for Capacity Building in Asia and the Pacific is funded by AusAID to strengthen the capacity of organisations and individuals to respond effectively to HIV by fostering strategic partnerships and linkages in the health care, research and community sectors.

Membership includes:

Albion Street Centre
Australasian Society for HIV Medicine
Australian Federation of AIDS Organisations
Australian Injecting and Illicit Drug Users League
Australian Research Centre in Sex, Health and Society
National Serology Reference Laboratory
National Centre in HIV Epidemiology and Clinical Research
National Centre in HIV Social Research
Scarlet Alliance, Australian Sex Workers Association

www.hivconsortium.org
02 8204 0751



iNOVA PHARMACEUTICALS (35-38)

iNova Pharmaceuticals develops and markets a range of over-the-counter and prescription medicines to Australasia, Asia-Pacific, South Africa, the Americas and other international markets directly and also through other pharmaceutical companies and agents. These include prescription medicines in the areas of weight management, dermatology, heart conditions, asthma and pain management.

To learn more about iNova Pharmaceuticals, go to <http://www.inovapharma.com>



JANSSEN-CILAG TIBOTEC (31, 32)

Tibotec, a division of Janssen-Cilag, is at the forefront of human immunodeficiency virus (HIV) research. With several active discovery programs in HIV, hepatitis C and other life-threatening infectious diseases, Tibotec's mission is to be a world leader in the discovery and development of innovative HIV/AIDS drugs and anti-infectives for diseases of high unmet medical need. PREZISTA[®] (darunavir) gained PBS approval in December 2007.

Tibotec, a division of Janssen-Cilag Pty Ltd
1 - 5 Khartoum Road, North Ryde,
NSW 2113 Australia
Ph: 61 2 8875 3333
Toll Free 1800 800806



MERCK SHARP & DOHME (29, 30)

Merck Sharp & Dohme (MSD) Australia is a research based pharmaceutical company and has been looking after the health of Australians since 1952, a history of which MSD is extremely proud. MSD invests a considerable amount into Australian research and development. Over 90% of MSD products are manufactured and packaged in Australia, which leads to new investment and infrastructure opportunities. The ongoing commitment of MSD in Australia is evidenced by its achievement in becoming the largest pharmaceutical exporter in the country, exporting to more than 16 countries throughout the world.

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NATIONAL ASSOCIATION OF PEOPLE LIVING WITH HIV/AIDS (44)

The National Association of People Living with HIV/AIDS is Australia's peak non-government organisation representing community-based groups of people living with HIV. NAPWA provides advocacy, policy, education and outreach on a national level.

We work across a range of health and education initiatives to promote the highest quality standard of care for HIV positive people and contribute to clinical and social research into the causes and prevention of HIV. We strive to minimise the adverse personal and social effects of HIV by championing the participation of positive people at all levels.



NATIONAL CENTRE IN HIV SOCIAL RESEARCH/ARCSHS (34)

The National Centre in HIV Social Research (NCHSR) was established in 1990 with funding from the Commonwealth Department of Health and Ageing, Australia. We are located within the Faculty of Arts and Social Sciences at The University of New South Wales, Sydney.

NCHSR is internationally recognised for its contribution to the Australian response to HIV and hepatitis C. While the core of its work has been in social aspects of HIV, particularly in regard to sexual practice, in recent years the NCHSR research program has expanded to include social research related to hepatitis C, injecting and illicit drug use, sexual health, Aboriginal health and the Asia-Pacific region.

NCHSR is highly regarded for its multidisciplinary approach, quality and range of work, timeliness of research findings, and engagement with those communities most affected by HIV, STIs and hepatitis C. NCHSR's core-funded strategic research has been strengthened by its location within an academic environment and the attendant scholarship and culture that entails. This has ensured research that is intellectually rigorous and valued by key decision makers.



ARCSHS

The Australian Research Centre in Sex, Health and Society was established in 1993 as an independent unit within the Faculty of Health Sciences at La Trobe University. It has a multi-disciplinary team of staff with qualifications and expertise in psychology, anthropology, sociology, public health, health promotion, methodology, epidemiology, education, women's health, consumer advocacy and health policy. The Centre is dedicated to the advancement of knowledge and applied skills in sexual health; locally, nationally and internationally. Through our research, teaching and community activities we strive to develop and sustain a direct and organic link with the wider community. The Centre has had since its inception a dedicated Community Liaison and Education Unit to ensure the research is disseminated widely and informs policy and practice.



NOVARTIS (13, 14)

Novartis is a world leader in the research, development and supply of products to protect and improve health and well-being.

Novartis Pharmaceuticals researches and supplies a broad range of innovative and effective prescription medicines to treat patients in both general and specialist practice and hospitals.

Created in 1996 from the merger of Swiss companies, Ciba and Sandoz, Novartis has a history in Australia going back over fifty years. Novartis employs about 98 000 people and operates in over 140 countries around the world.

In Australia the company now employs more than 600 people, and invests over AUD \$30million annually in local research. This research not only assures the effectiveness of the company's current range of treatments, but also secures the promise of improving health for the future.

Novartis medicines treat some of the most serious health conditions confronting healthcare professionals and their patients. The company's work is spread across many diseases in the areas of Primary Care, Oncology, Transplantation, and Ophthalmics.



PFIZER AUSTRALIA (27)

With a history dating back to 1886, Pfizer Australia has grown to become the nation's leading provider of prescription medicines. Pfizer Australia exports \$600 million worth of product around the region annually from three manufacturing plants across the nation. Our researchers are part of the world's largest private sector medical research program with more than 580 projects in discovery and development. In Australia, we spent more than \$45 million in 2006 on local research and development across our business, helping to keep some of the nation's leading researchers here in Australia working on conditions that have the potential to impact every Australian family.



SCHERING PLOUGH (42)

Schering-Plough is an innovation-driven, science-centred global health care company. Through its own biopharmaceutical research and collaborations with partners, Schering-Plough creates therapies that help save and improve lives around the world. Schering-Plough applies its research-and-development platform to human prescription and consumer products as well as to animal health products. Schering-Plough's vision is to "Earn Trust, Every Day" with the doctors, patients, customers and other stakeholders served by its colleagues around the world.

As part of its long-term commitment to working with doctors to support patients with hepatitis, Schering-Plough's PEGATRON is now the first and only pegylated interferon approved for retreatment of chronic hepatitis C.

THE UNDERVIEW COLLECTION - GLEN COWANS (33)

Glen Cowans is a unique and passionate photographer. His inspiration is our ocean. His subjects are the beautiful life forms that live there. Born in Western Australia, Cowans developed his passion for the ocean while snorkelling at the age of ten. In 1995 he began his pursuit of underwater photography, and in 2005 left his trade as an electrician to become a full-time photographer. With over 13 years' experience in underwater photography --- ranging through all the mediums of film, transparency and digital ---, Cowans has had more than 26 exhibitions. His work has found favour with collectors across Australia and around the world. Cowans' takes photography to a new level by bridging the gap between photography and art. His philosophy is to allow nature to be the artist and let the shapes, colours and life forms of the ocean create the masterpiece. Cowans' work offers viewers a rare experience, one where they can contemplate the wondrous life found in the underwater world.



Department of
Health

WA HEALTH (23)

Using a partnership approach, the Sexual Health and Blood-borne Virus Program of the WA Department of Health directs and coordinates the prevention and control of sexually transmitted infections, human immunodeficiency virus and blood-borne viruses (STI/HIV/BBV) for the population of WA. Priority populations within WA include: young people; Aboriginal people; people who inject drugs; gay and other homosexually active men; sex workers (including opportunistic sex workers) and clients of sex workers; people living with HIV/AIDS and hepatitis C; and health care workers.



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Back-to-back with the Australasian Sexual Health Conference 15 – 17 September 2008

**Wednesday 17 to
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Perth Convention Centre, Western Australia

**UNDERGRADUATE
AWARDS**



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**UNDERGRADUATE AND JUNIOR
RESEARCHER IN HIV
AND VIRAL HEPATITIS AWARDS
PROGRAM 2008**

LEON BOTES

Leon is a Sexual Health Nurse who has worked in Sexual Health and HIV/AIDS in South Africa, New Zealand and Australia. He has also worked for the National Centre in HIV Epidemiology and Clinical Research and completed his Masters in Health Science (Sexual Health) at the University of Sydney in 2005. Since then, Leon has been a tutor on the online learning Postgraduate Program in Sexual Health. Leon was awarded the Novartis 2008 Scholarship for Sexual Health Research, offered through the Royal College of Physicians. This scholarship has enabled him to begin his PhD project focused on Anal Squamous Intraepithelial Lesions (ASILs).

Poster Number 121

MING LIANG CHAN

Ming Liang Chan's research is focused on understanding the homeostatic control of CD4+ T cell numbers in chronic HIV infection. In HIV and in experimental models of SIV in rhesus macaques, chronic infection is associated with progressive CD4+ T cell depletion. However, in natural infection of some species, described as natural hosts, infection is largely asymptomatic. Ming Liang's current research involves the use of mathematical and statistical tools to study viral pathogenesis in SIV and gain a deeper understanding about the lack of disease progression in natural hosts. In his latest work, he used a model to explain how the non-pathogenic SIV infection of natural hosts can be caused by lower levels of CD4+ T lymphocyte activation. This dynamic understanding of infection provides valuable insights into the pathogenesis of AIDS in HIV-infected individuals.

HEIDI COUPLAND

Heidi is a PhD candidate in the National Centre in HIV Epidemiology and Clinical Research, University of New South Wales. Her supervisors are Associate Professor Lisa Maher and Dr Carolyn Day. Few studies have explored cultural differences in injecting drug users' (IDUs) vulnerability to hepatitis C (HCV) infection and barriers to accessing services for HCV-related issues. This ethnographic study explored Indo-Chinese IDUs' explanatory models of HCV prevention and management and examined their influence on health-seeking behaviour, in particular, access to HCV treatment. Field work and in-depth interviews were conducted with Cambodian, Lao and Vietnamese-background IDUs (n=72) in South Western Sydney. Twenty-three were involved in a pilot of a culturally-informed brief intervention regarding HCV treatment. Following a baseline interview and provision of the brief intervention, participants were offered facilitated referral to a tertiary liver clinic and were followed up and interviewed again at three and six months. Preliminary results indicate that explanatory models of HCV influence decision-making and patterns of service access in relation to hepatitis C testing and treatment. However, cultural meanings of injecting drug use and notions of family obligations, particularly in the context of immigration and resettlement, also shape responses to HCV among this group.

Oral Presentation: Wednesday 17 September: ASHM IDU: Domestic; 2.45pm - 3.00pm

Poster Number 151

BENJAMIN COWIE

Dr Ben Cowie is an Infectious Diseases Physician from Melbourne. He is writing his Doctoral Thesis through the University of Melbourne on the seroepidemiology of hepatitis B virus infection in Victoria and the development of a mathematical model of HBV infection in Australia, research which was conducted at VIDRL in Melbourne. A serosurvey of a randomised, age-structured sample of over 3200 serum specimens stored at VIDRL from 1995-2005 has enabled examination of the changing prevalence of infection and vaccination uptake over time, and analysis by age-group and geographic area has been undertaken. Both simple linear regression and complex deterministic models of HBV infection in Australia have been constructed, allowing an assessment of the impact of existing control strategies and describing the evolution of the burden of HBV infection in Australia to date and into the future.

ASHLEY FREEMAN

Ashley Freeman is an undergraduate student of Dental Surgery at the University of Adelaide, completing a concurrent honours degree in dental science. His research investigates the oral health and treatment needs of patients at a specialised dental institution for individuals with HIV. The introduction of highly-active anti-retroviral therapy (HAART) has allowed HIV positive individuals to experience a greater life expectancy but with the potential for an increased risk of medical comorbidities including non-HIV related oral conditions. Little data is available describing prevalence and severity of oral manifestations and little evidence available for appropriate dental management in a post-HAART cohort of patients. This retrospective study of patient case records from 2001 to 2008 aims to describe the oral health needs and oral manifestations of HIV amongst a South Australia population. Emphasis is placed on changes in the prevalence of HIV-related oral lesions since the introduction of highly active anti-retroviral therapy (HAART) in the late 1990s. The increase life expectancy of HIV patients as a result of HAART has also led to the increase prevalence of medical comorbidities. The nature and severity of these problems, as they relate to the prevalence of any oral lesions and necessity for dental care will also be assessed. Information provided will help establish the current oral health needs for people with HIV. These findings provide information on the prevalence of oral conditions and demonstrate the need to identify and address oral health needs for people with HIV.

Poster Number 126

SUZANNE POLIS

Suzanne Polis is working full time as a Clinical Nurse Consultant in HIV/ Hepatitis at St George Hospital, and a part time PhD student at University of Technology Sydney, Faculty of Nursing, Midwifery & Family Health. Suzanne's research focuses on individual's adherence to HIV and hepatitis B virus (HBV) medications. Initial studies aim to identify factors that are associated with non-adherence in intellectually challenged HIV positive people having clinical evidence of non-adherence and virological resistance to antiviral therapies. Factors that are found to be associated with non-adherence will be used to implement individualized, and developmentally appropriate, adherence strategies, and to develop educational tools and written information. Future quantitative and qualitative studies are planned to investigate adherence to HBV medications within the general population. Anecdotal evidence suggests that patients have limited knowledge and understanding of chronic HBV treatments, treatment adherence, and the development of drug resistance, and that they risk long term liver sequelae including hepatocellular carcinoma. Study findings aim to improve anti-viral medication adherence and long term health outcomes within these population groups.

SHARMILA REDDY

Eliciting broadly neutralizing antibodies (nab) against HIV-1 has been a major limiting factor in the development of successful vaccines against HIV-1. The HIV-1 envelope glycoprotein is the sole viral protein available for nab to target and hence would be an ideal candidate for vaccine development. However variations in envelope protein sequences driven by high error rate of HIV-1 reverse transcriptase during the course of infection can mediate escape from humoral immune responses. Studies show that protein sequences of transmitting strains are consistently different from those derived after seroconversion, have structural variations which lead to greater exposure of conserved domains and are highly sensitive to neutralization. Hence studying the envelope protein of viral isolates derived from patients prior to seroconversion may allow identification of envelope proteins with well exposed neutralization-sensitive epitopes - potentially useful information for developing vaccine candidates. Samples from preseroconversion cohort were selected, envelope region cloned and sequences were analyzed. The clones will be used for immunogenicity trials in animals and the neutralization activity of the resulting sera will be assessed. The aim is to induce high titers of broadly neutralizing antibodies capable of blocking HIV-1 transmission and to assess the relative contribution of different epitopes to virus neutralization.

Oral Poster Presentation: Saturday 20 September; Oral Poster Session: Clinical, Allied Health and Basic Science; 8.45am - 8.50am. Poster Number 109

RUBY UDDIN

Ruby Uddin is a Sexual Health Registrar, who has been training in Sydney with a particular interest in the clinical care for women living with HIV and the challenges they face. The rising rate of HIV infection in women in Australia, will heighten the need for HIV/Sexual Health services to focus further on developing a specific approach for management of HIV in women, particularly with emphasis on reproductive and maternal health. Notified cases of newly diagnosed HIV infection in females resident in NSW increased from 31 of 391 (7.9%) in 2005, to 45 of 369 (12.1%) in 2006, and a corresponding significant national increase has been observed from 5.8% to 14.3%, in 2005 and 2006, respectively. During her Sexual Health training at the Short Street Sexual Health Service, St George Hospital, Kogarah, where increasing numbers of HIV positive women are being seen, Ruby was able to document and investigate specific issues pertaining to management of HIV in women, particularly in relation to disclosure to partners, contraception, access to care and HIV management in pregnancy. Results of the study could be helpful in developing local service policy to optimise provision of services for HIV positive women.

**ASHM UNDERGRADUATE AND JUNIOR RESEARCHER SUPPORT AWARDS IN HIV
AND VIRAL HEPATITIS 2009**

ASHM is offering up to eight support awards in 2009. The awards are available to promote research interest in HIV and viral hepatitis. Applications should be made in writing via the application form on the reverse of this flyer, and must be received in the ASHM Office by COB 1 February 2009. Please attach your abstract and a photocopy of your most recent academic transcript.

THE AWARDS WILL COMPRISE:

- Annual ASHM associate membership for 2009
- Linkages between the student and ASHM members in the designated area of research interest
- Access to the ASHM website to allow students to place information about their research project
- Participation in relevant ASHM Committees
- Access to ASHM library, resources and archives
- First option to take on part-time research assistant positions offered by ASHM
- Registration at the 21st Annual ASHM Conference, to be held in Brisbane in September 2009, or registration at the 2010 Viral Hepatitis Australasian Conference
- Presentation of a poster following abstract submission to the chosen conference in a special poster session (required)
- Scholarship for recipients requiring travel and/or accommodation to assist with attendance at the Conference to a value of A\$400
- Publication of a short report on the research initiative in an edition of *ASHMNews*

THE APPLICATION PROCESS:

Applications are invited from all relevant disciplines, with priority given to medicine, nursing, dentistry and allied health, and must relate to a degree, diploma or award program at the undergraduate level (not available for post-doctoral programs). Applications can be received for residents of Australia and New Zealand only and can be for new work or work in progress. The awards program is funded by ASHM and the ASHM Tax Deductible Domestic Gift Fund. The Australian Government Department of Health and Ageing provides support for the administration of this program.

Abstracts of no more than 350 words should be submitted in writing along with the application form overleaf. Please note that applications which reflect the national priority action areas for research as outlined in the National HIV/AIDS Strategy and the National Hepatitis C Strategy will be given precedence. These research areas can be found on the Commonwealth Health website at www.health.gov.au or via the ASHM website at www.ashm.org.au. A Sub-Committee of the ASHM Board will review the applications and applicants will be notified of the outcome of their application by 20 March 2009.

For further information please review the website or contact Scott Chambers at scott.chambers@ashm.org.au. Tel: 02 8204 0704.

ASHM UNDERGRADUATE AND JUNIOR RESEARCHER SUPPORT AWARDS IN HIV & VIRAL HEPATITIS 2009

APPLICATION FORM

*Please attach your abstract (max. 350 words) and a photocopy of your most recent academic transcript.
You may attach any extra notes or supporting documentation.*

APPLICANT:

Name: _____

Postal address: _____

Phone: _____ Email: _____

Course in which you are enrolled: _____

Department/faculty: _____ Institution: _____

SUPERVISOR CONTACT DETAILS:

Name: _____

Postal address: _____

Phone: _____ Email: _____

Please describe your area of research interest (and attach abstract): _____

What do you hope to achieve? _____

What is your interest in HIV or viral hepatitis? _____

How could ASHM assist you? _____

Supervisor's signature: _____ Date: _____

Applicant's signature: _____ Date: _____

Form deadline:
COB 1 February 2009

Post to: ASHM Office, LMB 5057, DARLINGHURST NSW 1300
Fax: 02 9212 2382 or register online at: www.ashm.org.au



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**FULL CONFERENCE
PROGRAM**



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WEDNESDAY 17 SEPTEMBER

7.30am	Registration			
8.00am - 9.00am	Arrival Coffee/Tea in Exhibition and Poster Area in Pavilion 1			
8.30am - 10.30am	ASHM Opening Ceremony and Plenary 1		Sexual Health Plenary 5: A Mixed Bag of Jewels	
	Riverside Theatre/Auditorium	9.00am - 10.30am	Meeting Room 1,2,3	
	Chairs: John Dyer and Levinia Crooks		Chairs: John Chuah and Alexandra Marceglia	
8.35am - 8.40am	Welcome to Country by Janet Hayden		Matthew Law - Head Biostatics and Database, National Centre in HIV Epidemiology and Clinical Research, Sydney, New South Wales, Australia	
8.40am - 8.45am	Welcome by Jonathan Anderson - President, Australasian Society for HIV Medicine, Australia			
8.45am - 8.50am	Government Representative			
8.50am - 8.55am	Welcome by Graham Brown - President, Australian Federation of AIDS Organisations, Australia			
8.55am - 9.00am	Welcome by Robert Mitchell - President, National Association of People Living with HIV/AIDS, Australia		Kathleen Mazzella - Founder, Gynaecological Awareness Information Network, Western Australia	
9.00am - 9.45am	Gita Ramjee - Director, South African Medical Research Council HIV/AIDS Lead Programme, South Africa			
	HIV Prevention: Hypothesis to Facts		A Woman's Personal Perspective and Experience of what is Missing in Sexual Health and Society, the Vulva	
9.45am - 10.30am	Sarah Rowland-Jones - Human Immunology Unit, John Radcliffe Hospital, Oxford, United Kingdom		David Speers - Infectious Diseases Physician, Sir Charles Gairdner Hospital, Western Australia	
	Towards a HIV Vaccine - What is Protective Immunity Against HIV Infection?			
10.30am - 11.00am	Morning Tea in Exhibition and Poster Area in Pavilion 1			
11.00am - 12.30pm	Women Risk HIV - International	11.00am - 12.30pm	ACH2 Bench to Bed: 1	Sexual Health Plenary 6: Drugs and Sex
	Riverside Theatre/Auditorium		Meeting Room 8	Meeting Room 1,2,3
	Chairs: Susan Kippax and Gita Ramjee		Chairs: Tony Cunningham and Scott Bowden	Chairs: Fraser Drummond and Richard Teague

FULL CONFERENCE PROGRAM

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FULL CONFERENCE PROGRAM

11.00am - 11.15am	Holmes W - A Novel Approach to Antenatal Risk Assessment in Very Low HIV Prevalence Settings in Resource-Poor Countries	11.00am - 11.20am	Damian Purcell - Senior Lecturer, Virology, Department of Microbiology and Immunology, University of Melbourne, Melbourne, Victoria, Australia Towards Vaccines Eliciting Broad Neutralising Antibody Responses by Selecting for HIV-1 ENV Immunogens that Prominently Expose Conserved Neutralisation Epitopes	11.00am - 11.45am	Jeffrey Klausner - Director, Sexually Transmitted Disease Prevention and Control Services, San Francisco, USA
11.15am - 11.30am	Ofasia E - Addressing Gender-Based Violence in Settlement Areas of Port Moresby	11.20am - 11.40am	Patricia Price - University Academic, School Of Pathology And Laboratory Medicine, University of Western Australia, Perth, Western Australia		Sex, Drugs and Disease Transmission
11.30am - 11.45am	Kupul M - Tribal Fighting, Violence Against Women and Girls and HIV in Papua New Guinea		Understanding Susceptibility to CMV Immune Restoration Disease and the Immunological Consequences of Extreme Immunodeficiency		
11.45am - 12.00pm	Rawstone P - Female Sex Workers in Sri Lanka: Why are Women who Work on the Street More Likely to use Condoms Compared with Women who Work in other Locations?	11.40am - 12.00pm	Kate Cherry - Physician and Senior Research Fellow, Alfred Hospital and Burnet Institute, Melbourne, Victoria, Australia Predicting Neuropathy Risk Before Stavudine Prescription: An Algorithm For Minimizing Neurotoxicity In Resource-Limited Settings	11.45am - 12.30pm	Joel Palefsky - Professor of Medicine, University of California, San Francisco, USA
12.00pm - 12.15pm	Ghaly S - Alcohol Consumption, HIV Transmission and Implications for Women in South Africa	12.00pm - 12.20pm	Nitin Saksena - Chief Scientist, Head of the Retroviral Genetics Division, Westmead Millennium Institute, and Senior Research Fellow, University of Sydney, New South Wales, Australia Biological Characterisation of a Novel Anti-HIV Activity		Natural History of HPV in the Anal Canal
12.15pm - 12.30pm	Fawkes J - Enabling HIV Prevention Outcomes for Sex Workers, Papua New Guinea	12.20pm - 12.30pm	Discussion		

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12.30pm - 1.30pm	Lunch in Exhibition and Poster Area in Pavilion 1				
12.45pm - 1.15pm	<p>Launch of the Annual Surveillance Report, Aboriginal and Torres Strait Islander Surveillance Report and the Annual Report of Trends in Behaviour from the NCHECR and NCHSR</p> <p>Meeting Room 8; Lunch will be provided there for attendees from 12.30pm</p>				
1.30pm - 3.00pm	IDU - Domestic	1.30pm - 3.00pm	ACH2 Bench to Bed: 2	1.30pm - 3.00pm	Sexual Health Plenary 7: Out of Sight Out of Mind
	Riverside Theatre/ Auditorium		Meeting Room 8		Meeting Room 1,2,3
1.30pm - 1.45pm	Prestage G - Illicit Drug Use and Risk of HIV Seroconversion among Gay Men in Sydney: Data from the Him Cohort	1.30pm - 1.50pm	Paul Gorry - Head, HIV Molecular Pathogenesis Laboratory, Burnet Principal Fellow, Macfarlane Burnet Institute for Medical Research & Public Health, Melbourne, Victoria, Australia	1.30pm - 2.00pm	Elizabeth Phillips - Clinical Pharmacologist and Infectious Disease Physician, Royal Perth Hospital and Sir Charles Gairdner Hospital, Perth, Western Australia
1.45pm - 2.00pm	Deacon RM - Results from the 2008 Periodic Survey of NSW Needle and Syringe Program Attendees		Tissue-Specific Adaptive Changes in V3 of gp120 Enable Persistence of Maraviroc-Sensitive R5X4 HIV-1 in Brain		Management of Penicillin Allergy in the Syphilitic Patient
2.00pm - 2.15pm	Kwon AJS - Continued Increases in Syringe Distribution are Required to Restrain Viral Transmissions among Injecting Drug Users in Australia: Results from a Modelling Study	1.50pm - 2.10pm	Bin Wang - Research Fellow, Retroviral Genetics Division, Westmead Millennium Institute, Sydney, New South Wales, Australia	2.00pm - 2.30pm	Richard Hillman - Senior Lecturer, Sexually Transmitted Infections Research Centre, The University of Sydney, Sydney, New South Wales, Australia
2.15pm - 2.30pm	Spoooner C - The Role of Needle Syringe Programs in Preventing Transmission to Injecting by Young People	2.10pm - 2.30pm	Jillian Carr - Senior Research Officer, South Australia Pathology, Adelaide, South Australia, Australia		Anal Dysplasia and Cancer. An Australian Experience
2.30pm - 2.45pm	Gahan G - A Gap Analysis of People with a History of Injecting Drug Use who are not Currently Accessing HIV and Sexual Health Services in South Eastern Sydney Illawarra Area Health	2.30pm - 2.50pm	Anthony Cunningham - Director, Australian Centre for HIV and Hepatitis Virology Research, Sydney, New South Wales, Australia	2.30pm - 3.00pm	Basil Donovan - Professor of Sexual Health, National Centre in HIV Epidemiology and Clinical Research, Sydney, New South Wales, Australia
2.45pm - 3.00pm	Coupland H - Increasing Hepatitis C Treatment Uptake by Injecting Drug Users from Culturally and Linguistically Diverse Backgrounds: Outcomes of a Pilot Study of Indochinese Injectors	2.50pm - 3.00pm	Inhibition of HIV Binding to Langerin on Langerhan's Cells as a Strategy for Microbicide Development		It's only a cold sore, Love..."

FULL CONFERENCE PROGRAM

WEDNESDAY 17 SEPTEMBER 2008

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FULL CONFERENCE PROGRAM

3.00pm - 3.30pm	Afternoon Tea in Exhibition and Poster Area in Pavilion 1				
3.30pm - 5.00pm	Virology/Immunology	3.30pm - 5.00pm	Planning Requires Economic and Quality Review	3.30pm - 5.00pm	Sexual Health Conference Closing
	Riverside Theatre/Auditorium Chairs: Patricia Price and Rosemary Ffrench		Meeting Room 8 Chairs: Jim Hyde and Lisa Bastian		Meeting Room 1,2,3 Chairs: Jenny McCloskey and David Jardine
3.30pm - 3.45pm	Keane NM - An HLA-C*0702 Restricted T-Cell Response Directed Against an Immune Escaped HIV NEF KY11 Epitope Exhibits Higher Functional Avidity but Lesser Cytolytic Activity when Compared with the Anti-Wild Type Response	3.30pm - 3.45pm	Anderson J - A Critical Analysis of the Quality and Transferability of Economic Evaluations of HIV Interventions for Australian Decision-Making	3.30pm - 4.00pm	Basil Donovan - Professor of Sexual Health, National Centre in HIV Epidemiology and Clinical Research, Sydney, New South Wales, Australia
3.45pm - 4.00pm	Stratov I - Robust NK-Cell Mediated HIV-Specific Antibody-Dependent Responses in HIV-Infected Subjects	3.45pm - 4.00pm	Hillman R - Cost Effectiveness of Screening for Anal Cancer in HIV-Positive MSM		LASH Study - Law and Sexworker Health
4.00pm - 4.15pm	Fernandez S - CMV-Specific Effector Memory CD4+ T-Cells in HIV Patients on Long-Term Art are Predominantly 'CD28 Null' Immunosenescent Cells	4.00pm - 4.15pm	Bernard D - Effective Partnership and Adequate Investment Underpin a Successful Response: Key Factors in Dealing with HIV Increases	4.00pm - 4.30pm	Peter Leone - Associate Professor of Medicine, University of North Carolina, and Director, North Carolina HIV/STD Prevention and Control Branch, USA
4.15pm - 4.30pm	Lim A - Phenotypic Analyses of FOXP3-Expressing CD4+ And CD8+ T Cells in HIV-Infected Patients	4.15pm - 4.30pm	Savage J - Models of Access and Clinical Service Delivery in Australia Today		Acute HIV and STDs: Screening and Co-infection
4.30pm - 4.45pm	Seddiki N - Identification of Human Antigen-Specific Regulatory T Cells, Phenotyping and Functional Analysis	4.30pm - 4.45pm	Anderson J - Measuring Quality of Life for Economic Evaluation in HIV	4.30pm - 4.50pm	Prize Presentations and Closing Remarks by Darren Russell - President of the Australasian Chapter of Sexual Health Medicine Committee
4.45pm - 5.00pm	Seddiki N - Regulatory T Cell Abnormalities are Associated with Aberrant CD4+ T-Cell Responses in Patients with Immune Inflammatory Syndrome (IRIS)	4.45pm - 5.00pm	Discussion	4.50pm - 5.00pm	Presentation of Next Year's Conference by David Jardine - Committee Convenor, 2009 Australasian Sexual Health Conference, Brisbane
5.15pm - 6.15pm	Circumcision: Crown Jewels			5.15pm - 6.15pm	Diagnostics and Assay Development
	Riverside Theatre/Auditorium Chairs: Graham Brown and Andrew Grulich				Meeting Room 1,2,3 Chairs: Elizabeth Dax and Andrew Lloyd
5.15pm - 5.30pm	Templeton D - Reduced Risk of HIV Seroconversion Among Circumcised Homosexual Men who Report a Preference for the Insertive Role in Anal Intercourse			5.15pm - 5.30pm	Guy R - The Accuracy of HIV Incidence Assays in Estimating the Population Rate of New Infections: A Systematic Review

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5.30pm - 5.45pm	Londish G - Small Population Health Benefits on HIV by Circumcising Men who have Sex with Men	5.30pm - 5.45pm	Gold J - Sensitivity and Specificity of HIV Incidence Assays: A Systematic Review
5.45pm - 6.00pm	Anderson J - Cost-effectiveness of Circumcision for the Prevention of HIV in Gay Men in Australia	5.45pm - 6.00pm	Plate M - Evaluation of the New Version 3 Cavid Exavir™ Load Quantitative HIV RT Load Kit as an Alternative HIV Viral Load Monitoring Assay for use in Both Resource-Constrained and Developed Countries
6.00pm - 6.15pm	Donohue S - Promoting Circumcision within the Australian HIV Prevention Response	6.00pm - 6.15pm	Zaunders J - Persistence of High Levels of HIV Antigen-Specific CD4+ T Cells in Untreated Chronic Infection, Detected by a Novel Flow Cytometric Assay
7.30pm - 11.30pm	Joint Conference Dinner, 'Diamonds are Forever' - Bellevue Ballroom, Level 3, Perth Convention Centre Sponsored by the Australian Government Department of Health and Ageing, WA Health, Gilead, GlaxoSmithKline, Boehringer Ingelheim, and Merck Sharp & Dohme		

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WEDNESDAY 17 SEPTEMBER 2008

20th annual ashmconference

FULL CONFERENCE PROGRAM

THURSDAY 18 SEPTEMBER

7.00am	Registration	
7.30am - 8.45am	Breakfast Session - 'Meet the Experts' - Clinical	Oral Poster Session - Social Research, International, Community, Indigenous Health
	Riverview 4 Chairs: Miles Beaman and Martyn French	Meeting Room 1,2,3 Chairs: Jeffrey Grierson and Francine Eades
7.30am - 7.40am	Martyn French - Clinical Professor, Pathology and Laboratory Medicine, University of Western Australia, Perth, Western Australia Life-threatening Immune Reconstitution Inflammatory Disease	8.00am - 8.05am Scott-Visser B - Enhanced Primary Care (EPC) and Care Coordination as a Cooperative Model
7.40am - 7.50am	Roy Gulick - Professor of Medicine, Weill Medical College of Cornell University, USA Contemporary Approach to Management of Antiretroviral Treatment Failure or Toxicity	8.05am - 8.10am McGowan A - 'We have Infections Zapped!' Offering Testing for Chlamydia and Gonorrhoea in Targeted Youth Settings
7.50am - 8.00am	Robin Wood - Director, Desmond Tutu HIV-Research Centre, South Africa Management of Late Presenting Patients with Severe Opportunistic Infection	8.10am - 8.15am Reeders D - User-Centred Design in a Resource for Positive Travellers
8.00am - 8.10am	David Nolan - Royal Perth Hospital and Murdoch University, Western Australia Prevention and Management Strategies for Metabolic Syndrome and Cardiovascular Risk in Patients Taking Antiretroviral Therapy	8.15am - 8.20am Brown G - Evaluation of a Health Promotion Short Course for the HIV Community Sector
		8.20am - 8.25am Brown G - Netreach: Online Peer Outreach to Virtual Communities Across Australia
8.10am - 8.45am	Questions and Panel Discussion	8.25am - 8.30am Lake R - Are Hospitals Biohazards for People with HIV?
		8.30am - 8.35am Clayton S - Sero-Sorting: What is the Impact on HIV Transmission in Gay Men and How Do We Reduce it?
		8.35am - 8.40am Sarangapany J - Potential Difficulties and Barriers: Findings from a Knowledge, Attitudes and Practice Survey in Papua New Guinea
		8.35am - 8.45am Discussion
8.00am - 9.00am	Arrival Coffee/Tea in Exhibition and Poster Area in Pavilion 1	
9.00am - 10.30am	HIV and Ageing	
	Riverside Theatre/Auditorium Chairs: Bill Whittaker and Patti Martinez	
9.00am - 9.20am	Bruce Brew - Head, Department of Neurology, St Vincents Hospital, Sydney, New South Wales, Australia Neurodegeneration and Ageing in the HAART Era	
9.20am - 9.40am	Marian Pitts, Director, Australian Research Centre in Sex, Health and Society, La Trobe University, Melbourne, Victoria, Australia Growing Old Disgracefully with HIV	
9.40am - 10.00am	Andrew Grulich - Professor, National Centre in HIV Epidemiology and Clinical Research, Sydney, New South Wales, Australia HIV, Cancer, and Immune Deficiency	

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10.00am - 10.30am	David Nolan - Senior Clinical Research Fellow, Centre for Clinical Immunology and Biomedical Statistics, Royal Perth Hospital and Murdoch University, Perth, Western Australia						
	HIV Infection and Healthy Ageing: Is There a Need For HIV-Specific Management Guidelines for the Protection of Hearts, Bones, Minds and More?						
10.30am - 11.00am	Morning Tea in Exhibition and Poster Area in Pavilion 1						
11.00am - 12.30pm	Hot Topics: Top Papers of 2008		Community Research into Practice		International: Global HIV Initiatives vs Local Response		Margaret Macdonald Memorial Session - Epidemiology Population
	Riverside Theatre/ Auditorium Chairs: Susan Kippax and Chris Birch	11.00am - 12.30pm	Riverview 4 Chairs: Jo Watson and Marian Pitts	11.00am - 12.30pm	Meeting Room 1,2,3 Chairs: John Milan and Marina Carman	11.00am - 12.30pm	Meeting Room 8 Chairs: Andrew Grulich and Margaret Hellard
11.00am - 11.30am	Martyn French - Clinical Professor, Pathology and Laboratory Medicine, University of Western Australia, Perth, Western Australia	11.00am - 11.15am	Bruno Spire - Communities and Research: The Necessity for Dialogue	11.00am - 11.15am	Wilson D - Tailoring Global Responses to Local Epidemics	11.00am - 11.15am	Mcdonald A - Trends in Newly Acquired HIV Infection in Australia, 1994 - 2007
		11.15am - 11.30am	Canavan P - The Shock of Ethical Community Research	11.15am - 11.30am	Priohutomo S - Impact of the Global Fund in Indonesia	11.15am - 11.30am	Wand H - Increasing HIV Transmission through Male Homosexual and Heterosexual Contact in Australia: Results from an Extended Back-Projection Approach
11.30am - 12.00pm	Mary Crewe - Director, Centre for the Study of AIDS, University of Pretoria, South Africa	11.30am - 11.45am	Imrie J - The Feasibility of a National Gay Men's Internet-Based Cohort and Prospective Behavioural Surveillance Platform in Australia -What are the Issues?	11.30am - 11.45am	Worth H - Exploring the Links between HIV and Poverty: Are the Analyses Correct?	11.30am - 11.45am	Ward J - How is the Aboriginal and Torres Strait Islander Population Faring in the Australian HIV Epidemic? - An Analysis of Data from 1993-2007
		11.45am - 12.00pm	Whittaker B - Special Access Schemes - An Analysis of the Last Four Programs	11.45am - 12.00pm	Bebbington M - Capacity Building through Long-term Partnerships	11.45am - 12.00pm	Horyniak D - The Impact of Migration on the Burden of HIV Infection in Victoria, Australia

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12.00pm - 12.30pm	John Kaldor - Deputy Director, National Centre In HIV Epidemiology and Clinical Research, Sydney, New South Wales, Australia	12.00pm - 12.15pm	Ogier A - Towards more Equitable Access to HIV Clinical Trials	12.00pm - 12.15pm	Menon A - Building Clinical Capacity to Manage Human Immunodeficiency Virus (HIV) Infection in Resource Constrained Environments: Reflections from Experience with Clinical Mentoring in Papua New Guinea (PNG)	12.00pm - 12.15pm	Manopaiboon C - Unexpectedly High HIV Prevalence Among Thai Sex Workers in a Respondent-Driven Sampling Survey
		12.15pm - 12.30pm	Discussion	12.15pm - 12.30pm	Discussion	12.15pm - 12.30pm	Ryan CE - The Molecular Characterization of the HIV-1 Epidemic in Fiji
12.30pm - 1.30pm	Lunch in Exhibition and Poster Area in Pavilion 1						
12.30pm - 1.30pm	ASHM AGM in Meeting Room 6; Lunch will be provided at Meeting Room 6 for attendees						
1.30pm - 3.00pm	Australian Antiretroviral Guidelines: Consensus Session	1.30pm - 3.00pm	Social Research - Desire	1.30pm - 3.00pm	AusAID Session - Indonesia	1.30pm - 3.00pm	HIV Immunology
	Riverside Theatre/ Auditorium		Riverview 4		Meeting Room 1,2,3		Meeting Room 8
	Chairs: Alan Street and Ron McCoy		Chairs: Diana Bernard and Anthony Smith		Chairs: Murray Proctor and David Wilson		Chairs: Stephen Kent and Michael Boyle

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1.30pm - 2.15pm	<p>Roy Gulick – Professor of Medicine, Weill Medical College, Cornell University, New York</p> <p>How to Use the Newer Agents in the Treatment- Experienced Patient and What Drugs Are in the Pipeline</p>	1.30pm - 1.45pm	De Wit J - Increasing the Contribution of Social Research to HIV Prevention: Developing and Testing a Theory- Driven Intervention to Reduce Unpremeditated Risk- Taking in MSM	1.30pm - 1.45pm	<p>Sigit Priohutomo, Head HIV/AIDS Program Ministry of Health, Republic of Indonesia</p> <p>Report on the Integrated Bio Behavioural Surveillance (IBBS) Study for at Risk Populations in Indonesia</p>	1.30pm - 1.50pm	<p>Paul Gorry - Head, HIV Molecular Pathogenesis Laboratory, Burnet Principal Fellow, Macfarlane Burnet Institute for Medical Research & Public Health, Melbourne, Victoria, Australia</p> <p>Heterogeneity in Primary R5 HIV-1 gp120 Structures Affecting CD4 and CCR5 Interactions and Exposure of Neutralising Antibody Epitopes</p>
		1.45pm - 2.00pm	Triffit KA - Sex Pigs - A Rough Guide to Dirty Sex	1.45pm - 2.00pm	<p>Tim Mackay, Head, HIV Co-operation Program Indonesia</p> <p>AusAID Indonesia HIV Program Support, Responsiveness and Building Capacity</p>	1.50pm - 2.10pm	<p>Simon Mallal - Clinical Immunologist, Royal Perth Hospital - Clinical Immunology Department, Perth, Western Australia</p> <p>How Might Understanding of the Co-Evolution Of HLA and Viruses Inform Contemporary Clinical Issues</p>
		2.00pm - 2.15pm	Prestage G - Gay Men who Engage in Group Sex are at Increased Risk of HIV Infection and Onward Transmission: Data from the Three or More Study	2.00pm - 2.15pm	<p>Ms Wulan Sekar Sari, Director, Stigma Foundation, Indonesia</p> <p>Harm Reduction in Indonesia</p>		

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2.15pm - 3.00pm	<p>Tim Read - Sexual Health Physician, Melbourne Sexual Health Centre and Victorian infectious Diseases Service (Royal Melbourne Hospital), Melbourne, Victoria, Australia</p> <p>Catriona Ooi - Director of Sexual Health, Hunter New England Area Health, Newcastle, New South Wales, Australia</p>	2.15pm - 2.30pm	Grierson J - Walking after Midnight: Trajectories of Sex on Premises Visits	2.15pm - 2.30pm	<p>Carolyn Thomas - Supervisor, Spiritia Foundation, Indonesia</p> <p>Delivering Community Support Across Different Epidemics and Settings</p>	2.10pm - 2.30pm	<p>Alan Landay - Professor and Chairman, Department of Immunology/ Microbiology, Rush University Medical Center, Chicago, USA</p> <p>Innate Immunity in HIV Disease: Friend or Foe</p>
	<p>The Guidelines in Action - Treatment Dilemmas in Clinical Practice</p> <p>Two case based presentations:</p> <p>Case 1: Managing Suspected Early Virologic Failure</p> <p>Case 2: Juggling Antiretroviral Therapy and Cardiovascular Risk</p>	2.30pm - 2.45pm	Adam PCG - Sexual Desires, Sexual Control and Sexual Risk-Taking in Men who have Sex with Men.	2.30pm - 3.00pm	Discussion	2.30pm - 2.50pm	<p>Tony Kelleher - Associate Professor, National Centre in HIV Epidemiology & Clinical Research, Sydney, New South Wales, Australia</p> <p>What Do T Cell Responses Mean: A Post Step Perspective</p>
		2.45pm - 3.00pm	Holt M - Medicine, Risk Factor, Pleasure Enhancer or Safe Sex Aid? The Use of Viagra and other Sexuopharmaceuticals by Gay Men			2.50pm - 3.00pm	Discussion
3.00pm - 3.30pm	Afternoon Tea in Exhibition and Poster Area in Pavilion 1						
3.30pm - 5.00pm	<p>Ian Thompson Memorial Session - Clinical Anti Retroviral Therapy</p> <p>Riverside Theatre/ Auditorium</p> <p>Chairs: Elizabeth Phillips and Greg Dore</p>	3.30pm - 5.00pm	<p>Epidemiology - Morbidity and Mortality</p> <p>Riverview 4</p> <p>Chairs: John Kaldor and Sue Laing</p>	3.30pm - 5.00pm	<p>Working with CALD Communities / Working with Media</p> <p>Meeting Room 1,2,3</p> <p>Chairs: Trish Langdon and Lisa Bastian</p>	3.30pm - 5.00pm	<p>Prevention and Treatment Issues for Older Gay Men - Sponsored by NSW Health and ACON</p> <p>Meeting Room 8</p> <p>Chairs: Stevie Clayton and Geoff Honnor</p>

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3.30pm - 3.35pm	Introduction by David Cooper, Director, National Centre in HIV Epidemiology and Clinical Research, Sydney, New South Wales, Australia						Garrett Prestage - Senior Lecturer, National Centre in HIV Epidemiology & Clinical Research, Sydney, New South Wales, Australia
3.35pm - 3.45pm	Pett S - Changes in Circulating CCR5+ T-Cells and Antigen-Specific CD4+ T-Cells during Monotherapy with a Small Molecule CCR5 Antagonist Sch532706, compared with Combination Antiretroviral Therapy (CART)	3.30pm - 3.45pm	Murray JM - A Faster Decrease in CD4+ T Cell Counts after HIV Infection for Older Individuals Contributes to Levels of Immunosuppression at HIV Diagnosis	3.30pm - 3.45pm	Crawford G - Safe Sex No Regrets: Sexual Health in the Mainstream Media in WA	3.30pm - 3.45pm	An Overview of Risk and Behaviour in Older Gay Men
3.45pm -4.00pm	Read T - Efavirenz (EFV) Plasma Concentrations in Patients Stopping Therapy after at Least One Month due to Neuropsychiatric Disturbances: An Initio Substudy	3.45pm -4.00pm	Petoumenos K - Predictors of Long-Term Changes in Mean CD4 Cell Counts Amongst HIV Infected Patients from the Asia-Pacific Region During Active Combination Antiretroviral Therapy	3.45pm -4.00pm	Shaw MJ - Different Communities, Different Needs: Shaping HIV/AIDS Messages for Six New South Wales Culturally and Linguistically Diverse Communities	3.45pm - 4.00pm	John Imrie - Associate Professor, National Centre in HIV Social Research, University of New South Wales, Sydney, New South Wales, Australia Risk, Realities and HIV Seroconversions in Old Gay Men: Qualitative Results from an Investigation of Seroconversions in Gay Men Who HIV Test in England (Insight Study)
4.00pm - 4.15pm	Seneviratne N - ESPRIT (Evaluation Of Subcutaneous Proleukin® In A Randomised International Trial): Factors Associated with Ongoing Cycling with Recombinant Interleukin-2 (RIL-2)	4.00pm - 4.15pm	McDonald A - Who gets AIDS in the HAART Era?	4.00pm - 4.15pm	Newman CE - The Making of HIV as a Public Concern: Three Themes in the Contemporary Australian News Media Coverage of HIV	4.00pm - 4.15pm	Dermot Ryan - Acting Director, Community Health, AIDS Council of New South Wales, Sydney, New South Wales, Australia Prevention Issues and Responses

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4.15pm - 4.30pm	Zhou J - Deferred Modification of Antiretroviral Regimen Following Treatment Failure in Asia: Results from the Treat Asia HIV Observational Database (TAHOD)	4.15pm - 4.30pm	Grebely J - High Mortality Associated with HIV Infection Among Illicit Drug Users in the HAART Era	4.15pm - 4.30pm	Sabri W - Radio Dramas, HIV/AIDS & the Vietnamese Community in Sydney	4.15pm - 4.30pm	Russell Westacott - Director, Client Services, AIDS Council of New South Wales, Sydney, New South Wales, Australia Ageing GLBT Populations
4.30pm - 4.35pm	Oral Poster: McLellan D - Efavirenz and Positive Urinary Drug Screen for Cannabinoids	4.30pm - 4.45pm	Van Leeuwen MT - Cancer and HIV in Australia: A Comparison Across Early and Late HAART Periods	4.30pm - 4.45pm	Katsaros E - Reflections on Improving Health Outcomes	4.30pm - 4.45pm	Rob Lake - Chief Executive Officer, Positive Life NSW, Sydney, New South Wales, Australia Treatment Issues and Responses
4.35pm - 4.40pm	Oral Poster: Byakwaga H - HIV Disease Progression in HIV-1 Patients Initiating Antiretroviral Therapy with Advanced Disease in the Asia-Pacific Region: Results from the Treat Asia HIV Observational Database (TAHOD)						
4.40pm - 4.45pm	Oral Poster: Bloch M - Triple Class HIV Antiretroviral (ARV) Failure in an Australian Primary Care Setting						
4.45pm - 4.50pm	Oral Poster: Chibo - Resistance to the HIV-1 Integrase Inhibitor Raltegravir: A Case Study	4.45pm - 5.00pm	Gelgor L - Update of the Australian Long-Term Non-Progressor (LTNP) Cohort	4.45pm - 5.00pm	O'Connor CC - Acculturation, Sexual Behaviour, Risk And Knowledge In Vietnamese Men Living In Metropolitan Sydney	4.45pm - 5.00pm	Discussion
4.50pm - 5.00pm	Discussion						
5.00pm - 6.30pm	Policy: Australia's Response to HIV in Asia and the Pacific: New Partnerships and Collaborations			5.00pm - 6.15pm	Response and Predictions in ART		Adherence to Antiretroviral Therapy
	Riverside Theatre/Auditorium Chairs: Levinia Crooks and Dr Bagus Widjaja				Riverview 4 Chairs: Gail Matthews and Jill Carr	5.00pm - 6.30pm	Meeting Room 1,2,3 Chairs: Angela Kelly and Ric Chaney

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5.00pm - 5.15pm	Bob McMullan, MP - Parliamentary Secretary for International Development Assistance, Braddon, Australian Capital Territory, Australia A New Aid Policy on HIV/AIDS: Issues for Consideration	5.00pm - 5.15pm	Warner MS - Evaluation of the Relationship between HLA-B*5701 Status and HIV Reverse Transcriptase Codon 245 Variation in South Australian HIV-Infected Individuals	5.00pm - 5.15pm	Kerr SJ - Assessing Adherence in Thai Patients Taking HAART
5.15pm - 5.30pm	Dr Tarun Weeramanthri - Executive Director, Public Health Division, WA Health, Perth, Western Australia How to Overcome PIF (Policy Implementation Fatigue)	5.15pm - 5.30pm	Chew C SN - Characterisation of TNF Block Haplotypes and Genotypes that Predict an Individual's Risk of Stavudine-Associated Sensory Neuropathy	5.15pm - 5.30pm	Herrmann S - Side Effects, Dosing Schedules, Pill Burden and Perceived Stress: Interaction and Influence on Medication Adherence
5.30pm - 5.40pm	James Ward - Program Manager, Aboriginal and Torres Strait Islander Health, National Centre in HIV Epidemiology and Clinical Research, Sydney, New South Wales, Australia Is it Luck or Persistence on the Ground? - Aboriginal and Torres Strait Islander Australians and HIV. What Should a Future Policy Response Look Like for Indigenous Australia?	5.30pm - 5.45pm	Tschochner M - Naturally Occurring Polymorphisms in HIV-1 Integrase: Relationship to HIV Subtype, Integrase Inhibitor Resistance and Immune Selection	5.30pm - 5.45pm	Baker D - Improved Treatment Adherence Associated with Treatment Simplification
5.40pm - 5.50pm	David Cooper - Director, National Centre in HIV Epidemiology and Clinical Research, Sydney, New South Wales, Australia New Policies for Clinical and Operations Research in Resource Limited Settings	5.45pm - 6.00pm	Grey P - Patient Characteristics and Predictors of Time to Commence Antiretroviral Treatment in a Prospective Cohort Identified at Primary HIV Infection (PHI). (The Phaedra Collaborative Cohort)	5.45pm - 6.00pm	O'Connor MB - Adherence to Anti-Retroviral Therapy Among Patients in Bangalore, India
5.50pm - 6.00pm	Don Baxter - Executive Director, Australian Federation of AIDS Organisations, Sydney, New South Wales, Australia Re-shaping Australia's Response to Emerging Trends in the HIV Epidemic in Asia and the Pacific	6.00pm - 6.15pm	Discussion	6.00pm - 6.15pm	Ibrahim D - AIDS Dementia Complex (ADC) and Mental Illness: The Role of the NSW Mental Health Act in Managing Compliance with Highly Active Anti Retroviral Therapy (HAART)
6.00pm - 6.30pm	Discussion			6.15pm - 6.30pm	Discussion
6.30pm - 7.00pm	Launch of the Prison Entrants' Blood Borne Virus Report in Meeting Room 6 Sponsored by WA Health on behalf of the National Drug Research Institute				
Free Evening					

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7.00am	Registration Opens		
7.00am - 8.45am	Case Presentation Breakfast	7.45am - 8.45am	Oral Poster Session - Public Health and Epidemiology
	Riverview 4		Meeting Room 1,2,3
	Chairs: Tony Allworth and Pietro Vernazza		Chairs: Fengyi Jin and Barry Combs
7.30am - 7.45am	Sherry N - Autoimmune Haemolytic Anaemia: An Unusual Presentation of HIV Seroconversion	7.45am - 7.50am	Introduction to Session
7.45am - 8.00am	Peel T - Steroid-Dependent Cryptococcal Immune Restoration Disease in a HIV-Positive Patient	7.50am - 7.55am	Roth N - A Comparative Study of Syphilis & HIV from a Melbourne General Practice Perspective
		7.55am - 8.00am	Stoove M - Local HIV Information Testing and Support (HITS) Pilot Program: Improving the Capacity of General Practitioners
8.00am - 8.15am	Barber B - A Case of Tenofovir-Associated Renal Tubular Acidosis with Neurological Impairment	8.00am - 8.05am	Allison W - Clinical Features Associated with HIV Infection in Children at Port Moresby General Hospital - Interim Analysis of a Prospective Study to Ascertain Predictors of HIV Infection
		8.05am - 8.10am	Hsu D - Combination Antiretroviral Therapy in HIV Patients at a Sydney Sexual Health Clinic
		8.10am - 8.15am	Jin F - Renewing the Seroconversion Study
8.15am - 8.30am	Rogers B - Three's a Crowd: The Relationship between CA-MRSA, HIV and MSM	8.15am - 8.20am	Pedrana A - Estimating HIV Prevalence of HIV among Men who have Sex with Men (MSM); A Review of Methodological Options
		8.20am - 8.25am	O'Connor M - A Comparative Study of Human Immunodeficiency Virus Antibody-Positive Patients in Ireland and Australia
		8.25am - 8.30am	Prihaswan P - Sexo Latino. Sexo Caliente. Sexo Seguro. A Safe Sex Campaign for Spanish Speaking Gay Men
8.30am - 8.45am	Chang C - Fatal Acute Varicella-Zoster Virus Haemorrhagic Meningomyelitis with Necrotising Vasculitis in an HIV-Infected Patient	8.30am - 8.35am	Connelly C - The Effect of Introducing Specialist Blood-Borne Virus Nurses into Prison Health Centres
		8.35am - 8.45am	Discussion
8.00am - 9.00am	Arrival Coffee/Tea in Exhibition and Poster Area in Pavilion 1		
9.00am- 10.30am	Plenary - Prevention		
	Riverside Theatre/Auditorium		
	Chairs: Gita Ramjee and John De Wit		
9.00am - 9.25am	Bruno Spire - President, French NGO AIDES, Public Health and Social Science in Clinical Research, Marseilles, France		
	Public Health and Social Science in Clinical Research: The Interest of a Multidisciplinary Approach		
9.25am - 9.50am	Sarah Rowland-Jones - Human Immunology Unit, John Radcliffe Hospital, Oxford, United Kingdom		
	The Role of T-cells in HIV Immunity: Lessons from China and West Africa		

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9.50am - 10.10am	David Wilson - Lead Health Specialist, the World Bank and Adjunct Professor, Centre for International Health, Curtin University of Technology, Perth, Western Australia						
	Understanding Our Last 1,000 Infections - Knowing our Epidemics for more Effective Programming						
10.10am - 10.30am	Pietro Vernazza - Head, Division of Infectious Diseases and Hospital Epidemiology, Cantonal Hospital, St Gallen, Switzerland						
	Biological Factors of Sexual Transmission of HIV						
10.30am - 11.00am	Morning Tea in Exhibition and Poster Area in Pavilion 1						
11.00am - 12.30pm	Peter Meese Memorial Session - Clinical - Associated Conditions Complications	11.00am - 12.30pm	Indigenous Health	11.00am - 12.30pm	Epidemiology - Transmission/ Acquisition	11.00am - 12.30pm	International: Where to for Testing and Counselling in Resource-Poor Settings?
	Riverside Theatre/ Auditorium Chairs: Moira Wilson and David Shaw		Riverview 4 Chairs: Heather D'Antoine and Ted Wilkes		Meeting Room 1,2,3 Chairs: Andrew Grulich and Margaret Hellard		Meeting Room 8 Chairs: Edward Reis and Sigit Priohutomo
11.00am - 11.15am	Kidd M - Primary Healthcare and HIV as a Chronic Disease	11.00am - 11.15am	Huang R - Managing Data to Guide a Long-Term STI Control Response in some Remote Central Australian Aboriginal Communities	11.00am - 11.15am	Pierce AB - Rates of HIV Seroconversion in Patients who have Previously used NPEP: Data Linkage of the Victorian NPEP Service Database with the Victorian HIV Surveillance Registry	11.00am - 11.15am	Ankus J - Minimum Standards for HIV Counselling and Testing for the Pacific
11.15am- 11.30am	Agarwal U - Profile of HIV Associated Tuberculosis in the Setting of Free Anti- Retroviral Therapy at a Tuberculosis Hospital in India	11.15am- 11.30am	Slater A - Barriers to Hepatitis C Services for Rural Aboriginal People	11.15am- 11.30am	Jin F - Risk Reduction Patterns of Unprotected Anal Intercourse: Relative Risk for HIV Acquisition in the Health in Men (HIM) Study	11.15am - 11.30am	Sri Kartika A - VCT, lessons learnt from Indonesia after '3x5'
11.30am - 11.45am	Newman C - General Practitioner Descriptions of Challenges in the Management of Depression in Gay Men and Men with HIV	11.30am - 11.45am	Webb D - A Cultural World AIDS Day in the Aboriginal Community	11.30am - 11.45am	Jin F - Sexual Partners' Age as a Risk Factor for HIV Seroconversion in the Health in Men (HIM) Study	11.30am - 11.45am	Kelly A - Policing Women's Bodies: Are we Ready to Move Beyond Critiquing PICT Yet?
11.45am - 12.00pm	Carey C - Determination of the Underlying Cause of Death in Three Multicentre International HIV Clinical Trials	11.45am - 12.00pm	Smith M - Berrima Women's Project	11.45am - 12.00pm	Wilson DP - Importance of Promoting HIV Testing for Preventing Secondary Transmissions: Modelling the Australian HIV Epidemic Among Men who have Sex with Men	11.45am - 12.00pm	Poolsawat M - Providing HIV Services to Prisoners in Thailand: Peer Outreach Voluntary Counselling and Testing (VCT) and Linkages to Care

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12.00pm - 12.15pm	Hoy J - Re-Initiation of Antiretroviral Therapy (ART) in the CD4 Cell-Guided ART Interruption Group in the Smart Study Lowers Risk of Opportunistic Disease or Death	12.00pm - 12.15pm	Gilles M - Willingness to Pay: What is the True Cost of Providing Equitable Health Care in a Disadvantaged Community?	12.00pm - 12.15pm	Wilson DP - The Paradoxical Effects of using Antiretroviral-Based Microbicides to Control HIV Epidemics	12.00pm - 12.15pm	Dax E - Proposed Appraisal of HIV Testing Strategies Employing Simple/ Rapid Tests
12.15pm - 12.23pm	Oral Poster: Rotty J - Incidence and Characteristics of HIV-Associated Lymphoma in the Era of HAART at Four Major Australian Treatment Centres	12.15pm - 12.30pm	Cain A - The Process of Managing an HIV-Positive Indigenous Woman with a Chaotic Lifestyle in a Rural Setting	12.15pm - 12.30pm	Sirivongrangsorn P - HIV Risk Behaviour Among HIV-Infected Men who have Sex with Men in Bangkok, Thailand	12.15pm - 12.30pm	Allison WE - Use of Dry Blood Spots (DBS) to Aid Human Immunodeficiency Virus (HIV) Diagnosis in Children in the Absence of Local Nucleic Acid Testing Laboratory Capacity
12.23pm - 12.30pm	Oral Poster: Furner V - Complications: The TB + HIV Connection						
12.30pm - 1.30pm	Lunch in Exhibition and Poster Area in Pavilion 1						
1.30pm - 3.00pm	Australian Antiretroviral Guidelines: Consensus Session	1.30pm - 3.00pm	Social Research: Sexual Risk in Space and Time	1.30pm - 3.00pm	International: PNG	1.30pm - 3.00pm	Phillip Medcalf Memorial Session - Community, Health Choices and Communication
	Riverside Theatre/ Auditorium Chairs: Jenny Hoy and Fraser Drummond		Riverview 4 Chairs: Jeffrey Grierson and John Imrie		Meeting Room 1,2,3 Chairs: Joachim Pantumari and Goa Tau		Meeting Room 8 Chairs: Robert Mitchell and John Daye
1.30pm - 2.00pm	Dr. Sarah Pett - Infectious Diseases Physician and Lecturer, National Centre for HIV Epidemiology & Clinical Research, Sydney, New South Wales, Australia	1.30pm - 1.45pm	Smith A - I Met Him at the Candy Store: Community Attitudes to Sex on Premises Venues and their Patrons	1.30pm - 1.45pm	Presenter To be advised	1.30pm - 1.45pm	Martinez C - Life Coaching - Mission Not Impossible
	Initiation of Combination Antiretroviral Therapy in Adults with HIV-1-infection, What CD4 Threshold to Use - Overview of Clinical Trial Data 2008		1.45pm - 2.00pm				

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2.00pm - 2.30pm	Roy Gulick - Professor of Medicine, Weill Medical College, Cornell University, New York	2.00pm - 2.15pm	Prestage G - Age and Sexual Behaviour Among Gay Men in Sydney, Melbourne and Brisbane	2.00pm - 2.15pm	Gideon N and Sawiya G - Education Sessions Support Adherence and Improve Clinical Outcome, Heduru Clinic Port Moresby, PNG	2.00pm - 2.15pm	Green C - Treatment Questions? Answers by Internet and SMS in Indonesia
	Emerging Issues about Potency and Toxicity of the Preferred Agents for Initial Therapy	2.15pm - 2.30pm	Lee J - Sex Between Men in Timor-Leste: What does it Mean?	2.15pm - 2.30pm	Dala M - The Development, Delivery and Outcome of Patient Care for Individuals with HIV/AIDS attending MAC from 2004 to 2008	2.15pm - 2.30pm	DeMaere K - The Treataware Infoline: A National HIV Treatment Health Promotion Service for People Living with HIV
2.30pm - 3.00pm	Jeffrey Post - Infectious Diseases Physician, Prince of Wales Hospital, Sydney, New South Wales, Australia and Alan Street, Deputy Director and Head, HIV Service, Victorian Infectious Diseases Service, Royal Melbourne Hospital, and Visiting Physician, Infectious Diseases Unit, The Alfred Hospital, Melbourne, Victoria, Australia	2.30pm - 2.45pm	Holt M - '1 Msg Then Sex': Temporality, Spatiality, Safety and Risk In Gay and Bisexual Men's Accounts of Online Sex- Seeking	2.30pm - 2.45pm	Rondopali R and Gaudentia Sr - HIV/AIDS Awareness and Access to Antiretroviral Therapy (ART) Makes a Difference in People's Lives in Southern Highlands, PNG	2.30pm - 2.45pm	Sabri W - Dance, Theatre Drama, HIV/ AIDS & the African Communities in Sydney
	Testing for Latent TB in HIV Patients - The Old or the New?	2.45pm - 3.00pm	Discussion	2.45pm - 3.00pm	Discussion	2.45pm - 3.00pm	Triffitt K - Getting on with it again - Responding to the Needs of People Living Longer with HIV
3.00pm - 3.30pm	Afternoon Tea in Exhibition and Poster Area in Pavilion 1						
3.30pm	Exhibition Closes						
3.30pm - 5.00pm	Clinical - Toxicity	3.30pm - 5.00pm	Network Sex	3.30pm - 5.00pm	International - Harm Reduction in Asia	3.30pm - 5.00pm	Social Research - Lives Worth Living
	Riverside Theatre/ Auditorium Chairs: Ronan Murray and Andrew Carr		Riverview 4 Chairs: Basil Donovan and Kate Ward		Meeting Room 1,2,3 Chairs: Nick Medland and Catherine Spooner		Meeting Room 8 Chairs: Peter Canavan and Marian Pitts

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3.30pm - 3.45pm	Drummond F - Elevated Levels of Interleukin-6 and D-Dimer are Associated with an Increased Risk of Death in Patients with HIV	3.30pm - 3.45pm	Laing SC - Impact of a Non-Occupational Post-Exposure Prophylaxis Program for HIV in Western Australia	3.30pm - 3.45pm	Kamarulzaman A - Harm Reduction in Asia - A Clinician's Perspective	3.30pm - 3.45pm	Herrmann S - Development of a New Health-Related Quality of Life Questionnaire Specific to HIV/AIDS: An International and Cross-Cultural Initiative
3.45pm -4.00pm	Bloch M - Cardiovascular Disease (CVD) Risk in the STEAL Study Cohort	3.45pm -4.00pm	Kaye MB - Extensive Transmission Links amongst Newly HIV-Infected Patients Contribute Significantly to the Incidence of HIV-1 Infection in Melbourne	3.45pm -4.00pm	Sari SW - Seeing Harm Reduction from a Gender Perspective	3.45pm -4.00pm	Bavinton B and Gray J - Assessing the Needs of Younger HIV-Positive Men
4.00pm - 4.15pm	Carey D - Poly-L-Lactic Acid for HIV-1 Facial Lipoatrophy: 48-Week Follow-Up	4.00pm - 4.15pm	Poynten IM - Non-Occupational Post Exposure Prophylaxis Against HIV (NPEP) and Subsequent HIV Infection in Homosexual Men: Final Data from the HIM Cohort	4.00pm - 4.15pm	Kab V - Risk Lifestyle of Drug Users in Phnom Penh, Cambodia	4.00pm - 4.15pm	Grierson J - Being HIV Positive in Aotearoa /New Zealand: A Two Study Comparison 2001-2007
4.15pm - 4.25pm	Oral Poster: Knox D - A Public Access Program of Sculptra® Poly lactic Therapy to Treat People with Facial Lipoatrophy	4.15pm - 4.30pm	Langdon PA - 'Sex in Other Cities' - Responding to Increases in Overseas Acquired HIV Diagnoses in WA	4.15pm - 4.30pm	Crofts N - Harm Reduction in Asia - Australia's Role	4.15pm - 4.30pm	Zablotska IB - Current Care and Support Needs of HIV-Positive Gay Men: What Factors Limit Access to Available Services?
4.25pm - 4.35pm	Oral Poster: Mackie K - Interaction Between Inhaled Corticosteroids and Protease Inhibitors (PI) in HIV-Infected Individuals - Which is the Preferred Inhaled Corticosteroid?	4.30pm - 4.45pm	Harper RE and Russell D - North Queensland Travellers Project: Heterosexual HIV Cluster	4.30pm - 4.45pm	Speed T - This is the Real World - Not as We Know It	4.30pm - 4.45pm	Murphy D - Viral Families: Analysing Kinship Discourse in HIV Transmission
4.35pm - 4.45pm	Oral Poster: Hooker D - Monitoring and Understanding Apoptosis in HIV Patients by Ligation-Mediated Polymerase Chain Reaction						

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4.45pm - 4.55pm	Oral Poster: Russell D - Transient Sick Sinus Syndrome Related to Lopinavir-Ritonavir in a Patient with AIDS	4.45pm - 5.00pm	Discussion	4.45pm - 5.00pm	Discussion	4.45pm - 5.00pm	Fawkes J - National Needs Assessment of Sex Workers who Live with HIV 2008
5.15pm - 6.30pm	Swiss Statement			5.15pm - 6.30pm	Media Event - HIV Epidemiology and Public Health Response in WA		
	Riverside Theatre/Auditorium Chairs: Geoff Honnor and Jonathan Anderson				Meeting Room 1,2,3 Chairs: Paul Van Buynder and Trish Langdon		
5.15pm - 5.35pm	Pietro Vernazza - President, Swiss Federal Commission on AIDS, St. Gallen, Switzerland Background and Rationale - Normalising Sex in Stable Serodiscordant Relationships						
5.35pm - 5.50pm	David Wilson - Mathematical Modelling Expert, The National Centre in HIV Epidemiology and Clinical Research, Sydney, New South Wales, Australia Modelling of Data on Viral Load and Transmission						
5.50pm - 6.05pm	Susan Kippax, Professorial Research Fellow, National Centre in HIV Social Research, Sydney, New South Wales, Australia Understandings of Viral Load in Negotiating Unprotected Sex						
6.05pm - 6.20pm	Simon Donohoe - Manager, Education Team, Australian Federation of AIDS Organisations, Sydney, New South Wales, Australia Implications for HIV Education and Health Promotion						
6.20pm - 6.30pm	Debate						
Free Evening							

FULL CONFERENCE PROGRAM

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SATURDAY 20 SEPTEMBER

7.00am	Registration	
7.30am - 8.45am	Breakfast Session - 'Meet the Experts' - Basic Science/Immunology	
	Riverview 4 Chairs: Scott Bowden and Tony Cunningham	
7.30am - 7.40am	Paul Gorry - Head, HIV Molecular Pathogenesis Laboratory, Burnet Principal Fellow, Macfarlane Burnet Institute for Medical Research & Public Health, Melbourne, Victoria, Australia Adaptive Changes in CCR5-Restricted HIV-1 Affecting Entry Inhibitor Potency	7.45am - 8.45am
7.40am - 7.50am	Chris Burrell - Head, Infectious Diseases Laboratories, Institute of Medical and Veterinary Science, Adelaide, South Australia Natural History of Hepatitis B Infection	
7.50am - 8.00am	Anthony Cunningham - Director, Australian Centre for HIV and Hepatitis Virology Research, Sydney, New South Wales, Australia HIV Microbicides and Vaccines	7.50am - 7.55am
8.00am - 8.10am	Mina John - Clinical Immunologist, Clinical Immunology Department, Royal Perth Hospital, Western Australia Genetic Factors and HIV & Hepatitis C	7.55am - 8.00am
		8.00am - 8.05am
8.10am - 8.45am	Questions and Panel Discussion	8.05am - 8.10am
		8.10am - 8.15am
		8.15am - 8.20am
		8.20am - 8.25am
		8.25am - 8.30am
		8.30am - 8.35am
8.35am - 8.40am	Gorton C - HIV in the Tropics: An Analysis of New HIV Infections in Far North Queensland December 2006 - March 2008	
8.00am - 9.00am	Arrival Coffee/Tea in Foyer, Level 2	

SATURDAY 20 SEPTEMBER 2008

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	Clinical Epidemiology		Social Research - Listen Up: International Perspective on Young People and HIV Risk		Blood-Borne Viruses: Co-Infection		Program Delivery
9.00am-10.30am	Riverside Theatre/ Auditorium Chairs: Chris Bourne and Lisa Bastian	9.00am-10.30am	Riverview 4 Chairs: Heather Worth and Patrick Rawstone	9.00am-10.30am	Meeting Room 1,2,3 Chairs: Gail Matthews and Scott Bowden	9.00am-10.30am	Meeting Room 8 Chairs: Sam Libertino and Suzanne Hermann
9.00am - 9.15am	Goller JI - HIV, Syphilis and Chlamydia in MSM in Victoria: Risk Behaviour and Prevalence at Clinic Sentinel Surveillance Sites	9.00am - 9.15am	Power R - Zimbabwe, Adolescent Sexual Health and the Power of Narratives	9.00am - 9.20am	Matthews G - HIV/ Hepatitis B Co-Infection	9.00am - 9.15am	Ward K - Who is Diagnosing HIV in NSW?
9.15am - 9.30am	Higgins N - Rise in Syphilis Notifications in Victoria - A Case Series Study	9.15am - 9.30am	McMillan KE - Pacific Specific: Young People and Condom Use in Tonga and Vanuatu	9.20am - 9.35am	Oliver BG - Immunopathogenesis of Hepatic Flare in HIV-Hepatitis B Virus (HBV) Co-Infected Individuals Following Initiation of HBV-Active Antiretroviral Therapy	9.15am - 9.30am	Boddy G - Queensland HIV Models of Care Project 2008
9.30am - 9.45am	Srirajalingam M - Seroprevalence and Incidence of HSV-1 and HSV-2 in an HIV Seropositive Cohort	9.30am - 9.45am	Akuani F - Adequate Supply of Food and its Impact on Adherence to ART Treatment in Papua New Guinea	9.35am - 9.50am	Matthews G - Tenofovir Based HAART is Associated with High Rates of HBV DNA Suppression and HBEAG Seroconversion in Thai HIV-HBV Coinfected Patients	9.30am - 9.45am	Cain A - The Western Australian Rural and Remote HIV Program: A 10-Year Experience
9.45am - 10.00am	Bradstreet B - Clinical Outcome of a Community Based Response to a Syphilis Outbreak Among Gay Men in WA	9.45am - 10.00am	Walizopa L - The Role of Comfort in Young People Talking and Learning about Sex and HIV in Papua New Guinea	9.50am - 10.05am	Lo G - Screening for Hepatocellular Carcinoma (HCC) in Hepatitis/HIV Co-Infection using Ultrasound Imaging and Alfa-Feto Protein Levels	9.45am - 10.00am	Chuah J - Comparison of Clinical HIV Performance Indicators (Post-HAART) between AHOD and a Regional Sexual Health Clinic 1996-2007

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FULL CONFERENCE PROGRAM

10.00am - 10.15am	Moyer J - The Role of the Nurse in Syphilis (and Other STI) Risk Assessment in a Subacute Inpatient Setting at the Alfred Hospital, Melbourne, Victoria	10.00am - 10.15am	Regmi K - Adolescence Sexual Behaviour and Risks of Contracting Sexually Transmitted Infections: A Cross-Sectional Study in Nepal	10.05am - 10.20am	Jung S - GBV-C vs. HIV-1 Several GBV-C Proteins Inhibit Different HIV Replication Steps	10.00am - 10.10am	Oral Poster: Saloner KL - Enhancing the GP's Primary Care: Acon Sydney's Enhanced Primary Care Project
10.15am - 10.30am	Discussion	10.15am - 10.30am	Discussion			10.10am - 10.20am	Oral Poster: Lienert TM - Living Long Term with HIV in the Rainbow Region
						10.20am - 10.30am	Riley R - HIV and Hepatitis C Co-Infection: From Patient to Educator
10.30am - 11.00am	Morning Tea in Foyer, Level 2						
11.00am - 12.45pm	Plenary - HIV and TB Co-infection and Conference Closing						
	Riverside Theatre/Auditorium Chairs: Debbie Marriott and Jonathon Anderson						
11.00am - 11.30am	Robin Wood - Principal Investigator, Desmond Tutu HIV-Research Centre, Institute of Infectious Disease and Molecular Medicine, Faculty Of Health Sciences Observatory, University of Cape Town, South Africa HIV AND TB Co-infection						
11.30am - 12.00pm	Martyn French - Clinical Professor, Pathology and Laboratory Medicine, University of Western Australia, Perth, Western Australia Restoration of Immune Responses to M.tuberculosis in Patients with HIV and M.tuberculosis Infection is a Double-Edged Sword						
12.00pm - 12.30pm	Adeeba Kamarulzaman - Head, Infectious Diseases Unit, Department of Medicine, University of Malaya Medical Centre, Malaysia Opportunistic Infections in Asia - The Unmet Needs						
12.30pm - 12.45pm	Levinia Crooks - Chief Executive Officer, Australasian Society for HIV Medicine, Sydney, New South Wales, Australia Closing Remarks, Prize Announcements and Future Conferences						
12.45pm - 1.45pm	Lunch in Foyer, Level 2						
1.45pm	Conference Close						

SATURDAY 20 SEPTEMBER 2008



20th annual
ashmconference

Back-to-back with the Australasian Sexual Health Conference 15 – 17 September 2008

**Wednesday 17 to
Saturday 20 September 2008**
Perth Convention Centre, Western Australia

**ORAL
PRESENTATION
ABSTRACTS
WEDNESDAY 17 SEPTEMBER 2008**



ashm
Australasian Society for HIV Medicine Inc

**ASHM Opening Ceremony
and Plenary 1
8.30am – 10.30am**

HIV PREVENTION RESEARCH

Gita Ramjee

South African Medical Research Council HIV/AIDS Lead Programme

The HIV Prevention field has faced a number of set backs in the past year. Currently we have the ABC option of abstinence, being faithful and condomize (male and female), behavioural change and treatment of sexually transmitted infections. More recently, three randomized control trials showed that male circumcision is likely to reduce the risk of female to male transmission of HIV by up to 60%. With the rising infection rates in many countries, the current efforts for HIV prevention are clearly not adequate.

Our recent efforts to expand HIV prevention options through a variety of technologies (microbicides, vaccines, HSV2 suppressive therapy, and vaginal diaphragm) have had no success and in some cases there was a potential of the intervention to increase the risk of HIV acquisition. One of the challenges in the field has been in that the theoretical concepts that have been scientifically sound with adequate support from observational studies for many of these novel intervention technologies, are not supported by the same outcomes in randomized control trials. With growing infection rates in many parts of the world especially subSharan Africa, scientists in the HIV prevention field need to come together to strategies and ascertain why theoretical concepts and observational studies are not proven effective in randomized control trials, giving up on HIV prevention is not an option.

TOWARDS AN HIV VACCINE - WHAT IS PROTECTIVE IMMUNITY AGAINST HIV INFECTION?

Sarah Rowland-Jones, Nuffield Department of Medicine, Oxford University, John Radcliffe Hospital, Oxford OX3 9DU, UK

Following the disappointment experienced after the failure of the STEP HIV phase II vaccine trial last year, questions have been raised about whether or not an effective vaccine to prevent HIV-1 infection can ever be achieved. Some have contended that the trial should be seen as a product failure rather than a failure of the entire T-cell vaccine concept, and that clinical vaccine studies should continue on an empirical basis. Others have suggested that there needs to be a return to basic science in order to define genuine correlates of protective immunity against HIV-1 infection. This presentation will review the current efforts towards HIV vaccines and discuss our understanding of the requirements for a successful HIV-1 vaccine. Relevant studies of HIV resistance or control of infection from studies in Kenya and West Africa will be presented to provide support for the concept of protective immunity.

Women Risk HIV – International 11.00am – 12.30pm

A NOVEL APPROACH TO ANTENATAL RISK ASSESSMENT IN VERY LOW HIV PREVALENCE SETTINGS IN RESOURCE-POOR COUNTRIES

Holmes WR, Centre for International Health, Burnet Institute, Melbourne, VIC, Australia

In very low HIV prevalence settings in resource-poor countries the relative cost-effectiveness of routine provider-initiated offer of HIV testing for all pregnant women is low. A strategy of offering the test to pregnant women who may be more vulnerable to HIV infection is problematic because it is difficult to identify pregnant women at greater risk. Women at risk because of their partner's behaviour are often unaware of their risk, and undertaking risk assessment is a sensitive task for busy antenatal care staff to conduct in a confidential, inoffensive and non-stigmatising manner.

However, there are often opportunities to reach expectant fathers with information and risk assessment. These opportunities may include pre-conception couple visits, antenatal couple visits, and 'parentcraft' classes for pregnant women and expectant fathers.

We have developed a novel risk assessment quiz for expectant fathers in the entertaining style typical of women's magazine personality quizzes. Because the men do not need to fill in a checklist or questionnaire they can be completely honest in their answers because no one will know the result except themselves. The quiz includes 'comments' for each risk category. Those in the 'low or no exposure risk category' are congratulated and encouraged to continue their safe behaviours to protect themselves and their families. Those in higher exposure risk categories are informed that if they find they are HIV positive it is possible to protect their wife from infection if she is not yet infected, and that if she is already infected the risk of transmission to their baby can be greatly reduced. This provides a strong motivation for the father to request a confidential HIV test. A commitment to disclose a positive result to his wife would be obtained during the pre-test counselling.

It is planned to evaluate the risk assessment quiz for expectant fathers in Sri Lanka, where HIV prevalence remains very low.

ADDRESSING GENDER-BASED VIOLENCE IN SETTLEMENT AREAS OF PORT MORESBY

Ofasia E¹, Duffy SM²

¹World Vision Pacific Development Group; ²World Vision Australia

Gender-based violence (GBV) is prioritised in Papua New Guinea's (PNG) National Gender Policy and Plan on HIV/AIDS 2006-2010. Various studies indicate an association between GBV and Human Immunodeficiency Virus (HIV). High incidence of GBV in PNG is associated with rapid social, cultural and economic change, social dislocation and erosion of the wantok system, especially in Port Moresby's informal settlement areas. Victims of physical and sexual violence exhibit higher rates of HIV and sexually transmitted infections. The National AIDS Council estimates nearly 60% of new HIV infections in adults in 2007 occurred in women. Alarming rates of domestic abuse (two out of three married women) and sexual violence (over 50% of women) have been recorded in PNG. In addition to HIV transmission caused directly by violent sexual contact, GBV is symptomatic of disempowerment and denial of a woman's right to exercise control over sexuality, and to sustain safe sexual practices.

In 2007 World Vision commenced implementation of the OI Meri Igat Numba project to reduce GBV and HIV transmission in four settlement areas. The project takes an appreciative, rights-based and collaborative approach, encouraging positive attitudes and behaviours as well as challenging abusive ones. Project strategies combine behaviour change communication (BCC), engagement with service providers, and community forums. BCC activities include theatre, dance, media campaigns, and information, education and communication (IEC) materials developed in partnership with women and men in settlement areas. BCC messages raise awareness of HIV, safer sex, rights, health and welfare services, and strategies for action against perpetrators of GBV. Community forums provide opportunities for women to express concerns about GBV to men, community leaders and service providers. To lessen women's economic dependence, women receive training in vocational and business skills.

Project methodology and early project results will be discussed, including successes and challenges. Anecdotal evidence indicates that real change has occurred in both men's and women's attitudes, but suggest long-term engagement is required for sustainable change.

TRIBAL FIGHTING, VIOLENCE AGAINST WOMEN AND GIRLS AND HIV IN PAPUA NEW GUINEA

Kupul M¹, Mek A¹, Kepa B¹, Kelly A²

¹Papua New Guinea Institute of Medical Research, Goroka, Papua New Guinea; ²National Centre in HIV Social Research, UNSW, Australia

There are many drivers of the epidemic and in the Highlands of PNG tribal fighting may be one. While killing men, tribal fighting creates a breeding ground for many forms of violence against women and girls. Women and children are forced to be refugees in other ethnic areas, women and girls are exchanged for guns and/or forced into marriage and are raped and murdered. Women and children go without food, girls are denied education because they are refugees and pregnant women are deprived of antenatal care during pregnancy and labour. In these contexts women and girls are more vulnerable to HIV.

Concerned with such high rates of violence in Melanesia and East Timor a research of best practices was commissioned by AusAID and carried out by Program for Appropriate Technology in Health (PATH) utilizing local researchers. Drawn from the PNG country evaluation, which using participatory research methods, this paper addresses how two communities in Chimbu Province effectively addressing violence against women and girls by first combating tribal fighting.

The success of these communities indicates that in order for social change to occur there must be the desire for such change. There must also be ownership of the problem and the solutions. These communities and other which want to change must also be prepared AND supported to challenge cultural norms including violence, leadership and relationships within and between men and women and across ethnic groups. Two community organisations have initiated gender equity training, community policing by both men and women, and the involvement of women in decision making.

Where communities are working to help themselves, efforts must be made to help make them sustainable. To address violence against women and girls, gender relations need not be the direct entry point. Addressing other social issues such as tribal fighting can lead to change in gender relations and a reduction in violence against women and girls which in turn will make them less vulnerable to HIV. Communities have the power to transform themselves providing sanctuaries for women and girl from both violence and HIV.

FEMALE SEX WORKERS IN SRI LANKA: WHY ARE WOMEN WHO WORK ON THE STREET MORE LIKELY TO USE CONDOMS COMPARED WITH WOMEN WHO WORK IN OTHER LOCATIONS?

Rawstorne P, Worth H, Kippax S

National Centre in HIV Social Research, The University of New South Wales, Sydney, New South Wales, Australia

Sri Lanka has a low-level HIV epidemic. The first large scale behavioural surveillance survey (BSS) in Sri Lanka was conducted in 2006/2007. More than 7,000 people were sampled from six sub-population groups: female sex workers; factory workers; drivers of three-wheel taxis; men who have sex with men; 'beach boys'; and drug users. This paper is focussed on female sex workers.

Sampling female sex workers (FSW) was done according to the type of work context: streets, brothels, massage-parlours, casinos, and karaoke bars. There were exactly 900 FSW who had vaginal intercourse with a paying client in the previous twelve months, 488 of whom were working on the street. (Note: anal intercourse is not included in these analyses as it was rarely practiced).

In comparison with all other categories of FSW, women working on the streets were more likely to have always used condoms for vaginal intercourse in the last twelve months (82.0 % versus 62.3 %, $p=0.000$) and on the last occasion (95.1 % versus 85.0 %, $p=0.000$). These findings were contrary to expectation and prompted further analyses to explore the possible reasons why street-based FSW are more likely to use condoms for vaginal intercourse.

Multiple logistic regression analyses were conducted to examine the factors that distinguished FSW working on the street from other FSW. The final model showed that street FSW were more likely to: carry condoms with them; have found out about HIV through government health services; decide themselves how much the client pays for sex; and accurately believe that people can protect themselves from getting HIV sexually by using a condom every time they have intercourse. Street FSW were less likely than other FSW to: read and write; and to have found out about HIV through television.

Although less educated, FSW working on the street are better prepared to prevent HIV transmission by the use of condoms. These women are accessing important health information from government health services and appear to be taking greater responsibility for their health. Why these women have better access to government health services requires further exploration.

ALCOHOL CONSUMPTION, HIV TRANSMISSION AND IMPLICATIONS FOR WOMEN IN SOUTH AFRICA

Ghaly, S

The aim of this paper is to examine the HIV epidemic in South Africa and to explore the role that alcohol consumption plays in HIV transmission. The paper will include a critical appraisal of various interventions that aim to reduce alcohol abuse and in so doing, reduce HIV incidence.

In several studies, alcohol consumption has shown to negatively impact on HIV prevention and treatment programs in South Africa. High levels of alcohol consumption are often attributed to factors such as unemployment, abuse and as resistance against oppression. High alcohol consumption was found to be one of the predominant causes of risky sexual behaviour, and a correlate of increasing levels of violence. The association between increased risky sexual behaviour and high levels of alcohol consumption has been demonstrated through studies conducted in South Africa by the South African Community Epidemiological Network on Drug Use (SACENDU).

After working with local HIV clinics in townships with the Organisation Friends of Africa, it became evident that underdevelopment, high unemployment, lack of recreational activities and the access to illegal alcohol outlets impacts on the risk of disease transmission, rape, teenage pregnancies and other forms of violence against women, all of which may contribute to increasing HIV rates. Intervention strategies such as the 2003 National Liquor Act have been established to reduce levels of alcohol consumption, by including a liquor outlet policy; regulating the physical availability of alcohol; and placing restrictions on alcohol marketing. Increasing employment opportunities and the availability of recreational activities are strategies that can also aid in reducing alcohol misuse and high risk sexual behaviour. However, many of these strategies have not yet been implemented. Consequently alcohol remains the highest abused substance causing irreversible social and physical damage for people living in South Africa.

This paper reports on the effects that the misuse of alcohol can have on the increasing rates of HIV and the fact that women are predominantly affected and provides a critical appraisal on some of the current alcohol related interventions aimed at reducing HIV/AIDS transmission in South Africa.

ENABLING HIV PREVENTION OUTCOMES FOR SEX WORKERS, PAPUA NEW GUINEA

Janelle Fawkes, Chief Executive Officer, Scarlet Alliance, Australian Sex Workers Association,

When sex work is criminalised sex workers ability to access justice and services are reduced including: HIV prevention, testing, treatment and care; general sexual health. Laws regulating sex work in Papua New Guinea have been interpreted to mean sex work per se is illegal. This paper reviews the Papua New Guinea laws and reports on the impact of stigma and discrimination on HIV prevention along with the direct impacts on individuals. Anecdotal evidence collected during a three year capacity development project working directly with Papua New Guinea sex workers has identified the need for enabling legal environments for the success of future HIV prevention, testing, treatment and care services for sex workers in Papua New Guinea.

ACH2 Bench to Bed: 1
11.00am – 12.30pm

**TOWARDS VACCINES ELICITING BROAD
NEUTRALISING ANTIBODY RESPONSES BY
SELECTING FOR HIV-1 ENV IMMUNOGENS
THAT PROMINENTLY EXPOSE CONSERVED
NEUTRALISATION EPITOPES**

Purcell DF¹, Tan J¹, Siebentritt C¹, Sterjovski J², Gray LR²,
Churchill MJ², Reddy SM¹, Ramsland PA³, Gorry PR² and
Center RJ¹

¹Department of Microbiology and Immunology, University of Melbourne, Parkville VIC 3010; ²Macfarlane Burnet Institute for Medical Research and Public Health, Prahran VIC 3004; ³Structural Immunology Laboratory, Macfarlane Burnet Institute for Medical Research and Public Health, Heidelberg, VIC 3084

The recent failure of HIV vaccines eliciting potent T-cell responses in humans has highlighted the need to also stimulate broadly neutralising antibodies against HIV-1 envelope protein (Env), but this has proven a difficult task. While antibodies can be non-neutralising or enhancing for HIV infection, the desired broad neutralising antibodies bind conserved conformations such as the CD4 receptor and chemokine coreceptor binding sites on Env oligomers. We hypothesised that environments where target cells display low levels of receptor/coreceptor and negligible neutralising-antibody levels may select for HIV isolates that highly expose neutralisation-sensitive Env structures required for viral entry. We sought to rationally screen a panel of oligomeric Env for candidate neutralising-antibody immunogens by ranking them for binding affinity for soluble CD4 receptor (sCD4) and affinity for a reference panel of broadly neutralising monoclonal antibodies (mNAb). We assessed Env from two sources: 1) the brain, where antibody levels are typically low and 2) blood from late-stage AIDS patients when HIV-specific antibodies diminish. In general, Env from brain-derived clones showed higher affinity for mNAb and sCD4 than did Env from control clones derived from matched patient spleen. While some Env variants from late AIDS patients showed high affinity for sCD4 or mNAb this was not consistently different compared to Env derived from pre-symptomatic patients in the same cohort. A group of 6 Env clones with higher affinity for mNAb and/or sCD4 were selected for a DNA prime with a recombinant soluble gp140 oligomeric Env protein boost immunisation trial in mice. Most mice developed high anti-Env specific antibody titres measured by ELISA. Sera were pooled within groups and assessed for the ability to neutralise virus pseudotyped with Env derived from the AD8 (CCR5-restricted, relatively neutralisation resistant), 89.6 (dual CCR5/CXCR4 tropic) and NL4.3 (CXCR4-

restricted, relatively neutralisation sensitive) strains. Env from one brain-derived clone elicited antibodies that neutralised reporter virus pseudotyped with heterotypic B-clade AD8 and 89.6 Env, but surprisingly not NL4.3 Env. The systematic screening of Env variants may provide further useful Env candidates for evaluation as broad NAb-eliciting vaccines in animals

ACH2 BENCH TO BED: 1

WEDNESDAY 17 SEPTEMBER 2008: 11.00AM – 12.30PM

UNDERSTANDING SUSCEPTIBILITY TO CMV IMMUNE RESTORATION DISEASE AND THE IMMUNOLOGICAL CONSEQUENCES OF EXTREME IMMUNODEFICIENCY

Patricia Price, Pathology and Laboratory Medicine, University of Western Australia

CMV disease is a common complication of late-stage HIV disease and recurs as immune restoration disease (IRD) in some patients. Here immunological and genetic factors assayed by our group are used to profile patients who experience CMV disease. CD4 T-cell responses were assessed by IFN γ ELISpot assay and antibody was quantitated by ELISA using a whole CMV antigen.

We tested all available samples from patients who had begun ART with advanced immunodeficiency (nadir < 50 CD4 T-cells/ μ l) in Perth (1996-8) and achieved a sustained virological and immunological response (n=50 patients). These criteria imply selection of patients on the basis of survival before ART and a favorable outcome thereafter. Although CD4 T-cell counts increased during the first year on ART, IFN γ responses to CMV were low before ART, rose slowly and never reached levels seen with cells from uninfected donors. Within this patient cohort, the lowest nadir CD4 T-cell counts associated with persistently low CD4 T cell IFN γ responses to CMV antigen, higher IFN γ responses to an NK-cell target (K562) and characteristic TNFA and IL12B genotypes. In a broader cohort, the TNFA genotype and high numbers of activating KIR genes were associated with a history of CMV as an AIDS-defining illness.

Patients who developed CMV IRD (retinitis or encephalitis, n=7) had a history of CMV-AIDS. Their CMV IRD paralleled a rise in anti-CMV antibody and markers of immune activation (eg: plasma IL-6). Longitudinal studies of IFN γ responses were not possible, but responses were low 2-3 years after the IRD. CMV IRD patients all had very low nadir CD4 T-cell counts and the characteristic TNFA / IL12B and KIR genotypes. These genotypes may promote extreme immunodeficiency and/or CMV-AIDS or may allow patients to survive these conditions to experience an IRD and join our study. Activating KIR may promote an NK response able to compensate for poor CD4 T-cell responses to CMV. A corollary of this model is that CMV IRD may not be a T-cell cytokine storm, as implicated in IRD associated with mycobacteria.

A different scenario emerges in Kuala Lumpur. Patients beginning therapy with <200 CD4 T-cells all experienced a rise in CMV antibody and CD4 T-cell IFN γ responses. Associations with CMV IRD are now under investigation.

PREDICTING NEUROPATHY RISK BEFORE STAVUDINE PRESCRIPTION: AN ALGORITHM FOR MINIMIZING NEUROTOXICITY IN RESOURCE-LIMITED SETTINGS

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Sensory neuropathy (SN) is a common, disabling complication of stavudine (d4T) therapy, with prevalence rates >40% reported from d4T-treated cohorts of patients with HIV. Despite its toxicity, d4T is an effective, relatively inexpensive HIV treatment and remains important in resource-limited centres. Methods of predicting SN risk are needed to guide antiretroviral prescribing in countries where some use of d4T remains an economic necessity.

We undertook SN screening programs in Melbourne (low d4T use), Kuala Lumpur (intermediate d4T use) and Jakarta (routine d4T use) in 2006 to describe SN risk factors among HIV patients in our region. SN was defined by the presence of symptom/s and sign/s on the AIDS Clinical Trials Group Brief Peripheral Neuropathy Screen. Patients' height, age and weight were recorded and demographic, laboratory and treatment data were obtained from the medical file. Statistical analysis using Stata 9.2 defined factors associated with SN. The role of patient demographics in predicting SN was then assessed in patients who had ever used d4T.

294 patients were assessed (100 Australians, 98 Malaysians and 96 Indonesians). Prevalence rates of SN were 42%, 19% and 34% respectively and 32% overall. In addition to treatment exposures, increasing age ($p=0.002$) and height ($p=0.001$) were independently associated with SN risk. Receiver operating characteristic analysis suggested "cut offs" of ≥ 170 cm and/or ≥ 40 years for predicting patients at risk of SN. These were applied to the 181 d4T-exposed patients, yielding an SN risk of 20% in younger, shorter patients, 33% in younger but taller patients, 38% in older but shorter patients, and 66% in those older than 40 years and taller than 170 cm.

Stavudine is infrequently prescribed in Australia due to high rates of toxicity, but remains an important HIV treatment in our region. Rates of SN, a common d4T toxicity that impairs quality of life and may reduce patients' ability to work, vary with patient age and height. These data support prioritizing patients taller than 170 cm and/or older than 40 years (factors measurable at no extra cost) for access to antiretrovirals other than d4T.

BIOLOGICAL CHARACTERIZATION OF NOVEL HIV-SPECIFIC ACTIVITY

Nitin Saksena¹, Maly Soedjono¹, Wayne Dyer², and John Zaunders³ and Bin Wang¹,

¹Retroviral Genetics Labs, Westmead Millennium Institute, USYD, Westmead, Sydney; ²Australian RedCross, Clarence Street, Sydney; ³Center For Immunology, Darlinghurst, Sydney

Human Immunodeficiency virus type-1 has led to global AIDS pandemic. Currently, there are 40 million people infected with HIV and with 14,000 new infections occurring each day. Although there are several lines of anti-retroviral drugs available in the market and have provided better life standards to HIV-infected individuals, there are continuing problems associated with these drugs-such as toxicity and emergence of resistance. All HIV vaccines have failed to date. Thus, fresh approaches and strategies are needed for controlling HIV. Recently, we have discovered a novel HIV-specific cellular differentiation activity in the soluble factor secreted by the CD4+ T cells from a unique HIV+ elite controller. This cellular differentiation activity leads to the induction of CD14+ monocytes to their differentiation to antigen presenting cells displaying CD40, CD86, CD11b and CD14 markers. This activity was observed to occur in both autologous and non-autologous fashion. This new approach has shown promise on cells from HIV+ positive individuals with low viral loads, suggesting its possible future use as a therapeutic vaccine in conjunction with currently prescribed therapy. The biology of these findings will be findings will be discussed in detail.

**IDU – Domestic
1.30pm - 3.00pm**

**ILLICIT DRUG USE AND RISK OF HIV
SEROCONVERSION AMONG GAY MEN IN
SYDNEY: DATA FROM THE HIM COHORT**

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Background: Illicit drug use has been associated with risk behaviour among gay men. We examined frequency of use of illicit drugs as a risk factor for HIV seroconversion in a community-based cohort of HIV negative homosexually active men in Sydney, Australia.

Methods: From June 2001 to June 2007, participants underwent annual HIV testing and were interviewed twice a year. Detailed information about sexual, drug-using and other behaviour was collected.

Results: Among 1,427 participants enrolled, 53 HIV seroconverters were identified by June 2007.

At baseline, 62.7% reported using illicit drugs in the previous six months, including 10.7% who reported at least weekly use. Illicit drug use was associated with unprotected anal intercourse with casual partners (UAIC) ($p < .001$). Use of illicit drugs was associated with increased risk of HIV infection at a univariate level and this risk increased with greater frequency of use. This was also true of the use of Viagra. Use of methamphetamine, amyl nitrite and Viagra were highly intercorrelated. Use of each type of illicit drug was included in multivariate analysis, but after including Viagra only amyl nitrite and Viagra remained significant. After controlling for sexual risk behaviours, only use of Viagra remained significant (AOR=1.75, CI=1.31-2.33, $p < 0.001$), although amyl nitrite was borderline significant (AOR=1.26, CI=0.98-1.62, $p = 0.074$).

Conclusion: While drug use may not be a directly causative factor for UAIC, in this cohort of HIV-negative gay men frequent drug use is independently associated with HIV seroconversion. Viagra, amyl nitrite and methamphetamine are often used specifically, and explicitly, to enhance sexual pleasure among gay men, especially in the context of 'partying'. The association between these drugs and UAIC among gay men suggests that intensive sex partying, where both these activities often occur, is an appropriate priority in HIV-prevention efforts in this population.

**RESULTS FROM THE 2008 PERIODIC SURVEY
OF NSW NEEDLE AND SYRINGE PROGRAM
ATTENDEES**

Deacon RM¹, Iversen J¹, Mason R², Maher L^{1,3}

¹National Centre in HIV Epidemiology and Clinical Research, University of New South Wales, Sydney, NSW, Australia; ²AIDS/Infectious Diseases Branch, NSW Health Department, Sydney, NSW, Australia; ³School of Public Health and Community Medicine, University of New South Wales, Sydney, NSW, Australia

In April 2008, the NSW Department of Health requested that staff at Needle and Syringe Programs (NSPs) collect demographic and drug use data from clients of NSP services. The National Centre in HIV Epidemiology and Clinical Research (NCHECR) was commissioned to analyse and report on the results. All clients attending participating NSPs during a two week period were asked to provide information on their gender, age, ethnicity, age of first drug injection, last drug injected, frequency of injecting, syringe disposal and where syringes were obtained.

A total of 6047 data collection forms were returned from the 52 NSPs who participated in the data collection. Of these, 3197 were clients who had not previously attended the NSP during the two week period. The number of repeat clients was 2009 giving an overall repeat ratio of 1.6. The median age of non-repeat clients was 36 years, 66% were male, 5.9% were from a non-English speaking background and 13% self-identified as Aboriginal and/or Torres Strait Islanders. The median duration of injecting drug use was 15 years and the most common drug last injected was heroin (33%), followed by methamphetamine (28%). Approximately 41% of clients reported injecting daily or more frequently.

This project provides an important snapshot of the NSW NSP client base and a useful mechanism for comparing the characteristics of clients across different geographic areas in NSW, as well as guiding estimates of the total IDU population in NSW for service coverage evaluation.

CONTINUED INCREASES IN SYRINGE DISTRIBUTION ARE REQUIRED TO RESTRAIN VIRAL TRANSMISSIONS AMONG INJECTING DRUG USERS IN AUSTRALIA: RESULTS FROM A MODELLING STUDY

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Sharing syringes by injecting drug users (IDUs) is an important mode of worldwide transmission of blood borne viruses, such as HIV and HCV. In Australia, the current coverage of sterile syringes is approximately 50% and annually there are ~30-40 HIV notifications and ~9,500 cases of HCV due to syringe sharing by IDUs.

We address the following research questions: (i) what are the driving behavioural factors in differential HIV and HCV incidence among IDUs in Australia? (ii) What impact will changes in needle-syringe programs (NSPs) have on HIV and HCV incidence? (iii) How much reduction in the proportion of injections that are shared and number of time a syringe is used before disposal is required in order to theoretically eradicate HIV and HCV epidemics among IDUs?

These questions are addressed through the development of a novel mathematical model based on risk equations, calibrated to the Australian population of IDUs. Differential incidence rates for the two epidemics are due to differences in transmission probabilities but also because syringe sharing behaviour and syringe distribution in Australia are at levels that sustain high levels of HCV incidence but not HIV. We provide predictions of the changes in incidence of both epidemics due to changes in intervention strategies.

If Australia had not implemented NSP from the late 1980s, then HIV notifications could have increased substantially and moderate increases in HCV would also have been observed. We predict that interventions due to NSP are very effective in reducing HIV and HCV. An increase of in the coverage rate to 90% could theoretically eradicate HCV transmission among IDUs. Alternatively, if the proportion of injections that are shared decreased from 15% to 2.5% then the HCV epidemic among IDUs could be eradicated. This research highlights the large benefits of NSPs and recommends that increased coverage can result in significant reductions in viral transmissions among IDUs.

THE ROLE OF NEEDLE SYRINGE PROGRAMS IN PREVENTING TRANSMISSION TO INJECTING BY YOUNG PEOPLE

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There is evidence that drug users in Australia are making transitions to injecting at younger ages. Needle and syringe programs (NSPs) play important roles in services for injecting drug users (IDU), and have the potential to assist in prevention of transition to injecting methods. However, their potential to access young people at risk of initiating injection is affected by the reluctance of young people to use health services.

How can NSPs be better accessed by young people and play a role in prevention? What are the issues around young people accessing NSPs?

To answer these questions, a literature review and key informant consultations were conducted. Using this research, an overview of existing and potential strategies and an outline the significant issues for NSPs in implementing such strategies will be presented. Issues include concerns about exposure of young people to drug users, normalisation of drug use, and NSP workforce capacity to work with young people and implement interventions.

A GAP ANALYSIS OF PEOPLE WITH A HISTORY OF INJECTING DRUG USE WHO ARE NOT CURRENTLY ACCESSING HIV AND SEXUAL HEALTH SERVICES IN SOUTH EASTERN SYDNEY ILLAWARRA AREA HEALTH

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People with a history of injecting drug use are documented as one of the priority groups in the NSW HIV/AIDS Strategy 2006-2009 and receive special reference in the NSW Sexually Transmitted Infection Strategy 2006-2009. Despite this, access to specialist HIV and sexual health services by people who inject drugs remains low.

This paper describes a gap analysis commissioned by South Eastern Sydney Illawarra Health to identify characteristics and needs of people with a history of injecting drug use and who are not accessing HIV/AIDS and STI services; and to identify service support strategies for how SESIH services can better target these populations to improve access.

The paper describes innovative strategies used to contact key informants, the role of informatics in analysing service utilisation data and the development of service re-orientation processes to increase access to not only HIV and sexual health promotion, screening, prevention and testing services but also to treatment and care services.

INCREASING HEPATITIS C TREATMENT UPTAKE BY INJECTING DRUG USERS FROM CULTURALLY AND LINGUISTICALLY DIVERSE BACKGROUNDS: OUTCOMES OF A PILOT STUDY OF INDOCHINESE INJECTORS

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¹National Centre in HIV Epidemiology and Clinical Research and School of Public Health and Community Medicine, University of New South Wales; ²Sydney South West Area Health Service; ³Drug Health Services, Faculty of Medicine, University of Sydney

Background: There has been limited research exploring hepatitis C (HCV) treatment-seeking from the perspective of injecting drug users (IDUs), particularly those from culturally and linguistically diverse backgrounds.

Methods: Between 2003 and 2007 ethnographic fieldwork and in-depth interviews were conducted with Indo-Chinese IDUs in South Western Sydney (n=72) recruited using theoretical and snowball sampling. Eligibility criteria for the pilot study (n=23) included being aged 18 years and over, ability to complete interviews in English, being of Cambodian, Lao or Vietnamese cultural background and having injected drugs in the last six months. Following a baseline interview about HCV, a culturally-informed brief intervention about HCV treatment was provided and participants offered facilitated referral to a tertiary liver clinic. Participants were followed up and interviewed again at three and six months.

Results: At baseline, most participants were unclear about what treatment involved and its potential outcomes. Participants responded to the brief intervention with numerous, detailed questions but while most expressed interest in having treatment at some stage, few (n=3) attended the clinic. Factors influencing treatment-seeking included the cultural significance of "curing" HCV, perceived capacity to adhere to treatment in the event of experiencing side effects, patterns of injecting drug use, precarious personal circumstances and lack of support, imprisonment and past experiences with health services.

Some participants experienced difficulties accessing the liver clinic, particularly with the system for making appointments. Those who accessed the clinic and disclosed current drug use felt that they were discouraged from initiating treatment until they stopped injecting drugs. Cultural factors influenced interactions with clinic staff, particularly disclosure of drug and treatment-related concerns.

Conclusions: Findings suggest that the brief intervention increased participants' knowledge levels and interest in seeking treatment at some stage in the future. However, in addition to raising awareness of treatment, issues



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identified regarding the assessment process and options for assistance and support during treatment, need to be addressed to promote treatment uptake by this group. Models of service delivery in tertiary settings need to include staff capacity to address drug dependence issues, streamlined referral and assessment processes and mechanisms for linking clients with culturally-appropriate support.

IDU – DOMESTIC

WEDNESDAY 17 SEPTEMBER 2008: 1.30PM – 3.00PM

ACH2 Bench to Bed: 2
1.30pm – 3.00pm

TISSUE-SPECIFIC ADAPTIVE CHANGES IN V3 OF GP120 ENABLE PERSISTENCE OF MARAVIROC-SENSITIVE R5X4 HIV-1 IN BRAIN

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Most neurotropic HIV-1 strains are CCR5-restricted, but R5X4 variants have been identified infrequently in brain. In this study, HIV-1 Envs were cloned from R5X4 primary viruses isolated from brain (n=6) and spleen (n=6) of subject MACS1. Single R5X4 Envs cloned from brain and blood of another subject were included (aBR01, aBL01). Envs were sequenced and structural modeling was performed to analyze amino acid variants. Env fusogenicity was tested in fusion assays with wild type and mutant coreceptors. Sensitivity to inhibition by the CCR5 and CXCR4 inhibitors, Maraviroc and AMD3100 respectively, was tested in single-round entry assays. MACS1 brain (M1br) and the brain-derived aBR01 Envs were more fusogenic than Envs from matched spleen or blood in cells expressing CD4/CCR5, whereas MACS1 spleen (M1sp) and the blood-derived aBL01 Envs were more fusogenic than Envs from matched brain in cells expressing CD4/CXCR4. Entry assays showed brain/spleen R5X4 Envs had preferential usage of CCR5/CXCR4 for entry, respectively. Studies with coreceptor mutants showed that, compared to M1sp Envs, M1br Envs had reduced dependence on residues in the CCR5 N-terminus (Y15), ECL1 (H88), and ECL3 regions (E262, F264) for CCR5-mediated fusion. Compared to M1br Envs, M1sp Envs had reduced dependence on residues 4-36 in the CXCR4 N-terminus and R183 in the ECL2 region for CXCR4-mediated fusion. Sequence analysis identified R306 in the V3 loop of 6/6 M1sp Envs and S306 in 6/6 M1br Envs. Mutagenesis studies showed R/S306 was solely responsible for the spleen/brain phenotypes, respectively. Whilst entry of spleen R5X4 Envs was not inhibited by the CCR5 inhibitor Maraviroc, entry of brain R5X4 Envs was potently inhibited by Maraviroc; a phenotype also conferred by R/S306. Thus, tissue-specific adaptive changes resulting in altered mode of coreceptor usage may enhance the tropism of compartmentalized R5X4 strains for cells expressing CCR5 in brain and CXCR4 in lymphoid tissues. Furthermore, the results suggest CCR5 inhibitors may be effective in suppressing certain R5X4 HIV-1 variants.

GENOMIC AND PROTEOMIC CHARACTERIZATION OF A NOVEL HIV-SPECIFIC ACTIVITY

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Virus-specific CD4+T cells play a critical role in antiviral immunity. HIV-1-specific CD4+T cells in chronically-infected adults are mostly composed of IFN-g secreting cells and IL-2-secreting CD4+T cells, while in other HIV-infected progressors there appears to be a defect in IL-2-secreting cells. The HIV-infected non-progressors differ from other HIV+patients in displaying strong proliferative responses to viral antigen, which are thought to be highly protective. As discussed in the first talk, we have identified a rare HIV-infected non-progressor, in whom this proliferative response was coupled with strong HIV-specific cellular differentiation activity, which has not been observed before. This differentiation activity was mediated by a soluble factor secreted by CD4+T cells in response to HIV antigen. This soluble factor, *in vitro*, induces a potent and rapid differentiation of CD14+ monocytes to antigen presenting cells in both autologous and non-autologous fashion. In this study, using quantitative superarray, whole human genome microarray (>47,000 genes) and mass spectrometry, we have elucidated possible immunological mechanism of this novel HIV-specific bioactivity.

HIV DNA LEVELS IN PBMC DECLINE IN PATIENTS RECEIVING INTEGRASE INHIBITOR COMBINATION THERAPY

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HIV DNA can persist for years in circulating cells from patients on successful anti-retroviral therapy and presents a circulating latent reservoir of virus. New drugs to treat HIV infection are targeted at the HIV integrase (IN) enzyme. We assessed changes in HIV DNA in patients treated with an IN inhibitor, to assess if these new drugs can clear this circulating reservoir.

PBMC were isolated from patients recruited for Raltegravir (Ral) combination therapy based on special access guidelines, DNA extracted and HIV DNA quantitated (1). IN DNA sequence was obtained by consensus sequence analysis. HIV DNA was detected in all patients prior to Ral therapy and declined to undetectable levels within 4 wks in 5/6 patients and 8 wks in the 6th patient. Patients concurrently showed a rise in CD4+ cells and a decline in circulating plasma viral load. The increase in CD4+ cells without accompanied increased HIV DNA, indicates reconstitution with HIV negative cells and prevention of further re-infection of these cells. Successful therapy was maintained for at least 6 mths. A minor transient viremia was observed in one patient with a brief treatment intermission at 3 mth post-therapy which was accompanied by an increase in HIV DNA. Ral-induced drug resistance mutations in the IN gene were not observed in either the circulating virus or PBMC DNA. In conclusion, Ral combination therapy successfully and rapidly reduced HIV viral load and cellular DNA and increased CD4+ without drug resistance. Prevention of HIV DNA integration may promote decay and clearance of unintegrated latent HIV DNA forms, while the turn-over of cells harbouring integrated DNA without re-population of new infected cells may subsequently purge the HIV DNA containing reservoir. Thus, IN inhibitor therapy may reduce the circulating HIV reservoir above that seen with traditional protease and RT inhibitor based combination therapies.

This work was supported by funding from ACH2
(1) Carr, J.M., et al., (2007) J Clin Micro, 45(4): 1288-97

INHIBITION OF HIV BINDING TO LANGERIN ON LANGERHAN'S CELLS AS A STRATEGY FOR MICROBICIDE DEVELOPMENT

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The interaction of HIV with immature Langerhans cells (iLCs) in the female genital tract is of key importance for sexual transmission, as these cells are the major cells able to transport virus through epithelium to T cells in the submucosa or lymph node. HIV binds initially to langerin on iLCs. Then the virus is probably either endocytosed or cause true infection. Therefore inhibition of HIV binding to langerin is likely to be a successful strategy for prevention of infection by microbicides (but probably requires combination with an inhibitor of the HIV fusion receptor (CCR5)).

To test this hypothesis we initially used skin/mucosa derived immature (i)LCs but yields were too low for screening inhibitors, only for final validation of results. However with the model iLCs, Mutz 3 cells, derived from acute myelomonocytic leukaemia (5) and cultured in GM-CSF, TNF α , TGF- β , 99% expressed Langerin and <2% DC-SIGN and mannose receptor (MR), after cell sorting to deplete DC-SIGN/MR+ cells. 80-95% of these cells also expressed CD4 and 25-30% expressed CCR5. They were infectable by HIV at similar levels to iLCs.

Meanwhile parallel studies on the oligomeric status of langerin on the surface of langerin transfected QT6 and Mutz3 cells showed Langerin to equilibrate between monomeric and tetrameric states and that HIV gp120 trimer bound more strongly to the tetramer. The first inhibitors tested were the generic C Type Lectin Receptor inhibitor, mannan, and also blocking monoclonal antibodies to the carbohydrate recognition domain (CRD) and/or full extracellular domain (ECD) of langerin. All inhibited gp120 monomer/trimer binding to langerin as a monomer but not as a tetramer, indicating the need to develop inhibitors of gp120-langerin oligomer interactions, such as soluble langerins. The latter were tested for toxicity to monocyte derived DCs, Mutz 3 cells and keratinocytes and shown to be toxic only at high concentrations of >25 μ g/ml, using trypan blue dye exclusion or, for DCs in an antigen presentation assays. We will now examine the efficacy of soluble langerins in inhibiting binding of gp120 to langerin (oligomers) on Mutz 3 cells and iLCs, infection of these cells and finally transfer of HIV from these cells to CD4 lymphocytes.

Virology / Immunology
3.30pm – 5.00pm

**AN HLA-C*0702 RESTRICTED T-CELL
RESPONSE DIRECTED AGAINST AN IMMUNE
ESCAPED HIV NEF KY11 EPIOTOPE EXHIBITS
HIGHER FUNCTIONAL AVIDITY BUT LESSER
CYTOLYTIC ACTIVITY WHEN COMPARED
WITH THE ANTI-WILD TYPE RESPONSE**

Keane NM, Laird R, Chopra A, Maiden T, Almeida C, Mallal S, John M

HIV-1 mutational escape from a suppressive epitope-specific T-cell response has been well described. Analysis of HLA allele associated HIV polymorphism in population-based studies (n>800) suggests that HIV may also adapt to favour induction of certain epitopes that actively enhance viral replication. We therefore sought to investigate the presence and functionality of the HLA-restricted T-cell responses driving one such adaptation identified by the genetic analysis (Nef D108E in the HLA-C*0702 restricted Nef KY11 epitope).

Cryopreserved PBMC samples from 32 HIV-infected patients with HLA-C*0702 allele were assayed for IFN- γ production upon stimulation with the adapted and non-adapted ('wild type') KY11 peptides by ELISpot assay. The functional avidity of wild type and variant-specific T-cell directed responses were compared using serial peptide dilutions. Autologous epitope sequences were determined from contemporaneous plasma samples in patients with detectable HIV viral load (n=4). CTL killing of peptide-pulsed EBV transformed B-cells was determined using the Chromium release assay.

IFN- γ was detected in PBMC samples from all patients after stimulation with anti-CD3 or CEF. IFN- γ responses to the wild type or adapted KY11 epitopes were detected in 13 patients. The adapted epitope induced IFN- γ responses in 11 HLA-C*0702 patients (median-500, range 150-1110 spots/million cells). In 3 samples from 2 cases, the adapted peptide-specific response had greater functional avidity than the wild type peptide. Autologous sequence contained the D108E adaptation in 1 patient who concurrently demonstrated IFN- γ responses. In initial assessments of T-cell killing, HLA-C*0702 B-cells pulsed with wild type peptide were killed more readily by adapted peptide CTLs than wild type peptide CTLs.

Despite modest levels of epitope-specific IFN- γ responses overall in this treatment-experienced patient group, HLA-restricted responses against an HLA-adapted epitope were demonstrable, including with higher avidity than the wild type form in 3 samples, suggesting a functional basis

for adaptation driving creation of epitopes. In addition, preliminary data on CTL killing suggests lesser cytolytic activity of the variant specific T-cell response would favour persistence of the adapted virus. These data support the possibility of HIV adapting to actively exploit rather than simply evade T-cell responses and have implications for epitope inclusion criteria in HIV vaccine design.

ROBUST NK-CELL MEDIATED HIV-SPECIFIC ANTIBODY-DEPENDENT RESPONSES IN HIV-INFECTED SUBJECTS

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¹Burnet Institute; ²University of Melbourne

Antibody-dependent cellular cytotoxicity (ADCC) is a potentially effective adaptive immune response to HIV-infection. The study of ADCC responses has been hampered by the lack of simple methods to quantify these responses and map effective epitopes. We serendipitously observed that standard intracellular cytokine assays on fresh whole blood from a cohort of 26 HIV-infected subjects identified non-T lymphocytes expressing IFN- γ in response to overlapping linear peptides spanning HIV-1 proteins. The effector cells were CD3-4-8-14-2+56+/- NK lymphocytes and degranulated Granzyme B and Perforin in response to antigen stimulation. Serum transfer assays demonstrated that the specific response was mediated by IgG. Fresh blood samples from half of the HIV-infected cohort demonstrated robust HIV peptide-specific IFN- γ expression by NK cells; predominately to Env, Pol and Vpu HIV-1 proteins. Responses were readily mapped to define minimal epitopes utilizing this assay. Antibody-dependent, HIV-specific NK cell recognition, involving components of both innate and adaptive immune systems, represents a novel and potentially effective immune responses to induce by vaccination.

CMV-SPECIFIC EFFECTOR MEMORY CD4+ T-CELLS IN HIV PATIENTS ON LONG-TERM ART ARE PREDOMINANTLY 'CD28 NULL' IMMUNOSENESCENT CELLS

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HIV-infected individuals who achieve a long-term virological response to combination antiretroviral therapy (ART) experience variable recovery of CD4+ T-cell responses to the antigens of opportunistic pathogens. This does not reflect current CD4+ T-cell numbers but is particularly evident amongst individuals who had a low nadir CD4+ T-cell count before ART. Using cytomegalovirus (CMV) as an index antigen, we examined markers relevant to the activation or regulation of CD4+ T-cell interferon (IFN)- γ responses in HIV patients on ART.

Study groups comprised male, CMV-seropositive HIV patients (n=18) and healthy controls (n=10). HIV patients were selected to fit three criteria; (1) nadir CD4+ T-cell counts <50 cells/ μ L, (2) at least 3 years on ART and (3) plasma HIV RNA <50 copies/mL for at least 2 years. IFN- γ responses to a crude CMV antigen were measured by ELISpot and were shown to arise from CD4+ T-cells. Flow cytometry was used to assess expression of CD57, CD28, cytotoxic T-lymphocyte antigen (CTLA)-4 and programmed death (PD)-1 on CD4+ T-cells.

Expression of CTLA-4 on CD4+ T-cells was higher overall in HIV patients compared to controls (p=0.03) but was not correlated with IFN- γ responses to CMV (r=-0.17). The expression of PD-1 on CD4+ T-cells in HIV patients extended over a wider range than controls (median (range) 4.9% (0.2-13.1) vs 2.3% (0.4-4.5), respectively) but was also not associated with IFN- γ responses to CMV (r=0.26). The majority of CD4+ T-cells expressed CD28 in both patients and controls (median of 90% and 93%, respectively) and CD28 expression inversely correlated with IFN- γ responses to CMV (r=-0.54, p=0.02) in HIV patients. CD4+ T-cells that did not express CD28 expressed high levels of CD57. The proportion of CD57+ CD28- T-cells was directly correlated with IFN- γ responses to CMV in HIV patients (r=0.56, p=0.01).

These data suggest that a substantial proportion of CMV-specific effector memory T-cells in previously immunodeficient HIV patients receiving long-term effective ART are immunosenescent 'CD28 null' CD4+ T-cells, a situation similar to some autoimmune diseases. IFN- γ responses to CMV do not appear to be limited by CTLA-4 or PD-1.

PHENOTYPIC ANALYSES OF FOXP3- EXPRESSING CD4+ AND CD8+ T CELLS IN HIV-INFECTED PATIENTS

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Proportions of CD25+CD4+ regulatory T (Treg) cells are increased in HIV-infected patients. In untreated HIV disease, the proportion of CD4+ Treg cells in blood and tissue may be associated with the level of immune activation driven by HIV replication. Furthermore, populations of CD4-CD8- and CD8+ cells expressing FoxP3 are increased in the blood, particularly in patients with very low CD4+ T cell counts.

FoxP3+ cells have not been extensively phenotyped in HIV-infected individuals. We assessed the expression of various markers of activation and co-stimulatory molecules on FoxP3+CD4+ and FoxP3+CD8+ cells by flow cytometry, and compared the expression of these markers between untreated and treated patients.

The proportion of CD4-negative FoxP3+ cells was greatest in the most immunodeficient patients. This population included CD8+ and CD4-CD8- double negative cells. A greater proportion of FoxP3+ cells from untreated patients (n=20; 5-1,400 CD4+ T cells/ μ L) exhibited the memory (CD45RO+) or activated (HLA-DRHI or Ki-67+) phenotype when compared with patients on ART (n=20; 50-1,250 CD4+ T cells/ μ L) and uninfected donors (n=14). When FoxP3+CD4+ and FoxP3+CD8+ T cells were compared in treated/untreated patients and uninfected donors, expression of both CD28 and CTLA-4 was higher in the CD4+ subset, whereas expression of PD-1 and CD57 was higher in the CD8+ subset.

The data demonstrate major phenotypic differences between FoxP3+CD4+ cells and FoxP3+CD8+ cells. Proportions of CD4+ Treg cells and the FoxP3+CD8+ phenotype are directly related to the level of immune activation. A "re-balance" of FoxP3+ cells from the CD8+ to the CD4+ compartment may occur in treated patients who are able to successfully reconstitute their CD4+ T cell compartment and maintain virological control.

IDENTIFICATION OF HUMAN ANTIGEN- SPECIFIC REGULATORY T CELLS, PHENOTYPING AND FUNCTIONAL ANALYSIS

Nabila Seddiki^{1,2}, Kai Brown^{1,2}, Chansavath Phetsouphanh^{1,2}, David Cooper^{1,2,3}, John Zaunders^{1,3} and Anthony Kelleher^{1,2,3}

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CD4+CD25+CD127^{low}Foxp3+ regulatory T cell (Tregs) have a role in maintaining tolerance to self-antigens and coordinating immune responses to pathogens. More recently, there has been increased interest in antigen-specific Tregs as they have potential as a novel immunotherapeutic agent in the treatment of autoimmune disease and cancer and may also have therapeutic role in transplantation and vaccine regimes. Using recall responses and a new gating strategy for which includes Foxp3, CD134 and CD39, we aimed to identify, phenotype and study the function of Tregs responding to re-stimulation with epitopes from CMV pp65. In healthy CMV+ donors we found that 1.41% \pm 0.37% (mean \pm SEM) of peripheral CD4+ T cells were specific for pp65. Surprisingly, a majority of these cells (70.80% \pm 1.00%) were bona-fide Foxp3+ antigen-specific Tregs. This subpopulation was isolated by FACS and studied in suppression assays. Antigen-specific CD39+Foxp3+ Tregs were found to be better suppressors than CD39- Foxp3+ Tregs. To determine the source of these Tregs, the TCRV β CDR3 region of these subsets and other subsets of effector/memory cells is currently being amplified for clonotypic analyses. The results will determine whether antigen-specific Tregs are derived or not from effector/memory cells, which then undergo clonal expansion when encounter antigen.

REGULATORY T CELL ABNORMALITIES ARE ASSOCIATED WITH ABERRANT CD4+ T-CELL RESPONSES IN PATIENTS WITH IMMUNE INFLAMMATORY SYNDROME (IRIS)

Nabila Seddiki^{1,2}, Chansavath Phetsouphanh^{1,2}, Kai Brown^{1,2}, John Zaunders^{1,3}, David Cooper^{1,2,3}, Anthony Kelleher^{1,2,3}

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Up to 30% of patients with HIV commencing antiretroviral therapy (ART) late in the disease, restore a pathogen-specific cellular immune response that is immuno-pathological and causes disease referred as immune reconstitution inflammatory syndrome or IRIS. We report that in HIV-infected patients who developed IRIS to mycobacteria, a large expansion of CD4+ T-cells specific for *M. avium* complex (MAC) antigens producing high levels of IFN- γ and IL-2 ($P < 0.01$) was observed. Surprisingly, we found an even larger proportion of expanded CD127^{lo}Foxp3⁺CD25⁺Tregs in these patients compared to healthy controls ($17.8\% \pm 2.51\%$ c/w $6.81\% \pm 0.35\%$, $p < 0.05$) or to HIV+ patients before commencing ($4.5\% \pm 2.12\%$, $p < 0.01$) or 4 weeks after starting ART ($4.3\% \pm 1.61\%$, $p < 0.01$). However, these Tregs are defective in their ability to suppress effector T cell proliferation and production of inflammatory cytokines (IL-6, TNF- α). This may explain the aberrant immune responses observed in these patients. To further investigate the suppressive dysfunction, we assessed CD39 and CD73 expression and function. These two ecto-enzymes have been reported recently to play a major role in Tregs function. Interestingly we found that, although CD39 expression was elevated in IRIS patients compared to controls ($12.48\% \pm 2.069\%$ c/w $2.67\% \pm 0.38\%$, $p < 0.05$), CD73 expression was very low or absent compared to controls ($1.045\% \pm 0.18\%$ c/w $5.028\% \pm 1.18\%$, $p < 0.01$). The imbalance in expression of these 2 regulatory ecto-enzymes that normally work in tandem may help explain the observed defect in suppressive function of Tregs, allowing the excessive proliferation and inflammation in IRIS. Experiments are in progress attempting to delineate a possible role for CD73 dysfunction in the immuno-pathology of IRIS.

Planning Requires Economic and Quality Review
3.30pm – 5.00pm

A CRITICAL ANALYSIS OF THE QUALITY AND TRANSFERABILITY OF ECONOMIC EVALUATIONS OF HIV INTERVENTIONS FOR AUSTRALIAN DECISION-MAKING

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There have been few economic evaluations of HIV healthcare and prevention interventions in Australia. Decision-makers developing guidelines may use existing studies from the pre-HAART era or overseas. However findings from these studies may not be valid or relevant in an Australian population. This study aimed to examine the published literature of economic evaluations in the post-HAART era to assess their quality and transferability.

The peer-reviewed literature was searched using standard methodologies for publications (post 1996) related to economic evaluation of HIV interventions in high income countries. A second stage filter was applied which assessed the interventions on a number of criteria including impact on health and costs; evidence-based; on the policy agenda; options for incremental increase or decrease in funding; clear program logic for the intervention; temporal relevance. Finally the EURONHEED consensus instrument, developed by health economists, was used to score the quality and generalisability of the studies.

123 peer-review articles were available (1996-2007). Over 90% were published from North American studies with one published study from Australia. 58 related to healthcare and 62 prevention (including biomedical prevention). 19 focused on the prevention of perinatal transmission and 13 on the diagnosis, prevention and management of opportunistic infections. Quality and transferability scores ranged from 96% to less than 50%. Key issues in quality and transferability were perspective, study population, model design, measurement and valuation of benefit and cost data, and statistical analyses.

While there is extensive published literature on economic evaluations, most of it comes from North America and some of the findings appear less relevant to clinical management and policy making. Study populations may differ from an Australian population and values for costs and outcomes may not be valid for Australia in 2008. Decision makers need to consider both the internal and external validity of economic evaluations of HIV interventions in the post-HAART era.

COST EFFECTIVENESS OF SCREENING FOR ANAL CANCER IN HIV+ MSM

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Anal Squamous Cell Carcinoma (ASCC) occurs at rates of approximately 30 - 92 cases/100,000 in HIV+ MSMs. Despite surgery, chemotherapy and radiotherapy, the 2004 overall five year survival in Australia is 64% (lower in HIV+). This compares to 2002 rates of cervical cancer among the general Australian female population of 6.9 cases/100,000, and a five year survival of 74%.

Similarities exist between ASCC and cervical cancer. For example, both cancers occur in transitional tissue, both are caused by sexual transmission of certain genotypes of Human Papilloma Virus and they have similar cytological and histological features. Using cervical cancer screening as a model, we therefore sought to compare the estimated cost parameters of a theoretical anal Pap smear intervention to detect anal cancer, with those of the existing cervical Pap smear programme.

The total number of HIV+ MSM in Australia is approximately 12,700. It can therefore be estimated that 7.5 (range 3.6 - 11.7) cases of anal cancer will develop per year in these men. Anal Pap smears are reported as being 81% sensitive. Thus, if all 12,700 HIV+ MSM in Australia were screened, 81% of 7.5 cases = 6 cases would be detected. In this manner, each case of anal cancer would require $12,700/6 = 2,116$ HIV+ MSM to be screened.

In comparison, the New South Wales Pap Register recorded 681 306 cervical Pap smears in 2005, when the incident cervical cancer rate was 238 cases per year. Thus $681,306/238 = 2,862$ Pap tests were performed on women for each case of cervical cancer detected.

A U.S.A. paper in 1999 estimated the cost per QALY for anal cancer screening in HIV+ MSM every 2 years was \$13,000. In comparison, the most recent Australian figures indicate that the cost per QALY for cervical screening is significantly higher, at \$21,707.

Our preliminary calculations therefore suggest that an intervention targeting HIV+MSM with anal Pap smears to screen for anal cancer would be of comparable value and costs to that of the existing cervical cancer screening program. A number of assumptions were made in the above calculations, and further work is required to refine these figures.

EFFECTIVE PARTNERSHIP AND ADEQUATE INVESTMENT UNDERPIN A SUCCESSFUL RESPONSE: KEY FACTORS IN DEALING WITH HIV INCREASES

Diana Bernard¹, Susan Kippax¹, Don Baxter²
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²Australian Federation of AIDS Organisations (AFAO)

Background:

Australia has mounted an effective prevention response to HIV/AIDS by investing in policy informed by evidence, strong partnerships and adequate investment. Recently, in response to increases in HIV in some Australian states, the New South Wales (NSW) Department of Health set up a 'Think Tank' to examine state-based differences.

Methods:

The National Centre in HIV Social Research (NCHSR) undertook key informant interviews with major stakeholders to complement behavioural/surveillance data. It was hoped to identify how members of the partnership (government, non government organisations, researchers, gay community) in NSW had collaborated to keep HIV notifications in NSW stable compared with increases in Victoria and Queensland. In parallel, the Australian Federation of AIDS Organisations (AFAO) analysed the strategic contexts, government responses and investments in prevention of HIV in all jurisdictions in Australia.

Results:

There were significant differences between NSW, Queensland and Victoria in the way the HIV partnership functioned and was resourced. Whilst the strong partnership in NSW enabled a planned, evidence-based response, the response in Queensland was hampered by competitive tendering that pitched partners against each other. In Victoria diminished funding, the inability of partners to work together, an inadequate strategic framework and a more rigorous application of the purchaser-provider model inhibited collaborative planning and the optimal resource allocation necessary for an effective response. Prevention campaigns in Queensland and Victoria were also subject to greater government censorship than NSW campaigns.

Conclusions:

Since the Australian strategic response to HIV/AIDS has been one of the most successful in the world, an understanding of Australian partnership arrangements is highly relevant for other countries addressing the challenge of HIV/AIDS. Any interpretation of, and response to, increases in HIV notifications and unsafe sexual practice needs to be cognisant of the crucial nature of strategic partnerships and adequate resourcing for successful prevention.

Keywords: HIV transmission, evidence based policy, partnership

MODELS OF ACCESS AND CLINICAL SERVICE DELIVERY IN AUSTRALIA TODAY

Dr Jan Savage, ASHM
Mr Peter Canavan NAPWA, Ms Jo Watson, NAPWA, Ms
Levinia Crooks ASHM

Determining the appropriate nature, level and mechanism for delivering care to people living with HIV has been a constant challenge in the Australian environment. Since the early recognition of HIV and the management of opportunistic infection through to the development and delivery of very effective antiretroviral agents there has been a shifting understanding of what is best, what is appropriate, what is manageable and what is affordable care.

In Australia much care is provided to PWHIV by general practitioners in the community setting. But this care is provided in the context of there being a very dispersed HIV population nationally. At the same time our health workforce is over stretched and asked to take on increasing levels of complex management.

The Models of Access and Clinical Service Delivery Project is a joint initiative of NAPWA and ASHM. It is supported by DoHA and the States and Territories via AHMAC arrangements. The project is exploring the changing needs of PLWHA, the range of service models available generically to manage chronic care as well as the changing nature of HIV management.

The presentation outlines the methodology undertaken and presents preliminary data being collected as part of the project. It will also act as a discussion point for attendees to put forward issues which they see as important in the delivery of services to PLWHA as we enter the third decade of HIV management.

Circumcision
5.15pm – 6.15pm

REDUCED RISK OF HIV SEROCONVERSION AMONG CIRCUMCISED HOMOSEXUAL MEN WHO REPORT A PREFERENCE FOR THE INSERTIVE ROLE IN ANAL INTERCOURSE

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Imrie J³, Kippax SC³, Kaldor JM¹, Grulich AE¹

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Circumcision substantially lowers the risk of HIV acquisition among heterosexual men in Africa, but there are few and conflicting data addressing circumcision status as a risk factor for HIV among homosexual men. We examined circumcision status as an independent risk factor for HIV seroconversion in the community-based Health in Men (HIM) cohort of homosexual men in Sydney, Australia.

Between 2001 and 2004, 1,426 initially HIV-negative men were enrolled. Circumcision status was self-reported at baseline and was validated by clinical examination during study visits in a sub-sample of participants. All participants were tested annually for HIV. Demographic information was collected at baseline and detailed information on sexual risk behaviours was collected every 6 months.

At baseline, almost two thirds of participants reported being circumcised; mostly as infants. There were 53 HIV seroconversions in the HIM cohort, an incidence of 0.78 per 100PY. On multivariate analysis controlling for behavioural risk factors, being circumcised was not associated with HIV seroconversion (HR 0.76, 95% CI 0.41-1.41, $p=0.381$). However, among those with a preference for the insertive role in anal intercourse, being circumcised was associated with a significant reduction in HIV incidence when controlling for age and number of insertive unprotected anal intercourse (UAI) acts with HIV positive or status unknown (sero-nonconcordant) partners (HR 0.15, 95% CI 0.03-0.80, $p=0.026$). In these men, a median 100% (IQR 92.1-100%) of UAI acts with sero-nonconcordant partners were in the insertive position and reported preference for the insertive role was remarkably constant over time.

Overall, circumcision was not associated with HIV incidence in the HIM cohort. However, being circumcised was associated with a significant reduction in HIV incidence among those participants who reported a

preference for the insertive role in anal intercourse. As most HIV infections in homosexual men occur after receptive anal sex, circumcision is likely to have a limited impact as an HIV prevention intervention in Australian homosexual men. However, circumcision may have a role in those men who are predominantly at risk of HIV seroconversion through insertive rather than receptive anal intercourse.

SMALL POPULATION HEALTH BENEFITS ON HIV BY CIRCUMCISING MEN WHO HAVE SEX WITH MEN

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Men who have sex with men (MSM) suffer a disproportionate burden of HIV in the developed world. The recent success of circumcision in reducing HIV acquisition among heterosexual African men has prompted debate on whether circumcision could be effective in reducing HIV acquisition amongst MSM in developed countries. We developed a mathematical model to estimate the impact of a male circumcision intervention on HIV incidence and prevalence in a MSM community in a developed country. The model provides a simple relationship between the level of circumcision and long-term HIV prevalence. The results indicate that the decrease in HIV prevalence is much lower than that experienced amongst heterosexual men, such that if a MSM community initially had no circumcision and 10% HIV prevalence, complete circumcision would reduce this to 6%. However, it would require decades before a substantial drop in HIV prevalence was achieved. HIV incidence follows a similar pattern with a drop during intervention and then gradual decline over decades. Strategic positioning, another risk reduction strategy, can provide a slight increase to the effectiveness of circumcision reducing prevalence from 6% to 1%. These results suggest that circumcision is not a viable option to substantially reduce HIV prevalence amongst MSM in developed countries.

COST-EFFECTIVENESS OF CIRCUMCISION FOR THE PREVENTION OF HIV IN GAY MEN IN AUSTRALIA

Anderson J

This study aimed to examine the incremental cost-effectiveness of a program of male circumcision in Australian MSM.

We used a dynamic model with a hypothetical population of 180,000 MSM around Australia with baseline HIV prevalence according to age but homogenous sexual mixing. Circumcision was assumed to have an efficacy of 60% (range 30-82%) in preventing acquisition by an insertive MSM. Baseline circumcision rates ranged from 50.3% (for <25 y.o.) to 82.6% (for >45 y.o.). The impact of antiretroviral therapy, sero-positioning and condom use was included. Cost per circumcision was \$3,650 including pre-operative counseling, assessment and testing, operative care and post-operative follow-up. Relevant costs and outcomes including quality-adjusted life-years were discounted at 3%.

Three strategies for implementation of a circumcision intervention were compared with the status quo: circumcising all MSM at sexual debut, all insertive MSM immediately, and all MSM now. For each strategy the number of HIV infections prevented per year is shown in the table.

HIV infections prevented per year	10 years	25 years	50 years
sexual debut	11	37	72
Insertive	20	34	56
all MSM	37	57	80

All approaches were not cost-effective early post-intervention but they became cost-effective after 7-14 years for circumcising just insertive MSM; after 12-27 years for all MSM; and after 19-31 years for circumcising all at sexual debut. Intervention costs ranged from \$14m a year for the sexual debut approach, to \$196m in the first two years for the all MSM approach.

Sensitivity analyses will be presented that explore changes in risk behaviour, uptake and parameter uncertainty .

Targeting the intervention to insertive men would be most efficient, but even in the best-case, the benefits of an intervention based on male circumcision would not be seen for at least a decade and would have significant upfront costs.

Diagnostics and Assay Development 5.15pm – 6.15pm

THE ACCURACY OF HIV INCIDENCE ASSAYS IN ESTIMATING THE POPULATION RATE OF NEW INFECTIONS: A SYSTEMATIC REVIEW

Guy R^{1,2}, Gold J^{2,3}, García Calleja JM⁴, Kaldor J² on behalf of the WHO Working Group on HIV Incidence Assays

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Specialised HIV serological assays have been used in many countries to distinguish recent from established HIV infections in populations as a basis for estimating incidence. However there is recent evidence that the BED-CEIA assay overestimates HIV-1 incidence, due to misclassification of cases with longstanding HIV infection as recent infections, leading to a recommendation by UNAIDS that the BED assay not be used for routine surveillance, incidence estimates or monitoring incidence trends at a population level.

A review was conducted to summarise validation findings for all assays. Validation was defined to mean the process of comparing estimates of HIV incidence derived from use of an assay in a population, to concurrent estimates of incidence in the same population obtained by an alternative means that is believed to provide a reliable measure of incidence ('gold standard'). PubMed was searched to the end of December 2007.

There were 22 papers identified, reporting 25 overall incidence estimates. The most frequently used 'gold standard' incidence method was a cohort study (13), followed by a database of repeat HIV testers (four) and mathematical modelling (3). The percentage difference between the median assay-derived incidence and 'gold standard' incidence was 10%. Twelve of the 25 overall analyses were based on the comparison of assay-derived incidence and 'gold standard' incidence on identical samples; the median difference for these assessments was 7.3%, compared to 26% for the 13 validations conducted using non-identical populations. The median difference was -13.4% for five validations conducted among IDUs, 13.9% for eight validations in MSM increasing to 166.3% for eight validations among heterosexuals from sub-Saharan Africa. The median difference was 10.3% for three validations conducted using the 3A11-LS assay, 7.5% for 15 validations using the BED assay and 13.9% for the six validations using the Vironostika assay.

The review showed incidence assays perform well in providing estimates of HIV incidence and assays can be reliably used to estimate HIV incidence, as long as due

consideration is given to the presence of longstanding infections and people receiving HIV treatment, with their potential to produce "false-recent" findings in the population. A variety of validation methods were used, highlighting the need for a standard and comprehensive framework for the development of incidence assays.

SENSITIVITY AND SPECIFICITY OF HIV INCIDENCE ASSAYS: A SYSTEMATIC REVIEW

Gold J^{1,2}, Guy R^{1,3}, García Calleja JM⁴, Kaldor J³ on behalf of the WHO Working Group on HIV Incidence Assays

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Reduction in new HIV infections is one of the world's major public health objectives. Specialised serological assays have been developed to measure HIV incidence at a population level. Assays are developed to have an associated 'estimated window period' indicating the time in which an infection is considered recent. To maximise utility, assays must have a high probability of correctly detecting recent infections (sensitivity) and a low probability of misclassifying established infections as recent (specificity).

Publications reporting on sensitivity and specificity of assays measured against specimens of known time of infection until the end of 2007 were reviewed. Infections were classed as recent or established, as indicated by seroconversion before or after the assay window period. We also assessed specimens relating to individuals (i) known to be HIV infected for one year or more (longstanding infections), (ii) diagnosed with AIDS and (iii) receiving antiretroviral treatment.

Thirty two reports related to 16 different assays were identified. The 90 sample sets included in the reports were most commonly derived from cohorts (47) and sourced from the United States (27). Thirty six (40%) sample sets specified the subtype of the specimens; 22 were subtype B. The number of specimens assessed ranged widely (median 123, range 7-2749).

The median sensitivity for recent infections was 88.8% (n=30, range 42.3-100). The median specificity for established infections was 93.3% (n=33, range 49.5-100) compared to 98.0% for longstanding infections (n=8, range 70.0-100) and 91.6% for AIDS cases (n=23, range 72.2-100). Median specificity for individuals receiving antiretroviral treatment for one year was 95.5% (n=4, range 91.0-100) and 76.3% for individuals treated for two years (n=4, range 72.7-81.8).

The majority of sensitivity and specificity estimates were above 85% for recent and established infections. Specificity was lower for AIDS cases compared to longstanding infections and specificity appeared to decrease with increasing time on antiretroviral

treatment. However the limited descriptions of sample characteristics, and limited number of specimens from individuals with longstanding infections and individuals receiving antiretroviral treatment, indicates the need for established, well-described specimens banks for sensitivity and specificity testing during assay development, before their application in the field.

EVALUATION OF THE NEW VERSION 3 CAVIDI EXAVIR™ LOAD QUANTITATIVE HIV RT LOAD KIT AS AN ALTERNATIVE HIV VIRAL LOAD MONITORING ASSAY FOR USE IN BOTH RESOURCE-CONSTRAINED AND DEVELOPED COUNTRIES

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There is an increasing need for inexpensive and simple tests to monitor HIV disease progression in developed and resource-constrained countries to facilitate appropriate use of antiretroviral therapy. We have extensively evaluated the new version 3 (v3) low cost manual reverse transcriptase assay, ExaVir™ Load assay from Cavid AB (HIV RT) and compared it to the version 2 (v2) assay and the commercially available Roche COBAS Amplicor HIV-1 Monitor assay version 1.5, which measures HIV RNA (ultra-sensitive preparation; HIV RNA).

Frozen plasma samples from HIV-infected individuals with previously quantified HIV RNA were also tested for HIV RT activity using the v2 (n=411) and the v3 (n=265) assays. The HIV RT v3 assay sensitivity has improved significantly from v2 with 95% of all samples detectable with HIV RNA ≥ 400 copies/ml compared to 85% with v2. A strong positive association was observed between detectable samples tested using the HIV RNA assay compared to HIV RT v2 and v3 assays ($r=0.88$; $n=176$ and $r=0.88$; $n=223$ respectively). Bland-Altman model was used for measuring agreement between the HIV RNA assay and the HIV RT v2 and v3 assays (mean difference: $-0.19 \log_{10}$ and $-0.11 \log_{10}$ respectively) and between the HIV RT v2 and v3 assays (mean difference: $0.01 \log_{10}$).

The HIV RT v3 assay is more sensitive than the v2 assay. Other improvements include faster turnaround time and fewer consumables required. The HIV RT v3 assay is suitable for use in monitoring HIV disease progression in both resource-constrained and developed countries.

PERSISTENCE OF HIGH LEVELS OF HIV ANTIGEN-SPECIFIC CD4+ T CELLS IN UNTREATED CHRONIC INFECTION, DETECTED BY A NOVEL FLOW CYTOMETRIC ASSAY

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HIV antigen-specific CD4+ T cells are preferentially targeted and deleted by cytopathic infection. In most cases, HIV-1 antigen-specific CD4+ T cells are barely detectable by proliferation assays, and at low levels by interferon- γ production. We developed a novel assay of antigen-specific CD4+ T cells, based on up-regulation of CD25 and CD134 (OX40), and not reliant on either proliferation or cytokine production, to reassess the level of HIV-specific CD4+ T cells in untreated chronic infection.

Samples of whole blood from 15 healthy adult controls and 13 consecutive asymptomatic untreated subjects with established HIV-1 infection (median: 158 CD4+ T cells/ μ l; $4.7 \log_{10}$ RNA copies/ml) were incubated in vitro for 40-44 hr with either culture medium alone or with various recall antigens including lysates of CMV and M. avium; UV-inactivated HSV-1; or a pool of overlapping 15-mer peptides covering HIV-1 Gag. Cell surface CD25 and CD134 were measured on CD4+ T cells by flow cytometry. Results for subject groups were expressed as medians.

The background level of CD25+CD134+ CD4+ T cells was very low, $<0.03\%$ of CD4+ T cells (mean + $3xSD$). In healthy adult controls, recall responses to CMV, M. avium and HSV-1 were a median of 3.9%, 3.6% and 1.1% of CD4+ T cells, respectively and correlated with standard assays of lymphoproliferation in 7-day cultures. In the cohort of HIV-infected subjects, responses to CMV, M. avium and HSV-1 were 4.7%, 5.2% and 2.3% of CD4+ T cells, respectively. Responses to HIV-1 Gag peptides were a median of 0.1% in healthy adult controls, but in the HIV-infected subjects responding cells were a median 0.8% of CD4+ T cells ($*p<0.001$ compared with controls), with 6/13 subjects having much higher responses, ranging from 1.7 to 4.8% of CD4+ T cells.

This novel assay has revealed relatively large populations of antigen-specific CD4+ T cells that respond to recall antigens, in both healthy adults and asymptomatic, untreated chronically infected HIV-infected subjects. In particular, we have discovered that there are 5-10 times more HIV Gag-specific CD4+ T cells present in peripheral blood than previously estimated by proliferation or IFN- γ production.



20th annual
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Back-to-back with the Australasian Sexual Health Conference 15 – 17 September 2008

**Wednesday 17 to
Saturday 20 September 2008**
Perth Convention Centre, Western Australia

**ORAL
PRESENTATION
ABSTRACTS
THURSDAY 18 SEPTEMBER 2008**



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20th annual ashmconference

Breakfast Session – 'Meet the Experts' – Clinical 7.30am – 8.45am

This is intended to be an interactive session for practitioners involved in the clinical care of HIV-infected patients. It is assumed that participants will be experienced in the assessment and treatment of HIV infection. Presentations will elucidate practical and evidence-based clinical approaches to the evaluation and management of complex clinical scenarios, including

- Life-threatening Immune Reconstitution Inflammatory Disease (Prof Martyn French)
- Prevention and Management Strategies for Metabolic Syndrome and Cardiovascular Risk in Patients Taking Antiretroviral Therapy (Dr David Nolan)
- Management of Late Presenting Patients with Severe Opportunistic Infection (Dr Robin Wood)
- Contemporary Approach to Management of Antiretroviral Treatment Failure or Toxicity (Dr Roy Gulick)

Oral Poster Session - Social Research, International, Community, Indigenous Health 8.00am - 8.45am

Scott-Visser B - see page 255
McGowan A - see page 254
Reeders D - see page 242
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Brown G - see page 271
Lake R - see page 239
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BREAKFAST SESSION – 'MEET THE EXPERTS' – CLINICAL

THURSDAY 18 SEPTEMBER 2008: 7.30AM – 8.45AM

HIV and Ageing
9.00am – 10.30am

NEURODEGENERATION AND AGEING IN THE HAART ERA

Brew BJ

Departments of Neurology and HIV Medicine St Vincent's Hospital, Sydney Australia

Neurodegeneration and the effects of ageing on the brain in HAART treated patients are becoming of increasing concern. Existing HIV infected patients are growing older as a consequence of suppression of HIV replication and the number of older patients newly acquiring HIV infection is growing. There is evidence in some patients for chronic immune activation and oxidative stress within the central nervous system despite effective antiretroviral therapy at least as measured in the cerebrospinal fluid. Oxidative stress is the "final common pathway" in the pathogenesis of a number of neurodegenerative diseases. Furthermore, there are particular aspects of HIV disease and its therapy that potentially contribute to the development of ALzheimers disease or at least a like illness. These include hyperlipidaemia, excess amyloid production and inhibition of amyloid degradation. Emerging evidence for the development of these diseases from clinical and neuropathological studies will be reviewed. The implications for the early introduction of HAART with drugs that have good brain penetration will be discussed.

GROWING OLD DISGRACEFULLY WITH HIV

Pitts MK

Australian Research Centre in Sex, Health and Society, LaTrobe University

The advent of HAART and improved clinical care means that HIV positive people can now expect longevity almost equivalent to HIV negative people. This change has presented new challenges for positive people, those who provide treatment, care and support and those who research with them to understand better the lived experience. Ageing brings with it new challenges that may be related to the ageing process itself, to living longer with the virus and living longer on treatments. However, ageing is broader than simply facing these challenges. We simply do not know what the effects of HIV will be in the very long term, there is some evidence of premature ageing associated with HIV, but there are also indications that older HIV +ve people actually have better well being, if not better health than their middle aged counterparts. The relationship of identity, HIV status, gender and sexuality may also change as one ages. This talk will focus on the different ways in which people may grow older with HIV, exploring the diversity of experience and the highs as well as the lows of being old.

HIV, CANCER, AND IMMUNE DEFICIENCY

Grulich AE

National Centre in HIV Epidemiology and Clinical Research, UNSW, Sydney, NSW, Australia

Until recently, it was accepted that only a few specific types of cancer were associated with the immune deficiency associated with HIV infection. Although it is known that a number of other cancers occur at increased rates, most studies have concluded that these cancers occur at increased rates because of lifestyle risk factors for cancer in people with HIV, rather than a direct effect of immune deficiency.

In the past year, this paradigm has been challenged by the finding that solid organ transplant recipients have a profile of increased cancer incidence that is strikingly similar to people with HIV. As these two populations share little in terms of lifestyle risks for cancer, it appears that immune deficiency must underlie these increased risks. Most of cancers occurring at increased incidence are those known or suspected to be related to oncogenic infective agents including Epstein-Barr virus (non-Hodgkin lymphoma (NHL), Hodgkin lymphoma), human herpesvirus 8 (Kaposi's sarcoma, KS), human papillomavirus (anogenital and head and neck cancers), hepatitis B and C virus (liver cancer), and *helicobacter pylori* (stomach cancer). Most epithelial cancers common in the general population (eg breast, prostate and ovarian) do not occur at increased risk.

Although it is now clear that immune deficiency causes increased incidence of many cancers, there remains uncertainty about the level of immune function required to prevent increased rates. In transplant recipients, rates of many cancers rapidly return towards normal on cessation of iatrogenic immune suppression. In people with HIV, rates of NHL and KS have declined markedly since the widespread use of combination anti-retroviral therapy, but rates remain raised above population levels. For Hodgkin lymphoma, its incidence is highest when immune deficiency is moderate rather than profound. For other cancers, there are few data on rates by level of immune deficiency.

Describing cancer rates by level of immune function is an important research priority among people with HIV. If cancer incidence is raised even in the modestly immune deficient, cancer risk may become an important consideration in deciding when to start HIV therapy, and in the setting of goals for optimal immune recovery.

HIV INFECTION AND HEALTHY AGEING: IS THERE A NEED FOR HIV-SPECIFIC MANAGEMENT GUIDELINES FOR THE PROTECTION OF HEARTS, BONES, MINDS AND MORE?

Nolan DA^{1,2}

¹Centre for Clinical Immunology and Biomedical Statistics, Murdoch University and Royal Perth Hospital, Perth, Western Australia; ²Department of Clinical Immunology, Royal Perth Hospital, Perth, Western Australia

The widespread availability of effective first-line and salvage HIV treatment regimens has transformed HIV infection into a chronic condition that is frequently manageable into older age; including among those with longstanding HIV infection who were originally given a limited prognosis. Hence, long-term HIV treatment now incorporates an increased awareness of age-associated conditions such as cardiovascular and metabolic diseases, osteoporosis, cognitive decline, and risk of malignancy – in addition to providing optimally effective and safe antiretroviral therapy.

In this context, several key questions are now directing new avenues of clinical research. First, what is the impact of HIV infection and associated immune deficiency on age-associated diseases? There is now good evidence that progressive immune deficiency is associated with increased risk of atherogenic dyslipidemia, reduced muscle mass and bone density, and 'non-AIDS-related' malignancies (eg. skin and lung cancer). The potential effect of immune activation, irrespective of CD4 T cell count, is also being explored as a risk factor for cardiovascular disease, dyslipidemia and HIV-associated dementia. These factors can inform clinical management decisions with regard to patient assessment and monitoring, and are fuelling a growing debate regarding CD4-guided HIV treatment initiation.

Second, what is the impact of antiretroviral drug treatment on age-associated diseases? Here, consideration of individual drug toxicity profiles, rather than antiretroviral 'class effects', appears to be the most appropriate approach. This is a growing area of interest, particularly in light of recent studies suggesting associations between NRTI choice and risk of diabetes (stavudine>zidovudine) and cardiovascular disease (abacavir>didanosine).

Third - and perhaps most importantly at this stage - to what extent are we able to assess disease risk, and apply prevention and management strategies, using guidelines that have been developed in the general population? Here, an awareness of existing guidelines, and their incorporation into routine clinical practice, will provide a valuable platform for developing clinical experience as well as guiding further research. These guidelines also reinforce the potent contribution of 'lifestyle' factors (eg smoking) to chronic disease risk.

These question will be explored, with the goal of developing practical approaches to the management of healthy ageing in HIV infection.

Hot Topics: Top Papers 2008
11.00am – 12.30pm

This symposium is aimed at clinicians, epidemiologists, public health practitioners and researchers. Three presenters will summarise and place in broader context the 5-10 contributions in HIV basic, clinical, epidemiological and social research published over the course of the past year that they consider most important, with an emphasis on those most likely to result in fundamental practice and paradigm change.

Community Research and Practice
11.00am – 12.30pm

**COMMUNITIES AND RESEARCH: THE
NECESSITY FOR DIALOGUE**

Bruno Spire^{1,2}, Jean-Marie-Legall¹, Franck Barbier¹, Christian Andreo¹ and Vincent Pelletier¹

¹AIDES, Pantin, France; ²INSERM U912, Marseille, France

In France, AIDES is the largest community-based association and contributes through social activism both to improve the living conditions of PLWHA and to influence policy makers in order to stem the HIV epidemic. AIDES promotes a community based approach: "doing with people, not for people" by adopting innovative approaches and tailoring appropriate actions to meet communities' needs.

Since the introduction of ART, community activists and public researchers have worked together in order to answer research needs emerging from the community. In the field of care and support, one such need is how to face therapeutic failure by promoting salvage therapy trials combining several new molecules. Another such need is how to promote comprehensive care, including adherence interventions, justified either by a theoretical health psychology framework or on evidence-based empirical data. Research needs were also identified in the field of quality of life improvement, more particularly in the domain of sexual and affective life. Community members advocate to promote research on side-effects, including those which are all too often neglected, and to take into account the patient's perspective as a possible outcome in clinical trials. In the field of social sciences, research needs identified by the community raise several questions: i) how to influence the negative perception of PLWHA by the general public, ii) how to decrease stigmatisation which has not been strongly impacted by the advent of ART, iii) how to overcome barriers to disclosure and determine which interventions could help in creating greater acceptance of PLWHA. Furthermore, research is urgently needed to explore in which circumstances promoting "low risk" sex practices may reduce the risk of HIV transmission. It is also important to determine whether frequent, routine testing for people who are often exposed to HIV may reduce sexual risks in recently diagnosed HIV cases and also reduce HIV incidence. In conclusion, scientists must interact with community groups to better tailor research issues to real needs. Scientific evidence is an indispensable and efficient weapon to support action and lobbying. The battle against AIDS can be won only if scientists, field actors, community groups and civil society are mobilised altogether.

**THE SHOCK OF ETHICAL COMMUNITY
RESEARCH**

Canavan P

National Association of People Living With HIV/AIDS (NAPWA)

The history of the HIV community's involvement in clinical research has to date largely been driven from the start by 'health shocks'. The greatest health shock of them all is to be diagnosed with a life threatening disease and to have that diagnosis shift to the shock of vulnerability, rapid disease progression and death.

Health shocks associated with the HIV crisis have necessitated giving priority to the initiation of HIV clinical research agendas being driven by biomedical imperatives, including the need for effective antiretroviral treatments and management strategies.

Research influenced by needs which are foremost dealing with 'crisis avoidance' present particular challenges to communities and to their elected representatives in remaining engaged to ensure research is evolving in ethically robust, personally relevant, community supported and sustainable ways.

This paper seeks to first challenge some of the traditional ways community involvement in clinical research occurs and in doing so open up discussion on current levels of community engagement, discussing difficulties and emerging limitations of a representative model.

The HIV crisis has now shifted to occupy centre stage in the developing world and in doing so has introduced a new 'health shock risk' to opportunities for meaningful involvement by HIV positive communities in the developed world in engaging a research ethic which creates opportunities for a revitalized scientific research agenda relevant to the needs of HIV positive communities in the developed world today.

In seeking to reinvigorate a broad based community engagement with clinical research, this paper proposes that there is a concomitant opportunity to reexamine the motivations and opportunities of clinical research agendas to accommodate a multidisciplinary reflexive approach – which embraces diversified and changing health needs and perspectives, wider access arrangements, strengthened communication processes and guaranteed reporting of trial results.

Finally, ways forward are introduced to assist both community and researchers to begin a serious discussion on strengthening partnership processes and to avoid tendencies of mechanistic engagement with either clinical research or consumers.

THE FEASIBILITY OF A NATIONAL GAY MEN'S INTERNET-BASED COHORT AND PROSPECTIVE BEHAVIOURAL SURVEILLANCE PLATFORM IN AUSTRALIA – WHAT ARE THE ISSUES?

Imrie J¹, Prestage GP^{2,3}, Pitts M³

¹National Centre in HIV Social Research, The University of New South Wales, Sydney, NSW, Australia; ²National Centre in HIV Epidemiology and Clinical Research, The University of New South Wales, Sydney, NSW, Australia; ³Australian Research Centre in Sex Health and Society, La Trobe University, Melbourne, VIC, Australia

In Australia, concern about rising HIV-notifications, diverging epidemics between jurisdictions and increasing STIs among homosexually active men (MSM) have prompted a re-think of behavioural surveillance research. Current surveillance, while of high quality, has notable shortcomings – limited coverage outside main cities and among hard-to-reach groups, and capacity to evaluate prevention effectiveness.

We are investigating the feasibility of a national internet-based research platform that would support a longitudinal cohort of HIV-positive and HIV-negative men (with data linkage to national and state disease registers), and repeat cross-sectional behavioural surveys (with monitoring of repeat respondents over time).

A national internet-based platform combining both longitudinal and repeat cross-sectional studies would be unique. Added benefits of linkage to national and state registers would be incidence data on HIV/STIs and other health conditions (e.g. cancer, mental illness, etc), and potentially, health, pharmaceutical and social care service usage. Such a research platform would allow comparisons between states/territories, and with the general male population. Obvious challenges include participant retention, stratified sampling and sample-size in small states. But in this new territory there are also new issues - multi-level inter-sectoral collaboration, evaluation design, ethics, consent requirements, governance and data management (e.g. confidentiality, handling and ownership).

Innovations addressing limitations of current behavioural surveillance and extending its usefulness are needed, particularly in mature MSM HIV epidemics. Internet platforms and data linkage offer potentially mechanisms to do this, but at a national level, present a range of new challenges to the field.

NATIONAL SAS PROGRAMS – A REVIEW OF THE LAST 4 PROGRAMS

Watson J, Whittaker B¹, Brown D, Strum A, Paul A

¹National Association of People Living with HIV/AIDS (NAPWA), ²Janssen-Cilag Australia, ³Merck Sharp & Dohme Australia, ⁴Pfizer Australia

NAPWA is the national peak body representing plwha organisations in Australia. As part of its national advocacy program, it is the organisation responsible for negotiations with individual pharmaceutical companies for the development and monitoring of Special Access Scheme (SAS) programs for HIV antiretrovirals. NAPWA also maintains monitoring of the programs with the individual drug manufacturer's, prior to each drug being submitted and registered through the Australian regulatory process for listing on the Pharmaceutical Benefits Scheme.

The national SAS programs have been a feature of the Australian HIV community based response since the early HIV activism movement which established compassionate access to the experimental agent AZT, in the early 90's. Since then, there has been a program developed for every HIV drug, and over the years there has been significant changes to the way in which SAS programs have been developed, and how they have been utilised by doctors for their patients.

This presentation will review the last 4 programs which have been run in Australia, up to the present time. This will include a report of the individual program profiles, and their specific patient criteria and enrollment numbers. Some of the trends noted across state and territory jurisdictions, and the changes which can be observed across program timelines will be also addressed.

Discussion includes an analysis of the impacts of the overlap of some of the programs across specific periods of time, and their operation in parallel to several major clinical studies in Australia targeting the same patient population. The presentation will also cover the principles behind the ongoing provision of SAS programs in Australia today, and the analysis of trends observed in the patient group which is being supported through this mechanism for early access to the new agents.

Finally, some concluding remarks will be focused on the potential for improving SAS program parameters in the future, including better ways to learn from the "real life" information which these programs can provide as part of the experience of the patient and their doctors in ongoing HIV clinical management developments.

TOWARDS MORE EQUITABLE ACCESS TO HIV CLINICAL TRIALS

Ogier, A

National Association of People living With HIV/AIDS (NAPWA), Sydney, NSW, Australia

Access to optimal HIV treatments and services should not be reserved for those living in key urban centres. But where you live in Australia does limit the options of many people with HIV.

The Treataware campaign (launched by NAPWA in May 2008) is an important new health promotion project, providing a variety of formats in which all HIV positive Australians can access specific HIV treatments information. The project is promoted to people with HIV as well as their aligned health workers and medical practitioners to support a team approach to making informed choices regarding HIV treatments.

A key objective of Treataware is to encourage people with HIV to engage more with their medical practitioners about treatment developments and to link them to relevant clinical trials information regardless of their geographic location.

People with HIV need to be better informed about HIV and general health needs, but importantly they need to work in partnership with their health providers to produce clear, comprehensive and up to date plans for living well with HIV.

The Treataware clinical trials website incorporates the first searchable public register of Australian HIV clinical trials, providing clinical, technical and medical information in a user-friendly format. This database is acting as a centralised source of information for both people living with HIV and their clinical care providers.

Adrian Ogier did a lot of different things for a lot of different community organisations before achieving his most long-winded tour de force coordinating ASHM's prescriber program and short courses in HIV medicine. He now works for the National Association of People Living with HIV/AIDS in the Health, Treatments and Research Unit.

20th annual ashmconference

INTERNATIONAL: GLOBAL HIV INITIATIVES VS LOCAL RESPONSE

International: Global HIV initiatives vs local response
11.00am – 12.30pm

TAILORING GLOBAL RESPONSES TO LOCAL EPIDEMICS

David Wilson

Curtin University Of Technology And Lead Health Specialist, The World Bank

The presentation will talk about tailoring global evidence and interventions to an understanding of local HIV transmission dynamics to ensure global approaches tackle the sources of new infections in each local context and the role of surveillance, research and good analysis in bridging the gap between global policy and local action.

EXPLORING THE LINKS BETWEEN HIV AND POVERTY: ARE THE ANALYSES CORRECT

Worth H

National Centre In HIV Social Research

In the developing world, HIV has been constantly associated with poverty. Poor people are said to have the greatest vulnerability to HIV and that the economic impact epidemic will itself cause poverty to deepen and indeed to engender state instability in places with the highest prevalence. Yet, is this strictly true, or is the picture much more complicated?

In this paper, using a number of case studies, I will argue that it is not poverty per se that is the important association with the spread of HIV; rather, it is the incorporation of developing countries into the global world that creates conditions where the virus rapidly spreads.

THURSDAY 18 SEPTEMBER 2008: 11.00AM – 12.30PM

CAPACITY BUILDING THROUGH LONG-TERM PARTNERSHIPS

Bebbington M; Carman M

The HIV Consortium for Capacity Building in Asia and the Pacific is a collaboration of nine Australian HIV organisations formed to implement the AusAID funded Regional Capacity Building Program 2008-2011

The purpose of the Regional Capacity Building Program is to foster strategic partnerships and linkages between Australia and the Asia-Pacific region that will enable sustained performance improvement for individuals and organisations working in the HIV/AIDS health care, research and community responses.

The Program aims to support a strategic, coordinated and complementary use of the expertise and experience of organisations which have played important roles in the Australian response to HIV.

The Program seeks to build durable and long-standing relationships between partners, which can change and adjust as capacity develops. Sustainability is supported because capacity building takes place in the context of broader organisational development.

This presentation will provide an overview of the HIV Consortium's work plan and outline the HIV Consortium's approach to capacity building and partnerships.

BUILDING CLINICAL CAPACITY TO MANAGE HUMAN IMMUNODEFICIENCY VIRUS (HIV) INFECTION IN RESOURCE CONSTRAINED ENVIRONMENTS: REFLECTIONS FROM EXPERIENCE WITH CLINICAL MENTORING IN PAPUA NEW GUINEA (PNG)

Menon A¹, Ankus J¹, Reis E¹
Australasian Society for HIV Medicine (ASHM)

Since the announcement of the 3X5 initiative there has been a scaling up of access to treatments for HIV positive people in developing countries. Measures such as development of appropriate policies, infrastructure, reorientation and reorganization of the STI/HIV program, recruitment of staff, and increased funding are necessary prerequisites to this effort. Minimum standards, Standard Operating Guidelines, training programs and materials are widely available to enable clinical teams to deliver the continuum of care for HIV positive people.

A key element to this effort is the role of clinical mentoring in building clinical capacity within health services. This presentation will reflect on successes, constraints and the importance of ongoing support of services providing HIV treatment and care, based on experience from PNG

**Margaret Macdonald Memorial Session
– Epidemiology Population
11.00am – 12.30pm**

**TRENDS IN NEWLY ACQUIRED HIV
INFECTION IN AUSTRALIA, 1994 – 2007**

McDonald A for the National BBV and STI Surveillance Committee
National Centre in HIV Epidemiology and Clinical Research, Sydney

Introduction: Recent analysis of trends in newly diagnosed HIV infection in Australia indicated an increasing population rate of HIV diagnosis in Queensland, South Australia, Victoria and Western Australia and a stable trend in NSW in 2000 – 2006, suggesting differences in the extent of HIV transmission by State/Territory.

Methods: Cases of newly diagnosed HIV infection are notifiable in each State/Territory health jurisdiction in Australia. State/Territory health authorities forward notifications to the National HIV Registry for national collation and analysis. Information sought at national HIV notification includes evidence of recent HIV acquisition. Cases with a previous negative or indeterminate test result or a diagnosis of primary HIV infection within 12 months of HIV diagnosis are defined as cases of newly acquired HIV infection.

Results: In 1994 – 2007, 12 248 cases of newly diagnosed HIV infection were notified to the National HIV Registry including 3 120 (25.5%) with newly acquired HIV infection. The age standardised rate of newly acquired HIV infection in Australia increased steadily over time to 1.56 per 100 000 population in 2006. The percentage of new HIV diagnoses with evidence of newly acquired infection increased significantly from 21.7% in 1994 – 2000 to 29% in 2001 – 2007 ($p < 0.0001$). Compared with the percentage of diagnoses with newly acquired HIV infection in 1994 – 2000, significant increases occurred in 2001 – 2007 in NSW ($p < 0.0001$), QLD ($p < 0.0001$), VIC ($p = 0.018$) and WA ($p = 0.044$). Median age at diagnosis of newly acquired HIV infection increased significantly among males and females from 34 and 29 years in 1994 – 2000 to 37 and 31 years, respectively, in 2001 – 2007. Among homosexually active men, the percentage of new HIV diagnoses with newly acquired infection increased significantly from 26.8% in 1994 – 2000 to 37.1% in 2001 – 2007 ($p < 0.0001$). Significant increases in the percentage of diagnoses with newly acquired infection also occurred among both males and females whose exposure was attributed to heterosexual contact and among males with an undetermined exposure.

Discussion: The increasing population rate of diagnoses of newly acquired HIV infection suggests increasing HIV transmission in Australia, primarily among males with a history of homosexual contact.

**INCREASING HIV TRANSMISSION THROUGH
MALE HOMOSEXUAL AND HETEROSEXUAL
CONTACT IN AUSTRALIA: RESULTS FROM AN
EXTENDED BACK-PROJECTION APPROACH**

Handan Wand¹, Ping Yan², David Wilson¹, Ann McDonald¹, Melanie Middleton¹, John Kaldor¹ and Matthew Law¹
¹National Centre in HIV Epidemiology and Clinical Research, UNSW, Sydney, Australia; ²Center for Infectious Disease Prevention and Control Population and Public Health Branch, Canada

To reconstruct the HIV epidemic in Australia for selected populations categorized by route of exposure, including male homosexual transmission, transmission from injecting drug use (IDU), and heterosexual transmission for men and women in Australia. A modified statistical back-projection modelling technique was used to estimate the expected historical HIV incidence. The method links three sources of data from a surveillance system, namely, (1) newly diagnosed HIV infection, (2) newly acquired HIV infection and (3) AIDS diagnoses. We also ascertained sensitivity to changes in various parameter assumptions. These analyses estimated that to the end of 2006 a total of 19,690, 1050 and 2610 people have been infected with HIV through male homosexual contact (MHC), injecting drug use (IDU) and heterosexual contact (HC) respectively. Of those infected, 13%, 12% and 23% were estimated to have not been diagnosed with their HIV infection. HIV infections through IDU were estimated to be declining. Sensitivity analyses demonstrated that the model was robust to major parameter uncertainties. Our analyses suggest that sexual transmission of HIV is increasing in Australia. The estimated increase in HIV through HC was also accompanied with a high estimated proportion undiagnosed with their infection. These analyses suggest that sexual transmission of HIV, and in particular HC, should be the focus of renewed HIV prevention efforts. The proportion of new infections attributable to injecting drug use decreased since 2002; in contrast, the proportion attributable to heterosexual exposure has increased slightly. Thus this data provide useful information for planning future prevention activities and health structures, taking into account the increasing impact of the epidemic for selected populations by exposure categories.

HOW IS THE ABORIGINAL AND TORRES STRAIT ISLANDER POPULATION FAIRING IN THE AUSTRALIAN HIV EPIDEMIC? - AN ANALYSIS OF DATA FROM 1993-2007

Ward J, McDonald A, Middleton M, Kaldor J
National Centre in HIV Epidemiology and Clinical Research,
University of New South Wales, Sydney Australia

For many Aboriginal and Torres Strait Islander communities in Australia there are higher risks for acquiring HIV infection than in the non-Indigenous population due to substantially higher rates of bacterial sexually transmissible infections (STI). Furthermore, Aboriginal and Torres Strait Islander people have poorer access to health services compared with non-Indigenous people.

Nationally, information on Aboriginal and TSI status at HIV/AIDS diagnosis was sought prospectively from 1995. The pattern of newly diagnosed HIV infection in Australia is described over the years 1993 – 1999 and 2000 – 2006, by Aboriginal and/or TSI status.

In the Aboriginal and Torres Strait Islander population, 133 (28% female) and 138 (30% female) cases of HIV infection were newly diagnosed in Australia in 1993 – 1999 and in 2000 – 2006, respectively, whereas 4,737 (8.5% female) and 5,457 (10.9% female) were newly diagnosed in the non-Indigenous population in each time period, respectively. The declining trend in the age standardised rate of newly diagnosed HIV infection in 1993 – 1999 and the increasing trend in 2000 – 2006 was similar in the Aboriginal and TSI population and the non-Indigenous population. In the years 1993 – 1999 and 2000 – 2006, median age at HIV diagnosis increased significantly in both populations, from 29 to 33 years among Aboriginal and Torres Strait Islander cases ($p=0.004$) and from 33 to 36 years among non-Indigenous cases ($p<0.001$). Among the Aboriginal and Torres Strait Islander cases, exposure to HIV was attributed to male homosexual contact, injecting drug use, heterosexual contact or mother-to-child transmission in 51.9%, 6%, 35.3% and less than 2% of cases in 1993 – 1999 and to 44.9%, 19.6%, 32.6% and less than 1% in 2000 – 2006. In the non-Indigenous population, HIV exposure was attributed to male homosexual contact, injecting drug use, heterosexual contact and mother-to-child transmission in 72.5%, 3.3%, 15.3%, and less than 1% in 1993 – 1999 and to 71.1%, 3.2%, 19.9% and less than 1% in 2000 – 2006.

Although the population rate of HIV/AIDS diagnosis by Aboriginal and Torres Strait Islander status were similar the risk of HIV transmission in both populations needs to be minimized through diagnosis and treatment of bacterial STI and adoption of safer sexual and injecting behaviour.

THE IMPACT OF MIGRATION ON THE BURDEN OF HIV INFECTION IN VICTORIA, AUSTRALIA

Horyniak D¹, Stoové M¹, Yohannes K¹, Breschkin A², Tomnay J³, Carter T³, Hatch B³, Guy R¹

¹Centre for Epidemiology and Population Health Research, Burnet Institute, Melbourne, VIC, Australia.

²Victorian Infectious Diseases Reference Laboratory, North Melbourne, VIC, Australia. ³Department of Human Services, Melbourne, VIC, Australia.

Accurate estimates of the number of people diagnosed and living with HIV infection provide the basis for planning of services. Case reporting of new diagnoses provides an incomplete basis for planning, because it does not account for migration into and out of a jurisdiction.

The Victorian passive surveillance system records HIV diagnoses in Victoria, and distinguishes between new Victorian diagnoses and cases previously diagnosed interstate or overseas. Demographic and behavioural characteristics are recorded for each case. In order to gain an understanding of the impact of population movement on the burden of HIV infection in Victoria, we compared the characteristics of people first diagnosed with HIV in Victoria with those previously diagnosed elsewhere.

Between 1994 and 2007 there were 3,111 HIV notifications in Victoria, including 212 cases (6.8%) previously diagnosed positive interstate and 124 (4.0%) diagnosed overseas. The proportion of cases diagnosed outside Victoria increased from 6.4% between 1994 and 2000 to 13.8% between 2001 and 2007. Most of the previous interstate diagnoses were made in NSW (58.5%). Male-to-male sexual contact was the most commonly reported HIV exposure (77%) among interstate cases, compared to 72% among new Victorian diagnoses. The majority of previous diagnoses overseas were made in Asia (25%) and New Zealand (24%). Heterosexual exposure accounted for 38% of cases previously diagnosed overseas, compared to 18% of new Victorian diagnoses. Twenty percent of individuals diagnosed overseas were born in Asia and 16% in sub-Saharan Africa, compared to 5% and 9% respectively for new Victorian diagnoses.

Around 10% of HIV infections reported in Victoria have been previously diagnosed elsewhere. Interstate migrants displayed similar characteristics to those diagnosed locally, however international migrants differed substantially. Changes in the proportion of cases diagnosed outside Victoria may reflect trends in testing, as well as modifications to the systems used to detect previously diagnosed cases. There is currently no way to record outward migration of people with HIV infection from Victoria. Service planning needs to take account of the differing characteristics of people moving to Victoria with previously diagnosed HIV, compared to those already resident at the time of their initial diagnosis.

UNEXPECTEDLY HIGH HIV PREVALENCE AMONG THAI SEX WORKERS IN A RESPONDENT-DRIVEN SAMPLING SURVEY

Manopaiboon C¹, Whitehead SJ¹, Subhachaturas W², Tanpradech S¹, Siangphoe U¹, Johnston L³, Thepamnuay S¹, Anand A⁴, Sumanapun S⁵, Fox K^{1,4}

¹Thailand MOPH – U.S. CDC Collaboration, Nonthaburi, Thailand; ²Bangkok Metropolitan Administration, Bangkok, Thailand; ³Tulane University School of Public Health and Tropical Medicine, New Orleans, USA; ⁴Centers for Disease Control and Prevention, Atlanta, USA; ⁵Chiang Rai Provincial Health Office, Chiang Rai, Thailand.

Commercial sex has been a major driver of the HIV epidemic in Thailand. Recent evidence suggests that the highly successful HIV prevention programs of the past decade may now be eroding. The structure of sex work has changed substantially, with fewer brothel-based sex workers (SW) and more non-venue-based SW who are excluded from the annual sentinel surveillance system. We conducted a respondent-driven sampling (RDS) survey of HIV prevalence and risk behaviors among female SW in Bangkok and Chiang Rai.

Initial participants were selected by staff, then recruited peers according to RDS methods. Consenting participants completed a demographic and behavioral questionnaire by handheld computer and provided oral fluid specimens for HIV antibody testing (Oral Fluid Vironostika™ HIV-1 Microelisa, BioMeriux, Durham, NC) and urine specimens for Chlamydia trachomatis and Neisseria gonorrhoeae by polymerase chain reaction (Amplicor, Roche Molecular Systems, Branchburg, NJ). Data were analyzed using RDS Analysis Tool (RDSAT) software which adjusts for the network properties of respondents. RDSAT-weighted data were exported to SAS for multivariate analysis.

A total of 707 women were recruited in Bangkok and 366 in Chiang Rai. A total of 73% of Bangkok participants were non-venue-based compared to 24% in Chiang Rai. The RDSAT-adjusted rate of condom use with last client was higher in Bangkok (93%; 95% confidence interval (CI): 90%-95%) than Chiang Rai (69%; 95% CI: 61%-76%); HIV prevalence was also higher in Bangkok (20%; 95% CI 16%-25%) than in Chiang Rai (10%; 95% CI 6%-13%). In a logistic regression model for Bangkok participants, HIV infection was associated with age>25 (adjusted odds ratio (AOR) 4.5; 95% CI: 1.3-16.5), price<700 baht (~USD23) (AOR 3.3; 95% CI: 1.4-8.0), and concurrent sexually transmitted infection (AOR 4.5; 95% CI: 1.5-13.0); older age and lower price were highly correlated with street-based SW. No examined factors were statistically significantly associated with HIV infection in Chiang Rai.

HIV prevalences in this survey were significantly higher than 2007 sentinel surveillance findings among SW (Bangkok, 2.5%; Chiang Rai, 2.6%). Our findings suggest that important high risk groups, especially street-based SW in Bangkok, are in urgent need of prevention efforts and should be included in routine surveillance.

THE MOLECULAR CHARACTERIZATION OF THE HIV-1 EPIDEMIC IN FIJI

Ryan CE^{1,2}, Kama M³, Darcy A³, Aleksic E¹, Mirza T⁴, Chaudhary A⁵, Rogers G⁶, Crowe SM^{1,2}

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The HIV epidemic in Fiji remains largely uncharacterized. By the end of 2006, UNAIDS estimates that there were 219 reported infections, a figure which is thought to be a gross under-representation. The majority of infections occur among the 20-39 year age group and are reported to result from heterosexual contact. There is currently no published data concerning the HIV subtype in the Pacific Islands, with the exception of Papua New Guinea, which has been shown to have a predominantly subtype C driven epidemic.

In 2008, consenting HIV-1 positive individuals are being recruited through the hub doctors in Fiji and asked to complete a basic demographic and behavioural survey. Following this, 50µl of venous blood is spotted onto Whatman FTA Elute filter paper and stored at room temperature for 1-6 months before transport to the Burnet Institute. DNA is extracted using a low cost extraction procedure before undergoing a nested PCR designed to amplify the HIV-1 envelope region. Additionally, the reverse transcriptase and protease regions will be amplified using an in-house, low-cost genotyping assay to gain information on circulating drug resistance. All resulting sequences undergo phylogenetic analysis with published reference sequences to assign a subtype, and to assess their relatedness to each other, and to other epidemics in the region.

To date, 9 samples have been processed, with 8 yielding a PCR product and good envelope sequence. Of the 8 samples, 4 (50%) are subtype C, 3 (37.5%) are subtype B, and 1 (12.5%) subtype A. An additional 20 samples have been collected in Fiji and are awaiting transport to the Burnet Institute. This data, along with the genotype and demographic data will be presented.

This survey offers the first molecular information concerning the apparent diverse HIV epidemic in Fiji and provides valuable data regarding the movement and transmission of HIV-1 in the Pacific Islands. Continued surveillance of HIV subtypes throughout the world is recommended in order to gain a deeper understanding about the diversity of HIV and the impact this has on vaccine development and antiretroviral therapy.

**Australian Antiretroviral Guidelines:
Consensus Conference
1.30pm – 3.00pm**

The Annual Consensus Conference is this year incorporated into the clinical stream of the main ASHM 08 Conference program. Previously, the Annual Consensus Conference has been held on the Saturday afternoon immediately following the close of the ASHM Conference. Feedback from previous years has suggested that attendance and participation would be maximised if the Australian Antiretroviral Guideline sessions were moved into the ASHM program.

This year, the Australian Antiretroviral Guidelines sessions will be held on the Thursday 18 and Friday 19 afternoons of the ASHM 08 program. These sessions include evidence-based presentations from international and local experts on the latest research and developments in HIV treatment and provide the opportunity for discussion.

Dr Roy Gulick is a member of the US Department of Health and Human Services (DHHS) Panel on Antiretroviral Guidelines for Adults and Adolescents and will represent DHHS at these sessions. The DHHS Guidelines for the Use of Antiretroviral Agents HIV-1 Infected Adults and Adolescents have been endorsed by Australia and form the basis on which the Australian commentary is developed. The Australian commentary to the latest Guidelines for the Use of Antiretroviral Agents in HIV-1 Infected Adults and Adolescents is available at: <http://www.ashm.org.au/aust-guidelines/>.

NEWER AGENTS FOR TREATMENT-EXPERIENCED PATIENTS

Gulick R, MD, MPH
Weill-Cornell Medical College
New York

Recent developments lead to improved management of antiretroviral therapy for treatment-experienced patients. Newer approved drugs with novel resistance profiles (the NNRTI etravirine, the protease inhibitors darunavir and tipranavir) or new mechanisms of action (the CCR5 antagonist maraviroc and the integrase inhibitor raltegravir) offer significant virologic activity even in patients with extensive treatment experience and drug resistance. Recognizing these developments, current treatment guidelines state that the goal of antiretroviral therapy for ALL patients is suppression of HIV RNA to <50 copies/ml and that the optimal way to do that is to design a regimen with 2 (or preferably 3) fully active drugs.

Etravirine, a new NNRTI, demonstrated activity against many viral strains with resistance to efavirenz and nevirapine and was safe and well-tolerated when used with an optimized antiretroviral regimen containing darunavir in the phase III DUET studies of treatment-experienced patients. Subanalyses revealed that the virologic activity of etravirine was impacted only by the presence of 3 or more NNRTI-associated mutations (excluding K103N). Additional investigational NNRTIs with activity against drug-resistant virus are in development. The newer HIV protease inhibitors darunavir and tipranavir demonstrated activity against PI-resistant viral strains in the POWER and RESIST phase III studies, respectively, and are not necessarily cross-resistant to one another. Safety and tolerability considerations, particularly hepatic, favor darunavir over tipranavir. Additionally, because of drug-drug interactions, tipranavir cannot be co-administered with etravirine.

Drugs with new mechanisms of action demonstrate virologic activity, even against multi-drug resistant strains. Maraviroc, the first approved CCR5 antagonist, blocks HIV entry by R5 virus and demonstrated significant virologic activity and was well-tolerated in treatment-experienced patients with R5 virus (determined with a tropism assay) in the phase III MOTIVATE studies. An investigational CCR5 antagonist, vicriviroc, currently is under evaluation in phase III trials. Additional investigational chemokine receptor inhibitors also are in development. Raltegravir, the first approved HIV integrase inhibitor, inhibits strand transfer of viral DNA to host cell DNA and demonstrated significant virologic activity and was well-tolerated in treatment-experienced patients in the phase III BENCHMRK studies. Phase III studies of an investigational integrase inhibitor, elvitegravir, recently opened. Additional new agents with novel mechanisms of action also are in development, including CD4 attachment inhibitors and maturation inhibitors.

20th annual ashmconference

AUSTRALIAN ANTIRETROVIRAL GUIDELINES: CONSENSUS CONFERENCE

CASE PRESENTATIONS

1. Tim Read, sexual health physician at Melbourne Sexual Health Centre and Victorian infectious Diseases Service (Royal Melbourne Hospital).

Managing suspected early virologic failure.

A patient with cerebral toxoplasmosis had a viral load decrease of only 0.6 log, four weeks after commencing tenofovir, emtricitabine and nevirapine. Seeing this result at week six, should we have immediately switched treatment OR continued this treatment until seeing results of a genotypic resistance assay?

2. Catriona Ooi, Director of Sexual Health, Hunter New England Area Health

Juggling antiretroviral therapy and cardiovascular risk.

Should a smoker with impaired glucose tolerance, high triglycerides and impaired renal function continue to be treated with abacavir, lamivudine and efavirenz?

THURSDAY 18 SEPTEMBER 2008: 1.30PM – 3.00PM

Social Research – Desire
1.30pm – 3.00pm

**INCREASING THE CONTRIBUTION OF
SOCIAL RESEARCH TO HIV PREVENTION:
DEVELOPING AND TESTING A THEORY-
DRIVEN INTERVENTION TO REDUCE
UNPREMEDITATED RISK-TAKING IN MSM**

De Wit, JBF^{1,2}, Adam, PCG^{1,3}

¹National Centre in HIV Social Research, University of New South Wales, Sydney, NSW, Australia; ²Department of Social Psychology, Utrecht University, Utrecht, The Netherlands; ³Institute for Prevention and Social Research, Utrecht, The Netherlands

For more than a decade studies conclude that sexual risk-taking among MSM is increasing or remains high. But what are effective approaches to HIV-prevention in this era of HAART? This paper addresses this question by drawing on a program of social research concerned with the translation of theory-based understanding of individual and social processes underlying risky practises into effective HIV-prevention. A range of explanations has been offered for increasing trends in risk behavior, STI rates and HIV notifications in MSM worldwide, collectively emphasizing reduced motivation. However, as expected from recent social theorising of behaviour, studies we conducted in 5400 French and Dutch MSM showed that risk-taking with casual partners, mostly occurs in highly motivated men and is mainly unpremeditated. As unpremeditated risk-taking is largely unaddressed in current HIV-prevention, in collaboration with a major French NGO a novel theory-driven online intervention was developed and tested.

In an RCT 331 MSM who engaged in sex with casual partners and experienced difficulties in practising safer sex were randomly assigned to either a reference group not receiving any prevention advice, or one of two intervention groups receiving advice to promote their vigilance and control over situations related to unpremeditated risk-taking (e.g., when strongly aroused). Intervention format was either an e-card or a 3 min. interactive e-animation. The e-animation had a strong impact at immediate post-test and 6 months follow-up, while the e-card was generally not effective. In particular, the e-animation increased men's intention to exert vigilance and control to prevent unpremeditated risk-taking at post-test ($p < .05$), increased effective vigilance and control behaviors at follow-up ($p = .001$), and reduced willingness to engage in risk-taking at post-test ($p < .01$) and follow-up ($p = .000$). Most importantly, 6 months after the intervention the e-animation had reduced UAIC by 23% (adj. OR = .770, $p = .001$).

The present study illustrates that theory-based translational social research holds substantial promise for the strengthening of behavioural prevention of HIV, in particular when conducted in close collaboration between researchers and prevention experts. More specifically this study shows that non-premeditated, contextual processes that underly risk-taking in MSM can effectively be addressed in interventions based on innovative theorizing and using state-of-the-art intervention delivery.

SOCIAL RESEARCH – DESIRE

THURSDAY 18 SEPTEMBER 2008: 1.30PM – 3.00PM

SEX PIGS: A ROUGH GUIDE TO DIRTY SEX

Triffitt, KA

Positive Life NSW, Sydney, Australia

Australian research has identified gay men who practice adventurous sex as a priority group for HIV/STI prevention. Sexually confident HIV positive gay men are highly represented in this subculture. Specifically, the challenge was to develop a prevention campaign that adapted to participant's sexual limits and included the way new understandings of risk, safety and health are incorporated in HIV positive gay men's sexual lives.

Drawing on a review of SEX PIGS: DARK AND DIRTY SEX AND MANAGING YOUR HEALTH produced by Positive Life NSW, this paper will examine campaign development and implementation, and incorporate the ways sexually adventurous gay men 'care for self' and their partners.

By producing a more sophisticated understanding on prevention, adventurous sex is positioned as a 'productive' concept. It highlights values and models of behaviour, and harm minimisation applied to condom and drug use. While condom use with casual partners of unknown HIV status is a key message, the campaign also acknowledges gay men continue to redefine the limits of risk and safety.

HIV/STI prevention is not only a behavioural intervention, but is also a cultural practice, which engages and reproduces community ethics and values. This work creates opportunities for sexually adventurous gay men to speak through their culture and helps to define the sexual and subjective spaces they share.

GAY MEN WHO ENGAGE IN GROUP SEX ARE AT INCREASED RISK OF HIV INFECTION AND ONWARD TRANSMISSION: DATA FROM THE THREE OR MORE STUDY

Prestage G^{1,2}, Hudson J³, Bradley J¹, Corrigan N⁴, Down I⁴, Grulich A¹, McInnes D⁵

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Background: Group sex has been associated with risk behaviour and HIV seroconversion among gay men. We examined risk factors for risk behaviour in a community-based study of homosexually active men who participated in group sex activity in Australia.

Methods: The Three or More Study (TOMS) was an anonymous self-complete survey of men who had engaged in group sex with other men within the previous five years. Detailed information about sexual, drug-using and other behaviour during their most recent group sex encounter was collected. Men who reported group sex in the previous six months were included in these analyses. Results: In broader surveys of Australian gay men, about one quarter had engaged in unprotected anal intercourse (UAI) with non regular partners in the previous six months, whereas among the 746 TOMS participants, 29.4% reported UAI with non regular partners at their most recent group sex encounter, and 22.4% reported UAI with any partners they did not know to be the same HIV serostatus as themselves. After controlling for age, education, and location, not having a clear intention to use condoms, being HIV-positive or HIV status unknown, having more men at the group sex encounter, and engaging in group sex at least monthly were independently associated with UAI.

Conclusion: Gay men who engage in group sex, and particularly those who do so regularly and with more partners, are much more likely to engage in risk behaviour in general than are other gay men, and this risk behaviour often occurs in the context of group sex encounters. Group sex among gay men should be a high priority in HIV-prevention efforts in this population.

WALKING AFTER MIDNIGHT: TRAJECTORIES OF SEX ON PREMISES VISITS

Grierson J¹, Smith A¹, Von Doussa H¹

¹La Trobe University, Australian Research Centre in Sex, Health and Society, Melbourne, Australia

Background: Sex on premises venues (SOPV) are a primary site for health promotion interventions. Understanding the sexual practice of SOPV patrons requires an understanding of the ways in which the physical and social environments shape, constrain or co-vary with this practice.

Methods: Detailed interviews with SOPV patrons capture in rich narrative detail the exact nature, duration and sequencing of the sexual interactions that occurred during the men's most recent visit to an SOPV. The data allow us to describe trajectories of engagement with sexual possibilities during visit to an SOPV.

Results: 219 men completed telephone interviews within 48 hours of their visit. Interviews detailed the pattern of visits to SOPVs using time sequences that plotted their venue trajectory. Each sexual episode was further detailed in terms of partner characteristics, sexual practices and sequencing. 82% of men were HIV-negative. 68% of the men described themselves as single and 27% had a regular male partner. Most visits lasted between one and four hours. The most clearly sex-related sites (cruising areas, cubicles and wet areas) account for 70% of men's time. 74% of men's time does not involve a sexual interaction. Sexual encounters lasted an average of 26 minutes. Over half of the encounters took place in cubicles. Cubicles accounted for 83.9% of encounters involving anal intercourse, both protected and unprotected. The partner's age was more likely to be undetermined in cruising areas than in other sites such as cubicles. Partners' ages were assessed as somewhat older in cruising areas and wet areas compared to cubicles. Partner's HIV status was unrelated to site.

Conclusions: Detailed examination of trajectories of sexual practice in SOPVs provides useful contextual direction for effective targeting and delivery of health promotion interventions. Understanding SOPVs as a complex and dynamic social space will enhance outreach efficacy.

SEXUAL DESIRES, SEXUAL CONTROL AND SEXUAL RISK-TAKING IN MEN WHO HAVE SEX WITH MEN

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Sex is about more than preventing risk and a body of research shows that some sexual desires, reflected in the notion of sexual sensation seeking, are associated with risky practises. However, research also suggests that individuals can be effective self-regulators who do not indiscriminately enact what is considered a personal sexual disposition. Based in emergent theorising concerning the self-regulation of health behaviors, the aim of this study is to go beyond the notion of sexual sensation seeking as risk factor, and assess the extent to which any influence of sexual sensation seeking on sexual risk-taking among MSM is moderated by differences in men's perceived sexual control. Sexual control reflects individuals' agency in sexual contexts that can potentially be promoted to support men in having both gratifying and safe sex lives.

An online survey in The Netherlands recruited 1,613 MSM; 1,299 men who had sex with casual partners were included in this study. Potential sexual risk-taking in the preceding 12 months was indexed by number of causal partners (1-9 vs. ≥ 10), unprotected anal intercourse with casual partners (UAI-C; no vs. yes), and self-reported sexually transmitted infections (no vs. yes).

Sexual risk-taking with casual partners was highly prevalent in this online sample of MSM; 48.5% had had 10 or more causal sex partners, 39.8% had engaged in UAI-C, and 19.2% reported having had a STD. Multivariate logistic regression analyses showed that sexual sensation seeking was significantly related to more risk-taking according to each outcome variables, while all effects of sexual self control were significantly protective. As expected, sexual self control moderated the effects of sexual sensation seeking on behavioral indicators.

This study is the first to show that, although MSM who are higher in sexual sensation seeking are more likely to engage in sexual risk-taking, some men can effectively self-regulate this sexual disposition. While men high in sexual self control may spontaneously control their sexual desires, men low in sexual self control may benefit from a new generation of prevention methods that, inspired by a self-regulation approach, promote planning ahead of time.

MEDICINE, RISK FACTOR, PLEASURE ENHANCER OR SAFE SEX AID? THE USE OF VIAGRA AND OTHER SEUOPHARMACEUTICALS BY GAY MEN

Holt M¹, Bernard D¹ and Race K²

¹National Centre in HIV Social Research, The University of New South Wales; ²The University of Sydney

This paper aims to i) analyse the representations of Viagra and other drugs designed to treat erectile dysfunction ('sexuopharmaceuticals') in the HIV research literature and the accounts of gay men, and ii) identify the implications of sexuopharmaceutical use for HIV prevention and harm reduction among gay men.

31 gay men were interviewed in Sydney about contemporary gay life for the Qualitative Interviews Concerning Key Issues and Experiences (QUICKIE) project. A discursive analysis of accounts of sexuopharmaceutical use is presented here. The HIV research/public health literature is also drawn upon to illustrate how Viagra is considered a risk factor for HIV transmission.

Although not all participants had used sexuopharmaceuticals, their accounts suggested that Viagra and similar drugs are seen as aids to safe sex by some gay men; drugs that can offset erectile difficulties when using condoms, particularly in the context of alcohol or other drug use. Negative accounts of sexuopharmaceutical use were rare among participants. We suggest that the following contribute to a perception among gay men that Viagra and similar drugs are benevolent and pose few risks: i) the status of sexuopharmaceuticals as beneficial medicines and sexual enhancers, ii) gendered expectations that men should be able to perform sexually on demand, and iii) the trend that encourages biomedical or pharmaceutical fixes to behavioural problems.

Negative outcomes associated with sexuopharmaceutical use may be overlooked by gay men, suggesting a need for harm reduction information. The idea that problems with condom use and safe sex can be solved through pharmaceutical intervention requires ongoing and critical attention.

HIV Immunology
1.30pm – 3.00pm

HETEROGENEITY IN PRIMARY R5 HIV-1 GP120 STRUCTURES AFFECTING CD4 AND CCR5 INTERACTIONS AND EXPOSURE OF NEUTRALISING ANTIBODY EPITOPES.

Paul R. Gorry.

Centre for Virology, Macfarlane Burnet Institute for Medical Research and Public Health, Melbourne, Victoria, Australia.

CCR5-restricted (R5) HIV-1 variants cause immunodeficiency in the majority of HIV-1+ subjects who progress to AIDS, but the pathogenic mechanisms of R5 HIV-1 are poorly understood. The CD4-bound JRFL crystal structure of gp120 containing the V3 loop and the b12-bound gp120 crystal structure were used as templates to generate 3D models of 17 R5 gp120 proteins isolated patients with chronic/pre-AIDS (PA-R5 Envs) HIV-1 infection or AIDS (A-R5 Envs). Structural features were correlated to Env functional/genetic data including fusogenicity, CD4 binding, CD4-dependence, antibody binding and amino acid variations. A more open conformation of the CD4 binding site associated with movement of the V5 variable loop was present in the majority of A-R5 Envs and correlated with reduced CD4-dependence, increased CD4 binding and enhanced fusogenicity. In addition, the V3 loop of A-R5 Envs was more likely to exist in a conformation that brings the tip of the V3 loop closer to the co-receptor binding site, a conformation associated with enhanced binding of the anti-co-receptor binding site antibody 17b, altered reliance of CCR5 N-terminal and ECL residues for fusion and entry, as well as greater binding of CD4. These models suggest structural heterogeneity in R5 Envs may affect CD4 and CCR5 interactions and contribute to HIV-1 pathogenesis in subjects who continue to harbour R5 viral variants to late stages of infection.

HOW MIGHT UNDERSTANDING OF THE CO-EVOLUTION OF HLA AND VIRUSES INFORM CONTEMPORARY CLINICAL ISSUES

Simon Mallal¹, Tomer Hertz², Mina John¹, Silvana Guadieri¹, Ian James¹, Elizabeth Phillips¹, David Nolan¹ and Nebojsa Josic².

¹Institute for Immunology and Infectious Diseases Royal Perth Hospital and Murdoch University, Perth, Australia, ²Microsoft Research, One Microsoft Way, Redmond, WA 98052, USA

Class I MHC molecules are under diversifying selection but share the preference for binding to conserved areas of human proteins, and most target human viruses with similar efficiency. However flaviviruses, such as Hepatitis C, are unusual in that non-conserved areas may be preferentially targeted. MHC binding can be considered as 'nature's estimator of sequence conservation/functionality' and MHC targeting acts a fundamental force shaping the adaptation of pathogens and different viruses have taken different strategies to escape these selective pressures.

Some individuals exposed to Hepatitis C clear the virus during acute infection while others become chronically infected and there is also intra-patient variability in the response to therapy. This is likely to be determined by both variability in host alleles and the degree to which the infecting virus has adapted to those responses. However, to predict likely clinical outcomes it is also essential to first understand which responses are effective and constraining the virus from those host responses which are being elicited by the virus and are non-effective or even harmful to the host.

The failure of the STEP trial of the Merck developed Ad5-based HIV vaccine, which demonstrated that HIV acquisition was unexpectedly enhanced in vaccinated individuals despite evidence of immunogenicity has created new challenges in HIV vaccine research. We have found evidence of characteristic HLA allele-specific adaptations that induce T cell responses that are not just ineffective or neutral but actively enhancing to viral infection and harmful to immune control. These responses may appear strong by standard measures but they represent the consequence rather than the cause of adaptation and as such, serve the interests of the virus rather than the host. These findings support the concept that the more generally 'immunogenic' a vaccine is to this highly adaptable pathogen, the greater harm the vaccine may do unless the enhancing viral elements are pre-emptively identified and excluded from the immunogen.

ROLE OF INNATE IMMUNITY IN HIV INFECTION

Seema N Desai Ph.D.¹, Jeffrey Martinson B.A.¹, Carlos Montoya M.D.², and Alan L. Landay Ph.D.¹

¹Department of Immunology/Microbiology, Rush University Medical Center, Chicago, IL; ²Universidad de Antioquia, Medellín, Colombia

Innate immunity plays an instrumental role in activation and priming of adaptive immune response in HIV infection. HIV infection significantly impacts the frequency of innate cells mainly natural killer (NK) cells, plasmacytoid (p) and myeloid (m) dendritic cells (DCs). Highly active antiretroviral therapy (HAART) restores the frequency though functional impairment persists especially in pDC, the principle interferon- α producing cell. pDCs are activated via endosomal toll like receptors (TLR) 7 and 9. Our studies indicate that despite reduced numbers, pDCs remain responsive to TLR mediated activation and to AT-2 inactivated HIV-1 virus that induces IFN- α to a higher degree in healthy individuals compared to HIV infected. In vitro studies to examine the effects of activated innate immune responses in HIV infection, indicated that exogenous IFN- α induced program death Ligand-1 (PD-L1) on AT-2 HIV-1 activated monocytes and T cells which downmodulated T cell responses. Activation of pDC via TLR7 and 9 and AT-2 HIV also resulted in up-regulation of the enzyme, indoleamine 2-3 dioxygenase (IDO), which degrades the essential amino acid, tryptophan, leading to decreased proliferation of antigen specific T cells. Blocking pDC activation using chloroquine, a 4-aminoquinoline drug that inhibits endosomal fusion and acidification completely abrogated TLR7, 7/8 and 9 mediated IFN- α production and downstream metabolic signaling molecules IRF-7 and IRAK-4. Chloroquine impaired IDO and its activity. Chloroquine also downmodulated PD-L1 expression on pDCs and CD38 on T cells. Thus IFN- α that exhibits antiviral effects in the acute phase of HIV infection has a paradoxical role in the chronic phase that is associated with downmodulation of T cell responses via PDL1-PD-1 interaction or IDO synthesis. Chloroquine reverses the damage by blocking pDC activation in the endosome and downstream molecules in the IFN- α synthesis pathway suggesting its merit in adjuvant therapy with HAART.

REASSESSING VACCINE RESPONSES

Kelleher AD, NCHECR, UNSW and Centre For Immunology St Vincent's Hospital Darlinghurst, NSW

The recent early completion of the phase IIb proof of concept vaccine trial, STEP, because of lack of efficacy, has resulted in a reappraisal of what is required for an effective HIV vaccine. In particular these results have raised questions about the currently accepted assays used to measure immunogenicity of T cell vaccines: IFN- γ ELISpot and ICC. Further these results have raised questions as to whether a T cell based vaccine can prevent or control HIV infection. The increased rate of infection in those with higher rates of pre-existing Adenovirus immunity also highlights the need to more fully understand immune responses to the backbone of recombinant vectors as a part of vaccine development. The generation of strong mucosal immunity, generally accepted as a desirable component of a vaccine for HIV, may be problematical in the case of HIV vaccines. Increasing the pool of activated HIV specific CD4+ T cells in the mucosa may facilitate amplification of the initially transmitted quasispecies, encouraging rather than blocking productive infection.

A brief review of the STEP trial results will be presented as will a review of our current understanding of the determinants of T cell immunity and how these impact on future vaccine design and development.

**Ian Thompson Memorial Session
– Clinical Anti Retroviral Therapy
3.30pm – 5.00pm**

**CHANGES IN CIRCULATING CCR5+ T-CELLS
AND ANTIGEN-SPECIFIC CD4+ T-CELLS
DURING MONOTHERAPY WITH A SMALL
MOLECULE CCR5 ANTAGONIST SCH532706,
COMPARED WITH COMBINATION
ANTIRETROVIRAL THERAPY (cART)**

Pett SL^{1,2}, Zaunders J³, Bailey M³, Murray J^{1,4}, Cooper DA^{1,2},
MacRae K², Emery S¹, Kelleher A^{1,2,3}

¹National Centre in HIV Epidemiology and Clinical Research, University of NSW, Darlinghurst, Sydney, Australia; ²HIV, Immunology and Infectious Diseases Clinical Services Unit, St. Vincent's Hospital, Sydney, Australia; ³Centre for Immunology, St. Vincent's Hospital, Sydney, Australia; ⁴School of Mathematics and Statistics, University of NSW, Sydney, Australia.

We previously found that HIV- and CMV-specific CD4+ T-cells were CCR5+.

Therefore we investigated whether levels of these cells were altered in HIV-infected subjects given SCH532706 (a CCR5-antagonist) with low-dose ritonavir (r).

Subjects received SCH532706/r for 10 days (phase 1), followed by a 15-day "washout" (phase 2); cART was initiated on day 25. CCR5+ T-cell subsets and CD4+ T-cells specific for Mycobacteria tuberculosis and avium (M.TB and MAI), cytomegalovirus (CMV), Herpes simplex (HSV) and HIV Gag were measured at days 1, 3, 10 (phase 1); 20, 25 (phase 2) and 28, 35 on cART (phase 3); changes were analysed using the Mann-Whitney test. Changes in CCR5+ T-cell subsets were assessed by area-under-the-curve comparisons.

Ten males, with median 242 CD4+ (range 93-551) and 783 CD8+ (range 353-1115) T-cells/ μ L and 4.5 log₁₀ copies/mL viral load (range 3.8-5.7) were enrolled. At baseline, a median 20% of CD4+ and 50% of CD8+ T-cells were CCR5+. Antigen-specific CD4+ T-cells for M.TB, MAI, CMV, HSV and HIV Gag were 0.45%, 5.7%, 5.0%, 2.3% and 1.75%, respectively. Median viral load declines for phase 1 and 3 (SCH532706/r vs. cART) were -1.5 and -1.75 log₁₀ copies/mL, respectively (p=0.7).

Median changes in CD4+ T-cells for phases 1, 2, 3 were +16, -26, +28 cells/ μ L respectively (1 vs. 3: p=0.7); CD8+ T-cell changes were +91, -142, -71, respectively (1 vs. 3: p=0.02). Relative to baseline cell counts, changes in CCR5+CD4+ T cells for phases 1, 2, 3 were +22%, -24% and +24%, respectively (1 vs. 2: p=0.002; 2 vs. 3: p=0.01). In contrast, changes for CCR5+CD8+ T-cells were +33%, -13% and -10%, respectively (significant for phases 1 vs. 3;

p=0.01). Declines in M.TB-, CMV-, HSV-, and Gag-specific CD4+ T-cells occurred during receipt of SCH532706/r and cART. MAI-specific CD4+ T-cells declined significantly on cART vs. SCH532706/r (p=0.037).

CD4+ T-cell increases were modest on SCH532706/r and cART. However, CD8+CCR5+ T cells increased substantially during receipt of the CCR5-antagonist, but not cART, suggesting alterations in trafficking due to CCR5 blockade. Declines in CD4+ T-cells responsive to CMV, HSV and HIV Gag were equivalent during use of SCH532706/r and subsequent cART.

EFVIRENZ (EFV) PLASMA CONCENTRATIONS IN PATIENTS STOPPING THERAPY AFTER AT LEAST ONE MONTH DUE TO NEUROPSYCHIATRIC DISTURBANCES: AN INITIO SUBSTUDY

Read TRH^{1,2}, Mallon P³, Mijch A⁴, Goodall R⁵, Hudson F⁵, Wand H⁶, Carey D⁶, Emery S⁶, on behalf of the INITIO Coordinating Committee

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²Victorian Infectious Diseases Service, Victoria, Australia;

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⁴Monash University, Melbourne, Australia; ⁵Clinical Trials Unit, Medical Research Council, London, UK; ⁶NCHECR/UNSW, Sydney, NSW, Australia

Neuropsychiatric symptoms, including dreams, dizziness, insomnia, somnolence and mood changes can limit EFV use. Symptoms usually resolve within several weeks, but can persist in some patients necessitating EFV cessation. Central nervous system disturbances have been associated with elevated EFV concentrations. We examined EFV plasma concentrations in a retrospective nested case control study of HIV+ adults participating in INITIO, a large, international trial of initial antiretroviral therapy.

Cases (n=35) were participants who ceased EFV after >4 weeks therapy due to neuropsychiatric disturbances. Controls (n=75), matched for gender, country and time since randomisation; continued EFV for >6 months. Validated HPLC methods quantitated EFV concentrations in plasma collected (at or prior to EFV cessation for cases) and stored at -70°C. Cases and controls were compared using non-parametric methods.

11 participants (6 cases; 5 controls) had undetectable EFV levels and were excluded from analysis. EFV concentrations were >500 µg/L in all 99 participants and >1000 µg/L in 94, indicating acceptable adherence. Baseline age, height, weight, body mass index, HIV stage, serum creatinine, ALT, CD4 count or HIV RNA did not differ. Concomitant protease inhibitor therapy use was not different (p=0.61). Cases were more likely to be smokers (62% versus 27%; p=0.0011). Median EFV concentrations were not different in cases compared to controls (2259 [IQR 1768-2825] µg/L vs (2085 [IQR 1684-3336] µg/L respectively; p=0.77). EFV concentrations were >3000 µg/L in 17% of cases and 27% of controls (p=0.30), and >4000 µg/L in 7% and 16% respectively (p=0.24).

In a large randomised trial, EFV plasma concentrations did not predict drug cessation due to neuropsychiatric disturbances after at least one month of therapy. We cannot exclude that differences in adherence and time post dose of sample collection may account for our findings. It is possible the high prevalence of smokers amongst cases may represent individuals with pre-existing psychiatric disturbances.

ESPRIT (EVALUATION OF SUBCUTANEOUS PROLEUKIN® IN A RANDOMISED INTERNATIONAL TRIAL): FACTORS ASSOCIATED WITH ONGOING CYCLING WITH RECOMBINANT INTERLEUKIN-2 (RIL-2)

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ESPRIT is an ongoing phase III clinical trial evaluating the clinical impact of intermittent SC rIL-2 plus antiretroviral therapy (ART) vs. ART alone in HIV-1-infected individuals with CD4+ T-cells ≥300 cells/µL. After year 1 rIL-2 induction further rIL-2 dosing cycles should be given to achieve/sustain the CD4+ T-cell target (baseline x2 or ≥1000 cells/µL when baseline was 300-499 or ≥500 cells/µL respectively). The aim of the 2007 cycling initiative was to encourage all rIL-2 patients not at CD4+ target and without medical contraindication to receive further rIL-2.

The aim was to describe baseline and on-study predictors of ongoing rIL-2-cycling.

The reasons for non-cycling in eligible patients were summarised. Multivariate analyses were performed to determine the relationship between baseline and on-study predictors of receipt of ≥ 1 rIL-2 dosing cycle in 2007. Predictors considered were age, gender, ethnicity, geographical location of enrolment, baseline/nadir CD4+ T-cell count, prior ADI, previous rIL-2 cycles received and recent CD4+ T-cell count.

In 2007, 1107 patients were eligible to cycle. Median age was 40 years, 83.3% male, 76.8%, 10.8%, 8.0% were of white, black, Asian ethnicity respectively, 44.1%, 27.5%, 15.3%, 8.8% and 4.4% were enrolled in Europe/N.Africa, N.America, S.America, Asia and Australia respectively. Median baseline, nadir and recent CD4+ T-cell counts (in 2006) were 460, 184 and 568 cells/µL respectively; 26.1% had had a prior ADI.

Only 19.6% (n=217) received ≥1 rIL-2 dosing cycle in 2007. The main reasons given for non-cycling were "patient wish" (62.8%), "other" (17%), "previous rIL2-related toxicity" (11.7%) and CD4+ "high enough" (11.5%). Patients cycling in 2007 were more likely to have higher CD4+ counts in 2006 and had received a greater number of previous cycles (p<.001 for each). Geographical location of enrolment was also a determinant of cycling, with

the highest and lowest rates in Asia (37.1%) and Europe/N.Africa (12.9%) respectively.

The 2007 rIL-2 cycling initiative was not very successful. It is disappointing that patients with potentially the most to gain from further IL-2 cycling – those with lowest recent CD4+ counts and little previous IL-2 experience – were the least likely to re-cycle. It is unclear why re-cycling rates differed across geographical regions.

DEFERRED MODIFICATION OF ANTIRETROVIRAL REGIMEN FOLLOWING TREATMENT FAILURE IN ASIA: RESULTS FROM THE TREAT ASIA HIV OBSERVATIONAL DATABASE (TAHOD)

Zhou J¹, Li PC², Kumarasamy N³, Boyd M¹, Pujari S⁴, on behalf of The TREAT Asia HIV Observational Database
¹National Centre in HIV Epidemiology and Clinical Research, The University of New South Wales, Sydney, Australia; ²Queen Elizabeth Hospital, Hong Kong, China; ³YRG Centre for AIDS Research and Education, Chennai, India; ⁴Institute of Infectious Diseases, Pune, India

Effective new combination antiretroviral regimens (cART) in patients who experience treatment failure are not readily available in many Asian countries.. - We analysed the rates of treatment failure and antiretroviral modification following failure in patients from TAHOD.

Treatment failure was defined according to WHO guidelines. Time to treatment modification following cART failure was assessed by person-time method. Types of modification were summarised. Countries were categorised into high- and low-income by World Bank criteria.

Among 2446 patients (71% male) who initiated cART 447 developed treatment failure (242 immunological failure, 112 virological failure and 93 clinical failure) over 5697 person-years (7.8 per 100 person-years, 95% confidence interval CI 7.2-8.6). A total of 253 patients (76% male) changed at least one drug after treatment failure (51.6 per 100 person-years, 95% CI 45.6~58.4). There was no difference between patients from high- and low-income countries (unadjusted hazard-ratio HR 1.03; p=0.829). Compared to patients with virological failure, patients with either immunological or clinical failure were less likely to modify treatment (unadjusted HR 0.55; p<0.001 and 0.50; p<0.001, respectively). When modifying treatment, 24 (10% of 253) patients added one or more drug, 92 (36%) changed one and 137 (54%) two or more drugs. Compared to patients from low-income countries, patients from high-income countries were more likely to change two or more drugs (67% vs. 49%; p=0.009) and

to change to a protease-inhibitor-based regimen (48% vs. 16%; p<0.001).

We found that among a cohort of HIV patients across Asia, nearly half remained on a failing regimen one year after treatment failure. Deferred modification of regimen following treatment failure in many Asian countries may have implications for accumulation of drug resistance and response to second-line treatment. There is an urgent need to scale up access to second-line regimens and viral load monitoring in this region.

McLellan DGJ - see page 230
Byakwaga H - see page 224
Bloch M - see page 223
Chibo D - see page **225**

Epidemiology – Morbidity and Mortality
3.30pm – 5.00pm

A FASTER DECREASE IN CD4+ T CELL COUNTS AFTER HIV INFECTION FOR OLDER INDIVIDUALS CONTRIBUTES TO LEVELS OF IMMUNOSUPPRESSION AT HIV DIAGNOSIS

Murray JM^{1,2}, Kelleher AD²

¹School of Mathematics and Statistics, University of New South Wales, Sydney, NSW, Australia; ²National Centre in HIV Epidemiology and Clinical Research, University of New South Wales, Sydney, NSW, Australia.

It has been observed that older individuals at HIV diagnosis are more likely to present with lower CD4+ T cell counts, suggesting a longer time between infection and diagnosis with older age. We investigated whether this same correlation between age and CD4+ T cell numbers at diagnosis was also true in Australia. Additionally we assessed whether some of the loss in CD4+ T cell counts at diagnosis for older individuals could be attributed to faster immunosuppression. CD4+ T cell counts at HIV diagnosis (7,244 men and 1,045 women), and at primary HIV infection (1,206 men) were determined from the HIV Public Access Dataset. CD4+ T cell counts for 25 HIV-uninfected individuals were obtained from the Sydney AIDS Project, and CD4+ T cell counts for 259 men followed from primary HIV infection were obtained from the AIEDRP CORE01 Study.

CD4+ T cell counts for 25 HIV-uninfected men aged from 23 to 65 exhibited a non-significant increase with age. However median CD4+ T cell numbers per mm³ of blood for men at HIV diagnosis decreased from 500 for 15 to 24 year olds to 210 for those over 60, while for women these decreased from 534 to 175. At primary HIV infection men over 60 years of age had median CD4+ T cell counts of 352 per mm³ significantly lower than each age group younger than 45 where the medians ranged from 540 to 510 ($p < 0.05$ Tukey Test). Two years after primary HIV infection CD4+ T cell counts for treatment-naïve men were significantly negatively correlated with age ($p = 0.01$).

Although CD4+ T cell counts increase with age in uninfected individuals, levels at HIV diagnosis are significantly lower for older individuals with many presenting with AIDS level immunosuppression. Some of this will be due to longer times until diagnosis for older individuals, however a significant component is related to greater suppression at primary infection and while untreated for older HIV-infected individuals.

PREDICTORS OF LONG-TERM CHANGES IN MEAN CD4 CELL COUNTS AMONGST HIV INFECTED PATIENTS FROM THE ASIA-PACIFIC REGION DURING ACTIVE COMBINATION ANTIRETROVIRAL THERAPY

Egger S¹, Petoumenos K², Kamarulzaman A³, Hoy J⁴, Sungkanuparph S⁵, Chuah J⁶, Falster K^{2,7}, Zhou J², Law MG², on behalf of the Asia Pacific HIV Observational Database (APHOD)

¹The Cancer Council NSW, Woolloomooloo, NSW Australia; ²National Centre in HIV Epidemiology and Clinical Research, University of NSW, Sydney, Australia; ³Department of Medicine, University of Malaya, Lembah Pantai, Kuala Lumpur, Malaysia; ⁴The Alfred Hospital, Monash University, Melbourne, Australia; ⁵Ramathibodi Hospital, Mahidol University, Bangkok, Thailand; ⁶Gold Coast Sexual Health Clinic, Queensland, Australia; ⁷School of Public Health and Community Medicine, University of NSW, Sydney, Australia

The primary objective of this study is to investigate the predictors of long-term changes in mean CD4 cell counts among HIV positive patients, up to 6 years after the commencement of combination antiretroviral treatment (cART) in the Asia-Pacific HIV Observational Database (APHOD), a collaboration of the Australian HIV Observational Database (AHOD) and the TREAT Asia HIV Observational Database (TAHOD).

Patients in APHOD who first commenced cART after January 1 1997, and who had a baseline CD4 cell count and viral load measure, and at least one follow-up measure between 6 and 24 months were included. CD4 cell counts were determined at every 6-month period following the commencement of cART for up to 6 years. Linear random effects models were used to examine the change in and predictors of mean CD4 cell counts for each of the cohorts over a 6-year study period.

1638 patients fulfilled the inclusion criteria with a median follow up time of 58 months. At baseline TAHOD patients were slightly younger (37.6 vs 40.1 years), more likely to have prior AIDS (44% vs 13%) and substantially lower CD4 cell counts (176 vs 386 cells/ μ L) than AHOD patients. Lower post-cART mean CD4 cell counts were found to be associated with increasing age (-14 cells/ μ L per 10-year increase in age 95%CI [-21, -7], $p < 0.001$), pre-cART hepatitis C coinfection (-41 cells/ μ L 95%CI [-79, -2], $p = 0.038$), prior AIDS (-23 cells/ μ L 95%CI [-42, -2], $p = 0.019$), prior viral load 100,000 copies/ml (-40 cells/ μ L 95%CI [-56, -25], $p < 0.001$), and the Asia-Pacific region (27 cells/ μ L 95%CI [-46, -8], $p = 0.005$). Higher absolute post-cART mean CD4 cell counts were associated with lower post-cART viral load levels and higher baseline CD4 cell counts. Higher increments in post-cART mean CD4 cell counts was found to be associated with lower baseline CD4 cell

counts. Rates of mean CD4+ growth rates plateaued at 6 years of cART with sustained viral suppression.

Patients with continuously or intermittently sustained virological response experience ongoing CD4 cell increases for several years after commencing cART, with higher increases among patients with lower baseline CD4 cell counts. This increase was demonstrated in both the AHOD and TAHOD cohorts, despite the slightly lower, albeit statistically significant, overall absolute CD4 cell response in TAHOD over the six years.

WHO GETS AIDS IN THE HAART ERA?

Middleton MG¹, Jauncey M¹, McDonald AM¹, Grulich AE¹
¹National Centre in HIV Epidemiology and Clinical Research, The University of New South Wales, Sydney, Australia

Objective: To describe demographic, behavioural and clinical risk factors for AIDS in the HAART era in Australia.

Methods: AIDS cases diagnosed in three area health services in New South Wales in the years 2003 – 2005, including deaths in 2001 – 2005, and notified to the National AIDS Registry were eligible for inclusion in the study. A questionnaire asking for clinical, behavioural and demographic information was forwarded to people with AIDS (PWA) via the notifying doctor.

Results: Of the 131 PWA who were alive at the time of the survey, 36 (27.5%) responded. Twenty-five respondents (73.5%) were MSM and 22.2% spoke a language other than English at home. There was a high correlation between the demographic and risk factor information provided by patients and clinicians. Thirty-six percent of respondents were diagnosed with HIV \leq 90 days prior to AIDS (late diagnosis), 38.9% had received suboptimal HAART, and another 19.4% had not received HAART prior to their AIDS diagnosis. Of those with a late HIV diagnosis, 85% did not consider themselves at risk of HIV infection at the time of their diagnosis, 53% reported they had never had a previous negative test, and 31% reported delaying their HIV-test. The main reasons people did not consider themselves at risk of HIV infection were that they had never had a sexually transmissible infection (60%), had always had safe sex (50%), had not had many sexual partners (50%), or thought their sexual partners were HIV negative (50%). Sixteen PWA (44.4%) were treated with HAART prior to their AIDS diagnosis. Of these, 5 (31.3%) did not commence treatment soon enough, 5 (31.3%) had difficulty complying with treatment and 4 (25%) had a structured treatment interruption. Of the 7 PWA not treated prior to their AIDS diagnosis, 3 (42.9%) declined treatment and 3 (42.9%) were not offered treatment.

Conclusions: Most PWA with a late HIV diagnosis were not tested for HIV because they considered their sexual behaviour to be low risk. The majority of people who received HAART prior to their AIDS diagnosis received suboptimal treatment.

HIGH MORTALITY ASSOCIATED WITH HIV INFECTION AMONG ILLICIT DRUG USERS IN THE HAART ERA

Grebely J¹, Raffa JD², Lai C³, Kraiden M⁴, Dore GJ¹, Shannon K³, Kerr T^{3,5} and Tyndall MW^{3,5}

¹National Centre in HIV Epidemiology and Clinical Research, Sydney, NSW, Australia; ²Department of Statistics and Actuarial Science, University of Waterloo, Waterloo, Canada; ³BC Centre for Excellence in HIV/AIDS; ⁴British Columbia Centre for Disease Control; ⁵Department of Medicine, University of British Columbia, Vancouver, Canada.

Introduction: The impressive decrease in HIV-associated morbidity and mortality related to the introduction of highly active antiretroviral therapy (HAART) has been less dramatic in marginalized populations. This study was designed to measure mortality rates among a cohort of illicit drug users in Vancouver.

Methods: CHASE is a cohort study of inner city residents recruited from Vancouver, Canada between January 2003 and June 2004. Participants were then followed retrospectively and prospectively through health-related database linkages. HIV and HCV status were determined through linkage with provincial virology databases. Mortality data were derived from the British Columbia Vital Statistics registry (2003-2006). Causes of death were categorized according to ICD-10 chapter headings. Rates of all cause, drug-related, HIV-related and other cause-related mortality were measured. Factors associated with all cause and HIV-related mortality were also assessed using Cox proportional hazards models.

Results: Of 2913 participants, 305 and 1366 were infected with HIV and HCV, respectively. Among 178 deaths, the major causes were due to infection (23.0%), external causes of morbidity and mortality (18.5%), neoplasms (12.4%), respiratory system (11.8%), other ill-defined or unspecified causes (11.2%) and circulatory system (10.7%). Deaths were HIV-related in 34 (19.1%), drug-related in 30 (16.9%), liver-related in 12 (6.7%) and other cause-related in 102 (57.3%). All cause, HIV-related and drug-related mortality rates were 198.2, 37.9 and 33.4 cases/10,000 p-yrs. All cause mortality remained stable over the study period, with observed rates of 239.0, 179.5, 198.4 and 202.5 cases/10,000 p-yrs from 2003 to 2006, respectively. Overall, Cox proportional hazards analyses stratifying on age demonstrated that injection drug use in the previous 6 months (adjusted hazard ratio (AHR) 1.42; 1.03-1.94, p=0.030) and HIV infection (AHR 3.14; 2.11-4.66, p<0.001) were associated with all cause mortality. HIV-related mortality was independently associated with unknown HIV status (AHR 5.43; 1.53-19.30, p=0.009).

Conclusions: In this large retrospective-prospective analysis in the HAART era, mortality rates in illicit drug users were consistently high. Although injection drug use and HIV infection were strongly associated with all cause mortality, there were a range of other causes that could be prevented through targeted public health interventions.

CANCER AND HIV IN AUSTRALIA: A COMPARISON ACROSS EARLY AND LATE HAART PERIODS

Van Leeuwen MT¹, Vajdic CM², Middleton MG¹, McDonald AM¹, Law M¹, Kaldor J¹, Grulich AE¹

¹National Centre in HIV Epidemiology and Clinical Research, University of New South Wales, Sydney, NSW, Australia; ²University of New South Wales Cancer Research Centre, Prince of Wales Clinical School, University of New South Wales, Sydney, Australia.

The epidemiology of cancer in people with HIV infection since the introduction of highly active antiretroviral therapy (HAART) remains unclear. Using data from national, population-based registries, this study examined changes in cancer incidence among people with HIV infection in Australia post-HAART.

Probabilistic data linkage between the National HIV Registry, the National AIDS Registry and the National Cancer Statistics Clearing House (NCSCCH), was used to ascertain incident cancer diagnoses in adults (16-80 years) with HIV infection in Australia from 1982-2004. Person-years of follow-up were accrued from the date of seroconversion or HIV diagnosis, or from 01 Jan 1982, until the date of cancer diagnosis, death, or 31 December 2004. The observed number of cancer diagnoses was compared with that expected in the Australian general population through the calculation of five-year age-, sex-, state- and calendar-year-specific standardised incidence ratios (SIRs). SIRs were examined pre- and post-HAART, and across 'early' (1996 – 1999) and 'late' (2000 – 2004) HAART periods.

In total, 2 762 cancers (2 168 AIDS-defining, 594 non-AIDS-defining) were identified on the NCSCCH in 20 232 people. Overall, risk for Kaposi sarcoma (KS, SIR 5 379, 95%CI 4 793 – 6 036) and non-Hodgkin lymphoma (NHL, SIR 15.3, 95%CI 13.6 – 17.2) remained elevated post-HAART, though declined significantly across the early and late HAART periods (Ptrend <0.001). Risk for Hodgkin disease (HD) peaked during the early HAART period (SIR 17.3, 95%CI 10.3 – 27.2) but declined significantly thereafter (SIR 7.4, 95%CI 3.7 – 13.2; Ptrend <0.023). Risk remained significantly elevated for anal cancer in males (SIR 34.4, 95%CI 22.7 – 50.1), and for leukaemia (SIR 2.0, 95%CI 1.1 – 3.4), and was non-significantly elevated for cancers of the lip, oral cavity and lung. All cases of liver cancer occurred post-HAART (SIR 3.5, 95%CI 1.7 – 6.2).

People with HIV infection remain at risk for several cancers post-HAART including the AIDS-defining cancers NHL and KS, as well as leukaemia, liver, and anal cancer. Risk for NHL and KS continued to decline in the late HAART period. While the increase in risk for HD post-HAART has been previously observed, the recent decline in risk has not been elsewhere reported.

UPDATE OF THE AUSTRALIAN LONG-TERM NON-PROGRESSOR (LTNP) COHORT

Gelgor L¹, Anderson B², Baker D³, Finlayson R⁴, McFarlane R³, McMurchie M³, Kelleher A¹, Kaldor J¹ on behalf of the Long Term Non-progressor study group

¹National Centre in HIV Epidemiology and Clinical Research, University of New South Wales, Sydney NSW, Australia; ²St Leonards, Sydney NSW, Australia; ³East Sydney Doctors, Darlinghurst, Sydney NSW, Australia; ⁴Taylor Square Private Clinic, Darlinghurst, Sydney NSW, Australia.

The Australian LTNP cohort was established in 1994 to investigate viral, genetic and immunological factors that may influence disease progression. Individuals were eligible for the study provided they had documented HIV infection and remained asymptomatic for at least 8 years with a CD4+ count above 500/ μ L. This cohort has been followed clinically on an annual basis, with specimen storage for specialised analyses and regular recording of CD4+ counts, viral load, clinical disease and therapeutic intervention. Updated analysis of the cohort was undertaken to determine what proportion of the cohort sustained non-progression and to compare the viral load and CD4+ T cells over time with those within the cohort who had progressed

Of 111 people recruited into the cohort 30 are lost to follow up, 3 died, 9 developed AIDS, 35 commenced antiretroviral treatment, 34 (31%) remain untreated.

The median duration of infection of the 34 subjects that remain untreated is 21 years (Range 8-24 years) with those in the treatment group being infected for 22 years (Range 12-24 years). Median time to treatment is 13 years (Range 9-21 years). Those who remain untreated had lower median viral load of 2300 copies/ml at study entry with the most recent median viral load measuring 2700 copies/ml, compared to 9600 copies/ml in the treated group at study entry with the median HIV-1 RNA 32,200 copies/ml prior to the start of therapy. The median CD4+ T cell counts are within normal range for both the treated (550 cells/ μ L) just prior to treatment start and the most recent measured in the untreated (620 cells/ μ L) group. Survival analysis using the Log rank test for comparison indicated that a higher CD4+ T cell count ($p < 0.002$) and lower HIV-1 RNA ($p < 0.003$) at study entry were significant predictors of sustained nonprogression.

A substantial proportion of this cohort, remain untreated 20 years after diagnosis and exhibit ongoing viral load control with normal CD4+ T cell counts. The mechanisms underlying this phenomenon of control of HIV infection remains elusive. Continued studies of long-term non-progression contribute to understanding the pathogenesis of HIV-1 infection and for the development of improved treatment strategies such as vaccine development.

**Working with CALD Communities/
Working with Media
3.30pm – 5.00pm**

**SAFE SEX NO REGRETS- SEXUAL HEALTH IN
MAINSTREAM MEDIA IN WA**

Crawford G¹, Brown G², Nicholson C², Langdon T¹.

¹Western Australian AIDS Council, Perth, WA, Australia

²WA Centre for Health Promotion Research, School of Public Health, Curtin University of Technology, Perth, WA, Australia

Social marketing focusing on STIs and HIV has been absent from WA televisions since the 1990's, following a shift away from broad based marketing strategies. Following the success of the Safe Sex No Regrets mass media campaign in NSW, the campaign was implemented in WA, for 10 weeks between December 2007 and February 2008 incorporating television, print and night venue initiatives.

Objectives were primarily to increase awareness of safe sexual practice, and increase positive attitudes towards safe sex, and also increase knowledge of early testing, detection and treatment. The campaign, with party and nightclub focused imagery targeted sexually active heterosexuals under 30 and men who had sex with men under 45. Evaluation sought to determine whether the campaign has achieved its objectives and to test the efficacy of the approaches.

Two hundred pre and post campaign questionnaires were administered via telephone to a random cross section of the target group. A further 50 venue based intercept surveys were administered in night venues frequented by the target group. The survey examined campaign recall, attitudes, beliefs and risk behaviour toward safe sex, condom use, STIs and testing.

Baseline data indicated low levels of STI testing and condom use, but indicated high rates of awareness and attitude shifts amongst the target group concerning sexual health issues and protective behaviours. The evaluation methodology highlighted challenges in achieving enough telephone survey participants who identified having 'casual partners'. However a venue based sample in nightclubs was achieved with surprising ease.

Television and other media strategies have a role in HIV/STI prevention to raise awareness and reinforce condom use and testing messages. However behaviour change requires sustained social marketing as only one part of an integrated approach to prevention. Also the high success in achieving a venue-based sample may be useful for other campaign evaluations.

**DIFFERENT COMMUNITIES, DIFFERENT
NEEDS: SHAPING HIV/AIDS MESSAGES FOR
SIX NEW SOUTH WALES CULTURALLY AND
LINGUISTICALLY DIVERSE COMMUNITIES**

Shaw MJ¹, Sabri W², McMahon T², Edwards B³, McGowan L⁴

¹HIV & Related Programs Health Promotion Team (Inner West), Sydney South West Area Health Service, Camperdown, New South Wales, Australia; ²Multicultural HIV/AIDS & Hepatitis C Service of NSW, Camperdown, New South Wales, Australia; ³HIV & Related Programs Unit, South Eastern Sydney & Illawarra Area Health Service, Randwick, New South Wales, Australia; ⁴HIV & Related Programs Health Promotion Team (Liverpool), Sydney South West Area Health Service, Camperdown, New South Wales, Australia

New South Wales has a significant overseas born population with almost one third of people born outside of Australia. As part of increasing patterns of international mobility, temporary and permanent residents of NSW travel to their country of birth to visit friends and family or conduct business. To ensure that culturally and linguistically diverse (CALD) communities understand how HIV/AIDS is transmitted and prevented, as well as the particular risks associated with overseas travel, the NSW CALD HIV Interagency established a Travel and Mobility Working Group to identify health promotion initiatives which might address the HIV/AIDS risk posed by overseas travel among CALD communities.

The Working Group is made up of HIV/AIDS health promotion stakeholders from Sydney South West Area Health Service (SSWAHS), South East Sydney Illawarra Area Health Service (SESIAHS) and the Multicultural HIV/AIDS and Hepatitis C Service (MHAHS).

The Multicultural HIV/AIDS and Hepatitis C Service, in conjunction with the Travel and Mobility Working Group, commissioned an assessment of the HIV/AIDS information needs of six CALD communities: Chinese (Mandarin speaking); Vietnamese; Thai; Cambodian; Indonesian; and African communities. These communities have been identified by NSW Health as being a high priority among CALD communities in NSW. The key findings from the needs assessment will be used to inform community education campaigns with each community, including resource development.

This paper will discuss these key findings including:

- Current sources of health information
- Gender issues relating to HIV/AIDS messages
- Understanding and perceptions of HIV/AIDS within an Australian and overseas context
- Level of interest in information about HIV/AIDS
- Preferred communication mechanism for each community

**THE MAKING OF HIV AS A PUBLIC CONCERN:
THREE THEMES IN THE CONTEMPORARY
AUSTRALIAN NEWS MEDIA COVERAGE OF
HIV**

Newman CE¹, Persson A¹

¹National Centre in HIV Social Research, The University of New South Wales Sydney NSW Australia

This paper explores how HIV is constituted as a matter of public concern in Australia, where – unlike much of the rest of the world – there is a continuing low incidence of heterosexual transmission. In this context, it is timely to explore how the media contributes to the ongoing mobilisation of public interest in HIV, and how HIV is constituted as a public concern in relation to the past, present and future of heterosexual audiences.

This paper identifies three prevailing approaches to generating public concern in HIV news stories published in The Sydney Morning Herald between 2000 and 2005 as well as in academic media analysis and HIV education and advocacy. The study focused on this period because sufficient research had already been conducted on Australian HIV media coverage in the previous two decades of the HIV epidemic.

Each of the three themes identified pivots on the question of how to generate or regenerate a sense of urgency around HIV as a topical and relevant issue for Australian audiences. Firstly, reflections on fear revisit the early years of the epidemic, distinguishing different generations of Australians as either marked or unmarked by the 1987 Grim Reaper campaign. Secondly, narratives of complacency focus on an apparently widespread lack of concern or naïvety about HIV in the broadest population today. Lastly, projections in risk forecast a multiplication of HIV risk environments, incorporating new trends such as medical tourism or criminal cases of relationship 'betrayal'.

Together these three themes represent a shared moment in the history of public discourses on HIV, constructing Australian publics as passive, vulnerable, unaware and potentially uncaring. And yet they do little to engage the mainstream as more than merely spectators of public concern about HIV. This has significance for the future of HIV prevention in Australia, specifically in responding to changing dynamics in the global and local epidemics.

**RADIO DRAMAS, HIV/AIDS & THE
VIETNAMESE COMMUNITY IN SYDNEY**

Sabri W.

Multicultural HIV/AIDS & Hepatitis C Service

Australia is culturally diverse and HIV infection rates reflect this. Some 21% of national HIV notifications annually are among people born in non-English speaking regions of the world. The pattern of HIV infection among culturally and linguistically diverse (CALD) communities in Australia largely reflects prevalence rates in countries-of-origin.

The Multicultural HIV/AIDS and Hepatitis C Service (MHAHS) implemented a one-year project with the Vietnamese community to empower and increase their awareness and knowledge using a community development framework around crucial, yet sensitive, issues of HIV testing and prevention in partnership with Vietnamese community organisations.

This paper describes a key strategy of the project - the use of "Radio Dramas" designed to raise HIV/AIDS awareness amongst the Vietnamese community in NSW. It details the evaluation process and findings in relation to the reach of HIV/AIDS messages among the target communities.

The paper will also examine how this approach to community development demonstrates that community engagement, empowerment and partnership can result in capacity building and increase social capital around HIV/AIDS issues amongst CALD communities.

REFLECTIONS ON IMPROVING HEALTH OUTCOMES

Eisenberg M, [Katsaros E](#)

Multicultural HIV/AIDS and Hepatitis C Service, Sydney, NSW, Australia

People from culturally and linguistically diverse (CALD) backgrounds make up approximately one fifth of HIV notifications in NSW and are now recognised as a priority population by the NSW HIV/AIDS Strategy.

The Multicultural HIV/AIDS and Hepatitis C Service (MHAHS) is a state-wide service providing client support, community development, and advocacy for and with people from CALD backgrounds affected by HIV and hepatitis C. It currently employs 100 bilingual/bicultural workers, known as co-workers, in working with people from almost 30 language backgrounds.

This paper uses two complex HIV/AIDS cases to examine some factors which contribute to positive and less positive outcomes for the client, in particular the values and level of commitment of the workforce, both within and outside the MHAHS. It suggests that the practice of social inclusion is perhaps not quite what the rhetoric of diversity promises and argues that professional supervision for all workers is a crucial tool in improving health outcomes for all clients.

ACCULTURATION, SEXUAL BEHAVIOUR, RISK AND KNOWLEDGE IN VIETNAMESE MEN LIVING IN METROPOLITAN SYDNEY

[O'Connor CC](#)^{1,3}, [Wen LM](#)², [Shaw M](#)¹, [Quine S](#)³

¹Sexual Health Service, Division of Community Health, SSWAHS, Camperdown, Sydney; ²Health Promotion Unit, Division of Population Health, SSWAHS, Camperdown, Sydney; ³School of Public Health, University of Sydney

Objectives: To describe the relationship between acculturation, sexual risk and Sexually Transmissible Diseases (STDs) and Blood Borne Viruses (BBVs) knowledge among Vietnamese men living in inner Sydney and to compare this prevalence with national data.

Method: Telephone interviews were completed with a random sample of 499 Vietnamese men, selected from the electronic phone book using a list of common Vietnamese surnames.

Results: Of the 761 eligible men contacted, data were obtained from 499 men giving a response rate of 66 %. There was an association between lower acculturation scores and having more than ten lifetime sexual partners, more than 50 lifetime sexual partners, never using a condom, ever or recently had commercial sex, ever had an STD, were hepatitis B carriers or had ever been imprisoned.

Conclusion: There is an association between acculturation and many aspects of sexual behaviour

**Prevention and Treatment Issues For
Older Gay Men - Sponsored by NSW
Health and ACON
3.30pm – 5.00pm**

ACON & NSW HEALTH PRESENT:

Prevention And Treatment Issues For Older Gay Men.

A sponsored ASHM conference session on differences in risk, behaviour and health promotion need in men over 40

The average age of seroconversions is increasing; people with HIV are living longer, more men in their 40s and 50s are becoming HIV positive. This 90 minute session brings together a range of researchers, and service delivery and health promotion professionals to explore some of the specific issues related to developing appropriate responses for older men in terms of HIV prevention and health promotion activities.

The session will include an examination of available data both nationally and internationally that highlight issues in relation to risk behaviour and factors impacting on seroconversions amongst this target group. Additionally the session will explore aspects of sex cultures and the framing of prevention messages, specific interventions targeted to older HIV positive men, as well as exploring the Implications for an ageing GLBT community, including workforce development needs in the medical and aged care sectors.

Chairs: Stevie Clayton ACON & Geoff Honnor NSW Health

Panellists
Garrett Prestage
NCHECR

John Imrie
NCHSR

Dermot Ryan
ACON

Russell Westacott
ACON

Rob Lake
Positive Life NSW

**RISK, REALITIES AND HIV
SEROCONVERSIONS IN OLDER GAY
MEN: QUALITATIVE RESULTS FROM AN
INVESTIGATION OF SEROCONVERSIONS
IN GAY MEN WHO HIV TEST IN ENGLAND
(INSIGHT STUDY)**

Imrie J^{1,2}, Elam G², Macdonald N³, Hickson FC⁴, Power RM⁵, McGarrigle CA⁶, Fenton KA^{6,7}, Gilbert V⁶, Ward H³, Evans BG⁶ on behalf of the INSIGHT Collaborative Research Team

¹National Centre in HIV Social Research, The University of New South Wales Sydney, NSW, Australia; ²Centre for Sexual Health and HIV Research, Royal Free and University College Medical School, London, UK; ³Department of Infectious Disease Epidemiology, Imperial College Faculty of Medicine, London, UK; ⁴Sigma Research, University of Portsmouth, London, UK; ⁵Centre for Harm Reduction, Burnet Institute, Melbourne, VIC, Australia; ⁶Department of HIV and STIs, Health Protection Agency – Centre for Infections, London, UK; ⁷National Center for HIV, Viral Hepatitis, STD, and TB Prevention, Coordinating Center for Infectious Diseases, Centers for Disease Control and Prevention, Atlanta GA, USA

Gay men in their mid-life have survived the worst years of the HIV epidemic, so why are they now acquiring HIV? In England, men who have sex with men (MSM) age 35 to 44 years accounted for over a third (34% 787/2301) of all new diagnoses of HIV in 2006. InSIGHT (Investigation into seroconversions in gay men that HIV test) explored why gay men continue to acquire new HIV infections. This paper reports on one aspect of the qualitative stage of the study - our investigation of the context of HIV seroconversion among older gay men seeking repeat HIV tests at sexual health clinics in England and the factors contributing to unprotected anal intercourse (UAI).

In-depth interviews exploring the context of UAI were conducted among 26 recent HIV seroconverters (cases) and 22 controls purposively selected from the quantitative arm – the InSIGHT case-control study.

We found that older men are more likely to be exposed to major relationship and lifestyle changes, bereavement and loss. These factors impact on their sexual lifestyles and decisions to engage in higher risk sexual behaviour. In addition, among older men, the improved prognosis of HIV infection compared to other age related chronic health conditions reduces perceptions of the seriousness of HIV infection.

A range of psychosocial reasons led some men to engage in high risk UAI, despite high levels of risk awareness. The study findings indicate specific factors contributing to seroconversion in older men and a relationship between sexual and emotional needs, risk perceptions and behaviour. More work is required to understand the sexual needs and expectations of older men in order to inform specific health promotion measures aimed at reducing the risk of HIV infection in this group.

20th annual ashmconference

PREVENTION AND TREATMENT ISSUES FOR OLDER GAY MEN - SPONSORED BY NSW HEALTH AND ACON

THURSDAY 18 SEPTEMBER 2008: 3.30PM - 5.00PM

TREATMENT ISSUES AND RESPONSES

Lake, R.

Chief Executive Officer, Positive Life NSW

What kinds of peer support, policy and resource interventions are provided to, and valued by, older gay men living with HIV? Do newly positive older gay men have different issues and needs?

What services provide to people, and what is valued by them may be quite different. Positive Life and other HIV service providers, have developed services following evidence both of need and demand from this group. Responses to our targeted peer support and resources have been strong, but in identifying and providing for a wide range of needs, this may be a starting point, not the end. Services have often framed interventions for people living longer with Hiv, often older gay men, as rehabilitation. Peer support, social opportunities, and re engagement are key requests. One of the lessons for us is to recognise diverse needs, seek as much evidence as possible about those needs, and refine services to meet them.

For newly diagnosed older gay men, whether in their forties or sixties, the question is the difference their age has on the impact of a diagnosis. Does a positive diagnosis heighten existing concerns about ageing, relationships, income and the future? Or does the response parallel the lack of pessimism often ascribed to younger gay men who seroconvert today?

The common point for these groups is ageing. What is different for gay men ageing, and how big an impact does their Hiv status have? Is their general state of health, particularly a poorer state of health over a longer period of time, likely to have a more significant impact and direct their health, housing, income and community service and support needs? Are there are other significant events, such as relationship end or partner change, retirement, Hiv progression, onset of other critical or chronic health conditions? This presentation will include feedback from our interventions, evaluations and will highlight research needs.

ASHM Plenary – Policy, 'Australia's response to HIV in Asia and the Pacific: new partnerships and collaborations'
5.00pm – 6.30pm

NEW POLICIES FOR CLINICAL AND OPERATIONS RESEARCH IN RESOURCE LIMITED SETTINGS

Professor [David A. Cooper](#)

Director, National Centre in HIV Epidemiology and Clinical Research, University of New South Wales, Sydney, Australia.

The delivery of existing HIV interventions to resource limited settings has increased dramatically in recent years. Although the funding for these initiatives is still insufficient, the need for new clinical and operations research in these settings is essential to developing sustainable interventions and approaches into the future. The incorporation of research studies into HIV programs is necessary not only to determine the effectiveness of specific interventions in these settings but also to respond to unique challenges that arise in resource limited settings and to examine outcomes that may be specific to particular regions. Examples of this may include determining the cause of early mortality in patients starting antiretroviral therapy in resource limited settings or the influence that HIV treatment may have in areas with high rates of other infectious diseases like tuberculosis or malaria. Collaborations in the Asia-Pacific region have been established not only in order to provide counseling and clinical care but also to support HIV training and research in the region. The HIV-NAT collaboration, between the Netherlands, Australia and Thailand, and the Cambodia Treatment Access Program have successfully enhanced the HIV research capacity and training in the region. Additionally, the Sydney Declaration of 2007 highlighted the need for and increased awareness of the requirement for a firm commitment to sustained research funding in order to address HIV in resource limited settings.

Response & Predictions in ART 5.00pm – 6.30pm

EVALUATION OF THE RELATIONSHIP BETWEEN HLA-B*5701 STATUS AND HIV REVERSE TRANSCRIPTASE CODON 245 VARIATION IN SOUTH AUSTRALIAN HIV-INFECTED INDIVIDUALS

Warner MS¹, James HM², Higgins GD¹ and Ratcliff RM¹

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Abacavir hypersensitivity occurs in four to eight percent of patients and is strongly associated (greater than 100-fold increase) with the human leukocyte antigen (HLA)-B*5701 allele. HLA class I loci can shape viral evolution by selecting for HIV viral variants which evade the specific cytotoxic T lymphocytes produced. Investigators in Canada recently demonstrated a strong association between possessing the HLA-B*5701 allele and variations at codon 245 of HIV reverse transcriptase (RT).

Between June 2004 and January 2007, 40 of 409 (9.8%) HIV positive patients screened possessed the HLA B*5701 allele. Of patients screened for HLA*B5701, 290 (70.9%) had HIV sequence testing performed, and of these, 29 (10%) were positive for HLA-B*5701. Of these 29 patients, all but one had codon substitutions at position 245. Overall, 139 (53.1%) of 262 HLA-B*5701-negative and 28 (96.6%) of 29 HLA-B*5701-positive isolates had a polymorphism at position 245. The sensitivity and specificity of codon 245 substitutions for predicting HLA B*5701 were 97% and 47% respectively. The positive predictive value (PPV) of a codon 245 substitution was 18% and the negative predictive value (NPV) was 99.2%.

The presence of wild type sequence at RT codon 245 was highly correlated with the absence of the HLA-B*5701 allele. These results are similar to those found by Chui et al (2007) although we found significantly more codon 245 variants in virus from HLA-B*5701-negative individuals than in their study (53.1% versus 24.5%), resulting in a lower specificity of codon 245 variation in predicting HLA-B*5701 positivity (47% vs 75%). PPV (18% vs 20%) and NPV (99.2% vs 96%) were similar. Given the high negative predictive value for detection of wild type codon 245 and the possession of the HLA-B*5701 gene, RT sequencing could be used as a simple screening tool to identify patients who could safely be treated with abacavir.

CHARACTERISATION OF TNF BLOCK HAPLOTYPES AND GENOTYPES THAT PREDICT AN INDIVIDUAL'S RISK OF STAVUDINE-ASSOCIATED SENSORY NEUROPATHY.

Chew C SN¹, Cherry CL^{2,3,4}, Affandi J¹, Valente F⁵, Imran D⁶, Kamarulzaman A⁷, Tan HY⁷ and Price P¹

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Sensory Neuropathy (SN) is common in HIV patients and is promoted by exposure to the anti-retroviral drug, stavudine ("d4T-SN"). Stavudine remains in first-line HIV treatment in resource-limited settings as it is effective, inexpensive and does not cause anaemia. We are addressing genetic determinants of d4T-SN risk.

Alleles of genes in the TNF haplotype block may modulate d4T-SN risk. We associated TNFA-1031*2 carriage with d4T-SN in both Australian and Indonesian HIV patients exposed to d4T. As linkage disequilibrium within the TNF block hampers identification of single nucleotide polymorphisms (SNP) responsible for disease associations, we are undertaking additional genotyping in control donors and d4T-exposed HIV patients from various ethnic populations. We use the PHASE algorithm to define haplotypes based on 37 SNP spanning 6 genes around TNFA.

We find 15 conserved haplotypes account for >94% of healthy Caucasians (n=398). Sixteen haplotypes also account for >97% of South East Asian donors (n=247) - this includes 8 haplotypes found in Caucasians. Although TNFA-1031*2 is associated with d4T-SN in both Indonesian and Australian patients, the underlying haplotypes appear different in each population. Haplotype FV10 can be tagged by IKBL+446*2. FV10 occurs at similar frequencies (11-12%) in Caucasian and South East Asian controls and hence is a candidate risk haplotype. FV10 accounts for 52.9% of Australian patients exposed to d4T carrying TNFA-1031*2 and may associate with d4T-SN in these patients (31% vs 16%, p=0.27), but this requires confirmation.

To date five TNF block SNP have been genotyped in d4T-exposed Indonesian patients. Surprisingly, linkage disequilibrium was observed between TNF-1031*2 and IKBL+446*2 in d4T-exposed patients without SN (p=0.0009), but not in d4T-SN patients (p=0.76). Carriage of TNF-1031*2 and homozygosity for IKBL+446*1 was associated with an 8-fold increased risk of d4T-SN in Indonesians (p=0.004). This makes it unlikely that FV10 will associate with risk in Indonesians.

Taken together, these findings suggest that TNFA-1031*2 may play a role in the pathogenesis of d4T-SN, rather than being a marker for a risk haplotype. This work is continuing with additional genotyping and haplotype analyses, including DNA from cohorts of additional ethnicities.

**NATURALLY OCCURRING POLYMORPHISMS
IN HIV-1 INTEGRASE: RELATIONSHIP TO
HIV SUBTYPE, INTEGRASE INHIBITOR
RESISTANCE AND IMMUNE SELECTION**

Tschochner M¹, Chopra A¹, Maiden T¹, Ahmad I¹, Fordham A¹, Mallal S¹, John M¹

¹Centre for Clinical Immunology and Biomedical Statistics, Royal Perth Hospital and Murdoch University, Perth, Western Australia

Integrase inhibitors have emerged as an important new class of antiretroviral agents. A number of resistance associated mutations have been described based on pre-clinical testing. In order to determine whether viral subtype or HLA-specific immune selection may contribute to baseline integrase inhibitor resistance, we examined the prevalence of naturally occurring polymorphisms in the integrase sequences of 202 HIV-1 infected patients in the Western Australian HIV Cohort, all of whom were naïve to integrase inhibitors. We further examined these changes in relation to HIV subtype, co-variation patterns and established associations with HLA alleles.

Integrase sequences obtained by bulk sequencing and 4-digit HLA class I genotypes determined by sequence based typing were examined at a codon-specific level. The subtypes of all samples were assigned on the basis of the genome wide sequences using the NCBI genotyping tool.

The subtype distribution in the cohort revealed 74.8% were subtype B, 4% C, 4.5% CRF01, 0.5% CRF02, 0.5% CRF06 and 15.8% inter-subtype recombinants. Residues E92, T97, F121, and Y143 were absolutely conserved, however at other sites the prevalence of resistance-associated mutations was as follows: E138K (1.2%), G140S (2.3%), V151I (2.9%), M154I (2.4%), N155S (0.6%), E157Q (3.6%), G163R (3.0%), Y226D (0.6%), D232N (0.6%). Several residues (51, 61, 74, 125, 147, 148, 153, 183 and 230) had some degree of polymorphism but none that were drug resistance-associated changes. No sequences contained the resistance associated T125K. However, an alternative polymorphism T125A occurred in 35.5% of sequences and was dominated by non-B subtype sequences (3% of sequences with T125 were non-B subtypes versus 62.3% with A125). Notably, this polymorphism corresponds to HLA-B*5701/-B*5703 and -B*5801 driven escape within the known SW10 epitope.

In a population-based cohort, most integrase residues previously associated with integrase inhibitor resistance are highly conserved across and within HIV-1 subtypes, in keeping with being sites of significant functional, catalytic or structural importance. T125A appears to be subtype-specific as well as a result of immune selection in individuals expressing HLA-B*57/5801. Otherwise, the low prevalence of natural polymorphism is consistent with the lack of overlap between evident immune and drug targets in the integrase gene.

PATIENT CHARACTERISTICS AND PREDICTORS OF TIME TO COMMENCE ANTIRETROVIRAL TREATMENT IN A PROSPECTIVE COHORT IDENTIFIED AT PRIMARY HIV INFECTION (PHI). (THE PHAEDRA COLLABORATIVE COHORT)

Grey P¹, Srasuebku P¹, Finlayson R², Workman C³, McFarlane R⁴, Bloch M⁵, Medland N⁶, Roth N⁷, Anderson J⁸, Hoy J⁹, Read T¹⁰, Petoumenos K¹, Kelleher A¹.

¹National Centre in HIV Epidemiology and Clinical Research, Sydney, Australia; ²Taylor Square Private Clinic, Sydney, Australia; ³Aids Research Initiative, Sydney, Australia; ⁴407 Drs, Sydney, Australia; ⁵Holdsworth House Medical Practice, Sydney, Australia; ⁶The Centre Clinic, Melbourne, Australia; ⁷Prahran Market Clinic, Melbourne, Australia; ⁸Carlton Clinic, Melbourne, Australia; ⁹The Alfred Hospital, Melbourne, Australia; ¹⁰Melbourne Sexual Health Clinic, Melbourne, Australia.

Primary Infection (PHI) presents an opportunity to study HIV disease throughout its infection period. The PHAEDRA cohort was established to determine immunological, virological and therapeutic factors related to disease progression. There are a number of theoretical reasons, which support early antiretroviral treatment (ART). To find out what factors influenced the time to initiation of treatment in this cohort, a range of baseline factors were assessed.

From September 2002 to June 2007 data was collected on consenting subjects identified with either acute or early infection or with known dates of seroconversion. Acute and Early infection was defined by standard serological criteria. Demographic data plus Western Blot ELISA, Viral load, CD4, PHI symptoms and ART history were collected.

Of the 341 patients who consented, at the time of analysis, 79 were never treated (NTX) and 262 commenced therapy (103 through clinical trials (CTX), 159 off clinical trials (TX). Median age overall was 36 years. In the NTX group 35% were acutely infected compared with 67% in the TX and 62% of CTX. In the NTX group 67% had PHI symptoms against 85% of TX group and 87% of CTX patients. Median CD4 and RNA at baseline was 637.5 cells/mm³, 4.6 log₁₀ for NTX respectively, 510 cells/mm³, 5.9 log₁₀ for CTX and for TX 495 cells/mm³, 5.6 log₁₀. The median time to commence treatment in CTX group was 1.5 weeks compared to 6 weeks in TX group. Therefore despite similar clinical baseline characteristics therapy was commenced earlier in CTX patients. In multivariate Cox-regression analyses, predictors of time to commence treatment were: Acute status ($p < 0.001$), the presence of PHI symptoms ($p = 0.037$), clinical trial status ($p < 0.001$) and lower CD4 at baseline ($p = 0.028$) with higher RNA ($p = 0.010$).

Having a higher viral load and lower CD4 with PHI symptoms at baseline, predicted the uptake of antiretroviral treatment at seroconversion. These determinants were no different between commencing therapy, on or off a trial but the time to start treatment was much less in those in the CTX group.

Adherence to Antiretroviral Therapy
5.00pm – 6.30pm

**ASSESSING ADHERENCE IN THAI PATIENTS
TAKING HAART**

Kerr SJ^{1,5}, Avihingsanon A¹, Putcharoen O², Chetchotisakd P³, Duncombe C^{1,5}, Teeratakulpisarn S⁴, Phanuphak N⁴, Ruxrungham K^{1,2}, Cooper DA⁵, Phanuphak P^{1,4}.

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Excellent adherence to HAART will maintain viral suppression and offset resistance. We compared two self-reporting tools that can be used for rapid assessment of adherence in a clinical consultation, and assessed predictors that might allow early identification of non-adherent patients. Tool one was a visual analogue scale (VAS), tool two, the 3 question CASE adherence questionnaire (CASE). Poor adherence was defined as < 95% on VAS and ≤ 11 out of a possible 16 on CASE. 224 patients (Male 63%, age 38 (interquartile range [IQR] 33 – 44) years) from 3 sites in Thailand and duration of HAART treatment 51 (IQR 26 – 82) months completed the questionnaires and had plasma HIV-RNA (viral load) assessments. Daily pill burden was 4 (IQR 2 – 6) pills; 49 (22%) patients were on their first regimen. 24 (11%) patients had poor adherence on VAS; 17 patients had poor adherence on CASE. Six patients had poor adherence on both tools. 24 patients had plasma viral load detectable at > 50 copies/mL. The odds ratio (OR) for poor adherence and detectable viral load with VAS was 4.4 (95% confidence interval [CI] 1.6 – 12.2) and for CASE was 5.7 (95%CI 1.9 – 17.3), and for patients who scored with poor adherence on both tools was 19.8 (95%CI 3.4 – 114.9). Time to complete VAS was 15 (IQR 7 – 28) seconds and 45 (IQR 30 – 60) seconds for CASE. Gender, education, marital status, income, pill burden, transmission group, alcohol use, concurrent treatment with drugs for opportunistic infections or TB, duration of HAART or whether the patient paid for drugs themselves were not associated with poor self-reported adherence with either tool. Most questions about affect and self-esteem were also not associated with poor self-reported adherence, but patients indicating at least fairly often, felt 'unable to cope with all the things they had to do', had lower adherence scores. For patients who said they missed at least one dose of medication in the previous month, fear of arousing suspicion was cited as an important factor. Both adherence tools could be rapidly conducted in a clinical setting and poor scores predicted detectable viral load.

**SIDE EFFECTS, DOSING SCHEDULES,
PILL BURDEN AND PERCEIVED STRESS:
INTERACTION AND INFLUENCE ON
MEDICATION ADHERENCE**

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HIV Cohort research in Royal Perth Hospital (RPH) between the years 2002-2005 found that adherence to ART predicted viral suppression and CD4 T-cell recovery and diminishing adherence was associated with indicators of perceived stress, depression and the impact of side effects, particularly fatigue and skin itching. Whether these variables were associated with a particular regimen or dosing schedule was not studied.

Patients attending the Immunology Outpatient Clinic at RPH over a 3 month period in 2008 completed a questionnaire on ART (N=156), concomitant medications, pill burden, dosing schedule, side effects and perceived stress. Doctors verified the regimen and assigned a medication score indicating ART adherence.

The majority of regimens included a nucleoside backbone of abacavir/lamivudine (50%), tenofovir/emtricitabine (23%) tenofovir/lamivudine (8%) or zidovudine/lamivudine (7%) combined with either a ritonavir-boosted PI (35%; atazanavir 22%), efavirenz (28%) or nevirapine (25%). 108 vs 48 patients were on OD vs BD regimens respectively. Adherence improved since 2005 with 75% vs 55% of patients surveyed reporting 100% adherence over the previous month. Neither dosing schedule nor pill burden was associated with poorer adherence. Non-adherent patients reported more coping difficulties (p=0.02) than adherent, and the number of side effects experienced correlated with higher total perceived stress score (p=0.004). 130 patients experienced at least one side effect, 36% taking medication for relief. Compared with five years ago reported diarrhoea was reduced (34% vs 51% of patients), but reported fatigue (59%) muscle pain (36%), headache (36%), nausea (32%) and skin itch (39%) were comparable. Although boosted PI regimens were associated with more frequent side effects than NNRTI regimens, including headache (54%), diarrhoea (54%) and fever (atazanavir: 41%), they did not strongly correlate with reduced adherence (p=0.3).

In our cohort adherence has improved in the last two years: simpler dosing schedules and the decreased frequency of certain side effects such as diarrhoea may have contributed. In those patients with a higher frequency of reported symptoms and perceived stress, reduced adherence may be associated with health related quality of life (HRQL) issues not measured in this study. Further research is needed to understand the interaction between HRQL and medication adherence.

IMPROVED TREATMENT ADHERENCE ASSOCIATED WITH TREATMENT SIMPLIFICATION

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Objective: The OneDa study is a randomised, multi-centre, open-label study in well-controlled treatment-experienced HIV-infected patients to assess adherence to a once-daily regimen of antiretroviral therapy versus continuation of current anti-retroviral regimen delivered at least twice daily over a 48 week period.

Method: Adherence with therapy was measured using electronic monitoring (MEMS cap), patient self-report (MASRI questionnaire), therapeutic drug monitoring (TDM) and doctor assessment. Prior to randomisation all patients had a one month baseline observation period during which their adherence with their current twice-daily combination therapy was evaluated. Patients were then randomised to continuing current therapy or switching to once-daily treatment with any approved once-daily regimen. At week 24 patients were switched to once-daily therapy.

Results: 96 patients with fully suppressed virus were randomised. 94 were males, with an average age of 43 and average length of HIV infection of 10 years. Adherence (medication prescribed/medication taken) in the baseline month, as measured by MEMS cap, was 84.4%. 24 weeks adherence (MEMS caps) was significantly higher in the once-daily arm at 95.0% versus the continuation arm at 85.6% (p value 0.019). No virological failure (VL > 400 copies/mL) was reported in either arm.

Conclusions: Treatment simplification to once daily treatment appears to be an effective and safe approach to improving adherence to antiviral therapy.

ADHERENCE TO ANTI-RETROVIRAL THERAPY AMONG PATIENTS IN BANGALORE, INDIA

Cauldbeck MB¹, O'Connor C², Saunders JA³, O'Connor MB⁴, Rao B⁵, Mallesh GV⁵, Praveenkumar KN⁵, Mamtha D⁵, McGolderick C⁶, Laing RBS⁶, KS Satish⁵.

¹The School of Medicine, University of Aberdeen, Aberdeen, Scotland; ²GU/STD Clinics, Mid-Western Regional Hospital, Limerick, Ireland; ³Department of Mathematics and Statistics, University of Limerick, Ireland. ⁴Department of Medicine, South Infirmary - Victoria University Hospital, Cork Ireland; ⁵Department of Respiratory and HIV Medicine, Rajajinagar and Wockhardt Hospital and Heart Institute, Bangalore, India; ⁶Infection Unit, Aberdeen Royal Infirmary, Aberdeen, Scotland.

HIV has an estimated prevalence of 0.9% in India (5.2 million). Anti-retroviral drugs are the treatments of choice and non-adherence is an important factor in treatment failure and development of resistance, as well as being a powerful predictor of survival. This study proposes to assess adherence to ART in HIV+ patients in Bangalore, India a country where 10% of those who need get therapy.

A cross-sectional anonymous questionnaire survey of 60 HIV+ patients was carried out on patients attending HIV outpatient services in Bangalore, India. Consent was obtained and translation was carried out when required. Data was analysed using SPSS.

A response rate of 53/60 (88%) was achieved. The mean patient age was 39.85 yrs, with 50% aged 30-40 and 73.6% of participants were male. Mean family size =4.8 (1-13). 21% lived <50kms & 21% >400kms from clinic. 60% were fully adherent to their medications. Adherence was statistically significantly linked to regular follow-up attendance (70.5%, p=0.002). No other results were statistically significant but trends were found. Better adherence were seen in older patients (>40=50%, <40=15%), males, those from larger families, those who had AIDS (AIDS=72%, Well= 50%), those taking fewer tablets (<5 =76%, 5-9=41%) and without food restrictions (Without=70%, With= 48%). Commonest side-effects causing non-compliance were metabolic reasons (66%) and GI symptoms (50%). No differences were seen for education level, family income, distance travelled to clinic, time since diagnosis, or time on ART.

In conclusion regular attendance for follow up was statistically significant for adherence. Positive trends were seen in those in larger families, older, those who had AIDS, simple regimes, and without side-effects. Education income, distance travelled and length of time diagnosed or treated had no effect.

AIDS DEMENTIA COMPLEX (ADC) AND MENTAL ILLNESS: THE ROLE OF THE NSW MENTAL HEALTH ACT IN MANAGING COMPLIANCE WITH HIGHLY ACTIVE ANTI RETROVIRAL THERAPY (HAART)

Ibrahim D¹

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ADC is a well recognised syndrome that is generally associated with advanced HIV disease and is prevalent in some 10% of the HIV infected population. It is commonly characterised as a 'frontal-subcortical' dementia and is typified by impairments in cognitive and motor functioning, and may be associated with emotional/personality disturbances.

The level of impairment seen in ADC can compromise an individual's ability to maintain their capacity for independent living and their capacity for rational decision making. Further compounding this problem is the higher incidence of mental illness amongst HIV sufferers and, therefore, those with ADC, which can further impinge upon competent decision making and the ability of individuals to act in the interests of their own health and welfare.

A significant health and welfare issue in this population is medication adherence. Studies show a strong correlation between good HAART compliance and neurological improvement in cognitively impaired individuals. Cognitively compromised individuals with a concomitant mental illness are at further risk, in that poor compliance with their non-HAART medications can often lead to a relapse of psychotic symptoms.

In recent times, clients of our service with ADC who have been placed on Community Treatment Orders (CTOs), for the treatment and management of psychotic symptoms related to their mental health issues, have also had HAART medications placed on the treatment order. This indicates that cognitive health and mental health are seen as closely linked, and that the management of mental health issues (in this particular client group) cannot be made in isolation from the management of cognitive issues.

To date, the effectiveness of CTOs in compelling individuals with ADC and mental health issues to take HAART has yet to be evaluated. This paper will present a case study, and will canvass the views of a number of health & welfare practitioners working in the HIV field regarding CTOs & HAART. Certain questions will be explored, for instance: What would happen if an individual took objection and challenged the order? Could an individual be hospitalised under the Mental Health Act for not complying with HAART treatment in the order? Could CTOs be applied to those with cognitive impairment, but without a concomitant mental illness?



20th annual
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Back-to-back with the Australasian Sexual Health Conference 15 – 17 September 2008

**Wednesday 17 to
Saturday 20 September 2008**
Perth Convention Centre, Western Australia

**ORAL
PRESENTATION
ABSTRACTS
FRIDAY 19 SEPTEMBER 2008**



ashm
Australasian Society for HIV Medicine Inc

Oral Poster Session - Public Health and Epidemiology
7.45am – 8.45am

Roth N - see page 268
Stoove M - see page 269
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Case Presentation Breakfast
7.00am – 8.45am

**AUTOIMMUNE HAEMOLYTIC ANAEMIA:
AN UNUSUAL PRESENTATION OF HIV
SEROCONVERSION**

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¹Department of Infectious Diseases, Monash Medical Centre, Melbourne, VIC, Australia; ²Department of Medicine, Monash University, Melbourne, VIC, Australia

Autoimmune haemolytic anaemia (AIHA) is uncommon in HIV, although positive direct antiglobulin tests (DAT) occur quite frequently. Previous reports describe this condition mainly occurring in advanced AIDS. We describe a case of AIHA as a novel presentation of HIV seroconversion. A 54 year-old man presented with fever, rash and sore throat, followed by dyspnoea and haemoglobinuria one week later. AIHA was diagnosed, characterised by positive DAT with C3b specificity and negative cold agglutinins. The patient's haemoglobin fell to 62g/L, and improved with high-dose corticosteroids and intravenous immunoglobulin. Anti-HIV ELISA was positive, and a positive Western blot evolved consistent with HIV seroconversion. Baseline CD4 count was 92 cells/ μ L with a HIV viral load of 75,000 copies/mL, and antiretroviral therapy was subsequently commenced. We review previous published reports, specifically stage of HIV, haematological parameters (characteristics of DAT, reticulocyte count), management and outcome data.

**STEROID DEPENDENT CRYPTOCOCCAL
IMMUNE RESTORATION DISEASE IN A HIV
POSITIVE PATIENT**

Peel T¹, McLean C^{2,3}, Cameron P^{1,3}, Hoy J^{1,3}, Wright E^{1,3,4}

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We present the case of a 36 year old HIV positive man with the management dilemma of a prolonged Cryptococcal Immune Restoration Disease (IRD) managed with highly active anti-retroviral therapy (HAART) and corticosteroid therapy.

The patient initially presented in September 2006 with cryptococcal meningitis, occurring on a background of HIV diagnosed in 1997. The patient had ceased HAART several years previously but had restarted abacavir, lamivudine and boosted atazanavir one week prior to presentation wherein his CD4+ cell count was 11.0/uL and plasma HIV load was 55,000 copies/ml. *Cryptococcus neoformans* was cultured from the CSF and serum and cerebrospinal (CSF) cryptococcal antigen titres were 1:4096 and 1:256, respectively. Initial treatment comprised two weeks of amphotericin B deoxycholate (0.7mg/kg/day) and 5-fluorocytosine (2g QID) followed by oral fluconazole 400mg daily.

The patient's course was complicated by multiple presentations with headache, fever, seizures, raised intracranial pressure and obtundation coinciding with attempts to reduce the corticosteroid dose. Serial Magnetic Resonance Imaging of brain demonstrated progressive leptomeningeal enhancement. A brain biopsy showed encapsulated yeast cells; morphologically consistent with *Cryptococcus* however, cultures from tissue and CSF failed to isolate the organism. In February 2008, the patient presented with cervical lymphadenitis and airway compromise. Lymph node biopsy demonstrated abundant yeast cells, consistent with *Cryptococcus*, but no organisms were cultured. Of concern, the patient has had significant complications secondary to prolonged corticosteroid therapy including mood disturbance, weight gain, osteoporosis and vertebral crush fractures. Adjunctive non-steroidal anti-inflammatory agents did not have clinical benefit.

The patient has remained on HAART throughout with virological suppression, but poor restoration of CD4+ cell counts. Fluconazole therapy has been maintained throughout. Serum and CSF Cryptococcal antigen titres have decreased to 1:512 and 1:4, respectively.

The management of Cryptococcal IRD comprises HAART and antifungal therapy. In the setting of severe or refractory Cryptococcal IRD corticosteroids may be beneficial. In the case described corticosteroids have been poorly tolerated however their dose reduction has precipitated life-threatening events. Future management may require substitution of corticosteroids with other immunosuppressive therapy.

A CASE OF TENOFOVIR-ASSOCIATED RENAL TUBULAR ACIDOSIS WITH NEUROLOGICAL IMPAIRMENT

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Department of Infectious Diseases, Alfred Hospital, Melbourne, Victoria, Australia.

A 47 year old HIV positive man was admitted to hospital in August 2007 with two days of diplopia, expressive dysphasia and right sided paraesthesia, on a background of several months of lethargy and weight loss. His HIV had been stable since 2002 on tenofovir, emtricitabine and delavirdine, with a recent CD4 cell count of 200 cells/ μ l and HIV viral load of 450 copies/ml.

On admission, MRI of brain revealed multifocal hyperdense lesions of uncertain aetiology. CSF revealed an elevated protein, undetectable HIV viral load, and no lymphocytes or other abnormalities. CSF PCR for HSV, VZV, JC virus, CMV, EBV and toxoplasma was negative, as was serum syphilis serology. Pathological examination of a brain biopsy was consistent with an active chronic meningoencephalitic process. He was commenced on empirical antibiotics, although the diagnosis remained uncertain.

Four days after admission his conscious state deteriorated and he developed complete left gaze paresis, corresponding with progression of the MRI findings. His deterioration corresponded with the development of a profound non-anion gap metabolic acidosis (Na^+ 142, Cl^- 118, HCO_3^- 4), in addition to hypokalemia, hypophosphatemia, proteinuria (0.41g/L), decreased creatinine clearance (50mL/min) and urinary biochemistry consistent with proximal renal tubular acidosis (RTA). A diagnosis of Fanconi's syndrome was made and the patient was admitted to ICU and commenced on a bicarbonate infusion in addition to aggressive fluid and electrolyte replacement. Tenofovir and other antiretrovirals were ceased. The patient responded to correction of his acidosis and was discharged one month later with significant improvement of his neurological symptoms and MRI findings.

Prior to discharge he was commenced on etravirine, darunavir, abacavir, lamivudine and ritonavir. Six months post discharge the patient remains on 30g of sodium bicarbonate and 6.5g of potassium citrate daily. His renal function remains impaired with a creatinine clearance of 56 mL/min.

Proximal RTA is a well recognised adverse effect of tenofovir and adefovir. We describe a case of severe Fanconi's syndrome resulting in irreversible metabolic acidosis and renal impairment. In addition this case raises the possibility of neurotoxicity as a result of tenofovir-associated acidosis.

THREE'S A CROWD: THE RELATIONSHIP BETWEEN CA-MRSA, HIV AND MSM

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¹ Victorian Infectious Diseases Service, The Royal Melbourne Hospital, Parkville, Victoria Australia.

Community acquired methicillin resistant *Staphylococcus aureus* (CA-MRSA) infections are increasing in frequency in Australia and overseas. Most of these infections are confined to the skin, but more serious deep-seated infections can occur. Risk groups identified have included some indigenous communities, injecting drug users and sporting teams. CA-MRSA has also been described overseas in association with HIV infection and in men who have sex with men (MSM). Sexual transmission of a highly resistant CA-MRSA isolate has recently been reported amongst MSM in North America. To our knowledge no studies have examined the relationship between MSM, HIV and CA-MRSA infections in Australia.

We describe the case of a 46 year old gay man with a life threatening CA-MRSA infection in the setting of HIV infection with a low CD4 cell count (60/microlitre).

The infection originated from multiple skin abscesses. Subsequent bacteraemia was complicated by the development of a large prostatic abscess and metastatic pulmonary foci. The isolate was resistant to methicillin, ciprofloxacin and erythromycin but it remained susceptible to trimethoprim-sulfamethoxazole, rifampicin, fusidic acid and vancomycin; it tested positive for the virulence factor Panton-Valentine leukocidin. Further molecular characterisation is in progress.

Successful management required surgical drainage of the prostatic abscess followed by prolonged intravenous then oral anti-staphylococcal therapy, totalling 37 days. His course was complicated by prolonged fever and antibiotic allergies.

Antiretroviral therapy, which had been previously discontinued, was restarted, with attention to interactions with oral anti-staphylococcal therapy.

To our knowledge, this is the first case of disseminated CA-MRSA infection reported in association with HIV infection in Australia. A high prevalence of CAMRSA among HIV positive patients in Australia or the sexual transmission of MRSA locally would have significant implications for individual health and for the empirical management of staphylococcal infections. A study of CA-MRSA to delineate the incidence and transmission among HIV positive patients and MSM in Australia is needed.

FATAL ACUTE VARICELLA-ZOSTER VIRUS HAEMORRHAGIC MENINGOMYELITIS WITH NECROTISING VASCULITIS IN AN HIV-INFECTED PATIENT

Chang CC¹, McLean C², Vujovic O¹, Jenney AWJ¹, Short M³, Lyon S⁴, Storey E³, Lewin SR^{1,5}

¹Infectious Diseases Unit; ²Anatomical Pathology Department; ³Neurology Department; ⁴Radiology Department, The Alfred Hospital; ⁵Department of Medicine, Monash University, Commercial Road, Prahran, Victoria 3004, Australia.

A 41 year-old woman was transferred from a peripheral hospital to our institution with 2 days of fevers, headache, neck pain and progressive flaccid quadriparesis. She had a background of HIV infection diagnosed 15 years ago, with the most recent CD4 T-cell count (and nadir) of 155 cells/ μ l (7%) and HIV RNA of 6000 copies/ml three weeks prior to admission. She had no history of AIDS-defining illness. Two weeks prior to her presentation, her antiretroviral regime was changed from lamivudine, nevirapine and abacavir to lamivudine, raltegravir and ritonavir-boosted-atazanavir for immunological and virological failure.

At presentation, she had a flaccid quadriparesis and was febrile and drowsy with demonstrable neck stiffness and an occasional vesicular lesion over her trunk. CT brain was normal and lumbar puncture revealed bright yellow cerebrospinal fluid (CSF) with an opening pressure of 15cmH₂O. CSF analysis revealed xanthochromia, extremely elevated protein of 39.0g/L (normal range [NR] 0.15-0.4g/L), glucose of 2 mmol/L (NR 2.5-4.5mmol/L), 1400 red cells, 40 polymorphs and 2 lymphocytes suggestive of necrotising myelitis. CD4 T-cell count at presentation was 83 (9%).

A clinical diagnosis of VZV-associated necrotising meningomyelitis was made. Empirical intravenous dexamethasone 10mg 6-hourly, acyclovir 500mg 8-hourly, ceftriaxone 2g 12-hourly and benzylpenicillin 1.8g 4-hourly were immediately administered. MRI brain and spine revealed meningeal enhancement around the circle of Willis and brainstem, contiguous with marked oedema and expansion of her cervical cord with abnormal T2 signal. "Sugar-coating" of her entire spinal cord was noted. Progressive bulbar palsy and respiratory failure ensued and she died 60 hours post arrival to our institution.

Varicella zoster virus (VZV) was detected by PCR in her CSF and skin vesicle. Post-mortem examination confirmed extensive infarction and haemorrhagic necrosis of the entire spinal cord due to necrotising vasculitis in association with a lymphocytic meningitis.

This is the first case report of VZV-associated fulminant haemorrhagic meningomyelitis with necrotising vasculitis occurring in a moderately immunosuppressed HIV-infected patient in the HAART era. We believe this is potentially related to VZV immune restoration disease.

Prevention
9.00am – 10.30am

PUBLIC HEALTH AND SOCIAL SCIENCE IN CLINICAL RESEARCH: THE INTEREST OF A MULTIDISCIPLINARY APPROACH

Bruno Spire¹, Catherine Lepout², François Raffi³, Geneviève Chêne⁴ and Jean-François Delfraissy⁵

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This presentation aims to summarise almost 10 years of results obtained through interactions between social scientists and clinical researchers in France since the advent of highly active antiretroviral therapy (HAART). Such collaborations have been set up in the context of cohort studies or clinical trials which included collection of both clinical and socio-behavioural data. This co-operation conveys several key messages about adherence, quality of life and sexual behaviours. One major result is the demonstration that adherence to HAART is not predictable before treatment initiation. Moreover, adherence is a behaviour which changes over time. However, the impact of non-adherence on long-term immuno-virological outcomes is crucial during the treatment induction phase and justifies interventions at treatment initiation. Interestingly, one randomised clinical trial also showed the positive impact of an educational and counselling type intervention which took into account the cognitive, emotional, social and behavioural aspects of patients' daily lives on virological outcomes. Cohort studies have given us the opportunity to highlight a specific role of depression, independently of non-adherence, on HIV clinical progression. Among other important results, it is important to underline the role of patient's perception of HAART-related toxicity: the perception of subjective side-effects is detrimental to adherence, risky sexual behaviours, patient-provider relationships and quality of life. Another randomized trial also showed that patients' quality of life, estimated by the number of self-reported side effects, was better with LPV/r monotherapy when compared with a triple regimen of LPV/r+AZT/3TC. Among future perspectives involving collaboration between clinicians and social scientists, other socio-behavioural issues should be addressed such as the level of forgiveness associated with adherence to a specific drug combination. The comparison of several HAART regimens should be evaluated for joint outcomes which could combine for example immuno-virological and quality of life outcomes. Answering these research questions through a multidisciplinary approach is critical for the comprehensive care of PLWHA.

THE ROLE OF T-CELLS IN HIV IMMUNITY: LESSONS FROM CHINA AND WEST AFRICA

Sarah Rowland-Jones, Nuffield Department of Medicine, Oxford University, John Radcliffe Hospital, Oxford OX3 9DU, UK

The role of T-cell immunity in controlling HIV infection and shaping HIV evolution in the infected individual has been controversial. The example of HIV-2 infection in West Africa provides a potentially valuable (if under-appreciated) model of human co-existence with a pathogenic retrovirus, in that the majority of HIV-2-infected people have a normal lifespan with no signs of immune deficiency whilst those who develop disease do so in a manner identical to AIDS caused by HIV-1. Recent studies in the Gambia and Guinea-Bissau have shed light on the relative contributions of host and virus in long-term non-progression in HIV-2 infection.

Whilst initial studies in Perth, WA, suggested that T-cells play a major role in determining how HIV evolves under selection pressure in an infected person, more recent analysis proposed that founder effect is an important factor that may have confounded the initial studies. We have evaluated the role of HLA-mediated selection in a Chinese village where infection with a single or closely-related virus strain(s) occurred during a plasma donor scheme. This study, where founder effect is not a relevant factor, suggests that HLA-mediated selection is indeed the major cause of viral mutation in this cohort.

UNDERSTANDING OUR LAST 1,000 INFECTIONS - KNOWING OUR EPIDEMICS FOR MORE EFFECTIVE PROGRAMMING

David Wilson

Lead Health Specialist, the World Bank and Adjunct Professor,
Centre for International Health, Curtin University of Technology

Introduction: Led by UNAIDS, "Know your epidemic, know your response" has become a rallying cry for an intensified focus on HIV prevention, spurred by the sobering realization that for every two people enrolled in antiretroviral treatment programs, five more become newly infected. The quest to better understand epidemics reflects growing recognition that there is no single global HIV epidemic, but rather a multitude of diverse epidemics. The era of "standard" global prevention guidance is over. However, there is a globally useful distinction between concentrated and generalized epidemics, which are fundamentally different – not because of arbitrary prevalence thresholds, but regarding who gets infected and how.

Methods: Understanding who gets infected and how has led to the development of research methods to understand incident HIV infection - the figurative last 1,000 infections in a given context. Methods include cohort studies, BED and other assays, modeling of incident infection and epidemiological syntheses.

Results: Analysis of the last 1,000 infections illustrates the limited extent to which HIV programming is matched to epidemic contexts. For too long, the global HIV prevention community has pursued generalized responses in concentrated epidemics, concentrated approaches in generalized epidemics, or hedged their bets and done a bit of everything everywhere. Many national AIDS strategies are unfocused, developed in the face of glaring data and analytic gaps and mismatched to epidemic context. Moreover, too few strategies are based on proven approaches.

Conclusions: The challenge is clear. For too long, AIDS activists, academics and national and international institutions have given insufficient emphasis to aligning prevention priorities with epidemic transmission dynamics, compromising effective prevention with unfocused or mismatched responses. The global AIDS community in its entirety has been slow to implement genuinely proven approaches at adequate scale. With the knowledge of HIV transmission dynamics and proven prevention approaches we already have, far more should have been – and can still be - done to curb HIV globally.

BIOLOGICAL FACTORS OF SEXUAL TRANSMISSION OF HIV

Pietro Vernazza

St. Gallen, Switzerland

In general, transmission of HIV is rather an unusual event during a sexual encounter between two HIV-serodifferent partners than the rule. In newly diagnosed cases with HIV-infection only approximately 20% of the actual steady sexual partners are found to be HIV-positive despite a longer period of unprotected sexual exposure to the infected partner. However, some case reports document frequent transmission of HIV from one infected individuals to a majority of his sexual partners. Several factors may explain this observed heterogeneity in transmission risk. The contributing factors could be divided into those which modify susceptibility in the non-infected partner and others influencing infectiousness in the positive partner. Inborn and acquired (specific) immunity will affect susceptibility as well as any disruption of the mucosal surface in the setting of sexually transmitted diseases (STDs) or other inflammatory genital conditions.

The most potent factor influencing infectiousness of the HIV-positive partner is the concentration of HIV-Viral load in the blood. However, additional factors – mainly STDs – are the second important factor influencing transmission risk to the non-infected partner. The biologic mechanism explaining the epidemiologic evidence of increased transmission under STDs might include (among others) an increase in the number of infected cells and free virus in the genital secretions.

The presentation will summarize our knowledge on the numerous biological factors contributing to the heterogeneity of HIV transmission.

**Peter Meese Memorial Session – Clinical
– Associated Conditions Complications
11.00am – 12.30pm**

**PROFILE OF HIV ASSOCIATED TUBERCULOSIS
IN THE SETTING OF FREE ANTI-RETROVIRAL
THERAPY AT A TUBERCULOSIS HOSPITAL IN
INDIA**

Agarwal U¹, Kumar A¹, Behera D¹

¹Antiretroviral therapy Centre, Department of Medicine, LRS Institute of TB and Respiratory Diseases, New Delhi, India

Human immunodeficiency virus (HIV) associated tuberculosis (TB) poses a serious threat to public health. With the rollout of the national program, free of cost antiretroviral therapy is available to the Indian population since 2004. It still remains to be seen, how TB in HIV patients changes in terms of presentation, outcome, relapse and diagnostic modalities.

This study was undertaken with the aim to assess the presentation and outcome in patients concurrently treated for TB and HIV.

Retrospective review of medical records of 251 adult and adolescent HIV positive patients, registered between January 2006 and June 2007 was performed. Patients were said to be concurrently diagnosed with HIV and active tuberculosis if the two diseases were diagnosed within one month of each other.

73 (29.1%) of the 251 HIV infected patients, were diagnosed with concurrent active tuberculosis. Weight loss of more than ten percent and fever were the commonest presenting symptoms. Eighty seven per cent of the HIV-TB patients presented with CD4 counts less than 200 cells/ μ l. The mean CD4 count at presentation was 108.2 cells/ μ l.

38.4% patients had purely pulmonary tuberculosis, 39.7% had purely extra-pulmonary tuberculosis and 21.9% had both. Sputum positivity for acid fast bacilli (AFB) in those with pulmonary disease was 34.1 %. Four sputum negative patients of disseminated TB, revealed AFB on fine needle aspirate of lymph nodes. Immune reconstitution inflammatory syndrome (IRIS) was seen in 20.5% patients. The mean interval between initiation of ART and IRIS was found to be 17.7 days (median 15, range 7- 44).

Sixty seven per cent patients had a favorable outcome to tuberculosis treatment (cure and treatment completed), there were four defaulters and two treatment failures. There was only one patient of proven multi drug resistant (MDR) tuberculosis in this data. Case fatality of 17.8% was observed.

We concluded, nearly 30% of HIV infected patients accessing medical care had concurrent active tuberculosis. Despite profound immunosuppression at presentation, treatment of both the conditions together lead to an improved outcome. Efficient HIV-TB collaboration should be an integral component of comprehensive HIV care.

**GENERAL PRACTITIONER DESCRIPTIONS
OF CHALLENGES IN THE MANAGEMENT OF
DEPRESSION IN GAY MEN AND MEN WITH
HIV**

Newman CE,¹ Kippax SC,¹ Mao L,¹ Rogers GD,² Saltman D,³ Kidd MR⁴

¹National Centre in HIV Social Research, The University of New South Wales Sydney NSW Australia; ²School of Medicine, Griffith University, Gold Coast, QLD Australia; ³Institute of Postgraduate Medicine, Brighton and Sussex Medical School Brighton, United Kingdom; ⁴Discipline of General Practice, Faculty of Medicine, The University of Sydney Balmain NSW Australia

In contrast to the substantial literature on the management of depression in the general population in primary care settings, little is known about the management of depression affecting HIV-positive men and men who identify as gay (hereafter 'gay men') attending general practice clinics, particularly in the Australian context. This paper will explore qualitative descriptions of how depression in gay men and men with HIV is managed by general practitioners (GPs) who are accredited to prescribe antiretroviral medications in three Australian settings.

The Primary Health Care Project on HIV and Depression is a three year multi-method study funded by the General Practice Clinical Research Program of the National Health and Medical Research Council (2006-2009). The research team represents a unique collaboration between social researchers, general practice researchers, GPs and community partners. The study employs both qualitative and quantitative methods to answer a range of research questions including the prevalence and nature of depression among gay men (both with and without HIV) and heterosexually-identified men attending general practice clinics, factors associated with depression in these three groups, and the clinical and self-management of depression by GPs and patients themselves, especially those living with HIV.

As part of the qualitative component, interviews were conducted with 16 GPs representing three geographical settings and 7 practices: Sydney (4 practices), Adelaide (1) and a rural-coastal town in New South Wales (2). Participants included 14 male GPs and two female GPs, and the number of years each had been working in HIV medicine ranged from two to 24. Semi-structured face-to-face interviews of around one hour in length explored the diagnosis, treatment and management of depression, aspects of depression related to HIV, gender and sexuality, and reflections on practice. This paper will present the results of a thematic analysis that identifies strengths (eg. providing supportive counselling, making use of specialist support programs) and challenges (eg. patients' experiences of sexual dysfunction, expanding GP responsibilities) encountered by GPs in managing depression in this population. In doing so, this paper provides a unique and timely insight into the primary care management of depression by antiretroviral prescribers working in general practice settings in different parts of Australia.

DETERMINATION OF THE UNDERLYING CAUSE OF DEATH IN THREE MULTICENTER INTERNATIONAL HIV CLINICAL TRIALS

Alan R. Lifson¹, Waldo H. Bellosso², Cate Carey³, Richard T. Davey⁴, Daniel Duprez¹, Wafaa M. El-Sadr⁵, Jose M. Gatell⁶, Daniela C. Gey⁷, Jennifer F. Hoy⁸, Eric A. Krum¹, Ray Nelson¹, Dan Nixon⁹, Nick Paton¹⁰, Court Pedersen¹¹, George Perez¹², Richard W. Price¹³, Ronald J. Prineas¹⁴, Frank S. Rhame¹⁵, James Sampson¹⁶, John Worley¹⁷ on behalf of the INSIGHT network

¹University of Minnesota, Minneapolis, MN, USA; ²Hospital Italiano, Buenos Aires, Argentina; ³University of New South Wales, Sydney, Australia; ⁴National Institutes of Health, Bethesda, MD, USA; ⁵Columbia University, New York, NY, USA; ⁶University of Barcelona, Barcelona, Spain; ⁷Hvidovre University Hospital, Hvidovre, Denmark; ⁸Alfred Hospital and Monash University, Melbourne, Australia; ⁹Richmond AIDS Consortium; Richmond, VA, USA; ¹⁰Medical Research Council Clinical Trials Unit, London, United Kingdom; ¹¹Odense University Hospital, Odense, Denmark; ¹²North Jersey Community Research Initiative, Newark, NJ, USA; ¹³University of California, San Francisco, CA, USA ; ¹⁴Wake Forest University, Winston-Salem, NC, USA; ¹⁵Abbott Northwestern Hospital, Minneapolis, MN, USA; ¹⁶Research and Education Group, Portland, OR, USA; ¹⁷Park Nicollet Health Services, St. Louis Park, MN, USA

The aim was to describe processes for death reporting and to review specified attributions of mortality in large international HIV trials according to a uniform set of standards for assigning immediate, contributing and underlying causes, for large international HIV trials.

The three international trials were conducted during 1997-2008, with 11,593 enrollees from multiple sites in 36 countries. The trials were ESPRIT, SILCAAT and SMART. Three Clinical Endpoint Review Committee members independently reviewed each death report and supporting source documentation to assign underlying cause of death (defined as disease or injury initiating the train of events leading directly to death, or accident or violence producing the fatal injury), and all decisions were adjudicated until agreement was achieved.

Of 453 deaths reported through January 14, 2008, the underlying causes of death were: 47 (10%) AIDS-defining illnesses; 93 (21%) non-AIDS malignancies; 39 (9%) liver diseases (excluding malignancy); 40 (9%) cardiac diseases; 36 (8%) non-AIDS-defining infections; 22 (5%) suicides; 23 (5%) other trauma-related events or accidents; 20 (4%) drug overdoses or acute intoxications; 52 (11%) other identified causes; and 74 (18%) cases with "unknown" underlying cause.

For 63 unknown cases, ERC reviewers were specifically asked on the death review form about adequacy of

information and supporting source documentation; in all 63 cases, one or more reviewers felt there was inadequate information and documentation provided to make an informed decision about cause of death. Unknown cases included 16 persons who were reported as having been found dead, and another 15 who were reported as suddenly dying with limited details to help identify the underlying etiology.

The underlying cause of death was non-AIDS-defining diseases for most deaths (72%), and reflects the changing epidemiology of HIV in the HAART era. Accurate classification of cause of death requires provision of complete information and documentation, and is critically important for clinical studies.

RE-INITIATION OF ANTIRETROVIRAL THERAPY (ART) IN THE CD4 CELL-GUIDED CART INTERRUPTION GROUP IN THE SMART STUDY LOWERS RISK OF OPPORTUNISTIC DISEASE OR DEATH

Hoy JF^{1,2}, Drummond FM², Emery S², Cooper DAC² and the SMART Study Group

¹Infectious Diseases Unit, Alfred Hospital and Department of Medicine Monash University, Melbourne, VIC, Australia.

²National Centre in HIV Epidemiology and Clinical Research, University of NSW, Sydney, NSW, Australia

The SMART Study established that CD4-guided intermittent cART was inferior to continuous cART for major clinical outcomes. On January 11, 2006, based on the recommendation of the DSMB, ART-experienced patients (95.6% of all Drug Conservation (DC) patients) in the intermittent cART arm were encouraged to restart cART. Follow-up continued to study closure in July 2007 to assess whether risk associated with intermittent cART could be reversed.

5472 patients with CD4 > 350 cells/ μ l were randomized to intermittent CD4 cell-guided cART (stop ART >350 and start <250 cells/mm³) (DC, n=2720) or continuous cART (Viral Suppression [VS] n=2752). Hazard ratios (HR) for major clinical outcomes were estimated using Cox Proportional Hazards models for 2 time periods: from randomisation to January 11, 2006 (pre-January 2006), and from January 11, 2006 to July 11, 2007 (post-January 2006).

Pre-January 2006, DC patients spent 34% of follow-up time on cART compared to 94% for VS patients. Post-January 2006, DC patients spent 71% of time on cART compared to 91% for the VS group. Percentage of follow-up time spent with CD4 <350 cells/ μ l decreased from 31% pre-January 2006 to 23% post-January 2006 for DC, and 8% and 7%, respectively for VS. Pre-January 2006, rates for opportunistic disease (OD) or death, death, and a composite outcome of serious cardiovascular disease (CVD), renal and hepatic events were significantly greater for DC compared to VS. Post-January 2006, rates for all 3 outcomes declined for DC, whilst rates for VS patients remained stable. HR (DC/VS) improved for DC patients once they restarted cART, but remained significantly greater for OD or death post January 2006 (1.37 fold), while risk of death and composite outcome were no longer significant.

Following the recommendation to reinstate ART for patients in the DC group, the risk of OD or death was significantly reduced from 2.52 to 1.37 fold. However, less than full reversal of risk for DC compared to VS patients for OD or death was noted. This may be attributed in part, to some patients not initiating cART, and lower CD4 cell

counts for DC patients post-January 2006. These findings reinforce the recommendation not to interrupt cART using the CD4 cell-guided strategy evaluated in SMART.

Oral Posters:
Rotty J - see page
Furner V - see page

Indigenous Health
11.00am – 12.30pm

MANAGING DATA TO GUIDE A LONG-TERM STI CONTROL RESPONSE IN SOME REMOTE CENTRAL AUSTRALIAN ABORIGINAL COMMUNITIES

Huang R¹, Torzillo PJ¹

¹Nganampa Health Council, SA, Australia

Nganampa Health Council (NHC) has managed a data collection and surveillance system for monitoring STIs on the remote Anangu Pitjantjatjara Yankunytjatjara (APY) Lands for over twelve years as an important component of their comprehensive STI Control and HIV Prevention Program. This customised system provides a method of monitoring important indicators of clinical care such as participation rate in annual screening, treatment rates and time to treatment of various STIs, contact tracing, and in recent years population mobility.

Each year in the month prior to the annual population-wide screen a consistent population update is undertaken. The population update process is pivotal to obtaining comparable cross-sectional prevalence rates over thirteen consecutive years of annual population-wide screening for chlamydia, gonorrhoea and syphilis undertaken by NHC. The trends in these STIs over the thirteen year period of screening are discussed. Marked reductions in all three STIs has occurred but there was a rise in gonorrhoea over the period 2004-2007.

An appropriate monitoring and evaluation system managed within the health service has allowed informed and timely choices to be made about many aspects of this STI control program. It has guided choices and provided information such as appropriate age groups to test during annual population-wide screening, risk factors associated with STIs, and uptake of HIV testing. It has provided an early alert to the rise in gonorrhoea prevalence 2004-2007 which has allowed further research into the cause. NHC has now commenced using a patient information recall system (PIRS) live in all their remote clinics. The application of this system as an adjunct to the current data monitoring systems is briefly discussed.

BARRIERS TO HEPATITIS C SERVICES FOR RURAL ABORIGINAL PEOPLE

A. Slater

Hunter New England Population Health Services, Capacity Building Service Team, Hunter New England Area Health Services, Tamworth, NSW, Australia

Background: Aboriginal people are up to 10 times more likely to contract Hepatitis C when compared to the broader population (Bloodborne viral and sexually transmitted infections in Aboriginal and Torres Strait Islander People: Surveillance Report 2007). However, treatment statistics across the Hunter New England Area Health service suggest that Aboriginal people are less likely to access specialist Hepatitis C (Hep C) treatment services when compared to the broader population.

Aim: This project aimed: to identify barriers which prevent Aboriginal people from accessing specialist Hep C services; and to promote opportunities to increase Aboriginal people and community groups knowledge of the Hep C virus, routes of transmission, testing, treatment, care and available support services.

Method: Working within a cultural context and understanding community dynamics, project staff visited 9 towns and communities across North-West NSW over a two month period. The project staff convened Hep C discussion groups across a wide representation of local community groups, service providers and priority population groups e.g. Aboriginal people in correctional facilities. These groups were facilitated by an Aboriginal person known to the local community and aimed to encourage group discussion around access to specialist Hep C services and to deliver advice and information sessions to participants.

Results: Discussion groups identified a poor understanding of: available specialist Hep C services; and the Hep C virus, routes of transmission, testing, treatment, care and available support services. Where appropriate, local community members were opportunistically referred to specialist Hep C services and other local treatment options during the course of the discussion groups.

Conclusion: Discussion groups convened at a community level were an ideal vehicle for providing information to community groups, service providers and at risk client groups. Working within a cultural context, with an understanding of community dynamics and being known to the local community is important when encouraging the uptake of specialist Hep C services within Aboriginal communities. If we are likely to address the growing incidence of Hep C within Aboriginal communities future projects of this type are required.

A CULTURAL WORLD AIDS DAY IN THE ABORIGINAL COMMUNITY

David Webb

Aboriginal Sexual Health Worker, Sydney West Area Health Service, NSW Australia

The Sydney West Area Health Service (SWAHS) World AIDS Day (WAD) event is held at the Holy Family Church Emerton, a suburb of Mt Druitt in NSW. This area has a large Aboriginal community, and the Church traditionally has important links with this community and its' culture. The Holy Family Church has been holding World AIDS Day events for the last 10 to 15 years. The Church garden area has become a significant place where the ashes of Aboriginal People who have passed way with AIDS are scattered through out the garden.

SWAHS has been privileged to host a World AIDS Day event at the Holy Family Church for the past 3 years as a part of its' wider AIDS awareness programs that have been running in the area for the past 16 years. The aims of this event, which are in line with the *NSW HIV/AIDS, STI and Hepatitis C Strategies: Implementation Plan for Aboriginal People 2006-2009*, are to:

- increase Aboriginal community engagement in HIV/AIDS issues;
- increase community awareness and knowledge of HIV;
- find ways of reducing the risk of transmission amongst Aboriginal people; and
- For all these to be done in the context of continually supporting and affirming the culture and heritage of Aboriginal people.

The presentation will focus on the partnerships which supported this program and will outline the following strategies:

- a WAD painting representing the families communities of those have passed away from AIDS;
- the "Healing Tree"/"Tree Ochering" to highlight the impact of HIV/AIDS on both the indigenous and wider community in the Mt Druitt area;
- Women's business activities; and
- A focus on Aboriginal culture by featuring a traditional Welcome to Country in language, and then translated in English and a Smoking Ceremony by a local Aboriginal Elder.

BERRIMA WOMEN'S PROJECT

Smith M, Tyne M.

HIV & AIDS Related Programs (HARP) Health Promotion, Western Zone, Sydney South West Area Health Service (SSWAHS) Sydney NSW Australia;

HIV prevalence among people entering the Australian prison system in the year 2004 rose primarily within New South Wales (NSW) and South Australia (SA). This rise was particularly among women. The numbers of HIV+ women entering the prison systems are almost 40% higher than that of men.

Among new HIV diagnoses in 2002 – 2006, the most frequent reported route of transmission in the non-indigenous population was male homosexual contact (65%) heterosexual contact (20%) and injecting drug use (3%). In the Aboriginal and Torres Strait Islander population, HIV infection was attributed to male homosexual contact (37%) in heterosexual contact (34%) and injecting drug use (18%).

The Berrima Women's Project provides Aboriginal inmates of the Berrima Women's Correctional Centre in NSW with HIV and sexual health education in a traditional form, as identified in the National Aboriginal and Torres Strait Islander Sexual Health and Blood Borne Virus Strategy 2005-2008 (Section 3) and the National HIV/AIDS Strategy Revitalising Australia's Response 2005-2008 (Section 6). The Project comprises 18 sessions on sexual health and relationship topics. Each session includes interactive games on HIV, sexually transmitted infections and health topics followed by informal discussions with questions and answers. The women contribute to the project using traditional learning skills such as painting, craft and poetry/song to develop sexual health resources for use in other Aboriginal communities.

The project aims to increase to the women's capacity to make informed decisions about their sexual health; increase the number undertaking regular health check ups and develop knowledge of health/community service networks beyond the corrective centre.

This presentation will discuss partnership building with the Department of Corrective Services and Justice Health; the development of interactive relationships between the HARP health promotion service and the women; and among the women themselves.

WILLNESS TO PAY: WHAT IS THE TRUE COST OF PROVIDING EQUITABLE HEALTH CARE IN A DISADVANTAGED COMMUNITY?

Gilles MT¹, Ferguson C¹, Smith P¹, Edel M¹

¹Western Australian Country Health Service, WA Australia

It has been acknowledged that poor medical outcomes in Aboriginal people can be attributed to inequity in the delivery of services to this population. In a recent paper reviewing the outcomes of health care to a group of socially and geographically disadvantaged women with HIV infection. It was demonstrated that if adequately resourced and culturally appropriate care is supplied similar outcomes to those in non-Aboriginal metropolitan based HIV positive people can be achieved. The estimated cost per woman for this rural support plus the coordinated multidisciplinary care was \$57,545 per pregnancy. But this took no account of the true investment in this cohort. This study seeks to determine how much this level of care really cost?

Staff from the unit providing this rural care will be asked to record the duration and type of every interaction with their HIV clients for one month. This will include text messages, phone calls, home visits, and appointments. Using this diary and the staff salary an economic value will be produced for each client. In addition staff will undergo semi structured interviews relating to the emotional impact this work has on their lives.

The analysis and final report will incorporate both financial and emotional costs. There is no question in the team's mind that this level of care is worth it. Ironically the services success which has prevented the predicted HIV holocaust has reduced its visibility and money that used to be available for this service is drying up. This paper examines the issue of "willingness to pay" in this emotionally charged and important area of health delivery.

THE PROCESS OF MANAGING AN HIV +VE INDIGENOUS WOMAN WITH A CHAOTIC LIFESTYLE IN A RURAL SETTING

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Indigenous women with HIV face a number of unique social and medical issues. This presentation describes the medical, social and legal steps that needed to be taken to adequately manage an HIV positive woman originally from a remote Aboriginal community but now living in Kalgoorlie, and to manage the public health risk that she posed. Supported by the Department of Immunology at Royal Perth Hospital and the Case Management Unit in Perth, staff from the Goldfields Public Health Unit have been actively involved with this patient since her diagnosis in April 2006.

Her history of repeated head injuries, epilepsy and alcohol related brain damage have led to cognitive deficits which have made education and treatment issues difficult. She has been unable to maintain confidentiality of her diagnosis, and due to her risk taking behaviour she has faced stigmatisation and discrimination by her family, community and service providers. Her lifestyle was becoming increasingly chaotic as she had no fixed abode and regularly sought company and shelter wherever she could find it. This was frequently associated with groups of people who were drinking large amounts of alcohol. Often she would disappear for days at a time and the Public Health team would only discover her whereabouts after she presented to the local hospital emergency department having had a convulsion.

Good teamwork has been required between the local Public Health Unit and other medical and health practitioners in order to maintain her health and compliance with medication, and thus the health of the wider community.

Along the way it has been necessary to commence directly observed therapy seven days a week, invoke the Public Health Act and apply for guardianship and administration orders through the Offices of the Public Trustee and Public Advocate.

The presentation includes a timeline that outlines the events described above and highlights some of the challenges and successes which have allowed her viral load to remain undetectable, and the public health risk to be minimised.

**Epidemiology – Transmission/
Acquisition**
11.00am – 12.30pm

**RATES OF HIV SEROCONVERSION IN
PATIENTS WHO HAVE PREVIOUSLY USED
NPEP: DATA LINKAGE OF THE VICTORIAN
NPEP SERVICE DATABASE WITH THE
VICTORIAN HIV SURVEILLANCE REGISTRY**

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The Victorian NPEP Service (VNPEPS) is a state-wide service co-ordinated at The Alfred Hospital. Although patients are encouraged to return for HIV diagnostic testing three months following NPEP, return rates are poor, there is no long term follow-up and subsequent HIV diagnoses in those who have ever presented for NPEP are unknown. The HIM study reported an association between NPEP use and subsequent HIV seroconversion. We matched the VNPEPS database with the Victorian HIV Surveillance Registry to determine the numbers and rates of HIV seroconversion among NPEP users in Victoria. Patients in the VNPEPS (N=1595) database between Jan 2001 and Feb 2008 were linked with all entries in the Victorian HIV surveillance registry up to May 2008 using alpha-numeric identifier codes.

Sixty-one VNPEPS patients were identified as HIV positive, giving an incidence rate of 1.54 per 100 PY (95%CI=1.19-1.87) in those presenting for NPEP. Sixteen were HIV positive at baseline, thus giving an HIV incidence rate of 1.14 (95% CI =0.84-1.51) per 100 PY in those HIV negative at first NPEP presentation. All HIV diagnoses occurred in males with a mean age of 33.7 years. Two diagnoses were potential NPEP failures occurring within 3 months of NPEP prescription. A further eight HIV diagnoses occurred more than 3 months post NPEP with no intermediate negative HIV test recorded. The majority of HIV positive results (84%) occurred in those who presented for NPEP on only one occasion with a further 12% occurring among patients presenting twice for NPEP.

The incidence of HIV infection in HIV negative men who present to the VNPEPS is similar to the overall rate of seroconversion reported in the HIM study, and lower than the rate reported in men who had received NPEP in this study. Surprisingly, most HIV infections were diagnosed in men who had only one presentation for NPEP. Although Australian incidence data is limited, these findings suggest that HIV incidence among VNPEP presenters is comparable to estimates reported among gay male populations. Further evaluation including examining risk behaviour both before and after NPEP in this population is required.

**RISK REDUCTION PATTERNS OF
UNPROTECTED ANAL INTERCOURSE:
RELATIVE RISK FOR HIV ACQUISITION IN THE
HEALTH IN MEN (HIM) STUDY**

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A range of so-called risk reduction behaviours (RRBs) in which homosexual men practice unprotected anal intercourse (UAI) has been described. There are no published longitudinal data on the risk of HIV infection of these behaviours.

Between 2001 and 2004, 1,427 men were enrolled. They were followed up with 6 monthly behavioural interviews and annual HIV testing. Four possible RRBs were investigated, namely serosorting, negotiated safety, strategic positioning, and withdrawal during receptive UAI (UAI-R). These RRBs were defined behaviourally.

RRBs were common in this cohort. In most (88%) follow up periods with UAI reported, UAI occurred in the context of at least one RRB involved. Compared with those who reported no UAI, the risk of HIV infection was not raised in negotiated safety (HR=1.67, 95% CI 0.59-4.76) and strategic positioning (HR=1.54, 95% CI 0.45-5.26). Serosorting outside negotiated safety was associated with an intermediate rate of HIV infection. Withdrawal was associated with a higher hazard ratio (5.00, 95% CI 1.94-12.92), but this was largely because it was commonly practiced with HIV positive partners. With such partners, withdrawal was associated with a substantially lower risk than was UAI-R with ejaculation. Men who reported serosorting were much less likely to report UAI-R with withdrawal (OR=0.52, 95% CI 0.43-0.63) or strategic positioning (OR=0.44, 95% CI 0.36-0.54). Overall, men who reported any one of these RRBs were more likely to seroconvert to HIV than men who reported no UAI (HR=3.01, 95% CI 1.31-6.92), but they were much less likely to become infected than men who reported UAI without any of these RRBs (HR=0.29, 95% CI 0.14-0.54).

All RRBs were associated with an incidence of HIV infection that was intermediate between that in those who reported no UAI and higher risk activities suggesting that these behaviours did indeed reduce risk. In the presence of serosorting (including negotiated safety) strategic positioning and withdrawal were very unlikely, which suggests that men felt that practicing one RRB provided adequate protection. Researchers and policy makers need to address the reality that UAI in the context of RRB is common among gay men and help inform the choices around these behaviours.

SEXUAL PARTNERS' AGE AS A RISK FACTOR FOR HIV SEROCONVERSION IN THE HEALTH IN MEN (HIM) STUDY

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In Australia, HIV prevalence among homosexual men is low in men aged under 30 years and increases with age. This gives rise to the possibility that increasing partner age may be an important risk factor for HIV infection, particularly in younger men. We aimed to determine partners' age as a risk factor for HIV seroconversion in a community-base cohort of HIV negative homosexual men in Sydney.

Participants were men from the HIM study recruited between 2001 and 2004, followed to June 2007. Participants responded to "how many of your male sex partners were much older than themselves in the last 6 months" at baseline (none, a few, about half, most). In addition, those who were in a regular relationship reported the age of that partner at each interview.

A total of 1427 men were recruited. At baseline, about 20% of men reported that half or more of their partners were much older. Having more partners who were much older was associated with an increased risk of HIV seroconversion (p trend=0.002), and this remained significant after adjustment for number of episodes of sero-non-concordant unprotected anal intercourse (UAI), age, and number of casual partners (Hazard ratio for those who reported more than half partners were older compared to those who reported none older of 2.50, 95% CI 1.13-5.53, p trend=0.019). Stratified analysis showed that this trend was significant in participants aged both under and above the median age of HIV infection (37 years). In those who were in a regular relationship, men who reported their partner's age was within 5 years of their own were at lowest risk of HIV infection, compared with those who reported an older partner, but this was not significant. Interestingly, similar although weaker and non-significant patterns of increased risk were seen for men who reported that more partners were much younger.

Men who reported older partners were at increased risk of HIV infection and this was independent of UAI with sero-non-concordant partners.

IMPORTANCE OF PROMOTING HIV TESTING FOR PREVENTING SECONDARY TRANSMISSIONS: MODELLING THE AUSTRALIAN HIV EPIDEMIC AMONG MEN WHO HAVE SEX WITH MEN

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Newly infected people enter the stage of primary HIV infection (PHI). In this stage viral loads are higher than at any other time during the course of infection. Consequently, people in PHI have the greatest infectiousness per sexual encounter. Newly-infected people are also generally unaware of their new serostatus and potential to cause secondary HIV transmissions. In this study we address the research questions: (i) what proportion of new HIV infections in Australia is transmitted from people who are (a) undiagnosed, (b) in PHI, (c) on antiretroviral therapy? (ii) what is the expected epidemiological impact of (a) increasing rates of early treatment, and (b) increasing HIV testing rates?

We used a mathematical model to simulate HIV transmission in men who have sex with men (MSM) in Australia. We calibrated the model using established biological and clinical data and a wide range of Australian MSM epidemiological and behavioural data sources.

We estimate that ~19% of all new HIV infections are transmitted from the ~3% of MSM who are in PHI; ~31% of new HIV infections are estimated to be transmitted from the ~9% of MSM with undiagnosed HIV. We estimate that the average number of transmissions from HIV-infected MSM through the duration of PHI is ~0.14-0.28. The epidemiological impact of increasing treatment in PHI would be modest due to insufficient detection of newly-infected individuals. In contrast, increases in HIV testing could have substantial epidemiological consequences. The benefit of testing will also increase over time.

Promoting increases in the coverage and frequency of testing for HIV could be a highly-effective public health intervention and could increase the effectiveness of any strategy based on treating PHI. Treating PHI requires further evaluation of its long-term effects on HIV-infected individuals.

THE PARADOXICAL EFFECTS OF USING ANTIRETROVIRAL-BASED MICROBICIDES TO CONTROL HIV EPIDEMICS

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Vaginal microbicides, designed to prevent HIV infection in women, are one of the most promising biomedical interventions. Clinical trials of second-generation microbicides have begun; if shown to be effective they could be licensed within 5-10 years. Since these microbicides contain antiretrovirals (ARVs) they could be highly effective. However there is concern that, if used by HIV-positive women, ARV resistance may evolve.

We develop and analyse a novel mathematical model of a phase III clinical trial of ARV-based microbicides used by women at high risk of HIV infection. We also develop a dynamic transmission heterosexual model to investigate the potential population-level effects of microbicides that contain ARVs that are highly absorbent. The models are parameterized using epidemiological, clinical and behavioural data to predict the consequences of wide-scale usage of high-risk microbicides in a heterosexual population.

We find that adherence could have both beneficial and detrimental effects on trial outcomes. Most importantly we show that planned trial designs could mask resistance risks and therefore enable high-risk microbicides to pass clinical testing. Surprisingly, we show that reducing a participant's risk of resistance during a trial could lead to unexpectedly high rates of resistance afterwards when microbicides are used in public health interventions. We also find that, paradoxically, although microbicides will be used by women to protect themselves against infection they could provide greater benefit to men. More infections in men, than women, will be prevented if there is a high probability that ARVs are systemically absorbed, microbicides are less than ~50% effective, and/or adherence is less than ~60%.

Men will always benefit more than women in terms of infections prevented per resistant case; but this advantage decreases as the relative fitness of drug-resistant strains increases. Interventions that use ARV-based microbicides could have surprising consequences.

HIV RISK BEHAVIOR AMONG HIV-INFECTED MEN WHO HAVE SEX WITH MEN IN BANGKOK, THAILAND

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BACKGROUND: HIV prevalence among men who have sex with men (MSM) in Bangkok, Thailand increased from 17% to 28% between 2003 and 2005. However, limited data on sexual risk behaviors are available to guide HIV prevention efforts for MSM.

METHODS: HIV-infected MSM attending an STI clinic in Bangkok were interviewed about sexual risk behaviors and evaluated for sexually transmitted infections (STI), as part of routine services. Patients were examined for genital ulcers and had serologic testing for syphilis and urethral PCR testing for chlamydia and gonorrhoea. Steady partners were defined as regular sexual partners for ≥ 2 months; STI was defined as a positive laboratory test or clinician-confirmed genital ulcer. Electronic clinic record data were analyzed using SAS.

RESULTS: During October 2005-October 2007, 154 HIV-infected MSM were included. Median age was 28 years (range, 17-65 years). Sexual intercourse in the last 3 months was reported by 131 (85%) men. Of these, 79 (60%), 69 (53%), and 19 (15%) reported sex with steady male partners, casual male partners, and female partners, respectively. Condoms use during last sex was reported by 60% with steady male partners, by 75% with casual male partners and by 63% with female partners. Among those with steady male partners, 39% had disclosed their HIV status, 38% reported their partner had been HIV tested and 60% reported the partner tested HIV-negative. Among those with discordant steady partners, condoms use at last sex was reported by 64%. STIs were found in 41% of men (10%, chlamydial infection; 13%, gonorrhoea; 20% reactive syphilis serology; and 10%, genital ulcer). Unprotected last sex was more likely among MSM with steady male partners than other partner types (OR=2.65, 95% CI=1.2-5.6). Age, education, time since HIV diagnosis, antiretroviral therapy, CD4 count, and current STI were not significantly associated with unprotected sex.

CONCLUSION: Sexual risk behaviors and STIs were common among this group of HIV-infected MSM in Bangkok. High HIV discordance and low disclosure rates with steady partners highlight the need for effective HIV prevention strategies for MSM. Increasing condom use should be a focus of HIV prevention efforts among HIV-infected MSM.

International: Where to for testing and counselling in resource-poor settings?
11.00am – 12.30pm

MINIMUM STANDARDS FOR HIV COUNSELLING AND TESTING FOR THE PACIFIC

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In 2008 Secretariat of the Pacific Community (SPC) and Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) commissioned the Australasian Society for HIV Medicine and the National Centre in HIV Social Research in partnership with SPC to undertake an evaluation of existing HIV testing and counselling services in the 11 Pacific Countries supported by the GFATM: Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Niue, Palau, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.

This evaluation is in line with *A guide to evaluating HIV testing and counselling services in the Pacific Island Countries and Territories (PICTS) using minimum standards* devised by the Albion Street Centre Sydney for SPC and GFATM in 2007.

The minimum standards for voluntary counselling and testing services aim to develop more consistent, better quality and effective HIV test counselling services, both at country level and across the region.

The response from sites participating in the evaluation has been largely positive and many have been interested in determining minimum levels of service provision and areas for improvement. Services with identified gaps will be supported with follow-up technical expertise, training and resource provision.

It has been found that in applying minimum standards there needs to be a flexible approach, particularly where VCCT services are located within more general health services as opposed to stand alone VCCT/HIV and STI services. Also, important differences in the pre registration training of health professionals across the Pacific may mean that counselling skills training and ongoing supervision and support requires solutions that are country specific. Policy and protocol development were also identified as gaps within service provision.

This paper will discuss the findings of the evaluation of HIV testing and counselling services against the Minimum Standards and the implications of applying Minimum Standards to under resourced health services in low prevalence settings in the Pacific.

POLICING WOMEN'S BODIES: ARE WE READY TO MOVE BEYOND CRITIQUING PICT YET?

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There is nothing new in the desire to test people and determine their HIV status. However, attempts to scale up access to ART, and consequent recent shifts in HIV testing policy from opt-in to opt-out, has seen a resurgence in debates around HIV testing practices. This has been especially true in resource poor settings. It is argued that testing is the gateway to treatment, yet, with a minority of HIV-positive people who already know their status receiving treatment, increasing testing as evident in PNG does not guarantee access to ART.

When we examine available surveillance data of vertical transmission, it is evident that in PNG the prevention of mother to child transmission program (PMTCT) has not been successful. In a desperate attempt to stem the numbers of children acquiring HIV the government has endorsed PICT as a means to address this issue. However, this policy shift has occurred without an examination of the PMTCT programs and how those already testing positive can be better supported to return for the delivery of their child, to maintain strict feeding regimes and to maintain ongoing connections with health care workers at the PMTCT clinics. In addition, we have not examined from the health care providers perspectives why they have been unable to successfully care for such women and babies. It is important that as we continue to critique the policy we monitor the practice, especially in relation to counseling, consent and confidentiality. Health care professionals already yield a great deal of power; we must be certain that we do not deny those who seek their care any less. As suggested by the PICT guidelines there must be a guarantee of an enabling environment; at present, this is not the case for women in PNG. Until we can improve the social and health outcomes for women, their children and families *already* testing positive with opt-in it is not ethical or in the interests of maternal and child health to shift direction in HIV testing. While policies and practices continue to unfavorably prejudice and police women's bodies then we are not ready to move beyond critiquing test practices.

PROVIDING HIV SERVICES TO PRISONERS IN THAILAND: PEER OUTREACH, VOLUNTARY COUNSELING AND TESTING (VCT), AND LINKAGES TO CARE

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High HIV prevalence has been reported among prisoners in Thailand, yet HIV prevention programs and care referral systems are limited within Thailand's prisons. We established an HIV peer education program, condom access, and counseling and testing (CT) services in Prison A (900 male inmates). One year later, we conducted a cross-sectional survey to evaluate the intervention and to assess needs at Prison B (4000 male inmates).

A simple random sample of male inmates was selected in each prison. Consenting participants completed self-administered questionnaires using handheld computers. We conducted multivariate analysis of factors associated with anal sex and condom use.

At the two prisons, 746 male inmates (median age 24) were surveyed. Drug offenses were the most common reason for incarceration (49%), yet only 4% had ever injected drugs. Potential HIV risk behaviors in prison included sharing tattoo equipment (64%), penile modification (27%), anal sex (14%), and injecting drugs (1%). Independent factors associated with having anal sex in prison were years incarcerated (adjusted odds ratio [OR_a] 1.3, 95% confidence interval [CI] 1.1-1.4), being unmarried (OR_a 2.4, 95% CI 1.2-4.9), receiving a tattoo in prison (OR_a 2.2, 95% CI 1.1-4.7), and undergoing penile modification in prison (OR_a 2.4, 95% CI 1.6-3.8). Among inmates reporting anal sex, all at Prison A and 20% at Prison B believed condoms were easy to access in prison; perceived easy access to condoms was the only independent factor associated with condom use (OR_a 11.0, 95% CI 3.4-35.6). Most inmates at Prison A had been exposed to peer education (82%) and reported they trusted the confidentiality of prison CT services (70%). Of 171 inmates who accessed CT, 13 (8%) tested HIV-positive; all 13 were enrolled in HIV care and 3 have begun antiretroviral treatment.

Tattooing, penile modification, and anal sex were common behaviors in this population. Easy access to condoms was strongly associated with condom use. Peer education and prison CT services were well-received and linked HIV-infected inmates to care. These services should be key components of prison HIV interventions in Thailand.

PROPOSED APPRAISAL OF HIV TESTING STRATEGIES EMPLOYING SIMPLE/RAPID TESTS

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The use of HIV testing strategies employing so-called simple/rapid tests is gaining momentum internationally. The objective is to test larger numbers of people, so that those who need antiretroviral treatment can be treated as soon as possible. Increasingly, HIV testing is being conducted in non-laboratory settings, by personnel not trained in laboratories. The success of testing programs involving simple/rapid tests is typically measured by the numbers of people being tested, notified of their HIV status, or treated with anti-retroviral drugs. However, such measures can be misleading if used in isolation. The effectiveness of new testing strategies will depend on whether the quality of testing can be maintained when the throughput of testing is increased. Proper assessments of new strategies have often not been made.

The World Health Organization (WHO) is in the process of generating a number of revised testing strategies. These strategies, which have become quite complex, should not be adopted until and unless their integrity can be appropriately substantiated.

When seeking to substantiate new strategies, the following should be taken into account:

- Many individual tests have been subject to laboratory evaluations, and shown to operate appropriately and to accurately define true positive and true negative samples;
- However, evaluations of tests when used individually do **not** necessarily allow us to assess their performance when used in combination. A major reason for this is that tests may use similar antigens. As a result, tests proposed for use in combination may share either common false reactivity or common false negative results;
- An initial mathematical assessment of a strategy involving a combination of tests can be performed if the tests have been individually evaluated, using the basic formulae for predictive values of testing to estimate the probability that a result obtained from such a strategy is a true result. A model for this assessment has been established;
- However, mathematical assessment of any new strategy must be supplemented by scientific assessment, considering the mechanisms of each of the tests that are proposed to be combined;
- After mathematical and scientific assessment, the proposed new strategy must also be subject to a thorough practical validation in the laboratory e.g. in a validation of six HIV simple/rapid tests and enzyme immunoassays that was conducted in the same samples, four of 43 falsely reactive samples showed reactivity in at least two of the tests.

The increasing emphasis on the use of simple/rapid tests for HIV makes it very important to remember these principles. This is because many simple/rapid tests employ similar antigens, and sometimes two available tests are actually the same product, differently packaged.

USE OF DRY BLOOD SPOTS (DBS) TO AID HUMAN IMMUNODEFICIENCY VIRUS (HIV) DIAGNOSIS IN CHILDREN IN THE ABSENCE OF LOCAL NUCLEIC ACID TESTING LABORATORY CAPACITY

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Mortality rates of HIV infected children in Africa have been shown to approach 50% within the first two years of life. Early diagnosis is therefore important in order to ensure early access to care, treatment and support. The gold standard for diagnosis of HIV in children under 18 months old is nucleic acid detection via the polymerase chain reaction (PCR). In less resourced settings, including Papua New Guinea (PNG), nucleic acid testing often not available.

In the context of a prospective study looking at predictors of HIV infection at Port Moresby General Hospital (PMGH) dry blood spot samples were collected from children on Whatmans Protein Saver #903 cotton based paper. These DBS were transported to the laboratory in Sydney in individual dessicated airtight pouches. Blood was extracted from the filter paper and HIV-1 DNA amplified by PCR (Roche Amplicor HIV-1 test version 1.5, CA USA). Of 122 samples analyzed 107 were found to be negative, 17 reactive and 1 indeterminate.

Laboratory capacity for nucleic acid testing in PNG is under development but in the interim, transport of DBS to the NSW State Reference Laboratory can be a feasible alternative for diagnosis of HIV infection in children under 18 months old. The advantages of DBS include use of heel or finger prick to obtain blood (venesection in infants can be difficult) and ease of transport (less of a biohazard, no temperature requirement). With established systems in place for sending and receiving samples and reporting of results there is the potential for the NSW State Reference Laboratory to also offer this diagnostic service to other institutions in the region who as yet do not have the local diagnostic capabilities.

**Australian Antiretroviral Guidelines:
Consensus Conference
1.30pm – 3.00pm**

The Annual Consensus Conference is this year incorporated into the clinical stream of the main ASHM 08 Conference program. Previously, the Annual Consensus Conference has been held on the Saturday afternoon immediately following the close of the ASHM Conference. Feedback from previous years has suggested that attendance and participation would be maximised if the Australian Antiretroviral Guideline sessions were moved into the ASHM program.

This year, the Australian Antiretroviral Guidelines sessions will be held on the Thursday 18 and Friday 19 afternoons of the ASHM 08 program. These sessions include evidence-based presentations from international and local experts on the latest research and developments in HIV treatment and provide the opportunity for discussion.

Dr Roy Gulick is a member of the US Department of Health and Human Services (DHSS) Panel on Antiretroviral Guidelines for Adults and Adolescents and will represent DHHS at these sessions. The DHSS Guidelines for the Use of Antiretroviral Agents HIV-1 Infected Adults and Adolescents have been endorsed by Australia and form the basis on which the Australian commentary is developed. The Australian commentary to the latest Guidelines for the Use of Antiretroviral Agents in HIV-1 Infected Adults and Adolescents is available at: <http://www.ashm.org.au/aust-guidelines/>.

**EFFICACY AND SAFETY OF PREFERRED ART:
EMERGING DATA**

Roy M. Gulick, MD, MPH
Weill-Cornell Medical College, New York

Current treatment guidelines recommend specific antiretroviral drugs as preferred components of initial regimens based on their comparative efficacy, safety, tolerability, convenience, and other factors. Current preferred components are: abacavir/lamivudine and tenofovir/emtricitabine (nucleoside analogues); efavirenz (NNRTI); and atazanavir/ritonavir, fosamprenavir/ritonavir, and lopinavir/ritonavir (protease inhibitors). Emerging data further define the efficacy and safety of these preferred ART components.

ACTG 5202 recently demonstrated that abacavir/lamivudine was virologically inferior to tenofovir/emtricitabine and also associated with a shorter time to severe toxicity in patients with pre-treatment baseline HIV RNA levels $\geq 100,000$ copies/ml. Abacavir hypersensitivity reaction is avoided with the use of baseline HLAB5701 screening. Unexpectedly, abacavir was shown to be associated with an increased risk of cardiovascular events in both the D-A-D cohort and the SMART study, although the mechanism is unknown. Both abacavir and tenofovir have favorable lipid profiles compared with older nucleoside analogues. Tenofovir uncommonly is associated with renal toxicity in clinical trials and cohort studies.

Efavirenz remains the preferred NNRTI. A subanalysis of ACTG 5095 demonstrated consistent activity of efavirenz-based regimens across pre-treatment HIV RNA levels and CD4 cell counts. An extension of the 903 study recently demonstrated 7-year durability of efavirenz-based regimens. ACTG 5142 demonstrated efavirenz-based regimens were virologically superior to lopinavir/ritonavir-based regimens, although CD4 responses were less good and drug resistance at virologic failure occurred more commonly. Newer agents such as maraviroc, raltegravir, and the NNRTI rilpivirine, demonstrate comparable virologic responses to efavirenz. A surprising finding from A5142 was that lipotrophy was described more frequently with efavirenz than lopinavir/ritonavir. Long-term central nervous system side effects with efavirenz occur uncommonly.

The preferred protease inhibitors, each boosted with ritonavir, are atazanavir, fosamprenavir, and lopinavir and head-to-head studies (CASTLE and KLEAN) demonstrate their comparable efficacy. More recently, head-to-head studies demonstrate the comparable efficacy to lopinavir/ritonavir of darunavir (ARTEMIS) and saquinavir (GEMINI). Atazanavir/ritonavir is given once-daily and studies suggest the activity of once-daily ritonavir-boosted

fosamprenavir and lopinavir. Atazanavir uncommonly is associated with renal stones. Comparative studies demonstrate differences in the lipid profiles of ritonavir-boosted protease inhibitors; a recent meta-analysis suggested ritonavir-boosted fosamprenavir and lopinavir were associated with the greatest lipid increases compared to atazanavir, darunavir, or saquinavir.

TESTING FOR LATENT TB IN HIV PATIENTS – THE NEW OR THE OLD?

The risk of reactivation of latent tuberculosis infection is significantly increased in the setting of HIV co-infection. Interventions to reduce the risk of reactivation of latent tuberculosis have been well established. Clinicians need to be able to diagnose latent tuberculosis to be able to offer these interventions to their patients. The tuberculin skin test (based on a delayed type skin hypersensitivity reaction to tuberculin) has been the most commonly used test to diagnose latent tuberculosis infection. However, it has limitations that include specificity, sensitivity and practical aspects. New diagnostic tests for latent tuberculosis infection based on the detection of interferon gamma that is produced in the presence of Mycobacterium tuberculosis antigens have been developed and are now recommended as an alternative to the tuberculin skin test in the latest iteration of the US DHHS antiretroviral treatment guidelines. These tests may be more specific for tuberculosis than the tuberculin skin test, but the role of these assays in the HIV setting has not been completely defined. This joint presentation will highlight the current data that relate to the use of each test to diagnose latent tuberculosis infection in people with HIV infection.

**Social Research – Sexual Risk
in Space and Time
1.30pm – 3.00pm**

**I MET HIM AT THE CANDY STORE:
COMMUNITY ATTITUDES TO SEX ON
PREMISES VENUES AND THEIR PATRONS**

Smith A¹, Grierson J¹, Von Doussa H¹

¹La Trobe University, Australian Research Centre in Sex, Health and Society, Melbourne, Australia

Background: In developing health promotion interventions for sex on premises venues (SOPVs) it is critical to understand the place they have in the communities that access them.

Methods: An anonymous, self-complete questionnaire was administered to men attending the Midsumma gay community carnival in 2007. The survey consisted of 21 items assessing participant characteristics and knowledge and attitudes relating to SOPVs and their patrons.

Results: A total of 287 surveys were returned. Mean age was 39 years. 50% were in a regular relationship. 51% had had an HIV test in the previous 12 months and 8% of the sample was HIV positive. 8% had had an STI in the previous 12 months. 46% had met a sexual partner at an SOPV in the 12 months prior to survey. Generally attitudes indicate little community disapproval of venues and their patrons. Respondents tended to disagree with statements that characterise patrons of SOPVs negatively. There was fairly comprehensive rejection of the premise that closing venues would reduce HIV/STI infections or reduce the amount of sex gay men had. When asked to rate how they might feel telling their gay friends that they had met a new boyfriend at a number of different places, men were significantly less comfortable reporting SOPVs than other settings (including online sites). Generally SOPV users were more strongly supportive of SOPVs and demonstrated a more nuanced conceptualisation of patrons.

Conclusions: Understanding what the peers of SOPV patrons believe about the venues and their customers can help us to tailor messages that can: address stigmatisation of users if this is evident; target specific populations in 'insider' language; mobilise patron expectations of venue standards; suggest approaches that embed SOPV practice in broader social and sexual practices; or avoid reinforcing typologies that distance patrons from the target message.

**HIV/AIDS AND AUSTRALIAN GAY LIFE: A
GENERATIONAL OVERVIEW**

Dr Robert Reynolds

National Centre in HIV Social Research

We are fast approaching the 30th anniversary of the emergence of HIV/AIDS in Australia, or, more specifically, 30 years since the first notification of AIDS in Australia (November 1982). Traditionally, a generation spans 30 years; thus we can now speak historically of a generation of HIV/AIDS.

This appellation, however, does not adequately do justice to the ebb and flow of HIV/AIDS over 30 years and its impact on Australian gay life, including the impact of the AIDS epidemic on changing formations of gay identity. HIV social researcher Jeffrey Grierson noticed in the late 1990s three distinct cohorts of gay men: pre-AIDS; Peri-AIDS; and Post-AIDS.

I think Grierson's formulation has stood the test of time, and in this presentation I want to revisit these three cohorts. During 2004-7, I conducted a series of in-depth short life history interviews with a group of men ranging in age from the mid-50s to the mid-20s. These interviews were written up in a monograph which traced three decades of gay life in Sydney. While HIV/AIDS was not a central pre-occupation of the book, it nevertheless shadowed the participants' narratives of self-identity. In this presentation, through a close reading of some of these narratives, I hope to show how the AIDS epidemic has effected the formation of gay identities, and how this has changed over time.

AGE AND SEXUAL BEHAVIOUR AMONG GAY MEN IN SYDNEY, MELBOURNE AND BRISBANE

Garrett Prestage,¹ Susan Kippax,² Fengyi Jin,¹ Andrew Frankland,² John Imrie,² Andrew Grulich,¹ and Iryna Zablotska²

¹National Centre in HIV Epidemiology & Clinical Research, UNSW; ²National Centre in HIV Social Research, UNSW.

Background: Little attention has been paid to the issue of age in relation to HIV risk behaviour in Australia in recent years. Since 1996, the average age of new HIV infections has been increasing and since 2001 HIV prevalence has declined among younger men, particularly in Sydney.

Methods: The Gay Community Periodic Surveys (GCPs) are repeated, cross-sectional surveys conducted using anonymous, self-complete questionnaires with recruitment at gay community venues, clinics and large gay community events. Men were asked to report HIV testing and sexual behaviour. We included 2007 data from Sydney, Melbourne and Brisbane.

Results: Among men aged over thirty, there was little difference in terms of behaviours between those aged in their thirties, those aged in their forties, or above. The main differences were between those aged under and above thirty. Men aged over thirty were more likely to report being in non-monogamous relationships than their younger counterparts ($p < 0.001$), though these relationships were of longer duration and the men were more likely to know their own or their partners' HIV serostatus ($p < 0.001$). Men aged over thirty reported sex with a greater number of casual male partners in the previous six months ($p < 0.001$). Approximately one quarter of the sample reported engaging in any UAIC in the previous six months but there was little age difference in the likelihood to report UAIC. Men aged over thirty were more likely to engage in group sex.

Conclusion: While age is a consideration in the assessment of risk of HIV transmission among gay men, this risk is dependent upon the context in which it occurs: Age-mixing may be important in understanding HIV risk among young gay men. Men aged over thirty appear to be more sexually active in general and are more likely to engage in more adventurous sex play such as group sex.

SEX BETWEEN MEN IN TIMOR-LESTE: WHAT DOES IT MEAN?

Lee J, Rawstorne P, Worth H
National Centre in HIV Social Research

Issues: In Timor-Leste, various socio-cultural factors such as political instability and associated violence, mobile populations and low condom use have all contributed to the increased HIV vulnerability amongst MSM.

Description: There are no designated venues where MSM congregate or socialise in Dili, the capital, or indeed the districts. Whilst a well established social network between men who identify as being homosexual or MSM (as they term themselves) does exist in Dili, the sexual networks between MSM and their sexual partners (or clients as they are referred to) remain relatively unknown.

The MSM clients are an even more 'hidden' group and represent a highly dynamic population. It is difficult to quantify the exact number of clients, as each MSM may have from 2-20 clients. These clients identify as heterosexual and often have girlfriends or wives. For the most part, the client appears to hold power in their relationships with MSM, only performing anal intercourse in the insertive position, and get rewarded by MSM for sexual services. Usually these rewards take the form of a monetary payment or goods such as mobile phone cards. This information was elicited during a mapping exercise as part of a larger behavioural surveillance survey.

Lessons learned: Little is known about the clients of MSM, yet they represent a potential link for HIV transmission from a more-at-risk group (MSM) to the general population. In addition, this is a group that is not well serviced by health promotion, largely as the practices of this group are clandestine and are yet to be documented.

Next steps: Utilising the findings of this research, health promotions can be designed and tailored to meet the specific needs of this hidden population. In addition, a greater understanding of the social and sexual dynamics of MSM and their clients will inform policies and programmes addressing HIV in Timor-Leste.

'1 MSG THEN SEX': TEMPORALITY, SPATIALITY, SAFETY AND RISK IN GAY AND BISEXUAL MEN'S ACCOUNTS OF ONLINE SEX-SEEKING

Holt, M¹

¹National Centre in HIV Social Research, The University of New South Wales, Sydney, New South Wales, Australia.

Online sex-seeking by gay and bisexual men has often been characterised as a cause for concern. The use of gay chat sites that facilitate the advertising of and search for sex partners is seen as a highly efficient way for men to find each other. Speed or efficiency, together with the abundance of potential partners and relative anonymity have been seen as factors that could drive unsafe sexual activity or HIV transmission (although direct links between internet use and unsafe practice are rarely demonstrated). What are often missing in discussions of men's online sex-seeking are the accounts of gay and bisexual men themselves. How do men characterise their online practice and the ways in which they search for and meet partners? Do these accounts trouble narratives of risk and online practice?

The e-male survey of Australian gay, bisexual and same-sex-attracted men provided an opportunity to consider these issues. While the majority of participants received a quantitative survey, 491 men (10% of eligible participants) were directed to a small set of open-ended questions, including an item about men's most recent experience of online sex-seeking. Analysis of this item indicates that men employ a variety of temporal and spatial strategies when looking for partners online, and that accounts of safety, care and deliberation are more common than those of risk or abandon. While many men's accounts spoke to the speed and efficiency of online sex-seeking (e.g. '1 msg then sex'), many others referred to the space of the internet as territory where they could get to know partners before meeting them offline. Intervals of days or weeks between first online contact and meeting face-to-face were not uncommon.

Participants' accounts also indicated, as expected, that most men continue to seek and practice safe sex with their online partners. Quickly arranged encounters did not always feature anal sex, and men pointed out that in these situations HIV disclosure was unlikely or unnecessary. Most accounts of anal sex emphasised the use of condoms; unprotected anal intercourse was rare and usually negotiated. These accounts suggest that the majority of men's sexual encounters initiated online are safe, pleasurable and feature planning or deliberation.

International: PNG
1.30pm – 3.00pm

**EDUCATION SESSIONS SUPPORT
ADHERENCE AND IMPROVE CLINICAL
OUTCOME, HEDURU CLINIC PORT MORESBY,
PNG.**

Sawiya, G.; Ragagalo, O.; Nauna, T.; Nano, G; Tau, G.
Heduru Clinic, Port Moresby General Hospital, Port
Moresby, PNG.

Background. Adherence to antiretroviral therapy (>95%) predicts HIV outcome. Individual understandings of HIV/ treatments, practical supports to adherence are factors predicting adherence in PLWHA. From 2004 (start of ART at Heduru) culturally appropriate group HIV education sessions on antiretroviral therapy, factors supporting adherence and problem solving for individuals on treatment have been delivered weekly.

Aim: To describe the development, delivery and evolution of education sessions at Heduru and to examine the influence of attendance at education sessions on outcome.

Results: All patients are invited to attend at least one of weekly presentations on: HIV/AIDS, how ART work, taking ART; when, how and what to expect, side effects management, ARV resistance prevention, adherence (how and why) and health maintenance (nutrition, safe sex, safe water, safe parenthood, influence of religion), follow-up and review protocols.

The program has evolved including encouragement of patient treatment partners to attend (late 2004), incorporation in practical National Prescribers Training Programs (2005), inclusion of expert patient trainers (2006), development of flip charts and modification for beginning staff members (2007).

	New registrations(n)	HAART (n)	Education Session Attendance	
			Participants(n)	Non participants(n)
2005	238	199	141	58
2006	330	269	320	10
2007	489	387	233	154

Of 231 individuals attending first assessment/registration January to June 2007, 205 (88%) attended a group education session; of 177 individuals commencing ART 94 (53%) attended education sessions. The attendees did not differ from non-attendees by gender, age, marital status or baseline WHO clinical stage or performance grade. Although 11% have died in each group the proportion lost to follow-up at one year was 12 (13%) amongst the attendees compared to 22 (26%) in those not attending education session.

Conclusion Nurse delivered culturally appropriate education sessions are associated with reduced loss to follow-up amongst HIV patients at Heduru. The inclusion of volunteer patient educators has a marked impact on sessions, encouraging open discussion and reassurance concerning outcome of ART.

INTERNATIONAL: PNG

FRIDAY 19 SEPTEMBER 2008: 1.30PM – 3.00PM

HIV/AIDS AWARENESS AND ACCESS TO ANTERETROVIRAL THERAPY (ART) MAKES A DIFFERENCE IN PEOPLE'S LIVES IN SOUTHERN HIGHLANDS, PNG

Rondopali, Sr Rose John, Gaudentia Sr. HIV/AIDS Office, Diocese of Mendi, SHP, PNG.

Introduction: Southern Highlands Province (SHP) is situated in the interior of mainland PNG. It is divided into eight districts where remoteness, lack of infrastructure and disparate languages as well as cultural differences make response to the increasing burden of HIV/AIDS a substantial challenge.

Aim: To describe the development of the Mendi Catholic HIV/AIDS diocesan network. This aims to ensure PLWHA live positively, supported without stigma and discrimination to access treatment and care within local communities in a context of respect and love.

Methods: A regional approach based on a network of parishes will be demonstrated. Activities involved will be detailed; establishment of parish HIV Committees, community awareness programme, implementation of a system of PLWHA follow-up and family education and supports within local parishes and ART clinic establishment.

Results: SHP Catholic HIV/AIDS programme has been based in remote areas where Government services do not reach. During 2006, 2007 and to February 2008 the Mendi clinical service has provided voluntary counseling and testing to 1806 individuals 173 (9.6%) diagnosed with HIV infection. ART has become available and forty-six individuals are receiving treatment and eight-seven cotrimoxazole prophylaxis and general care. Antenatal Provider Initiated HIV Counseling and Testing (PICT) has been provided to more than 2000 women and PMTCT have been provided where required (6 women). Availability of ART and care has resulted in individuals attending for diagnosis and treatment and the associated obvious health benefits (return to families and work, ability to tend gardens to sustain themselves and their families, acceptance into the community activities including school and church).

Conclusions: A decentralized model of HIV/AIDS care and follow-up is being established within the network of Catholic parishes in Southern Highlands. The lessons learnt from our training, awareness, networking and clinical/follow-up activities within the responsible parishes is the basis for further human rights based service development.

**Phillip Medcalf Memorial Session
– Community, Health Choices and
Communication
1.30pm – 3.00pm**

LIFE COACHING – MISSION NOT IMPOSSIBLE

Martinez Cipri

Positive Services Department Western Australian AIDS Council

Since the uptake of Highly Active Antiretroviral Therapy (HAART) in the mid nineties, the health prospects of People Living with HIV (PLWHA) in Australia has become, and continues to be, increasingly positive. Whilst this has improved their health status and survival overall, some have not necessarily enjoyed an improvement in their quality of life, particularly those who were diagnosed prior to the availability of HAART.

Many of this group of people have found it difficult to move forward and therefore remain on disability support pensions, feeling isolated and lacking motivation. They are unable to see anything positive in their future and continue to have a perception of their illness that is not matched with their clinical results. In other words, their HIV is *under control on paper*, and yet some PLWHAs continue to live with a perception that they don't have a future.

In response to this issue, in 2007 the Western Australian AIDS Council (WAAC) introduced the Life Coaching project. The aim of the project is to assist PLWHA to improve their quality of life through carefully identifying their values, beliefs and goals with the aim of achieving their personal vision. Since the introduction of the Life Coaching project, 14 WAAC staff have been trained or are in the process of being trained as Life Coaches, with 6 staff currently having clients.

Since the project started, 21 PLWHAs (16 males and 5 females) expressed an interest in engaging with the life coaching process. Two thirds (14 people) were assessed as being suitable for coaching (9 identifying as gay, 4 as heterosexual and 1 as bisexual) and were allocated to coaches. Since the project began 4 people have ceased coaching for various reasons. Of the ten currently being coached, their commencement ranged from October 2006 to January 2008.

This presentation will provide an overview of what Life Coaching is, how the model works and what it has to offer PLWHA. The expected and unexpected benefits for PLWHA and staff, including how it complements other strategies such as therapeutic counselling will be discussed.

**HIV POSTIVE SPEAKERS BUREAUX
– A MODEL FOR SUSTAINABILITY AND
RELEVANCE IN 2008 AND BEYOND**

Niggli MR

People Living with HIV/AIDS Victoria Inc, Melbourne, VIC, Australia

The People Living with HIV/AIDS Victoria (PLWHA Victoria) HIV Positive Speakers Bureau is recognised for its management, training and expertise in delivering talks about the realities of living with HIV in the 21st century contributing to reducing HIV stigma and discrimination in the wider community. The Bureau has developed a highly successful and sustainable model that strives for excellence and consistently delivers talks to more than 3500 Victorians per year. The visibility of Victorian HIV Positive speakers adheres to the UNAIDS Greater Involvement of People Living with HIV/AIDS (GIPA) Principle and The Ottawa Charter of Health Promotion.

In other Australian States, Speakers Bureaux have had limited success. This paper will illustrate how Victoria developed a sustainable model that is still relevant in 2008. Management methods of funding, recruitment, induction, training, administration will be illustrated. Key factors of retention and support for speakers from diverse backgrounds will be outlined.

A hallmark of Victoria's success is the speaker's professionalism and with that professionalism comes a recognition that we need to move to sophisticated social marketing to attract different audiences and remain relevant. An overview of the Victorian Bureau's innovative new campaign will emphasise it's future sustainability and credibility.

TREATMENT QUESTIONS? ANSWERS BY INTERNET AND SMS IN INDONESIA

Green C¹

¹Spiritia Foundation, Jakarta

Antiretroviral therapy (ART) has been provided free-of-charge to people living with HIV (PLHIV) in Indonesia who meet the WHO criteria since late 2004. There are now some 6,000 people on ART, provided through some 200 AIDS referral hospitals. Thus each hospital has on average 30 patients on ART, but the number is much lower in many. Although each hospital has at least one doctor trained to manage ART, many of these have very little experience, and little time to spend educating themselves. For similar reasons, doctors can rarely spend more than ten minutes with any patient.

As a result, PLHIV frequently have unanswered questions about their therapy. The Spiritia Foundation (the national peer support for PLHIV) has responded to this challenge in two ways. First, by training members of peer support groups as treatment educators. But five days training cannot provide answers to all these questions, and the group educators often feel reluctant to train their peers, fearful of difficult questions.

To address this, Spiritia offers two Q&A services. The first allows anonymous submission of treatment questions to our web site, where they are usually answered within 36 hours. This is supplemented by a mobile phone SMS service, where we attempt to answer more swiftly, usually within one hour.

While Internet access is still not universal, Internet cafes are widely available and relatively cheap, so many PLHIV can use this service, while also browsing the Spiritia site for information. But mobile phone service is almost ubiquitous in Indonesia, and SMS messages are relatively cheap, offering an alternative for the internet-challenged.

We now answer an average of more than two questions every day on the web site, plus as many as 4-5 via SMS. If the SMS question is complex, we offer to call back to discuss the matter in more detail.

The main challenge is that there is no equivalent service for the 'worried well', so some 30% of the questions are of the 'am I infected?' type.

THE TREATAWARE INFOLINE A NATIONAL HIV TREATMENT HEALTH PROMOTION SERVICE FOR PEOPLE LIVING WITH HIV

DeMaere K¹, Whittaker B¹

¹National Association of People Living with HIV/AIDS (NAPWA), Sydney, NSW, Australia

Increased scientific knowledge and the continuing development of better antiretroviral treatments have significantly changed the outlook for many Australians living with HIV today. The goal of maximizing health and wellbeing of people with HIV over the long-term is assisted by a strong doctor/patient partnership in health planning. To support this partnership, people with HIV need reliable and accessible treatment and health information sources to inform health decision making.

In mid 2008 the National Association of People Living with HIV/AIDS (NAPWA) launched a suite of health promotion initiatives under the banner of Treataware. This paper will focus on the Treataware infoline project, a community-based service which provides a central place for people with HIV to obtain information about treatments, health planning and health issues. The Treataware infoline is also designed as a useful referral point for doctors and other health professionals.

The Treataware infoline offers a free, confidential, national telephone information service to HIV positive people. Callers are able to discuss treatment, care, health and research issues with trained HIV treatment educators.

This paper will present the preliminary results of the Treataware infoline; provide an overview of promotional activities for the service; describe training, monitoring and evaluation arrangements; and highlight future directions for this community-based initiative.

DANCE, THEATRE DRAMA, HIV/AIDS & THE AFRICAN COMMUNITIES IN SYDNEY

Sabri W

Multicultural HIV/AIDS & Hepatitis C Service

The pattern of HIV infection among culturally and linguistically diverse (CALD) communities in Australia largely reflects prevalence rates in countries-of-origin. In 2002-2006, people born overseas accounted for about 31% of new HIV diagnosis in Australia. Of these people born in Sub-Saharan Africa accounted for up to 18%.

In 2007, the Multicultural HIV/AIDS and Hepatitis C Service (MHAHS) implemented a one year project targeted at the African communities to build their capacity in relation to HIV/AIDS issues including safe sex practices and living with HIV/AIDS.

The paper mainly discusses the use of theatre and dance as a creative intervention, designed to raise HIV/AIDS awareness and knowledge. It details the process and steps undertaken to involve the African community members in the script writing and the performance of the "African Dance and Theatre Drama".

The paper also describes the community development frame work adopted to mobilise community members in the development and the implementation of a major community event around such a sensitive issue.

GETTING ON WITH IT AGAIN - RESPONDING TO THE NEEDS OF PEOPLE LIVING LONGER WITH HIV

Triffitt, K.A., Flanagan, G, Santana H
Positive Life NSW, Sydney, Australia

Research has identified people living longer with HIV as a priority group in terms of future needs for both clinical services and care. The psychosocial impacts of living longer with HIV are only now starting to become clearer through research, clinical outcomes and community consultation. Those living longer with HIV are a diverse group. While many have put their lives on hold, others have made significant career choices. Both of these situations are not static and can change, sometimes rapidly, in a variety of ways. Daily living for many people with HIV also includes interactions between ageing, long-term psychosocial and clinical experience of treatments, and the long-term impact of the virus itself.

Responding to the needs of people living longer with HIV, Positive Life NSW has developed work in the areas of social marketing, peer support, systemic advocacy and health education. These different areas all combine to enhance skills, reorient services and create supportive environments. This paper will report on policy work, focus and group discussions, individual interviews and community forums. By incorporating and sharing personal strategies for change and enhancing quality of life, this work promotes the development of capacity at both policy and community level to negotiate the challenges of living longer with HIV.

Clinical – Toxicity
3.30pm – 5.00pm

**ELEVATED LEVELS OF INTERLEUKIN-6
AND D-DIMER ARE ASSOCIATED WITH AN
INCREASED RISK OF DEATH IN PATIENTS
WITH HIV**

Drummond FM¹, Hoy J^{1,2}, Emery S¹, Cooper DA¹ and the SMART Study Group

¹National Centre in HIV Epidemiology and Clinical Research, University of NSW, Sydney, NSW, Australia; ²Infectious Diseases Unit, Alfred Hospital and Department of Medicine Monash University, Melbourne, VIC, Australia

In SMART, CD4-guided intermittent antiretroviral therapy (ART) as compared to continuous ART resulted in an increased risk of cardiovascular disease (CVD) and of all-cause mortality, the latter primarily due to non-AIDS causes. To explore reasons for these increased risks, we evaluated four inflammatory (high sensitivity-C reactive protein [hsCRP], interleukin-6 [IL6], amyloid A and amyloid P) and two coagulation (D-dimer and prothrombin fragment 1+2 [F1.2]) markers that have high laboratory and biological reproducibility and that have been associated with mortality and CVD in the general population.

Patients with CD4+ count >350 cells/mm³ were randomised to viral suppression (VS, continuous ART *n*=2752) or to drug conservation (DC, CD4-guided intermittent ART, *n*=2720). To assess the short-term effect of intermittent ART on the biomarkers, stored plasma samples at baseline and Month 1 after randomisation for a random set of DC (*N*=249) and VS (*N*=250) patients were analysed. In addition, a nested case control study was carried out in which two controls were matched (age, gender, country, date of randomisation) to each death (*N*=85) and case of CVD (*N*=136). Adjusted odds ratios (OR) for the 4th versus the 1st quartile for each biomarker at baseline were estimated using logistic regression.

IL6 and D-dimer levels increased by 30% and 16%, respectively, one month after randomisation in the DC group and changed little in the VS group (5% and 0%) (*p*<0.0001 for treatment difference in each biomarker). For DC patients, increases in IL6 and D-dimer after one month were related in a graded manner to the increases in HIV RNA at month 1 (*p*<0.0001 for each biomarker). IL6 and D-dimer determined at baseline were strongly related to mortality with ORs greater than 12 for those in the 4th versus 1st quartile. Associations with CVD were more modest and were significant for IL6 and amyloid P. Associations of baseline levels of the biomarkers with all-cause mortality and with CVD were similar for DC and VS patients.

ART interruption results in significant increases in IL6 and D-dimer. Elevated levels of D-dimer and IL6 identify a sub-group of HIV-infected patients at high risk of death in both treatment groups. Increases in IL6 and D-dimer may explain, in part, the increased risk of mortality and CVD in the DC group.

**CARDIOVASCULAR DISEASE (CVD) RISK IN
THE STEAL STUDY COHORT**

Bloch M¹, Hoy J², Woolley I³, Hounsfield V⁴, Humphries A⁵, Amin J⁵ on behalf of the STEAL investigators

¹Holdsworth House Medical Practice Darlinghurst NSW Australia; ²The Alfred Hospital Melbourne VIC Australia; ³Monash Medical Centre Clayton VIC Australia; ⁴Royal North Shore Hospital St Leonards NSW Australia; ⁵NCHECR UNSW Darlinghurst NSW Australia.

Combination antiretroviral therapy (cART) has increased survival in HIV patients and shifted attention to broader health issues including cardiovascular disease (CVD) risk. HIV itself, as well as cART toxicity may increase CVD risk. In the STEAL study, 360 participants were randomised 1:1 to receive fixed-dose abacavir-lamivudine or tenofovir-emtricitabine. On entry, all participants had HIV-1 infection, were on stable cART with plasma RNA <50 copies/ml for at least 3 months. Our aim was to assess baseline CVD risk in the STEAL study and compare it to other Australian cohorts.

All subjects enrolled in the STEAL study were assessed for individual CVD risk factors including age, gender, smoking status, fasting total and HDL cholesterol, blood pressure (at baseline or up to 3 months prior), personal history of diabetes, hypertension and CVD. Framingham 10-year risk was calculated for those participants with all required data (*n*=272).

The STEAL cohort were 98% male, aged 45±9 years, had a mean systolic BP of 125±14mmHg, and diastolic of BP 78±10mmHg, total cholesterol 5.3±1.2mmol/L, and HDL cholesterol 1.3±0.4mmol/L. 96% had no history of diabetes, and 35% were current smokers. The average 10 year CVD risk was 8±6%, with 68% in the low risk category (<10%); 28% in the moderate risk category (10-20%); and 3% in the high risk category (>20%). These results compare favourably with other published HIV cohort data but are lower than in Australian population based studies (approximately 12-14% CVD risk). It has been previously noted by the D:A:D Study Group, that the Framingham equation underestimates observed CVD risk in an HIV population.

At the commencement of the STEAL study the cohort was representative of an Australian HIV cohort with a 10 year CVD risk slightly lower than that reported in a non-HIV Australian cohort.

POLY-L-LACTIC ACID FOR HIV-1 FACIAL LIPOATROPHY: 48-WEEK FOLLOW-UP

Carey DL1, Baker D2, Petoumenos K1, Chuah J3, Rogers G4, Watson J5, Cooper DA1,6, Emery S1, and Carr A6, for the FLASH Investigators

1. NCHECR/UNSW, Sydney, NSW, Australia
2. 407 Doctors, Sydney, NSW, Australia
3. Gold Coast Sexual Health Clinic, Miami, QLD, Australia
4. Griffith University, Gold Coast, QLD, Australia
5. National Association of People living with HIV/AIDS, Sydney, NSW, Australia
6. St Vincent's Hospital, Sydney, NSW, Australia

Poly-L-lactic acid (PLA) injections modestly increase objectively assessed facial thickness but not facial volume. We report the impact of a 24-week delay in PLA injections on efficacy, safety and quality of life. Longer term efficacy, safety and durability were also evaluated.

HIV+, lipoatrophic adults were randomised to 4 open-label PLA treatments administered every two weeks from week 0 (immediate group, n=50) or after week 24 (deferred group, n=50). Endpoints included facial soft tissue volume (FSTV) assessed by volumetric computed tomography, facial lipoatrophy severity, quality-of-life, and safety. Analyses were by intention-to-treat.

PLA treatment adherence was 98%. At 48 weeks, mean change in FSTV was 14 (95% confidence interval [CI] -1 to 29) cm³ in the immediate group and 18 (95% CI 5 to 30) cm³ in the deferred group (between-group difference, -34[95% CI -22, 16] cm³; p=0.71). These represent changes of 4% and 5% respectively (between-group difference, -1%; p= 0.66). There was no significant between-group difference for changes in tissue depth in injection planes (base of nasal septum p=0.44; and maxilla p=0.22). Viral load, CD4+ cell count, antiretroviral adherence, patient and physician-assessed facial lipoatrophy severity, and Multidimensional Body-Self Relations Questionnaire-Appearance Scales (MBSRQ-AS) scores did not differ significantly. The Short Form (SF)-36 Health Survey-assessed mental health score was significantly higher in the immediate group than the deferred group (5.2 and -3.7 respectively; p=0.027). Soft tissue thickness in injection planes increased modestly between weeks 24 and 48 in early PLA recipients. At week 48, mean change in FSTV was 14 (95% CI -1 to 29) cm³ (p=0.06) in immediate group participants and increases in tissue thickness were observed in both injection planes (p<0.0001). Median duration of treatment-related adverse events was 2 (interquartile range: 1-3) days.

Delaying PLA treatment by 24 weeks did not impact change in FSTV or tissue depth in injection planes. FSTV and soft tissue thickness were higher at week 48 than at week 24 in early PLA recipients suggesting that the PLA treatment effect was durable. PLA was safe and well-tolerated over 48 weeks.

Oral Posters:
Knox D - see page
Mackie K- see page
Hooker D - see page
Russell D - see page

Network Sex
3.30pm – 5.00pm

IMPACT OF A NON-OCCUPATIONAL POST-EXPOSURE PROPHYLAXIS PROGRAM FOR HIV IN WESTERN AUSTRALIA

Laing SC¹, Dykstra CA², Marshall LJ³, McCloskey JC², Langdon P⁴, Brown G⁵ and Mak DB¹

¹Communicable Disease Control Directorate, Department of Health WA, Perth, WA, Australia, ²Sexual Health Service, Royal Perth Hospital, Perth WA, Australia, ³Infectious Diseases Department, Fremantle Hospital, Fremantle, WA, Australia, ⁴WA AIDS Council, Perth, WA, Australia, ⁵WA Centre for Health Promotion Research, Curtin University of Technology, Perth, WA, Australia.

Since late 2001, the Department of Health (DOH) has monitored provision of non-occupational post-exposure prophylaxis (NPEP) for HIV in WA. Up to 31 December 2007, 214 cases received NPEP.

Gay Community Periodic Surveys (2002 and 2004) showed that the Perth community awareness of NPEP availability was low.

In May 2005, the DOH and the WA AIDS Council commenced a targeted campaign to raise awareness of NPEP availability and to increase the level of appropriate treatment. The campaign is aimed at health care providers and people at high risk of HIV infection - men who have sex with men, people in sero-discordant relationships, people living with HIV/AIDS, people who inject drugs and people who have been sexually assaulted or had unsafe sex with a person known to have HIV, or to be strongly suspected of being HIV-positive. Strategies have included resource development and distribution (pamphlets, fact sheets, posters, press advertisements in gay press and banner advertisements on Gaydar), establishment of a 1300 phone line to triage cases, and provision of information for health care providers.

Since the campaign commenced, awareness of NPEP has increased. In 2006, a significantly higher percentage of Perth Gay Community Periodic Survey respondents was aware that NPEP was readily available compared to the two previous surveys (18.5% [2002], 26% [2004], 48.2% [2006], χ^2 test for trend, $p < .001$ for both).

The average number of cases receiving NPEP per year increased by 16.6% since the campaign commenced (34.3 cases per year, May 2002 - April 2005; 40 cases per year, May 2005 - April 2007). Evidence from clinicians indicates

that they receive appropriate referrals from the phone line and available data indicates that the proportion of patients receiving NPEP who met the recommended guidelines has increased from 50% ($n = 34$) during the period May 2002 - April 2003 to 96.7% ($n = 30$) during the period May 2006 - April 2007.

Initial concerns that a campaign might encourage inappropriate and over use of NPEP have not been realized.

EXTENSIVE TRANSMISSION LINKS AMONGST NEWLY HIV-INFECTED PATIENTS CONTRIBUTE SIGNIFICANTLY TO THE INCIDENCE OF HIV-1 INFECTION IN MELBOURNE.

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Primary HIV infection (PHI) and its association with elevated viral load is thought to be a critical period for onward transmission of the virus, particularly if the individuals concerned are unaware of their HIV-positive status. To determine whether such transmission contributes to the rates of infection observed in Melbourne, phylogenetics was utilised to investigate virological links amongst newly HIV-infected patients.

A total of 376 patients (369 males, 7 females) infected with HIV-1 subtype B between 1996 and 2006 were investigated based on conclusive serological evidence that they had become infected within the preceding 12 months. All patient information was de-linked prior to undertaking the analysis. Phylogenetic analysis was performed on 1035-nucleotide (nt) HIV-1 *pol* sequences initially using distance-based methods. Monophyletic clusters were confirmed using Bayesian methods. Virological links were regarded as likely based on bootstrap values of greater than 90%, intra-cluster average genetic distances of less than 0.03nt substitutions per site and posterior probabilities of 1.0.

Phylogenetic analysis identified 54 transmission clusters involving 226 (60%) newly infected patients. Although 41 clusters included linkages between only 2 to 4 individuals, 13 clusters involved 5 or more individuals and accounted for 113 (30%) PHIs. The largest cluster included related viral sequences from 22 individuals infected over a period spanning 8 years. Other clusters linked 14, 12 (n=2) and 8 (n=2) individuals with a maximum period of transmission within clusters spanning 9 years. Within these large clusters groupings of 3 or more individuals who had been infected within a period of 12 months were frequently observed.

This study demonstrated the existence of several large clusters of patients infected with related viral strains many of which were transmitted within restricted time frames. This suggests transmission of HIV to multiple recipients contributes to the number of new infections in Melbourne and that onward transmission of HIV during early stages of infection is a factor in the continuing epidemic. Phylogenetic surveillance of HIV transmission within the local population provides the opportunity to identify sources of multiple transmissions and carry out targeted education programs aimed at reducing the number of new infections.

NON-OCCUPATIONAL POST EXPOSURE PROPHYLAXIS AGAINST HIV (NPEP) AND SUBSEQUENT HIV INFECTION IN HOMOSEXUAL MEN: FINAL DATA FROM THE HIM COHORT

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¹National Centre in HIV Epidemiology and Clinical Research, UNSW, Sydney, Australia; ²National Centre in HIV Social Research, UNSW, Sydney, Australia

Non-occupational post exposure prophylaxis (NPEP) as a means of HIV prevention has yet to be established globally. In Australia, guidelines recommending the use of NPEP were first released in New South Wales in 1998. NPEP is now available in most states.

In a community-based cohort of HIV negative homosexual men, the Health in Men (HIM) study, we aimed to determine the awareness of availability of NPEP; the frequency and predictors of use of NPEP at baseline and during the study and the incidence of HIV seroconversion in NPEP users. Annually, men were asked questions about NPEP, tested for HIV and detailed quantitative data on unprotected anal intercourse (UAI) were collected. NPEP awareness, use and predictors of use at baseline were analysed using logistic regression. Cox regression models examined incident NPEP use, HIV seroconversion and time trends in NPEP use.

1,427 participants were enrolled. Final HIM interviews were completed in July 2007. At baseline, 78.5% of participants were aware of NPEP and 6.3% reported previous use of NPEP. By the fifth annual interview, 97.4% of participants had heard of NPEP.

During follow up, NPEP use increased significantly from 1.7/100PY in 2002 to 9.9/100PY in 2006 ($p < 0.001$). Previous use of NPEP at baseline was associated with UAI in the past 6 months with casual partners ($p < 0.001$), and UAI with partners of unknown or positive HIV status ($p < 0.001$). UAI was a strong predictor of use of NPEP during the study. Use approached 25/100 PY in men who reported receptive UAI with casual partners if ejaculation occurred and exceeded it if the partner was known to be HIV positive. By the end of 2006, 49 HIV seroconversions were identified (HIV incidence 0.80 per 100 PY (95% CI 0.60-1.060)). Men who received NPEP had a significantly higher rate of HIV seroconversion during the study period.

NPEP use is increasing. Awareness of NPEP among HIM participants was almost universal. Use seemed appropriate, with many men reporting highest risk behaviours also reporting NPEP use. In this setting, men who received NPEP were at higher risk of subsequent HIV infection.

'SEX IN OTHER CITIES' – RESPONDING TO INCREASES IN OVERSEAS ACQUIRED HIV DIAGNOSES IN WA

Langdon PA

Western Australian AIDS Council Inc, West Perth, WA, Australia.

Over the past three years, there has been a dramatic increase in the number of new HIV diagnoses amongst WA men acquiring HIV overseas. New diagnoses amongst heterosexual men increased by 212%, (50 in 2005-2007 compared with 16 in 2002-2004) and by 42% amongst homosexual men (20 in 2005-2007 compared with 14 in 2002-2004). In the same period, the number of heterosexual and homosexual men acquiring HIV in Australia remained stable.

Western Australia is currently experiencing an unprecedented resources boom with commensurate labour demands, including for temporary 457 visa holders. The resource industry labour market is structured around fly in fly out workers, which impacts on personal relationships and the capacity for service delivery within community settings. Overseas travel for work and leisure in nearby high prevalence countries is higher amongst Western Australians compared with other Australians. These factors combined with poor population health infrastructure, in rural and remote WA and high endemic rates of STIs in some regions means there is potential downstream vulnerability for local populations, particularly women and Aboriginal people.

The WA AIDS Council (WAAC) has planned an integrated community response to this issue with the aims of minimising the number of people acquiring HIV overseas and preventing onward HIV transmission in Australia. The strategies are aimed at a population level rather than an individual level, including advocacy for specific policy development. Tailored research and surveillance is also in the pipeline which will inform future service delivery.

WAAC is building partnerships with governments, resource companies and occupational medicine companies with the aim of providing information, training and development for professionals. Targeted social marketing is aimed at work and leisure travellers using in-flight magazines, mining publications, travel industry publications and community newspapers. A new website www.sexinothercities.com.au has been developed and has applicability for travellers from Australian states and territories.

Targeting people acquiring HIV outside Australia is complex. Vulnerable men do not necessarily belong to any specific community or groups and are not easily accessible. New strategies and different partners are required to respond to this growing phenomenon.

NORTH QUEENSLAND TRAVELLERS PROJECT: HETEROSEXUAL HIV CLUSTER

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Heterosexual men travelling to Papua New Guinea for employment purposes have been identified as a small, but significant population at risk of HIV transmission. They are also under-represented in service statistics, and less likely to identify themselves as at risk.

In 2007 5/26 of all new HIV diagnoses in Cairns were acquired by heterosexual males reporting sexual contact in Papua New Guinea, an increase from 1/16 cases acquired by this group in high prevalence countries in 2006.

This spike follows similar national trends, with the Northern Territory and Western Australia also recording significant increases in diagnoses acquired in high prevalence countries. The Far Northern cluster, however, has described a unique demographic. The males are all heterosexual, aged between 47-66, and based in Cairns and/or PNG locations. Three out of the 6 males also had a female partner living in Cairns – these women have all tested negative for HIV infection.

In response to this cluster, Queensland Health has funded Family Planning Queensland to implement a social marketing campaign advocating safer sex practices amongst those travelling between Cairns and neighbouring high prevalence countries, with a particular focus on Papua New Guinea. The campaign will measure awareness of risk of STI and HIV transmission among the target group, awareness of preventive strategies and testing options, and the uptake of testing and treatment services in the Cairns district among the target group.

This target group poses significant difficulties in health promotion. Uptake of information provided through brochures, convenience advertising and in-flight magazines depends on the target group reading and remembering this information. Men in this target group may not be interested in reading these resources.

Increased knowledge, awareness of risk and even increased intention to use condoms may not be sufficient to influence behaviour change. Cultural and environmental factors (e.g., being unable to easily acquire suitable condoms at the destination, engaging in sexual activity spontaneously or while intoxicated, engaging in surreptitious sexual activity to conceal the fact from his regular partner) may mitigate against men in the target group from adopting preventive measures, despite increases in knowledge.

International: Harm Reduction in Asia
3.30pm – 5.00pm

HARM REDUCTION IN ASIA – A CLINICIAN'S PERSPECTIVE

A Kamarulzaman

University of Malaya. Kuala Lumpur.

In many parts of Asia, HIV epidemics have been largely driven by injection drug use, and transmission among sex workers and their clients. HIV rates of greater than 20% among injecting drug users have been recorded in many countries, including Indonesia, Malaysia, Myanmar, Thailand, and Vietnam. In response to the escalating epidemics, several countries in the region have embarked on harm reduction efforts but in many instances these responses have come somewhat too little and too late.

Despite recent global initiatives that have increased the number of people receiving antiretroviral therapy in the region by almost threefold, injecting drug users remain disproportionately less likely to have access to these medications. Some of the major obstacles to access to antiretrovirals for injecting drug users include legal policies surrounding drug use, inadequate health infrastructure, cost, and pervasive stigma and discrimination, which hinder drug users from coming forward for treatment. In some countries, where access to antiretrovirals in the community has increased, continued criminalisation of drug users has led to periods of treatment interruption for HIV-positive IDUs when they are imprisoned. This raises the risk for development of antiretroviral resistance.

In Asia, an inadequate health infrastructure and lack of healthcare workers with the relevant skills and training to provide treatment are major obstacles to access to antiretrovirals, particularly for injecting drug users. The complexity of managing HIV infected drug users, who often present with multiple medical problems, makes it crucial that health professionals are adequately trained. High rates of co-infection with hepatitis C and tuberculosis increase the risk for antiretroviral-associated toxicities as well as complex drug-drug interactions.

Integrated treatment for substance abuse, general medical care, HIV and psychiatric treatment and psychosocial support in non-traditional health care settings such as hospitals and clinics is a model of care that should be examined and extensively developed in the region. Finally, scaling up antiretroviral and opiate substitution treatment must be accompanied by a commitment to improve social support services, in order to help integrate people back into society, with their families, and into job training and placements. Building the capacity of health care professionals alone will not be adequate. Peer support, peer-based treatment education, patient advocacy, case management and social services are other crucial services that must be developed for a comprehensive and successful management of HIV infected drug users.

RISK LIFESTYLES OF DRUG USERS IN PHNOM PENH, CAMBODIA

Dr Vannda Kab

Korsang

In Cambodia, illicit drug use has increased dramatically in the past eight years. The injecting drug use level appears to be small but increasing. Amphetamine (yama) appears to be the most widely used illicit drug (with regard to HIV transmission).

Concern about illicit drug use is increasing in the country because there is a possible link between such illicit drug use (yama, glue) with increased sexual risk/transmission of HIV and other sexually transmitted infections (STIs), and yama use has been found among the above highly vulnerable groups. We have observed that among the vulnerable population there also has been an increase in heroin injecting, while the yama users have switched from smoking yama to smoking heroin and then injecting heroin.

The injection related infections have been considerably high among the injecting drug users (IDUs) because the injection equipment has been reused up to 5 or more times a day. The sharing of the used syringes and other injection equipment with the lack of HIV transmission education, the lack of sterile injection equipment and the zero knowledge of how to clean injection equipment with bleach play very crucial part in the HIV/AIDs epidemic in the community.

Moreover, the zero knowledge of vein care or overdose prevention plus the basic lack of overall health care and nutrition, this has led to many preventable deaths.

Korsang is a small grass roots program located in Phnom Penh, Cambodia. It is fairly new program, beginning in September 2004. The main component of the Korsang team is to engage in intensive, risk reduction based IDU and drug user outreach and education through peer related connection. Korsang is targeting Cambodians who are engaged in injection drug use and yama use who are currently un-served and at serious risk of HIV and other health-related hazards that accompany drug use and high-risk sexual behavior. Korsang staff visits areas where street based injection drug use is a serious issue and sex worker areas where yama and unprotected sex go hand in hand.

HARM REDUCTION IN ASIA – AUSTRALIA'S ROLE

Professor Nick Crofts

Senior Research Fellow, Nossal Institute for Global Health

HIV among and from injecting drug users is still driving the AIDS epidemic in much of Asia, as it has since HIV first appeared in the region. Substantial progress has been made in developing supportive environments for effective harm reduction responses in many countries in the region, and in implementing such responses – and Australia has been a major contributor to this progress. However, harm reduction programs in Asia are still far outweighed by the sheer scale of numbers of the HIV epidemics, and are reaching only small proportions of those at risk and affected. As well, policy environments remain ambiguous at best and openly hostile at worst. This session will examine the situation and challenges in HIV among and from IDUs in Asia, and the needs and opportunities for heightened Australian involvement and support.

THIS IS THE REAL WORLD - NOT AS WE KNOW IT

Speed T.

Australian Injecting and Illicit Drug Users League Inc. (AIVL) Canberra, ACT, Australia In the context of large and growing HIV and hepatitis C epidemics, not to forget the impact of coinfection, amongst people who inject drugs across the Asia region, AIVL is extending itself to tackle what is without a doubt one of the organisation's greatest yet most rewarding challenges - our foray into international development work.

Were we ready for the steep learning curve this work presented? Were we ready for the easily established rapport, the warmth from our peers in the region, enthusiastic to work alongside us? How is it to work in an environment where to be a drug user can mean death by firing squad, where government 'war on drugs' propaganda is not rhetoric?

Whilst not wishing to be too voyeuristic nor perhaps even alarmist by way of this presentation, we seek to share our experiences and learnings eg what could 'dry injecting' possibly mean and how do you work with this concept without shuddering? This presentation will share the extreme hardships some of our peers face, the context of their drug use and drug treatment, and the nature of their drug use, what this means to health and humanity.

This presentation will conclude with an exploration of some of the key issues and barriers that will need to be addressed if an effective response to HIV and hepatitis C prevention and treatment among people who inject drugs across Asia is to be developed effectively and in line with need and their growing proud voices.

Social Research – Lives Worth Living
3.30pm – 5.00pm

**DEVELOPMENT OF A NEW HEALTH-RELATED
QUALITY OF LIFE QUESTIONNAIRE SPECIFIC
TO HIV/AIDS: AN INTERNATIONAL AND
CROSS CULTURAL INITIATIVE**

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Health-Related Quality of Life (HRQL) questionnaires (Q's) specific to HIV/AIDS were developed before the advent of antiretroviral therapy (ART) and/or before current co-formulations which have, purportedly, a lower toxicity profile. Arguably, these Q's have diminished sensitivity to measure the current impact of HIV disease and treatment on People Living With HIV/AIDS (PLWHA). Relevant domains important for PLWHA such as sleep, perception of treatment and impact of current common side effects, including lipodystrophy are missing and the assessment of psycho-social impact could be improved.

The objective is to develop a new Patient-Reported Outcomes (PRO) questionnaire to measure the HRQL of PLWHA in different countries and cultures, using an item bank developed from semi-directive interviews which explored the multidimensionality of PLWHA's HRQL with participants. To capture cultural differences in perceptions, interviews were held in: Senegal, Brazil, USA, Australia, Thailand, China, Cambodia, India and France and recorded, transcribed and translated into English and French.

Globally 148 (47% female) individuals consented to the interviews from which the domains representing PRO's were identified. Using participants' verbatim, 300 items were generated in French and English and organized into a 24-domain item bank. An endpoint model was designed to explain the relationship between PRO's, health status, symptoms, side effects and the different domains of HRQL. Cultural differences were identified in

domains such as daily activities, stigma, and relations with family and/or friends. Cognitive debriefing was carried out at each centre on 5 participants not part of the original interview group, using a 70 item questionnaire that had been developed—this was subsequently reduced to 60 items after harmonization.

At the next stage the questionnaire will be administered to 100 participants at each centre. In WA the results will be correlated with appropriate clinical information from the WA HIV Cohort database. It is anticipated that following psychometric validation and translation into the target languages this questionnaire will be a contemporaneous tool to use with WA patients and migrants from high prevalence countries. Globally, the new HRQL instrument will be used by those who seek to measure the impact of HIV and treatment on PLWHA accurately.

ASSESSING THE NEEDS OF YOUNGER HIV POSITIVE MEN

Bavinton B¹, Gray J¹

¹ACON, Sydney, NSW, Australia

The rate of seroconversion amongst gay men aged 29 years and under in NSW has remained fairly stable for a number of years at 80 to 90 each year. At any given time there are approximately seven to eight hundred men in this category. However, NSW does not have any services specifically targeting this age group. Although there is anecdotal evidence suggesting that the needs of this group may be different from those of older positive gay men, there is very little research focusing on younger positive men.

In 2007-08, ACON conducted a needs assessment with this target group, which sought to determine whether there are unique needs faced by this group, and if so, how these might be addressed.

A high level of involvement by the target population was an integral component of the needs assessment. Volunteers helped to determine areas for further discussion and facilitated a series of five discussion nights with other young positive men. The discussion nights each focused on a different topic – including sex, relationships, mental health/emotional wellbeing/drugs and alcohol, disclosure, and health/treatments. These sessions were complemented by an online survey which added quantitative data to the rich qualitative information produced by the discussion nights. The young men assisted in the analysis of the data.

The needs assessment determined that younger positive men have specific needs that can be met through a range of programmatic responses. The most significant needs that were identified concerned stigma and discrimination, peer support, social identification, non-concordant sex and relationships, and service usage. Addressing these issues requires a multifaceted approach that works with younger HIV positive men to improve skills, reduce social isolation, build a culture of service usage, and support these young men around sex and relationships. Additionally, a separate focus must be on reducing the levels of HIV stigma and discrimination amongst HIV negative men.

BEING HIV POSITIVE IN AOTEAROA /NEW ZEALAND: A TWO STUDY COMPARISON 2001-2007

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Background: Understanding the lived experience of HIV is critical for the provision of treatment and support services in ways that appropriately reflect the contexts and needs of PLWHA.

Methods: HIV Futures New Zealand is an anonymous, cross-sectional survey of people living with HIV/AIDS. The survey covers the domains of HIV testing and counselling; health status and management; antiretroviral therapy; service use; well being and mental health; social support and community engagement; relationships and sex; recreational drug use; accommodation; employment; finances; and discrimination. First conducted in 2001 (N=226) it was replicated in 2007 (N=261). Participant demographics were generally representative of the known HIV positive population in terms of gender age and ethnicity.

Results: All results reported are 2001 then 2007. Ratings of health status and well being were similar across the two surveys. A greater proportion had been diagnosed with an AIDS defining illness in the two years prior to survey (5%, 14%). Similar proportions had ever used antiretroviral treatments (78%, 79%), while current use was higher (64%, 73%). Service use was lower across all services at HIV organisations in the most recent survey. For example, treatments advice (55%, 34%); treatments information (26%, 15%); and counselling (48%, 31%). More participants owned or were purchasing their own home (37%, 46%). Fewer were in public rental accommodation (18%, 13%). More reported being in paid employment (53%, 62%). Median weekly personal income has increased (\$330, \$486), and this is greater than the change in consumer price index. Fewer reported experiencing discrimination in relation to accommodation, at health services and in relation to obtaining insurance.

Conclusions: A general improvement in the health and well being of New Zealand PLWHA can be seen from these comparisons. Critical economic and social disadvantage still remains when compared with the New Zealand population.

CURRENT CARE AND SUPPORT NEEDS OF HIV-POSITIVE GAY MEN: WHAT FACTORS LIMIT ACCESS TO AVAILABLE SERVICES?

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Where accessible, effective, simplified treatments transformed HIV infection into a chronic condition. The changing needs of HIV-positive people have prompted health-care systems worldwide to improve and adjust services. We consider current access to care among HIV-positive people.

Data collected in 2006 from a community-based cohort of HIV-positive gay men (Positive Health) in Sydney (N=270) were used. Participants were asked about their health/clinical and community-based service needs and, subsequently, about difficulty in accessing services. We report the prevalence of specific needs, barriers, and predisposing factors associated with them.

Participants most commonly used a GP (64%), hospital clinic/outpatient services (39%) and sexual health clinics (14%) for HIV management. All participants needed at least one HIV-related health service (mostly multiple services) - doctors experienced in HIV management, dentists, antiretroviral prescribers and hospital pharmacies. Most were able to use available services without problems. However, problems appeared in relation to obtaining doctor appointments and opening hours for hospital pharmacies. Cost emerged as a substantial barrier to dental care (91% of those in need) and psychological counselling. Need for one or more community-based services was reported by 46% of the men. The most difficult to access were income and peer support, public housing (supported accommodation); usually due to poor services and staff attitudes. Income level was a single predisposing factor associated with limited access to services.

Conclusion: In Australia, health service needs outweigh those for social support. Complex medical and social support services remain essential to HIV-positive people. Worldwide, positive changes in health and life expectancy have translated into HIV-infected people with highly specific health care needs. This results in growing stress on health and social services, some of which are currently not meeting the needs of HIV-positive people. The ability of society to provide an adequate standard of care depends on the adaptability of services to the changing needs of HIV-positive people.

VIRAL FAMILIES: ANALYSING KINSHIP DISCOURSE IN HIV TRANSMISSION

Dean Murphy,¹ Jeanne Ellard,¹ kylie valentine,² Jahan Tyson¹

¹ National Centre in HIV Social Research, University of New South Wales; ² Social Policy Research Centre, University of New South Wales

Phylogenetic analysis is the calculation of genetic distance between viral strains. This analysis can determine the degree of relatedness between two samples of HIV, and has been used forensically to prosecute people for transmission of HIV.

The Viral Families project is a pilot qualitative study investigating two social and political dimensions of this technology: the potential for new forms of *social* connection and belonging; and the potential for new forms of *biological identity*. Its theoretical innovation is the use of science and technology studies to explore the intra-action of clinical technologies and human actions.

In this presentation we identify discourses of kinship in the narratives of gay men engaging in deliberate HIV transmission or acquisition, and in media coverage of HIV transmission.

We undertook a content analysis of HIV-related articles published in print-based media from 2007 and 2008. We also analysed the public areas of selected gay chat sites with a focus on 'barebacking' (intentional unprotected sex) for use of familial and genealogical tropes, especially in relation to HIV infection, as well as 'bug-chasing' and 'gift-giving' (intentional HIV transmission) discourses.

Our preliminary analysis of chat sites and recent Australian media has documented intentional HIV transmission, but there is little evidence that people are seeking to become transmit or acquire HIV from a particular source in order to create kinship connections. There is also evidence of bug-chasing and gift-giving but there is an absence of any notion of viral *specificity* i.e. connectedness based on similar virus or origin of infection.

Nonetheless, kinship and reproductive terms like 'daddy', 'boy', 'breed' and 'seed' are found in print media and websites, indicating the importance of genealogical constructions in the different social arenas of mainstream media and gay sexual culture. The circulation of these genealogical constructions between clinical, social and criminal discourses is important to the co-constitution of scientific and social knowledges of HIV.

The next phase of the study will involve interviews with HIV-positive gay men to explore their understandings of the implications of this technology.

NATIONAL NEEDS ASSESSMENT OF SEX WORKERS WHO LIVE WITH HIV 2008

Fawkes J

The one year community based needs assessment project sought to identify the needs of HIV positive sex workers in Australia through qualitative interviews and utilising community development approaches. This paper will outline the key recommendations from the final report (<http://www.scarletalliance.org.au/library/hiv-needsassessment08/>) as well as the process that was critical to the projects strong outcomes.

Established as a peer-based project, in line with Scarlet Alliance's principles and GIPA (Greater Involvement of People Living with HIV/AIDS), the project was designed to empower the participants, members of the HIV positive sex worker community, to run the project. The project involved capacity development for community members and community building activities including encouraging HIV positive sex workers to share their stories in "proVision" the Scarlet Alliance magazine.

All approaches were underpinned by a strong sense of need to protect participants rights and ensure the project followed recognised ethical approaches. Productive ways of working with participants individual privacy needs were developed to increase participation. Additionally, the project had continual reference back to the participants, via the project officer, Kane Matthews, and engaged with participants about the nature of their contributions and their "comfort" with the way the needs assessment was carried out and reported.

The process ensured that the written report reflects what the contributors offered. This was done in a way which valued peer based networks and provided evidence that these networks can be productive and generate sound knowledge about what the issues and needs are for those within the network.

The project also included a survey of health care services. The responses demonstrate a need for increased training of health care workers; the need to address discrimination and stigmatising approaches; and improved access to up to date information on the legal rights of sex workers living with HIV.

Swiss Statement
5.15pm – 6.30pm

BACKGROUND AND RATIONALE - NORMALISING SEX IN STABLE SERODISCORDANT RELATIONSHIPS

Pietro Vernazza
St. Gallen, Switzerland

During the past few years, HIV-physicians as well as community members have started to question the need for barrier protection methods in HIV discordant couples if the infected partner was on HAART and some physicians have openly talked to patients about the limited risk in such situations. In late 2007, several individual physicians have given public statements regarding the low risk of transmission.

Based on an evaluation of a Swiss HIV expert group the Swiss commission on AIDS has informed Swiss physicians in January 2008 that the commission considered it adequate to inform their patients about the limited risk of transmission under HAART. This step was considered necessary to harmonize the information that individual physicians have given to their patients. Particularly, it was considered important, to inform physicians and the community about the potential of interfering risk factors which were not considered by most physicians in the past.

Since no randomized controlled trials exist to calculate transmission risks in discordant couples and will be very unlikely to be available in the near future, the Swiss expert's evaluation of transmission risk was based on three methods of approximation: i) estimation based on the lack of documented individual cases in Switzerland and Europe, ii) extrapolation of a mathematical model for transmission risk based on free viral load in semen, and iii) support of these estimates by biological studies.

In summary, all available estimates indicated that transmission risk in discordant couples is in a very low range. A comparison of the most conservative risk estimate with other risks in daily life as well as the risk of condom-protected sex in the absence of treatment support the notion that the residual risk associated with sex in the presence of a fully suppressive HAART is negligible.

The presentation will focus on the background and development of the Swiss commission's statement and will discuss the most important arguments that were raised against the Swiss statement.

RELATION BETWEEN HIV VIRAL LOAD AND INFECTIOUSNESS

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Abstract

A consensus statement released on behalf of the Swiss Federal Commission for HIV/AIDS suggests that people receiving effective antiretroviral therapy—ie, those with undetectable plasma HIV RNA (<40 copies per mL)—are sexually non-infectious. We analysed the implications of this statement at a population level.

We used a simple mathematical model, based on the empirical data used by the Swiss, to estimate the cumulative risk of HIV transmission from effectively treated HIV-infected patients (HIV RNA <10 copies per mL) over a prolonged period. We investigated the risk of unprotected sexual transmission per act and cumulatively over many exposures, within couples initially discordant for HIV status.

Assuming that each couple had 100 sexual encounters per year, the cumulative probability of transmission to the serodiscordant partner each year is 0.0022 (uncertainty bounds 0.0008–0.0058) for female-to-male transmission, 0.0043 (0.0016–0.0115) for male-to-female transmission, and 0.043 (0.0159–0.1097) for male-to-male transmission. In a population of 10 000 serodiscordant partnerships, over 10 years the expected number of seroconversions would be 215 (80–564) for female-to-male transmission, 425 (159–1096) for male-to-female transmission, and 3524 (1477–6871) for male-to-male transmission, corresponding to an increase in incidence of four times compared with incidence under current rates of condom use.

Our analyses suggest that the risk of HIV transmission in heterosexual partnerships in the presence of effective treatment is low but non-zero and that the transmission risk in male homosexual partnerships is high over repeated exposures. If the claim of non-infectiousness in effectively treated patients was widely accepted, and condom use subsequently declined, then there is the potential for substantial increases in HIV incidence.



20th annual
ashmconference

Back-to-back with the Australasian Sexual Health Conference 15 – 17 September 2008

**Wednesday 17 to
Saturday 20 September 2008**
Perth Convention Centre, Western Australia

**ORAL
PRESENTATION
ABSTRACTS**
SATURDAY 20 SEPTEMBER 2008



ashm
Australasian Society for HIV Medicine Inc

**Breakfast Session – ‘Meet the Experts’
– Basic Science/Immunology
7.30am – 8.45am**

This session will cover the latest research on bio infections from biomedical through to clinical research. Presentations will be delivered by experts in their field.

**NATURAL HISTORY OF HEPATITIS B
INFECTION**

Chris Burrell

SA Pathology/IMVS and University of Adelaide

Hepatitis B virus infects approx. 30 % of the world's population at some point in their lives, and the ~350 million individuals who remain persistently infected have a 20-30% probability of dying from hepatitis B. The natural course of infection involves a number of distinct decision points in the balance between virus and host defence. (1) the acute infection may be symptomatic or subclinical (2) acute infection may be cleared, or may persist indefinitely (3) during persistent infection, patients may progress through four distinct and sequential phases, each with different virological, immunological and disease parameters (4) concurrently, variable progression of liver disease through to cirrhosis and liver cancer occurs in a proportion of patients.

Many risk factors or predictors for this progression in individual patients have been defined in recent years, and indications for antiviral therapy to assist clearance are becoming better defined. However, the basic immunological and virological drivers of this complex progression are still poorly understood.



20th annual ashmconference

ORAL POSTER SESSION - CLINICAL, ALLIED HEALTH AND BASIC SCIENCE

**Oral Poster Session - Clinical, Allied
Health and Basic Science
7.45am – 8.45am**

Purnomo J – see page 264
Crooks L – see page 267
Di Guilmi A – see page 260
Di Guilmi A – see page 261
Earle M – see page 261
Emori R – see page 277
Hoare A – see page 246
Tan D – see page 218
Reddy S – see page 217
Gorton C – see page 244

FRIDAY 19 SEPTEMBER 2008: 7.45AM – 8.45AM

Clinical Epidemiology
9.00am – 10.30am

HIV, SYPHILIS AND CHLAMYDIA IN MSM IN VICTORIA: RISK BEHAVIOUR AND PREVALENCE AT CLINIC SENTINEL SURVEILLANCE SITES

Goller JL¹, Guy R¹, Lim M^{1,2}, Gold J¹, Leslie, D³, BK Tee⁴, Roth N⁵, Fairley C⁶, Higgins N⁷, Hellard ME^{1,2}

¹Centre for Epidemiology and Population Health Research, Burnet Institute, Melbourne, VIC, Australia; ²Department of Epidemiology and Preventive Medicine, Monash University, Melbourne, VIC, Australia; ³Victorian Infectious Diseases Reference Laboratory, North Melbourne, VIC, Australia, ⁴The Centre Clinic, St Kilda, VIC, Australia, ⁵ Prahran Market Clinic, Prahran, VIC, Australia, ⁶Melbourne Sexual Health Centre, Carlton, VIC, Australia; ⁷ Department of Human Services, VIC, Australia

In Victoria, since early 2000, there has been a steady increase in diagnoses of HIV and sexually transmissible infections among men who have sex with men (MSM). These findings arise from passive surveillance which is highly dependant on the extent of testing. In April 2006, three sentinel surveillance networks for HIV, syphilis and chlamydia commenced operation at five Victorian medical practices with a substantial MSM clientele. The system aimed to provide testing rates, prevalence and risk behavioural information to assist in interpretation of passive surveillance trends. Demographic and risk behaviour information were collected through a questionnaire from all MSM undergoing routine testing and linked with laboratory results. This paper compares results from April-December 2006 and January-June 2007. Overall 5126 HIV, 5193 syphilis, and 3046 chlamydia questionnaires were received in 15 months. In all three networks, three quarters (74-77%) of MSM reported casual anal sex partners in the last six months and about one third (33-36%) reported inconsistent condom use with these partners. These behaviours remained consistent in both time periods. The proportion of MSM diagnosed with infectious syphilis increased significantly from 1.6% of 2858 MSM tested in 2006 (95% CI: 1.2-2.1) to 2.7% of 2295 MSM tested in 2007 (95% CI: 2.0-3.4; $p < 0.01$). The relative risk of an infectious syphilis diagnosis was 6.5 (95% CI: 3.1-13.7) in HIV positive MSM compared to HIV negative MSM. HIV and chlamydia prevalence remained steady over both time periods: HIV - 1.9% in 2006 and 2.0% in 2007; chlamydia - 5.8% in 2006 and 5.4% in 2007. Further demographical and behavioural information will be presented and discussed in the context of Victorian passive surveillance trends. The increasing infectious syphilis prevalence among those tested highlights the need for initiatives aimed at reducing syphilis transmission with a particular focus on reducing transmission in HIV positive men.

RISE IN SYPHILIS NOTIFICATIONS IN VICTORIA – A CASE SERIES STUDY

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¹Department of Human Services, Melbourne, VIC; ²Melbourne Sexual Health Centre, Carlton, VIC, ³Royal Melbourne Hospital, Parkville, VIC,

Annual notifications of infectious syphilis in Victoria have risen more than 40-fold from 9 cases in 2000 to 423 cases in 2007, with men who have sex with men (MSM) continuing to comprise a majority of the cases (85% in 2005-2007).

A case series study was conducted to examine and better understand the cause(s) of the syphilis increase in Victoria. Cases notified to the Department of Human Services between 1 January and 31 March 2008, aged 18 years or older with evidence of infectious syphilis and a Victorian postcode of residence were eligible for inclusion. A telephone administered questionnaire was used to collect data relating to demographic, social/sexual behaviour, testing history and health seeking behaviour.

Of the 103 infectious syphilis cases, 48 males consented to participate (response rate of 47%); 88% were in MSM and 25% reported co-infection with HIV. Thirty-four cases reported casual sexual partners in the preceding month, potentially exposing more than 67 persons. Of the cases reporting casual sexual partners, nearly all reported unprotected oral sex and 66% reported unprotected anal sex. Ten of the 48 cases (21%) reported no anal sex at all. The most frequent site for meeting sexual partners was in a bar/club or over the internet (35% and 31% respectively). Thirty-nine cases (81%) were symptomatic with an average time to diagnosis of 32 days (median = 20 days, range: 7 to 119 days). Cases reported hours of operation, time and cost as the largest barrier to health care (29%, 23% and 21% respectively).

The results suggests that syphilis cases are not diagnosed in a timely way and public health interventions to improve health seeking behaviours should be considered.

SEROPREVALENCE AND INCIDENCE OF HSV-1 AND HSV-2 IN AN HIV SEROPOSITIVE COHORT

Authors: Srirajalingam M¹, Aitken S¹, Taylor J², Dwyer DE², Chuah J¹

¹Gold Coast Sexual Health Clinic, Miami. Gold Coast, Australia; ²Westmead Millennium Institute, Sydney University and Westmead Hospital, Westmead, Australia.

Background

Genital herpes is associated with increased rates of acquisition and transmission of Human Immunodeficiency virus (HIV).

Objective:

Determine the prevalence and incidence of Herpes Simplex virus type 1 and 2 (HSV-1,-2) infections in an HIV positive cohort.

Methods

Baseline HSV type-specific IgG serology was carried out on 256 HIV positive patients attending a Sexual Health Clinic. Follow-up testing was available for 106 subjects between 1997-2003.

Results

Prevalence study: Of the 256 subjects (232 males, mean age 39 y, range 19-71y and 24 females, mean age 32 y, range 18-47 y) 56% (56% of men and 58% of females) were HSV-2 seropositive and 83% (84% of men and 71% of females) were HSV-1 seropositive.

Longitudinal study: 106 subjects (96 males, 10 females) had testing performed on more than one occasion.

Seven (70%) females were HSV-1 seropositive and 3 (30%) were HSV-2 seropositive. There were no seroconversions in this group.

Among the males baseline seropositivity for HSV-2 and HSV-1 were 20.8% (n=20) and 67.8% (n=65) respectively. Among the 76 **HSV-2-Neg** males at baseline there were 11 HSV-2 seroconversions (52.71/10³ P-Y). Among the 31 **HSV-1-Neg** males there were 3 HSV-1 seroconversions (30.9/10³ P-Y).

Among the 65 **HSV-2-Neg/HSV-1-Pos** males there were 9 HSV-2 seroconversions (52.79/10³ P-Y). Among the 11 **HSV-2-Neg/HSV-1-Neg** males, there were 2 HSV-2 seroconversions (52.38/10³ P-Y). There were 3 seroconversions among the 31 **HSV-1-Neg** subjects (30.9/10³ P-Y).

The Relative Risk of seroconversion to **HSV-2-Pos** status in **HSV-1-Pos** vs. **HSV-1-Neg** subjects was 0.76 (95% CI 0.19-3.07); the Risk Ratio based on incidence rates with person-years of follow-up was 1.01 (95% CI 0.97-1.03).

Conclusions

There was a high prevalence of HSV infection and evidence of ongoing HSV-2 acquisition in this group of HIV seropositive subjects. As HIV and HSV have synergistic effect on each others transmission, measures to control HSV infection may be important.

**CLINICAL OUTCOME OF A COMMUNITY
BASED RESPONSE TO A SYPHILIS OUTBREAK
AMONG GAY MEN IN WA**

Bradstreet B, Yam SH, Langdon PA
Western Australian AIDS Council Inc, West Perth, WA,
Australia.

The WA AIDS Council (WAAC) has been operating sexual health clinics in the two sex on premises venues (SOPVs) in Perth for 14 years. This very effective model provides opportunistic, free, anonymous HIV and STI testing to at-risk men. Over half of the clientele attend specifically for testing with the rest being sauna patrons at the time of the clinic. The clinics operate for 4 hours per week.

Following a syphilis outbreak among gay men in 2006, WAAC undertook a community based response (social marketing and editorial in print and web-based media, poster, pamphlets and verbal information to sexual, social and community groups and cyber-based outreach etc) with one of the aims to increase syphilis testing.

We examined the attendance and STI testing data of the two SOPV clinics, comparing the 18 months prior to the response with the 18 months of the response. Clinic attendance has increased by over 21% (from 263 to 320 men) with the majority of men citing the increase in syphilis infections as the reason for attendance. In Clinic A there was a marked increase (29%) of men attending the SOPV clinic specifically for testing. In Clinic B there was a marked increase (41%) of SOPV patrons seeking testing.

There has been a 36% increase in syphilis tests and nearly 30% increase in HIV tests, with a significant increase in the yield of positive syphilis test results per test completed. (0.88% in the eighteen months prior to the intervention to 3.88% after the intervention started). In the same time frame, the HIV yield increased from 0 to 1.33%. There has also been a significant increase in the number of Chlamydia and gonorrhoea diagnoses.

An integrated community based response has shown that at-risk men will respond to a call to be tested and that accessible sexual health services are a vital plank in achieving a sustained response to an outbreak. It has also shown the value of undertaking comprehensive STI screening when the opportunity arises.

**THE ROLE OF THE NURSE IN SYPHILIS
(AND OTHER STI) RISK ASSESSMENT IN
A SUBACUTE INPATIENT SETTING AT THE
ALFRED HOSPITAL, MELBOURNE, VICTORIA**

Moyer J¹
1Fairfield House, Infectious Diseases Unit, The Alfred
Hospital, Prahran, VIC, Australia

Fairfield House (FFH) is a sub-acute inpatient ward at The Alfred Hospital with fifteen beds dedicated for HIV patients. Syphilis notifications have progressively increased in Victoria, predominantly in men who have sex with men (MSM), with a significant proportion of these notifications occurring in HIV patients. This paper will examine the nurse's role in the process by which these patients are tested for syphilis and other sexually transmitted infections (STIs) during admission at Fairfield House.

Syphilis testing on HIV+ inpatients at FFH is currently performed either based on presenting symptoms or by STI risk assessment. STI risk assessment may be done on admission by the Infectious Diseases medical team but may be initiated by nursing staff and then communicated to the medical team. As there is no current protocol at FFH for nurse initiated STI risk assessment, STI risk assessment by nursing staff and consequent testing of inpatients at FFH, particularly syphilis testing, may be inconsistent.

To examine the current variations in nurse-initiated STI risk assessment with a particular emphasis on syphilis, a medical record search using an audit tool will be applied to all HIV inpatients admitted to FFH over a three month period (October-December 2007). Preliminary data indicate 31.6% (25/79) of inpatient visits during the study timeframe were tested for syphilis.

The information from this study will highlight gaps in nurse-initiated STI risk assessment at Fairfield House. The results of this study will be used towards up-skilling nursing staff if inadequate STI risk assessment is noted, and to develop protocols for STI risk assessment and testing with the FFH multidisciplinary team.

**Social Research – Listen Up:
International Perspective on Young
People and HIV Risk
9.00am – 10.30am**

**ZIMBABWE, ADOLESCENT SEXUAL HEALTH
AND THE POWER OF NARRATIVES**

Power R¹, ²Cowan F, Langhaug L², ³Matudsi M

¹Centre for Harm Reduction, Burnet Institute, Melbourne, Australia; ²University College London; ³University of Zimbabwe (Funded by the NIH, USA)

The narrative data presented here derive from a community-randomised trial of a complex adolescent sexual health intervention in rural Zimbabwe. This research comprised 30 communities, with a cohort of 6,600 students, followed up over a four-year period. The main outcome measures were reductions in the incidence of HIV-1, HSV2 and unintended pregnancy.

Alongside the quantitative data, qualitative data were collected to better understand the contextual and cultural issues associated with sexual behaviour and adolescent lifestyles. We conducted a series of participatory workshops with young people to explore these issues further. By means of risk mapping, pair-wise ranking and role play, we constructed narratives that depicted some of the key risk situations and environments confronting these young people. Risk environments and contexts included: the family, school, church, the highway, bottle-shop. These narratives (a selection of which will be played during the presentation) were used to imagine more positive futures. As a result community-level interventions were developed to attain these goals and to improve the sexual and reproductive health of rural Zimbabwean adolescents.

**PACIFIC SPECIFIC: YOUNG PEOPLE AND
CONDOM USE IN TONGA AND VANUATU**

McMillan K.E.¹

¹National Centre in HIV Social Research, University of New South Wales, Sydney, Australia.

The Pacific is a region that has not commanded a lot of attention in HIV research to date. To a large extent, the particularities of Pacific island nations are effaced in a consignment to the category 'Asia- Pacific'; a category in which the 'Pacific' tends to appear as rim to an Asian epicentre.

This paper reports on data gathered via 62 in-depth interviews with 18-25 year olds in Tonga and Vanuatu, during March and April 2008. The face to face interviews enquired into young people's personal experiences of, and thoughts about, condom access and use.

While the results are largely consistent with international data on young people and condom use (e.g. the importance of peer networks, and a mismatch between knowledge and practice), some of the data highlight issues related to social and cultural factors that are common to Pacific nations (e.g. living in close communities with strong traditions, and rapid social change), and other results indicate marked differences between the Tongan and Ni-Van participants, directing attention to specificities of each location, (e.g. the community of fakaleiti, and the condom positivity of Ni-Van parents) and consequently to particular opportunities for condom promotion in both Tonga and Vanuatu.

ADEQUATE SUPPLY OF FOOD AND ITS IMPACT ON ADHERENCE TO ART TREATMENT IN PAPUA NEW GUINEA

Akuani F²; Kelly A¹PhD¹; Mek A²; Emori R²; Walizopa L²; Kepa B²; Nosi S²; Kupul M²; Peter B²; Pirpir L²

¹National Centre for HIV Social Research, UNSW, Sydney, Australia; ²Papua New Guinea Institute of Medical Research, Operational Research Unit, Eastern Highlands; Papua New Guinea

Antiretroviral therapies (ART) are highly concentrated and those on treatment are advised to take them with food. For most PLWHA in resource poor settings, the availability of adequate food supply is not guaranteed. This can cause not only challenges for the health and well being of PLWHA on treatment, but also for adherence. To date no research has been carried out in Papua New Guinea in order to examine the relationship between ART and food for PLWHA. This paper presents findings of data collected in three of six sites (Lae, Mingendi and Port Moresby from a social impact study of ART in PNG.

A mixed-method approach was taken using survey and in-depth interviews with PLWHA on ART. From three provinces a total of 152 PLWHA (over the age of sixteen) participated in the survey and 28 participated in the in-depth interviews. Ethics approval was granted by the PNG Medical Research Advisory Committee and UNSW.

Three quarters of the PLWHA from all three sites, reported having an increased appetite since commencing treatment. When asked if they had enough food to satisfy their hunger; a total of 49 out of the 152 participants said they did not; 36.8% were from Port Moresby while, less than 1% were from Mingendi and Lae. Participants were further asked if not having enough food was a barrier to them not taking their medication. Of the 138 who answered, 14.5 % (all of whom were from Port Moresby) said yes, while in Lae and in Mingendi no participants mentioned this. The qualitative data further validated this finding. Fear of resistance, led many who were without food, take them with water only or just a scone. Again, this was only true for those from Port Moresby.

The availability of an adequate supply of food is an important factor influencing PLWHA to adhere to treatment in Port Moresby where food and basic necessities constantly depends on money rather than gardens.

THE ROLE OF COMFORT IN YOUNG PEOPLE TALKING AND LEARNING ABOUT SEX AND HIV IN PAPUA NEW GUINEA

Walizopa LD¹, Emori R¹, Nosi S¹, Akuani F¹, Kupul F¹, Kepa B¹, Cangah B¹, Mek A¹, Pirpir A¹, Keleba K¹, Kelly A²

¹Papua New Guinea Institute of Medical Research, Operational Research Unit, Goroka, Papua New Guinea; ²National Center for HIV Social Research, University of New South Wales, Sydney, Australia

Young people acquire knowledge and attitudes about sex and HIV from a variety of sources. During this process, young people are receptive to both accurate and inaccurate information as well as judgmental and non-judgmental beliefs.

Exploring how and where young people acquire their knowledge and attitudes is important for educators so that programs and campaigns are appropriately developed. This paper explores the role of comfort in young peoples' knowledge acquisition process towards sex and HIV in secondary schools in Eastern Highlands Province, Papua New Guinea.

Focus group discussions (FGDs) were carried out among Grade 12 students attending three secondary schools. A guide was developed which involved 5 predetermined categories, sex, HIV, discrimination, condoms, sex and HIV education. A total number of 73 students participated. Eight genders specific FGDs were carried out, 5 males, 3 females. Informed consent was provided by all participants.

The level of comfort was the primary indicator of students' openness to talking or learning about sex and HIV. Students felt most comfortable to share information, which may or may not be accurate, their views and experiences of sex and HIV with their peers. The extent to which students felt comfortable was determined by the gender of the person they spoke to, where they were talking or listening, the age of the person talking, the relationship of the person to them and their beliefs in the other persons' knowledge about sex.

An atmosphere of comfort is critical to engage students in a meaningful and on-going way to talk and learn about sex and HIV. Educators must take into account the 'space of comfort' in order to transfer accurate knowledge on sex and HIV to young people and enable them to explore their attitudes and behaviors.

ADOLESCENCE SEXUAL BEHAVIOUR AND RISKS OF CONTRACTING SEXUALLY TRANSMITTED INFECTIONS: A CROSS-SECTIONAL ANALYTICAL STUDY IN NEPAL

Regmi, K.¹, Regmi, S.² and Lamichhane G.³

¹School of Health & Social Care, University of the West of England, Bristol, UK; ²Royal Berks NHS Hospital, Reading, UK; ³HIV Prevention and Control Project, Kathmandu, Nepal

It has been well documented about importance of sexual behaviour and risk of contracting sexually transmitted infections (STIs). Growing expansion of urbanisation and in/out migration further create positive paradigm, which facilitates sexual interactions between different hard to reach/risk groups. Over past few decades, despite a large gap in socio-cultural stigma, many young people are engaged with pre/extra marital sexual relationships and becoming inclined to STIs and HIV. This aim of this research was to examine and analyse the patterns of adolescences' sexual behaviour and risks of contracting STIs and HIV.

Five groups of young people comprised of both sexes, 15-24 age, were asked to describe their attitudes and perceptions using in-depth interview (n=29) and group consultations (n=55). To accommodate 'sensitiveness' in researching process, same sex researchers were recruited and used. Respondents were also presented statements and they indicated degree of agreement or disagreement with each on Likert-type scale.

Discussion revealed that socio-cultural taboos, amongst unmarried-adolescence, remain significantly high. Majority of the respondents (75.32%) reported that poor interaction between sexual health providers and unmarried adolescence, fear of stigmatisation and limited access, care and support found important barriers to initiate discussion on all services related to STIs and HIV. Study further demonstrates that, although pre/extra marital practices have been discouraged, the level of education/awareness and urbanisation have further bring associated risks for contracting of STIs and HIV. Study suggests that there was inseparable link between unmarried young people and increasing risks of STIs and HIV - due to change in sex and sexuality; and sexual norms and independence. Most of the respondents (56.1%) believed that early sexual experimentation with multiple partners, alcohol consumption and erratic use of condoms considered as 'high risk' behaviours contracting for STIs/HIV. Implication for sexual health promotion, encompassing the sexuality, life skills, and HIV/AIDS education adheres to the socio-cultural context would bring positive changes in safer sex practices amongst adolescence groups in Nepal.

Program Delivery
9.00am – 10.30am

WHO IS DIAGNOSING HIV IN NSW?

Ward K¹, Crooks L², McAnulty J¹

¹Communicable Disease Branch, NSW Health, Sydney, NSW, Australia; ²Australasian Society for HIV Medicine

Following a positive HIV test result, the diagnosing clinician needs to provide support and information to the patient and either direct clinical care or referral to relevant services. We sought to identify the services that diagnose HIV in NSW and in the case of general practitioners, determine the level of experience in diagnosing HIV.

New South Wales doctors must notify demographic and epidemiological information on all new HIV diagnoses. We analysed the HIV surveillance data collected from 2000 to 2007 by the health provider making the first diagnosis of HIV.

Preliminary results indicate that:

- 70% of HIV patients were diagnosed by a service in their local area.
- 56% were diagnosed by a general practitioner (GP).
- 78% of all notifying GPs only notified one patient with HIV over eight years. This accounted for 34% of all patients diagnosed with HIV infections.

Most patients with HIV infections are diagnosed by GPs, many of whom have not diagnosed HIV in the recent past and therefore may not be familiar with recent developments in diagnosis and management. GPs require access to up to date resources to help manage patients newly diagnosed with HIV.

QUEENSLAND HIV MODELS OF CARE PROJECT 2008

Forrester JM, Boddy G, Kelly M on behalf of the Steering Committee

Increasing patient numbers and finite resources threaten the capacity of current models of HIV care across the country. NAPWA and ASHM have identified this as a critical issue and have commissioned an upcoming review. The 24% increase in the number of HIV cases seeking care in Queensland since 2002, the complexity of HIV in relation to non-HIV co-morbidities in the HIV population, the ageing HIV population and without additional workforce prompted a review of the capacity of the models of care in Queensland.

The HIV Models of Care Project commenced on 25 March 2008 with the employment of the MOC Project Officer for 3 months. The aim of the project was to explore the current model of care and service integration in Queensland. The key focus was to examine the capacity of the models of care given the increase in the HIV population over the last 6 years and the current HIV workforce. The Key objectives of the project were:

1. Describe the current models operating in Queensland;
2. Map the gaps in the current clinical model operating in Queensland;
3. Compare the current clinical model to models of care in other Australian States;
4. Propose recommendations to Queensland Health to improve the current clinical model

The project was limited to a clinical focus. Resources did not permit thorough evaluation of current model from PLWHA or social determinants of health perspective although these are integral to models of care. The project had a 14 person steering committee comprising of key stakeholders. It was agreed to limit the focus of this project to clinical aspects of care with three key areas of clinical focus identified:

1. Traditional HIV clinical care;
2. Non-traditional HIV clinical care;
3. HIV workforce issues.

The project has been divided into 3 sections comprising of a literature review, interviews with key stakeholders, the writing of a report outlining the findings of the interviews, the gaps in the model and the recommendations. 35 clinicians were interviewed across the state, 13 using a tailored interview tool. These data will be presented at the conference.

THE WESTERN AUSTRALIAN RURAL AND REMOTE HIV PROGRAM: A 10 YEAR EXPERIENCE

Cain A¹, Murray R², Martinez OP^{1,3}, French MAH^{1,3}

¹Department of Clinical Immunology & Immunogenetics, Royal Perth Hospital & PathWest Laboratory Medicine, Perth, Western Australia; ²Department of Microbiology & Infectious Diseases, Royal Perth Hospital & PathWest Laboratory Medicine, Perth, Western Australia; ³School of Pathology & Laboratory Medicine, University of Western Australia, Nedlands, Western Australia

A Rural/Remote HIV Program was set up in Western Australia in 1998 as a response to the increasing number of HIV infected patients in country areas and the increasing complexity of treatments and procedures used in the management of HIV positive Patients. The Rural/Remote Team is headed by a Consultant Clinical Immunologist, assisted by other immunologists and an Infectious Disease Physician and includes a Nurse Coordinator who runs the program on a daily basis. The Team provides clinical and nursing expertise and liaises closely with regional health professionals including Population Community Health Units, local GP's and the Prison Service.

The programme also includes management of pregnant women with HIV infection as part of a multidisciplinary team of Doctors, Nurses and Social Workers.

There are only two S100 prescribers in regional Western Australia. All HIV medications are prescribed at Royal Perth Hospital and are sent to the regional Professionals. The Rural/Remote Team conducts clinics and provides formal education sessions for local health professionals. In addition, telehealth facilities are utilised.

The program has registered a total of 236 regional HIV patients since its establishment. The current enrolment is 148 which includes 118 adults, 1 positive child and 26 uninfected children (24 of which are Aboriginal) born to HIV positive mothers. Of the 118 adults, 78 are male including 9 Aboriginal people and 40 are female (including 20 Aboriginal people).

77 of the 118 adults are receiving Antiretroviral Therapy. Of these, 64 (83%) have 100% adherence and 60 (78.5%) have undetectable (<40 copies/ml) HIV RNA in plasma. Of the 29 infected adult Aboriginal people (males and females), 14 are receiving ART. Of these, 11 have 100% adherence and undetectable HIV RNA in plasma.

Our findings demonstrate that although Western Australia is a large state and there is a lack of clinical HIV expertise in Regional WA, it is possible to provide a high level of care that is culturally appropriate to regional HIV patients. The expertise of the Rural/Remote Team has greatly enhanced the activities of local regional health professionals to manage HIV infected patients.

COMPARISON OF CLINICAL HIV PERFORMANCE INDICATORS (POST-HAART) BETWEEN AHOD AND A REGIONAL SEXUAL HEALTH CLINIC 1996-2007

Chuah J, Fankhauser W, Page M, Gold Coast Sexual Health Clinic, 2019 Gold Coast Highway, Miami, Queensland, 4220; Dickson B, Ellem S, CaraData, Parkwood, Queensland 4214; Petoumenos K*; National Centre for HIV Epidemiology & Clinical Research (NCHECR), UNSW, Darlinghurst 2010, *on behalf of AHOD Steering Committee and participating centres.

This study examined the patterns of a minimal set of trend clinical performance indicators from a medium-size, regional sexual health (SH) clinic, the Gold Coast Sexual Health Clinic (GCSH) in comparison to a representative "national" trend (AHOD - Australian HIV Observational Database) during the same period (when available).

Between 01 January 1996 and 31 December 2007, epidemiological and utility data were collected at the GCSH, using the Sexual Health Information Program (SHIP V7.7). The data were collated and expressed in graphs and tables formats, in direct comparison to the Australian HIV Observation Database (AHOD), representing the "national" standard, covering the period of 01 January 1999 till 31 December 2007.

There has been an improvement trend in HIV performance at GCSHC, compared to AHOD in recent years, with the exception of crude death rate. New indicators suggested substantial burden of CVD risks, Depression and Co-infections at GCSH, reflecting disparity in support services & increased complexity of HIV management. This study also re-iterated the potential roles of SHIP and SH clinics in the surveillance and monitoring of provision of ambulatory care in HIV management in Australia, especially when regularly bench-marking against a representative "national standard" like AHOD.

Oral Posters:
Saloner KL - see page 265
Lienert TM - see page 240

Blood-Borne Viruses: Co-Infection
9.00am – 10.30am

IMMUNOPATHOGENESIS OF HEPATIC FLARE IN HIV-HEPATITIS B VIRUS (HBV) CO-INFECTED INDIVIDUALS FOLLOWING INITIATION OF HBV-ACTIVE ANTIRETROVIRAL THERAPY

Oliver B.G.¹, Crane M², Avihingsanon A.³, Visvanathan K.², Matthews G.⁴, Dore G.⁴, Price P.^{1,5}, French M.^{1,5}, Ruxrungtham K.⁴, Lewin SR.^{2,6}

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Following the initiation of HBV-active combination antiretroviral therapy (ART) in HIV-HBV co-infected individuals, hepatic flares (HF) are a significant clinical problem. We hypothesised that HF in this setting is a form of immune restoration disease (IRD).

We conducted a case-control study of cases with HF (n=8; defined as ALT > 5 X the upper limit of normal or > 200 IU/L rise from baseline within the first 12 weeks of treatment) and controls not having HF. Patients were recruited as part of the Tenofovir in Co-infection (TICO) study which is a prospective randomized (1:1:1) trial of tenofovir (TDF) vs lamivudine (LMV) vs TDF/LMV within an efavirenz based ART regimen (n=36). Quantification of immune mediators (IL-18, -2, -6, -8, -10, soluble[s] CD26, sCD30, CXCL-10, CCL-2, TNF- α , IFN- α and - γ in serum was performed by ELISA, antigen capture bioassay or cytometric bead array. The percentage of activated NK cells (CD56^{bright}TRAIL+) in PBMC samples was determined by flow cytometry. In addition, immune mediator levels were correlated with ALT, HBV VL, HIV VL and CD4 count at each time point (Spearman's test).

Cases had significantly higher HBV viral loads ($p=0.011$) and ALT ($p=0.008$) than controls prior to initiation of ART. Following ART, CXCL-10 levels significantly decreased ($p<0.05$, Kruskal-Wallis) in controls but not in cases. In cases, sCD30 levels increased and peaked at wk 8 ($p<0.05$, ANOVA) while there was no significant change in controls. Significant positive correlations were found between ALT and CXCL-10, sCD30, CCL-2 and IL-18 at wk 8. There was a significant increase in sCD26 over time in both cases and

controls ($p<0.05$, ANOVA). The percentage of activated NK cells significantly declined in both cases and controls. IL-2, -6, -8, -10, TNF- α , IFN- α and - γ were not detectable in the majority of case and control sera.

Rises in CXCL-10 (a chemokine induced by IFN- γ) and sCD30 (an immune activation marker of the TNFR family) correlate with HF following initiation of HBV-active ART in HIV-HBV co-infected patients. Also implicated are markers of IFN- γ induction (IL-18) and activity (CCL-2). These data support our hypothesis that HF in this setting is the result of HBV-related IRD in the liver.

TENOFOVIR BASED HAART IS ASSOCIATED WITH HIGH RATES OF HBV DNA SUPPRESSION AND HBeAg SEROCONVERSION IN THAI HIV-HBV COINFECTED PATIENTS

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Two randomised clinical trials of HBV-active HAART in antiretroviral naive HIV-HBV coinfecting subjects were initiated in Thailand in 2004-2005. Randomisation was i) zidovudine(AZT)/lamivudine(LAM)/efavirenz (EFV) or ii) AZT/tenofovir (TDF)/EFV or iii) TDF/LAM/EFV in the TICO study (n=36) and to i)AZT/emtricitabine (FTC)/EFV or ii)TDF/FTC/EFV in HIV NAT 023 (n=18). Study follow-up was to 48 weeks after which all subjects on LAM or FTC HBV monotherapy added TDF.

This analysis aimed to determine >48 week HBV virological and serological responses in HIV-HBV coinfecting subjects receiving TDF containing HAART.

47/54 HIVHBV coinfecting subjects were followed for a median of 27 months (range 14-40m) after HAART initiation. Mean age was 38 years and 31/47 (66%) were male. They were significantly immunosuppressed pre-HAART with a median CD4 count of 42 cells/mm³ and 45% were AIDS-defined. Median HBV DNA was 8.0 log₁₀ IU/ml (IQR 7.5-8.7 log₁₀ IU/ml) with 30/47 (64%) HBeAg positive. All patients were on TDF-containing regimens: 19 in initial combination (TDF+LAM/FTC), 17 with late combination after AZT→TDF switch at 48 w, and 11 on TDF monotherapy for HBV. Median duration of TDF was 25, 8 and 32 months respectively.

All patients had HIV RNA suppression < 50 c/ml and median CD4 count was higher at 342 cells/mm³. 72% of subjects had HBV DNA < 20 IU/ml with 94% HBV DNA < 400 IU/ml. No subject had HBV DNA > 1000 IU/ml. No significant differences were seen in proportion of patients <20 IU/ml by type of TDF-regimen (p=0.236). HBeAg loss occurred in 46% of HBeAg positive subjects with an anti-HBe seroconversion rate of 33%. HBeAg loss was not associated with age (p=0.08), CD4 nadir (p=0.71), change in CD4 count (p=0.53), or baseline HBV DNA (p=0.48). The cumulative rate of HBeAg loss was 13% at 3m, 30% at 6m, 40% at 12m, 50% at 18m and 67% at 24 months. HBsAg

loss occurred in 12%.

In conclusion TDF-containing HAART is highly successful in achieving HIV and HBV-related virological suppression in coinfecting subjects initiating HAART in Thailand, irrespective of regimen. Further work is needed to understand the mechanism(s) of the high rates of HBeAg loss and HBsAg seroconversion.

SCREENING FOR HEPATOCELLULAR CARCINOMA (HCC) IN HEPATITIS/HIV CO-INFECTION USING ULTRASOUND IMAGING AND ALFA-FETO PROTEIN LEVELS

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Hepatocellular carcinoma (HCC) is a serious complication of chronic viral hepatitis once cirrhosis has developed. Screening for HCC allows for early detection in HCV or HBV mono-infection and, if detected, possible treatment. Since HIV co-infection is associated with faster progression of liver disease in both HBV and HCV infection and non-AIDS cancers have recently been shown to be more common and occur earlier in the setting of HIV, it is likely that HIV co-infection increases not only the rapidity of hepatocarcinogenesis but also the overall risk of HCC.

Screening for HCC by abdominal ultrasound and alfa-feto protein (AFP) measurement is recommended at 6 to 12 month intervals for both HBV and HCV mono-infected patients. There are multiple treatment modalities currently available for HCC including radio-frequency ablation, percutaneous ethanol injection, trans-arterial chemo-embolisation, resection and liver transplantation. Treatment is a feasible option in those individuals with hepatitis/HIV co-infection who are successfully treated with HAART and otherwise healthy.

Fifty-one hepatitis/HIV co-infected patients attending the Ambulatory HIV Service at Royal Perth Hospital (RPH) were identified and their medical records reviewed to identify uptake of HCC screening. Since 2000, 21 patients (41%) were screened at least once by abdominal ultrasound, 5 more had ultrasound requested for other reasons (e.g. renal failure). One patient was subsequently found to have a HCC as an incidental finding. Nine of the 21 patients (42%) screened since 2000 have had a second study performed and 8 more patients (31%) are awaiting further follow-up. The mean interval between ultrasound screening was 1.0 year (range 0.5-2.2). Thirty patients (59%) have been screened for HCC with measurement of serum AFP.

There has been poor uptake of initial and follow-up HCC screening with abdominal ultrasound and AFP in hepatitis/HIV co-infected patients at RPH and few patients have had regular follow-up scans. Improved drug treatments have resulted in decreased mortality from HIV in countries with access to HAART but co-infection with hepatitis poses a significant threat to those that might otherwise expect a normal lifespan. Improved screening protocols for HCC are warranted.

GBV-C VS. HIV-1 SEVERAL GBV-C PROTEINS INHIBIT DIFFERENT HIV REPLICATION STEPS

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GBV-C, discovered during the search for new hepatitis viruses displays itself by two extraordinary properties confirmed by clinical studies as well as by in vitro experiments: Although GBV-C is closely related to HCV there is no relation between GBV-C viremia and hepatitis or other diseases. Moreover, longterm GBV-C infection correlates with a higher survival probability for GBV-C/HIV patients.

By co-infection experiments on PBMC and T-cell lines we demonstrate that GBV-C isolates differ in their ability to impair replication of different HIV strains and clades. The HIV inhibitory phenotype was corroborated by single-round of infection assays using reporter-HIV pseudo typed with HIV specific or heterologous envelopes mediating cell entry by different mechanisms. Whereas GBV-C isolates, predefined as HIV inhibitory isolates, suppress reporter-HIV particles independent of the pseudo typed envelope and in order that autonomous of the cell entry mechanism, the majority of GBV-C HIV non-inhibitory isolates displayed no effect on HIV and VSV pseudotype infection. Interestingly, some GBV-C isolates have been identified which impair exclusively the HIV gp120 mediated entry suggesting that more than one GBV-C protein must be involved in HIV suppression affecting different replication steps. Therefore, each GBV-C protein was cloned and separately expressed in T-cell lines and ongoing gene expression was detected by FACS and immunofluorescence. Infection assays with replication deficient reporter-HIV pseudo typed with HIV, SIV, MLV and VSV envelopes were performed to determine the inhibitory capacity of each GBV-C protein and to differentiate between impairment of the gp120/CD4 dependent HIV entry mechanism and later HIV replication steps. Indeed, we identified three GBV-C proteins with anti-viral properties: Whereas the E2 protein blocks exclusively HIV-entry by the induction of an unknown soluble factor, the non-structural GBV-C proteins NS3/4A and NS5A impair HIV post-entry replication steps.

Taken together our results arise that the existence of GBV-C isolates with different HIV inhibitory phenotypes may explain the controversial epidemiological data on the influence of GBV-C infection for HIV progression *in vivo*. Furthermore, the identification of three proteins derived from a non-pathogenic virus reveals an interesting and profitable source for the development of innovative, antiretroviral drugs based on GBV-C derived peptides.

HIV AND HEPATITIS C CO-INFECTION: FROM PATIENT TO EDUCATOR

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Social Workers at John Hunter Hospital worked with a person co-infected with HIV and Hepatitis C through the stages of assessment and treatment for Hepatitis C. After a successful outcome to treatment the person was re-engaged to reflect on and capture his experiences. His experiences were developed into an educational format to inform people in similar situations in the Newcastle and Hunter area. The roles of each Social Worker and the Non Government Organizations in enabling the transformation from patient to educator will be noted. The person has allowed his presentation to be included within this presentation and it will highlight how he prepared for and coped with treatment and it will highlight the outcomes for him.

**Plenary – HIV AND TB Co-infection and
Conference Closing
11.00am – 12.45pm**

HIV AND TB CO-INFECTION

Wood, Robin

Desmond Tutu HIV Centre, Department of Medicine,
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Tuberculosis control programs have failed to contain TB incidence in those countries with high HIV-prevalence. Sub-Saharan Africa is particularly heavily affected, with 80% of the global HIV/TB burden. In 2005 the World Health Organization declared HIV/TB to be "a regional emergency, requiring urgent and extraordinary actions". However, the interactions between HIV and TB at a population level have not been well understood and no new interventions have been instituted within the region. The interactions between HIV and TB are particularly intense in South Africa townships where adult HIV prevalence is >20%, TB incidence rates >1000/100,000 cases per annum and annual risk of TB infection in children may exceed 4.0% per annum.

Population TB/HIV prevalence studies in communities with data on TB incidence and HIV status, allows differential estimation of TB case finding proportions for HIV-infected and uninfected individuals. Passive case finding appears to be a less successful strategy for HIV-infected individuals. HIV-infection is also associated with an increased prevalence of relatively asymptomatic but sputum TB culture-positive individuals.

Observations of HIV-infected individuals from such high TB transmission populations during increasing immune compromise before initiation of ART, together with changes in TB susceptibility during immune reconstitution with ART have provided an opportunity to gain new insights into the role of immune compromise in the development of TB disease. ART decreases the long-term susceptibility to TB but may also paradoxically increase the severity and quantity of clinical presentations of TB soon after treatment initiation. Increased survival of HIV-infected individuals with advanced HIV-infection with persistently increased susceptibility to TB may diminish the potential benefits of earlier initiated ART as a TB control measure. Molecular epidemiologic studies of TB transmission within high density communities identify both reactivation and rapid progression of recent TB infection as important contributors to TB transmission and specific TB strain association with HIV-infection.

Interventions to control TB transmission in high HIV-prevalent settings include, environmental control, improving DOTS program performance, active TB case-finding, isoniazid preventative treatment and antiretroviral therapy. Available clinic and population-based data may be combined to model the impact of individual and combinations of intervention strategies.

**RESTORATION OF IMMUNE RESPONSES
TO *M.TUBERCULOSIS* IN PATIENTS WITH
HIV AND *M.TUBERCULOSIS* INFECTION IS A
DOUBLE-EDGED SWORD**

French MA.

Department of Clinical Immunology, Royal Perth Hospital and PathWest Laboratory Medicine, and School of Pathology and Laboratory Medicine, University of Western Australia

Co-infection with HIV and *M. tuberculosis* is common in many resource-poor countries where antiretroviral therapy (ART) programmes are currently established or being introduced. As HIV and *M. tuberculosis* both infect cells of the immune system, it is not surprising that co-infection with these pathogens has interacting and complex effects on immune responses, especially during immune reconstitution induced by ART.

It appears that 'protective' immune responses against *M. tuberculosis* are restored by the use of ART as rates of tuberculosis generally decline in HIV patients receiving therapy. However, disease provoked by *M. tuberculosis* infection can present during the first few months of ART and might contribute to the higher mortality rates observed during the first 6 months of ART in resource-poor countries. Two patterns of disease are seen. Firstly, 10-20% of HIV patients who start ART after receiving treatment for tuberculosis (TB) experience a 'paradoxical relapse' of the TB. It is often characterised by unusual or excessive inflammation and is therefore commonly referred to as paradoxical TB immune reconstitution inflammatory syndrome (TB-IRIS). Secondly, TB may present *de novo* during the first few months of ART. This is referred to as ART-associated TB and occurs about 20 times more frequently in patients from resource-poor countries than in those from resource-rich countries.

Clinico-pathological and immunological studies suggest that both TB-IRIS and ART-associated TB are types of immune restoration disease (IRD). Tissue inflammation often has the characteristics of a Th1 or possibly Th17 response and circulating interferon- γ T cell and/or delayed-type hypersensitivity (DTH) skin test responses to *M. tuberculosis* antigens are increased. ART-associated TB is particularly associated with an early increase in circulating T cells producing interferon- γ (IFN- γ) after exposure to RD1 antigens of *M. tuberculosis* whereas paradoxical TB-IRIS is associated with a late increase in circulating T cells producing IFN- γ after exposure to PPD, which is preceded by increased DTH responses to PPD. It therefore appears that although TB-IRIS and ART-associated TB are both manifestations of IRD, there are differences in the immunopathogenesis.

Increased understanding of the immunopathogenesis of TB-IRIS and ART-associated TB will improve diagnostic methods and management of patients with HIV and *M. tuberculosis* co-infection.



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PLENARY – HIV AND TB CO-INFECTION AND CONFERENCE CLOSING

OPPORTUNISTIC INFECTIONS IN ASIA – THE UNMET NEEDS

A Kamarulzaman. University of Malaya

In recent years, access to antiretroviral treatment has expanded in every region of the world including East, South and Southeast Asia with coverage expanding more than 75% in some countries. Whilst this has led to significant improvement in the morbidity and mortality rates for people living with HIV, opportunistic infections continue to be a significant issue in the management of the HIV infected in the region.

Delayed presentation and diagnosis of HIV due to a myriad of reasons mean that patients in the region continue to present with a variety of opportunistic infections. Despite advances and development in the science of antiretroviral therapy, unfortunately the same cannot be said for the diagnosis and management of opportunistic infections. Diagnostic tools for the rapid detection of common opportunistic infections such as tuberculosis that are simple to use in the field and are inexpensive continue to elude us. Access to microbiology laboratory, radio-imaging and to less toxic, effective and inexpensive medications for many serious opportunistic infections can be poor outside of large cities in Asia and the Pacific. This often results in inappropriate and delayed therapy of these infections resulting in significant morbidity and mortality.

Finally, with the emergence of MDR tuberculosis, many healthcare centres in the region are ill-equipped to handle the infection control needs to minimise the spread of this infection to patients and healthcare workers alike.

Whilst the expansion of antiretroviral therapy has been met with reasonable success, some attention needs to be given to the ongoing need for better diagnostic tools and treatment for common opportunistic infections complicating HIV in patients living in the Asia and the Pacific.

SATURDAY 20 SEPTEMBER 2008: 11.00AM – 12.45AM



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Back-to-back with the Australasian Sexual Health Conference 15 – 17 September 2008

**Wednesday 17 to
Saturday 20 September 2008**

Perth Convention Centre, Western Australia

**POSTERS
LISTING**



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Back-to-back with the Australasian Sexual Health Conference 15 – 17 September 2008

**Wednesday 17 to
Saturday 20 September 2008**

Perth Convention Centre, Western Australia

**POSTER
ABSTRACTS**



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BASIC SCIENCE

**P105
PROGRESSION OF HUMAN
IMMUNODEFICIENCY VIRUS (HIV)
INFECTION AND ACTIVATION OF CD4+ T-
LYMPHOCYTES**

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Human immunodeficiency virus (HIV) infection involves the progressive decline of CD4+ T-lymphocytes, resulting in severe immune deficiency. This in turn leads to opportunistic infections and cancers characteristic of AIDS, and eventually death. HIV is derived from simian immunodeficiency virus (SIV) which infects primates. It has been observed that natural hosts of SIV, such as sooty mangabeys, are largely asymptomatic when infected. This is sharply contrasted with non-natural hosts of SIV, such as rhesus macaques, and untreated HIV-infected individuals, who experience progressive CD4+ T-cell depletion and go on to develop AIDS.

Currently, the lack of disease progression in natural hosts of SIV is still not clearly understood. A better understanding of why SIV is non-pathogenic in natural hosts will therefore provide valuable insights into the pathogenesis of AIDS in HIV-infected individuals and point to new directions in treatment. Recent experimental data show that CD4+ T-cells of SIV-infected sooty mangabeys exhibit lower levels of the Ki67 activation marker than those of rhesus macaques and HIV-infected individuals, so that disease progression is apparently associated with activation. However, few mathematical models have been formulated to relate the levels of activation to disease progression. In our study, we have developed a model that demonstrates the relationship between activation and disease outcome, and helps us understand why SIV-infected sooty mangabeys are non-pathogenic compared to SIV-challenged rhesus macaques and HIV-infected individuals.

We used a deterministic model of viral dynamics to characterize the interactions between CD4+ T-cells and the virus. Using this model, we can predict the changes in the number of resting and activated CD4+ T-cells, the number of infected cells and the number of virus particles during acute and chronic phases of infection. Our preliminary analysis reveals that a lower level of activation, as seen in SIV-infected sooty mangabeys, results in considerably less depletion of CD4+ T-cells, lower infection levels and somewhat lower viral loads, as compared to infected rhesus macaques and humans. Moreover, the results agree with experimental data obtained from our collaborators. Therefore, we conclude that the non-pathogenicity of SIV-infected sooty mangabeys may be attributed to lower levels of activation of CD4+ T-cells.

**P106
ORAL POSTER FRIDAY 19 SEPTEMBER 1635
– 1645**

**ASHM - CLINICAL - TOXICITY
MONITORING AND UNDERSTANDING**

**APOPTOSIS IN HIV PATIENTS BY LIGATION-
MEDIATED POLYMERASE CHAIN REACTION**

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Increased apoptosis *in vivo* has been associated with serious, persistent antiretroviral drug toxicities, including lipotrophy. A biochemical hallmark of apoptosis, internucleosomal DNA fragmentation, has been detected *in vivo* by ligation-mediated polymerase chain reaction (LM-PCR). Here we develop LM-PCR to *measure* apoptosis, assess its reliability, validate it against two existing apoptosis quantifiers and examine clinical associations with LM-PCR results in well-characterized HIV patients.

Genomic DNA was column-purified from cells. For LM-PCR, blunt-ended linkers were ligated to oligonucleosomal apoptotic fragments. Removal of one linker strand allowed amplification of the apoptotic population using the other strand as PCR primer. We converted LM-PCR into a comparative quantifier by digital image capture of amplified fragmentation then division of trace quantities of 600bp apoptotic amplicons into amplicons of the single-copy CCR5 gene, generating the LM-PCR 'value'. In validation studies, apoptosis in staurosporine-exposed Jurkat cells was measured over time in parallel by active caspase-3/ELISA, terminal deoxynucleotidyl transferase-mediated fluorescence at DNA strand breaks (TUNEL)/FACS, and LM-PCR. We applied LM-PCR to PBMC samples archived from a longitudinal study of HIV patients.

Dynamic range of the LM-PCR value is ≥ 17 -fold (~200-fold difference in apoptotic fragmentation). Inter-gel reliability (reflecting electrophoresis, band detection and photography) and intra-gel reliability (reflecting input DNA mass, sample loading and trace quantity measurement) are both excellent (intra-class correlation coefficients 0.97 and 0.95 respectively, standard errors of measurement 0.17 and 0.12 respectively). Validation experiments reveal LM-PCR is as sensitive as caspase-3/ELISA and more sensitive than TUNEL/FACS for distinguishing low degrees of apoptosis (relevant spectrum *in vivo*). In clinical samples, elevated PBMC LM-PCR results are independently associated with both current treatment exposures and clinical lipotrophy.

LM-PCR has been modified, optimised, validated and shown to be a reliable apoptosis quantifier able to differentiate low degrees of apoptosis. In the validation time course, the LM-PCR profile mirrored that of caspase-3/ELISA (rather than that of TUNEL/FACS) reflecting the known correlation between active caspase-3 levels and induction of the endonuclease responsible for internucleosomal cleavage. The development and validation of LM-PCR to measure apoptosis provides a new and versatile tool for monitoring and understanding important antiretroviral drug side effects in HIV patients.

**P107
IMMUNODEFICIENCY VIRUS EXPLOITATION
OF DENDRITIC CELLS IN THE EARLY STEPS
OF INFECTION**

Junior Freddy KANKOU

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Bernard Frederic University of Bossangoa (Central African Republic)

The unique capacity of dendritic cells (DCs) to capture and process pathogens for presentation to the immune system, combined with their capacity to express costimulatory and adhesion molecules as well as cytokines and chemokines, renders them powerful antigen-presenting cells. However, immunodeficiency viruses hijack DCs to facilitate virus dissemination while subverting effective immune activation. Depending on the activation level of the DC subset, human immunodeficiency virus can use different receptors (CD4, chemokine, and C-type lectin receptors) to bind to DCs. These aspects likely impact whether a DC is productively infected by or simply carries virus for transmission to more permissive targets. DCs efficiently transmit virus to CD4⁺ T cells, driving virus growth as well as providing signals to trigger virus expansion in virus-bearing CD4⁺ T cells. There is accumulating evidence that viral determinants (nef, tat) selectively modulate immature DC biology, fostering DC-T cell interactions and virus replication without up-regulating costimulatory molecules for effective immune function. In addition, virus-loaded, immature DCs activate CD4⁺ virus-specific T cells, and mature DCs stimulate CD4⁺ and CD8⁺ T cells. Thus, even if immature DCs entrap virus as it crosses the mucosae and initiate a CD4⁺ T cell response, this is likely insufficient to control infection. Appreciating how virus modulates DC function and what determines whether virus is processed for immune stimulation or transmitted between cells will unveil the exact role of these cells in the onset of infection and advance preventative microbicide and vaccine/therapeutic approaches.

**P108
POPULATION-BASED GENETIC APPROACH
IDENTIFIES NOVEL HEPATITIS C TARGETS OF
THE IMMUNE RESPONSE**

Pfafferoth K

Human leucocyte antigen (HLA) class-I restricted Cytotoxic T Lymphocyte (CTL) responses play an important role in the clearance of Hepatitis C virus (HCV) infection. Although several HLA class I-restricted epitopes within HCV have been described, the true extent of CTL-driven immune pressure on the virus is likely to be more extensive than currently described. This is partly due to the use of peptides derived from laboratory strains rather than circulating viruses in cellular assays and the focus on CTL epitopes restricted by common HLA alleles.

We previously described a population-based genetic approach that identifies sites within the HCV genotype (GT) 1 genome that represent *in vivo* targets of HLA-driven selection pressure. These sites, and flanking sequence, were then further examined using web-based programs (syfpeithi and BIMAS) to predict putative HLA Class I-restricted epitopes. Sixty one predicted HLA Class I-optimal peptides were identified. These HLA-specific peptides along with their potential escape variants were then tested using automated IFN-gamma ELISpot assays on 50 HCV-infected Haemophilia patients with different infection outcomes. Peptides were selected for each individual based on their HLA Class I alleles. In addition, we adjusted the H77 overlapping peptides (OLPs) to a relevant consensus sequence based on our population study of individuals with chronic GT1 infection.

CTL responses towards predicted HLA Class I epitopes were detected as well as previously unknown escape mutations that interfere with CTL recognition. Furthermore, in many cases CTL responses against the adjusted OLPs induced a CTL response but not the equivalent non-adjusted H77-derived OLPs.

In conclusion, the ELISpot assays using H77-derived OLPs underestimate the overall breadth of the HLA Class I-restricted immune response in HCV-infected individuals. In order to capture the true extent of HLA-specific CTL responses we recommend that H77-derived overlapping peptides should be adjusted for sequence polymorphisms that are present in circulating viruses. Furthermore, the population-based genetic approach highlights sites within the viral genome that are under HLA Class I-restricted selection pressure and can inform HLA Class I-epitope predictions and identifies potential escape mutations.

**P109
ORAL POSTER SATURDAY 20 SEPTEMBER
0830 - 0835**

**ASHM - ORAL POSTER SESSION - CLINICAL,
ALLIED HEALTH AND BASIC SCIENCE**

**MOLECULAR CLONING AND
CHARACTERISATION OF ENVELOPE FROM
HIV-1 PRE-SEROCONVERSION STRAINS**

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Human trials have shown that HIV-1 vaccines eliciting potent T-cell responses without stimulating broadly neutralising antibodies (nAb) to HIV-1 envelope protein (Env) failed to reduce HIV infections or disease progression. Clearly, a better understanding of the nature of the Env that supports HIV-1 transmission is required to produce vaccines capable of raising broad nAb that block HIV-1 at this earliest time. During the course of infection extensive variations arise in Env driving escape from humoral immune responses. Therefore, we sought to examine Env sequences of transmitting strains derived before seroconversion and ensuing selection of Env for resistance to nAb. Transmission strain Env may expose conserved domains sensitive to antibody neutralization and hence studying HIV-1 Env from patients isolates obtained before seroconversion may allow identification of well-exposed neutralization-sensitive epitopes that could inform vaccine design.

Whole blood was collected from patients at high risk for HIV-1 infection and five pre-seroconversion (PSC) samples were selected that were negative for HIV-1 antibody ELISA and western blot, but positive for p24 antigen and HIV-1 RNA viral load assays. RNA was extracted from cell-free virus and reverse transcribed into cDNA. A nested PCR approach was used to amplify near full length envelope genes. The PCR products were cloned and tested for Env-mediated entry by pseudotyping a GFP reporter virus and assaying infectivity in permissive cells. Of the 28 PSC clones tested, 10 (36%) were functional, and these were fully sequenced. Within-sample variability was very low, indicating limited genetic evolution or drift. The number of potential N-linked glycosylation sites was consistently lower in PSC clones in comparison with the pNL4.3 and AD8 reference sequences. These clones will be phenotypically characterized for their affinity for CD4, co-receptors and known broadly neutralizing antibodies. The clones will be further used for immunogenicity trials in animals and the neutralization activity of the resulting sera will be assessed.

P110
ORAL POSTER SATURDAY 20 SEPTEMBER
0825 - 0830

**ASHM - ORAL POSTER SESSION - CLINICAL,
ALLIED HEALTH AND BASIC SCIENCE**
DO NATURAL KILLER CELLS COMPENSATE
FOR IMPAIRED

CD4⁺ T-CELL RESPONSES TO CMV IN HIV
PATIENTS RESPONDING TO ANTIRETROVIRAL
THERAPY?

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Although HIV patients beginning antiretroviral therapy (ART) with extreme CD4⁺ T-cell depletion can achieve a stable virological response, recovery of CD4⁺ T-cell and natural killer (NK) cell numbers and function are variable. We evaluated whether NK cell function might compensate for deficiencies in T-cell responses to a common viral pathogen, cytomegalovirus (CMV).

Male patients with nadir CD4⁺ T-cell counts <50 cells/ μ l and undetectable plasma HIV RNA for >1 year on ART were divided into low (CMV-lo, n=8) and high (CMV-hi, n=10) responders based on CD4⁺ T-cell interferon-gamma (IFN γ) responses to CMV. NK subsets and perforin expression were quantitated cytometrically. NK IFN γ responses to K562 cells were assessed by ELISpot. Cytokine receptor mRNA was quantitated in unstimulated CD56⁺ cells.

NK cell IFN γ responses and proportions of CD56⁺CD16⁺ cells were correlated in patients ($p < 0.001$) and both were lower than in controls ($p = 0.006$ and $p = 0.007$, respectively). However, NK cell IFN γ responses correlated inversely with the expression of IL-10R1 ($p = 0.002$), IL-12R β 1 ($p = 0.004$) and IL-12R β 2 ($p = 0.024$) mRNA. Expression of these transcripts is reduced by exposure to the cytokines, so low expression may reflect immune activation.

Proportions of CD56⁺CD16⁻ NK cells correlated inversely with current CD4⁺ T-cell counts and were weakly inversely associated with CD4⁺ T-cell responses to CMV. Expression of perforin in CD56⁺CD16⁻ NK cells was higher in CMV-lo patients than controls ($p = 0.046$). Hence increased proportions and cytolytic function of CD56⁺CD16⁻ NK cells may compensate for CD4⁺ T-cell dysfunction, but NK cell IFN γ responses remain functionally deficient in patients who began ART with extreme immunodeficiency.

P111
ASSESSMENT OF THYMUS-DERIVED NAÏVE
T-CELLS IN HIV PATIENTS WHO HAVE
EXPERIENCED IMMUNE RECONSTITUTION

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The expression of CD31 by naive T-cells is known to mark a CD4⁺ T-cell that has recently exited the thymus. However CD31 has not been validated for use in other T-cell populations. Here we correlate expression of CD45RA and CD31 on CD4⁺ T-cells, CD8⁺ T-cells, regulatory T-cells (Tregs) and $\gamma\delta$ T-cells with other indicators of thymus function.

PBMC were cryopreserved from 27 previously immunodeficient HIV patients with a stable response to ART (nadir CD4⁺ T-cell count <50/ μ l, age 34-73 years) and 23 healthy control donors (age 14-79 years). Flow cytometry was used to identify cells co-expressing CD4, CD8, FoxP3 (marking Treg) or $\gamma\delta$ TCR, with CD45RA and CD31. Naïve T-cells were enumerated in whole blood using CD45RA and CD62L. TREC levels were quantitated using real-time PCR in CD4⁺ and CD8⁺ T-cells purified using magnetic beads.

The proportion of CD4⁺ T-cells co-expressing CD31 and CD45RA correlated inversely with age in HIV patients ($p = 0.026$) and healthy controls ($p < 0.0001$). In patients and controls, co-expression of CD31 and CD45RA correlated directly with CD4 TREC content ($p = 0.016$ and $p = 0.001$, respectively), naive CD4⁺ T-cell counts ($p = 0.002$ and $p < 0.0001$, respectively) and thymus size ($p = 0.06$, only assessed in patients).

In controls, proportions of CD8⁺ T-cells co-expressing CD45RA and CD31 correlated inversely with age ($r = -0.59$, $p = 0.003$) and directly with CD8 TREC content ($r = 0.69$, $p = 0.0003$) and naive CD8⁺ T-cell numbers ($r = 0.47$, $p = 0.02$). However, these relationships were not observed in HIV patients. In controls, the proportion of $\gamma\delta$ T-cells co-expressing CD45RA and CD31 increased with age ($r = 0.62$, $p = 0.002$). CD45RA⁺ CD31⁺ $\gamma\delta$ T-cells were higher in patients than controls ($p = 0.007$) and did not correlate with thymus volume.

These data validate CD31 as a marker of recent thymic origin in CD4⁺ T-cell populations. Although CD31 may mark CD8⁺ thymic emigrants in healthy controls, the relationships were not evident in HIV patients. CD31 expression on $\gamma\delta$ T-cells may not indicate a thymic origin of these cells. The proportion of circulating CD45RA⁺ CD31⁺ $\gamma\delta$ T-cells appears to increase when the immune system is compromised, such as in older individuals and HIV patients who have experienced immune reconstitution.

P112
LONGITUDINAL PLASMA ANTIBODY TITERS
IN RELATION TO IRD IN HIV PATIENTS
BEGINNING ART IN KUALA LUMPUR

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Hospital, Australia.

A proportion of HIV patients beginning antiretroviral therapy (ART) develop an immune restoration disease (IRD). To investigate the underlying mechanisms, longitudinal changes in plasma antibody titers were investigated in relation to IRD in a cohort of HIV patients beginning therapy with a range of opportunistic infections.

Plasma were collected from 20 male (16 Chinese and 4 Malay) HIV patients beginning ART with <100 CD4 T-cells/ μ l at the University of Malaya Medical Centre, Kuala Lumpur, on 5 occasions over the first year of therapy. 10 patients experienced IRD [2 with cytomegalovirus (CMV) retinitis, 1 with Bell's palsy, 2 with cryptococcal meningitis, 4 with tuberculosis lymphadenopathy (TB) and 1 with varicella zoster virus (VZV)]. Plasma antibodies (IgG) reactive with CMV, Cryptococci, PPD and VZV antigens were assessed using standard ELISA methods.

All patients developed high levels of anti-CMV antibody during 1 year on ART, regardless of IRD. Antibody reactive to cryptococcal antigen peaked only at the time of cryptococcal IRD. Anti-PPD titers were elevated at the start of ART in two TB IRD patients and remained high or increased further at the time of their IRD. However, the other two TB IRD patients retained low to intermediate titers throughout first year of ART. Anti-VZV titers were detectable in the VZV IRD patient at the start of ART, with a marginal increment during IRD. Bell's palsy followed high titers of antibody reactive with CMV and not VZV.

Despite their immunodeficiency, most HIV-infected patients display restored antigen-specific IgG antibody responses during 12 months of ART. Antibody titers were varied considerably between patients but were relatively stable over time, suggesting inherent differences in immune capacity. The high titers of anti-CMV IgG developing in most patients regardless of IRD may reflect the reactivation of CMV by chronic immune activation or may reflect immune dysregulation associated with the restoration of CD4 T-cell numbers and function.

CALD SESSION**P113
TRENDS OVER TIME IN THAI GAY MEN'S
ACCESS TO A SEXUAL HEALTH SERVICE IN
SYDNEY: AN ONGOING PARTNERSHIP**

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¹HIV/AIDS and Related Programs Unit, South Eastern Sydney and Illawara Area Health Service, NSW, Australia; ²ACON, Sydney, NSW, Australia; ³Multicultural HIV/AIDS and Hepatitis C Service, Sydney, NSW, Australia; ⁴HIV and Related Programs Health Promotion Team, Sydney South West Area Health Service, NSW, Australia; ⁵HIV and Related Programs Health Promotion Team, Northern Sydney and Central Coast Area Health Service, NSW, Australia

Thai gay men remain a priority group for HIV and sexually transmissible infection (STI) prevention in Sydney. Research indicates that poor access to sexual health check ups may have contributed to undiagnosed HIV transmission among people from culturally and linguistically diverse (CALD) communities.

Working in collaboration with affected communities and a range of services is essential in health promotion. A media campaign, targeting both ethnic and gay press, to increase HIV and STI testing rates among Thai gay men has been implemented annually since 2006 through a partnership of health services.

In 2008 the media campaign was reviewed to give a new look and better connect with the target audience based on the evaluation from previous years. A participation strategy was also undertaken to involve Thai gay men in the development of new campaign material. The project continued to maintain strong partnerships between services and Thai communities resulting in notable support from the Thai press, publishing a series of articles promoting access to HIV and STI screening for Thai gay men.

Evaluation of this new campaign is being conducted. This will provide data prior, during and after the campaign on Thai gay men's access to a sexual health clinic. These include attendance, proportion of new clients, HIV and STI testings and diagnoses, number of asymptomatic screens and trends over time.

This paper will describe the findings of the evaluation, the process of working in an ongoing partnership, and comment on the trends regarding access of Thai gay men to sexual health screening.

**P114
ORAL POSTER FRIDAY 19 SEPTEMBER 1223
- 1230****ASHM - PETER MEESE MEMORIAL SESSION
- CLINICAL - ASSOCIATED CONDITIONS****COMPLICATIONS
THE TB + HIV CONNECTION**

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Background: The *NSW HIV/AIDS Strategy 2006-2009* has identified people with HIV from CALD backgrounds as a priority. In NSW, there are 350-420 HIV notifications annually, with people from CALD backgrounds accounting for 1 in 5 notifications. Further, 85% of people with TB diagnosed in Australia are born overseas. However only approximately 30% of those diagnosed with TB in NSW have documented HIV tests. In November 2005, NSW Health formed a NSW CALD Interagency committee to enhance inclusion of CALD issues in the work of HIV and related sectors.

Outcome: One of the key initiatives of the interagency was the establishment of the NSW TB/HIV Working Group in recognition of the nexus between TB and HIV for people from priority CALD backgrounds. The working group aimed to develop a strategic approach to support partnerships and collaboration between the TB and HIV sectors across NSW. The key initiative in 2007-2008 has been the development of a state-wide "Roadshow".

The purpose of the Roadshow was to bring together HIV, sexual health and TB clinicians in each Area Health Service to:

- promote the new NSW Health Policy Directives to enable statewide standard practice of testing, diagnosis and management of TB/HIV;
- formalise partnerships and strengthen clinical care coordination between the TB, HIV and related sectors at a local level.

The Roadshow outlined the principles of TB and HIV testing, and management within the respective sectors. It also highlighted key issues relating to migration, settlement and refugee health within NSW.

The development, implementation and outcomes of the "Roadshow" initiative will be discussed in detail including the enhanced partnerships that have been generated between the sectors, and also the lessons learnt in developing and implementing the Roadshow at a state and local service level. The model utilised may also be relevant in addressing other health challenges in HIV care and treatment in the future.

P115
ORAL POSTER FRIDAY 19 SEPTEMBER 2008
0825 - 0830

ASHM - ORAL POSTER SESSION
- PUBLIC HEALTH AND EPIDEMIOLOGY

SEXO LATINO. SEXO CALIENTE. SEXO SEGURO. A SAFE SEX CAMPAIGN FOR SPANISH SPEAKING GAY MEN

Prihaswan P¹, Silveira M¹, Suarez M², Moreton R³, Dabhadatta J⁴, Wang J⁵, Wong S⁵, McGowan L¹.

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The Culturally and Linguistically Diverse (CALD) Gay Men's Working Group is a partnership project targeting high priority CALD populations to reduce HIV and STI transmission. This presentation describes the processes and outcomes of the development of a Spanish-speaking Gay Men HIV and STI Campaign in metropolitan Sydney. There is no available research about the sexual health needs and behaviours of Spanish-speaking gay men in Sydney. To inform the development of strategies a series of focus groups and key informant interviews were undertaken to explore understandings of HIV and STI risk, current service access and testing practices, and utilisation of gay and ethnic media.

Strategies have included a social marketing campaign as well as a social support initiative. Campaign messages were developed in close consultation with Spanish-speaking gay men. The social support component provided an opportunity for Spanish-speaking gay men to connect with each other and reduce social isolation for those men who are not attached to the gay scene. It will also allow for ongoing dialogue between this group and service providers regarding their HIV and STI information needs. Findings from these consultations and campaign development processes will be presented.

P116
BROTHEL BASED ASYMPTOMATIC SCREENING OF FEMALE SEX WORKERS IN A REGIONAL SETTING.

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HIV and Sexual Health Service, Northern Sydney Central Coast Health, Gosford, NSW, Australia.

A needs assessment was conducted of workers living in the regional area of Central Coast NSW Australia in 2005 - 2006. 17% of sex workers reported that they either do not have a regular sexual health checks or have never had them. 43% of workers reported having infrequent sexual health screening. Vaccination rates for hepatitis B were low amongst survey respondents.

Recommendations were made to explore alternative methods to increase the number of sex workers undertaking regular sexual health screens. It was also recommended to explore approaches to increase the number of sex workers fully vaccinated against Hepatitis B.

The asymptomatic onsite brothel screening program was developed and implemented by the Holden Street clinic at Gosford NSW in November 2007.

An outreach screening and anaphylaxis policy was developed. Letters were sent to all brothel managers outlining the program and service provision. This included 7 Asian and 4 English speaking brothels to which response was overwhelming. Screening was offered to asymptomatic workers who were then registered by the clinic, a sexual health history was obtained, serology for Hepatitis A, B and C, syphilis, and Human Immunodeficiency Virus; self collected vaginal swabs, throat swabs for gonorrhoea, first void urine for chlamydia. Follow up with results and vaccination was offered 2 weeks post screening.

Post screening results have indicated that this program gives workers an alternative choice to attending the Sexual Health Clinic thus increasing uptake in screening and education. Results show 50% of new sex workers registered at the sexual health clinic in the past 5 months occurred through the outreach program.

CALD SESSION

POSTER ABSTRACTS

CLINICAL MEDICINE

P117 RELATIVE SIGNIFICANCE OF PHYSIOTHERAPY IN THE TREATMENT OF ACQUIRED IMMUNE DEFICIENCY SYNDROME. A REVIEW OF LITERATURE

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Masterskill College of nursing & health sciences, Cheras {Selangor}, Malaysia.

Objective: Acquired immune deficiency syndrome is characterized by depressed and disturbed immune system and in long term it leads to psychological symptoms like stress, nervousness, anxiety, frustration and worries, which in turns leads to a vicious cycle of Persistent pain and agony. This review is an attempt to enlighten the effectiveness of exercises and other physiotherapeutic interventions for reduction in the stress and anxiety thereby improvement in the psychological symptoms which are commonly manifested in A.I.D.S and are used clinically.

Methods: A systematic review has been made by MEDLINE, CINHAI, AMED, PUBMED, SCIENCE DIRECT, SPORTS DISCUSS, PEDRO, BMJ, COCHRANE LIBRARY and other OVID databases. "The awareness of inevitable death leads to an irreparable damage to the psychology which in turns leads to Psycho morbidity in terms of stress, anxiety and depression. Hereby, speed of the disease can be altered and moderated well with the psychotherapeutic benefits of exercise. As regular active exercises like jogging slow running, pace walking, weight bearing, walking, resistance training, low impact aerobics, bicycling, brisk walk, and muscular strengthening relatively keeps the immune level steady, and decreases the speed of deterioration. Improvements mostly are caused by rhythmic, aerobic exercises, using of large muscle groups of moderate and low intensity for example, jogging, swimming, cycling, and walking. In addition, life style modification and exercises gives feeling of psychological well being, and "In addition a reason to live".

Result: Exercise offers a low-cost alternative treatment adjunct which is easy to adapt. Slight reductions in stress, anxiety and change in the mood alleviate and reduce these symptoms and thereby modulate the immune system. Since ancient era exercises is being used successfully as a therapeutic adjunct in a variety of psychiatric disorders. Enormous strives have made for the treatment but very little documentations has been done till now, however this concept need's more evidence based researches and studies. In future we can develop specific physiotherapy techniques and protocols and to the various stages of the diseases which will be specific in terms of intensity & duration.

Conclusion: No doubt, an inexpensive approach with pain modulation approach is proved effective in treating

the diseases in specific terms of moderation of psychomorbidity. It modulates and reduces it by improving function of immune system and positive attitude towards the disease. Altered the immune system, may break the vicious cycle of anxiety and depressed immune system and cause psycho-physiological relaxation.

P118 RESISTANCE TO ANTIRETROVIRAL DRUGS IN HIV NAÏVE PATIENTS RECRUITED INTO THE ALTAIR STUDY

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The ALTAIR study is a Phase IIIb/IV, randomised, open label study comparing three regimens of combination antiretroviral therapy (ART) in treatment-naïve, HIV-infected subjects over a two-year period. The objective of the study is to compare the safety, tolerability and efficacy of these regimens based upon a fixed dose combination of tenofovir and emtricitabine (Truvada®). The study is being conducted at 36 sites in 15 countries across five continents.

Evidence of harbouring ART-resistant HIV was an exclusion criterion and where available, patients had a genotypic resistance test by local service providers at screening. Two sites sent samples to Sydney for testing. Point mutations were analysed locally and patients were defined as "HIV resistant" or "HIV non resistant" according to the current International AIDS Society (IAS) guidelines.

Of 441 subjects screened, 24 were excluded because of resistance. However, four were subsequently found not resistant according to the IAS guidelines, leaving 20 (4.5%) subjects with truly resistant HIV. Australia had the highest mutation rate (13.6%), followed by Canada (6.2%), Europe (4.3%), Latin America (3.4%) and Asia (2.9%). Resistance to non-nucleoside reverse transcriptase inhibitors (NNRTI) was the most frequent (45.0%), followed by nucleoside reverse transcriptase inhibitors (NRTI) (31.0%) and protease inhibitors (PI) (12.0%). Three patients were resistant to two different classes of ART; two were resistant to NNRTI and NRTI and one was resistant to NRTI and PI. When analysed by region, Europe presented a different pattern with the majority of mutations conferring resistance to NRTI (75.0%) and then NNRTI (25.0%).

The prevalence of mutations associated with resistance to ART in HIV-naïve subjects varied in different regions with highest rates where ART is broadly available. Most mutations conferred resistance to NNRTI and NRTI. Although low in number, these results confirm the importance of testing for ART resistance in patients considering initiation of therapy, especially in countries where ART is widely available.

P119
ORAL POSTER THURSDAY 18 SEPTEMBER
1640 – 1645

ASHM - IAN THOMPSON
MEMORIAL SESSION - CLINICAL ARV

TRIPLE CLASS HIV ANTIRETROVIRAL (ARV)
FAILURE IN AN AUSTRALIAN PRIMARY CARE
SETTING

Bloch M¹, Farris M² Tilden D³ Gowers, A¹, Hughes, T¹
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The prevalence, predictors and outcomes of triple class HIV ARV failure in primary care practice in Australia have not been evaluated.

In a cross-sectional retrospective ethics-approved study we reviewed records of all participants attending a high caseload Sydney primary care practice who failed triple class ARV virologically, immunologically or due to intolerance in each class (NRTI, NNRTI, PI).

Triple class ARV failure prevalence was 5.1%, all were male with a median age of 49. Median age at HIV diagnosis was 29, 96% of participants were diagnosed prior to 1997. 59% initiated monotherapy and 10% dual therapy. At therapy initiation, median CD4 T lymphocyte count was 303 cells/ μ L, and 30%, 52% and 17% were CDC classification A, B and C respectively.

From diagnosis to ARV initiation was 5.5 years (SD 4.11), and time from initiation to triple class failure was 6.76 years (SD 3.17). Over 85% of participants ceased ARV due to intolerance or virologic failure and 31% of participants experienced triple class virologic failure. Intolerance was experienced equally across NRTI, NNRTI and PI (32%, 36% and 34% respectively). Virologic failure was more common with PIs than NRTI & NNRTI (33% vs 25% & 27% respectively)

Resistance information was present for 57% of participants, the prevalence of NRTI, NNRTI and PI resistance was 86%, 76% and 62% respectively. The following independent mutations were prevalent in >35% of participants D67N, L210W, M184V, M41L, T215Y, K103N, L90M, V82A.

For the 51 participants there were 30 unique regimens in current ARV therapy. The median duration of current therapy was 1.6 years. 78% of participants were currently virologically controlled (VL<50).

Thus triple class ARV failure in primary care represents 5% of patients. The common characteristics of these patients is that they had longstanding HIV and were initiated sub-optimally however they are currently well controlled.

P120
IDENTIFICATION OF THE GENETIC
MARKER HLA-B*5701 AND ABACAVIR
HYPERSENSITIVITY REACTION (HSR) IN HIV-
1 PATIENTS IN SYDNEY, AUSTRALIA AND
DEVELOPMENT OF MECHANISMS FOR RISK
REDUCTION

Bloch M, Quan D, Beileiter K and Franic T.
Holdsworth House Medical Practice, Sydney, NSW, Australia

The HLA allele, *HLA-B*5701*, confers susceptibility to abacavir HSR, a systemic allergic reaction which resolves on abacavir cessation but can be life-threatening on abacavir re-challenge. Although abacavir, and abacavir containing compounds in conjunction with other NRTI as treatment options are efficacious, the need to prevent possible HSRs is clear. Hence we measured the prevalence of *HLA-B*5701* in a sample of HIV patients attending a high HIV caseload Sydney primary care practice and used this information to design methods of reducing the risk of abacavir HSR.

Abacavir treatment naïve or previously clinically diagnosed abacavir HSR HIV-1 patients were invited to participate in an Ethics-approved cross-sectional study. Patients who tolerated abacavir were excluded. 300 patients were enrolled, 90% were abacavir naïve, 23.3% were antiretroviral naïve and 66.7% were on antiretroviral therapy that excluded abacavir. All patients were male, median age 43 yrs, of Caucasian (91%), Asian (5.3%), Hispanic (1.7%), Mixed (1.3%), African and Aboriginal (0.3%) ethnicities. The prevalence of *HLA-B*5701* in the abacavir naïve cohort was 8.5%. 10 percent (30/300) of patients enrolled were previously diagnosed as having an abacavir HSR. Interestingly, only 50% (15/30) were positive for the *HLA-B*5701* allele, all being Caucasian. The median CD4+ count at the time of diagnosed HSR was 580 cells/ μ L. 96.8% of patients consented to their information being entered into a secure web-based registry containing de-identified *HLA-B*5701* status and abacavir HSR details. The registry was created with graded access for the treating physician and laboratory.

Successful implementation of a genetic screening protocol revealed the prevalence and distribution of *HLA-B*5701* to be as described in previous studies, but the clinical diagnosis of abacavir HSR may be a poor predictor of *HLA-B*5701* status. The acceptability of a secure web based registry for retention and result access has potential for wider application.

P121 TOWARDS EVIDENCE-BASED GUIDELINES FOR ANAL CANCER SCREENING

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Anal cancer is a condition with significant morbidity and mortality. The early stages of anal cancer and pre-cancer are typically asymptomatic and thus the majority of patients are diagnosed with late-stage disease. As a consequence, anal cancer generally has a poor prognosis, with five-year survival rates between 20% - 70%.

Anal cancer is rare in the general Australian community, with an incidence rate of approximately 1 case/100,000 per year. Such a relatively low rate may explain the comparatively low levels of awareness amongst the medical and general communities. However, rates among MSM, particularly those with HIV infection, are much higher – typically 30-50 cases/100,000.

The introduction of cervical cancer screening programs is widely regarded as a major public health success, with incident cases of cervical cancer decreasing from 40-50 cases/100 000 during the last 20 years to the current rate of 8 cases/100 000. These programs are based on regular cytological screening of 'at-risk' women for cervical squamous intra-epithelial lesions. Women identified with these lesions are then offered the opportunity for early intervention, which prevents the development of cervical cancer.

The aetiological, epidemiological and cytological similarities between cervical and anal cancer have led to increasing calls for the introduction of comparable screening programs for anal cancer in high-risk populations. To date, however, there are no Australian data to support such a move

We therefore set out to determine whether anal cytological screening was acceptable to HIV positive MSM and investigate whether it would lead to a significant increase in the detection of individuals with severe anal dysplasia and anal cancer

A prospective three-year study of 1000 HIV positive MSM attending an HIV outpatient clinic has commenced in Sydney. Epidemiological, behavioural, virological, immunological, cytological and histological data from the first 100 participants will be presented.

Anal cancer is now the third most common tumour occurring in the HIV infected, and rates are rising. There is increasing evidence that screening for anal cancer is now technically possible, and probably desirable. These data will help inform the development of evidence-based Australian guidelines for the screening of HIV positive MSM for anal dysplasia and cancer.

P122 ORAL POSTER THURSDAY 18 SEPTEMBER 1635 – 1640

CLINICAL ANTI-RETROVIRAL THERAPY

HIV DISEASE PROGRESSION IN HIV-1 PATIENTS INITIATING COMBINATION ANTIRETROVIRAL THERAPY WITH ADVANCED DISEASE IN THE ASIA-PACIFIC REGION: RESULTS FROM THE TREAT ASIA HIV OBSERVATIONAL DATABASE (TAHOD)

¹Byakwaga H, ¹Petoumenos K, ²Zhang F, ³Ananworanich J on behalf of the TREAT Asia HIV Observational Database (TAHOD).

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There is little data on HIV disease progression from resource-limited settings in patients initiating combination antiretroviral therapy (cART) with advanced HIV infection

To examine predictors of AIDS or death in patients initiating cART with CD4 cell count \leq 200 cells/ μ L in the TREAT Asia HIV Observational Database (TAHOD).

Patients who commenced cART after 1 January 1997 in TAHOD with a baseline CD4 cell count \leq 200 cells/ μ L were included. The main outcome measure was progression to either an AIDS defining illness or death occurring between 6 months and 2 years after initiation of cART. Predictors of HIV disease progression were assessed using survival analysis methods.

A total of 1253 patients included in these analyses contributed 2056 person years of follow up, during which 113 patients were diagnosed with AIDS and 9 died. The median CD4 count at start of cART was 63 (IQR 25-130) cells/ μ L, the median absolute CD4 cell count six months from start of cART was 175 (IQR, 106-268) and the mean CD4 T-cell increase was 122 (SD, 105) cells/ μ L. The rate of progression to the combined endpoint (AIDS or death) was 5.9 per 100 person years. In univariate analyses gender and CD4 count at month 6 were significantly associated with HIV disease progression. CD4 count at month 6 was the only independent predictor of disease progression (HR 0.75, 95% CI 0.62-0.87, $P < 0.001$).

In patients initiating cART with advanced disease (CD4 count \leq 200 cells/ μ L), the CD4 count at month 6 but not the baseline CD4 count is strongly associated with the risk of HIV disease progression.

**P123
RESISTANCE TO THE HIV-1 INTEGRASE
INHIBITOR RALTEGRAVIR: A CASE STUDY**

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HIV integrase inhibitors are a new class of antiretroviral drugs that target a critical stage in the HIV replication cycle by blocking the integration of viral DNA into the host cell genome. Raltegravir, a strand-transfer inhibitor of HIV-1 integrase, has been associated with complete suppression of viral load when used with an optimised background regimen in heavily pre-treated patients. However, resistance to the drug has been described in a small number of cases.

Here we describe a case of multidrug class resistant HIV, including resistance to raltegravir. The patient was diagnosed HIV positive in October 1993 with a CD4 cell count of 66 (8%). He started on zidovudine monotherapy in 1994 and over the next 8 years was treated with dual therapy as well as various antiretroviral combination regimens. Throughout this time, his CD4 cell count was always less than 100 and HIV viral load greater than 80,000 copies/mL, suggesting poor adherence. In 2001 he commenced treatment with enfuvirtide on an optimised background but with only a transient response.

Raltegravir treatment was commenced in September 2007, resulting in a viral load reduction of approximately 3 log₁₀ after 2 months but with a rebound thereafter. PCR amplification and sequencing of the entire integrase region in samples with viral loads of 3 log₁₀ HIV copies collected during March and April 2008 revealed a wild type gene. Sequencing of the integrase region in a sample collected in May with a viral load of 4 log₁₀ HIV copies identified an N155N/H mutation. Previous studies have described this mutation as one of two possible genetic pathways for development of resistance to raltegravir, the other being Q148H. At this stage no secondary mutations have been identified. The genetic barrier for resistance to raltegravir is low. Adherence will be an important issue if patients are to benefit optimally from its use.

**P124
VACCINATION RATES IN HIV-INFECTED
PATIENTS ATTENDING HOSPITAL
INFECTIOUS DISEASES OUTPATIENT CLINICS.**

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Significant gaps exist between current immunisation recommendations for HIV-infected patients and clinical practice.

The aim of this study was firstly to determine the extent of screening for viral hepatitis and secondly to evaluate immunisation uptake of Influenza, Hepatitis A and B in HIV-infected patients attending outpatient clinics.

A retrospective review of patient case notes, pharmacy records and pathology results was performed. 291 HIV-infected patients visiting the outpatient department (≥1 visit) during the 12-month period of 2006 were identified from our HIV database.

265 males (91.1%), mean age 46.1 years and 26 females (8.9%), mean age 40.7 years, were analysed. Mean CD4 (cells/mm³) was 476.2 (95% CI: 444.6-507.8) with 196 (67.4%) having undetectable viral loads (<50 copies/mL). Hepatitis C antibody was performed on 90.7% (264/291) of patients with 15.9% (42/264) being antibody and PCR positive.

From Hepatitis A testing, 28.9% (84/291) of patients were non-immune and in 36.1% (105/291) serology status was unknown. With Hepatitis B, 31.6% (92/291) patients were identified as vaccine eligible but in 24.7% (72/291) serology markers were incomplete or absent to fully assess vaccine eligibility. 5.3% (14/262) of patients tested for Hepatitis B surface antigen were co-infected.

There were no absolute contraindications to vaccination in any patient. 24.4% (71/291) received Influenza vaccine; 36.9% (31/84) of eligible patients received ≥1 or more doses of Hepatitis A vaccine, and 31.5% (29/92) of eligible patients received ≥1 Hepatitis B vaccine dose. Immune response to vaccination was not routinely performed.

Full serology markers for Hepatitis A and B were not routinely requested in all HIV patients. Poor vaccine uptake among high risk individuals was confirmed from this study. Our findings highlight the real problems faced with routine immunisation coverage in a busy ambulatory HIV practice and emphasise the need for a dedicated and proactive approach to identify, vaccinate and follow up eligible patients. Having implemented a nurse initiated "opt out" immunisation process for 2008, we plan to review its impact next year.

P125 A STUDY OF ALDESLEUKIN WITH AND WITHOUT ANTIRETROVIRAL THERAPY (STALWART): DESIGN AND BASELINE CHARACTERISTICS

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STALWART is a clinical trial designed to evaluate subcutaneous recombinant aldesleukin (rIL-2) as an antiretroviral therapy (ART) sparing agent.

The primary objective of STALWART is to compare change from baseline in CD4+ T-lymphocyte count after 32 weeks in three groups of patients randomized to receive

1. 3 cycles of rIL-2 administered as monotherapy;
2. 3 cycles of rIL-2 with concomitant peri-cycle highly active ART; or
3. neither ART nor rIL-2.

Patients with HIV-1 infection, CD4+ T lymphocyte count ≥ 300 cells/mm³ and who have not taken ART for at least one year prior to randomization are to be enrolled.

This international, phase II, open label trial is randomizing participants equally among the three groups. Protocol implementation is overseen by a multinational team and four International Coordinating Centers in Sydney, London, Copenhagen and Washington DC.

Enrollment will stop on June 30, 2008. With at least 70 patients per treatment group, power exceeds 80% for detecting pair-wise differences in CD4+ T lymphocytes after 32 weeks of 80 to 100 cells/mm³.

Through April 2008, 216 participants enrolled in the STALWART study at 28 of the planned 35 sites. The mean age is 38 years, 19% are female with a median entry CD4+ T-cell count of 414 cells/mL. 75% of participants are ART naïve.

While a substantial phase II database exists on the effect of rIL-2 on CD4+ T lymphocyte count with continuous ART, data are more limited when rIL-2 is not used with ART or with peri-cycle ART. STALWART will provide important information on the potential use of rIL-2 as an ART-sparing treatment in a diverse population.

P126 A RETROSPECTIVE ANALYSIS OF THE ORAL HEALTH AND TREATMENT NEEDS IN PATIENTS WITH HIV INFECTION

Investigators: Freeman AD¹, Logan RM¹, Liberali SL^{1,2}, Coates EA²

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The introduction of highly-active anti-retroviral therapy (HAART) has allowed HIV positive individuals to experience a greater life expectancy but with the potential for an increased risk of medical co-morbidities including non-HIV related oral conditions. Little data is available describing prevalence and severity of oral manifestations and little evidence available for appropriate dental management in a post-HAART cohort of patients.

The Special Needs Unit (SNU) at the Adelaide Dental Hospital has provided comprehensive dental treatment for patients with HIV since 1998. A retrospective case-note analysis with emphasis on identifying the prevalence of HIV-related oral lesions was performed, utilising electronic and hand-written records. A total of 277 (264M: 13F) individuals were identified who had attended SNU for dental care between 2001 and 2008.

The majority of patients presented with medical co-morbidities. There were significant differences observed in the prevalence of oral conditions between HAART and non-HAART groups, and in comparison to a previous pilot study performed in the late 1990s. HAART individuals presented with more oral conditions, including papillomatous lesions, xerostomia and candidiasis. Further analysis of this sample, including the treatment needs of these individuals is pending.

These findings provide information on the prevalence of oral conditions and demonstrate the need to identify and address oral health needs for people with HIV.

P127
KEY SUCCESSES, PROCESSES AND LESSONS
LEARNED:
THE ISENTRESS EXPANDED ACCESS
PROGRAM

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¹ Merck Sharp & Dohme (Australia) Pty Ltd.

The Therapeutic Goods Administration (TGA) Act permits access to unregistered medication for patients with life threatening conditions via Special Access Schemes (SAS). Post-registration an SAS changes status to an Expanded Access Program (EAP) and EAPs may continue until medications achieve listing on the Pharmaceutical Benefits Scheme (PBS).

In setting up the ISENTRESS SAS a broad consultative process was undertaken with internal and external stakeholders.

This consultation process yielded specific decisions.

Australia would run the program as an SAS rather than a global research protocol with the following criteria:

- similar inclusion/exclusion criteria and adverse event reporting procedures to the research protocol
- no other patient data would be collected
- genotype results were removed as part of the inclusion criteria as genotype testing was not available on the Medicare Benefits Schedule
- a CD4 count restriction of < 200mm³/ml was required for each patient enrolment
- any exemptions to the inclusion/exclusion criteria would require approval by the Merck Sharp & Dohme (MSD Australia) Medical Advisor

Australia became the first country outside of the United States of America to commence an ISENTRESS[®] access program on November 1, 2006.

The transition from SAS to EAP and then preparing for PBS launch involves satisfying complex legal, regulatory and logistical requirements, and being transparent in communication with internal and external stakeholders.

This presentation discusses many of the challenges, processes, protocols and successes experienced by MSD Australia in initiating and managing the Australian ISENTRESS[®] SAS/EAP.

P128
WITHDRAWN

P129
CHARACTERISATION OF PARTICIPANT
REACTION TO ABACAVIR IN THE STEAL
STUDY: A RANDOMISED, OPEN LABEL TRIAL
TO ASSESS THE SAFETY AND EFFICACY OF
SWITCHING TO FIXED-DOSE TENOFOVIR-
EMTRICITABINE OR ABACAVIR-LAMIVUDINE.

Davies SC¹, Bloch M², Haskelberg H³, Humphries A³ on behalf of the STEAL investigators

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Abacavir causes a potentially severe hypersensitivity reaction (HSR) in 5-8% of patients. The symptoms of HSR can be non-specific, and in blinded trials HSR was reported in 2-7% of participants not receiving abacavir. The presence of the *HLA-B*5701* allele is a strong predictor for HSR and clinical diagnosis of the reaction has reduced where screening has been implemented. In the STEAL study 360 participants were randomised 1:1 to receive either fixed-dose abacavir-lamivudine or tenofovir-emtricitabine. All were screened for the *HLA-B*5701* allele and excluded if positive (unless previously tolerant to abacavir). We aimed to characterise clinical reports of HSR against a case definition and perform epicutaneous patch tests to determine whether these cases were true immunological HSRs.

Two clinicians reviewed the reports of presumptive abacavir HSR against a standardised case definition, and classified them as true clinical HSR or not. The case definition required at least two intensifying symptoms from a list of 5 categories (rash, fever, respiratory, gastrointestinal and constitutional) within 6 weeks of commencing abacavir, and resolving within 72 hours of ceasing abacavir. For the skin patch test dilute concentrations of abacavir were applied to the skin and reactions were assessed after 24h and 48h. Erythema and vesicular rash limited to the patch area characterised a positive result, with no response to the control vehicle.

Of 441 participants screened for study eligibility, 28 (6.3%) tested *HLA-B*5701* positive and all except one (previously tolerant to abacavir) were excluded from participation. Four participants randomised to the abacavir-lamivudine arm reported symptoms and ceased abacavir due to presumptive HSR. Two of these met the case definition for clinical HSR. Results from the skin patch test will be presented.

Similar to previous reports, *HLA-B*5701* screening resulted in less frequent suspected abacavir HSRs. True clinical HSR occurred in only two (1.1%) patients. True immunological HSR results will be presented.

**P130
COORDINATION OF INTERNATIONAL
CLINICAL STUDY – SET UP, ETHICS, AND
LOCAL REGULATIONS**

Haskelberg H¹, Puls RL¹, Emery S¹ for the Altair Study Group

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ALTAIR is a Phase IIIb/IV, international, open-label, randomised, 96 week clinical trial designed to compare the safety, tolerability and efficacy of three initial regimens of combination antiretroviral therapy based upon a fixed dose combination of tenofovir and emtricitabine (Truvada®). This international study has randomised 329 treatment-naïve subjects at 36 sites in 15 countries. This is an investigator-initiated study, sponsored and coordinated by the NCHECR/UNSW.

To oversee and coordinate this trial, three structures were put in place. Firstly, an Executive structure comprising the Protocol Steering Committee (PSC) and the Data Safety Monitoring Board (DSMB), secondly, the coordinating centres in Sydney and Buenos Aires and thirdly, the site base study teams. With this structure, time, distance and language differences were overcome, primarily through electronic means, including electronic case report forms, a study website and teleconferencing/email communication.

As Truvada® is not licensed in Singapore, Thailand or Malaysia, special importation permits were required. At study completion, Truvada® will be available for an extra year in these countries.

Twenty one sites (58.3%) submitted their own ethics application, while the sponsor alone and in collaboration with a locally contracted lawyer completed 13 (36.1%) and two (5.5%) ethics approvals, respectively. Of the 17 sites requiring national regulatory approval, two submissions were made by the sites, 13 (76.5%) were made by the sponsor and two (11.8%) were made by the sponsor with legal collaboration. Ethics and regulatory submissions took between 35 and 272 days to be approved, with a median of 116.0 days. Following approval, sites took between seven and 192 days to recruit their first patient, with a median of 78.9 days. The main reasons for delay include contractual and financial issues, access to few naïve patients, importation permit and drug labelling delays.

Thus far, the international nature of this trial has provided many challenges, nevertheless full recruitment of the Altair study was achieved within the expected timeline. Overall, good design and careful management were required for successful recruitment of the ALTAIR study.

**P131
ORAL POSTER FRIDAY 19 SEPTEMBER
0805 – 0810**

CLINICAL MEDICINE

**CLINICAL AUDIT: VIROLOGIC AND
IMMUNOLOGIC RESPONSE TO
COMBINATION ANTIRETROVIRAL
THERAPY IN HIV PATIENTS AT A SYDNEY
SEXUAL HEALTH CLINIC**

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Bigge Park Centre (BPC) is a sexual health clinic located in a socially disadvantaged area in South West Sydney. This study served as a clinical audit, documenting the patient demographics of BPC, identifying factors associated with virologic, immunologic and discordant responses, evaluating the centre's ability in HIV control and investigating changes in practice through time.

Data including age, gender, ethnicity, mode of transmission, hepatitis co-infection, prior AIDS defining illness, HIV-1 RNA and CD4 counts were collected from medical records of patients on antiretroviral therapy for treatment of HIV with at least 1 year follow up at the BPC and analysed.

BPC manages HIV patients from diverse backgrounds. Sequential monotherapy was significantly associated with poor virologic and immunologic response. When only treatment-naïve patients were analysed, Caucasian race, high viral load at 1 month and triple-NRTI-regimen were associated with lack of virologic control, whereas lower baseline viral load and triple-NRTI-regimen were associated with reduced CD4 count rise. Lower baseline CD4 count and prior diagnosis of AIDS were associated with poor immunologic response despite virologic control. Virologic control and immunologic response achieved were comparable to that documented in medical literature. There was no significant change over time in terms of timing of HAART initiation, attainment of immunologic response or virologic control since the late 1990s.

HIV control achieved at the BPC was comparable to that reported in medical literature. Enhancement of strategies to promote screening and improve adherence will likely improve patient care.

**P132
CRYPTOCOCCAL MENINGITIS IN RSCM
HOSPITAL, JAKARTA**

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In Indonesia, mortality and clinical characteristics data of cryptococcal meningitis in HIV patient was limited. The objective of our study was to determine the mortality and clinical characteristics of cryptococcal meningitis in our hospital. Total of 209 lumbar puncture was done from January 2005 to December 2007. Sixty patients had cyptococcal meningitis, 52 diagnosed by positive cerebrospinal fluid Indian ink stain and 8 had positive serology. All of them HIV positive. 92% were males and 8% females. Age ranged 17-37 years old. CD4 ranged 1-90 sel/ μ l. The most common symptom was headache (65%), admitted with unconsciousness 30%, neck stiffness 75%, and focal brain lesion from CT Scan 13%. Amphotericin B was given to 35 patients (59%) patients and among them 66% survived. Twenty five patients did not received Amphotericin B, of whom 21 (84%) died and 4 patients (16%) survived. This was a first report of cryptococcal meningitis in Indonesia.

**P133
CORRELATES OF RENAL FUNCTION IN A
COHORT OF STABLE AND VIROLOGICALLY
SUPPRESSED HIV PATIENTS ON ART
SCREENED FOR THE STEAL STUDY.**

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The STEAL study randomised HIV participants to receive fixed-doseabacavir-lamivudineortenofovir-emtricitabine. Participants were screened for renal dysfunction by two methods: glomerular filtration rate (eGFR) calculated by MDRD equation and creatinine clearance (CCrCl) calculated by Cockcroft-Gault equation. The MDRD equation has not been validated in an HIV population but is reported as more accurate than CCrCl. Our aim was to examine the correlation between the two equations at baseline in an HIV cohort and to determine correlates of renal impairment.

eGFR and CCrCl were compared by pair-wise correlation. Associations between those ineligible to participate (n=17) because their eGFR was <70mL/min/1.73m², and biochemical parameters and family history were assessed by logistic regression. Associations between both eGFR and CCrCl and the above parameters, as well as HIV infection related parameters were assessed by linear regression. Parameters for associations were categorised at their median.

Measurements for eGFR and CCrCl were available on 438 of 441 screened patients. Despite some variation, there was high statistical correlation between the two equations (pair-wise correlation co-efficient=0.69, p<0.001). Only three screened patients had eGFR <60mL/min/1.73m², one of which also had CCrCl <50mL/min. Elevated bilirubin (p=0.03) and urea (p=0.04) were more common in the 17 participants with eGFR <70mL/min/1.73m². Independent correlates of reduced eGFR were age \geq 44 years (p=0.01), phosphate <1.01mmol/L (p=0.02) and urea \geq 5.3mmol/L (p<0.001). Independent correlates of reduced CCrCl were age \geq 44 years (p<0.001), BMI \leq 25 (p<0.001), amylase \geq 62U/L (p=0.012), urea \geq 5.3mmol/L (p=0.001). The following previously reported correlates of renal impairment were not found to be significantly associated in our cohort: HIV parameters, hypertension, smoking, dyslipidaemia, diabetes and tenofovir use.

While eGFR and CCrCl were highly correlated, we could not evaluate these equations in terms of renal dysfunction because very few participants had poor renal function. Reduced eGFR and CCrCl were both associated with older age and elevated urea, as expected. Our observations regarding bilirubin and phosphate correlations with lower eGFR prompt further analyses of STEAL data regarding the use and duration of protease inhibitors and tenofovir respectively.

P134
WITHDRAWN

P135
ORAL POSTER FRIDAY 19 SEPTEMBER 1625
- 1635

ASHM - CLINICAL – TOXICITY

INTERACTION BETWEEN INHALED CORTICOSTEROIDS AND PROTEASE INHIBITORS (PI) IN HIV-INFECTED INDIVIDUALS - WHICH IS THE PREFERRED INHALED CORTICOSTEROID?

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Iatrogenic Cushing syndrome due to concurrent use of inhaled fluticasone propionate and ritonavir is well described in the literature and is not uncommon in clinical practice. However, there are less, if any, reports of the CYP3A4-mediated interaction between ritonavir and other inhaled corticosteroids (budesonide, ciclesonide and beclomethasone). The objective of this literature review is to ascertain the inhaled corticosteroid causing the least adrenal suppression when combined with ritonavir boosted protease inhibitors (PIs) based on available pharmacokinetic and comparison studies. A search using electronic databases, Pubmed and Embase was completed and included papers published prior to 1st March 2008.

The finding of the review indicates that both inhaled budesonide (Pulmicort[®], Symbicort[®]) and ciclesonide (Alvesco[®]) have less systemic corticosteroid effects than fluticasone (Flixotide[®], Seretide[®]) however the small levels systemically active are also cleared via CYP3A4 pathways, therefore the potential still exists for adrenal suppression to occur if combining with ritonavir.

Beclomethasone dipropionate (QVAR[®]) is not metabolised by cytochrome P450 enzyme pathway. Therefore, any beclomethasone absorbed systemically is cleared regardless of ritonavir CYP3A4 inhibition. Further research and clinical experience is required to determine if beclomethasone should be considered the inhaled corticosteroid of choice in HIV-infected individuals taking ritonavir boosted PIs.

P136
ORAL POSTER THURSDAY 18 SEPTEMBER
1630 – 1635

ASHM - IAN THOMPSON MEMORIAL
SESSION - CLINICAL ARV

EFAVIRENZ AND POSITIVE URINARY DRUG SCREEN FOR CANNABINOIDS

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We have observed two patients on long term efavirenz therapy as part of an anti-retroviral regimen test positive for urinary cannabinoids following routine employment drug screening. In both cases use of cannabis was denied but the positive results led to employment termination. It is now recognised that a side chain of efavirenz can interact with commercial drug assays resulting in a false positive result. As drugs of abuse screening is now routine in many employment sectors this interaction may have a significant impact on employment choices and prospects for those individuals receiving an efavirenz containing anti-retroviral regimen. To explore this further, urine samples from 15 individuals receiving efavirenz were assayed by the cloned enzyme donor immunoassay (CEDIA, Microgenics) for the presence of cannabinoids. A control group of 20 individuals on non-efavirenz containing regimens were also assayed. Confirmatory testing with gas chromatography was performed on all positive samples. Correlation between plasma efavirenz concentrations and drug screen results was also determined. Our analysis suggests that patients receiving Efavirenz should expect a false positive urinary cannabinoid result when tested by the CEDIA method. Additional confirmatory testing by gas chromatography is required to clarify the result. This information may be important in some individuals when selecting anti-retroviral drugs.

P137

BASELINE DATA FROM THE ALTAIR STUDY: A RANDOMISED, OPEN-LABEL, 96-WEEK STUDY COMPARING THE SAFETY AND EFFICACY OF THREE DIFFERENT COMBINATION ANTIRETROVIRAL REGIMENS AS INITIAL THERAPY FOR HIV INFECTION.

Puls, RL¹, Arriaga, ME¹, Satchell C¹, Dazo C¹, Haskelberg H¹, Boesecke C¹, Drummond F¹, Srasuebku, P¹, Emery S¹, for the Altair Study Group.

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ALTAIR is a Phase IIIb/IV, international, randomised, open label study comparing three regimens of combination antiretroviral therapy (cART) in treatment-naïve, HIV-infected subjects at 36 sites in 15 countries on five continents. Patients were randomised in a 1:1:1 ratio to each cART regimen containing a fixed dose formulation of tenofovir and emtricitabine (TDF/FTC), with either efavirenz (EFV) or ritonavir boosted atazanavir (r/ATV) or zidovudine (ZDV) plus abacavir (ABC). The primary objective of this study is to compare safety and virological efficacy, as measured by the time-weighted mean change from baseline plasma HIV-RNA over 96 weeks.

Of 441 patients screened, 87 were ineligible, one died before randomisation, eleven were outside the screening period and 13 chose not to continue into the study. Of 329 randomised patients, two were incorrectly randomised. Of those correctly randomised, 100 (30.6%) patients were from Asia, 74 (22.6%) from Europe/Israel/Canada, 120 (36.7%) from Latin America and 33 (10.1%) from Australia. Among ineligible patients, 20 (4.5%) were ineligible due to genotypic resistance, 12 (2.7%) to HLA-B57*01 positivity, 20 (4.5%) to low creatinine clearance and 22 (5.0%) to other laboratory parameters, including six (1.4%) with low CD4 count and six (1.4%) with low plasma HIV viral load. Patients were predominately male (76.6%), with category A HIV infection (72.0%) and infected by homosexual (52.0%) or heterosexual (45.9%) sex, respectively.

At randomisation, mean (SD) CD4+ T cell count was 229 ± 116 cells/μL and 11.3% of patients had ≥350 cells/μL; mean (SD) plasma HIV viral load was 4.7 ± 0.7 log₁₀ copies/mL and 54.4% of patients had ≥ 100,000 copies/mL. Fasting glucose was 5.0 + 1.0 mmol/L, cholesterol was 4.0 + 0.9, HDL was 0.9 ± 0.3 and LDL was 2.5 ± 0.8 mmol/L, triglycerides were 1.6 + 1.7 mmol/L. Baseline Framingham cardiovascular disease risk was calculated for 304 patients and the mean score was 3.9 (3.5); 286 (94.1%) were at ≤ 10%, 16 (5.3%) were at between 10% and 20% and 2 (0.6%) patients were at ≥ 10% risk of cardiovascular disease within ten years.

The study continues and the last patient will complete 96 weeks on therapy in February 2010.

P138

ORAL POSTER THURSDAY 18 SEPTEMBER 1215 – 1223

ASHM - PETER MEESE MEMORIAL SESSION - CLINICAL - ASSOCIATED CONDITIONS COMPLICATIONS

INCIDENCE AND CHARACTERISTICS OF HIV-ASSOCIATED LYMPHOMA IN THE ERA OF HAART AT FOUR MAJOR AUSTRALIAN TREATMENT CENTRES

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Since the introduction of highly active antiretroviral therapy (HAART) a decrease in incidence of AIDS-defining malignancies including non-Hodgkin's lymphoma (NHL) has been described. Whether the incidence of Hodgkin's lymphoma (HD) has decreased is unclear. In order to assess incidence and characteristics of HIV-associated lymphoma (HAL) in Australia we have collected longitudinal data since 2003 from four major HIV-treatment centres.

During this five year period a total of 79 HALs were observed. There was no apparent increase in HAL diagnoses over time with an average of 13 new cases per year (except 25 in 2005). The majority of HALs (n=64, 84%) was NHL with diffuse large B-cell lymphoma as the predominant histological type (n= 38). Extra-nodal involvement was common (n=64). The incidence for HD was lower than for NHL with a total of 12 cases and no increase over time.

For the majority of NHL-patients (76%) lymphoma was the first AIDS-defining illness. The mean CD4-cell count at HAL-diagnosis was relatively high with 258 cells/ul. The mean nadir was 147 cells/ul. The majority of patients (n=51) was ARV treatment-experienced and 42 patients (53%) were on HAART at time of HAL-diagnosis. Of patients on HAART 24 (57%) had achieved virological suppression (< 500 copies/ml). There was no significant difference for NHL and HD in viral load (VL) at HAL-diagnosis, CD4 nadir and current CD4-cell count. The majority of patients (79%) received HAART during chemotherapy. 42% achieved complete response. 24% had a partial response. 21% experienced progression of disease and 13% had stable disease. Of 79 patients in this 5 year period 17 have died.

Due to the small number of cases we are limited to making general observations only. However, this is the first longitudinal cohort that will provide more information about the natural history and incidence of HAL in Australia.

P139
ORAL POSTER FRIDAY 19 SEPTEMBER 1645
- 1655

ASHM - CLINICAL - TOXICITY

TRANSIENT SICK SINUS SYNDROME RELATED TO LOPINAVIR-RITONAVIR IN A PATIENT WITH AIDS

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A 42-year-old northern Thai man who recently migrated to Australia developed transient sick sinus syndrome soon after institution of treatment with Kaletra (lopinavir/ritonavir) and Kivexa (abacavir/lamivudine) is presented. His most recent CD4 count was 390 cells/l, and he was taking no other medications, nor any herbal medicines. He presented with dizziness to the Emergency Department after 3 doses of Kaletra (and 2 of Kivexa). There was no history of any cardiac conditions and the only other history of note is a positive VDRL test, and Herpes Zoster 6 months ago.

On admission he was bradycardic with pulse rate of 42/minute. His ECG demonstrated sinus arrest with junctional escape rhythm which later changed into atrial fibrillation followed by sinus bradycardia. Three days after stopping his medications he reverted to normal sinus rhythm. To our knowledge only 4 similar cases have been described in the literature, and 3 occurred in Japanese individuals. All of these cases were associated with the introduction of lopinavir/ritonavir. In contrast to our patient, however, all of the previously described cases were on various other medications apart from antiretrovirals, and the mechanism of cardiac conduction defects with these agents has not yet been elucidated.

Our case occurred in a man who is HLAB57-negative, and it is proposed that lopinavir/ritonavir is the cause of this mans sinus arrhythmia.

Even though the numbers of affected individuals are small, 3 out of 4 individuals were of Asian origin which raises the question about genetic propensity to this particular manifestation of this particular combination of antiretroviral (lopinavir/ritonavir).

P140
**HIV-TB CO-INFECTION: A SOUTH
AUSTRALIAN EXPERIENCE**

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Tuberculosis (TB) is the most common opportunistic infection in Human Immunodeficiency Virus (HIV) / Acquired Immunodeficiency Syndrome (AIDS). The accessibility of global travel, increasing migration as well as displacement of communities due to conflict, war and famine has led to increased human movement throughout the world.

TB incidence had been falling in developed countries until recently. However, with the rise of HIV infection, TB has become a diagnostic and management issue for clinicians worldwide. We present three recent cases of HIV-TB co-infection which highlight practice points in this setting.

The diagnosis of TB was made after the diagnosis of HIV in all three of the cases. The possible place of acquisition differed in all three patients. Two had typical radiological findings consistent with TB. One was treated for TB prior to HIV whilst the remaining had HIV treatment commenced prior to TB treatment. All three had similar triple therapy for HIV. Two had confirmed *Mycobacterium tuberculosis* on culture with one showing partial resistance to isoniazid. All three were commenced on standard quadruple therapy; moxifloxacin and streptomycin was added until microbiological confirmation for the third. Intravenous therapy was needed in one patient due to drug malabsorption. Treatment was halted temporarily in two due to adverse drug reaction and for complications arising from HIV/TB. Directly Observed Therapy was utilized in two patients to ensure adherence to therapy. The duration of therapy ranged from six months to two years.

The HIV/AIDS pandemic is threatening to destabilize control of TB, especially in areas of the world lacking the resources to combat the burgeoning numbers of HIV-TB co-infected individuals. Despite the relatively low numbers of individuals co-infected with TB and HIV, Australia is not immune to the effects of this growing world trend. The complexities associated with treatment of HIV-TB co-infection should not prevent appropriate and adequate treatment.

**P141
SEQUENTIAL TRANSMISSION OF 3-CLASS
DRUG-RESISTANT HIV**

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Patient A presented in February 2007 requesting non-occupational post-exposure prophylaxis (nPEP) for human immunodeficiency virus (HIV). HIV testing confirmed previously unknown established HIV-1 infection. A negative HIV test was documented in October 2005. On history he may have experienced seroconversion illness during winter of 2006. Baseline HIV genotype testing showed resistance to nucleoside reverse transcriptase inhibitors (NRTIs), non-NRTIs and protease inhibitors. The resistance associated reverse transcriptase mutations detected were A98G, K103N, V108I and T215C. The major and minor resistance associated protease mutations detected were L10V, M46I, I54V, Q58E, A71V, L76V, V82F and L90M. Subsequent contact tracing identified a possible source patient (patient B) who was highly treatment experienced with multi-drug resistant HIV on antiretroviral therapy. Phylogenetic comparison of the two patients' HIV reverse transcriptase and protease sequences confirmed a high (100%) probability of transmission from patient B to patient A. Patient A was counselled about the need for protected sex and relevant disclosure of his serostatus. A third HIV-infected patient (patient C) was identified in 2008 with a highly similar, if not identical, antiretroviral resistance pattern to that of patients A and B. Patient C had serology consistent with recent HIV seroconversion. Patient A may be a more likely source of HIV transmission to patient C, as the plasma viral load of patient B has been nearly undetectable (but not completely so) since starting a new antiretroviral regimen in 2007.

We postulate that a multi-drug resistant strain of HIV-1 has been sequentially transmitted to two patients.

**P142
PREVALENCE OF INTEGRASE INHIBITOR
RESISTANCE MUTATIONS IN TREATMENT
NAÏVE AND TREATMENT EXPERIENCED HIV
INFECTED PATIENTS.**

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In two Phase III trials (BENCHMARK-1 & 2), raltegravir (RAL), an HIV-1 integrase inhibitor (INI), was documented to be effective in treating patients with triple-class resistant virus. RAL failure was associated with INI resistant virus secondary to 3 distinct resistance pathways:

N155H; Q148H and Y143K each accompanied by secondary resistance mutations.

RAL will be available in Australia in June 2008 for use in treatment experienced patients. However, baseline resistance remains largely unknown.

Methods: Following extraction of HIV RNA from the patient's plasma a one step RT-PCR (primers bpol2: 5'-AGCTTCCCCGAAATATACATATGGT-3' & Pol 1937

5'-AGAAGTAAACATAGTAACAGACTCAC-3') followed by a 2nd round nested PCR was performed (primers: Pol-6: 5'-ATGGTGTTTTACTAAACTTTTCCATG-3' & Pol 1976:

5'-AATCATTCAAGCACAACCA-3'). Following purification, the amplicons were sequenced (Applied Bioscience Systems®).

Results: Of the 104 INI naïve isolates, 88% (n=91) were clade B. The non-B

(n=13) isolates included 4 clade A; 4 clade C; 3 clade G and one each of CRF02-AG and CRF01-AE. 51% (n=53) of the isolates were from treatment experienced patients with triple and double class resistant virus.

Compared to the IN clade B consensus sequence, polymorphisms were observed in 43% (122/288) of all amino acid positions. V30I; F100Y; L101I; T113V; K136Q; V201I; T206S; T125AV; and S283G were significantly more likely to occur in non-B HIV clades. The presence of V72I was significantly associated with RT and PI drug resistant virus whilst L101I and A265V were significantly associated with viruses from treatment naïve virus. Previous antiretroviral therapy was significantly (p<0.01) associated with greater genetic variability (mean 4.6%) on distance matrix studies of integrase

(IN) gene (for clade B only) compared to ARV naïve isolates (mean 3.8%).

No primary mutations were documented in any samples. Secondary RAL associated mutations were observed in 9% (n=11) of samples, with G140S (n=2); L74I (n=5) and I203M (n=4) detected.

Conclusion: Failure of previous antiretroviral therapy selects for IN gene polymorphisms; some of which may be secondary INI resistance mutations. No primary RAL mutations were detected; secondary RAL mutations were observed in 9% of HIV-1 isolates. It would be reasonable that all patients have INI resistance genotyping prior to the commencement of RAL

P143 BASELINE RESISTANCE TO ETRAVIRINE (TMC 125) IN ANTIRETROVIRAL EXPERIENCED AND NAÏVE HIV INFECTED PATIENTS.

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The first generation of NNRTIs (nevirapine, efavirenz) can rapidly select resistant HIV, with extensive cross-resistance within the class. Significant NNRTIs resistance can be mediated by a single mutation. Etravirine (TMC125), is a second generation NNRTI that is active against HIV-1 resistant to the first generation NNRTI, including viruses with the K103N RT mutations. TMC125 resistance may occur with the accumulation of the NNRTI mutations; V90L, L100I, V106I/A, Y181C/I/V, A98G, K101E/P, V179D/F and G190A/S, with three or more of these mutations required for full resistance.

Aim: To evaluate the potential role of etravirine in antiretroviral experienced HIV infected patients who may have K103N or other NNRTI mutations.

Methods

ARV resistance genotyping were performed on HIV-1 protease and RT regions from 730 HIV-1 infected patients: 74% (543/730) were ARV-experienced. Following RNA extraction from plasma, RT (750 base pairs) and protease (300bp) were amplified by nested PCR using gene-specific primers, and sequenced. Interpretations of sequence for primary and secondary RT and protease mutations were directly adopted from the Stanford University HIV Drug Resistance database.

Results

Of the 543 ARV-experienced patients 22% (117/543) had the K103N mutation. Etravirine associated mutations were detected in 40% (47/117) of these patients. However, only 4 (0.9%) patients had ≥ 3 associated mutations (V106A, V179D and G190A), 18 (15.4%) had 2 and 28 samples had a single mutation.

In ARV-naive patients (n=187), 10% had first generation NNRTI resistant virus with K103N as the most prevalent mutation (74%; 17 of 23). One patient (0.5%) had 3 associated mutations; 5 (3%) had 2 mutations and 13 (7%) patients had a single associated mutation.

Conclusions

In ARV experienced and naive patients, etravirine efficacy would be compromised in 0.9% (n=4) and 0.5% (n=1) patients respectively. Care must be taken, with the use of the first generation NNRTIs as the accumulation of 3 or more mutations may limit TMC125 efficacy.

P144 THE ACCEPTABILITY OF A WEB-BASED ELECTRONIC CASE REPORT FORM (ECRF) FOR USE IN CLINICAL TRIALS.

Vulcao JAV, Courtney-Vega K, Humphries A, Jacoby S, Haskelberg H on behalf of the STEAL Study Group National Centre in HIV Epidemiology and Clinical Research (NCHECR), UNSW, Darlinghurst NSW, Australia.

The electronic Case Report Form (eCRF) is a web-based, interactive data collection tool that has recently been introduced into clinical trials conducted by NCHECR. The aim of this paper is to examine the acceptability of this new system by the site coordinator, and if the acceptability has changed over 2 years.

The STEAL study was the first NCHECR trial to use eCRF. The Inform eCRF was launched in 2006 at which time the first acceptability survey was sent to all coordinators (n=34). In 2008 the same survey was sent again to all coordinators. In 2008 20/29 (69%) responded, 13 of whom completed the survey in 2006.

Overall, in 2008 there were significantly more coordinators that prefer eCRF to paper CRF (from 53% in 2006 to 85% in 2008). For those coordinators (n=13) that completed both surveys their preference for eCRF increased from 54% to 69% over the 2 years of the study. Overall preference for the Inform product for future studies was 75% in 2008, compared to 68% in 2006. Satisfaction with the eCRF features, functionality, quality, reliability and ease of use improved from approx 74% to 96% over the two years. Overall comments included user-friendliness, faster and cleaner data collection, quick query management processing and better on environment.

Overwhelmingly study coordinators preferred entering clinical trial data into internet-based eCRFs as compared to paper-based forms. The poor overall response rate of 69% may have skewed the results. Although this was the first time NCHECR utilised an eCRF, there was overwhelming positive support for its continued use. For NCHECR the advantages include real-time access to data, more efficient study monitoring and elimination of storing paper-based CRF.

COMMUNITY PROGRAM

P145 HIV/AIDS PREVENTION IN PAKISTAN: DYNAMICS OF CONDOM USE AMONG MEN HAVING SEX WITH MEN

Akhtar MM, Punjab AIDS Control Programme, Lahore, Pakistan.

HIV/AIDS is at an early stage in Pakistan and patterns of risk behaviors facilitating rapid spread of infection are widespread. Majority of clients buying sex commercially do not use condom. Condom promotion among men having sex with men was a major component in service delivery package under World Bank funded Enhanced HIV/AIDS Control Programme, implemented with men having sex with men in Lahore, Pakistan. Out reach workers visited the targeted population at Gurus' houses where clients were provided with information about HIV/AIDS, motivated to have safe sex and offered condoms. Selected information on condom use was collected from 500 clients. Majority of clients were unmarried and were carrying condoms at the time of interview. Clients on average had anal sex at least once a day. Condom use rate was lower among married clients than unmarried. Condom use rate declined with increase in age. Major reasons for non-use of condom were decrease in sexual gratification and non-affordability. In future, follow-up visits to targeted clients would be increased and condoms would be provided to non-affording clients.

P146 EMPOWERING WOMEN GROUP FOR HIV PREVENTION

Aryal K
Nepal Red Cross Society

Due to the little access to information Women in communities are really out from different health facilities and are found more vulnerable than males to HIV/AIDS due to social and physiological reasons. So, Nepal Red Cross Society (NRCS) started HIV prevention intervention for women since 2002 aiming to reduce HIV transmission rate by enhancing knowledge and skills among women and to empower women through active participation as a result they can take responsible decision regarding Reproductive Health (RH), HIV/AIDS, STIs.

Women from low economical background marginalized groups and excluded from the society, have no other access of information regarding HIV and AIDS, who practice relatively high risk behaviors are selected after orientation. Selected women of aged 16-39 years are trained on HIV/AIDS, RH, STIs and leadership skills and mobilized to disseminate information in communities through peer to peer sharing, organizing home visits, orientation sessions, competition during different festivals and performance of street drama. One of the major responsibilities of the trained women groups is to organize a monthly meeting aiming to enhance knowledge and skill regarding RH, HIV/AIDS and STIs. These meetings are designed as the input sessions so as to empower the women group. They have to submit report containing activities carried out, lesson learned, the impact of the programme and feedback for the improvement. They collect address of migrated people and send letter containing information on HIV/AIDS.

Although it has been not a long time, NRCS addressed women group on its HIV prevention programme but it has able to achieve successful result. The number of women visiting health facilities for STIs treatment has been increased; they are empowered to take a responsible decision after project implementation in communities. 1460 women Peer Educators are developed. Increased demand of condom indicates that service seeking behavior among women has improved. They can talk openly about HIV/AIDS, STI and RH.

Empowerment of women is essential to reduce the risks of HIV/AIDS and STI. Similarly, activities have to be designed focused on problems like, illiteracy and lack of employment opportunities which are contributing factors to weaken women status in the community and should cover the women from high risk group.

**P147
PEER EDUCATORS CONFERENCE; TO
CONSOLIDATE LEARNING & EXPERIENCES
WORKING AS A PEER EDUCATOR**

Aryal, K
Nepal Red Cross Society

With the motto "I serve" Junior/Youth Red Cross (J/YRC) was established in 1965. Nepal Red Cross Society through J/YRC from 1994 has been implementing HIV/AIDS Prevention and Reproductive Health Program. Annually 2297 Peer Educators (PEs) are developed. They are instrumental to disseminate knowledge and skill around HIV/AIDS amongst peer. Packing into account the need to recognize their contribution to the program Peer Conference was held with the objectives; to bring the scattered PEs in one place in order to share their experiences, lesson learned and obstacles of the program period, to update their leadership skill and knowledge, to develop independently problem solving skill.

Altogether 49 participants from different regions i.e. terai, mid-hill, far and mid eastern and western areas representing 13 districts of Nepal participated in the conference. Gender balance was ensured in the participation, the number of female participants was equivalent so as to male. Participatory learning methods like group discussions, question answers, situation discussions, practical work, were applied. Media presentation and models were used to make the sessions more effective and educative. The participants made presentation highlighting prominent issues around Youth PEs. Altogether 33 abstracts were prepared by the youths with the back up support of teacher sponsor. Teacher Sponsors participated in the conference for the encouragement of the PEs. To update knowledge of the participants, input sessions were organized.

The conference concluded with adopting Deceleration. The deceleration reads:

Realizing HIV/AIDS

- a global and local concern
- has a large-scale social, economic and health impacts
- the young people are the most sufferers

Participants express commitments to; act actively to raise awareness among youth and community at large, support youth for positive behavioral changes, engage in the care and support to positive people and creating an enabling environment to them, advocacy for increased access to age-specific appropriate knowledge.

"This program has helped me in developing my skills, now I am confident that I can express my self even in the large gathering". Santi Tamang

Peer conference is essential to share experience, lesson learned, obstacles of PEs, which automatically help to reduce risk and burden of HIV/AIDS and STIs.

**P148
ORAL POSTER THURSDAY 18 SEPTEMBER
0815 – 0820**

**ASHM - ORAL POSTER SESSION -
SOCIAL RESEARCH, INTERNATIONAL,
COMMUNITY, INDIGENOUS**

**EVALUATION OF A HEALTH PROMOTION
SHORT COURSE FOR THE HIV
COMMUNITY SECTOR**

Brown G1, Donohoe, S2

1Western Australian Centre for Health Promotion Research, Curtin University Perth, Australia

2Australian Federation of AIDS Organisations, Sydney, Australia

The Australian Federation of AIDS Organisations and the WA Centre for Health Promotion Research collaborated in conducting a 3-day short course in Health Promotion for those working within the HIV community sector. The course was designed for people in the HIV community sector with an emphasis on AIDS Councils, People Living with HIV/AIDS Organisations, Sex Worker Organisations, and other partner organisations.

After the trial of a two day condensed course with Education Managers from the state AIDS Councils, a broader 3 day course was developed to be conducted in Melbourne, Sydney, Brisbane, Adelaide, Darwin and Perth. Driven by the results of an online survey, the course took a very hands-on and pragmatic approach.

The course aimed to develop or improve skills in health promotion planning; community participation; achieving the right strategy mix; and effective evaluation within an HIV community response context. It was assumed that there was a range of experience and skills in health promotion amongst the participants of the workshop. Over 100 participants have completed the course to date.

A key aspect of the course was the understanding and application of behaviour and social theories to planning and evaluating strategies for the individual, group, community and population level.

Impact evaluation of the course consisted of pre-course online survey and post course survey with an emphasis on self efficacy in applying key content areas, and then a follow-up survey of participants two to three months later to determine application of the knowledge, skills and momentum created by the course.

Initial results show: increases in self efficacy regarding the use of theory to support looking at a health issue and

potential responses from different angles or perspectives and guiding strategy development; more confidence in applying evaluation approaches that are practice- and theory-driven; and benefits from the opportunity to participate in a planning and decision making process with a real scenario with colleagues working in a similar area. Full results of the follow up survey will be available at the time of presentation.

P149

**GETTING THE BEST HIV CARE
THE CHECKLIST GUIDE: A UNIQUE
RESOURCE FOR PEOPLE WITH HIV**

Canavan P, Ogier A, Whittaker B
National Association of People Living With HIV/AIDS
(NAPWA), Sydney, NSW, Australia

HIV treatment and care have changed a lot over recent years. The development of better treatments have meant that more Australians with HIV can expect to live longer and enjoy better health. Knowledge about HIV clinical management has also increased, and today the focus is on keeping people with HIV well over the long term.

Health and wellbeing requires careful planning, as HIV and its treatment often complicates general health management. The experience of living with HIV is different for each HIV positive person. For people newly diagnosed with HIV, adjusting to being HIV positive can be a stressful time. Some people find that HIV has a serious impact on their health and well being. Many other people enjoy long periods of good health and live full and active lives.

Making decisions about health and HIV treatment options can be challenging, but NAPWA believes that people should be supported in taking an active role in their health decision making. If people with HIV better understand their own treatment and care choices then they can actively participate in their healthcare management with their doctors, and this can lead to better health outcomes.

In May 2008 NAPWA launched *Treataware* – a national health and treatment campaign for HIV positive Australians. One arm of the campaign is a printed resource called *“Getting the best HIV care: a checklist guide for people with HIV.”*

The guide gives people with HIV a checklist of issues they can work through with their doctor when planning their health and treatment. The booklet lists main tests and health checks they should expect to receive as part of comprehensive health care as well as support and information services to access for living long-term with HIV.

An outline of the development process of this important resource is presented, acknowledging the collaboration with HIV positive contributors and a number of HIV clinicians. A final discussion point will be next steps in ongoing evaluation of this interactive resource for use by patients with their doctors in the clinic setting.

P150 INTEGRATED COMMUNITY HIV/AIDS PREVENTION PROGRAM

Chola BM

OBJECTIVE(S):

- Increased access to reproductive health services
- Increased access to HIV/AIDS and STI diagnostic and treatment services
- To empower community with life coping skills

METHODOLOGY

The Peer Education strategy is employed where young people aged between 13 and 18 are trained as Peer Educators and reach out to fellow young people in the community through one on one basis, group discussions, drama performances, sports and drop-in-shops that include barber shops, hair saloons, roadside stalls, bars and markets. Through these activities, people in the community have access to reproductive health information, condoms, HIV/AIDS/STI diagnostic and treatment services through the Community Health Clinic and training in life coping skills that include critical thinking, analytical skills, problem solving, negotiation skills, assertiveness and decision making skills among others.

SUMMARY OF RESULTS

- Well informed community
- Increased number of young people seeking Voluntary Counseling and Testing for HIV
- Reduced incidences of STIs and unplanned for pregnancies
- Reduced stigma and discrimination of PLWHAs
- Improved access to ART

CONCLUSION

Integration of Community HIV/AIDS initiatives ensures increased access to services, a continuum of services and a sound base for program sustainability beyond donor support.

P151 POPULAR APPROACHES TO MANAGING HEPATITIS C INFECTION AMONG INDOCHINESE INJECTING DRUG USERS: "IT'S ALL UP TO YOU"

Coupland H¹, Day C², Maher L¹

¹ National Centre in HIV Epidemiology and Clinical Research and the School of Public Health and Community Medicine, University of New South Wales, Sydney, NSW, Australia; ² Drug Health Services, Faculty of Medicine, University of Sydney, NSW, Australia

Popular perceptions of the management of hepatitis C (HCV) can provide important insights into decision-making about seeking HCV treatment. Little is known about these approaches among culturally and linguistically diverse groups. This ethnographic study explores these approaches among Indochinese injecting drug users (IDUs).

Ethnographic fieldwork and in-depth interviews were conducted with Cambodian, Lao and Vietnamese IDUs (n=72), to identify explanatory models of hepatitis C (HCV) prevention and management and their influence on health-seeking behaviours. Participants were recruited using theoretical and snowball sampling based on peer and street networks. A grounded theory approach was used to identify emergent themes.

Popular approaches focussed on maintaining body "strength" to "fight" HCV. This was achieved by "looking after yourself" by eating a "healthy" diet, adequate exercise and sleep and avoidance of drug and alcohol use. For Vietnamese participants this also involved the consumption of "cooling" foods or drinks, consisting of fruits, vegetables or herbs, to restore humoral balance and avoid becoming "weak". The origins of these approaches will be explored.

These approaches could "maintain" or "stabilize" HCV and prevent disease progression. However, while most participants subscribed to these beliefs, applying them in practice was described as difficult for IDUs and they were rarely adopted. Awareness of potential outcomes of HCV treatment, particularly that treatment could clear the virus, was also limited. Participants expressed anxiety about how "bad" their HCV had become and reported being "scared" to undergo further monitoring, such as liver function testing.

Data indicate the importance of promoting the need for regular monitoring of liver function and disease progression among this group, as well as potential HCV treatment outcomes. Inclusion of information in post-test counselling and peer education activities, regarding the role of diet, drug use and lifestyle in HCV disease progression is also necessary to encourage testing and treatment seeking.

**P152
TB CO-INFECTION: WHY DO INDONESIAN
PLHIV STILL DIE?**

Green C¹

¹Spiritia Foundation, Jakarta

TB is curable and preventable; yet TB remains the prime cause of mortality for people living with HIV (PLHIV) in the developing world. To respond to this in Indonesia, the Spiritia Foundation (the national peer support for PLHIV) has implemented a number of interventions: informing PLHIV about TB-HIV co-infection; treatment education; promoting infection control in peer group and counselling settings; raising awareness of healthcare workers; advocating for implementation of preventive therapy; pressing for surveillance, including of MDR-TB; encouraging integration of HIV and TB services; and supporting efforts by partner organizations working in related fields.

As a result, PLHIV are more aware of their vulnerability. There have been advances in the healthcare sector, particularly with an increasing number of primary healthcare centres implementing one-stop shops that provide TB and antiretroviral therapies.

Major challenges continue to exist, particularly in encouraging doctors in the private sector to adhere to the International Standards of TB Care, and raising the level of suspicion about possible HIV co-infection in cases of TB. Diagnosing TB among PLHIV is still delayed, with the result that antiretroviral therapy is started late. In addition, infection control in many hospitals and clinics is lacking. In Papua, which is experiencing a generalized HIV epidemic together with high rates of TB, the spitting which accompanies the widespread habit chewing of betel nut, even in hospitals, clearly raises the risk of active TB, and a long-term campaign will be needed to address this.

**P153
ORAL POSTER THURSDAY 18 SEPTEMBER
0825 - 0830**

**ASHM - ORAL POSTER SESSION - SOCIAL
RESEARCH, INTERNATIONAL, COMMUNITY,
INDIGENOUS**

**ARE HOSPITALS BIOHAZARDS FOR PEOPLE
WITH HIV?**

Lake, R,

Positive Life NSW

Preventable admissions and avoidable mortality are two key features of the health systems advocacy agenda proposed by Positive Life NSW for the period 2008-2010. A renewed Federal Government focus on health prevention presents an opportunity to consider more active prevention, screening and early intervention approaches to prevent hospital admissions.

In addition to adverse events experienced generally by hospital inpatients, patients with HIV face an increased likelihood of privacy breaches, disclosure of HIV status and in some cases, discrimination from other patients, their visitors or allied health care staff when this occurs.

This presentation will detail some of these events using case studies. There is growing awareness of screening and other prevention strategies to consider the benefits, particularly psycho social, to people with HIV of more active and earlier health interventions to prevent hospital admission or consider the use of innovative outpatient options more frequently used with older people.

P154 LIVING LONG TERM WITH HIV IN THE RAINBOW REGION

Lienert TM¹, Starkey RJ², McKellar-Stewart NP³, Scott-Visser B⁴, Santana H⁵

¹²³ ACON Northern Rivers, Lismore NSW, Australia; ⁴SHAIDS sexual health clinic, North Coast Area Health Service, Lismore, NSW, Australia; ⁵ Positive Life NSW.

The Northern Rivers, including the Rainbow Region of NSW, hosts a large number of people with HIV who moved to the area from Sydney in the critical early days of the epidemic, facing limited life expectancy. While their goal was to experience a more relaxed quality of life, many faced new problems inherent to rural communities such as the need to travel long distances and a lack of transport, limited access to specialised medical practitioners, employment and housing, and limited social networks.

The advent of HAART brought unexpected challenges to this group of people who, now ageing, had to swiftly adapt to potentially long-term rural lifestyles.

In this paper we will explore the role that ACON's Client Services and HIV Health Maintenance staff, along with the NCAHS HIV/AIDS Enhanced Primary Care (EPC) Co-ordinator, other partner agencies and local positive people have played in addressing the complex needs of people living long term with HIV in the region.

P155 ENHANCED PRIMARY CARE (EPC) AND CARE CO-ORDINATION AS A CO-OPERATIVE MODEL

Scott-Visser BR 1, Starkey R 2, Lienert T
SHAIDS, Lismore, NSW, Australia
ACON, Lismore, NSW, Australia

The terms empowerment and self determination can become clichéd. Case management means many things to many people. How can these values and perspectives effectively be implemented to produce positive outcomes for positive people, especially those with complex needs living in a rural setting?

In this presentation, we discuss our unique roles, the theory behind our work (differentiating case management and care co-ordination), why we use these models and how we have developed an effective partnership model.

The two presenters work in differing services in differing roles, however they have developed a partnership approach to initiate productive outcomes for positive people, especially those with complex needs living in rural Australia.

- 1 SHAIDS, Lismore, NSW, Australia
- 2 ACON, Lismore, NSW, Australia

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**P156
MULTIDISCIPLINARY HIV COMMUNITY
HEALTH TEAM USES AN AREA-WIDE
APPROACH TO PROVIDE EFFECTIVE
REFERRAL AND CARE
COORDINATION SERVICES IN SOUTH
EASTERN SYDNEY ILLAWARRA AREA HEALTH
SERVICE**

Murray KJ¹

¹HIV Community Team, South Eastern Sydney Illawarra Area Health Service (SESIAHS), Sydney Australia

SESIAHS covers a large geographical area including Sydney's Central Business District (CBD), East and Southern suburbs, the Illawarra and South. Traditionally HIV funded community health services have been concentrated in the inner-east, with little or no service provision outside this area. A new multidisciplinary Community Health Team was established in November 2007 to provide outreach services across SESIAHS. The team comprises nurses, social workers and a dietitian. Members of the team have specialist experience in mental health, alcohol and other drugs, HIV and primary care

People living with HIV/AIDS (PLWHA) may experience a range of acute or chronic health problems and require a number of different services to manage their needs. Challenges for service providers can include issues with medications, mental health, physical health, nutrition, housing, finances and alcohol and other drugs. The HIV Community Team provides advocacy and support around these issues and works in partnership with other health programs and agencies.

The service's goals are to provide a strong consumer-focused model of care, strengthen partnerships with other health services and agencies and avoid duplication by providing services that compliment those of existing service providers. A key focus is providing more equitable and integrated service delivery across the SIAHS.

Partnership arrangements to date include dietetic support to Pt Kembla Sexual Health Clinic, care coordination services through ACON, effective referral pathways with mental health services and support to HIV/AOD Integrated Service Model for Homeless People.

**P157
ANY QUESTIONS...WHAT DOES MY PATIENT
REALLY WANT TO
KNOW?**

Perri, V

People Living With HIV/AIDS Victoria
Melbourne, Victoria, Australia

As part of People Living With HIV/AIDS Victoria's Health Promotion work and through one of its courses/workshops, participants are given the opportunity to explore the many questions they can think of when choosing a suitable General Practitioner with whom they feel not only meets their medical needs but someone they can talk to and trust without feeling embarrassed or fearful when discussing intimate details.

In this conference workshop aimed at General Practitioners, Nurses and other Health Professionals working with HIV positive people, we will conduct this activity in order for the participants to gain a sense of what their clients are thinking and wanting out of their session.

**P158
POWER OF POSITIVE DIGITAL STORY
TELLING**

Jeffrey Robertson

Straight Arrows Inc

Digital story project and its value in being used as an educational tool in relation of infection, transmission and prevention and also the power of personal stories to relay their struggles around HIV medications and also living well with HIV

This would be about a half hour presentation and the 20 minutes for questions and answers
Hopefully to point out relevant issues of people living with HIV today

- 1 Living with HIV in 2008
- 2 Medication and how they improve people life
- 3 Travel and HIV among young people and their journeys
- 4 Personal perspective of HIV

Outcomes would hopefully give real life perspective to people in the sector about progress made by people who have overcome the issues in relation to HIV and how this would give a better insight into people living with HIV not dying from aids

Attached is a pdf of the journeys into the unknown launch and I would have permission to use some of these stories in our presentation

EDUCATION**P159
PROVIDING ON-LINE SUPPORT FOR
TEACHERS IN DELIVERING SEXUALITY
EDUCATION IN WESTERN AUSTRALIA**

McKay E¹, Baker M¹

¹Sexual Health and Blood-borne Virus Program,
Department of Health, Perth, WA,

Sexual health education is a subject that teachers are frequently required to teach often without any prior training. Some teachers view the subject as a priority while others may feel uncomfortable or insufficiently prepared to teach it.

A priority of the Department of Health's (DOH) policy and programming in public health is to work with the school education sector to promote and support the conduct of quality sexual health education. In addition to parents, the DOH regards teachers and schools to be a fundamental partner in providing sexual health education to student.

Since 2002, The DOH has funded the development and implementation of set of resources for teachers called the "Growing and Developing Healthy Relationships" (GDHR) Curriculum Support Materials, and corresponding in-person professional development courses for teachers.

In 2005, an audit of the uptake of the GDHR materials found that the materials are having a positive impact on school sexual health education.

An impact evaluation is currently underway to examine the influence on teacher and school nurse practise from participation in the professional development and training. The results will be available by mid-2008.

The DOH, in partnership with the Department of Education and Training are moving towards providing on-line support for teachers in order to increase their access to up-to-date curriculum resources, training and support.

The Project involves two components:

1. Development of an interactive website based on updated GDHR content. This will incorporate a range of age-appropriate learning activities, links to resources, statistics, background information, and an on-line question box for teachers.

2. Development of a corresponding on-line training course. This course is designed to increase teachers' confidence, comfort, knowledge and skills using on-line learning techniques such as asynchronous learning, podcasts, video clips, discussion forums, interactive games, and professional facilitation.

**P160
ORAL POSTER THURSDAY 18 SEPTEMBER
0810 – 0815****ASHM - ORAL POSTER SESSION - SOCIAL
RESEARCH, INTERNATIONAL, COMMUNITY,
INDIGENOUS****USER-CENTRED DESIGN IN A RESOURCE FOR
POSITIVE TRAVELLERS**

Malhotra S¹ and Reeders D¹

¹PLWHA Victoria Inc, Melbourne, VIC, Australia

As a discipline, User-Centred Design (UCD) responds to the challenge of finding intuitive conventions for interface design to help users of online and print resources access complex information according to their needs. PLWHA Victoria adopted this approach during the development of *Up Up & Away – A Guide for Positive Travellers*. Faced with "apples vs. oranges" information about entry restrictions against HIV-positive travellers, positing a thirty-day maximum visit allowed the generation of simple categories: no restrictions, possible restrictions, known restrictions, which are represented using an intuitive traffic light metaphor. A dynamic, searchable companion website makes full use of hypertext markup conventions to highlight information updated after printing, and links to source material and further reading.

The project offers a best-practice model for the collaborative development of resources to communicate complex information, which can be applied in other contexts including clinical and pharmacy settings. Supported by Roche Products over a period of six years, the project grew from a collection of fact sheets into print and now online resource formats. Contributing organisations include NAPWA, ATPA, ACON, Positive Life NSW and PLWHA Victoria, and a network of educators is being established to maintain the companion website (www.positivetravel.info) and reply to questions received from visitors.

The presentation will introduce the UCD approach, discuss its application to the positive travel project and argue for its adoption in public health education.

P161
SECONDARY SCHOOL NURSES' AND THEIR
WORK PROVIDING SCHOOL-BASED SEXUAL
AND REPRODUCTIVE HEALTH PROGRAMS IN
VICTORIAN SCHOOLS

Towers C

Secondary school nurses provide a broad range of school nursing services in public, private and independent schools in all Australian states and territories. However, the role of Victorian Department of Human Service (DHS) secondary school nurses (SSNs) in providing sexual and reproductive health (SRH) education and services to students is relatively unclear. Key focus areas developed for SSNs by DHS required SSNs to play a key role in reducing negative outcomes and risk taking behaviours among students. Evidence is emerging that SSNs are developing a key role in school-based SRH programs. Therefore, evidence about SSNs work in sexual health is required.

A cross-sectional survey of DHS secondary school nurses (N=129) was conducted using self-completed anonymous questionnaires. Seventy four SSNs responded, giving a response rate of 57.4%. Over 90% of respondents provided a diverse range of health promoting SRH programs ranging from classroom programs, individual and small group student consultations, and wider school community programs.

Most respondents believed SRH was a major practice area of SSNs. SSN readiness to provide sexual education and student consultations regarding sexual health depended on their qualifications, nursing experience, participation in professional development, networks, and interest in sexual health. Schools, policies, and the Secondary School Nursing Program guidelines also affected their ability to provide SRH education and care to students.

Significantly, SSNs appear to have been overlooked as a key stakeholder in school-based sexual education and care of students. Sexual health is a DHS Victorian health promotion priority area for 2007-2012 and SSNs need to assert their right as a key SRH stakeholder, and participate in key government groups developing strategies and frameworks to guide sexual education and care of young people.

EPIDEMIOLOGY**P162
MOLECULAR EPIDEMIOLOGY OF
MYCOBACTERIUM TUBERCULOSIS IN
KIRIBATI**

Aleksic E¹, Cox H¹, Ryan C^{1,4}, Globan M³, Reiher B², Toatu T², O'Connor J⁵, Crowe S^{1,4}

¹Burnet Institute, Melbourne, Victoria ²Tunguru Hospital, Tarawa, Kiribati ³Victorian Infectious Diseases Reference Laboratory, Melbourne, Victoria ⁴Department of Medicine, Monash University, Clayton, Victoria, ⁵Secretariat of the Pacific Community, Noumea, New Caledonia

With an incidence of 348 cases/100,000 people, Kiribati has the highest TB burden in the Western Pacific region. Current data indicate there are 21 diagnosed cases/month, a figure that has increased substantially over the past 5 years, where incidence was 250 cases/100,000 in 2000. As HIV testing services are not well established and data concerning prevalence are limited, the extent of the effect HIV has on the incidence of TB is not fully understood. A high proportion of the population are highly mobile fisherman, among whom the prevalence of STIs is high and condom use is low, thus providing a perfect transmission environment for HIV.

We have designed a study to address the molecular and epidemiologic factors associated with the recent increase in cases in Kiribati. To date, we have enrolled 48 patients with newly diagnosed TB. Epidemiological data are gathered, sputum collected and both sent to Australia for culture, DST and identification of MTb (IMVS, Adelaide). DNA extracted from the MTb (VIDRL, Melbourne) is sent to Burnet Institute for genotype analysis. Median time from specimen collection to receipt in Australia is 29 days (8-54).

Using two genotyping techniques, MIRU-VNTR and spoligotyping we have examined the relatedness of strains from 30 patients, with an additional 18 in progress. Molecular mapping has shown that >40% of strains within our participants are of the Beijing genotype. There is a high proportion of fishermen, administration workers and students with a mean age of 34 (9-68). Approximately half the participants are female (44%) and the median number of people living per house is 8 (3-16). Nine (19%) patients had a previous instance of TB in their family and there were 6 (13%) individuals who reported prior TB. Ten patients have been tested for HIV with; 8 (80%) of respondents not knowing their result.

The finding of multiple strains of TB suggests that there is a diverse TB epidemic occurring in Kiribati, with overcrowding and mobility as contributors. The presence of the Beijing genotype is of concern as this genotype is often associated with multi-drug resistance. Currently, patients with TB are not routinely tested for HIV, and those that do not necessarily return for their results.

**P163
CLINICAL FEATURES ASSOCIATED WITH HIV
INFECTION IN CHILDREN AT PORT MORESBY
GENERAL HOSPITAL - INTERIM ANALYSIS
OF A PROSPECTIVE STUDY TO ASCERTAIN
PREDICTORS OF HIV INFECTION**

Allison WE¹, Kiromat M², Vince J², Cunningham P³, Kaldor J¹.

¹The National Centre in HIV Epidemiology and Clinical Research, Sydney, NSW, Australia; ²Department of Paediatrics, Port Moresby General Hospital, Port Moresby, Papua New Guinea, ³NSW State Reference Laboratory for HIV, St Vincent's Hospital, Sydney, NSW, Australia;

A number of clinical signs and symptoms are common in both children infected with HIV and sick but HIV uninfected children, particularly in resource-limited settings. In settings where hospital prevalence of HIV infection is high all admitted children may be tested for HIV serostatus. In Papua New Guinea (PNG), where prevalence estimates are much lower than Sub-Saharan Africa, clinicians are faced with the challenge of which children to select for testing based on clinical criteria.

We randomly recruited children who fitted the inclusion criteria of all admitted children aged 0-16 years. Exclusion criteria were children who were confirmed HIV serostatus positive (HIV+) and ≥ 2 years old, children of any age on antiretroviral treatment and refusal of informed consent by the primary carer of the child. Recruited children were tested for HIV infection by dry blood spot nucleic acid testing and specific information was collected on clinical history and physical examination.

Of the first 122 children recruited, 17 were found to be HIV+ and 1 had an indeterminate result. History and physical examination were analysed separately and subjects with aspects of history or examination missing from the data collected were excluded from the relevant analysis. On history, chronic ear infection was found to be significantly associated with HIV infection [p: 0.001, OR (95% CI): 13.6 (3.1-59.9)]. On examination, oral thrush was found to be significantly associated with HIV infection [p: 0.001, OR (95% CI): 9.2 (2.2-33.2)]

These early results are encouraging as to achievement of the objective of the study which is to establish a firm evidence base leading to guidelines in the use of clinical criteria to select children for testing for suspected HIV infection in PNG.

**P164
HEPATITIS B AND C PREVALENCE AMONG
PATIENTS INFECTED WITH HUMAN
IMMUNODEFICIENCY VIRUS IN MOROCCO**

Benjelloun S¹, Akil A¹, Bensghir R², Wakrim L¹, Oulad Lahcen A², Hassar M¹, Ezzikouri S¹, Himmich H²
¹Viral Hepatitis Laboratory, Institut Pasteur du Maroc, Casablanca, Morocco²Service of Infectious Diseases, CHU Ibn Rochd, Casablanca, Morocco

In HIV-infected persons, an estimated 2–4 million have chronic HBV co-infection and 4–5 million have HCV co-infection. HBV, HCV and HIV share common routes of transmission, but they differ in their prevalence by geographic region and the efficiency by which certain types of exposures transmit them. The aims of the present study were to determine the prevalence of HBV and HCV infection among 309 Moroccan HIV infected patients.

Chronic HBV infection has been found in 2.2%, including 71.4% of heterosexuals. Two genotypes were found (D2 and B). HCV infection has been found in 9.4% of HIV-positive persons overall; 13.3% of injection drug users, 3.3% of men who have sex with men and 56.7% of heterosexuals. Most of anti-HCV positive patients were positive for viral RNA (67%) and 4 genotypes were detected (1a, 1b, 2c and 3a) with predominance of genotype 1. The characteristics of HIV infected persons differ according to the co-infecting hepatitis virus, their epidemiologic patterns may change over time, and surveillance systems are needed to monitor their infection patterns in order to ensure that prevention measures are targeted appropriately.

**P165
UNDERSTANDING THE EPIDEMIOLOGY
OF HEPATITIS C IN VICTORIA: REVIEW OF
CURRENT SURVEILLANCE MECHANISMS**

Goller JL¹, Lim M^{1,2}, Horyniak D¹, Aitken C¹, Stoope M¹, Samuel King J³, Brown J⁴, Fairley C⁵, Higgins N⁶, Hellard ME^{1,2}

¹Centre for Epidemiology and Population Health Research, Burnet Institute, Melbourne, VIC, Australia; ²Department of Epidemiology and Preventive Medicine, Monash University, Melbourne, VIC, Australia; ³ Access Health, St Kilda, VIC, Australia, ⁴Healthworks, Footscray, VIC, Australia, ⁵Melbourne Sexual Health Centre, Carlton, VIC, Australia; ⁶ Department of Human Services, VIC, Australia

In Australia, an estimated 200,000 people are living with hepatitis C virus (HCV), 13,000–20,000 individuals are diagnosed annually with HCV; injecting drug use (IDU) is the main route of transmission. Around three quarters of infected individuals progress to chronic HCV with long term sequelae for a minority of these including liver failure and hepatocellular carcinoma. The current Victorian Hepatitis C Strategy identifies epidemiological surveillance as a core component of the response to the epidemic. The Strategy recommends enhanced notification systems that integrate prevalence, incidence and disease outcome data in conjunction with behavioural data, which focuses on transmission risk in key populations. Up until a few years ago three HCV-related surveillance systems existed in Victoria; (i) passive HCV surveillance, (ii) annual surveillance of HCV and injecting risk behaviour through the National NSP survey and (iii) the annual Illicit Drug Reporting System (IDRS) which also examines injecting behaviour. These systems provide useful data but have several limitations, including being unable to measure HCV incidence. In recent years, three new data collection approaches have provided more comprehensive and integrated HCV surveillance data in Victoria; (i) targeted enhanced surveillance (established 2002), involving follow up of diagnoses with clinical or laboratory indicators to identify incident HCV infections and describe associated demographic and risk factors, (ii) a sentinel network of nine primary health care clinics (GPs, prisons, sexual health clinics) (established 2005) to monitor HCV testing rates, prevalence and incidence among people routinely tested for HCV, and (iii) a community-based longitudinal cohort study of IDUs conducted between 2001–2003 and 2005–2007 to provide detailed information about injecting risk behaviour, injecting networks, HCV subtypes and estimates of HCV incidence and prevalence. We will describe epidemiological results, running costs and strengths and weaknesses of these initiatives. Recommendations will be made for future Victorian HCV surveillance and research initiatives.

P166
ORAL POSTER SATURDAY 20 SEPTEMBER
0850 – 0855

**ASHM - ORAL POSTER SESSION - SOCIAL
RESEARCH, INTERNATIONAL, COMMUNITY,
INDIGENOUS**

**HIV IN THE TROPICS: AN ANALYSIS OF
NEW HIV INFECTIONS IN FAR NORTH
QUEENSLAND DECEMBER 2006 – MARCH
2008**

Ms Carla Gorton¹, Ms Joanne Leamy¹, Dr Darren Russell¹.
¹Cairns Sexual Health Service, Cairns, QLD.

In March 2008 a small scale study of all new HIV infections managed at Cairns Sexual Health Service (The Dolls House) was conducted. A total of 35 clients were newly diagnosed as HIV positive at the Dolls House between December 1, 2006 and March 31, 2008. Of these 33 (94%) were male and 2 (6%) were female. The mean age of males was 38.8yrs and the mean age of females was 33.5yrs. 2 (6%) of the clients were Aboriginal and Torres Strait Islanders.

24 (68%) of the clients had same sex partners, 9 (26%) had opposite sex partners, 1 (3%) had partners of both sexes and in one case (3%) partners were unknown. 9 (26%) clients had a regular partner who was HIV positive, 10 (28%) had a regular partner who was HIV negative, 7 (20%) were unsure of the status of their regular partner and 9 (26%) had no regular partner.

6 (18%) of the clients had contracted HIV via heterosexual sex in a high prevalence country (5 in PNG and 1 in Malaysia). These clients were all male and their mean age was 58yrs.

9 (26%) clients were co-infected with an STI at the time of their HIV diagnosis, 18 (51%) tested negative for an STI at the time of diagnosis and 8 (23%) declined STI testing.

Occupational background, additional risk factors (including IDU), PEP awareness and Gay community connectedness were also noted and all data will be graphed or described on the poster.

The study has implications for education and prevention messages and is informing a planned Syphilis Testing month in Cairns during June 2008.

P167
ORAL POSTER SATURDAY 20 SEPTEMBER
0835 – 0840

**ASHM - ORAL POSTER SESSION - CLINICAL,
ALLIED HEALTH AND BASIC SCIENCE**

**MODELLING THE EMERGENCE OF DRUG-
RESISTANT HIV IN BANGKOK**

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Thailand has been successful in scaling up access to antiretroviral therapy (ART). However, second-line and third-line therapy options are relatively scarce, limiting options once a patient experiences treatment failure. Continued use of a failed regime may select for drug-resistant strains of HIV and these resistant strains may be transmitted to susceptible individuals. The potential emergence of transmitted drug-resistant HIV in Thailand is of considerable concern.

We have investigated ART scale-up plans in Thailand in order to predict the degree of acquisition and transmission of drug resistant HIV. We also forecasted the impact of treatment plans on future HIV incidence. We address this issue through the development of a mathematical model, calibrated to match the HIV epidemic in Bangkok and the planned scale-up of therapy. The model tracks transmission of susceptible individuals through the stratification of seven different population groups across thirteen different disease stages. This allows the model to track the number of individuals that acquire drug resistance through treatment failure, and those who become newly infected with drug-resistant virus.

We show that high levels of treatment over a sustained number of years without alternative treatment options, has the potential to lead to large rates of transmitted resistance. We predict low-to-moderate levels in the short term, of ~5% transmitted drug resistance after 5 years, but sustained treatment rates could lead to very high levels of drug resistance in the longer term (of over 10% within 10 years). This work highlights the great need for accessibility to second- and third-line antiretroviral therapies and drug resistance monitoring in the region.

P168
ORAL POSTER FRIDAY 19 SEPTEMBER 0820
- 0825

ASHM - ORAL POSTER SESSION - PUBLIC HEALTH AND EPIDEMIOLOGY

RENEWING THE SEROCONVERSION STUDY

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The previous two waves of the Seroconversion Study provided crucial information on circumstances that might put gay men at higher risk of HIV infection in Australia, and helped enormously in framing HIV prevention campaigns. The last few years have seen a significant increase in HIV notifications in homosexual men in some states and changes in the forms of risk behaviour among gay men. We have re-developed the Seroconversion Study to continue monitoring risk factors for HIV infection.

To achieve optimal participation and expand recruitment options beyond high-caseload clinics, the study now allows enrolment through community-based organisations as well as clinics in other settings. Further, the reliance on clinic-based interviews has been reduced by allowing for participants' online enrolment and self-completion of the questionnaire.

Through to April 2008, 22 participants were recruited through this new scheme. The questionnaire was administered by interviewers in 16 men, and 6 men completed the survey online. The mean age of the participants was 35 years, and over 90% were gay/homosexual self-identified. A quarter (26%) completed a tertiary or higher degree and the majority (73%) were recruited from Queensland. A high risk event (HRE) which they thought had led to their HIV seroconversion was identified by 19 (86%), and in 15 (79%) the source person was reported as a casual partner. Among these casual partners, 10 (67%) were previously known to the participants, including 3 whom participants reported having sex with before the HRE. Nearly 40% reported that they met the source partner through the internet. At the HRE, receptive unprotected anal intercourse was reported by 15 (79%). Drug and alcohol use was common at the high risk event. Four men (21%) reported having more than 5 drinks of alcohol and amyl was the most frequently reported recreational drug used (21%), followed by crystal/meth (16%).

The new wave of the seroconversion is up and running. Preliminary results have indicated that participants recruited under the new scheme are similar to those who were recruited from clinics in the previous rounds.

P169
UNDERTREATMENT OF PAIN IN HIV-POSITIVE SOUTH AFRICANS

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Pain is a common complication of HIV infection and its treatment. However, most studies investigating HIV-related pain and its treatment have taken place in first-world countries, with predominantly male and white patients. Because ethnic and cultural background may affect pain perception, and female HIV-positive patients have been shown to be more likely to receive inadequate pain management, we have investigated the prevalence, intensity and treatment of pain in HIV-positive patients in a predominantly female, and black, cohort of patients in South Africa.

We recruited 392 adult outpatients (298 black females, 94 black male), in the day wards of a hospital in Johannesburg, South Africa. Patients completed the Wisconsin Brief Pain Questionnaire to assess the prevalence, severity and location of pain, and what medications were being taken to alleviate pain. The adequacy of analgesia achieved by patients was assessed by calculating the Pain Management Index, which compares pain intensity to the analgesic potency (based on the WHO Pain Ladder) of the medications that patients took.

Three-hundred and two (77%) of the patients were in pain (30% had mild pain, 36% had moderate pain, and 11% had severe pain). Sixty-eight percent of patients in pain had pain at multiple sites, with the most common sites of pain being the feet (30%), abdomen (10%) and head (20%). Only paracetamol and nonsteroidal anti-inflammatory drugs were taken for pain control, irrespective of pain severity, with no patients in moderate to severe pain achieving adequate pain control. Therefore, there is a high prevalence of pain in South African HIV-positive outpatients, which is similar to the prevalence reported in European and North American studies, and it is poorly treated.

P170 TRIPLE CLASS EXPERIENCE IN THE AUSTRALIAN HIV OBSERVATIONAL DATABASE (AHOD)

Marashi Pour,^{S1}, Petoumenos,^{K1}, and Chuah,^{J2}, on behalf of the Australian HIV Observational Database
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2. Gold Coast Sexual Health Clinic, Queensland, Australia

The management of HIV disease for patients who become triple class experienced (TCE), is an important and ongoing challenge. The aim of this study is to describe the characteristics of patients who become TCE in the Australian HIV Observational Database (AHOD).

Patients recruited to AHOD up to March 2007 who commenced combination antiretroviral treatment (cART) from 1 January 1997, for more than 14 days, and were experienced to the three major ARV classes were included in these analyses. Patients were defined as TCE at the time they stopped or changed the regimen the third class of ARV was first introduced. Patient characteristics including age, sex, prior AIDS, CD4 cell count, and viral load at the time of becoming TCE, and mortality rates after becoming TCE are summarised.

A total of 2066 patients were recruited to AHOD by March 2007. Of these, 1168 commenced cART, 737 (63%) patients commenced cART between 1 January 1997 and 31 December 1999; and a further 431 (37%) since January 2000. During follow-up 386 patients (33%) became TCE; 359 (93%) were male, mean age was 44 years (SD:10.2), and 91 (23.6%) had a prior AIDS defining illness diagnosed. 272 patients had a viral load measure available at the time of becoming TCE, with 68% having a undetectable viral load (≤ 400 copies/mL). The mean CD4 was 555 (SD: 376). The median time on treatment from commencing cART to becoming TCE was 2.8 years (IQR: 1.4-5.2). Among patients with follow-up after becoming TCE (n=386), 27 patients died, yielding an overall crude mortality rate of 1.67 per 100 person years. More than half (55.6%) were non-AIDS related deaths.

While the majority of patients in AHOD who become TCE are stopping or changing treatments for various reasons including toxicities, approximately one third of patients continue to stop treatment due to virological failure. Despite become TCE, the rate of death in these patients is similar to that previously shown in AHOD overall. These results illustrate the complexities of treating experienced patients and the challenges faced in developing appropriate treatment regimens for the long-term management of HIV positive patients, particularly in the era of continuous therapy once treatment is commenced.

P171 PROJECTION DEATHS FOLLOWING AIDS IN AUSTRALIA TO THE END OF 2010 BY USING PARAMETRIC SURVIVAL MODELS

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Information on AIDS mortality is needed for health care planning and resource allocation in upcoming years. There has been little work projecting mortality following AIDS in Australia.

Parametric models including exponential, Weibull, lognormal and log-logistic were used to model survival following AIDS between 1980 and 2003. Likelihood based goodness-of-fit criteria were used to select the best fitting parametric model. In order to project mortality to the end of 2010, AIDS diagnoses over the period from 2006 to 2010 were generated based on the average number of AIDS diagnoses reported to the National AIDS Registry in 2005. Covariate values for additional dummy diagnoses required for projecting mortality were generated based on the average values of those covariates among AIDS diagnoses from 2001 to 2005. Three scenarios for trends in highly active antiretroviral therapy (HAART) use for the period between 2006 and 2010 were considered; that HAART remained stable at, increased from, or decreased from 2005 levels. Predicted number of deaths was estimated by calculation of cumulative risk of death for each individual and then summing over all individuals by calendar year from 2006 to 2010.

The Weibull model was found to be the best fitting model for survival following AIDS and consequently was used to project deaths into the future. The number of deaths after AIDS is projected to increase from 175 in 2005 to 213 and 252 in 2010 if HAART remains stable at 2005 levels or decreases respectively. Deaths after AIDS are projected to decrease from 175 in 2005 to 171 if HAART usage increases to 100% of all AIDS diagnoses by 2010.

Deaths after AIDS is projected to increase if HAART usage remains stable or decreases and to decrease if HAART usage increases to 100 percent of AIDS diagnoses.

P172

A STUDY OF NEEDLE STICK INJURIES AMONG NON-CONSULTANT HOSPITAL DOCTORS IN IRELAND

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* Joint second authors

In a time of increasing blood borne infection prevalence and global travelling, NCHDs are thus being exposed to a greater number and wider variation of blood borne infections. Needle stick injuries (NI) are possibly the main route of acquiring such infections from a non-consultant hospital doctors (NCHDs) perspective. This study examines NCHDs experiences surrounding NI, blood/needle handling training received, infection fears and NCHDs demographics.

A cross-sectional self-administered anonymous questionnaire survey was conducted on 185 NCHDs working in 7 teaching hospitals. NI history along with training, fears and demographics were examined. Ethical approval was prospectively received.

A response rate of 85.4% (158/185) was achieved, with 58% of participants being medical NCHDs and 42% surgical. The mean age was 27.7, with Interns (46%), SHOs (33%) and Registrars (20%) taking part. 58% have experienced a NI with a mean number of 2.77 accidents (range:1-13). Venopuncture (47%) was the commonest type of injury. Only 31% report wearing gloves when dealing with needles or blood products. 37% have had sharps handling training, while 37% have reported their NI to the relevant departments. HIV (60%) followed by HCV (28%) and HBV (11%) are the infections most feared.

As a consequence of this study we conclude that a NI history is greater among the surgical NCHDs than the medical NCHDs. The level of disposable glove usage is worryingly poor. Training in sharps handling and in dealing with a NI needs to be addressed. HIV is the blood borne infection most fear of being contracting as a consequence of a NI.

P173

A COMPARATIVE STUDY OF HUMAN IMMUNODEFICIENCY VIRUS ANTIBODY POSITIVE PATIENTS IN IRELAND & AUSTRALIA

O'Connor MB¹, O'Connor C², Saunders JA³, Sheehan C⁴, Murphy E⁴, Horgan M^{1,4}, Carr A⁵, Cooper DA^{5,6}.

¹ The School of Medicine, University College Cork, Cork, Ireland. ² Department of GU/STD Medicine, Mid Western Regional Hospital, Limerick, Ireland. ³ Department of Mathematics and Statistics, University of Limerick, Limerick, Ireland. ⁴ Department of Infectious Diseases, Cork University Hospital, Cork, Ireland. ⁵ HIV, Immunology and Infectious Diseases Clinical Services Unit, St Vincent's Hospital, Sydney, Australia. ⁶ National Centre for HIV Epidemiology and Clinical Research, University for New South Wales, Sydney, Australia

Differences between HIV+ patients in developed and third world countries are publicised. This study proposes to compare patients demographically, medically and therapeutically in Ireland & Australia.

A confidential cross-sectional self-administered anonymous questionnaire survey of HIV antibody positive patients attending HIV outpatient services in both countries was carried out. Data was analysed for variations within cohorts and between cohorts using SPSS. Ethical approval was prospectively received in both countries.

A response rate of 71%(93/131)[Ire] & 76%(148/194)[Aus] was achieved, with a mean age of 36(20-67)[Ire] & 45(20-71)[Aus]. Mean time diagnosed was 4.5yrs[Ire] & 11.8yrs[Aus], with a reported diagnostic CD4 <200 in 35%[Ire] & 22%[Aus]. A total of 64%[Ire] & 85%[Aus] are currently receiving HAART medications. Resistance in patient started ART post-HAART is 0%[Ire] & 2%[Aus]. Statistically significant findings included: 1) having a history of Gonorrhoea and Syphilis (a) in all subgroups in both countries, (b) is more likely with CD4 <200 at diagnosis(p=0.035). 2) Recreational drug use is higher in (a) younger people(p=0.021), (b) males(p=0.007), (c) homosexuals(p=0.05). 3) Alcohol use more likely in males(p=0.03). 4) Patients with HIV+ partners are less likely to use condoms(p=0.012). 5) Mean lifetime partner numbers predictive of number in last 6 months. 6) Doctor requesting a test is associated with no previous test(p=0.038).

There were no factors associated with place of diagnosis, being "ill" at diagnosis, currently receiving ART, having a regular sexual partner, or sharing diagnosis with others.

As a consequence of this study we conclude that resistance post-HAART is minimal. Improvements are needed in STI prevention, doctors being proactive in testing, condom use with HIV antibody positive partners, addictive substance habits in younger male homosexuals, and the number of sexual partners of HIV antibody positive patients post-diagnosis.

**P174
MEASURES OF COUNTRY AND SITE
RESOURCING PREDICT VIROLOGIC
SUPPRESSION, IMMUNOLOGIC RESPONSE
AND DISEASE PROGRESSION IN THE TREAT
ASIA HIV OBSERVATIONAL DATABASE
(TAHOD).**

Oyomopito R

The study's objective
HIV viral load (VL) and CD4 diagnostics are not routinely available in resource-limited settings despite improved access to antiretrovirals (ARVs). We aim to determine whether measures of country income, based on World Bank criteria or site-reported frequency of diagnostic testing, predicted post HAART treatment outcomes.

Methodology

Analyses were based on 2333(69.7%) eligible patients starting HAART from 2000 onwards. Sites were categorized by country income (high/low) and annual frequency of VL ($\geq 3/1-2/<1$) or CD4 ($\geq 3/<3$) testing. Endpoints were VL suppression (<400 copies/ml) and change in CD4 count at 12 months and time to AIDS/death. Demographics, CDC classification, baseline VL/CD4, Hepatitis B/C coinfections and HAART regimen were covariates.

Effects of the country income measures were adjusted for significant baseline patient covariates. VL and CD4 endpoints were analysed using logistic and linear regression, respectively. Time to AIDS/death was analysed by proportional hazards models.

Summary of results

Patients from low income countries had lower CD4 counts, less asymptomatic infection and fewer hepatitis B/C and VL results available at ($p<0.001$).

785(33.7%) patients were analysed for VL suppression. Patients from sites with <1 /year VL testing ($OR=0.30;p<0.001$) and reporting "Other" HIV source exposures including IDU and blood products ($OR=0.28;p<0.001$) experienced reduced suppression.

1120(48.2%) patients had change in CD4 data. Smaller increases were associated with older age ($p=0.001$) and "Other" exposure ($p=0.033$). Patients from high income sites had lower increases in CD4 count ($p=0.005$). Patients from sites with VL testing <1 /year had higher increases ($p<0.001$).

For time to AIDS/death analyses, Hepatitis C coinfection ($HR=1.7;p<0.02$) and severely symptomatic HIV infection ($HR=1.4;p=0.008$) increased disease progression. Female gender ($HR=0.8;p=0.03$) and baseline CD4 count ≥ 100 cells/ μ L were protective ($p<0.001$). VL testing <1 /year was associated with increased disease progression ($HR=1.4;p=0.032$).

Conclusion

Measures of country income, including site-reported availability of diagnostic testing, were associated with virological and clinical outcomes following HAART.

**P175
ORAL POSTER FRIDAY 19 SEPTEMBER 0825
- 0830**

**ASHM - ORAL POSTER SESSION - PUBLIC
HEALTH AND EPIDEMIOLOGY**

**ESTIMATING HIV PREVALENCE OF HIV
AMONG MEN WHO HAVE SEX WITH MEN
(MSM); A REVIEW OF METHODOLOGICAL
OPTIONS**

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HIV prevalence estimates are required to support the planning of health services, monitor the long-term impact of interventions and inform models of HIV transmission. In Victoria, like most other parts of Australia, the HIV epidemic has been concentrated among men who have sex with men (MSM), suggesting that prevalence estimates should initially be focussed in this population. Estimating HIV prevalence requires determination of the number of people with HIV infection (numerator) in a representative sample of the population of interest (denominator). In order to identify a repeatable and accurate strategy for estimating HIV prevalence among MSM in Victoria we considered four methodological strategies, and compared them against the criteria of repeatability, accuracy, cost and representativeness. Passive surveillance is based on reports of new HIV diagnoses and can serve as a numerator in prevalence estimates, with the denominator being the number of people tested. Although representative of diagnosis rates, these data do not provide true prevalence estimates because the population tested does not include those previously diagnosed, those not undergoing testing, and does not account for in or outward migration. A second option is estimating prevalence through census type surveys to provide numerators and denominators. This approach is expensive and theoretically representative, but may be subject to high degrees of underreporting of both quantities. Another approach to deriving HIV prevalence is to use self-reported HIV status reported in surveys such as Gay Community Periodic Survey which takes place annually at community events, venues and bars. This approach is relatively cheap, but can not be assumed to provide valid prevalence estimates because of its dependence on self-report and an inability to detect unrecognised infections. A related, fourth approach is to incorporate HIV testing into these types

of surveys, ideally using some form of minimally invasive specimen collection, such as oral fluids. This approach does not provide for greater representativeness, but is more accurate than self-report while being simple and repeatable. On the basis of the criteria, an oral fluid, venue-based approach was selected for Victoria and will be piloted in June 2008.

P176

DEMOGRAPHIC CHARACTERISTICS OF CLIENTS ACCESSING PUBLIC SEXUAL HEALTH CLINICS IN NEW SOUTH WALES

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3. University of Wollongong, NSW, Australia

We aimed to describe the demographics of an adult population accessing public sexual health clinics (PSHCs) in New South Wales (NSW). Demographic data was collected as part of a larger study determining accessibility and acceptability of PSHCs

The study was a survey using a self-administered, anonymous questionnaire and was conducted between December 2005 and February 2006 in four PSHCs in different geographical locations – Sydney city (SC), Sydney suburban (SS), Sydney outer metropolitan (SOM) and NSW rural areas (NSWRA). An accredited health interpreter was offered for non-English speaking clients who required assistance completing the questionnaire.

Three hundred and two adults (68% male, 32% female) participated, a response rate of 89%. Thirty six refused participation for reasons of: time constraints 6 (17%), no interest 18 (50%), and 12 (33%) gave no reasons. The Majority (82%) of the participants were from the SC (n=110) and SS (n=139) clinics with 53 (18%) from SOM and NSWRA. Pooled data found 26.5% were aged 18 – 25 years, 56% were aged 26-49 years and 17.5% were over 50 years. Eighty-two percent of the sample was Caucasian, 69% were born in Australia and 88% spoke English as their main language. Ninety six percent of the participants had at least a secondary education. Of these, 65% had a tertiary level education. Only 38% reported full-time employment with 28% being unemployed or retired. Seventy nine percent of the respondents reported multiple visits to the clinics. No differences were found in educational status or SHC users. However, significant differences were found in age ($p < 0.001$), gender ($p < 0.001$), employment status ($p < 0.001$), ethnicity ($p = 0.023$), country of birth ($p = 0.02$), and language spoken at home ($p = 0.007$) between sites.

The demographics of clients attending PSHCs varied from site to site. SC clients were more likely to be Caucasian, male age between 26-50 years. In contrast SS clients were more culturally and linguistically diverse. SOM and NSWRA were similar to SC but had equal distribution of male and female clients born predominantly in Australia. This reflects local demographic variation to some extent, but may also reflect the nature of the clinical services provided at PSHCs.

**P177
PREVALENCE TOXOPLASMA IN WOMEN
PREGNANTE IN ZANJAN CITY ,IRAN 2006-
2007**

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Emam Hossein hospital Zanjan ,Iran.

Abstract

The aims of the present study were to determine the prevalence of toxoplasmosis in pregnant women .Prevalence toxoplasma was determine by ELISA method.Serum samples belonge to women pregnant refer to hospital. Five hundred and fourty woman pregnant presented.Overall IgG seroprevalence rate of toxoplasmosis was (47.5%) , only egith women (1.5%) were found to have IgM antibodies. No significant difference was between ,job,abort, meat,based of Chi-squar test but a significant difference was between educatin ,contact with cat,dog ,vegetable and water (P<0.001).Intervention programs including health education and environment sanitation are recommended.

**P178
SHORT-TERM CLINICAL DISEASE
PROGRESSION IN HIV-1-POSITIVE PATIENTS
TAKING COMBINATION ANTIRETROVIRAL
THERAPY: TAHOD RESULTS**

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¹ National Centre in HIV Epidemiology and Clinical Research, UNSW, Sydney, Australia ²Tan Tock Seng Hospital, Singapore, ³ Queen Elizabeth Hospital Hong Kong, China, ⁴ YRG Centre for AIDS Research and Education, Chennai, India

The aim is to develop short-term predictive risk equations of AIDS or death in Asian populations based on simple clinical data.

Inclusion criteria were HAART initiation and completion of required laboratory tests. Predictors for short term clinical disease progression defined as AIDS or death, were assessed. Poisson regression was used with three different models: (1) clinical data only, (2) clinical data and CD4 counts, and (3) clinical data and CD4 and viral load (VL).

Body mass index (BMI) and anaemia were predictive in all three models. Others were age and female, CD4 (Models 2 and 3) and detectable VL (Model 3). We separated patients into patient risk groups; low(L), high(H) and very high(VH). For Model 1 patients with severe anaemia or BMI < 18 were at very high risk, while patients with (age < 40 or male) and mild anaemia were at high risk. For Model 2, patients with CD4 < 50 or severe anaemia or BMI < 18 were at very high risk, patients at high risk were patients with (CD4 51 – 200 or Age < 40 or male) and mild anaemia. For Model 3, patients with CD4 < 50 or detectable viral load or severe anaemia or BMI < 18 were at very high risk, and patients with CD4 51 – 200 and mild anaemia were at high risk.

The incidences from Model 1 were 2.4%, 7.6% and 17.7 % from L, H and VH risk groups, respectively. The Model 2 incidences were 1.0%, 3.8% and 18.6 % from L, H and VH risk groups, respectively. Finally, the Model 3 incidences were 1.6%, 4.3% and 6.3 % from L, H and VH risk groups, respectively

These models are simple enough for widespread use in busy clinics. These models should allow clinicians to identify patients at highest risk of the outcome, with a view if possible to intervention.

P179
**COST-EFFECTIVENESS OF DARUNAVIR/
RITONAVIR 600/100 MG BID VERSUS
COMPARATOR PIS IN HIGHLY TREATMENT
EXPERIENCED, HIV-INFECTED ADULTS IN
AUSTRALIA**

Warren E¹, Schrover R¹

¹Janssen-Cilag Pty Ltd

Introduction:

We evaluated, from an Australian perspective, the cost-effectiveness of ritonavir-boosted darunavir (DRV/r) 600/100 mg BID plus an optimised background regimen (OBR) compared with investigator-selected control PIs (CPIs) +OBR used in the DRV POWER 1&2 trials in highly treatment experienced HIV-infected adults, in line with the currently reimbursed indication for DRV/r in Australia. We also examined the cost-effectiveness of DRV/r compared to tipranavir/ritonavir (TPV/r), which recently received Pharmaceutical Benefits Scheme reimbursement for this patient group in Australia.

Methods:

We extracted mean CD4 count and viral load data for DRV/r and CPI-based HAART from weeks 0-72 from the POWER 1&2 studies. We projected viral load from week 73 onwards over a 10 year time horizon with exponential regression curves for each treatment group. Using the relationship between CD4 count and viral load reported in the PLATO collaboration, we estimated the monthly mean CD4 counts in each group over this time horizon from these projected viral load data. We then used a Markov model with monthly transition probabilities as reported in the EuroSIDA Cohort to predict AIDS defining events, deaths and related costs based upon monthly CD4 counts over this horizon. We also performed a cost-effectiveness analysis of DRV/r + OBR versus TPV/r + OBR based upon an indirect comparison and data from the POWER and RESIST studies. We assumed that patients would switch to salvage therapy after virological failure with DRV/r, CPIs or TPV/r-based HAART.

Results:

Our analysis of DRV/r + OBR versus CPIs + OBR in highly treatment experienced patients found a discounted Incremental Cost-Effectiveness Ratio (ICER) of AUD\$36,776 per life year gained and a discounted cost per Quality Adjusted Life Year (QALY) gained of AUD\$39,019 for DRV/r. Our analysis of DRV/r versus TPV/r found a discounted ICER for DRV/r of AUD\$40,595 per life year gained and AUD\$42,284 per QALY gained.

Conclusion:

DRV/r 600/100mg BID-based HAART is cost-effective compared to both CPI and TPV/r based regimens in highly treatment experienced, HIV-infected adults in Australia. A lower, once daily dose of DRV/r (800/100 mg QD) is currently being evaluated in treatment naïve and early treatment experienced HIV-infected patients.

INDIGENOUS HEALTH

P180 PROMOTION OF HPV VACCINES TO FACILITATE SEXUAL HEALTH EDUCATION WITHIN A HOLISTIC HEALTH FRAMEWORK IN ABORIGINAL COMMUNITIES

Stacey Donovan

Aboriginal Sexual Health Worker, Biripi Aboriginal Medical Service, Taree NSW Australia

The occurrences of cervical cancer in Aboriginal women, is 5 times greater than that of Non- Aboriginal women.

The role of the Human Papilloma Virus (HPV) and cervical cancer are well established.

It has been identified that being infected with HPV is a normal part of being sexually active, thus is of particular concern for girls and young Women, in the Aboriginal communities, due to sexual activity commencing at a younger age.

In 2006, the Therapeutic Goods Administration, approved Gardasil™ which is a vaccine that protects women by 90-100%. The vaccine was made available and subsidised by the Australian Government, targeting females aged between 9-26 years of age. From 2007 this became a school based Vaccination Program.

The role of an Aboriginal Sexual Health Worker is promoting health, providing health education on safe sex practices and raising awareness of sexually transmissible infections (STI), and blood borne viruses (BBV).

The *NSW HIV/AIDS, STI and Hepatitis C Strategies: Implementation Plan for Aboriginal People 2006-2009* states that HIV/AIDS, STI and hepatitis C programs may be more acceptable to Aboriginal people, and therefore more accessible, when delivered within a holistic health framework.

In line with the above NSW Plan and the *National Aboriginal and Torres Strait Islander Sexual Health and BBV Strategy 2005-2008*, the Aboriginal sexual health worker at Biripi Aboriginal Medical Service (AMS) promotes HPV Vaccine part of their sexual health role. This ensures Aboriginal girls and women receive this preventative treatment, in an effort to reduce the statistics around cervical cancer in Aboriginal communities, while at the same time facilitating HIV/AIDS, STI and hepatitis C education within a holistic health framework.

The presentation will focus on the strategies implemented undertaken at Biripi AMS, and their results.

**P181
ORAL POSTER TUESDAY 18 SEPTEMBER
0805 – 0810**

ASHM - ORAL POSTER SESSION - SOCIAL RESEARCH, INTERNATIONAL, COMMUNITY, INDIGENOUS

'WE HAVE INFECTIONS ZAPPED!' OFFERING TESTING FOR CHLAMYDIA AND GONORRHOEA IN TARGETED YOUTH SETTINGS

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¹HIV & Related Programs Health Promotion Team, Sydney South West Area Health Service, Camperdown, New South Wales, Australia

Chlamydia is the most common STI in Australia and is particularly high in young people 15 to 30 years old. Aboriginal young people in NSW are recognised as suffering from a higher burden of sexually transmitted infections (STIs) and blood-borne viruses than non-Aboriginal young people and have been identified as a priority population for Sexual Health Services across the state by the NSW Department of Health.

Young people however, do not access health services as extensively as adults and seldom discuss sexual health issues when they do. Research has noted that barriers to accessing health care include financial concerns, lack of knowledge, lack of confidentiality and other emotional concerns. Young people traditionally do not perceive themselves at risk of STIs. This supports the need to actively engage young people in settings where they feel more comfortable and secure engaging with health care staff.

In response to these issues, the HIV & Related Programs (HARP) Health Promotion Team (SSWAHS) has initiated an outreach testing program as a strategy to improve access for young clients, particularly young Aboriginal clients, to sexual health clinical services. In line with the NSW Sexually Transmissible Infections Strategy 2006-2009, the program will trial an active outreach approach to sexual health clinical services and promote collection of urine for chlamydia and gonorrhoea testing.

This program is being delivered as a collaboration between the HARP Health Promotion Team and the RPA Sexual Health Clinic team. Of particular importance is the role of the Aboriginal Sexual Health Workers (ASHWs) in maintaining relationships with services and working directly with Aboriginal young people. STI testing is offered by both ASHWs and nursing staff.

This paper will discuss the process of:

- selecting two local youth services as sites for outreach testing
- developing and formalising partnerships with these services
- developing a series of project resources, including an information pamphlet and safe sex packs
- delivering the program and preliminary results

P182
ORAL POSTER THURSDAY 18 SEPTEMBER
0800 - 0805

**ASHM - ORAL POSTER SESSION - SOCIAL
RESEARCH, INTERNATIONAL, COMMUNITY,
INDIGENOUS**

**ENHANCED PRIMARY CARE (EPC) AND
CARE CO-ORDINATION AS A CO-OPERATIVE
MODEL**

Scott-Visser BR 3, Starkey RJ 4

-
- 1 SHAIIDS, Lismore, NSW, Australia
 - 2 ACON, Lismore, NSW, Australia

The terms empowerment and self determination can become clichéd. Case management means many things to many people. How can these values and perspectives effectively be implemented to produce positive outcomes for positive people, especially those with complex needs living in a rural setting?

In this presentation, we discuss our unique roles, the theory behind our work (differentiating case management and care co-ordination), why we use these models and how we have developed an effective partnership model.

The two presenters work in differing services in differing roles, however they have developed a partnership approach to initiate productive outcomes for positive people, especially those with complex needs living in rural Australia.

INTERNATIONAL & REGIONAL ISSUES

P183

POTENTIAL DIFFICULTIES AND CONFLICTS: FINDINGS FROM A KNOWLEDGE, ATTITUDES AND PRACTICE SURVEY OF HEALTH CARE WORKERS IN PAPUA NEW GUINEA

Hill R1, Ryan B2, Sadler S1, [Sarangapany J1](#), Begley K1, Wyndham H1, Cousins J2, Nicol K2, Kalinoe M2 and Miria R2
1Albion Street Centre, Surry Hills, NSW, Australia
2Anglicare StopAIDS, Port Moresby, Papua New Guinea

The social and cultural impact of twin HIV and STI epidemics in Papua New Guinea (PNG) is widely acknowledged. Responding to these diseases using a multi-sectorial approach is a Government of PNG (GoPNG) priority. The PNG and Australia Sexual Health Improvement Program (PASHIP) is a partnership between the Australian and PNG governments, and a number of local and international organisations. The purpose of the program is to reduce the prevalence of STIs through the provision of sexual health services.

The study was a questionnaire based survey of knowledge and attitudes of Health Care Workers (HCWs) in a single health care facility in Port Moresby. The survey was divided into two sections: 1) knowledge and 2) attitudes, with each section containing three separate sub-sections. A total of 19 forms were returned, four from nursing staff and fifteen from counselling staff. For the knowledge section of the survey overall scores were higher among the nursing participants than among counselling staff, 90% correct compared with 69% correct respectively. Basic knowledge of transmission was similar between both groups. There were differences in specific knowledge about STIs between nurses and counsellors, and this accounted for differences in the overall knowledge score. Despite the overall sound knowledge of the HCWs, three reported that there was a cure for HIV with one person witnessing a 'faith healing' that cured HIV. Attitudes towards condom use had positive response from both groups. The survey indicated a strong perception that those most vulnerable to STIs, such as men who have sex with men (MSM) and commercial sex workers (CS) deserved access to health care. However, more than half (8/15) of the counsellors felt that knowing a colleague's HIV positive status would give them a better chance to protect themselves against HIV.

The study found that the overall level of knowledge was high and there was a high level of commitment and motivation to care for people living with HIV in this PNG HCW cohort. There were, however, some myths and beliefs that could potentially be barriers to the delivery of care which need to be addressed.

P184

NEW MARRIAGES, NEW PREGNANCIES AND KNOWLEDGE OF SPOUSE HIV STATUS AT AN HIV TREATMENT FACILITY IN CAMBODIA.

Roeun M¹, Pouv S¹, Phorn S¹, Khem C¹, Keo S¹, Song S¹, Taing S¹, Eng L¹, [Huffam S^{1,2}](#), Saphonn V¹, Kaldor J², Cooper D A², Mean CV¹.

¹National Center for HIV/AIDS, Dermatology and STIs (NCHADS) Ministry of Health Cambodia, ²The National Center in HIV Epidemiology and Clinical Research (NCHECR), University of New South Wales, Sydney, NSW, Australia.

The NCHADS Social Health Clinic (SHC) is an outpatient facility providing care, including antiretroviral therapy (ART), to people living with HIV in Phnom Penh, Cambodia.

Patients' spouse status (single, married, divorced, widowed, and HIV/ART status) are recorded by counsellors and peer support workers at enrolment, and entered into an observational clinic database. All current patients' data were reviewed and updated in early 2008, and compared with baseline.

Of 1989 ever enrolled patients 1411 were current at April 30th 2008, with a median time of enrolment of 22.8 months, and 1047/1411 (75%) on ART. At enrolment 479/677 (71%) men, and 419/734 (57%) women were married, and 27/677 (4%) men and 116/734 (16%) women widowed. Spouse status was "missing" for 106/734 (14%) women and 30/677 (4%) men. At review, spouse status rates are similar to at enrolment except 213/734 women (29%) were subsequently recorded as widowed, with data missing for only 2 women.

New marriages (or stable partnerships) occurred for 56 (8%) male patients and 58 (8%) women, including 14 patients who entered more than one marriage since enrolment. After enrolment 39/734 (5%) women became pregnant including 8 (14%) of the 58 women with a new marriage.

HIV status was recorded as unknown for 181/524 (35%) spouses of male patients, and 179/492 (36%) spouses of female patients at enrolment. At review, HIV status are recorded unknown for 116/540 (21%) current spouses of male patients, and 144/504 (29%) spouses of female patients, including 9/50 (18%) spouses of men, and 16/50 (32%) spouses of women in new marriages. Overall 260/1044 (25%) patients' current spouse's HIV status are recorded as unknown, 492/1044 (47%) HIV +ve, (including 39/100 (39%) newly married), and 292/1044 (28%) HIV -ve (including 36/100 (36%) newly married). Of HIV +ve spouses, 278/492 (56%) are on ART.

These data give some insight into changes in marital status, knowledge of spouse HIV status, and occurrence of pregnancies in a cohort of PLHA over time. To prevent 2^o HIV transmission, HIV clinics must acknowledge their patients' relationships and family life and encourage and facilitate honest communication between couples, disclosure of HIV status, HIV testing of partners, use of HIV prevention methods, and ensure family planning and sexual health services are available to patients and their partners.

**P185
COMMUNITY CAPACITY ENHANCEMENT
FOR HIV RESILIENCE IN A GENERALISED
EPIDEMIC: A COMPARISON STUDY OF
A SOCIAL CHANGE COMMUNICATION
APPROACH IN RURAL ETHIOPIA**

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¹World Vision Ethiopia, ²World Vision HIV and AIDS Hope Initiative Africa Region, ³World Vision Australia

Community capacity enhancement (CCE) is an approach developed by the United Nations Development Programme to assist communities to address social, cultural, and gender factors contributing to HIV vulnerability. It utilises the 'community conversation' methodology pioneered by the Salvation Army and Hope Worldwide. CCE can be categorised as a 'social change communication' intervention, defined in November 2007 by the Joint United Nations Programme on HIV and AIDS (UNAIDS) *Technical Consultation on Social Change Communication* as "...the strategic use of advocacy, communication and social mobilization to systematically facilitate and accelerate change in the underlying drivers of HIV risk, vulnerability and Impact."

As an international non-governmental organisation, World Vision's challenge is to identify evidence-informed and theory-based HIV response approaches that are viable for scale-up and yet flexible enough to be adapted for a range of epidemiological and social contexts. World Vision is moving toward incorporating a CCE approach into a 'core model' for HIV prevention in generalised epidemic settings in sub-Saharan Africa with predominantly sexual transmission. In 2007 World Vision Ethiopia commenced a four-year pilot project to test the viability and effectiveness of a CCE approach in the context of broad-based, long-term, multi-sectoral community development programmes. The project operates in one district in Tigray Region and three districts in the Southern Nations and Nationalities People's Region. The CCE approach is employed in combination with other behaviour change interventions: life-skills education in schools, child peer education for in-school and out-of-school youth, and the 'Channels of Hope' methodology for mobilising faith communities. Baseline, mid-term and final evaluations will employ a combination of qualitative and quantitative methodologies to compare results against comparison sites, which will use the same set of interventions, excluding the community conversations methodology.

This presentation will discuss the project's implementation approach and research methodology, and present relevant baseline findings.

**P186
IMPLEMENTATION ISSUES ARISING FROM
THE 2008 WHO/ILO POST EXPOSURE
PROPHYLAXIS GUIDELINES**

Tomkins M, Gold J

The Albion Street Centre, Sydney, NSW, Australia

The World Health Organization (WHO) and International Labour Organization (ILO) recently published *Joint WHO/ILO guidelines on post-exposure prophylaxis (PEP) to prevent HIV infection*. Personnel from the Albion Street Centre were involved in drafting the document.

The Guidelines include policy and clinical guidelines for PEP for occupational exposure and non-occupational exposure (primarily after sexual assault) and are intended to be able to be used in any setting in any country.

Although the guidelines are designed to ensure equitable and appropriate access to PEP in resource constrained settings issues with implementation are foreseen.

Key delivery issues include:

- Is the provision of PEP after occupational exposure or sexual assault beneficial in terms of effectiveness and/or cost?
- How can PEP be seen as a priority in the context of inadequate treatment resources?
- How can PEP be provided without affecting resources available for antiretroviral therapy or prevention?
- Is there a link between provision of PEP and subsequent sexual, drug use and occupational practices?
- What are the minimum requirements (in terms of other support services) needed to be able to offer PEP?
- Is there a reliable risk assessment algorithm that ensures PEP is not given for low risk exposures?
- What is the role of source assessment? Should PEP only be given if the source is known to be HIV antibody or HBV antigen positive?
- Which drugs should be recommended?
- How can PEP accessibility be made equitable in all settings?

The provision of international PEP guidelines raises important concerns regarding implementation and should include mechanisms for an evaluation of their impact on HIV care delivery and prevention programs.

NURSING & ALLIED HEALTH

P187 **SHARP PRACTICE: THIRTEEN YEARS OF THE NSW NEEDLESTICK INJURY HOTLINE**

Cherry R, Melling P, Wyndham H
Albion Street Centre, NSW, Australia

The New South Wales (NSW) Needlestick Injury Hotline was launched in September 1995. The Hotline was developed in response to a 1994 NSW Health Department report which identified a crucial need for a coordinated approach to the treatment of health care workers sustaining needlestick injuries in NSW health care facilities. The Hotline was designed to augment, not supplant, local policies and protocols for managing exposures. The objective was to provide immediate information, risk assessment, support and referral to injured health care workers and the emergency services (i.e. police, fire and ambulance personnel), their supervisors and clinicians, 24 hours a day, 365 days a year.

In 2008 occupational exposures remain a common cause for concern among health care workers. Exposures continue to occur despite the introduction of new safety equipment such as needle-less systems. Knowledge deficits among health care professionals providing direct management of needlestick injuries persist, and the uptake of hepatitis B vaccination among some groups of health care workers remains inconsistent.

The Needlestick Hotline has established a database capturing valuable information about trends in needlestick injuries and occupational exposures. This poster will identify key trends and provide an overview of the service.

P188
WITHDRAWN

P189
WITHDRAWN

P190
ORAL POSTER SATURDAY 20 SEPTEMBER
0805 - 0810

**ASHM - ORAL POSTER SESSION - CLINICAL,
ALLIED HEALTH AND BASIC SCIENCE**

**VALIDATING A TWO-QUESTION DEPRESSION
SCREENING TOOL IN AN HIV-POSITIVE
POPULATION TO USE IN IMPROVING
NUTRITION OUTCOMES AND PROGNOSIS**

Di Guilmi, A.^{1,2}, Sarangapany, J.^{1,3}, Houtzager, L.^{1,3}, Young, J.^{1,3}, Purnomo, J.¹, Begley, K.¹

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³ The University of Wollongong, Wollongong, NSW, Australia.

Depression is a treatable disorder which is prevalent amongst people infected with HIV with rates as high as 20-32%. Concurrent depression can result in increased symptoms and accelerated progression to AIDS. Studies have found associations between nutrient intake and depression. Poor diet quality and micronutrient deficiencies, particularly folate and omega-3 fatty acids, may propagate depressive symptoms. This study aims to validate a two-question depression screen, previously validated within a veteran's population, in HIV-1 infected patients. The overall goal is to incorporate the tool within nutritional screening to improve nutritional outcomes and prognosis through identifying and treating depression.

A convenience sample of 32 participants (30 male, 2 female) was recruited for the study. The mean age of the participants was 44 ± 10 years and the mean duration of HIV-infection was 12 ± 7 years. Participants completed the two-question depression screen and the Centre for Epidemiologic Studies Depression Scale (CESD-10), to assess the validity of the tool. The scoring system for both the CESD-10 and two-question depression screen remained the same as in the original study. Validity testing was performed by bi-variate correlation analysis using Spearman's (ρ) correlation coefficient. A strong correlation was found between the two measures, $\rho=0.78$ ($p<0.001$). These results indicated that the abridged screening tool was valid for detecting individuals at risk of depression. The proportion of participants classified as depressed by the CESD-10 was 9/32 (28%) and with the abridged tool was 12/32 (38%). The abridged questions overestimated depressed participants, which is acceptable for a screening tool.

As screening tools improve potential case identification, further confirmatory assessment and appropriate interventions such as cognitive behaviour therapy and

nutrition counselling can be initiated in a timely fashion to improve outcomes. Effective treatment can reduce major depression in 80-90% of patients. Greater attention to nutritional factors in mental health is warranted given that nutrition interventions are inexpensive, safe and easy to administer. The depression screening questions should be incorporated into a larger nutrition screening criteria to assist in detecting and treating comorbidities relating to HIV-infection and treatment.

P191
ORAL POSTER SATURDAY 20 SEPTEMBER
0810 - 0815

**ASHM - ORAL POSTER SESSION - CLINICAL,
ALLIED HEALTH AND BASIC SCIENCE**

**VALIDATING AN ABRIDGED SYMPTOMS
DISTRESS QUESTIONNAIRE IN AN HIV-
POSITIVE POPULATION TO FACILITATE
DIETETIC REFERRAL AND IMPROVE
NUTRITION OUTCOMES**

Di Guilmi, A.^{1,2}, Sarangapany, J.^{1,3}, Houtzager, L.^{1,3}, Young, J.^{1,3}, Purnomo, J.¹.

¹ The Albion Street Centre, Prince of Wales Hospital, Sydney, NSW, Australia.

² The University of Sydney, Sydney, NSW, Australia.

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HIV infection, secondary infections and treatment with antiretroviral (ARV) medications can result in complicated health and nutritional issues for individuals. There is increasing evidence to suggest that nutrition interventions can influence future health outcomes and prognosis. HIV infection and/or ARV treatment may induce various side effects including nausea, vomiting, diarrhoea, taste changes, weight loss and micronutrient deficiencies. These symptoms may propagate more serious comorbidities such as malnutrition, muscle wasting and reduced functional status. Nutrition screening allows for early detection of symptoms and encourages treatment with nutritional counselling.

This study aims to validate an abridged symptoms distress questionnaire in a HIV-1 infected sample against the Symptoms Distress Module (NIAID Adults AIDS Clinical Trials Group), a validated questionnaire used in HIV clinical trials. The overall goal is to increase symptom detection and improve nutrition outcomes through appropriate dietetic referral. A convenience sample of 32 (30 male, 2 female) participants was recruited for the study. The mean age of the participants was 44 ± 10 years and the mean duration of HIV-infection was 12 ± 7 years. Participants completed both the abridged and complete symptoms distress questionnaires. Validity testing was performed by bi-variate correlation analysis using Spearman's (rho) correlation coefficient. A strong correlation was found between the two measures, $\rho=0.86$ ($p<0.001$), indicating the abridged questionnaire was valid for detecting patients with a high symptoms score. The questionnaire indicated that a dietetic referral was required in 28 (87%) participants. A high frequency of symptoms was observed in the sample; 28 (88%) reported fatigue, 23 (73%) diarrhoea, 21 (66%) bloating, 18 (56%)

fat deposits or weight gain, and 17 (53%) reported weight loss or muscle wasting.

Nutrition management is integral to the care of HIV-infected individuals as they may be at nutritional risk at any point in their illness. Nutritional counselling can assist in alleviating nutrition related symptoms, and improve nutrition status, immune function and survival. The abridged symptom distress questions should be incorporated into a larger nutrition screening criteria to assist in detecting and treating symptoms related to HIV-infection and treatment.

**P192
DEVELOPMENT AND RELIABILITY TESTING
OF NUTRITION SCREENING CRITERIA FOR
USE IN HIV-1 INFECTED PATIENTS**

Di Guilmi, A.^{1,2}, Sarangapany, J.^{1,3}, Houtzager, L.^{1,3}, Young, J.^{1,3}, Purnomo, J.¹, Begley, K.¹

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Targeted nutrition screening provides a quick, reliable and cost-effective alternative to complete assessment, to identify individuals who have one or more indicators of poor nutritional status or disease risk. Early identification allows for timely intervention and management with nutritional counselling, support and supplementation to improve nutritional status.

There have been few nutrition screening tools used in the screening of HIV-positive patients and most do not incorporate risk factors for multiple nutritional issues, nor do they consistently take into account the chronic nature of the disease or long-term antiretroviral therapy. Hence, a multi-parameter tool is indicated for nutrition screening amongst people living with HIV. We have identified evidence-based risk factors that would contribute to diabetes and cardiovascular disease; and nutritional deficiencies in this population, including; symptoms, malnutrition, food insecurity, poor oral health and depression.

The aim of this study was to develop and pilot a nutrition screening criteria using validated questionnaires and evidence-based risk factors for disease, and to test the inter-rater reliability of the tool in a HIV-positive population. A convenience sample of 32 participants (30 male, 2 female) was recruited for the study. The mean age of the participants was 44 ± 10 years and the mean duration of HIV-infection was 12 ± 7 years. Reliability of referrals between two health practitioners was tested using the kappa-test statistics. Two of either a medical officer, registered nurse or dietitian scored the completed screening criteria and indicated an appropriate referral to a dietitian, dentist or psychologist. Referral to a dietitian was concordant in 93%, a dentist in 76% ($k=0.66$, $p<0.001$), and a psychologist in 86% ($k=0.73$, $p<0.001$) of cases. Of the 32 participants; 29 (91%) required a referral to a dietitian, 15 (47%) to a dentist and 16 (41%) to a psychologist.

The screening criteria developed were found to be reliable between examiners, and further testing is undertaken to validate the tool and assess sensitivity and specificity. A panel of experts within the centre concluded that the tool was adequate and reliable for a referral pathway.

**P193
ORAL POSTER SATURDAY 20 SEPTEMBER
0810 – 0815
ASHM - ORAL POSTER SESSION - CLINICAL,
ALLIED HEALTH AND BASIC SCIENCE**

**COMPLEX PSYCHOLOGICAL FACTORS
CONTRIBUTING TO SEXUAL RISK BEHAVIOUR
AMONG HIV NEGATIVE MEN WHO HAVE SEX
WITH MEN (MSM): INFORMING SEXUAL RISK-
REDUCTION INITIATIVES FOR THE FUTURE.**

Earle, M., Hoy, J., Price, B.

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Predictors of sexual risk behaviour potentiating HIV or STI infection among HIV negative Men who have Sex with Men (MSM), have been extensively researched. An illuminating body of literature has accumulated describing the demographics and health status of MSM engaging in sexual risk behaviour along with many social and contextual variables surrounding it. Though some contributing mental health conditions such as substance abuse, depression or anxiety have also been studied, comparatively less attention has been given to complex psychological factors such as impulsivity, affect regulation or interpersonal relating difficulties. Given these factors have repeatedly been identified in the mental health literature as contributing to other forms of risk-taking behaviour such as binge-drinking, substance or gambling addiction, they warrant closer attention.

In response to this need, the Psychology Unit within the Victorian HIV Service began systematically collecting data regarding these psychological factors from HIV negative MSM attending the service for assistance reducing sexual risk behaviour. Clients were referred from the Victorian Non Occupational Post-Exposure Prophylaxis (NPEP) program and from general practice clinics in the community, after seeking medical help regarding a sexual risk event. Clients completed the Sexual Sensation-Seeking and Sexual Compulsivity Scales (Kalichman & Rompa, 1995) and the Personality Assessment Inventory (PAI, Morey, 2007). Both of these psychological assessment instruments are valid and reliable measures of sexual excitement-seeking, sexual compulsivity, depression and anxiety along with propensities toward impulsivity, self-harming behaviour, difficulties with affect regulation and negotiating interpersonal relationships.

Trends in the data collected to date will be presented and discussed in light of relevant research from within the HIV Prevention and Mental Health fields. Applications of this data will also be discussed, including its use as an evidence-base for developing psychological interventions aimed at helping HIV negative MSM engaging in sexual risk behaviour increase their sexual safety, and ways it might inform preventative education campaigns

**P194
NURSE ROLE IN PROVIDER-INITIATED
HIV TESTING AND COUNSELING IN RSIJ
HOSPITAL, JAKARTA**

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Imran Darma²

¹Department of Nursing Jakarta Islamic Hospital (RSIJ);

²Department of Neurology University of Indonesia; ³AIDS
Working Group Jakarta Islamic Hospital (RSIJ)

Nurse role as a counselor for human immunodeficiency virus (HIV) suspected patients based on admission symptom was very important to diagnose HIV. We determined patient or family response to provider-initiated HIV testing and counseling by nurses in our hospital. We conducted a cross sectional study from August 23rd to May 10th 2008. Fifty four patients were included and majority of patients were males 41 (76%). The age of patients ranged from 20 to 44 years with mean value 28 years. Marital status was 57% single, 30% married and 13% widow. Eleven (20%) patients had education degree lower than high school. Thirty two (59%) of the patients employee and 41 % unemployee. HIV risk factor was intravenous drug users (IDU) 61%, heterosexual 6% and others 33%. Admission symptoms were prolonged fever 54%, chronic diarrhea 13%, unconsciousness 11% and others 22%. Fourty (74%) patients showed a positive response attitude when nurse asked for HIV testing and 14 (26%) showed a negative response attitude. Marital and job status had significant value to patients response ($p=0,037$ and $p=0,042$). Almost all of the provider-initiated HIV testing and counseling in our hospital by nurses had positive response, and factors which influenced their response was marital and job status.

**P195
WITHDRAWN**

**P196
UNDERSTANDING DOMESTIC VIOLENCE
AND SAME SEX DOMESTIC VIOLENCE IN A
HIV AMBULATORY CARE SETTING**

Hennessy R

Domestic Violence (DV) and Same Sex Domestic Violence (SSDV) has been recognised as a serious issue. Overseas and anecdotal reporting suggests that DV in same-gender relationships is comparable to the rates of DV against heterosexual women. As in opposite-gendered couples, the issue is presumably underreported. Being afraid of revealing the nature of the sexual relationship, an unsympathetic justice system and inadequate resources for male victims are some of the barriers to reporting.

Purportedly HIV in an abusive relationship may add to the complexity of concerns. Perpetrators of DV ostensibly could use HIV status as a means of coercion or intimidation in their relationships. Victims may fear that their abusive partner may reveal their HIV status to others and thus face HIV discrimination and potentially outing of sexual orientation due to HIV's association with sexuality in Australia. Alternatively abusive HIV positive partners may coerce partners to risk HIV infection and should HIV transmission occur this sero-concordance itself may make separation more difficult due to the fears previously noted.

Currently within the SESIAHS sector data on DV and SSDV is not uniformly collected. Understanding how HIV may affect DV has rarely been considered. In addition to other approaches the Albion Street Centre's (ASC) Psychology Unit acknowledged the need to develop a strategic plan to address DV and SSDV service delivery. Promoting awareness and improving our understanding of DV and SSDV within our HIV positive client's relationships were identified as essential first steps.

Information regarding client's experiences of DV both in current and past relationships will be collected over a one month period. Identifying if HIV features in any abuse experienced and what help or barriers to help, if any, clients will be considered. Data on a planned recruitment of 30 clients will be presented.

Gaining an insight into the incidence and type of DV issues facing clients will potentially enable psychosocial based services to better assist people to leave an abusive relationship. Such information can assist professional providers, who may have inadequate levels of experience and training to work with victims, to highlight what the professional development and resource needs are to improve service delivery.

P197
MENTAL HEALTH DIAGNOSES IN
FREMANTLE'S HIV-POSITIVE PATIENTS

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Previous studies have shown the incidence of psychiatric and substance abuse disorders are generally higher in people infected with HIV than in the general population. It has also been shown that improving treatment in those with both HIV and mental health disorders can improve quality of life and treatment outcomes. In order to improve the provision of mental health care amongst the cohort of HIV patients attending Fremantle's Infectious diseases department, we performed an audit examining mental health diagnoses and the care accessed by these persons.

A retrospective case note review was performed. Demographic data, risk factors for HIV transmission, CD4 count at HIV diagnosis, current mental health diagnoses (MHD), previous MHD, HIV treatment outcomes, current psychiatric treatment, and health services accessed were recorded.

In February 2008, 90 HIV-positive patients (males N=69, females N=21) were registered on the department's database. Of these 34% (38/90) were found to have a current MHD, and another 13% (14/90) had a past history. Men were more likely to have a MHD and present later with advanced HIV disease. Of the 11 indigenous patients attending the clinic, 9 had a current MHD.

Only 51% of those with a current MHD were accessing a General practitioner (GP) and 23% Mental health services. 67% were recorded as being prescribed antidepressants, 19% antipsychotics, and 14% were on both medications. Of these, 55% of patients had their psychiatric medications prescribed by the Infectious diseases department.

Reassuringly all patients with a mental health diagnosis who required HIV treatment were taking HAART (highly active antiretroviral treatment), and the majority had undetectable HIV viral loads.

We have subsequently secured funding for a psychiatric outpatient's session in our HIV clinic and are actively seeking GP's for patients who are not registered with a general practice. We are also developing a mental health assessment tool to be used within our clinics, in order to identify patients who require early intervention and referral to specialist services.

P199
ANZANAC VICTORIAN BRANCH: RESPECTING
OUR HISTORY, CAPTURING OUR EXPERTISE
AND LOOKING TO THE FUTURE.

Crock L¹, Gellie K¹, Moyer J¹, Tomnay J¹.

1. Australian & New Zealand Association of Nurses in AIDS Care (ANZANAC) Victorian Branch Committee, Melbourne, Victoria

ANZANAC (Victorian Branch) began as the Victorian AIDS Nurses Resource Group in 1986 when a group of nurses recognised the need to support and educate nurses working in HIV/AIDS. Whilst the group has had name changes over the years, its purpose and core functions have been maintained, with a small but dedicated group of active members. Now in its 22nd year, the group is led by a volunteer committee. Although it receives no funding, ANZANAC (Victorian Branch) produces a regular journal and holds education and networking events for members. It advocates and responds to issues relevant to Victorian HIV nurses, and people living with HIV/AIDS.

A strong sense of the historical importance among group members is balanced by recognition of how a dynamic epidemic impacts on the needs of Victorian nurses. In 2007, ANZANAC (Victorian Branch) conducted a survey of members to explore and document the diversity and expertise within the group, to establish the current needs of members, and to plan for the future.

An email requesting members to fill in an online survey was sent in three waves. Also, non participating members attending a subsequent education session were invited to fill in a hard copy of the survey. Results were entered into "Survey Monkey" and analysis performed.

86% (19/22) of members participated. 90% of participants worked in public health, community nursing, research or a public hospital. All participants (100%) had or did work in an HIV related position. 70% (14/20) respondents had a combined 204 years experience in HIV nursing. 94% of respondents were Division 1 nurses, with 90% having post graduate qualifications (52% graduate diploma, 32% Masters, 11% PhD). 78% of respondents indicated that ANZANAC's education sessions, journal, peer support and networking were good or very good. Members stated that, in the future, ANZANAC (Victorian Branch) should focus on increasing its profile among nurses in Victoria and provide more educational opportunities such as journal/book clubs, refresher courses on HIV, blood borne viruses and sexually transmissible infections. ANZANAC (Victorian Branch) also needed stronger networking within Australia.

We conclude that ANZANAC (Victorian Branch) is meeting the current membership needs.

**P200
A STUDY OF FACTORS AFFECTING LONG-TERM ADHERENCE TO ENFUVIRTIDE (ENF) THERAPY IN HIV-1 INFECTED INDIVIDUALS**

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1St Vincent's Hospital, HIV Ambulatory Care Unit, Sydney, Australia, 2St Vincent's Hospital, Research Office, Sydney, Australia, 3Roche Products, Medical, Sydney, Australia

Text: Objective: To describe issues for patients related to long term adherence to ENF and to identify strategies that affect adherence to twice daily injections. Methods: 17 subjects provided informed consent; structured interviews were undertaken at an HIV Ambulatory Care Clinic. The interviews were tape-recorded and transcribed verbatim. Transcripts were analyzed using an interpretative phenomenological approach. Themes were identified which reflected the subjects' experience of self administering ENF. Results:

Demographics	N = 17
Mean Age (Years)	47
Mean time taking Anti Retroviral Therapy (ART) (Years)	13
Mean time taking ENF (Months)	24
Mean CD4+ Cells/mm ³	287
% HIV Viral Load <50	71
% Currently on ENF	82
% Male	94

[Demographics]

The main findings were that adherence to ENF takes self discipline, commitment and a sustainable routine combined with an understanding of the process for self administering a twice daily injection. Improved HIV clinical surrogate markers were powerful motivators for long term use. Lifestyle readjustment was also required for successful long term use. High levels of satisfaction with training and confidence in the ability to self inject were important for adherence. Injection site reactions (ISR) posed significant problems for many patient however choice in the delivery method (27, 31 gauge needles and biojector) provided patients with options to manage the impact of ISR. Conclusion: Study participants recognized that taking ENF required additional commitment to adherence compared to oral ART. Patient education needs to focus on ways to develop routines, management of ISRs and identification of suitable injection sites. Patients taking ENF long term would benefit from annual training sessions, targeting ISR management and updated self administration education.

Country of research: Australia

**P201
ORAL POSTER SATURDAY 20 SEPTEMBER
0800 – 0805**

ASHM - ORAL POSTER SESSION - CLINICAL, ALLIED HEALTH AND BASIC SCIENCE

REDUCED ENERGY AND INCREASED SATURATED FAT INTAKE IN A COHORT OF HIV POSITIVE CLIENTS IN SYDNEY

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³University of Sydney, Sydney, NSW, Australia

Balanced nutrition is essential for people living with HIV (PLHIV) as it helps in managing symptoms, reduce toxicities associated with anti retroviral therapy, delay disease progression and maintain immune responses leading to a better quality of life.

Thirty two subjects (30 males, 2 females) participated in the study to evaluate dietary intake among HIV-1 infected patients. Dietary intake was analysed using Food Works Nutrient Analysis Software Version 5. Comparisons were made to current Recommended Dietary Intakes (RDI), the Australian Guide to Healthy Eating (AGTHE), National Cholesterol Education Program (NCEP) and National Nutrition Survey (1995).

Mean age was 44 ± 10 years and mean duration of HIV-infection was 12 ± 7 years. Mean actual energy intake was 9618.2 ± 4697.1 kJ/day which was -890.7 ± 3498.3 kJ/day lower than estimated energy requirements (EER). The majority of subjects (72%) did not meet EER. Macronutrient breakdown was 20% protein, 45% carbohydrate and 34% fat. Total fat included 44% saturated fat contributing to 13% of total energy intake. Mean fibre intake was 23.2 ± 12.4 g/day and was inadequate in 24 (75%) subjects. Mean intakes of magnesium and folate in 25 (78%) subjects, and zinc in 19 (59%) were found to be lower than the RDI. Twenty nine (91%) did not meet the AGTHE recommendation for consumption of vegetables; 27 (84%) for fruits and; 21 (66%) for bread, cereal, rice and pasta. Mean percentage energy from saturated fat in 27 (84%) and dietary cholesterol in 17 (53%) were higher than the NCEP guidelines. Mean cholesterol and sugar intake were 356.0 ± 190.9 mg/day and 123.7 ± 83.6 g/day respectively which were higher than that reported in the general population in New South Wales.

This study found that despite high sugar and saturated fat intake, energy intake was still lower than recommended. The pattern of food consumption in these patients was not consistent with the AGTHE guidelines with participants consuming food of low nutritional value resulting in low energy intake. Clinicians need to be aware of nutritional deficiencies and to consider nutritional referral and intervention in the management HIV-1 infected patients.

P202

WITHDRAWN

P203

**ORAL POSTER SATURDAY 20 SEPTEMBER
0810 – 0815**

**ASHM - ORAL POSTER SESSION - CLINICAL,
ALLIED HEALTH AND BASIC SCIENCE**

**ARE WE MISSING AN OPPORTUNITY TO
IMPACT BMI'S IN PEOPLE WHO ARE HIV +VE?**

Roney J1, Bryant M1, Downs C1, Giddings E1, Hoy J1, Liddle R1, Rotty J1. ¹Clinical Research Unit, Infectious Diseases, The Alfred Hospital, Melbourne, VIC, Australia

Excess body weight contributes to risk for a variety of conditions such as diabetes, cardiovascular disease (CVD), osteoarthritis, hypertension, and dyslipidemia, (WHO 2003). The most recent National Health Survey taken in 2004-2005 reported an increased number of Australians classified as overweight (BMI score 25 to 29.99) and obese (Body Mass Index or BMI score > 30), over the last 15 years, 4.6 million in 1989/90 to 7.4 million in 2004-005.

In the pre HAART era, the average BMI in the HIV positive population was lower than normal. However with effective anti-retroviral treatment, the HIV-infected population is now at risk of disease associated with higher BMIs. In 2003, the D:A:D study analysis identified that 3.5% of the study population were considered obese.

In April 2008, all HIV-infected patients attending the Infectious Diseases Outpatient clinic (OP), were approached to have their BMI calculated. 191 patients agreed. The purpose of this cross-sectional survey was to examine the prevalence of obesity, and to assess whether this had previously been identified and appropriate interventions had been put in place. The Alfred Hospital has 1191 HIV-infected people regularly attending the OP for HIV clinical care. Of these 1093 are male, with a mean age 46 years (range 21.2 to 83.3) and 98 are female, with a mean age of 40.9 years (range 19.6 to 72.9).

Of the patients assessed in April 2008, 183 were male with an average age of 46.6 (range 23-79),. The mean male BMI was 24.26 (range 16.44 to 38.96) with 4% (n=8) underweight, 33% (n=61) being considered overweight and 6% (n=11) obese. Only 8 women participated in the survey therefore not providing a sufficient data set for analysis

This data is similar to data collected on 159 males presenting to OP and enrolled in a lipodystrophy prevalence study. The mean BMI was 24.1 (range 18.1 to 34.6) in 1998.

However, 39% of patients assessed in the cross-sectional study in 2008 had a BMI > 25. The paper will explore other risk factors such as duration of HIV infection, duration and type of ART, VL suppression and CD4 cell count (current and changes over time).

P204

**ORAL POSTER SATURDAY 20 SEPTEMBER
1000 – 1010**

ASHM - PROGRAM DELIVERY

**ENHANCING THE GP'S PRIMARY CARE:
ACON SYDNEY'S ENHANCED PRIMARY CARE
PROJECT**

Saloner KL¹

Barr NJ¹

¹ACON

ACON's Enhanced Primary Care (EPC) Project is a model that can be adopted by a number of non-government organizations (NGOs) and GP offices for wider practice. The aim of this paper is to showcase the model currently being revitalized by ACON Sydney which is possibly underutilized by services working with clients who could benefit immensely from a more immediate and accessible level of psycho-social intervention, particularly where a relationship and high degree of trust already exists.

The EPC project sees social workers, who are employed by ACON, work onsite at high HIV caseload GP surgeries assisting the GPs' care provision.

A unique aspect of service delivery through the EPC method is the maintenance of two very different types of relationships. The first is the relationship with a range of time-restricted GPs who have often had a long-term relationship with the client. The second is a client group who frequently has a history of involvement with health care services, often characterized by experiences of homophobia for GLBT clients and/or clients with "anger management issues". For clients, the interface with systems is one that they frequently do not feel equipped to negotiate with ease. The EPC officer's role is to create a harmonious outcome for the client and the GP.

In the 2007-2008 fiscal year, EPC workers saw approximately 13 clients per month. The majority (approximately 80%) of these clients receive care co-ordination, whilst the remainder might only seek information. On average each care co-ordinated client receives seven occasions of service from the EPC worker.

Historically, EPC officers were required to be experts in relation to Medicare's system of developing Team Care Arrangements and GP Management Plans. Today, 2 out of 3 GP surgeries utilise social workers' professional skills and knowledge to provide key services such as short-term interventions to help clients realize their goals and potential with particular emphasis on whole-of-person care. With the GP looking after the medical aspects, social workers can look after the psycho-social aspects so that a complementary relationship results.

**P205
CERVICAL SCREENING (PAP SMEARS)
ATTENDANCE IN HIV POSITIVE WOMEN: A
NURSING AUDIT**

Smith M.L

Division of Nursing Albion Street
NSW, Australia

Studies suggest that cervical Low and High Grade Intraepithelial Lesions (LSIL/HSIL) are more common and potentially progress to higher grade cellular changes faster in HIV positive women. The National Cervical Screening Program Guidelines recommend annual Pap smears for immunosuppressed women, which includes HIV positive women.

An audit of HIV positive women attending Albion Street Centre for their HIV care was commenced in March 2008 to ascertain the rate of women who adhere to this recommendation. Of the 39 files reviewed 11(28%) women have had documented Pap smears here or at their GPs in the last 12 months, with no abnormal cells detected, 2 (5%) women have had hysterectomies and will require no further Pap smears, and 2(5%) women are transgender and do not require Pap smears. Of the remaining women, 6 (15%) have had Pap smears attended in the past 2 years and the remainder of the women will require clarification to identify if they have had Pap smears attended elsewhere.

This poster aims to provide an overview of the results of this audit and a review of the centre's recall system. It is anticipated that the findings from this audit will highlight the need for a proactive recall system for these client's and to identify client's awareness of the need for their Pap smears. The results of this audit will potentially assist other services in improving their care for HIV positive women.

**P206
WITHDRAWN**

**P207
VALIDATION OF AN ABRIDGED FOOD
SECURITY TOOL AND EVALUATION OF ORAL
HEALTH RISK IN A HIV-1 INFECTED COHORT**

Young J^{1,2} Sarangapany J^{1,2} Houtzager L^{1,2}, Di Guilmi A^{1,3}
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2. University of Wollongong, NSW, Australia
3. University of Sydney, NSW, Australia

Food security (FS) and oral Health (OH) screening tools have been used in the general population. However this is the first time OH and FS have been screened together in people living with HIV (PLHIV). The FS nutrition screening tool (NST) was developed using two questions from the FS questionnaire (FSQ). The OH NST included a question on mouth pain, dry mouth and time since last dental visit as these were the main OH issues identified in a HIV-1 infected cohort. Each participant completed three forms: FSQ vs. FS NST and OH NST.

Thirty two (30 male, 2 female) participated in the study. The mean age of participants was 44 ± 10 years, with a mean duration of HIV infection of 12 ± 7 years. A highly significant correlation was found between the abridged FS NST and the FSQ ($\rho = 0.845, p < 0.001$). The proportion of PLHIV reporting food insecurity was 11 (34%) and 12 (37.5%) with the FS NST and FSQ respectively indicating that the FS NST accurately detected food insecurity. From the OH NST 15 (50%) PLHIV were identified as being at high risk of OH issues. A significant correlation was also found between the OH NST and FS NST ($\rho = 0.471, p = 0.007$).

The strong relationships found between the FS NST and the FSQ suggest that the NST adequately screens PLHIV for FS issues. Therefore the abridged food security tool (FS NST) could be incorporated into a NST for a multidisciplinary approach to the nutrition management of PLHIV. The OH NST requires further investigation to determine the true extent of OH issues in a HIV-1 infected cohort. A relationship exists between oral health and food security but the true cause and effect requires further research.

PRIMARY CARE

P208 KNOWLEDGE OF HIV/AIDS AMONG 'PRIMARY HEALTH CARE PROVIDER'S AND IMPACT OF TRAINING.'

Badhan S

Objective:
India is ill prepared for 'Provider- Initiated Testing and Counselling (PITC)' as per UNAIDS guidelines for HIV testing because of the lack of knowledge about various aspects of HIV/AIDS among the primary health care providers. Thus, objective of present study was to assess the level of knowledge about HIV/AIDS among the private practitioners who are supposed to identify suspected cases of HIV/AIDS, counsel and refer them for testing.

Methods:

The study was conducted in North East Delhi from 15th Dec. 06 to 15th Feb. 2007 among primary health care service providers. A pre-tested, semi-structured questionnaire was used to collect the information about sexually transmitted diseases, presence of HIV in human body, categorization of some of the risk categories for HIV transmission, modes of transmission and prevention of HIV/AIDS and the conditions for initiating treatment. This was followed by one day workshop for training and education for risk reduction practices. A purposive sample of 350 private practitioners was taken for time constraints.

Results:

Out of 350 study subjects contacted 278 responded (79.42 %). Majority of these were males (87.05%), aged below 40 years (81.40%) having no recognized medical degree (82.02 %). Surprisingly only 27.33% study subjects could name all the four modes of transmission viz. sexual intercourse, blood transfusion, parent to child and IV Injections, correctly and there was significant improvement at the end of workshop. There was no significant difference between males and females except in relation to the window period where females outnumbered the males

Conclusion:

The knowledge about the STD's, HIV/AIDS among the study subjects was found to be very poor which improved, a bit but not significantly, after the workshop, highlighting the need of vigorous awareness campaigning before they take up the responsibility of PITC as per UNAIDS guidelines.

	Male (%) 242 (87.05)		Female (%) 36 (12.94)		Total 278	
Correctly named transmission mode	Pre	Post	Pre	Post	Pre	Post
4	64 (26.44)	92 (38.01)	12 (33.33)	18 (50.0)	76 (27.33)	110 (39.56)
3	58 (23.96)	128 (52.89)	8 (22.22)	13 (36.11)	66 (23.74)	141 (50.71)
2	43 (17.76)	22 (9.09)	6 (16.66)	5 (13.88)	49 (17.62)	27 (11.15)
1	77 (31.81)	0	10 (27.77)	0	87 (31.29)	0
Window Period: Yes	52 (21.48)	126 (52.06)	15 (41.66)	21 (58.33)	67 (24.10)	147 (52.87)
CD4 - Count: Yes	28 (11.57)	54 (22.31)	7 (19.44)	12 (33.33)	35 (12.58)	66 (23.74)

**P209
ORAL POSTER SATURDAY 20 SEPTEMBER
0805 - 0810**

**ASHM - ORAL POSTER SESSION - CLINICAL,
ALLIED HEALTH AND BASIC SCIENCE**

**THE SUPPORT FOCUS IS ON INDEPENDENT
LIVING!**

Crooks L, Chair, NSW HIV/AIDS Supported Accommodation Plan Implementation Working Group

Over the last twenty years, the NSW AIDS Program established a range of supported accommodation services for people with HIV/AIDS. Originally the services provided respite care and support in a context of acute illness and limited life expectancy. A range of graded services were later developed for people with AIDS Dementia Complex and other complex support needs.

With improved HIV/AIDS treatments supported accommodation needs have changed. In particular a greater number of people with HIV/AIDS require longer term support and commonly support that is complex in its provision because of co morbidities such as drug and alcohol problems, mental illness and cognitive or intellectual disabilities. Factors arising from ageing have also become a consideration.

In an environment where HIV/AIDS is now a chronic illness and where congregate types of supported accommodation arrangements are no longer considered the most appropriate model for service delivery, NSW has changed its approach to the supported accommodation provided through the AIDS Program for the purpose of improving the coordination of services, the prioritisation of access, the focus on individual needs and the partnerships between HIV/AIDS services and other agencies.

This paper focuses on the NSW changes to policies and models of care and the essential involvement of service providers and other stakeholders in a process that supports a philosophy of independent living.

P210 GENERAL PRACTITIONER UNDERSTANDINGS OF HOW DEPRESSION AFFECTS GAY AND HIV POSITIVE MEN IN AUSTRALIA

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This paper explores how Australian general practitioners (GPs) who are accredited to prescribe antiretroviral medications understand the relationship between depression, gender and sexuality in gay men, including those living with HIV.

The Primary Health Care Project on HIV and Depression is a three year multi-method study funded by the General Practice Clinical Research Program of the National Health and Medical Research Council (2006-2009). The research team represents a unique collaboration between social researchers, general practice researchers, GPs and community partners. The study employs both qualitative and quantitative methods to answer a range of research questions including the prevalence and nature of depression among gay men (both with and without HIV) and heterosexually-identified men attending general practice clinics, factors associated with depression in these three groups, and the clinical and self-management of depression by GPs and patients themselves, especially those living with HIV.

As part of the qualitative component, interviews were conducted with 16 GPs representing three geographical settings and 7 practices: Sydney (4 practices), Adelaide (1) and a rural-coastal town in New South Wales (2). Participants included 14 male GPs and two female GPs, and the number of years each had been working in HIV medicine ranged from two to 24. Semi-structured face-to-face interviews of around one hour in length explored the diagnosis, treatment and management of depression, aspects of depression related to HIV, gender and sexuality, and reflections on practice.

This paper will present the results of a thematic analysis that identifies recurrent themes in the understandings (eg. perceptions, attitudes and beliefs) of GPs regarding how depression affects the gay men they see in their practices, in comparison with heterosexual men. Both the differences (eg. ways of seeking help, attitudes to treatment) and similarities (eg. forms of emotional expression, excessive time spent on work) that they identified are understood to directly shape the management of depression in these populations. Broader social issues (eg. ageing, social isolation, poverty) are understood to also complicate and exacerbate individual experiences of depression. GPs with less experience in treating gay and HIV positive men can benefit from these insights to ensure that depression is accurately detected and effectively treated in these populations.

P211 ORAL POSTER FRIDAY 19 SEPTEMBER 0800 - 0805

ASHM - ORAL POSTER SESSION - PUBLIC HEALTH AND EPIDEMIOLOGY

A COMPARATIVE STUDY OF SYPHILIS & HIV FROM A MELBOURNE GENERAL PRACTICE PERSPECTIVE.

Roth N, Nicolson J
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Since ~2000, there has been a resurgence of syphilis, particularly in homosexual men (MSM) and in HIV positive men. With an apparent rise in the rate of new HIV infections (particularly in Victoria) there has been speculation that this signified a rise in risk-taking behaviour among MSM and/or confirmation that syphilis-associated ulceration and inflammation increases the risk of HIV acquisition.

Our clinic has a predominantly gay patient population, with a significant HIV caseload. We conducted a retrospective case review of all diagnoses of syphilis, with the aim of describing the differences, if any, between HIV positive and negative men in the presentation, treatment response and follow-up of syphilis cases.

The clinic uses a computerised medical record system (CMRS). All patients with positive syphilis serology were identified. By manual review, cases of previous treated syphilis were removed, focussing this study on de novo syphilis cases. The CMRS was then reviewed for all identified cases to identify the parameters of interest.

187 diagnoses of syphilis were identified: 86 in HIV negative men, 101 in HIV positive men. Differences were found in the presentation, treatment regime, occurrence of Jarisch-Herxheimer reaction and adequacy of serological follow-up in the HIV positive vs. negative groups. Response to treatment was the same in both groups. In 7 cases, a possible relationship was observed between the syphilis diagnosis and subsequent HIV seroconversion. Follow-up serology was significantly more consistently performed in HIV-positive patients.

The clinical presentation of syphilis in HIV positive men is associated with more florid clinical symptoms and signs and better clinical follow-up, but a similar treatment response to HIV negative men. Better documentation of a past history of syphilis in medical records is needed to optimise follow-up.

P212
ORAL POSTER FRIDAY 19 SEPTEMBER 0805
- 0810

**ASHM - ORAL POSTER SESSION - PUBLIC
HEALTH AND EPIDEMIOLOGY**

**LOCAL HIV INFORMATION TESTING
AND SUPPORT (HITS) PILOT PROGRAM:
IMPROVING THE CAPACITY OF GENERAL
PRACTITIONERS.**

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¹Centre for Epidemiology and Population Health Research,
The Burnet Institute, Melbourne, VIC, Australia.

In Victoria, around one third of the men who have sex with men (MSM) diagnosed with HIV each year have their testing and diagnosis performed at "low case load" GP clinics. These low case load clinics are responsible for the diagnosis of less than three HIV cases per year. MSM diagnosed by these GP clinics have been shown to have lower CD4 counts compared to those diagnosed at high case load clinics. Low CD4 counts are indicative of late diagnostic presentations, suggesting that men attending low case load GP clinics may have been infected with HIV for longer. These patients have a greater potential to transmit HIV infection to others by not being aware of their infection and through potentially higher viral loads.

The purpose of the HITS pilot program is to improve the capacity of GPs working in low case load clinics to discuss issues of sexual health and sexual risk behaviour with MSM, improve HIV/STI testing, management and referral, and develop clinical practices that are MSM welcoming.

The program includes: a review of existing HIV/STI information; interviews with GPs/practice nurses; a sexual health update session; development of a sexual health education package; implementation of a system for distribution of educational material; and a consultation service for GPs to access support, advice and/or referral information.

A process and impact evaluation will be conducted to assess the objectives of this program, including pre- and post-program surveys and interviews with MSM. Findings from the HITS pilot program and evaluation will be presented.

PUBLIC HEALTH & PREVENTION

P213 NPEP REPEAT PRESENTERS MODEL OF CARE

Armishaw J¹, Earle M², Pierce A¹, Wright EJ¹

1. Victorian NPEP Service, Infectious Diseases Unit, Alfred Hospital, Melbourne, Victoria, Australia

2. Sex Health and Wellbeing Service, Victorian HIV Service, Infectious Diseases Unit, Alfred Hospital, Melbourne, Victoria, Australia

Non-occupational post-exposure prophylaxis (NPEP) is a course of antiretroviral medications commenced within 72 hours of exposure to HIV and taken for 28 days in order to reduce the risk of acquiring HIV infection. NPEP has been available at The Alfred Hospital in Melbourne since 2000. The Victorian NPEP Service was established in August 2005 and NPEP availability has been rolled out into the community, with NPEP now available at 9 metropolitan centres and in 5 rural areas. Approval to maintain a database of individuals presenting for NPEP was granted by The Alfred Research and Ethics Committee. Consent for coded information to be sent to the Victorian NPEP Service for inclusion on the database is obtained.

From 10 August 2005 to 31 Dec 2007 (28 months), 1022 patients have presented on 1207 occasions of service, with 204 patients (20.0%) presenting on 383 occasions. Of the 204 patients who have had repeat NPEP presentations, 116 patients (56.9%) presented twice, 46 (22.5%) presented 3 times and 22 (10.8%) had 4 or more presentations. Repeat presentations made up 31.7% of all consultations. Data from the Health in Men (HIM) Cohort shows that those who presented for NPEP were 2.2 times more likely to sero-convert to HIV. NPEP presentation is a marker of HIV risk, which if not addressed, may lead to HIV acquisition from future exposures.

The Repeat Presenter Model of Care was implemented in February 2008 and targets those who have presented for NPEP 3 or more times in the previous 2 years. The model of care has 3 components. Patients are asked to nominate a GP/clinic where they will attend for any future NPEP presentations and to consent for a summary of their NPEP history to be sent to the nominated GP/clinic. These 2 interventions aim to support a therapeutic relationship between the patient and the doctor where risk reduction can be approached from a more informed position. The third intervention is for the patient to agree to a referral to the Sex Health and Wellbeing Service, a psychology service at The Alfred Hospital focussed on men's sexual health.

P214 USING FINANCIAL INCENTIVES TO INCREASE HEPATITIS B IMMUNISATION COMPLETION IN INJECTING DRUG USERS: A RANDOMISED CONTROLLED TRIAL

Barnes K, van Beek I, Day C, Topp L, Shanahan M, Wand H, Maher L (on behalf of the Hepatitis Acceptability and Vaccine Incentives Trial (HAVIT) Group*)

Using financial incentives to increase hepatitis B immunisation completion in injecting drug users: A randomised controlled trial

While injecting drug users (IDUs) are at high risk of hepatitis B virus (HBV) infection, studies have documented low rates of immunisation uptake, completion and vaccination-induced immunity. The HAVIT trial seeks to identify strategies to improve HBV vaccine completion and seroconversion. The study will also gather important data on acceptability and IDU attitudes towards immunisation which will inform preparedness for candidate HCV vaccine trials.

The primary objective is to compare the proportion of participants who complete the vaccine series in an incentive payment arm relative to a standard care arm. Secondary objectives are to assess the incremental cost effectiveness of standard care compared to incentive payments as methods of improving series completion; identify the correlates of immune response (HBsAb \geq 10 mIU/ml) week 12; and determine the acceptability of vaccines, barriers to immunisation uptake and willingness to participate in vaccine trials.

Results have the potential to reduce the burden of disease associated with HBV infection, and potentially, other vaccine-preventable infections, in IDUs by providing data on the efficacy and cost-effectiveness of contingency management in this group. Results in relation to acceptability, attitudes and willingness to participate will inform preparedness for future HCV clinical trials.

* Lisa Maher, Ingrid van Beek, Carolyn Day, Libby Topp, Marian Shanahan, Handan Wand, Craig Rodgers, Greg Dore, Andrew Lloyd, Paul Haber, Nicholas Walsh.

P215
ORAL POSTER THURSDAY 18 SEPTEMBER
0820 – 0825

ASHM - ORAL POSTER SESSION -
SOCIAL RESEARCH, INTERNATIONAL,
COMMUNITY, INDIGENOUS

NETREACH: ONLINE PEER OUTREACH
TO VIRTUAL COMMUNITIES ACROSS
AUSTRALIA

Brown G1, Keen P2, Maycock B1, Hyde Z1
1Western Australian Centre for Health Promotion
Research, Curtin University Perth, Australia
2Australian Federation of AIDS Organisations, Sydney,
Australia

NetReach was a peer-based sexual health promotion outreach program targeting Australian men who have sex with men (MSM) via Internet chat rooms and profile sites. It was a collaborative effort of the AIDS Councils of Western Australia, South Australia, Victoria, Queensland and Tasmania and the Australian Federation of AIDS Organisations.

In essence peer volunteers and staff entered existing commercial online chat rooms in a similar way to peer outreach at social, community and sexual venues. The program was implemented in a way that aimed to respect and support the users of this virtual environment and the online community they had created. During the brief development and trial period there were 304 outreach shifts, with exposure to 27,672 people and 460 in depth online discussions. 18 months after the end of the trial period AIDS Councils were interviewed to discuss the sustainability of the program and why some had maintained the interventions and why some had ceased Internet outreach in this format.

The online environment may change significantly in as little as six months, requiring the delivery of online outreach programs to be modified. Planning, funding and evaluation arrangements need to reflect this. Involving participants from the online community in the project was critical to maintain a level of cultural acceptance and credibility, adapt to rapid changes in culture and technology, and to sustain a reflexive approach. Feedback from AIDS Councils 18 months after the trial period focused around the challenges of sustaining outreach with limited numbers of participants or capacity to track direct impact versus the need to be part of the developing context of online communities.

Organisations looking at online outreach need to consider their infrastructure, connections to online cultures, and flexibility of funding requirements before embarking on an investment into online outreach.

P216
ORAL POSTER THURSDAY 18 SEPTEMBER
0840 – 0845

ASHM - ORAL POSTER SESSION - SOCIAL
RESEARCH, INTERNATIONAL, COMMUNITY,
INDIGENOUS

SERO-SORTING: WHAT IS THE IMPACT ON
HIV TRANSMISSION IN GAY MEN AND HOW
DO WE REDUCE IT?

Stevie Clayton, CEO, ACON (AIDS Council of NSW)
Dermot Ryan, Manager Education, ACON (AIDS Council
of NSW)

Research among Sydney gay men conducted by Australia's National HIV Research Centres since 2001 shows an overall decline in partner numbers and in UAIC, an increase in disclosure of HIV status to sexual partners, and increased reporting of partners of the same sero-status. Disclosure of sero-status and negotiation around condom use often occurs in a context of trust and familiarity between partners which could indicate an increase in sero-sorting or simply a greater willingness to discuss HIV status.

Sero-sorting is the practice of consciously choosing sexual partners of the same HIV status to facilitate unprotected anal intercourse while minimizing HIV transmission. Recent studies have shown an increase in sero-sorting amongst both HIV positive and HIV negative Sydney gay men.

With a population as highly educated about HIV as Sydney gay men, provision of information about risk may not be sufficient to effect behaviour change as there are complex analyses of relative risk versus potential pleasure being undertaken, which require greater understanding of motivation for effective interventions.

Based on this evidence ACON developed a culturally appropriate, multi-faceted campaign encouraging gay men to reflect on assumptions and beliefs which influence their decisions around condom use in the context of their knowledge, or presumed knowledge, about the HIV status of themselves and their partners.

This paper will examine the current research, reflect on the campaign and consider the evaluation results.

P217
WITHDRAWN

P218
**AVOIDING HEPATITIS C INFECTION DESPITE
LONG TERM INJECTING: BEHAVIOURAL,
SOCIAL OR IMMUNOLOGICAL?**

Peter Higgs¹, Campbell Aitken², Margaret Hellard² and Lisa Maher¹

¹Viral Hepatitis Epidemiology & Prevention Program, National Centre in HIV Epidemiology & Clinical Research, UNSW; ²Centre for Epidemiology & Population Health Research, The Burnet

Abstract:

Transmission of hepatitis C (HCV) in injecting drug users primarily occurs as a result of exposure to the virus during injection. There is some evidence that previous infection with HCV may be protective for future infection of the same genotype but not against other genotypes. If this is true and HCV infection occurs at similar or higher rate in previously exposed compared to naïve individuals this poses significant challenges for HCV vaccine development.

The Networks II study is an ongoing cohort study of HCV among injecting drug users (IDUs) being conducted in Melbourne, Australia. Three hundred and ninety-five IDUs were recruited between July 2005 and November 2007 and most were interviewed and tested for HCV markers at least twice.

Fifty IDUs remained HCV antibody and RNA negative at their last test, and 10 people initially lacking evidence of exposure to HCV tested RNA-positive during the study. Initial analyses indicate that people who reported injecting with five or more others in the three months prior to baseline were significantly more likely to be infected with HCV at any time than people who reported injecting with fewer than five others.

However, there may not be specific injecting risk behaviours that markedly increase or decrease an IDU's risk of HCV exposure and infection. Some IDUs may simply be lucky, others may unknowingly only inject or share with other HCV negative IDUs; alternatively, some individuals' immune systems may protect them from infection.

The ability of some IDUs to escape or reject HCV infection despite repeated and often long-term exposure has been previously noted by ourselves and others, and is the subject of an ongoing international collaboration.

P219
**COUNSELORS' PERSPECTIVE AND QUALITY
OF COUNSELING IN VOLUNTARY HIV
COUNSELING AND TESTING CENTERS IN
DELHI**

Kant S

Background: Confidential counseling process is a crucial step towards providing prevention, care and support services. It empowers the client to make informed choice about getting tested to know their HIV sero-status. With rapid scale of counseling and testing services in India, ensuring quality of counseling becomes very important. We have assessed quality of counseling provided and satisfaction level of counselors working in Voluntary Counseling and Testing Centers (VCTC) of Delhi.

Methods: A cross-sectional health-facility survey was conducted in 10 randomly selected VCTC of Delhi. The observations of counseling sessions were carried out by investigator through personal presence during counseling using checklist. Counselors were interviewed using a semi-structured interview schedule that assessed counselors' perception as HIV counselor, trainings received; availability and need of support and supervision; their job satisfaction in present set up. It's a semi-structured interview schedule administered to the counselors. Qualitative analysis of statements was done by coding of themes, domain identification and calculation of frequencies.

Results: Ten out of 18 VCT centers were selected randomly (3/6, 5/8 and 5/8 from teaching, non-teaching and specialized hospitals respectively). Fifty-one counseling sessions were observed and 17 counselors interviewed. Six out of 17 counselors were Masters in Social Work. Counselors demonstrated good interpersonal skills but needed in-service training to further improve their counseling skills. Majority (9/17) of counselors believed a positive career prospect as counselor. Few (5/17) felt insecure due to low salary structure and temporary nature of the job. The counselors reported the need of in-service training that should be practically oriented (10/17).

Conclusion: The quality of counseling was found to be at par with other studies and the counselors were overall satisfied with their job profile. The nature of training being received by the counselors has to be reviewed with particular emphasis on frequency of in-service training, eligibility of trainers and practical orientation of courses.

P220

WITHDRAWN

P221

**ORAL POSTER FRIDAY 19 SEPTEMBER 1615
– 1625**

ASHM - CLINICAL - TOXICITY

**A PUBLIC ACCESS PROGRAM OF SCULPTRA®
POLYLACTIC THERAPY TO TREAT PEOPLE
WITH FACIAL LIPOATROPHY**

Knox D¹, Carr A², Conway D³, Edwards B¹, Flanagan G⁴, Furner V⁵, Heslop J⁶, Honnor G⁴, Lake R⁴, McKellar-Stewart N⁷, McMurchie M⁸ and Pollard A⁷.

¹ HIV/AIDS & Related Programs (HARP) Unit, South Eastern Sydney and Illawarra Area Health Service, Sydney, NSW, Australia, ² St Vincent's Hospital, Sydney, ³ Australasian Society for HIV Medicine, ⁴ Positive Life NSW (previously PLWHA NSW), ⁵ Albion Street Centre SESIH, ⁶ HARP Unit North Coast Area Health Service, ⁷ ACON, ⁸ East Sydney Doctors (formerly 407 Doctors) East Sydney NSW.

Around half of people living with HIV in Australian report some degree of lipodystrophy, with most reporting consequent stigmatisation and poor body image. A number of cosmetic treatment options for facial lipoatrophy are available through private clinics. In 2006 NAPWA negotiated with a major pharmaceutical company to provide polylactic therapy as part of a compassionate access scheme for the delivery of Sculptra® to a defined number of HIV positive people in Australia for no charge. In New South Wales, the HARP Unit of South Eastern Sydney and Illawarra Area Health Service, in collaboration with a multidisciplinary Steering Committee and with funding from NSW Health, developed and implemented a Sculptra® Program. The Program was for eligible HIV-positive adults in NSW to be assessed by their S100 prescribing doctors to receive therapy. Access was based on severity and financial need.

NSW received Sculptra® for 205 individuals to receive 8 vials (4 treatments). Allocations of places into the program were made to S100 Prescribers based on antiretroviral prescription numbers per service.

Plastic and cosmetic surgeons across the state who are able to provide Sculptra® were contacted and 12 agreed to be part of the Program. Prescribers referred clients to these proceduralists.

205 individuals were enrolled into the program which ran from April 2007 until June 2008. Clients were offered up to four treatments, each about 2 weeks apart, and a survey evaluation of the program was conducted

with the patients, the referring prescribing doctors and proceduralists.

187 clients received treatment, with 53 of these returning the evaluation survey so far (28%). Clients were asked to indicate 'yes' or 'no' to the question of satisfaction with treatment, with 52 indicating they were satisfied, with 1 writing that they would 'wait and see'.

Of the 12 proceduralists engaged, 10 saw clients as part of the program and were sent evaluations. Of these 8 have returned completed surveys (80%), with 3 reporting minor nodules or bruising.

49 prescribers referred patients to the program and were sent surveys. 26 surveys have been returned (53%), with 25 reported no adverse reactions and 1 noting 'expected local reactions'.

P222 CAUSES OF DEATH OF HIV _ INFECTED PATIENTS RECEIVING HAART IN UGANDA

Author Waiswa Moses, John Muwanga.
The African child care and Mother Development: (ACMD)
Kampala- Uganda

Background: HAART has had a dramatic impact in the HIV epidemic in Uganda. With a clear decline in morbidity and mortality, although even in development countries, with a wide spread use of effective treatment HIV- related deaths are still occurring.

Methods: We review the charts of all Hiv -infected patients who have died from march 2004 through August 2007. we evaluate the basic epidemiologic data, immunologic and virologic status, treatments received, and causes of death of every patient.

Results: of the 865 patients of our cohort, a total of 50 (5.5%) have died in the study period. SD of age at the time of death is 35_+ 6years, 40, (85%)are male, 36 (77%) are women, medium of CD4 Cell count is 79permm, and medium of HIV RNA is 4.9log: 6patients(13%)had never received anti-retroviral therapy although they should have received according to guidelines, and 20 patients are receiving suboptimal treatment or no treatment at all. Cirrhosis of the liver is the cause of death in 18 patients(38%),progressive multifocal koencephalopathy in 6 (13%),wasting syndrome in 12(23%),and pneumonia in 3(6%).compared with the rest of the cohort, patients who have died are commonly men, are more commonly HCV-infected, have lower CD4 count, and have higher HIV RNA(all differences $p<.0.1$).

Conclusion: in the era of HAART, the first causes of death in patients with Hiv infection is Cirrhosis of the liver, in adequate treatment is common among patients who die.

P223 AN EXAMINATION OF A NUMBER OF RECENT HIGH-PROFILE AUSTRALIAN CRIMINAL CASES, TO HIGHLIGHT THE COMPLEX RELATIONSHIP BETWEEN THE LEGAL REGULATION OF HIV TRANSMISSION AND EXPOSURE, AND EFFECTIVE PUBLIC HEALTH OUTCOMES

David Scamell, Policy Manager, AIDS Council of NSW
Sally Cameron, Policy Consultant to Australian Federation
of AIDS Organisations

Description

There is a growing international trend towards the employment of criminal law in relation to HIV transmission and exposure despite a lack of evidence to demonstrate its effectiveness in reducing the incidences of HIV infection. The type of laws that are enacted and the manner in which they are used present a number of considerable challenges to established public health HIV prevention practices based on individual responsibility, voluntary testing, and access to treatment, care and support.

Recently a number of HIV-related prosecutions in Australia have occurred, attracting significant political and media attention. These cases have coincided with a rise in HIV infections across the country. The confluence between these cases and the rise in infections has resulted in public and government debate about the role of law in Australia's response to the epidemic and the effectiveness of the response more generally.

Lessons learned

While the debate to date has reinforced the broad public health approach to HIV prevention, certain aspects reinforced the need for HIV policy to be guided by comprehensive evidence, particularly given the impact criminal penalties for HIV transmission may have in relation to increasing stigma and decreasing levels of testing and willingness to access health services.

Next steps

Further research is needed across multiple jurisdictions and within differing epidemics (generalized or within specific population groups) as to the impact and effectiveness of criminalization on HIV prevention.

P224
MEN'S QUICK QUIZ: ANNUAL SNAPSHOT
OF STI KNOWLEDGE AT A GAY COMMUNITY
EVENT

Prihaswan P¹, [Shaw MJ](#)¹, Silveira M¹.

¹HIV & Related Programs Health Promotion Team (Inner West), Sydney South West Area Health Service, Camperdown, New South Wales, Australia.

As the Sydney Mardi Gras Season's biggest daytime event, Mardi Gras Fair Day provides an opportunity to promote local sexual health services to gay men and to check their sexual health and service knowledge.

Since 2004, we have been coordinating the administration of a 'Quick Quiz' to gay men attending Fair Day. The quiz includes a series of questions on STIs which are revised annually. Questions generally address the asymptomatic nature of STIs, current STI testing recommendations and treatment for STIs. The quiz also asks about access to sexual health clinics and general practice for regular sexual health check-ups. Information on age and postcodes are also collected.

The quiz is also useful as a tool to engage respondents in discussion about sexual health and is administered from an information stall shared by metropolitan Area Health Services.

Each year, about half of the respondents have demonstrated good understanding of the asymptomatic nature of STIs. The majority have also demonstrated good knowledge of current STI testing recommendations and were generally aware of treatment for STIs.

A smaller proportion of respondents reported accessing GPs for sexual health care. For those men accessing GPs, the majority reported visiting a GP in the Darlinghurst area.

This paper will focus on the results of respondents from Sydney's inner-west. A detailed analysis of the quiz results from 2005 to 2008, including attendance at public sexual health services and general practice, will be presented. Recommendations for future STI campaigns and capacity building programs for health care workers, including GPs, will also be discussed.

SOCIAL RESEARCH

P225

WITHDRAWN

P226

SEXUAL BEHAVIOUR IN FIJI ISLANDS. A RETROSPECTIVE K.A.P SURVEY ON SEXUAL BEHAVIOUR IN FIJI

Chaudhary A

The Western Health Hub Centre in Fiji caters for around 250 000 people. Since the inception of the clinic in 2004, 5367 clients seeking STI and HIV related out-patient services have been seen. History from clients is recorded in a set template and upon seeking verbal consent, question on personal sexual behaviour is asked and recorded. The clients were also informed that the information will be used to draw up statistics on sexual behaviour in Fiji and also that their names would be kept confidential.

Of the 5367, 133 did not qualify and 82 declined to answer personal question.

The records of the 5152 clients was analysed and a comprehensive report on sexual behaviour [wich included age of first sex, number of sexual partners, use of condoms, and failure to use of condoms, sexual orientation and knowledge and attitude towards sex]

Correlations between the ethnic groups, social status, marital and education level with the sexual behaviour was elicited.

P227

CAMP GOODTIME: CATERING FOR THE DADS! SOCIAL RESEARCH INTO THE IMPLEMENTATION AND EVALUATION OF SPECIFIC GROUP PROGRAMS FROM 2002-2007 AS PART OF A UNIQUE NATIONAL SERVICE TO FAMILIES LIVING WITH HIV/AIDS

Coady JF¹

¹Short Street Clinic St George Hospital KOGARAH NSW 2217

Camp Goodtime is an annual four day camp facilitated by the Paediatric HIV service at Sydney Children's Hospital providing support to children and families living with HIV/AIDS. Operating since 1990, this unique service provides medical management, psychological support, consultation and education in framework aimed at reducing isolation experienced by these families. Trained volunteers are assigned to care for the children while two social workers cater to the needs of the parents.

Social work input for parents had previously been on an ad hoc basis, usually with a different worker each year. The last five years however has seen a continuous social work service to fathers allowing the development of a formalised group program. This program focused on developing connection, sharing experiences and information, providing client support and nurturing peer and self support. It was envisaged that this knowledge and experience would benefit the fathers and their families in self management strategies long after they left the camp.

Apart from annual evaluation reports garnered by the service, there had been no research done as to the efficacy of the range of benefits received from the group programs by attending families, and in particular by the fathers. A qualitative research project was initiated in 2007 to provide and evaluate written and recorded data to research the lived experience of this unique client group over a five year period. A detailed analysis of the specialized service was undertaken to ascertain what impact it has made in the lives of these families. Initial findings indicate the programs have been highly desirable, with further details to be presented.

Information provided from this research will assist social workers and other allied health professionals involved in HIV care to adapt their client centred approach to improve outcomes in working with specific populations such as these families from diverse parts of Australia.

P228
ORAL POSTER SATURDAY 20 SEPTEMBER
0815 – 0820

**ASHM - ORAL POSTER SESSION - CLINICAL,
ALLIED HEALTH AND BASIC SCIENCE**

**PHYSICAL AND SOCIAL BENEFITS OF
ANTIRETROVIRAL THERAPY (ART) ON THE
LIVES OF PEOPLE LIVING WITH HIV AND
AIDS (PLWHA) IN PAPUA NEW GUINEA (PNG)**

Emori R¹, Kelly A², Akuani F¹, Nosi S¹, Peter B¹, Kupul M¹,
Walizopa L¹, Mek A¹, Pirpir L¹, Worth H² and Siba P¹.

¹PNG Institute of Medical Research, Goroka, Eastern
Highlands Province, Papua New Guinea; ²National Centre
in HIV Social Research, University of New South Wales,
Sydney, Australia.

In the past three years, there has been an increase in efforts to roll out ART in PNG. While there is some knowledge of the clinical impact of ART in PNG in terms of morbidity, little is known of the social impacts of these treatments. In an effort to understand these social impacts, this study has sought to explore these impacts of ART on PLWHA in PNG.

This study used a multi-method approach to examine the social impacts of ART for PLWHA. A total of 152 people were surveyed and 28 participated in in-depth interviews. Ethics approval was granted by the PNG Medical Research Advisory Committee and University of New South Wales, Australia.

Since taking ART, the majority of people reported that their health status improved. 90.8% of participants rated their physical health as good to excellent whereas before ART only 8.5% participants had good health. In the last month on treatment 94.1% of people rated their mental health as good to excellent where in the month before treatment only 15.7% rated their mental health as good. Prior to commencing ART 44.1% indicated that their quality of life was poor. On treatment 50.7% people experienced an improvement in the quality of life.

The qualitative data shows similar results with most participants experiencing improvements in physical and social aspects of their lives. These included regaining strength and appetite; being able to work; tend to chores and work in the gardens; and walk long distances again. Other physical improvements included gaining of weight and the re-growing of hair. The social benefits of these physical consequences of ART were considered of high importance because they meant that they were no longer recognizable as someone with HIV.

ART has provided physical and social benefits to PLWHA. Their health and well-being has improved and their capacity to engage with family and the community has benefited. While these results don't disprove any of the real negative impacts of ART such as side effects, these physical and social benefits are significant as ART rolls out and the country monitors the success of ART in its socio-cultural context.

P229 VISUAL REPRESENTATION OF PEOPLE LIVING WITH HIV IN PAPUA NEW GUINEA

Mek A¹, Kelly A², Akuani F¹, Kepa B¹, Kupul M¹, Emori R¹, Peter B¹, Nosi S¹, Pirpir L¹ & Walizopa L¹

¹Operational Research Unit, Papua New Guinea Institute of Medical Research, Goroka, Eastern Highlands Province, Papua New Guinea

²National Centre for HIV Social Research, University of New South Wales, Sydney, NSW, Australia

Participatory visual methods are used in social research to better understand people's experiences of health, illnesses, death and dying including the everyday lives of people living with HIV. Such methods offer an alternative to the spoken and written word, and the statistical representation of life. The use of visual methods was chosen to understand how people pictorially perceive themselves living with HIV in Papua New Guinea (PNG) and to pilot the use of such methods here. The data analysis is based on these drawings of self-image of the body at various stages in the lives of people living with HIV and the shift from imminent death to a life on antiretroviral therapy (ART).

The visual data is drawn from a larger mixed-methods study on the social impacts of ART on PLWHA in 3 provinces of PNG. Of those who participated in the qualitative interviews, eight participants illustrated on paper their routine daily activities and the meanings of HIV prior to and after treatment.

The images contrast the difference between suffering bodies confronting imminent death (prior to ART) with healing, healthy bodies (post-ART). Before going on ART, people positioned HIV as inseparable from who they were. In contrast, in drawing life after antiretroviral treatment they displayed drastic bodily changes leading to social interaction and a new relationship to death. People drew themselves interacting with others; with healthy bodies; with their hair growing; with flesh on skeletons, and; being able to participate in life again. ART transformed people's lives from one of inevitable death to one of renewed life.

For HIV-positive people, the images they drew are powerful tools that offer researchers an alternative method of grasping what it means to live with HIV and a method that can be applied in contexts where visual imagery has a particular importance - such as PNG.

P230 TRANSLATION: PAPUA NEW GUINEAN RESEARCHER'S PERSPECTIVE

By Pirpir Lawrencia¹, Kelly Angela², Nosi Somu¹, Walizopa Lucy¹, Mek¹ Agnes, Emori Rebecca¹, Akuani Frances¹, Kupul Martha¹, Peter Canggih Brenda¹, Kepa Barbara¹ & Keleba Kritoe¹

¹ Papua New Guinea Institute of Medical Research

² University of New South Wales National Centre for HIV Social Research

The philosophy that underpins the Strengthening HIV Social and Behavioural Research Cadetship Program at the Papua New Guinea Institute of Medical Research is one of 'learning by doing', carrying out 'real life' research projects. After completing a study on the attitudes of young people towards sex and HIV the issue of language and translation became a real life scenario which the cadets had to become skilled in.

In HIV social and behavioural research the role of language is critical. How questions are asked can influence the way a person responds. But more than this, in international research, the role of translating one language into another is pivotal. Simply knowing the words of a language is not sufficient to translate that language into another.

This paper highlights how translation requires the careful recreation of meaning from one language to another, not a literal word for word exchange. Learning to capture meaning in this way is a skill and one that requires capacity building, as has been the experience of the HIV social and behavioural research cadets in PNG.

We cannot expect that because someone is fluent in their own language that they will be automatically able to translate it. Translation is a complex skill that social researchers need to develop. This entails understanding local differences in the use of language, for example the metaphor 'kol kaukau' in Tok Pisin literally means 'cold sweet potato'. However, the meaning of this in its speech context was that the introverted girls are those who go around and have sex. Thus, an English translation, metaphorically, could be 'still waters run deep'.

The skill of translation needs to be seen as an important priority in capacity building of social researchers who work across languages in setting where training has been limited.

**P231
DOES COMMUNITY TESTING FOR HIV PROVE
EFFECTIVE?
[A CROSS-SECTIONAL STUDY IN NEPAL]**

Regmi K

Background: HIV epidemic continues to pose a major public health challenge. National strategy for HIV aims to decrease the number of HIV through increased testing for disadvantaged and hard to reach group i.e. sex between men, sex between men and women and injecting drug users. Fear of stigmatisation and lack of peer supports found major barriers to attend sexual health and HIV screening. In order to further de-stigmatised HIV testing, a service for HIV has been offered and managed as part of a general health screen where urine tested for raised sugar and Chlamydia as well as blood pressure screening and advice on maintaining a healthy life style. The purpose of the present study was to examine the effects of community testing for HIV.

Methods: Standard 2 steps HIV testing is limited by poor return for results rates and misses high risk individuals who do not access conventional testing facilities. We, therefore, describe a community testing programme among people who had difficulty in accessing and utilising of government local health care services due to stigma and challenging socio-cultural circumstances using Abbott Rapid Determine HIV-1/2 test among three primary health centres in rural part of Nepal, in 2005/6.

Results: over 6 months, 200 adults were invited to participate and 180 (90%) underwent testing. HIV seroprevalence was 17.2% (31 of 180) overall and 3.9% amongst hard to reach individuals reporting no previous testing, a prior negative test of previous testing without result disclosure. All 180 patients received their results. Of 15 newly diagnosed persons who received confirmatory results, 7 (47%) reported at least one contact with a health provider in four months following diagnosis. Individuals who reluctant to use hospital services were also attended for testing, which enabled them to access treatment and care for long term health benefits. General and test-specific counselling, mobilising health care professionals, found important in dealing with positive and negative results.

Conclusion: limited evidence suggest that routine HIV testing in hospital setting has a part to play in increasing uptake of testing and thus preventing deaths. This study concludes that community testing for HIV is feasible, acceptable and effective based on the number of high risk persons tested over a short period, the participation rate, the prevalence of new infection the rate of result disclosure and the proportion linked to care and support. Increasing update of HIV testing will have both individuals and public health benefits.

**P232
ORAL POSTER FRIDAY 19 SEPTEMBER 0830
- 0835**

**ASHM - ORAL POSTER SESSION - PUBLIC
HEALTH AND EPIDEMIOLOGY**

**THE EFFECT OF INTRODUCING SPECIALIST
BLOOD BORNE VIRUS (BBV) NURSES INTO
PRISON HEALTH CENTRES.**

Connelly C¹, Patterson KL¹, McNulty L¹.

¹Department of Corrective Services, Hakea Prison, Perth, WA, Australia

Socio economic challenges and psychiatric illness can affect the physical health and well being of an individual and inadvertently, access to adequate medical care. Many prisoners report low employment rates, mental health issues and substance abuse prior to imprisonment. Imprisonment allows health care workers to take advantage of the opportunity provided by incarceration to offer health screening- including BBVs - and assessment to individuals who do not otherwise access a medical service.

Approximately half of all prisoners in Australia have a history of injecting drug use. BBV screening has become a priority for prison health services. Currently such screening is not compulsory upon reception to WA prisons though many prisoners have taken up the offer of testing after routine admission. Specialist BBV nurses conduct detailed screening of risk behaviour, Pre- and Post-Test Counselling, provide ongoing education and discuss treatment options. Currently the main focus is on Hepatitis C.

The creation of the specialist BBV nurse role has allowed significant health care benefits to patients in the custodial setting including:

- Increased rates of BBV screening
- Access to support & harm reduction counselling and treatments.
- More prisoners will have treatment for their BBV thus reducing the public health burden of the disease.

Recent improvements in screening as a result of BBV nurses have led to the following outcomes;

- Screening of an average of 22 new patients per week.
- A current register of 76 people who are Hepatitis C antibody positive of whom 64 are also RNA positive.
- Of these 76 patients, eight were newly diagnosed cases of Hepatitis C detected in the current intensive screening program.

In conclusion, the introduction of specialist BBV nurses has resulted in improved care being provided to prisoners with, or at risk of contracting, Hepatitis C.



20th annual
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08

**ORAL
PRESENTATION
ABSTRACTS
WEDNESDAY 17
SEPTEMBER 2008**

For more information contact:
The Conference Secretariat on
Tel: 61 2 8204 0770
Email: info@sexualhealthconference.com.au
www.sexualhealthconference.com.au



The Royal Australasian
College of Physicians
Adult Medicine Division
Australasian Chapter of Sexual Health Medicine

**Sexual Health Plenary 5:
A Mixed Bag of Jewels
9.00am – 10.30am**

**SHOULD WE BE VACCINATING BOYS AS WELL
AS GIRLS WITH THE HPV VACCINE?**

Regan DR¹, Law MG¹, Philp DJ², Hocking JS³

¹National Centre in HIV Epidemiology and Clinical Research, UNSW, Sydney: ²National Centre for Epidemiology and Population Health, ANU, Canberra: ³Key Centre for Women's Health in Society, University of Melbourne, Melbourne

HPV vaccination has been shown to be effective in preventing cervical cancer in females. While immunogenicity has been shown in males, trials are underway to demonstrate HPV vaccination is clinically effective.

Mathematical modeling of HPV transmission in Australia suggested that for a vaccine with 100% effectiveness and conferring lifelong immunity, then with coverage over 80%, vaccinating 12-year old males in addition to 12-year old females had only a modest impact on HPV incidence among females. Vaccinating 12-year olds only was estimated to take long periods to take effect, with an estimated 7 years to achieving 50% of the effect on HPV incidence. A catch-up campaign, vaccinating 13-25 year old females, was estimated to decrease this time to under 2 years. The models suggested that vaccination of males and females would not eradicate HPV with realistic vaccine coverage rates.

These models suggest that for a HPV vaccine of 100% effectiveness and conferring lifelong immunity, there is at most modest effect on cervical cancer risk in vaccinating males in addition to females. Vaccinating 12-year old males with such a vaccine would only be cost-effective if this resulted in appreciable reductions in HPV-associated disease in men, such as anal or penile warts, and anal or head/neck cancer. Vaccinating 12-year old males may be cost-effective in preventing cervical cancer among females if herd-immunity effects become important in the case that vaccination coverage rates are low, or that the vaccines prove to be only partially effective or confer limited duration of immunity. To answer these questions, it is important that the current HPV vaccination schedule in Australia is monitored, both in terms of coverage rates and conferred immunity.

**IS YOUR CLITORIS IN YOUR VAGINA OR THE
VULVA! WHAT IS A VULVA!**

A Woman's Personal Perspective and Experience of what is missing in sexual health and society, The Vulva
[Kath Mazzella](#)

This presentation aims to bring life to the vulva, bringing it out from the unknown or un-mentionable and giving it the recognition and the status it deserves.

It will highlight the stigmas, misconceptions and taboos that surround the vulva and ask how women, educator's, health professionals and society can break down these barriers and move to a healthy and accurate knowledge of this vital part of female genitalia. These questions will be posed and related to you through the perspective of one woman.

A woman who's experience of gynaecological cancer has taken her on an inspiring journey. A woman who went from knowing nothing about down there, to one who is now an empowered, assertive, understanding individual.

The presenter will relate how her own experience altered her to how women in the community suffer in silence and of the need to give these women a voice.

She will take you through her quest to raise the profile of this issue within Australia,

Her successes – which include the establishment of the Gynaecological Awareness Information Network (GAIN), National Gynaecological Awareness Day – the lessons learned and the work that is yet to be done. She was also involved with the Australian Senate Gynaecological Cancer Enquiry. Key themes of the presentation include:

- i. Giving women better knowledge of, and responsibility for their sexual health
- ii. Educators seeing it from a health consumers point of view. Working together.
- iii. Calling a spade a spade, a vagina a vagina, and a vulva a vulva. How by not speaking about or acknowledging this part of the body can suppress emotions, disempower women and cause significant psychological and physical health problems.
- iv. Encouraging women to be proud of their vulva instead of calling it something it is not: a vagina. Come and get inVULed!

Sexual Health Plenary 6: Drugs and Sex 11.00am – 12.30pm

NATURAL HISTORY OF HPV IN THE ANAL CANAL: EVERYONE'S GETTING INTO THE ACT

Palefsky JM¹

¹Department of Medicine, University of California, San Francisco, San Francisco CA USA 94143

A high proportion of anal cancers are associated with human papillomavirus (HPV), most commonly HPV16. The incidence of anal cancer is increasing annually in the general population among both men and women but has increased most dramatically among HIV-positive men and women.

Among HIV-negative men who have sex with men (MSM), the epidemiology of anal HPV infection resembles that of penile infection more than that of cervical infection with approximately 60% having anal HPV infection throughout a wide age range. In contrast nearly all HIV-positive MSM have anal HPV infection. Other high-risk groups include HIV-positive women and high-risk HIV-negative women, in whom anal HPV infection is more common than cervical infection. Anal HPV infection may also be as common or more common than cervical HPV infection in sexually active but healthy, lower risk women. Finally, more than 20% of heterosexual men have anal HPV infection.

The key consequence of anal HPV infection is anal cancer—some but not all individuals with anal HPV infection will develop anal intraepithelial neoplasia (AIN) and fewer still will develop anal cancer. The main risk factors for progression to high-grade AIN (HGAIN) are HIV-positivity with lower CD4+ level and oncogenic anal infection but risk factors for progression from HGAIN to anal cancer are not understood. ART has not reduced the incidence of HGAIN nor of anal cancer implying that the immune response plays a less prominent role in progression to anal cancer than in development of HGAIN. The data suggest that the incidence of anal cancer will continue to grow in the future, raising questions about whether at-risk individuals should be screened for HGAIN and/or anal HPV infection. Additional questions relate to the effect of anal HPV in women on the biology and natural history of cervical cancer and its precursors.

**Sexual Health Plenary 7:
Out of Sight Out of Mind
1.30pm – 3.00pm**

**ANAL DYSPLASIA AND CANCER. AN
AUSTRALIAN EXPERIENCE**

Richard Hillman

Australian rates of anal cancer are rising in both males and females, with approximately 260 new cases being reported annually. Precursor lesions are typically asymptomatic, leading to frequent late-stage presentation and poor five year survival rates (typically 60 -70%). Furthermore, symptoms of anal cancer & associated treatments are often extremely unpleasant.

Anal cancer occurs as a consequence of sexually transmitted infection and has an unusual epidemiology. Overall, rates in women are generally slightly higher than in men. However, within the two sexes, the distribution varies markedly. In women, anal cancer typically presents over the age of 60 years, in smokers, and in those with a history of cervical cancer & receptive anal intercourse. In men, it presents at a younger age, in men who have sex with men, and in the HIV-infected. Indeed, rates in the latter group are approximately 100 times higher than in the general population.

This presentation will review what we know of the epidemiology of anal cancer & precancerous lesions in Australia, the potential value of screening programs and the possible public health impacts of HPV prophylactic vaccination.

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SEXUAL HEALTH PLENARY 7: OUT OF SIGHT OUT OF MIND

IT'S ONLY A COLD SORE, LOVE...

B Donovan.

National Centre in HIV Epidemiology and Clinical Research, University of New South Wales, Level 2, 376 Victoria Street, Darlinghurst NSW 2010, Australia; and Sydney Sexual Health Centre, Sydney Hospital.

Over recent generations oral sexual practices have grown in incidence while re-positioning themselves in our society, with variations within different sub-populations. For many teenagers, oral sex is the new abstinence (in the Clintonesque sense), and its contraceptive effect is a bonus. For men who have sex with men (MSM), the near-universal practice of fellatio is a pretty effective HIV prevention strategy. Indeed, sexual safety codes within MSM relationships are often seen as being honoured if oral sex is the only sex that takes place with third parties. Oro-anal sex ('rimming') with casual partners has gone from being a minority practice among MSM in Australia in the 1980s to a majority practice by the 2000s.

Oral sex brings with it advantages and dangers. Certainly, among MSM only anal sex and oral sex rate as 'highly valued' as a source of pleasure, with the widespread use of oral sex probably reducing the individual- and population-level risk of HIV transmission. And oral sex is one of the most efficacious and use-effective contraceptives.

On the public health down-side, oral sex is logistically easier to organise than anal or vaginal sex so it enables rapid and furtive sexual encounters. Only in commercial contexts is oral sex protected with a condom. Promoted since the 1980s, everyone talks about dental dams for cunnilingus and rimming, but hardly anybody has ever used one. Some of the diseases that have been linked to oral sex include ano-genital HSV-1 infection, gonorrhoea, syphilis, hepatitis A, shigellosis, giardiasis, amoebiasis, and ocular and oro-pharyngeal cancers. While unusual, there are occasional traumatic consequences to oral sex, though these are rarely fatal.

WEDNESDAY 17 SEPTEMBER 2008: 1.30PM – 3.00PM

Sexual Health Conference Closing
3.30pm – 5.00pm

**THE LAW AND SEXWORKER HEALTH (LASH)
PROJECT**

Donovan B^{1,2}, O'Connor JL¹, Harcourt C^{1,2}, Egger S³,
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Objective: Based on the hypothesis that restrictive or punitive laws could have adverse consequences, we explored the impact of various prostitution laws on the health and welfare of the sex workers working in three jurisdictions.

Methods: Key informants, searches of advertisements, agency lists, and site visits enabled us to map the female brothel-based sex industries in Perth (where all forms of sex work were criminalised), Melbourne (decriminalised, but regulated), and Sydney (decriminalised and deregulated). Representative samples of sex workers were invited to self-complete a questionnaire (available in 5 languages) and to provide a vaginal tampon for testing for chlamydia, gonorrhoea, Mycoplasma genitalium, and Trichomonas vaginalis by multiplex PCR.

Results: All 3 cities had thriving and diverse sex industries, though the unregistered premises in Melbourne proved to be the most difficult to access. Questionnaire participation rates were high (>80%) when access was gained: 175 women in Perth, 229 in Melbourne, and 201 in Sydney. The Melbourne women were a median of 4 years older and had been working 2-3 times longer. Only 27% of the Sydney women had been born in Australia (cf 51% in Perth and 67% in Melbourne, $p < 0.001$), while more Perth women had injected drugs (14%) in the last 12m (cf 2% in Sydney and 10% in Melbourne, $p < 0.001$). There was no significant difference in mental health scores (K10) between the women in the 3 cities. Despite vastly more frequent screening of the Melbourne women as required by the law (72% monthly cf 12% in Sydney and 15% in Perth, $p < 0.001$) STI prevalences were similarly low in each city. However, the under-sampling of unregulated sex workers in Melbourne limited the interpretation of these findings.

Conclusions: The demographic differences between the sex industries in the 3 cities may be partially explained by their legal frameworks. The policy of compulsory monthly STI screening of sex workers in Victoria should be reviewed.

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