18th annual

ashm conference

Wednesday 11 to Saturday 14 October 2006

melbourne 06

Carlton Crest Hotel, Melbourne

The conference will be held back-to-back with the 3rd ACH^2 Workshop, 8 – 10 October 2006 (Australian Centre for HIV and Hepatitis Virology Research) and the Australasian Sexual Health Conference 2006, 9 – 11 October 2006

CONFERENCE HANDBOOK AND ABSTRACTS

SUPPORTED BY & IN ASSOCIATION WITH:

Australian Government
Department of Health and Ageing

Australian Government
AusAID

Collaborating Research Centres:
Australian Centre in HIV and Hepatitis Virology Research (ACH^2)
Australian Research Centre in Sex, Health and Society (ARCSHS)
National Centre in HIV Epidemiology and Clinical Research (NCHECR)
National Centre in HIV Social Research (NCHSR)

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WELCOME LETTER

Dear ASHM Members, friends and colleagues,

It is our great pleasure to welcome delegates to Melbourne, Victoria for the 18th Annual ASHM Conference.

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.

The 2006 ASHM Conference is running back-to-back with the Australasian Sexual Health Conference. Wednesday 11 October will feature sessions from both the ASHM and the Sexual Health Conference. This represents an excellent opportunity for delegates to attend sessions for both conferences.

ASHM is holding the 2nd Australian Consensus Conference on the use of antiretroviral agents in HIV-1 infected adults on the afternoon of Saturday 14 October 2006, immediately following the 2006 ASHM Conference. As a result of discussions at the ASHM Conference and the presentations and discussion at the Consensus Conference, the Antiretroviral Guidelines Panel will synthesise the opinions of the Conference into appropriate Australian commentary. The commentary will then be included in the electronic document. It is the Panel's intention to update the commentary in line with updates in the USA source Guidelines, and to hold an annual Consensus Conference, adjacent the ASHM Conference, to endorse this method of providing Guidelines for the Australasian setting and to review and update the commentary. The Consensus Conference is being held adjacent to the ASHM Conference to reduce costs, but more importantly it will allow Consensus Conference attendees to benefit from the presentations at the ASHM Conference. The ASHM Board also recognises the importance of providing a forum for debating contentious treatment strategies. Topics considered substantive and substantial by the Antiretroviral Guidelines Panel will be taken into consideration in planning subsequent ASHM Conference programs and extending invitations to international and local speakers.

The ASHM Conference always provides an opportunity for discussion, collaboration and networking. It is a time for our research centres, professional organisations, health care providers, consumer groups and government to meet, to learn and to plan the future. We hope you enjoy the 18th Annual ASHM Conference and find it a stimulating and innovative meeting.

Levinia Crooks,
Chief Executive Officer
Australasian Society for HIV Medicine

Professor David Cooper
Director, National Centre for HIV Epidemiology and Clinical Research

Professor Anthony Cunningham
Director, Australian Centre for HIV and Hepatitis Virology Research

Professor Susan Kippax
Director, National Centre for HIV Social Research

Professor Marian Pitts
Director, Australian Research Centre in Sex, Health and Society

The Conference Convenors Group

Joe Sasadeusz
Victorian Infectious Diseases Service, Melbourne, Australia

Colin Batrouney
Victorian AIDS Council/Gay Men's Health Centre (VAC/GMHC), Melbourne, Australia

Liz Dax
National Serology Reference Laboratory, Melbourne, Australia

Heidi Drummer
Macfarlane Burnet Institute, Melbourne, Australia

Jeffrey Grierson
Australian Research Centre in Sex, Health and Society, Melbourne, Australia

Stephen Kent
University of Melbourne, Australia

Johnson Mak
Macfarlane Burnet Institute, Melbourne, Australia

Ronald McCoy
Royal Australian College of General Practitioners, Melbourne, Australia

Nick Medland
The Centre Clinic, Melbourne, Australia

Marian Pitts
Australian Research Centre in Sex, Health and Society, Melbourne, Australia

Sally Roberts
Auckland Hospital, New Zealand

Alan Street
Royal Melbourne Hospital, Melbourne, Australia

Sonny Williams
PLWHA (VIC), Melbourne, Australia

Edwina Wright
Alfred Hospital, Melbourne, Australia

Levinia Crooks
Edward Reis
Daliah Frank
Nadine Giatras
Nicole Robertson
Australasian Society for HIV Medicine, Sydney Australia

REVIEWERS

Brent	Allan	Victorian AIDS Council / Gay Men's Health Centre
Dennis	Altman	AIDS Society of Asia & The Pacific (ASAP)
John	Ballard	Australian National University
Colin	Batrouney	Victorian AIDS Council
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Marcus	Bogie	AIDS Action Council of the ACT
Adrian	Booth	O'Brien Street Practice & The Care and Prevention Programme
Samantha	Bowden	NT AIDS and Hepatitis Council
Mark	Boyd	Flinders Medical Centre
Joanne	Bryant	National Centre in HIV Social Research
Chris	Burrell	University of Adelaide
Sally	Cameron	Australian Federation of AIDS Organisations
Marina	Carman	Australasian Society for HIV Medicine
Stevie	Clayton	AIDS Council of NSW
Chris	Clementson	ACON
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Damian	Conway	Australasian Society for HIV Medicine
Erika	Cox	Launceston General Hospital - Department of Pathology
June	Crawford	National Centre in HIV Social Research
Levinia	Crooks	Australasian Society for HIV Medicine
Suzanne	Crowe	Macfarlane Burnet Institute
Denise	Cummins	Redfern Community Health Centre
Philip	Cunningham	St Vincent's Hospital
Erol	Digiusto	National Centre in HIV Social Research
Julie	Dixon	South East Sydney/Illawarra Area Health Service
Greg	Dore	National Centre in HIV Epidemiology and Clinical Research
Heidi	Drummer	Macfarlane Burnet Institute
Dominic	Dwyer	Westmead Hospital
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Jeanna	Ellard	National Centre in HIV Social Research
Rick	Franklin	Auckland Sexual Health Services
Suzanne	Fraser	National Centre in HIV Social Research
Martyn	French	Royal Perth Hospital – Communicable Diseases Service
Daniel	Gallant	Hepatitis C Council of SA
Roger	Garsia	Royal Prince Alfred Hospital – Immune Monitoring Clinic
Marisa	Gilles	Combined Universities Centre for Rural Health
Paul	Goldwater	Women's & Children's Hospital, Children, Youth & Women's Health Service
Carla	Gorton	Australasian Society for HIV Medicine
Jeffrey	Grierson	Australian Research Centre in Sex, Health and Society
Philip	Habel	Interchange General Practice
David	Harrich	Queensland Institute of Medical Research

Jenny	Heslop	Mid North Coast Area Health Service
Martin	Holt	National Centre in HIV Social Research
Max	Hopwood	National Centre in HIV Social Research
Jennifer	Hoy	Alfred Hospital - Infectious Disease Unit
Brian	Hughes	John Hunter Hospital
Michael	Hurley	Australian Research Centre in Sex, Health and Society
Anthony	Jaworowski	Macfarlane Burnet Institute
John	Kaldor	National Centre in HIV Epidemiology and Clinical Research
Phillip	Keen	Australian Federation of AIDS Organisations (AFAO)
Anthony	Kelleher	National Centre in HIV Epidemiology and Clinical Research
Angela	Kelly	Australian Research Centre in Sex, Health and Society
Stephen	Kent	University of Melbourne
Alison	Kesson	The Children's Hospital at Westmead
Susan	Kippax	National Centre in HIV Social Research
Henrike	Korner	National Centre in HIV Social Research
Stephen	Lambert	The University of Queensland
Ahmed	Latif	Clinic 34 – Alice Springs
Sharon	Lewin	Alfred Hospital - Infectious Disease Unit
Andrew	Lloyd	Department of Infectious Diseases, Prince of Wales Hospital
Chris	Lyttleton	Anthropology, Macquarie University
Lisa	Maher	National Centre in HIV Epidemiology and Clinical Research
Johnson	Mak	Burnet Institute
Limin	Mao	National Centre in HIV Social Research
Debbie	Marriott	St. Vincent's Hospital
Cipri	Martinez	WA AIDS Council
Ronald	McCoy	Royal Australian College of General Practitioners
Dale	McPhee	National Serology Reference Laboratory, Australia
Nicholas	Medland	The Centre Clinic, Victorian AIDS Council
Graham	Mills	Waikato Hospital - Sexual Health Clinic
Christy	Newman	National Centre in HIV Social Research
Catherine	O'Connor	Livingstone Road Sexual Health Centre
Cathy	Pell	Australasian Society for HIV Medicine
Asha	Persson	National Centre in HIV Social Research
Peter	Pigott	Royal North Shore Hospital - HIV Medicine Unit
Alan	Pithie	Christchurch Hospital - Infectious Diseases Department
Marian	Pitts	Australian Research Centre in Sex, Health and Society
Jeffrey	Post	Prince of Wales Hospital - Department of Infectious Diseases
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Brian	Price	Alfred Hospital
Patricia	Price	Royal Perth Hospital
Damian	Purcell	University of Melbourne
John	Quin	South West Area Health Service, Sydney
Kane	Race	National Centre in HIV Social Research
Patrick	Rawstorne	National Centre in HIV Social Research

Nigel	Raymond	Infectious Diseases and General Physican, Wellington
Vanessa	Read	Prison Health Services - WA
Elizabeth	Reid	Australian National University
Edward	Reis	Australasian Society for HIV Medicine
Robert	Reynolds	National Centre in HIV Social Research
Jacqui	Richmond	St Vincent's Hospital - Melbourne
Juliet	Richters	National Centre in HIV Social Research
Sally	Roberts	Auckland District Health Board
Gary	Rogers	Secretariat of the Pacific Community
Norman	Roth	Prahran Market Clinic
John	Rule	National Association of People Living with HIV/AIDS
Darren	Russell	Cairns Sexual Health Service
Dermont	Ryan	AIDS Council of NSW
Simon	Sadler	Albion Street Centre
Joseph	Sasadeusz	Victorian Infectious Diseases Service
Cindy	Shannon	Shannon Consulting Services
David	Shaw	Royal Adelaide Hospital - Infectious Diseases Clinic
Eammon	Smythe	New Zealand AIDS Foundation
Tuck Meng	Soo	Interchange General Practice
Kim	Stewart	New South Wales Health
Alan	Street	Royal Melbourne Hospital - Victorian Infectious Diseases Service
Alan	Strum	People Living with HIV/AIDS (VIC)
David	Sutherland	Nineways Specialist Clinic
Gilda	Tachedjian	Macfarlane Burnet Institute
Kelly	Tank	Sacred Heart Palliative Care Service
Alina	Thomas	Scarlet Alliance
Mark	Thomas	Auckland Hospital - Adult Infectious Diseases Unit
Carla	Treloar	National Centre in HIV Social Research
James	Ward	Aboriginal Health & Medical Research Council of NSW
Ashley	Watson	Canberra Sexual Health Centre
Jo	Watson	National Association of People Living with HIV/AIDS
Matthias	Wentzlaff-Eggebert	AIDS Council of South Australia
Steve	Wesselingh	Macfarlane Burnet Institute
John	Wilkinson	Westmead Hospital - Millennium Institute - Centre of Virus Research
Sonny	Williams	PLWHA (VIC)
Jon	Wills	Australian Research Centre In Sex, Health And Society
Alex	Wodak	St Vincent's Hospital - Alcohol and Drug Service
Ian	Woolley	Alfred Hospital - Infectious Disease Unit
Heather	Worth	National Centre in HIV Social Research
Edwina	Wright	Alfred Hospital
Lorraine	Yap	National Centre in HIV Social Research
John	Ziegler	Sydney Children's Hospital

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TUESDAY 21 FEBRUARY 2006

WEDNESDAY 22 FEBRUARY 2006

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Please review accompanying Product Information before prescribing. Full Product Information is available from GlaxoSmithKline Australia Pty Ltd. 1061 Mountain Highway, Boronia, Victoria, 3155. ABN 47 100 162 481. Kivexa, Trizivir and Ziagen are trademarks of the GlaxoSmithKline group of companies.

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INVITED SPEAKERS

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Peter Drahos

Peter Drahos is a Professor in Law, the Head of Program of the Regulatory Institutions Network and the Director of the Centre for the Governance of Knowledge and Development at the Australian National University. He is a member of Médecins Sans Frontières Working Group on Intellectual Property and Access to Medicines and has worked on intellectual property, trade and access to medicines for a number of years.

His former positions include Herchel Smith Senior Research Fellow in Intellectual Property at Queen Mary College, University of London and officer of the Australian Commonwealth Attorney-General's Department.

Professor Drahos' publications include: *A Philosophy of Intellectual Property,* Dartmouth *(1996), Global Business Regulation,* Cambridge University Press, 2000, (with John Braithwaite), *Information Feudalism: Who Controls the Knowledge Economy?* (with John Braithwaite), Earthscan (2002), New Press (2003) and Oxford University Press (2003) and *Global Intellectual Property Rights: Knowledge, Access and Development,* Macmillan (2002) (with Ruth Mayne).

Wafaa El-Sadr

Wafaa El-Sadr is Professor of Clinical Medicine and Epidemiology at Columbia University, College of Physicians and Surgeons and the Mailman School of Public Health. She is also the Chief of the Division of Infectious Diseases at Harlem Hospital Center. She directs the International Center for AIDS Care and Treatment Programs (ICAP) and the Center for Infectious Diseases Epidemiologic Research. She has developed programs in 15 countries for the provision of HIV/AIDS care and treatment in resource-limited settings. Her research interests are in HIV/AIDS and tuberculosis.

Joep Lange

Joep Lange, Professor of Internal Medicine at the Center for Poverty-Related Communicable Diseases, Academic Medical Center University of Amsterdam, The Netherlands, is an internist by training. For over 20 years he has pioneered clinical trial design and implementation, clinical research site training, and policy-making for HIV-related issues, including Prevention of Mother-to-Child Transmission (PMTCT) interventions. During this time he has been a principal investigator on antiretroviral therapy and PMTCT. From 1992 to 1995 he worked at the World Health Organization (WHO) as the Chief of Clinical Research and Product Development of the Global Program on AIDS. Presently Dr Lange serves as Director of the Netherlands' National AIDS Therapy Evaluation Center (NATEC) and Chief Scientific Officer of the International Antiviral Therapy Evaluation Center (IATEC). He was President of the International AIDS Society from 2002 to 2004 and is also Founder and Chairman of the PharmAccess Foundation. Professor Lange is member of a number of advisory boards including the WHO Strategic and Technical Advisory Committee for HIV/AIDS (STAC-HIV), Steering Committee '3 by 5' Evaluation, Member Writing Committee WHO HIV Treatment Guidelines, the HIV Prevention Working Group of the Bill & Melinda Gates Foundation, and the Scientific Advisory Board of the International AIDS Vaccine Initiative.

Christopher Lee

Christopher Lee is currently the Head of the Medical Department at the Kuala Lumpur General Hospital (KLGH), Malaysia. He trained in Infectious Diseases at the Regional Infectious Diseases Unit at Edinburgh's City Hospital in the early 1990s and has been helming the Infectious Diseases Unit at the KLGH since 1994. He has been actively involved in the care of HIV patients and has been heading the Ministry of Health's HIV treatment program since 1994. He serves as a member on various HIV national level committees, including the National HIV Technical Committee and the Patient Management Subcommittee. He started the National HIV/AIDS Treatment Registry (NHATR) in 2003. This monitors the coverage and the effectiveness of the antiretroviral roll-out in Malaysia. He also serves on the HIV Advisory Committee of the International Society of Infectious Diseases and is currently the President of the Malaysian Society of HIV Medicine (MASHM).

INVITED SPEAKERS

Gary Nabel

Dr. Gary Nabel is Director of the Vaccine Research Center at NIAID, NIH is well known for his work in the field of HIV. His work has led to the development of HIV vaccine candidates currently in Phase II clinical trials, as well as for other emerging viruses, including Ebola and influenza.

Will Nutland

Will Nutland is Head of Health Promotion Services at Terrence Higgins Trust in London, UK. He leads THT's health promotion team targeting HIV prevention and sexual health interventions at gay men, African communities, young 'at risk' communities and people living with HIV. Will studied International Development at the University of East Anglia and went on to co-found Norwich Gay Men's Health Project in 1992 and has worked in community-based health programmes in the UK for the last 15 years. He is co-author of *Making it Count* – the collaborative planning framework for reducing HIV incidence amongst homosexually active men in England. In 2001 Making it Count was adopted as the Department of Health's framework under which HIV prevention for gay men and bisexual men should be commissioned and planned in England. Will has a particular interest in building synergy between researchers and health practitioners and has co-authored a number of 'research into practice' with colleagues at Sigma Research, including *The Field Guide in 2003*.

Vera Paiva

Vera Paiva is Professor of Social Psychology and a founding member and coordinator of the Interdisciplinary Group for AIDS Prevention (NEPAIDS) at the University of São Paulo, Brazil. She is also a Researcher and Lecturer at the Sociomedical Department, Mailman School of Public Health, Columbia University, New York, USA.
Professor Paiva has worked extensively within the human rights perspective, in the .field of sexuality and gender studies, and the enhancement of AIDS care and prevention. Currently, she is involved in studies of the enhancement (sexual and reproductive) of people living with HIV/AIDS, stigma and discrimination affecting children and adolescents who are AIDS orphans, and the Brazilian religious response to AIDS. Vera has been a consultant for UNAIDS, WHO, and the National and the São Paulo State Programs of STD and AIDS and is currently a Member of the National AIDS Committee for the Brazilian National Program of STD/AIDS of the Ministry of Health.

Alice Pau

Alice Pau, received her Bachelor of Science in Pharmacy from the University of Houston and her Doctor of Pharmacy degree from the University of Michigan. She subsequently completed a clinical pharmacy residency at the University of Illinois Hospital. Dr Pau began her specialisation in infectious diseases pharmacology in 1984, with clinical and research interests and expertise in therapeutic management of HIV infection since 1988. Dr Pau is currently a Clinical Staff Scientist at the National Institute of Allergy and Infectious Diseases, US National Institutes of Health. Prior to that, she was Clinical Associate Professor at the University of Illinois College of Pharmacy, with an adjunct faculty appointment at the College of Medicine. Dr Pau has been a member of the DHHS Adult and Adolescents Antiretroviral Panel since 1998 and was appointed as Assistant Executive Secretary in 2002, and Executive Secretary in 2003. She is also a member of the DHHS Panel on Treatment and Prevention of Opportunistic Infections in HIV-infected Patients.

INVITED SPEAKERS

Christopher Power

Christopher Power, a physician-scientist, is the only neurologist in Canada treating people with AIDS-dementia while also investigating treatments for AIDS-related neurological diseases in the research laboratory. Dr Power recently found that HIV infection transforms a molecule required for normal brain function into one that is toxic to brain cells, resulting in dementia due to the death of neurons. This discovery, published last year in *Nature Neuroscience*, could lead to new avenues of potential treatment for patients with AIDS-dementia and perhaps other types of dementia.

Daniel Tarantola

Daniel Tarantola is Professor and Chair of Health and Human Rights at The University of New South Wales, working on a new Health and Human Rights Initiative (UNSW/HHRI) which involves the Faculties of Medicine, Law and Arts and Social Sciences. Early in his career, Daniel worked with the World Health Organization (WHO) on large-scale international health programmes and, in the late 1980s, engaged actively in the design and launching of the WHO Global Programme on HIV/AIDS. Having left WHO in 1991, Daniel served till 1998 as a Lecturer in Population and International Health at the Harvard School of Public Health and Senior Associate of the François-Xavier Bagnoud Center for Health and Human Rights. From 1998 to 2004, Daniel rejoined WHO as Senior Policy Adviser to the Director General and, additionally during the latter part of this period, as Director of the WHO Department of Immunization, Vaccines and Biologicals.

MEMORIAL SESSIONS

ASHM has a commitment to ensure that at each conference we honour the memory of those 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 to other countries 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. Just one example of the unique places and positions that Phillip held in so many people's lives is that in a year where he was an Executive Assistant for the Executive Officer of ASHM, he was also the NAPWA President invited to be part of the Opening Session of the 2001 ASHM National Conference. Phillip leaves behind a legacy that was obviously valued and appreciated by people all around Australia.

MEMORIAL SESSIONS

Peter Meese

Dr Peter Meese, a physician in the Infectious Diseases Unit of the Alfred Hospital died on 23 February 2000. Dr Meese 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 for publishing and 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 and continued studies in Boston as a clinical Royal Postgraduate Medical School within the Hammersmith Hospital. 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 and 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.

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GENERAL INFORMATION

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Disclaimer
All information disclosed in the Conference Program is correct at the time of printing. ASHM 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. ASHM accepts no responsibility for errors, misprints or other issues with abstracts contained in this handbook.

Internet Café
An Internet café is available in the Grand Waldorf Ballroom foyer in the Carlton Crest Hotel and is proudly provided by Abbott which is located at booth numbers 19, 20 and 21.

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 whilst 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.

Registration Desk
All inquiries should be directed to the registration desk in the Ground Level foyer, open at the following times:

Wednesday	11 October:	7.30am - 5.30pm
Thursday	12 October:	7.30am - 5.30pm
Friday	13 October :	7.30am - 5.30pm
Saturday	14 October :	7.30am - 5.30pm

Smoking
This conference has a no smoking policy.

Speaker Preparation Room
A speaker preparation room will be located in the UN Suite 1610 of the Carlton Crest Hotel. This room will be open at the following times:

Monday	9 October:	7.30am – 5.30pm
Tuesday	10 October:	7.30am – 5.30pm
Wednesday	11 October:	7.30am – 5.30pm
Thursday	12 October:	7.30am – 5.30pm
Friday	13 October:	7.30am – 5.30pm
Saturday	14 October:	7.30am – 3.30pm

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.

Poster Display
Posters part of the oral poster sessions will be displayed in the Belair Room for the duration of the conference. All remaining posters will be displayed for the duration of the Conference in the Grand Waldorf Ballroom Foyer, which also contains the exhibition booths and all the catering. Posters will be available for viewing on Wednesday 11 October from 8.30am until Saturday 14 October at 3.30pm. Poster boards will be numbered as indicated in the Posters Listing section of this handbook. Delegates are encouraged to visit all the poster displays during tea and lunch breaks and the Conference Reception.

Posters for the Sexual Health Conference will be available for viewing on Monday 9 October from 12.30pm till Wednesday 11 October at 3.30pm in the Grand Waldorf Ballroom Foyer.

Trade Exhibition
The trade exhibition is situated in the Grand Waldorf Ballroom of the Carlton Crest Hotel, Melbourne which also contains the posters and all the catering.
The exhibition will be open during the following hours:

Wednesday	11 October:	8.30am – 5.00pm
Thursday	12 October:	8.30am – 6.30pm
Friday	13 October:	8.30am – 5.00pm
Saturday	14 October:	8.30am –1.30pm

The trade exhibition for the Australasian Sexual Health Conference will also be available for viewing on Wednesday 11 October: 8.30am – 5.00pm

GENERAL INFORMATION

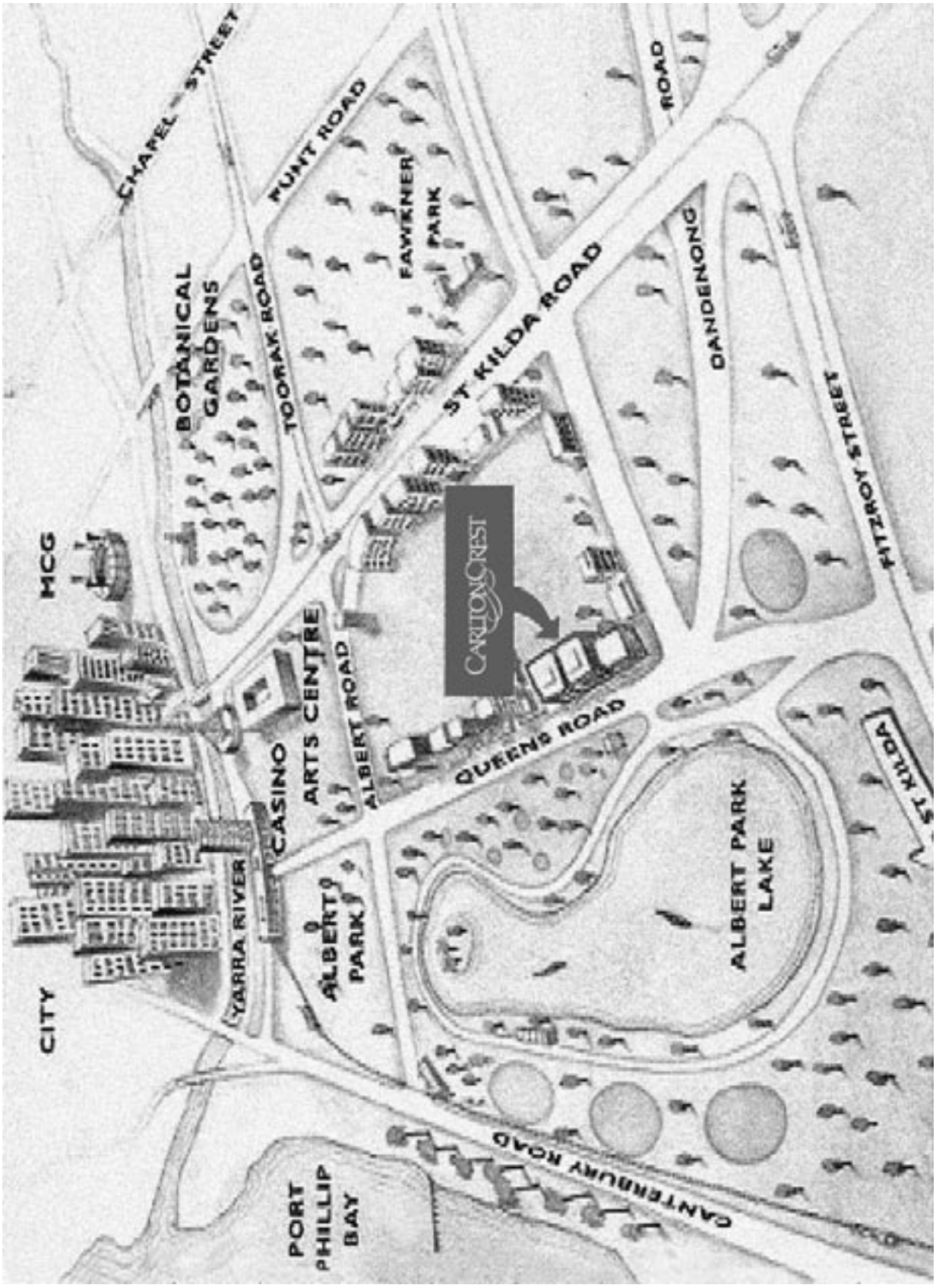
Venue

The Carlton Crest Hotel will host the plenary sessions in the Grand Waldorf Ballroom accessible via the Carlton Crest Convention Centre – entry on Lorne Street. Access to the Grand Waldorf Ballroom through the main Carlton Crest Hotel lobby is possible via the Windows on the Park restaurant.

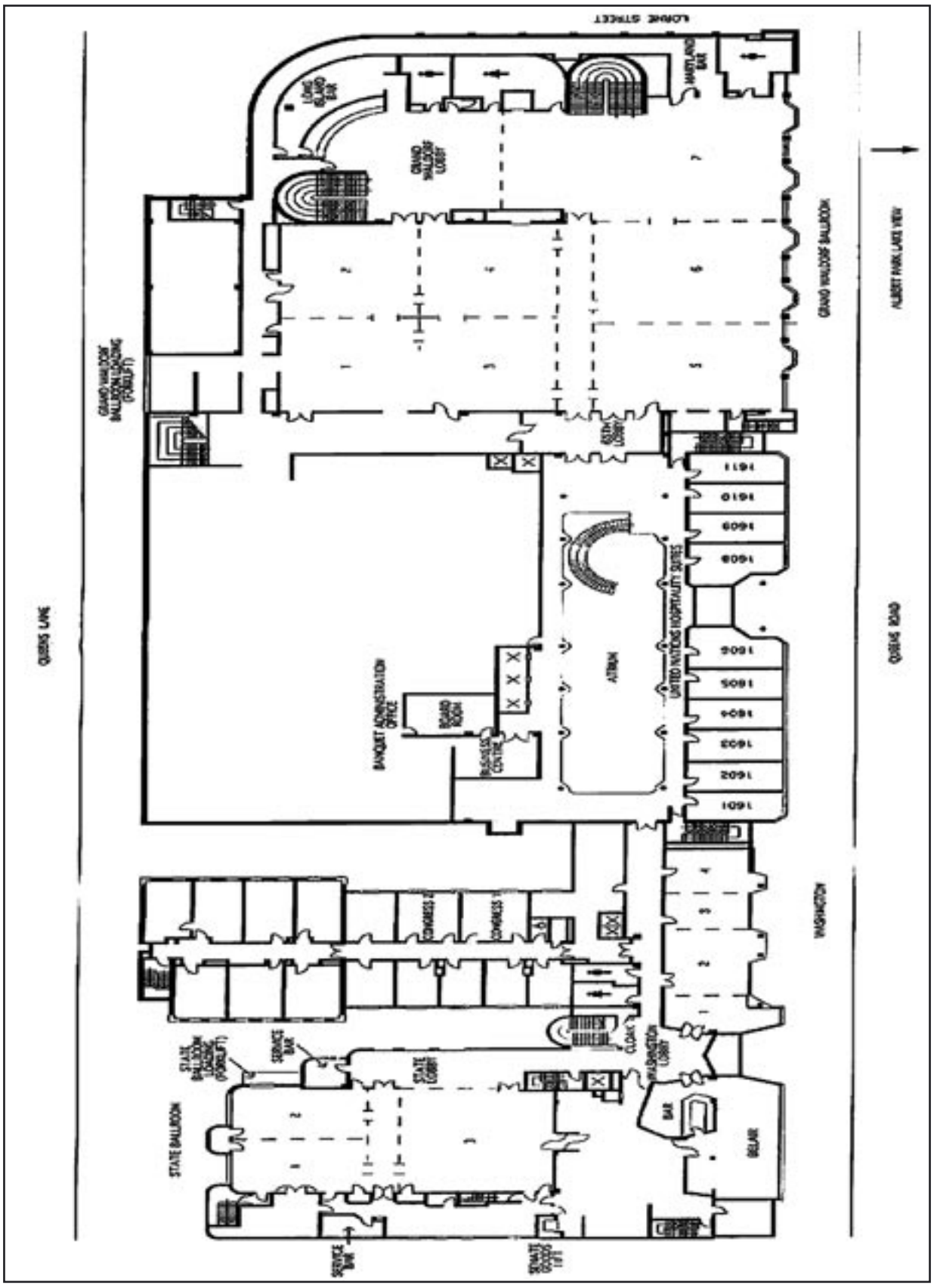
The Consensus Conference on Saturday 14 October will also be held in the Grand Waldorf Ballroom. Symposia and Concurrent Sessions will be held in the State Ballroom and Washington Rooms. UN Suite 1608 on Level 1 is available as a quiet room for delegates, particularly those with medical conditions, and we request that it be used only for this purpose and not for ad hoc meetings.

The Carlton Crest Hotel
65 Queens Road
Melbourne VIC 3004
Phone: +61 3 9529 4300
Fax: +61 3 9521 3111
Web: www.carltonhotels.com.au/melbourne/

LOCATION MAP – MELBOURNE



VENUE FLOOR PLAN – CARLTON CREST – LEVEL 1



ASSOCIATED EVENTS

Tickets to Associated Events

Tickets and/or name badges will be required for entry to all associated events. All tickets will be given out on registration – or printed on the name badge. If you would like to purchase tickets to the Case Presentation Breakfast or Conference Reception you may do so up until 12 noon on Wednesday 11 October at the registration desk. No tickets for the Conference Gala Dinner are available on-site. A no-refund policy exists for cancellation of function tickets.

Lunches and Tea Breaks

Lunches and tea breaks on each day will be served in the Grand Waldorf Ballroom foyer among the trade exhibition and poster displays.

Morning Tea	10.30am – 11.00am
Lunch	12.30pm – 1.30pm
Afternoon Tea	3.00pm – 3.30pm

Conference Gala Dinner (Sponsored by GSK)

7.00pm, Wednesday 11 October 2006
Dinner: National Gallery of Victoria
(NGV International)
180 St Kilda Road Melbourne

The dinner is held jointly with the Australasian Sexual Health Conference.

Conference Reception

5.00pm – 6.30pm, Thursday 12 October 2006
Grand Waldorf Ballroom Foyer, Level 1
Carlton Crest Hotel, Melbourne

One ticket is included for registered delegates
$44.00 for additional guests

Case Presentation Breakfast (Sponsored by Bristol-Myers Squibb)

7.30am – 9.00am, Friday 13 October 2006
Washington Room, Level 1
Carlton Crest Hotel, Melbourne

Tickets: $22.00 per person

Case presentations supported by brief literature reviews and a Q & A session will take place at this early-morning session. Breakfast will be served from 7.00am. The winner of the best Medical Case Presentation will be announced during the closing session.

THE 2ND AUSTRALASIAN CONSENSUS CONFERENCE

SATURDAY OCTOBER 14, 2006
1.30PM – 5.00PM
GRAND WALDORF BALLROOM, LEVEL ONE
CARLTON CREST HOTEL, MELBOURNE

ASHM is holding the 2nd Australasian Consensus Conference on the use of antiretroviral agents in HIV-1 infected adults and adolesents immediately following the close of the ASHM Conference.

Delegates attending the full ASHM Conference can register for the Consensus Conference free of charge. Individuals wishing just to attend the Consensus Conference can register for Saturday only. This meeting is closed to pharmaceutical industry representatives and is not supported by industry sponsorship.

At its February 2005 meeting the Australian Health Minister's Advisory Committee on HIV and STI endorsed the USA Department of Health and Human Services Guidelines for the Use of Antiretroviral Agents in HIV-1 Infected Adults and Adolescents and requested that the Antiretroviral Guidelines Panel develop and regularly update a detailed commentary on those Guidelines relevant to Australia.

The Panel identified that three levels of commentary were required. The first was procedural and involved translating terms, contacts and the like to Australasian equivalents. The second involved a number of minor variations or differences of opinion and/or data. This commentary is embedded in the electronic version of the Guidelines and the reader is alerted to the commentary by virtue of it being included in a highlighted text box. The commentary has been written by Australian experts and reviewed by the Antiretroviral Guidelines Panel as a whole. Feedback on the Guidelines and commentary can be given from the electronic document. These comments will then be reviewed by the ASHM secretariat and referred to the Panel.

The Panel also identified a third level of commentary. This related to substantive and substantial issues which are to be discussed at the annual Consensus Conference on the management of HIV. The four key issues identified for discussion at the 2006 Consensus Conference are:

- Perspectives on guideline development
- First line therapy - Yes to abacavir, no to AZT?
- Resistance Testing: Now recommended but what about access?
- Treatment Interruption: Dead in the water or awaiting rescue?

The program includes evidence-based presentations delivered by international and Australian experts.The afternoon will be devoted to discussion aimed at developing consensus. Following the Consensus Conference, the Antiretroviral Guidelines Panel will synthesise the opinions of the Conference into appropriate Australian commentary. The commentary will then be included in the electronic document.

The program for the Consensus Conference is shown on page xx

18th annual

ashm conference

Wednesday 11 to Saturday 14 October 2006

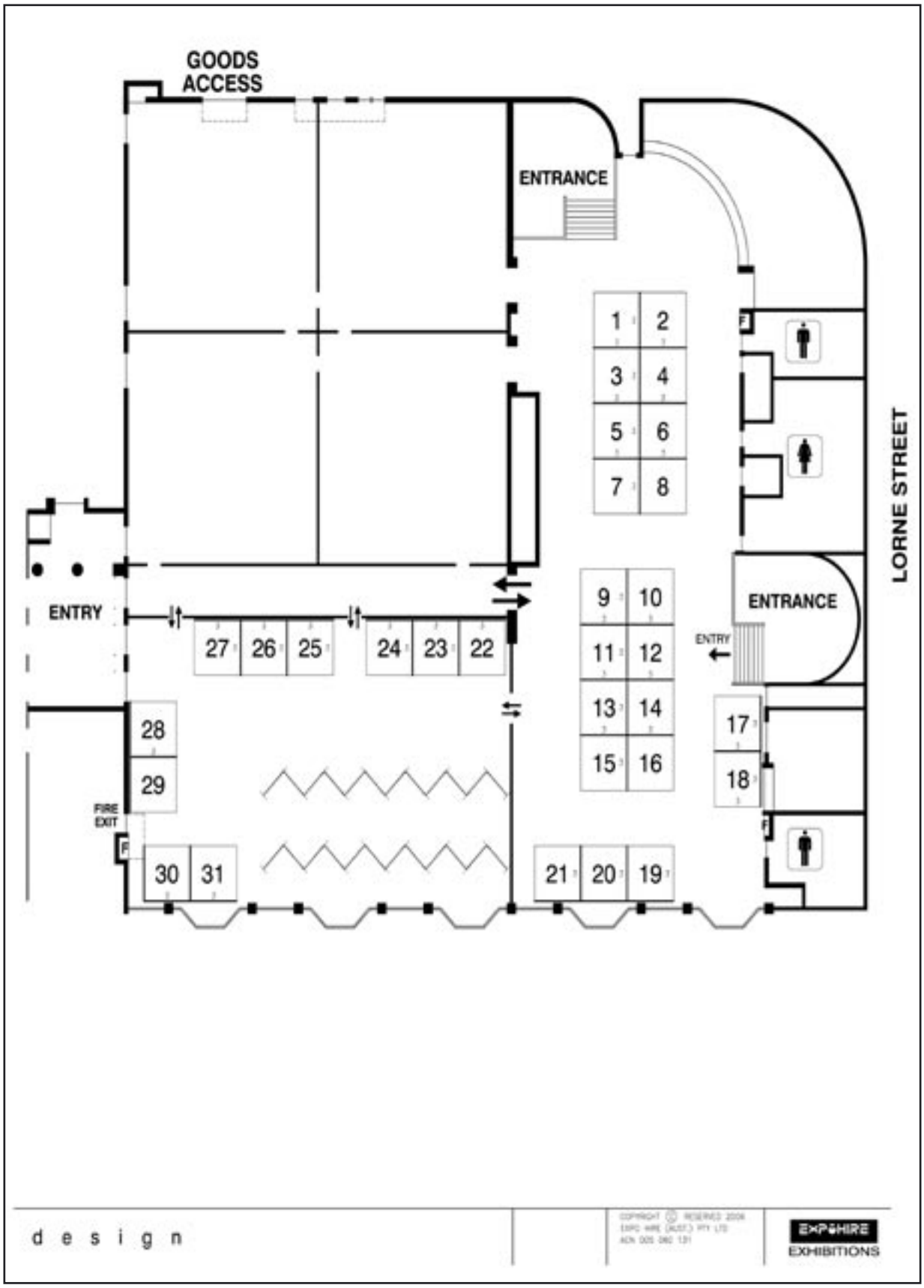
melbourne 06

EXHIBITION BOOTH LISTING

EXHIBITION BOOTH LISTING

Organisation	Booth Number
Bristol-Myers Squibb	1 & 3
Australasian Society for HIV Medicine	2, 4 & 6
University Queensland School of Medicine	5
Novartis	7 & 8
GSK	9, 10, 11 & 12
Boehringer Ingelheim	13 & 15
Roche Products	14 &16
Sexual Health and Family Planning Australia	17
Pfizer	18
Abbott	19, 20 & 21
Burnet Institute	22
AusAID	23
Merck Sharp & Dohme	24
Schering Plough	25
Tibotec, Janssen-Cilag	27
Gilead	28 & 29
NZAF	30
National Centre in HIV Social Research & Australian Research Centre in Sex, Health & Society	31

EXHIBITION AREA FLOOR PLAN – GRAND WALDORF FOYER



18th annual

ashm conference

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melbourne 06

EXHIBITOR DIRECTORY

EXHIBITOR DIRECTORY

Bristol-Myers Squibb (Booths 1 & 3)

Bristol-Myers Squibb is a global pharmaceutical and related health care products 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 medicines that address significant medical needs in key disease areas.
Bristol-Myers Squibb's effort to address the global HIV/AIDS pandemic is best demonstrated through its focus on leadership in science, its enduring commitment to expand access to treatment and care for HIV/AIDS patients, and philanthropic initiatives such as *Secure the Future*® .

Australasian Society for HIV Medicine (Booths 2, 4 & 6)

The Australasian Society for HIV Medicine (ASHM) is the peak representative professional body for medical practitioners and other health care workers in Australasia, who work in HIV and related disease areas. It was formed in 1988 (as the Australian Society of AIDS Physicians), changed its name in 1989 to reflect a broader membership base and was incorporated in New South Wales in 1990. It became a registered charity in 2003.
ASHM is a key partner in the Australasian and regional response to HIV, hepatitis and related diseases. It works closely with government, advisory bodies, community agencies and other professional organisations. 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. The ASHM International Program focuses on collaborations and partnerships to provide training and support for professional health care workers in regional countries, including Papua New Guinea, the Pacific, Timor Leste and Indonesia.
ASHM is governed by an elected voluntary Board and managed by a secretariat. It receives support from the Australian Government's Department of Health & 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 convenes committees on a range of issues affecting its members, including education, HIV treatment, viral hepatitis, international/development issues and professional affairs. ASHM conducts an annual medical scientific conference, and the conference team provides professional conference organisation to third parties in the sector.

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

University of Queensland School of Medicine (Booth 5)

The HIV & HCV Education Projects is based within the School of Medicine of 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 project 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 were 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.
The HIV & HCV Education Projects also offer customised education activities on topics of choice and for particular target audiences as well as established education activities in the three core domains of HIV, Sexual Health and Viral Hepatitis on a state, national and international level.

Contact:
School of Medicine - The University of Queensland
288 Herston Road
HERSTON QLD 4006
Australia
Tel: 61 7 3346 4813
Fax: 61 7 3346 4757
Email: hivandhcvprojects@uq.edu.au

EXHIBITOR DIRECTORY

Novartis (Booths 7 & 8)

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 50 years. Novartis employs about 80 000 people and operates in over 140 countries around the world.
In Australia the company now employs more than 500 people, and invests over A$27million annually in local research. This research not only assures the effectiveness of the company's current range of treatment, but also secures the promise of improving health for the future.
Novartis medicines treat some of the most serious health conditions confronting health care professionals and their patients. The company's work is spread across many disease areas including Primary Care, Oncology, Transplantation and Ophthalmics.

Contact:
Barry Frost
Senior Product Manager
Novartis Pharmaceuticals Australia Pty Ltd
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NORTH RYDE NSW 2113
Australia
Tel: 61 2 9805 3555
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Email: barry.frost@novartis.com
Web: www.novartis.com.au

GSK (Booths 9, 10, 11 & 12)

GlaxoSmithKline (GSK) Australia is one of Australia's largest pharmaceutical and health care companies and is committed to improving the quality of human life by enabling people to do more, feel better and live longer.
GSK has four main sites in Australia, employing more than 1500 people. It is Australia's largest supplier of vaccines and a leading supplier of medicines for asthma, diabetes, bacterial and viral infections, depression, migraine, gastroenterological disease, epilepsy, smoking cessation and pain relief. More than 16 million Australians rely on at least one of GSK's medicines, vaccines or consumer health care products.
The company invests more than A$34 million in R&D each year, making it one of Australia's top 20 R&D investors.

Contact:
BORONIA VIC 3155
Australia
Tel: 61 3 9721 6000
Web: www.gsk.com.au

Boehringer Ingelheim (Booths13 & 15)

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, as of 1 March 2006, Viramune® (nevirapine) has been donated to treat more than 700 000 mother-child pairs through 144 programs in 58 countries.
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, well being, political and social stability of Australia's nearest neighbour. It is currently working with its partners to provide education and support to health care workers in PNG.

Contact:
Ms Karen Low
HIV Manager
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PO Box 1969
Macquarie Centre
NORTH RYDE NSW 2113
Australia
Tel: 61 2 8875 8833
Fax: 61 2 8875 8712
Email: klow@syd.boehringer-ingelheim.com

EXHIBITOR DIRECTORY

Roche Products (joint HIV & Pegasys) & Diagnostics (Booths 14 & 16)

Roche is one of the world's leading research-oriented health care groups. For more than 100 years, Roche has been active in the discovery, development, manufacture and marketing of innovative health care solutions. Roche's products and services address prevention, diagnosis and treatment of diseases, thus enhancing well-being and quality of life. A core therapeutic area of focus is virology, and some of the innovative products developed by Roche include Fuzeon® (enfurvitide) for HIV infection, Pegasys®RBV® (peginterferon alfa-2a + ribavirin) and Pegasys® (peginterferon alfa-2a) for hepatitis C & B. Our mission is to create, produce and market innovative solutions of high quality for unmet medical needs. We do this in a responsible and ethical manner and with a commitment to sustainable development, respecting the needs of the individual, the society and the environment

Contact:
Tracy Jones-Bower
Associate Product Manager - Pegasys
Roche Products Pty Limited
4-10 Inman Road
DEE WHY NSW 2099
Australia
Tel: 61 2 9454 9512
Fax: 61 2 9454 9284
Mobile: 0408 449 909
Email: tracy.jones-bower@roche.com

Sexual Health and Family Planning Australia (Booth 17)

Sexual Health & Family Planning Australia (SH&FPA) is the peak body for seven state and territory family planning organisations.
Family planning organisations provide high quality sexual and reproductive health, clinical, educational and training services to Australian communities.
SH&FPA also manages a comprehensive international program which supports population policies promoting personal choice and human rights and is integrated with broader development goals such as poverty alleviation and gender equity.
SH&FPA is governed by a board of voluntary directors and managed by a forum of Chief Executive Officers from member organisations.

Contact:
Lynne Jordan
Chief Executive Officer
Family Planning Victoria
901 Whitehorse Road
BOX HILL VIC 3128
Australia
Tel: 61 3 9257 0140
Fax: 61 3 9257 0110

Pfizer (Booth18)

With a history dating back to 1886, Pfizer Australia has grown to become the nation's leading provider of prescription medicines, consumer health care products and animal health products. With many of our prescription medicines leading their therapeutic areas, and with trusted consumer products such as Listerine, Benadryl, Codral and Visine, it's easy to see why millions of Australians trust Pfizer Australia everyday.

Contact:
Pfizer Global Pharmaceuticals
Pfizer Australia
Tel: 61 2 9850 3333
Fax: 61 2 9850 3146
Web: www.pfizer.com.au

EXHIBITOR DIRECTORY

Abbott (Booths19, 20 & 21)

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.'

Contact:
David Mitchell
Business Unit Manager
Virology Abbott
32-34 Lord Street
BOTANY NSW 2019
Australia
Tel: 61 2 9384 9720
Fax: 61 2 9384 9999
Mobile: 0412 110 765
Email: david.mitchell@abbott.com

Burnet Institute (Booth 22)

The Burnet Institute which now incorporates the Austin Research Institute is one of Australia's leading medical research and public health institute's specialising in infectious diseases, immunology, immunotherapy and cancer.
Burnet's laboratory-based research is concentrating on understanding basic virology, viral pathogenesis and replication, developing novel ways of preventing infection, rapid diagnostics, vaccines for infectious diseases and cancers, and new and better drug therapies.
Through its public health field programs, Burnet is working within Australia and in many resource-poor countries of the Asia Pacific region, as well as in Africa. The Institute's Centre for International Health, Centre for Harm Reduction and Centre for Epidemiology and Population Health Research play a critical role in preventing the spread of and reducing the impact of infectious diseases.

Contact:
Professor Steve Wesselingh
Director
Macfarlane Burnet Institute for Medical Research and Public Health Ltd (Burnet Institute)
85 Commercial Road, Melbourne 3004
Tel: 61 3 9282 2123
Fax: 61 3 9282 2100
Email c/- prathbone@burnet.edu.au
Web: www.burnet.edu.au

AusAID (Booth 23)

AusAID is the Australian Government's agency for overseas aid. The overseas aid program aims to assist in reducing poverty, helping to raise standards of living and increasing quality of life for people in developing countries. The Australian Government is deeply concerned at the incidence and impact of HIV/AIDS globally, and is taking a lead role in the Asia Pacific regional response to HIV/AIDS. Key features of our response are: building regional leadership, education and prevention programs, and treatment and care. We have committed AU$600 million across the decade to 2010 to tackle HIV/AIDS. AusAID supports ASHM's international program.

Contact:
Joyce Wu
HIV/AIDS Taskforce
AusAID
Tel: 61 2 6206 4806
Fax: 61 2 6206 4864

Merck Sharp & Dohme (Booth 24)

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.

Contacts:
Alan Strum
Business Manager - HIV
Tel: 61 2 9795 9634
Mobile: 0414 795 204
Murray Altham
Health Service Associate - HIV
[VIC, QLD, TAS, WA]
Mobile: 0414 795 361
Lucie Emond
Health Service Associate - HIV [NSW, SA]
Mobile: 0414 795 054

Schering-Plough (Booth 25)

Schering-Plough is a global pharmaceutical company committed to discovering and bringing to market new therapies and treatment programs that can improve people's health and save lives.
The company's core product lines are in allergy/respiratory,anti-infective/anticancer,dermatologicals and cardiovasculars, with a growing animal health business, complemented by leading over-the-counter and personal care brands. Schering-Plough has established itself as a leader in biotechnology, with strong research positions in genomics and gene therapy. With headquarters in Kenilworth, New Jersey USA, Schering-Plough International markets its products in more than 125 markets throughout the world, maintains subsidiaries in some 40 nations and has manufacturing facilities in over 20 of these.

Contact:
Ronda Fethers
Senior Product Manager
Schering-Plough PTY Limited
Specialty Healthcare
Locked Bag 5011
BAULKHAM HILLS NSW 2153
Tel: 61 2 9852 7444
Email: ronda.fethers@spcorp.com

Tibotec, a division of Janssen Cilag Pty. Ltd. (Booth 27)

Tibotec is the virology and infectious diseases franchise division of Janssen Cilag dedicated to the discovery and development of innovative new drugs for HIV/AIDS and other infectious diseases of high unmet medical need. Recognised as one of the companies at the forefront of HIV research, Tibotec has three antiretroviral compounds in Phase II and III Clinical trials. The company also has an anti-TB compound in early development and several active discovery programs in HIV, HCV and other life-threatening infectious diseases.
.
Tibotec is committed to improving medical care and the quality of life for patients.

Contact:
Tibotec, a division of Janssen Cilag Pty. Ltd.
1-5 Khartoum Road
North Ryde NSW 2113
Locked Bag 2070 North Ryde NSW 1670
Tel: 61 2 8875 3333
Fax: 61 2 8875 3399

Gilead Sciences (Booths 28 & 29)

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, chronic hepatitis B, influenza and serious bacterial and systemic fungal infections.
Gilead's operation in Australia is responsible for sales, marketing and clinical trial activities throughout Australia and New Zealand. Gilead provide the sales, marketing and medical support for outstanding products such as AmBisome®, Truvada®, Viread® and Hepsera®.

Contact:
Gilead Sciences
Level 1, 128 Jolimont Road, East Melbourne, Victoria, 3002, Australia
Tel: 61 3 9272 4400
Fax: 61 3 9272 4411
Web (Australia): www.gileadsciences.com.au
Web (world wide): www.gilead.com

NZAF (Booth 30)

The New Zealand AIDS Foundation Positive Health Services are committed to continuing to be responsive to all people infected and affected by HIV, regardless of age, gender, ethnicity or sexual orientation while being aware that MSM (men who have sex with men) are the core group affected within New Zealand.

The Programme focuses on providing free and confidential HIV testing, counselling and information to people living with HIV/AIDS and their significant others, promoting a safe-sex message to all and utilising a health promotion model to challenge unsafe sexual behaviours

Recognition is also given to the growing need of positive migrants within the heterosexual communities who have acquired HIV/AIDS before migration to New Zealand.

Contacts:
Eamonn Smythe
National Positive Health Manager
New Zealand AIDS Foundation
Te Tuuaapapa Mate Aaraikore o Aotearoa
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PO Box 6663, Wellesley Street
Auckland, New Zealand
DDI: 64 9 300 6958
Mobile: 021 741 603
Fax: 64 9 309 3149
Email: eamonn.smythe@nzaf.org.nz
Web: www.nzaf.org.nz

National Centre HIV Social Research (Booth 31)

The National Centre in HIV Social Research (NCHSR) was established in 1990 with funding from the Commonwealth government and is located at The University of New South Wales. The NCHSR conducts social research into the prevention and treatment of HIV, hepatitis C and other communicable diseases, with special reference to gay men, injecting drug users and other marginalized groups, and a growing program of international research, particularly in the Asia-Pacific region. The NCHSR works with affected communities and NGOs so that its research is both informed by community needs and informs policy and practice.

Contacts:
Maude Frances
Research Resource Manager
National Centre in HIV Social Research
Webster Building
University of New South Wales
Sydney NSW 2052
Tel: 61 2 9385 6405
Email: m.frances@unsw.edu.au
Web: http://nchsr.arts.unsw.edu.au

Australian Research Centre in Sex, Health and Society (Booth 31)

The Australian Research Centre in Sex, Health and Society is a multidisciplinary centre which undertakes research into social, psychological and cultural aspects of human sexuality, sexual identity and health, HIV/STIs and blood borne viruses. ARCSHS also provides research leadership at state, national and international levels and offers knowledge, skills, and resources to assist other organisations in health promotion, service delivery and the formulation of public policy.

Contacts:
Dr Jeffrey Grierson
Senior Research Fellow
Living with HIV Program
Ms Sue Dyson
Community Liaison & Education Unit
Australian Research Centre in Sex, Health & Society
Level 1, 215 Franklin Street
Melbourne VIC 3000
Tel: 61 3 9285 5382
Email: arcshs@latrobe.edu.au
Web: www.latrobe.edu.au/arcshs

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UNDERGRADUATE AND JUNIOR RESEARCHER SUPPORT AWARDS PROGRAM

UNDERGRADUATE AND JUNIOR RESEARCHER IN HIV AND VIRAL HEPATITIS AWARDS PROGRAM 2006

LAURA EADIE

Laura Eadie is currently undertaking her Honours year through the University of Adelaide and the Institute of Medical and Veterinary Science. She is conducting her research in the infectious diseases HIV laboratory with Professor Chris Burrell, Dr Peng Li and Dr Jill Carr as her supervisors.

Oral Presentation – Wednesday 11 October
ASHM Basic Science - Virus-Host Interplay
3.30pm – 3.45pm

JACQUELINE FLYNN

Jacqueline Flynn (BSc Hons, MBiotech) is a Senior Research Assistant of the Viral Immunology Group at the Burnet Institute. Her area of research interest is in cell-mediated immunity to HCV in human cohort studies and in the assessment of vaccine immunogenicity in animal models, and DC uptake and maturation studies. Her current involvement in the Australian Trial in Acute HCV Cohort (ATAHC) involves the assessment of immune function and predictors for viral clearance in acute infection.

Oral Presentation - Thursday 12 October
ASHM Basic Science Attacking the Virus: Immunology of HIV and Related Infections
3.45pm – 4.00pm

MATTHEW KAYE

Matthew Kaye graduated from Monash University in 2000 with a first class Honours degree in Biochemistry and Molecular Biology. For the past four years he has been working as a medical scientist with the Viral Identification Lab at the Victorian Infectious Diseases Reference Laboratory where he has specialised in public health virology. At the beginning of this year Matthew was awarded an Australian Postgraduate Award to undertake his PhD studies. The focus of these studies will be primary HIV infection, with the aim of developing techniques and assays that will enhance current HIV surveillance and assessment capabilities.

Poster Presentation

PETER KELLEY

Peter is currently working as the Infectious Diseases/ Microbiology registrar at Flinders Medical Centre and is in his first year of joint Infectious Diseases/ Microbiology training. Peter completed his medical degree at the University of Melbourne in 2001 and then undertook his internship and basic physician training at Austin Health. Prior to studying medical Peter did a Bachelor or Science with Honours in Microbiology at Monash University.

Poster Presentation

KATE LEARMONTH

Kate completed her degree at the University of Melbourne, majoring in Immunology and Biochemistry in 2005. She will complete her honours degree at the National Serology Reference Laboratory, through the Department of Medicine at St Vincent's, The University of Melbourne. Kate's project looked at the accuracy of interpretation of simple/rapid HIV tests. She would like to do some volunteer work in high HIV incidence areas, working with adversely affected communities before backpacking around Europe and Asia.

Oral Presentation – Friday 13 October
Basic Science - New HIV Therapies and Low Cost Diagnostics
2.45pm – 3.00pm

ROSEMARIE MASON

Rosemarie Mason moved from Canada to Australia in February 2006 after completing a MSc in Immunology studying immunogenicity of drug-resistant HIV. She was keen to join Dr Stephen Kent's laboratory at the University of Melbourne in order to pursue research on vaccine-induced protective immunity against drug-resistant HIV and was awarded funding from the Canadian Institutes of Health Research to work with Dr Kent over the next three years. Rosemarie is currently working to develop a vaccine which can provide an 'immune barrier' against HIV drug resistance mutations and thereby prolong the utility of current antiretroviral drugs.

Oral Presentation - Thursday 12 October
ASHM Basic Science Attacking the Virus: Immunology of HIV and Related Infections
4.00pm–4.15pm

VAN THI THUY NGUYEN

After being awarded a Medical Doctor Degree in 1986 at the Thaibinh Medical University (TBMU) Vietnam, Van Thi Thuy Nguyen has been working as a lecturer in there. From 1994 to 1997, Van undertook a Masters Degree at the Hanoi Medical University and became a specialist in communicable diseases. After returning to TBMU, she was appointed Deputy Head of Department of Communicable Diseases and promoted to be senior lecturer. In 2001, Van became Deputy Head of Research Office at the university. Since 2004 Van has been undertaking a PhD in Public Health at the School of Public Health and Community Medicine, University of New South Wales.

Oral Presentation – Friday 13 October
Viral Hepatitis Epidemiology
2.15pm – 2.30pm

AILEEN OON

In 2005 Aileen Oon completed her Medical Science degree and an Honours year in the School of Biotechnology and Biomolecular Sciences at the University of New South Wales (UNSW). Her honours project was on the hepatitis C virus and she found honours to be a challenging but interesting introduction to scientific research and decided to start a PhD in 2006. Aileen continued on in the area of hepatitis C virus research and she is currently under the supervision of Dr Peter White at UNSW.

Oral Presentation - Thursday 12 October
ASHM Basic Science Attacking the Virus: Immunology of HIV and Related Infections
4.15pm – 4.30pm

KAARIN SMYTH

Kaarin started at the Burnet Institute in 2004, working on various projects investigating the mitochondrial toxicity of HIV treatments until 2006. Kaarin began an MBBS degree at the Australian National University in February 2006. She was pleased to expand her established research interest in HIV treatment toxicity to include an examination of antiretroviral toxic neuropathy (ATN) in the Alfred Hospital Infectious Diseases Clinic in July of this year.

Poster Presentation

UNDERGRADUATE AND JUNIOR RESEARCHER IN HIV AND VIRAL HEPATITIS AWARDS PROGRAM 2007

ASHM is making up to six (6) support awards available in 2007. 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 side of this flyer, and must be received in the ASHM Office, Locked Mail Bag 5057, DARLINGHURST NSW 1300 by COB 30 March 2007. Please attach your abstract and a photocopy of your most recent academic transcript.

THE GRANT WILL COMPRISE:

- Annual ASHM associate membership for 2007, valued at A$66
- Linkages between the student and ASHM members in the designated area of research interest
- Information placed on the ASHM website about their research project
- Participation in relevant ASHM Standing Committees
- Access to ASHM library and resources
- First option to take on part-time research assistant positions offered by the Society
- Registration at the International AIDS Society Conference 2007 (IAS2007), Sydney, or other relevant sectoral conferences valued at over A$500
- A scholarship for recipients requiring travel and/or accommodation to assist with attendance at a conference, to a value of A$400
- Successful applicants will be asked to submit an abstract for the IAS Conference in Sydney in July 2007, or other relevant sectoral conferences
- Publication of a short report on the research initiative in an edition of ASHMNews.

AWARD CATEGORIES AND APPLICATIONS:

Applications are invited from all relevant disciplines, with priority given to medicine, science, nursing, and allied health. Applications must relate to a degree, diploma or award program but are not available for post-doctoral programs. Applications can be received for new work or work in progress. Applications are open to residents of Australia and New Zealand.

Applications that reflect national research priorities as outlined in the National HIV/AIDS and Hepatitis C Strategies will be given priority. These can be found on the Commonwealth Health website at www.health.gov.au or via the ASHM website at www.ashm.org.au. Applicants must submit an abstract of no more than 350 words with their application.

ADJUDICATION:

The Committee will review the applications and successful applicants will be notified of the outcome of their application by 30 April 2007. Your supervisor may be contacted to attest to your suitability. You may also be required to provide more information but in the first instance please only complete the application following and submit an abstract. If you have not yet determined a supervisor you may use an academic mentor on this application.

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ORAL PRESENTATION ABSTRACTS

WEDNESDAY 11 OCTOBER 2006

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ASHM Opening Ceremony and Plenary 1 8.30am – 10.30am

BIOMEDICAL PREVENTION, PARTICULARLY CHEMOPROPHYLAXIS, AND TREATMENT ROLLOUT IN THE DEVELOPING WORLD

Joep, L
Professor of Internal Medicine at the Centre for Poverty-Related Communicable Diseases, Academic Medical Centre University of Amsterdam, The Netherlands

Due to increased political commitment on both a global and national level and to increased funding opportunities, over the past few years there has been a significant rise in uptake of antiretroviral therapy in resource-poor settings. The number of people receiving HAART in sub-Saharan Africa alone rose from 100,000 at the end of 2003 to 810,000 at the end of 2005. Although this signifies considerable progress, the situation is still very different from that in the developed world. In many developing countries the leading first line regimen is a fixed dose combination of stavudine/lamivudine/ nevirapine, which has a low threshold for development of viral drug resistance and has considerable long-term toxicity (peripheral neuropathy, lipoatrophy). Viable triple drug second line regimens are often not available. Moreover, most developing countries suffer from critical shortages of qualified health care workers. While it is understandable that in the light of the emergency response to the call to scale up antiretroviral therapy in resource-poor settings, drug regimens have not been chosen primarily with long-term treatment in mind, it is time to take a different view now. Especially in settings where in the foreseeable future drug options will still be limited, it is mandatory to make the right choices from the very beginning of treatment. An initial choice for the cheapest combination will come at a high cost later.

The financial response to the epidemic should also move beyond the emergency phase. Relying exclusively on donor money without setting up sustainable systems to finance health care in developing countries themselves will be a dangerous and foolish strategy and a squandered opportunity. The current political momentum for the antiretroviral scale up should be put to much greater use and serve to establish a solid health care sector in sub-Saharan Africa through the establishment of health insurance schemes for the masses.

SMART STUDY AND IMPLICATIONS

El-Sadr, W
Professor of Clinical Medicine and Epidemiology at Columbia University, College of Physicians and Surgeons and the Mailman School of Public Health

VIRUSES, VACCINES AND EMERGING THREATS TO HUMAN HEALTH

Nabel, G.J
Vaccine Research Center, National Institute of Allergy and Infectious Diseases, National Institutes of Health

The threats of natural disease outbreaks and of bioterrorism have highlighted the need for effective vaccines to protect public health. Many of the infectious agents identified as potential threats have a high potential human health impact but presently do not affect a large percentage of the population. For this reason, early detection and vaccination are critical to minimize adverse effects. Rational vaccine development is predicated on understanding the mechanisms by which viruses cause disease and integration of this information into a system which optimizes the immune response. Ebola virus infection represents an emerging infectious disease and potential microbial threat whose molecular pathogenesis is poorly understood. Through the use of genetic immunization, either a DNA prime followed by an adenoviral boost or accelerated immunization using adenovirus alone, immunity to Ebola virus has been established and used to study the immune basis for protection. These studies in non-human primates inform human vaccine design. Translation from basic research into a successful vaccine requires many steps and potential utilization of the animal rule as a licensure strategy. The application of rational vaccine design to prevention and control of diverse infectious disease agents such as HIV, WNV, influenza, and SARS will be discussed.

Sexual Health Plenary: Challenges in the Clinic
9.00am – 10.30am

AN UPDATE ON THE ETIOLOGY AND TREATMENT OF BACTERIAL VAGINOSIS

Hillier S
Professor, Obstetrics, Gynecology and Reproductive Sciences and of Molecular Genetics and Biochemistry, University of Pittsburgh School of Medicine

EPIDEMIOLOGY OF HPV - IMPORTANT CLINICAL QUESTIONS

Koutsky L
Professor, Department of Epidemiology, University of Washington, Seattle, USA

PARTNER NOTIFICATION

Low N
University of Bern, Switzerland

Partner notification is widely agreed to be an essential part of the clinical management and population control of sexually transmitted infections. WHO defines partner notification as the process of informing the sex partners of people with sexually transmitted infections of their potential exposure to infection, ensuring their evaluation and/or treatment, and providing advice about preventing future infection. In practice, it is more difficult to agree on the essential components of partner notification, who can and should do partner notification, and where it should be done.

The achievements of partner notification are fairly modest. For gonorrhoea and chlamydia, partner notification by patient referral, carried out by sexual health advisers in the UK, treats about 0.5 sexual partners per index case, and US data suggest that about half of these will be infected. There is no empirical evidence to show that partner notification reduces the transmission of any sexually transmitted infection. Patient-delivered partner therapy to expedite treatment and reduce the duration of infection is the only method that has been shown to prevent re-infection in the index case, because these are the largest trials. Even so, the absolute reduction in risk of re-infection with gonorrhoea or chlamydia is about 5%, and treating partners without a clinical assessment is illegal in some countries. I will use this presentation to discuss the potentials and pitfalls of partner notification from a global perspective.

Joint Plenary: Revisiting Prevention 11.00am – 12.30pm

IMPACTS OF CONSERVATISM ON HEALTH PROMOTION IN GENERAL AND HIV, STI PREVENTION

Nutland WR[1]
[1]Terrence Higgins Trust, London, UK

Over the last five years, the impact of increasing conservatism has been observed on HIV and STI health promotion, particularly on that targeting gay men and other men who have sex with men. This has manifested itself in the withdrawal of state funding for health promotion programs, threats of cessation of future funding and censorship of program materials.

As community organisations rely increasingly on non-governmental sources of funding, including corporate sponsorship, conditions set by funders and conservatism within corporate boardrooms impact further on the content and scope of HIV and STI health promotion.

Using examples from Europe, North America and Australia, the paper demonstrates the challenges for future HIV and STI health promotion within a climate of increasing conservatism and highlights community interventions that attempt to 'take back' gay health to its roots.

ROLE OF HSV SUPPRESSION IN HIV PREVENTION

Celum C
Associate Professor, Division of Allergy and Infectious Diseases, School of Medicine, University of Washington, Seattle, USA

Increasing evidence demonstrates a substantial link between the epidemics of sexually transmitted HIV-1 and HSV -2 infection. Over 18 prospective studies have demonstrated that prevalent HSV-2 is associated with increasing the overall risk of HIV-1 acquisition up to 3-fold fold. Per-sexual contact transmission rates among couples from Rakai, Uganda indicate that at all levels of plasma HIV-1 RNA in the source partner, HSV-2 seropositive HIV-1 susceptible persons have a 5-fold greater risk of acquiring HIV-1 compared with HSV-2 negative persons. *In vitro* and *in vivo* studies suggest mucosal HIV-1 shedding is more frequent and in greater amounts during mucocutaneous HSV-2 replication, including subclinical mucosal reactivations. Most HIV-1 infected persons are co-infected with HSV-2 most of whom experience frequent subclinical and clinical reactivations of HSV-2. Subclinical HSV reactivation elevates systemic and genital HIV-1 RNA levels and daily suppressive HSV-2 therapy reduces plasma HIV-1 RNA by 0.6 $\log_{10}$. These data show that greater attention to the diagnosis and treatment of HSV-2 among HIV-1 infected persons is warranted, especially those who continue to be sexually active, those not on antiretroviral therapy, or not well suppressed by antiretrovirals. Ongoing proof-of-concept trials employing acyclovir are assessing whether it is possible to prevent HIV acquisition among HIV susceptible persons with HSV-2 infection and HIV transmission in HIV-discordant couples which will directly test the hypotheses that indicate HSV-2 increases susceptibility to and infectiousness of HIV.

ASHM Concurrent Session - ACH2 Basic Science; Translational Research 1
11.00am – 12.30pm

POTENTIAL DIAGNOSTIC AND PROGNOSTIC VALUE OF NEW TESTS FOR HEPATITIS C VIRUS-SPECIFIC IGM

Anderson, D.[1] Diaz, J[1] Garcia, M.[1], Howard, T[1], Ffrench, R.[1], Torresi, J[2]
[1]Macfarlane Burnet Institute for Medical Research and Public Health, Commercial Rd. Melbourne, 3004 and Select Vaccines Lt.
[2]Department of Medicine, Royal Melbourne Hospital

Introduction: The clinical management of chronic HCV infection has improved markedly over the past several years with the availability of more effective drug combinations. Individual viral genotypes give a population-based estimate of likely response rates, however there is an unmet need for minimally invasive prognostic markers that can be used to predict response to therapy. The Australian Trial for Acute Hepatitis C (ATAHC) is investigating the treatment of HCV infected individuals early in the course of infection. In the absence of specific tests for acute infection, the classification of recent infection with HCV relies on a positive HCV antibody test in the last 6 months and negative antibody test within the last 2 years. This is impractical for wider patient management, and there is thus an unmet need for assays that can discriminate between acute or recent HCV infections and established or chronic infections. This study was undertaken to evaluate a novel HCV IgM ELISA developed by the authors, versus conventional or modified serological assays and a newly available HCV IgM ELISA (Cortez). Assays were evaluated for (1) their ability to discriminate between recent and chronic HCV infection, and (2) their potential prognostic value for predicting response to therapy in chronic HCV infections.

Methods: Sera from three groups of HCV positive patients representing acute, recent or chronic infections were used to assess the IgM capture ELISA developed in-house. Samples included HCV antibody seroconversion panels representing acute infections (Boston Biomedica Inc.) (n=4), ATAHC patients sera/plasma (n=39) representing recent infections, and sera from Royal Melbourne Hospital (RMH) (n=56) representing chronic infections with interval samples collected during treatment. Samples were tested using the In-house capture ELISA and the results compared with those from 2 commercially available indirect ELISA assays (ORTHO ELISA 3.0 modified for IgM, and Cortez HCV IgM, Diagnostic Automation).

Results
1. For the acute sample group, the Cortez HCV ELISA detected IgM antibody in 4 of 4 seroconversion panels, whereas the IgM capture detected 3 of 4.
2. For recent infections, the IgM capture assay was able to detect IgM in 31/39 (79%) of patients and the Cortez IgM, 25/39 (64%), whereas all patients were strongly reactive in the modified ORTHO assay. Positive sample ODs were lower however in the capture IgM assay than the Cortez assay.
3. For the chronic sample group, the IgM capture assay was able to detect IgM antibody in 43/56 samples (77%). The Cortez IgM detected 49/56 (88%). ODs were again higher in the Cortez test than the capture ELISA. The ORTHO modified for IgM was highly reactive in nearly all the patients.

Discussion: Both the Cortez HCV IgM and capture IgM can detect the rise in HCV IgM during HCV antibody seroconversion. This suggests that both assays may have utility in identifying acute or recent HCV infections. The Cortez IgM ELISA also demonstrated a decrease in HCV IgM levels when tested with interval samples collected during patient treatment, which was not evident with the ORTHO modified ELISA and was inconsistent with the capture ELISA. The dynamics of IgM responses and assay characteristics will be discussed.

NOVEL DRUG RESISTANCE MUTATION IN THE HIV-1 REVERSE TRANSCRIPTASE CONNECTION SUBDOMAIN

Tachedjian,G[1,,5, 6] Yap, SH[1,2], Wynhoven, B[2], Kuiper. M[3], Sluis-Cremer, N[5], Harrigan R P[2],
[1]Molecular Interactions Group, Burnet Institute, Melbourne, VIC, Australia; [2]British Columbia Centre for Excellence in HIV/AIDS, Vancouver, BC, Canada; [3]Victorian Partnership for Advanced Computing, Melbourne, VIC, Australia; [4]Department of Medicine, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA; [5]Department of Microbiology, Monash University, Clayton, VIC, Australia; [6]Department of Medicine, Monash University, Prahran, VIC, Australia.

Introduction: The N348I mutation in the human immunodeficiency virus type 1 (HIV-1) reverse transcriptase (RT) is significantly more prevalent in antiretroviral therapy experienced (>12%) compared to antiretroviral therapy naïve (<1%) patients ($p<<0.01$). Only 8 recognised RT drug-resistance mutations were more prevalent than N348I. N348I was also observed to be associated with recognised resistance mutations against zidovudine (AZT), lamivudine (3TC), efavirenz (EFV) and nevirapine (NVP). Although the interpretation of HIV-1 RT genotyping assays is commonly limited to the first 240 codons, we hypothesise that mutations beyond codon 240 also affect HIV-1 drug susceptibility. Specifically, we hypothesise that N348I confers/potentiates resistance against AZT, EFV and NVP and overcomes the suppression of phenotypic AZT resistance by the M184V mutation that confers 3TC resistance.

Methods: Molecular HIV-1 clones with N348I alone or in the context of recognised resistance mutations in the NL4.3 background were constructed and tested in phenotypic drug susceptibility assays by infecting TZM-bl HIV-1 indicator cells and measuring β-galactosidase activity.

Results: The presence of N348I alone in otherwise wild-type NL4.3 conferred a 2-fold resistance against AZT; while a 2 to 4-fold enhancement of AZT resistance was observed when N348I was present in the context of AZT-resistance mutations M41L and T215Y. Although N348I did not appear to affect 3TC susceptibility, our preliminary data suggest that N348I may alleviate the suppressive effect of the 3TC-resistance mutation, M184V, on phenotypic AZT resistance conferred by M41L and T215Y. The effect of N348I on EFV and NVP susceptibilities are currently being investigated.

Discussion: Classical thymidine analogue mutations (TAMS) including M41L, K70R and T215Y represent primary drug resistance mutations that confer 4, 8 and 16-fold resistance to AZT, respectively. Accumulation of these mutations along with the secondary drug resistance mutations D67N, L210W and K219Q, which do not confer resistance alone but potentiate AZT resistance in the presence of the primary TAMS, result in the generation of high-level resistance to AZT. As N348I also confers AZT resistance by itself, it represents a novel primary drug resistance mutation. Similar to classical TAMS, N348I also potentiates AZT resistance. These results demonstrate that a mutation in the RT connection subdomain can have an important role in conferring decreased drug susceptibility. These results also indicate that limiting the interpretation of HIV-1 RT genotyping assays to codon 240 may be inadequate for accurate prediction of drug susceptibility to antiretroviral drugs.

NOVEL HIV-1 GLYCOPROTEIN VACCINE BASED ON A FROZEN FUSION INTERMEDIATE

Poumbourios, A[1,2], Wood, S[1], Maerz, A L[1], Center, R J[3] and Drummer, H E[1,2,3].
[1]Macfarlane Burnet Institute for Medical research and Public Health
[2]Department of Microbiology, Monash University
[3]Department of Microbiology and Immunology, The University of Melbourne

The HIV-1 gp120-gp41 glycoproteins form a trimer of heterodimers with gp120 mediating attachment to CD4 and chemokine receptors and gp41 catalysing membrane fusion. gp120-gp41 are the sole targets for neutralizing antibodies (NAbs), however, *env* is the most variable viral gene. Such variation is associated with immune evasion. Additional NAb evasion mechanisms include a glycan coat, which prevents NAb access to underlying polypeptide, and kinetic and steric constraints, which do not favour the elicitation of NAbs to conserved transient conformations associated with receptor binding and membrane fusion. The design of gp120-gp41 immunogens that elicit broadly reactive NAbs is therefore a major goal of the international vaccine research effort.
The aim of this project is to induce and trap a fusion-intermediate conformation of gp120-gp41 for vaccination studies. We reason that a frozen fusion intermediate will sustain the exposure of conserved neutralization epitopes that are otherwise only transiently expressed during the fusion cascade. Recently, we proposed that interactions between the conserved disulfide-bonded region of gp41 and the C1 and C5 regions of gp120 form a synapse for transmission of the fusion activation signal. Based on the influenza virus HA2 precedent, we hypothesized that this interaction maintains gp120-gp41 in a prefusion state and that its destabilization will promote the fusogenicity of gp120-gp41. In support of this notion, a mutation in the disulfide-bonded region of gp41 promoted gp120 shedding and conferred greater fusogenicity to a primary HIV-1 strain at limiting CXCR4 coreceptor concentrations. Furthermore, the mutation conferred greater sensitivity to the inhibitory C-helix analogue, C34, which targets the gp41 coiled coil in a fusion-intermediate conformation. These data suggest that the mutation destabilizes the gp120-gp41 complex, promoting the formation of gp120-gp41 fusion intermediates. gp120-gp41 can be trapped in a prefusion conformation by introduction of an inter-gp120-gp41 disulfide. We have engineered this disulfide in a soluble form of gp120-gp41, Env_{SS}, aiming to freeze the fusion intermediate state. SDS-PAGE of Env_{ss} reveals quantitative inter-gp120-gp41 disulfide formation, with minimal contamination by monomeric gp120 and uncleaved precursor gp140. These latter forms generally elicit non-neutralizing antibodies or NAbs with narrow neutralization specificities. The antigenicity and immunogenicity of wild type and mutated Env_{ss} is being characterised.

RAPID ASSAYS THAT MEASURE HIV-1 INACTIVATION BY NEUTRALISING AND NON-NEUTRALISING ANTIBODIES

Damian Purcell[1], Shahan Campbell[1], Annett Schöenberner[1], Adam Wheatley[1], Jane Howard[1], Anthony Kelleher[2], Bruce Loveland[3], and Robert Center[1]

[1]Department of Microbiology and Immunology, The University of Melbourne, Parkville, VIC.
[2]National Centre for HIV Epidemiology and Clinical Research, Centre for Immunology, Darlinghurst, NSW.
[3]Austin Research Institute, Heidelberg, VIC.

Background: Neutralising antibodies (NAbs) to HIV-1 inhibit infection by physically blocking the interaction of surface envelope proteins with target cell receptors or by preventing viral fusion. However, non-neutralising antibodies (non-NAbs) against HIV predominate after vaccination or infection. The value of non-NAbs in preventing infection by opsonisation, antibody-directed cell-mediated cytotoxicity (ADCC) and activation of the complement (C′) cascade leading to lysis of virions or infected cells warrants further investigation as primary transmitting HIV-1 strains and plasma HIV-1 are sensitive to C′-mediated lysis.

Methods: In concert with our effort to identify and deliver HIV envelope immunogens that elicit a strong NAb response in small animal models, we have developed a pseudoviral, enhanced green fluorescent protein (EGFP) reporter-based NAb assay. A panel of pseudoviruses were generated by co-transfection of an *env*-deleted proviral DNA with the *egfp* gene fused into the *nef* frame and exchangeable viral envelope protein expression vectors. Pseudovirus infection of target cells generated EGFP that was quantified by FACS analysis.
Results: We used pseudovirus to measure susceptibility to C′ and mimic plasma-derived virus for the detection of non-neutralising, yet virus-inactivating, antibodies. We incorporated a source of active human C′ to trigger C′-mediated virus neutralisation. We also inactivated pseudovirion-associated complement inhibitory proteins (CIPs) by various means, such as phospholipase C treatment to remove the CIPs, CD55 and CD59. Upon disablement of the C′ inhibitory activity of CD55 by antibody, we observed virus neutralisation, whereas an alternate CD55-specific antibody that does not inhibit CD55 activity, unexpectedly, led to an enhancement of virus infection. We also observed enhancement of infection contributed by non-C′ serum factor(s).
Conclusions: Assays using pseudovirus-reporters demonstrated both beneficial and undesirable effects of non-NAbs, such as enhancement of infection. Our data highlights the importance of the alternate protective functions of antibodies, especially in light of the extreme difficulty in eliciting useful neutralising antibody responses with current experimental vaccines. We are currently investigating the evolution of these antibody activities during acute HIV-1 infection.

HIV-1 TRANSMISSION AND VIRAL FITNESS

Alicia Arnott,[1,2,3,5] Darren Jardine,[1] Paul Gorry,[2,3] Kate Merlin,[4] Pat Grey,[4] Anthony Kelleher,[4] Don Smith,[4] Elizabeth Dax, [1,6] , Dale McPhee,[1,2,5,6] and the Pulse Study Team.

[1]National Serology Reference Laboratory, Australia; Fitzroy, Australia

[2]Department of Microbiology, Monash University, Clayton, Victoria, Australia

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[5]National Centre in Hepatitis and HIV Virology Research, Australia

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Understanding differing humoral immune responses to individual HIV strains may allow novel interventions with drugs or protective antibody. Destruction of immune responses by HIV is a hallmark of disease progression. Viral attenuation or reduced fitness may affect this process dramatically. Our preliminary findings suggest that individual infecting viruses have different degrees of viral fitness. Viral fitness is defined as the replicative adaptation of a virus to the environment. Fitness relates to the capacity of the virus to replicate in a given setting, its capability to be transmitted to a new host, and its ability to cause disease (replication, transmission and virulence or pathogenicity, respectively). This study will potentially provide more definitive information on relative fitness of HIV-1 viral strains transmitted initially to a new host.

A real time PCR based assay system is being developed and validated to provide quantification of the time to virus reverse transcription, integration and relative amounts of viral DNA produced ex vivo as a measure of viral fitness. Comparison of viral fitness with clinically relevant parameters for primary virus infection will then be possible. To assess virus neutralization for these primary strains blocking of autologous virus infection in a single round assay using TZM-bl cells will also be assessed. Primary viral isolates can be used to measure collectively virus binding, viral entry and early steps in viral replication. The success of neutralizing antibodies to block infection of patient's virus isolates from both contemporaneous and non-contemporaneous plasma samples as well as reference antibodies will provide a measure of the success in blocking infection.

The use of this novel real-time PCR assay will provide the opportunity to compare multiple parameters of viral replication for HIV-1 isolates taken in acute infection. The parameters are readily quantified for efficient cross-comparison which has not been possible previously. Collectively, these will provide a measure of relative viral fitness. Correlation with other replication parameters can then be assessed. Overall this will deliver an efficient and accurate measure of viral fitness from diverse HIV-1 isolates in early infection.

ASHM Concurrent Session - ACH² Basic Science; Translational Research 2
1.30pm -3.00pm

DETECTION OF INTRAHEPATIC VIRUS-SPECIFIC T-CELLS IN MARMOSETS WITH RESOLVED GBV-B INFECTION

Woollard, D.J., Haqshenas, G., Dong, X., Gowans, E.J.
The Burnet Institute, Hepatitis C Research Unit, Melbourne, Australia, 3004

Introduction: One of the major problems in developing a vaccine against hepatitis C virus (HCV) is the lack of a convenient small animal model to test efficacy. A potential small animal model for studying HCV immunity is the common marmoset. Unlike chimpanzees, marmosets are not endangered, are relatively inexpensive and are susceptible to infection with GB virus-B (GBV-B). GBV-B is also a member of the Flaviviridae family and is the most closely related virus to HCV. The virus infects marmosets and tamarins and typically causes an acute infection that is resolved, but can cause persistent viremia in some animals. There are currently no established assays to measure cell mediated immunity following GBV-B infection of marmosets.

Methods: Two marmosets were experimentally infected with RNA transcripts encoding GBV-B by intrahepatic injection. Serum samples were isolated at multiple time-points post-infection and analysed for GBV-B RNA by RT-PCR and anti-GBV-B core antibody by ELISA. Marmosets were sacrificed several months after infection and liver infiltrating lymphocytes (LILs) were collected and analysed for GBV-B-specific T-cell responses by IFN-☒ ELISPOT assay. GBV-B antigens were prepared as overlapping peptide pools encompassing GBV-B core, NS3, NS4a and NS5b.

Results: GBV-B RNA was detected in both marmosets at week 1 post-infection and reached a peak viral titre at week 3 post-infection (1.6×10^7 and 5×10^7 copies/ml). GBV-B viral load was rapidly reduced thereafter and was undetectable at week 8 before rebounding transiently again at week 10. Antibody responses against GBV-B core were detected in serum at weeks 4, 8 and 12 post-infection. Virus-specific T-cell responses were detected at week 16 post-infection in LILs by IFN-☒ ELISPOT assay. The T-cell responses were measured against peptide pools spanning GBV-B NS3 (1036-1337aa; 420 and 4920 SFC/10^6 LILs), NS3/NS4a (1328-1721aa; 1220 and 2640 SFC/10^6 LILs) and NS5b (2435-3011aa; 900 and 2060 SFC/10^6 LILs). No responses were detected against GBV-B core. IFN-☒ ELISPOT responses against GBV-B NS3/NS4a were also measured in peripheral blood mononuclear cells (PBMC) of a marmoset that also resolved GBV-B infection, but were lower in magnitude (275 SFC/10^6 PBMC) compared to the responses in the liver.

Discussion: These data demonstrate that GBV-B-specific T-cell responses targeting multiple regions of the virus are present in the liver of marmosets that have resolved infection and suggest that these responses may be important in viral clearance. These results highlight the potential use of the GBV-B/marmoset model as an animal model to investigate virus-specific immune responses and to test HCV vaccine candidates.

SENSITIVE DETECTION OF HIV-1 K103N MUTATION FROM TREATMENT NAÏVE PATIENTS

Wang B[1], Kol C[1],Chew J[2], Joshi H[1], Steain M[1], Cunningham T[1], Dwyer D[2], ZhongPing He[3], and Saksena N[1]
[1] Retroviral Genetics Laboratory, Center for Virus Research, Westmead Millennium Institute; [2] CIDMs, ICPMR, Westmead Hospital, NSW, Australia; [3] Centre of Clinical Laboratory, You An Hospital, Beijing, China.

Introduction: Resistance to antiretroviral therapy, even in patients who have never received treatment (primary resistance), is a growing concern. The clinically important consequences of primary resistance are a longer time to virologic suppression and a higher risk of treatment failure. Genotype-resistance testing can help identify effective antiretroviral regimens and has been incorporated into clinical treatment guidelines. However, the limitation in testing sensitivity, especially in the detection of low-level resistance population by sequencing based genotypic testing, may underestimate the presence of resistance particularly in treatment naïve patients carrying low-level resistance.

Method: In this study, we carried out genotypic resistance study on 59 HIV-1 infected treatment naïve patient from Beijing, China. Standard genotyping testing was performed to verify the presence of drug resistance mutation in HIV-1 protease and RT region. In addition, the allele-specific PCR and Rolling Circle Amplification (RCA) technologies were developed to achieve sensitive detection of K103N mutation at low-level.

Results: 25% (15/59) of these patients were infected with HIV-1 strains carrying primary resistance mutations according to standard genotypic resistance testing. Among these patient, large majority of viral strains were resistant to NNRTI (12/15) and 103N mutation were the most predominant resistant mutation observed (10/12). By using the highly sensitive allele-specific PCR and the novel technology rolling-circle amplification (RCA), we observed the significant increasing number of patient (50% increase) harboring low-level 103N variants. Both technologies are capable in detection the presence 0.1% of resistant viral variants and suitable for large-scale screening.

Discussion: The proof of concept has been developed that assay systems, such as RCA, can be successfully designed to detect single HIV-1 resistance mutations. This provides us with a platform to work for other resistance mutations of relevance and use RCA technology for this purpose and also for a wide array of diagnostic applications. In case of HIV, our sensitive testing technologies revealed higher rates of mutations that exist in minority viral populations, and by achieving sensitive detection would improve therapeutic choices. The significant increase in the prevalence of K103N mutation in drug naïve patients suggest that baseline resistance testing should be performed before treatment.

NOVEL INHIBITORS TARGETING VIRAL FUSION OF HCV

Dean J[1], Poumbourios P[1,2], Drummer H E[1,2,3].
[1]Macfarlane Burnet Institute for Medical Research and Public Health, Melbourne;
[2]Department of Microbiology, Monash University, Melbourne.
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Introduction. The HCV envelope glycoproteins E1 and E2 form a non-covalently associated heterodimer that mediates viral attachment and entry. Glycoprotein E2 comprises a receptor binding domain (residues 384-661) that mediates attachment to cellular receptors CD81 and SR-B1 and other as yet unidentified molecules. Anchoring the glycoprotein to the viral or cellular membrane is the transmembrane domain (residues 716-746). The region between the RBD and TMD contains a conserved hydrophobic heptad repeat sequence (residues 675-699) that we have shown functions in heterodimerzation with E1 and is also essential for viral entry (Drummer and Poumbourios, 2004, JBC, v279, p30066). The sequence, location and function of this region is analogous to that of the stem region of class II fusion proteins such as the phylogenetically related dengue virus glycoprotein E. We therefore hypothesise that HCV uses a class II mechanism of fusion. It is predicted that the stem region of class II fusion proteins packs onto the outside of the fusion activated trimeric structure providing stability and allowing the apposition of fusion loop and TMD in the final post-fusion conformation. The C-helix of the HIV-1 fusion protein gp41 also packs onto the outside of the trimeric coiled-coil and it has been shown that inhibitors comprising the C-helix of HIV-1 block viral fusion. Fusion inhibitors for HIV-1 are now in clinical use (Fuzeon, Enfurvitide) and have been shown to lower viral loads by at least 0.5log in HIV-1 infected patients. Using this information, we have now developed an inhibitor of HCV fusion based on the HCV stem region. This paper describes the development and specificity of this new class of antiviral agents targeting HCV fusion.
Methods. Pseudotyped virions were produced in 293T cells cotransfected with vectors encoding E1E2 from genotypes 1a, 1b and 2a, pHEF-VSVg, MLV env, HIV-1 env or empty vector and the HIV-1 luciferase reporter plasmid, pNL43lucR-E. Virus and peptide was applied to Huh7 cells and infection quantitated by measuring luciferase activity 3 days later.
Results. Synthetic peptides representing the HCV stem region were shown to inhibit the entry of E1E2 pseudotyped viruses from genotypes 1a, 1b and 2a but not pseudotyped virions containing glycoproteins from unrelated viruses VSVg, HIV-1 *env* or MLV-*env*. Inhibition was observed at 30 micromolar and no toxicity was apparent at this concentration. We are now examining the ability of this peptide to inhibit replication of cell culture grown HCV.
Discussion. Peptides representing the HCV E2 stem region are capable of inhibiting the entry of HCV pseudotyped viruses and display broad reactivity. We plan to optimise the sequence and delivery of the peptide in future studies.

INHIBITION OF RETROVIRUS RELEASE BY A LATE DOMAIN PEPTIDE

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Introduction: Budding and release of HIV-1 progeny virions is promoted by a specific interaction between the Pro-Thr-Ala-Pro (PTAP) motif located within the p6 domain of Gag and the cellular endosomal sorting factor Tsg101. Mutation of the PTAP motif results in severe defects in virion release. Similarly, depletion of Tsg101 or overexpression of full-length or truncated forms of the protein potently interfere with HIV-1 particle budding. Disruption of the PTAP/Tsg101 interaction thus constitutes a potential strategy for developing inhibitory molecules that disrupt HIV-1 budding.
Methods: In this study, we have designed 14-amino-acid (KRPE**PTAP**PEESKR) FITC and/or rhodamine-conjugated peptides and examined their ability to inhibit virion release in cell lines (293T) and in primary monocyte-derived macrophages (MDM) and primary $CD4^+$ T cells using immunoprecipitation, infectivity assays, immunofluorescence and electron microscopy. A scrambled version of the PTAP peptide is used as a negative control.
Results: Our data show efficient delivery of the FITC- and rhodamine-conjugated peptides into 293T cells, MDMs, and $CD4^+$ T cells within 4 hours, with a peptide half-life of ~72 hrs. Treatment of HIV-1-infected MDMs with the PTAP peptide at a concentration 0.1 g/ml significantly inhibits HIV-1 replication, while the same amount of peptide did not affect replication in $CD4^+$ T cells. Our radioimmunolabeling assays in 293T cells transfected with an EIAV/PTAP chimera showed a concentration dependent inhibitory effect of 10-100ug/ml peptide on virion release. Furthermore, the release of wild type EIAV/Gag was not affected by the treatment with the PTAP peptide. Treatement of AD8 transfected 293T with the PTAP peptide resulted in a modest inhibitory effect in p24 levels. However, electron microscopy demonstrated a defect in pNL4-3-transfected 293T cells treated with the PTAP peptide that is reminiscent of that observed upon overexpression of an N-terminal Tsg101 fragment (TSG-5') or deletion of the PTAP motif.
Discussion: We have used a novel approach (specific L domain peptides) as a tool to further understand the mechanism of L domain host protein interactions in different cell types and have explored the potential use of L domain peptides as "budding inhibitor". Although the inhibitory effect described here is lesser than that achieved via the deletion of the PTAP motif in wild type HIV-1 or overexpression of TSG101 and its derivatives, we demonstrate that small molecules that display features of the L domain motifs in retroviruses, such as the PTAP-containing peptides, may provide a starting point for the development of HIV-1 budding inhibitors.

ISOLATED HIV -1 VIRION COREA ARE ACTIVE FOR REVERSE TRANSCRIPTION

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Introduction: Our aim is to elucidate early reverse transcription complex (RTC) formation. Previous experiments had demonstrated that intravirion the second-strand transfer step of reverse transcription was less efficient than in cells (approximately 1% and 40%, respectively) suggesting a requirement for a cell factor for efficient reverse transcription, possibly for uncoating. To explore this idea further, we wished to isolate active cores to develop an *in vitro* reconstitution system of early complex formation.

Materials and methods: To remove the viral envelope, Triton X-100 was added to virions and the effect on virion integrity determined. To purify core-like fractions, virion preparations were subjected to equilibrium density gradient centrifugation. The endogenous reverse transcriptase activity (ERT) of the fractions was determined using quantitative polymerase chain reaction (qPCR) and SYBR green chemistry.

Results: When adding detergent to remove the viral envelope, it was found that intravirion endogenous reverse transcriptase (ERT) activity was optimal with addition of 0.006% v/v (0.1 mM) Triton X-100, but the envelope remained intact at this concentration. However, increasing Triton X-100 concentration to 0.03% resulted in loss of authentic ERT activity and the release of capsid from the virion. As an alternative we used a modified "spin-thru" method which is commonly used to isolate cores. This method, which sediments particles through a 0.03% (0.5 mM) Triton X-100 layer, also disrupted virion, core and ERT activity without loss of reverse transcriptase enzymatic activity. Fortuitously, a dense core-like fraction (peak buoyant density 1.26-9 g/ml) prepared without detergent, possibly derived from disrupted virions, was found to naturally occur as a minor sub-fraction in our preparations. Core-like particles were identified in this active fraction by electron microscopy. We report the detection of authentic strong-stop, first-strand transfer and full-length minus strand products in this core-like fraction, indicating that cores are capable of authentic reverse transcription.

Discussion: The disruption of ERT activity in cores by mild detergent treatment suggests that reverse transcription may initially require an intact core structure, as also suggested by previous fluorescent microscopy and genetic data. On the basis of these results, *in vitro* trans-complementation with Jurkat lysates have been initiated.

LEVELS OF INTEGRATED AND TOTAL CELLULAR HIV DNA IN CIRCULATING PBMC ARE NOT ASSOCIATED WITH PLASMA VIRAL LOAD, CD4 COUNTS OR DURATION OF SUPPRESSIVE ANTI-RETROVIRAL THERAPY

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Introduction. Patient HIV infection is managed by monitoring CD4 counts and plasma viral load (pVL). With successful antiretroviral therapy pVL can be reduced to undetectable levels. However, replication competent virus and cell associated viral DNA can still be detected in the circulation and viral rebound occurs on cessation of therapy, suggesting the presence of circulating HIV reservoirs despite undetectable pVL. Monitoring the circulating HIV DNA reservoir may provide additional information on HIV replication and disease progression in patients with undetectable pVL.

Methods. Samples were collected with informed consent from specimens presenting to the Serology Unit of IDL, IMVS for routine pVL quantification. Plasma was removed for pVL determination and total PBMCs were extracted from the buffy coat layer. Total DNA was extracted (Qiagen DNeasy Kit) from $2x10^6$ PBMC and normalised for β-globin by real time PCR. We adapted our previously published Alu-PCR to specifically detect integrated HIV DNA forms (integrated viral load, iVL, Vandegraaf *et al*., 2001 *JVirol* **75:** 11253) and PCR for the HIV LTR to detect total cell associated HIV DNA (cVL) to a real time PCR format. Reactions were performed on 50,000 and 10,000 cell equivalents, respectively with standards derived from a mix of 3 chronically infected cell lines (ACH2, H3B, 8E5), diluted in 50,000 or 10,000 cell equivalents of uninfected HUT-78 DNA. Alu- PCR controls and internal references were run in each assay. Assay co-efficients of variation were 30.4 ± 8% and 21 ± 5.8 (inter) and 6.8 ± 1.7 and 19 ± 3.9 (intra) for iVL and cVL respectively.

Results. In a cohort of 5 patients, measurements of iVL and cVL in CD4+ cells (positively isolated by magnetic beads) were not reflective of those quantitated in PBMCs and thus further analysis was performed on PBMCs. In a cohort of 46 patients with broad pVL values, total cVL was quantitated in most samples but iVL was quantitated in only 47.8%, with 26% undetectable and 21.7% of samples invalid due in the latter case to high levels of unintegrated HIV DNA. There was no correlation between cVL or iVL with pVL, CD4 count or duration of viral suppression (up to 5 yrs). However, the ratio of cVL:iVL tended to be higher in patients with CD4<350, pVL<400 and longer times of undetectable pVL. Analysis of 9 patients with long term undetectable pVL at quarterly intervals showed no consistent decline in cVL or iVL with time and changes in cVL and iVL within a patient could be concordant or discordant.

Conclusion. These results show that cVL and iVL can be co-ordinately quantitated in PBMC from clinical patient samples with circulating viremia or undetecable pVL. Although measurements do no correlate with current clinical parameters, in patients with undetectable pVL, changes in cVL, iVL or the ratio of cVL:iVL could reflect changes in the replicative capacity of HIV reservoirs.

This work was supported by funding from the Australian Centre for HIV and Hepatitis Virology Research (ACH^2).

ASHM Social Research – Thinking Big
1.30pm – 3.00pm

HELPING OR HINDERING PUBLIC HEALTH? LAWS, REGULATIONS AND GUIDELINES RELATING TO HEPATITIS C

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The development of healthy public policy is a key element of national responses to the human immunodeficiency virus (HIV) and hepatitis C. One aspect of policy which has avoided scrutiny for many years in Australia is the role of legislation in reducing the transmission of blood borne diseases (BBVs) such as HIV and hepatitis C.

The law is often invoked to strengthen public health strategies where risks to the public are perceived to be high. The transmission of HIV in the mid 1980s saw increased interest in all Australian jurisdictions in ensuring that legislation supported HIV prevention strategies.

Laws, regulations and guidelines have been specifically developed to reduce BBVs. Strategies associated with preventing hepatitis C transmission (e.g. needle and syringe programs) and with practices associated with risk behaviour (injecting drugs, tattooing and body piercing) are regulated by local government, states/territories and by the Commonwealth. These regulations are many and diverse, encompassing criminal and civil law; health acts; standards of care; codes of conduct and legal agreements between government and professional bodies.

Legislation making the distribution of needles and syringe lawful in Australia was first adopted with an amendment to the Drugs Misuse and Trafficking Act 1985 in New South Wales. Other jurisdictions followed and these amendments still form the legislative basis for the program.

This study identifies and analyses all relevant regulations pertaining to hepatitis C in three areas: 1) tattooing and body piercing, 2) needle and syringe programs, and 3) high risk practices within prison. Our analysis has demonstrated a number of areas of significant mismatch across Australia with disparities existing between jurisdictions in some areas.

Areas of current controversy will be highlighted. Discussion will centre on the role of needle syringe programs which operate within a context where, while the distribution of needles and syringes is lawful, both the self-administration and possession of drugs is mostly not. The issue of whether the health of the injecting drug user community is adequately protected and promoted within the current legislative framework will be discussed.

EVALUATION OF COMMUNITY ATTITUDES TOWARDS THE SYDNEY MEDICALLY SUPERVISED INJECTING CENTRE

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The Sydney MSIC, which was established in 2001, aims to address public health and amenity issues related to street-based injecting drug use in the Kings Cross area. This study examines community support over time and describes resident and business operators' perceptions of public drug use and related issues.

Telephone surveys were conducted among random samples of Kings Cross residents and businesses in 2000 (n= 515; n=209), 2002 (n=540; n=540) and 2005 (n=316; n = 210). Differences between groups and changes over time were assessed using chi-square analyses.

Response rates were high at 75% or greater in all three survey periods and residents in 2005 were similar to those in 2000 and 2002 with regard to gender, education, employment, and history of injecting drug use. However the 2005 sample was older and less likely to be in full time employment. Three-quarters of residents (73%) in 2005 agreed with the establishment of the Sydney MSIC, a slight decrease from 78% in 2002 but still higher than 68% who agreed in 2000 prior to opening. In 2005, 68% of business operators agreed with its establishment continuing an increase from 58% in 2000 and 63% in 2002.Fifty-eight percent of residents and 60% of business operators reported that they had ever seen public injecting in 2005.

Compared to 2000 and 2002, residents and business operators surveyed in 2005 perceived a decrease in levels of public drug use and publicly disposed syringes in the month prior to being surveyed. Among residents, this perceived decrease was statistically significant.

The majority of residents and business operators surveyed were aware of the Sydney MSIC and indicated high and sustained support for the service both before and after establishment.

COMMUNITY INVOLVEMENT IN HIV VACCINE DEVELOPMENT

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Australia's response to HIV has been characterised at all levels by a unique partnership between government, researchers, medical practitioners and the infected and affected communities. An Australian consortium, through a contract with the NIH, was engaged with the development of a prime/boost preventative HIV vaccine. The consortium included the affected communities represented by the Australian Federation of AIDS Organisations (AFAO) and was also unique since nowhere else has community been a partner in the development and trialling of an HIV vaccine. There are sound ethical reasons for the inclusion of community as a partner through all stages of the process of vaccine development but the reality of that involvement has not been analysed previously.

Using a grounded theory approach, a series of semi-structured interviews was conducted with consortium members who agreed to participate in this project. Thematic analysis of those interviews identified some important themes.

All participants viewed the involvement of community as critical to the process, in particular in terms of the comprehensive informed consent and education processes of the trial. However, some non-partnership consortium members questioned the worth of community in both contributory and monetary terms. Some of this was attributed to a lack of understanding of the way community operates and led to gaining shared understandings of the way both scientists and community work. AFAO's involvement as a full partner, and its internal governance structures, were also contrasted with the Community Advisory Boards (CAB) structures of most other HIV vaccine trials.

As a full partner in the process, AFAO influenced the development and trialling of the vaccine in ways that could not have been achieved in a CAB structure. However, this created a potential conflict between AFAO's advocacy role and its duty to act in the best interests of the consortium.

POLICY CONFLICTS IN HIV PREVENTION CAMPAIGN APPROALS

Kennedy M
Victorian AIDS Council/Gay Men's Health Centre

Social marketing targeting gay men with HIV and STI prevention messages must compete for attention with other forms of marketing targeting this audience. Such health promotion campaigns are primarily undertaken in Australia by government funded community based organisations that must manage an increasingly complex balance between effective social marketing and campaign material that will pass governmental approval processes.
This paper uses tools developed for analysing policy conflicts to examine recent cases where government funding bodies either refused to approve campaign resources or demanded significant changes. These cases demonstrate significant areas of policy conflict and inadequate mechanisms to identify and resolve these conflicts.
Conflicts are apparent across a range of variables – in values, in cultural understanding, in approaches to health promotion, and in what is socially and politically acceptable in public discourse about sex and drugs. The divide is not just on community-funder lines as government staff have often been participants in reference groups for projects which were subsequently refused approval when submitted to more senior decision-makers.
In the face of increasing social and political conservatism in government, even in traditionally liberal societies, HIV and STI prevention campaign planning should address explicitly the potential for such conflicts to occur and develop strategies to overcome them. At the CBO level, senior management and Board support is crucial, as is an effective media management strategy.
Policy conflicts in this area are predictable and approval guidelines for HIV and STI prevention resources should establish mechanisms for early identification and resolution of conflicts including, where appropriate, input from external health promotion experts.

WRONG WAY! – GO BACK! REFLECTIONS ON TWO CAMPAIGN APPROACHES

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Social marketing campaigns that address issues relating to sexual health and HIV prevention are notoriously difficult to evaluate. This presentation will compare evaluation results from two Victorian AIDS Council social marketing campaigns entitled 'Check It Out' and 'Get PEP' (Post-Exposure Prophylaxis).

The Check it Out campaign conducted in 2004 aimed to promote sexual health and increase regular HIV / STI testing in men who have sex with men. The Get PEP campaign conducted in 2005 aimed to raise awareness amongst gay men of PEP, the PEP 1800 line and the PEP website (www.getpep.info).

The Check it Out campaign resulted in 3131 hits to the Check it Out website between March and May 2004; there was minimal campaign recognition (31.8 %) as measured by the Melbourne Gay Periodic Survey; social research focus groups showed poor campaign awareness and analysis of laboratory and sentinel surveillance data showed no further increase in HIV and STI testing during the campaign period compared to prior to the campaign. In contrast, the Get PEP campaign was followed by an increase in calls to the PEP hot-line from an average of five to 135 calls per month, over 10,000 hits to the PEP website over 9 months; high recognition (around 60 %) of the Get PEP campaign materials, as measured by the Melbourne Gay Periodic Survey; and the monthly number of PEP prescriptions increased by 100% (from 15 to 30) following 9 months of implementing the campaign (9 months).

The contrasting results from the Check It Out and Get PEP campaigns provide valuable insights for planning social marketing campaigns. Potential reasons for the success of one approach over another will be discussed and we will offer clear directions for future campaign development.

JUST HOW DOES MALE CIRCUMCISION PREVENT TRANSMISSION OF HIV TO WOMEN? – A CRITICAL ANALYSIS OF DISCOURSES IN THE RECENT MEDICAL LITERATURE

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It was first suggested in 1989 that men who have been circumcised may be less susceptible to heterosexual acquisition of HIV infection. The recent publication of results of the first of several randomised prospective trials of circumcision as an "intervention", however, has evoked calls in the medical literature for the procedure to be adopted as a primary HIV prevention strategy.

Male circumcision has been hailed as providing "a degree of protection against acquiring HIV infection, equivalent to … a vaccine of high efficacy" on the basis that men in the study who were randomised to undergo the procedure appeared to be significantly less likely to acquire HIV in the subsequent 18 months.

While scientific method of the study has been criticised, and there have been some references to "cultural barriers" to adoption of the procedure, there appears to have been little recognition that, even if it is effective, male circumcision will provide direct protection only for men. HIV prevention for women appears to be assumed as an inevitable consequence of protecting men and the potential impact on the sexual behaviour of men who may come to believe that they have been surgically "protected" (even if only partially) from HIV goes unexamined.

This paper reports on a critical discourse analysis of medical texts on this topic, which aims to reveal the key discourses in operation and their effects in terms of gendered power dynamics. Critical discourse analysis involves "the uncovering of implicit ideology in texts. It exposes underlying ideological bias and therefore, the exercise of power." The paper examines a complete ascertainment all English language Medline-listed materials with Medical Subject Headings (MeSH) coding : [("HIV" OR "HIV Infections" OR "Acquired Immunodeficiency Syndrome") AND "Circumcision"], since the beginning of 2005 (34 items).

It identifies a veiled discursive call to shift the emphasis of HIV prevention toward increasingly medicalised (and indeed surgicalised) approaches that fail to take account of the gendered operation of power and the other social determinants of HIV transmission.

ASHM Basic Science – Virus–Host Interplay 3.30pm – 5.00pm

THE ROLE OF APOBEC3G CYTIDINE DEAMINASE ACTIVITY IN INHIBITION OF HIV REVERSE TRANSCRIPTION AND INFECTIVITY

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The Human Apolipoprotein B mRNA-Editing Enzyme Catalytic Polypeptide-Like 3G (APOBEC3G) is a potent inhibitor of Human Immunodeficiency Virus (HIV) replication in the absence of functional Viral infectivity factor (Vif). APOBEC3G is the proposed antiviral factor present in non-permissive cells, for the replication of Vif-deficient (dV) virus. APOBEC3G possesses cytidine deaminase (CD) activity whereby cytidine residues in viral DNA are deaminated, converting them to uridine residues, thus resulting in G to A mutations in replicated virus. However, recent studies indicate APOBEC3G's antiviral activity can be dissociated from its CD activity. These studies suggest APOBEC3G contains an additional antiviral mechanism that prevents infection by dV HIV.

Because the original observation of dV replication in non-permissive cells was characterised by an inhibition of reverse transcription (RTn), we aim to investigate whether APOBEC3G requires CD activity in order inhibit HIV RTn and reduce viral infectivity.

We have obtained APOBEC3G expression constructs with conservative mutations in the C-terminal CD domain (H257R, E259Q) from Michael Malim. These mutants have previously been reported to retain 50-90% wildtype (WT) APOBC3G inhibitory activity. WT and mutant APOBEC3G expression vectors were co-transfected with WT or dV DNA into HeLa cells at a ratio of 1:0.125 (virus : APOBEC3G) that specifically inhibits dV, but not WT, infectivity. Virus was isolated from each of these co-transfections and the infectivity assessed in a single cycle infectivity assay (HeLa CD4-LTR βgal). Co-localisation of virus and APOBEC3G within transfected cells was analysed by confocal microscopy. The presence of APOBEC3G in the virions was confirmed by Western analysis.

Preliminary results suggest that while WT APOBEC3G inhibits dV infectivity greater than 5-fold when compared with WT infectivity, H257R and E259Q CD mutants do not inhibit HIV infectivity in a Vif-specific manner, suggesting loss of antiviral function. Future experiments will specifically examine effects of WT and mutant APOBEC3G on both RTn and mutations present in reverse transcripts within T-cells. This research will further help us to understand the antiviral mechanisms of APOBEC3G and delineate the factors responsible for the inhibition of RTn and G to A mutations observed in replication of dV HIV in non-permissive cells.

CHANGES OF HIV-1 VIRAL LOAD ARE ACCOMPANIED BY CHANGES IN THE NUMBERS OF MUTATIONS IN VIRAL MINORITY POPULATIONS

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Most multiply treated patients accumulate resistance associated mutations in the long run. This study originally intended to investigate the reasons for viral load re-increases in the absence of obvious genotypic changes of plasma viruses of patients in deep salvage therapy. We assumed samples to harbour newly developed resistant mutations not detectable by population sequencing.
23 samples of 12 heavily treated patients were chosen according to the occurrence of changes in viral load (VL) (7x VL increase of >0.5lg, 4x reduction of VL <0.5lg, 12x stable VL). As a control served a group of five patients, two of them treatment naïve and three receiving their first-line therapy with similar VL changes over time.

Genotypic drug resistance testing was determined using the ViroSeq Kit. Phenotypic drug resistance and viral replication capacity were determined using a recombinant virus assay. Molecular clones were generated and sequenced from each sample. The resulting 125 clonal sequences were compared to sequence analyses of corresponding viral plasma populations. Mutations detected only by clonal analyses were of interest. Remarkably, most of these mutations were unknown and not associated to drug resistance. None of the molecular clones harbouring those mutations led to the generation of infectious virions after transfection. However, the number of these mutations per 1000bp was higher in clones derived from patients with increasing VL (n=4.47) than for samples derived from patients with a decrease in VL (n=2.51) whereas the samples with stable VL (3.66) were in between ($p=0.006$, $R^2=0.32$). Interestingly, this was true for all patients independent of their pretreatment. Of note, absolute VL and the number of mutations did not correlate.

In conclusion, additional drug resistance mutations were rarely observed, and changes in viral load behaviour could not be explained by resistance. However, the re-increase of viral load was associated with increasing numbers of uncharacterized mutations in viral minorities. Appearance of these mutations -leading to an enrichment of replication incompetent viruses in the plasma- indicates either the recruitment of viral variants from the compartments or a direct influence of changes in the replication level on the viral mutation rate during stable non-suppressive therapy.

MHC RESTRICTION OF MULTIPLE IMMUNODOMINANT HIV/SIV CD8 T CELL EPITOPES IN PIGTAIL MACAQUES

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CD8 T cell immunity can partially control HIV-1 in humans and HIV/SIV in macaques. However, the immune response to natural infection is frequently focussed on one or only a few dominant epitopes, which can be subverted relatively easily by mutational escape. Mutant virus frequently reverts back to wild-type on transmission to MHC mismatched hosts. An incomplete picture of MHC alleles hampers studying this process in macaques. We undertook an extensive epitope mapping and MHC restriction study of dominant T cell epitopes.

SHIV or SIV-infected pigtail macaques had CD4 and CD8 T cell epitopes mapped by IFN□□ICS on fresh blood samples using progressively smaller pools of overlapping 15mer peptides. Fine mapping used 8-11mer peptides. MHC class I typing of over 110 pigtail macaques used reference strand-mediated conformational analysis (RSCA), a fluorescent heteroduplexing technology that identifies the unique gel mobility of individual MHC alleles. Individual MHC alleles were cloned, sequenced and utilized for the generation of MHC tetramers.

To date we have identified numerous SIV Gag, HIV-1 Env, and SIV Env CD4 and CD8 epitopes in pigtail macaques, of which 30 have been fine mapped. Seven immunodominant epitopes recognised by multiple animals have been further studied to date: 3 in SIV Gag, 3 in HIV-1 Env and one in SIV Env. MHC typing by RSCA identified alleles shared by all macaques responding to each epitope, strongly suggesting MHC restriction by these alleles. One previously undescribed allele likely restricts a dominant AF9 Gag response. Construction of MHC tetramers was then used to fold MHC polypeptides around the putative T cell epitope and confirm MHC restriction.

Epitope mapping and MHC restriction of novel dominant T cell responses in macaques now provides a powerful tool to identify and dissect the relative benefits of T cell immunity and cost of viral mutational escape. In addition, novel tools such as pigtail macaque MHC tetramers and the ability to pre-identify immune responders by MHC typing improves the power of studies to address further unanswered question in HIV vaccinology.

A T2 CYTOKINE ENVIRONMENT MAY NOT LIMIT T1 RESPONSES IN HIV PATIENTS WITH A FAVOURABLE RESPONSE TO ART

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Low production of interferon-□ (IFN-□□ marks HIV-induced immunodeficiency and has been ascribed to a bias towards T2 cytokines. However the evidence supporting this model is meager, especially in patients responding to antiretroviral therapy (ART).

This was investigated in two cross-sectional studies of HIV patients who were immunodeficient when they began ART and had stable increases in CD4 T-cell counts. Blood leukocytes were assessed unstimulated or after stimulation with CMV, anti-CD3 or mitogen. IFN□ and IL-5 responses were initially assessed by ELISpot and ELISA. We then adopted a sensitive RT-PCR system to assess IL-5 and IL-4 mRNA as T2 cytokines in the second patient cohort. IFN-□ was assessed as a T1 cytokine, with IL-4□2 (an inhibitory splice variant of IL-4). Results were correlated with putative serological markers of a T1 (LAG-3, CD26) or T2 (CD30, IgE) cytokine environment.

IL-5 production and IgE levels were elevated in patients. Surprisingly IgE levels did not correlate with IFN-γ and correlated inversely with IL-5 released in culture ($p = 0.05$). Levels of IL-4, IFN-□, IL-5 and IL-4□2 mRNA were correlated after anti-CD3 stimulation, where IL-5 was the best predictor of IFN-□ mRNA ($p=0.006$). Weak positive correlations were evident between CD30 and cytokine mRNA levels, whilst IgE correlated inversely with IL-4, IL-4□2, IL-5 and IFN-□ mRNA levels.

In conclusion; we found no evidence for an inverse relationship between T1 and T2 cytokine responses in unstimulated cells or after *in vitro* stimulation and did not link either sCD30 or CD26(DPPIV) with a T1 or T2 cytokine environment. Elevated serum IgE warrants further analysis as a marker of persistent T-cell responses dysregulation. This is supported by case-studies from our clinic.

THE QUALITY OF THE CELLULAR IMMUNE RESPONSE TO HEPATITIS C VIRUS INFECTION

Ffrench R[1], Flynn J[1], Crooks LA[1], Hosseiny P[2], Lloyd A[2]
1. Viral Immunology group, Burnet Institute, Melbourne
2. Inflammation Research Unit, UNSW, Sydney

Introduction

Strong and broad cellular immune responses appear critical in the resolution of HCV infection, and both CD4 and CD8 responses are required. It has been previously demonstrated that CD4 responses are quickly lost in chronic HCV infection and that CD8 responses become weak or absent. Previous studies have not yet assessed the quality of the immune response and how this affects resolution of infection or progression to chronic liver disease. The hypothesis of this project is that the level and nature of the cellular immune response is affected by the cytokine environment in acute infection and that the functional avidity of the cellular response is critical in viral clearance.

Methods

We have established assays to assess the functional avidity of the cellular immune response in acute and chronic HCV infection, using peptide titrations and calculation of the concentration of peptide needed to stimulate a half maximal T cell response by ELISPOT assay. In addition we have optimised the measurement of multiple cytokine using the bioplex multi-array system to measure Th1 and Th2 cytokine levels in cells stimulated with pooled HCV peptides. Finally we have started production of a panel of MHC class I -peptide tetramer complexes that will be further used for assessment of TCR density and functional avidity.

Results

We have assessed the specificity, magnitude and functional avidity of cellular immune responses in cohorts of acutely (n=12) and chronically (n=32) infected individuals. Acutely infected individuals had a lower prevalence of both IFN- and IL-2 ELISPOT responses than chronically infected individuals, with 7/12 (58%) responding in either assay, compared to 29/32 (90%) chronics. However the magnitude of the responses in the acute infection was greater, with a mean summed response to HCV peptides of 364 SFC/10^6 PBMC in the IFN- assay and 387 SFC in IL-2. In chronic infection the mean response was 294 SFC in IFN- and 215 SFC in IL-2. The breadth of the IFN response was similar, with 3-4 pools positive in both acute and chronic infection. In contrast IL-2 responses were broader in the acute cohort. There was significantly higher prevalence of responses to NS4b in acute infection (p=0.02). We have tested and validated the avidity assays using different dilution series and have optimised this to use 7 half log dilutions. We have also developed an algorithm to directly calculate the avidity of the ELISPOT data. This involves log transformation of the data and calculation of the midpoint of the high and low phase of the curves. We have demonstrated a broad range in the avidity of T cell responses between individuals, with acutely infected individuals showing a mean avidity of 0.2g/ml compared to 0.4g/ml in chronic infection. Some lower avidity responses were demonstrated in the acute cohort, particularly in the IL-2 responses. We have also optimised the assays for production of multiple Th1 and Th2 cytokines by bioplex and find that most responses in chronic infection are relatively low, and focussed on IFN- mean 174 pg/ml), with some low IL-2 (52 pg/ml), IL-10 (63 pg/ml) and IL-13 (14 pg/ml) responses.

Discussion

This study has assessed the quality of the immune response by examining the breadth, strength and avidity of T cell responses. We have found broader and higher magnitude responses in acute infection, although they are detected in fewer individuals than chronic infection. The avidity of the response was similar in the two cohorts although there were some lower avidity responses in the acute cohort. The cytokine pattern was of the expected Th1 type, although low in magnitude. Follow up of longitudinal samples in the ATAHC cohort where outcome of infection will be known will allow correlation of the quality of the T cell response with resolution of infection.

Sexual Health Conference Plenary: Law and STIs Control and Conference Closing 3.30pm – 5.00pm

CONSENSUAL ADOLESCENT SEX: AN ALTERNATIVE LEGAL FRAMEWORK TO THE CRIMINAL LAW

Petersen K

Controlling the sexual behaviour of young people who are not yet legal adults and who are not still children in a social sense, raises complex problems in liberal democracies with diverse community and moral values. Clearly the criminal law is a blunt tool for restricting the sexual freedom of consenting adolescents to engage in sex with their peers. Medical law principles governing consent and competence, on the other hand, may be a better approach to respecting autonomy rights and protecting adolescents from harm. This paper consider how these principles can be applied in a meaningful way which would facilitate the parental and state obligations to protect the health interests and freedom of young people to make independent and informed decisions about their sexual lives.

ADOLESCENTS ACCESSING SEXUAL HEALTH SERVICES

Williams H M
Melbourne Sexual Health Centre, Melbourne and School of Population Health, University of Melbourne

Adolescents face many barriers when accessing general medical services. A lack of explicit confidentiality, together with a lack of understanding of the limits of confidentiality, is a frequently cited reason for a reluctance to use services. Recent evidence suggests that if young people are not guaranteed confidentiality when seeking prescribed contraception from a doctor, they are likely to boycott these services. Many of these adolescents admit they are still likely to engage in sexual intercourse, with a less effective method of contraception or no contraception at all.

A recent review of Sexual Health Clinical Services in Victoria, commissioned by the Department of Human Services, confirmed concerns around confidentiality as one of the major barriers facing adolescents when trying to use sexual health services. Other important factors highlighted in this report include a lack of knowledge of available sexual health services, lack of independent transport, cost and lack of bulk-billing services, lack of access to consistent evidence-based sex education in schools and limited opening hours of services. As service provision forms an important part of the effective public health control of sexually transmissible infections (STIs), and many STIs are most prevalent in those under the age of 25 years, services aimed at reducing the prevalence of STIs in the community need to address these issues to be truly accessible to those most at risk.

The use of public health services in Australia often requires a Medicare card. If a Medicare card is used, confidentiality is difficult to guarantee as inconsistencies exist in the information released by Medicare in the form of statements requested by parents for tax relief purposes. A case scenario will be discussed to illustrate the difficulties faced by adolescents when using medical services.

LAW AND PUBLIC HEALTH (PEPFAR)

Loff B

This presentation will place the President Bush's Emergency Plan for AIDS Relief (PEPFAR) in its political context and discuss the varied responses to it. Some of the matters to be touched upon will include the role of the media, trafficking myths, the international criminal environment, legal challenges to PEPFAR, and the impact on policies of agencies providing services to sex workers.

'SEXPIGS' AND HIV RISK
3.30pm – 5.00pm

Prestage G
National Centre in HIV Epidemiology and Clinical Research

Over the past few years we have examined much research data that has identified strong associations between unprotected anal intercourse with casual partners (UAIC), illicit drug use, HIV seroconversion and aspects of gay community involvement, such as more frequent participation in gay party scenes and being more 'sexually adventurous' (partyboys and sexpigs). Also, we have observed that some gay men use risk-reduction strategies that do not always include condom use for casual sex, such as serosorting and strategic positioning. These data have been relevant, but necessarily limited: They do not account for all seroconversions, nor do they help us understand the motivations and beliefs of the men at increased risk of HIV infection and transmission. However, a broad overview of the research data, coupled with an assessment of what we know of changes in the gay community and how gay men organise their sex lives, strongly suggest that the men who play 'hard and dirty', who take calculated risks, are key to any interventions aimed at reducing new infections. In this presentation Garrett will briefly describe the types of behaviours he believes are indicative of increased risk and why so many infections are occurring among men who appear to be well-informed and to have strong social support networks.

Chalmers B

Senior Group Work and Peer Education Officer with the Gay Men's Education Team at ACON, where he is charged with developing and providing a range of peer education opportunities for gay and bisexual men.

Baden's presentation will outline the program developed by ACON to engage with gay men in Sydney who could be described as sex pigs and its attempts to address HIV, STIs and risk reduction strategies used by this group. It will describe the challenges encountered as well as the solutions found in formulating this program thus far, including ways that affected community members were consulted during the development of these strategies.

Hurley M
Senior Research Fellow at the Australian Research Centre in Sex, Health and Society, La Trobe University, Melbourne

Michael's interest is in 'intensive sex partying' as a cultural practice involving a deep immersion in gay socialities (age, parties, venues) and sexual and drug taking practices (frequent sexual activity, a broad sexual repertoire, more and multiple partners). This presentation will briefly explore partying as a sometimes routinised, sometimes circumstantial way of doing gay, that is valued primarily in terms of intensifying the pleasures of sex, drug use and the performance of masculinity rather than risk of HIV infection or transmission. He suggests that this intensity can be positioned partly as a productive distraction from wider social hostility and the mundaneness of much gay life.

Honnor G

CEO of PLWHA (NSW), an organisation that is primarily focussed on working for healthy, wellness sustaining outcomes for positive people

Geoff will explore the dichotomy presented by "skilled sex pig practitioners" on the one hand and being "an out of it sex pig" on the other and offer some ideas as to how we might use the former to manage the latter, within a culture of care.

Quan D
Director at Holdsworth House Medical Practice

Dick will explore the role of the GP to engage the 'sex pig' in care and follow up.
As many are HIV positive with greater risk of STI's including syphilis and HCV, drug use and at risk behaviour it is important for GP to ensure that regular blood investigations are carried out, community groups may be utilized, education is reinforced, contact tracing can take place and treatments are instituted.
The presentation will present ways of assisting this group without marginalising them, thorough care planning and meaningful client participation

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ORAL PRESENTATION ABSTRACTS

THURSDAY 12 OCTOBER 2006

THURSDAY 12 OCTOBER 2006

Plenary 2
9.00am – 10.30am

HIV NEUROPATHOGENESIS IN THE HAART ERA

Power C
Medical Microbiology & Immunology University of Alberta

ROLLING OUT HAART IN MALAYSIA: MATCHING GOALS WITH REALITIES

Dr Christopher KC Lee
Infectious Diseases Unit, Sungai Buloh Hospital
Malaysia

The United Nations Joint Program for AIDS (UNAIDS) has categorized Malaysia as a country with a concentrated HIV epidemic in a focused population. As of 30th June 2006, Malaysia reported 73455 HIV cases. There has been a consistent trend in recent years, with 6000-7000 new cases notified yearly. Intravenous drug users (IDUs) make up almost 75% of all infections although a gradual increase in heterosexual transmission has been noted in the last 5 years. Being a developing country, Malaysia faces numerous challenges in keeping up with the medical needs of the increasing HIV population. Highly Active Antiretroviral Therapy (HAART) was beyond the reach of the average Malaysian during its early years with standard regimens costing close to USD500 per month. Treatment was then centered in a few large hospitals with infectious disease physicians who had access to the appropriate laboratory support. Antiretroviral (ARV) drug prices dropped somewhat during the turn of this century due both to global efforts to increase access as well as local negotiations with multinational pharmaceutical companies. In 2003, the Malaysian government took the decision to import 6 ARVs from India in its efforts to expand ARV treatment.

HAART is now available in all specialists hospitals as well as the large health centers, which are manned by community medicine physicians. A program to train both doctors and paramedics in HIV treatment, which was initiated in the mid 1990s, was scaled up in 2001 to involve all states. A yearly national HIV update training course for both physicians and paramedic counselors has been established since 2002. Viral load facilities have been put in place in 3 regional hospitals and 2 more are expected to start services by the end of 2006. In July 2006, the Ministry of Health approved a proposal to provide all NRTIs and NNRTIs for free. The National HIV/AIDS Treatment Registry (NHATR) was also set up in 2003 under the auspices of the Ministry of Health (MOH) to track the HAART roll-out so as to ensure efficiency and equitable access.

Despite the above advances, major challenges continue to be faced in certain areas. Treatment access among IDUs has become a major focus and is now being linked to the Harm Reduction program which was commenced early this year. Cost of second-line HAART regimens remain high and access to newer ARVs have been difficult. No new ARV agent has been introduced in Malaysia in the last 5 years. Resistance testing has yet to be established in a structured fashion in the country although preliminary work has been started in one academic institution. Due to the above issues, great emphasis has been placed on ensuring maximal efficacy with the 1st. line regimens. Strengthening adherence has now become a major aspect of the national HAART roll-out.

THE ROLE OF CLINICAL RESEARCH IN RESOURCE-POOR SETTINGS

Cooper D.

Engaging Ethnic Communities - Interactive Symposium with Comment from Ethnic Media 9.00am – 10.30am

NSW CALD HIV/AIDS INTERAGENCY

Tawil V[1], Luisi B[2]
[2]AIDS/Infectious Diseases Branch, NSW Department of Health, Sydney, NSW, Australia
[1]NSW Multicultural HIV/AIDS and Hepatitis C Service, Sydney, NSW, Australia.

People from culturally and linguistically diverse (CALD) backgrounds are a priority for both the *National HIV/AIDS Strategy 2005-2008* and the *NSW HIV/AIDS Strategy 2006-2009*. The NSW HIV/AIDS Strategy specifies that:

- people from CALD backgrounds are a priority population for all HIV funded services;
- each service needs to identify its capacity to undertake appropriate HIV prevention, care and support work with people from priority CALD backgrounds; and
- this work should be done in consultation and collaboration with the communities themselves and with the Multicultural HIV/AIDS and Hepatitis C Service (MHAHS) in order to ensure its appropriateness and effectiveness.

A key initiative outlined by the NSW HIV/AIDS Strategy is the establishment of a NSW CALD HIV/AIDS Interagency to enhance inclusion of CALD issues in the work of the HIV sector.

The Interagency was formed by NSW Health in November 2005, with MHAHS providing secretariat support. Areas of expertise of the Interagency Membership reflect key areas of action identified in the NSW HIV/AIDS Strategy i.e. HIV health promotion, prevention, care and support.

To date the Interagency has progressed the following priorities:

- Review of data and evidence to identify current priorities and challenges for HIV health promotion, prevention, care and support work with people from priority CALD background.
- Identified areas for partnership and collaborative projects.
- An Interagency workplan with strategies for:
- community development work with priority CALD communities;
- workforce development with HIV and non-HIV Sectors;
- stronger partnerships with tuberculosis and immigration services;
- area CALD profiling to inform local service planning;
- ongoing identification of issues where there is a lack of data/evidence; and
- cross-area and/or multi-agency social marketing campaigns and other activities.

This paper will describe the goals, objectives and functions of the NSW HIV/AIDS CALD Interagency, and will examine the success of this model to date in working towards the goals of the NSW HIV/AIDS Strategy 2006-2009.

USING ENGLISH LANGUAGE CLASSES TO GIVE HIV/AIDS INFORMATION TO NEW ARRIVAL IMMIGRANTS AND REFUGEES FROM HIGH PREVALENCE COUNTRIES

Lovell R[1], Sabri W[2]
Family Planning NSW, Sydney, NSW, Australia
[2]Multicultural HIV/AIDS and Hepatitis C Service, Sydney, NSW, Australia

In recent years there has been an increase in the number of HIV/AIDS notifications in NSW. A large portion of this increase has been within the culturally and linguistically diverse (CALD) heterosexual community. For this reason it was considered important that new arrivals to Australia be educated about HIV/AIDS issues at an early stage in their settlement process. In response to this need, *About AIDS* was designed to teach English using HIV/AIDS information, allowing student to learn and at the same time become aware.

Family Planning NSW developed the *About AIDS* CDROM in partnership with The Australian Centre for Languages (ACL) and Multicultural HIV/AIDS and Hepatitis C Service.

In order to develop a culturally sensitive and user friendly resource consultations were conducted with twenty nine (29) ACL Auburn teachers, thirty two (32) ACL students, twenty six (26) community leaders/representatives from a range of cultures and ACL management. In addition HIV/AIDS information sessions were conducted with students and teachers. Overall the response to developing the resource was very positive.

In initial consultations with teachers concerns were raised about teaching HIV/AIDS to culturally diverse students in a mixed gender class setting. Later consultations and workshops directly with students revealed that they were interested in receiving the information and found the CDROM format to be appropriate and non-confronting.

About AIDS was designed for use with the support of a teacher, by students in a computer-based lesson. Using the format of an interactive CDROM allows students to work at their own pace, choosing information they feel comfortable with and to have their questions answered in a semi-private manner.

Without the involvement of teachers, students and community representatives in the different stages of the project, *About AIDS* could not have been produced. We are hoping *About AIDS* will increase the capacity building of English Language Providers, in relation to HIV/AIDS issues and their students.

WORKING WITH THE ETHNIC MEDIA TO TALK ABOUT HIV/AIDS – SOME REAL LIFE EXPERIENCES

Luisi B[1], Das R[1], Pozo S[2], Coulson D[3] and Paljor S[1].
1. Multicultural HIV/AIDS and Hepatitis C Service, PO Box M 139, Missenden Road, NSW 2050
2. Spanish Herald, 1-9 Glebe Point Road, GLEBE 2037
3. Thai SBS Radio Program, PO Box 294, South Melbourne, VIC 3205, Australia

Working with communities and individuals from Culturally and Linguistically Diverse (CALD) backgrounds has been identified in "The National HIV/AIDS Strategy 2005-2008: Revitalising Australia's Response". It is well recognised that CALD communities in our society have specific needs and approaches in the spectrum of HIV/AIDS care- right through form prevention to treatment.

Services need to develop strategies for working with CALD communities that are culturally appropriate and are effective in communicating key health messages when it comes to HIV/AIDS.

This paper will explore the best ways to work with ethnic media based on the experiences of the Multicultural HIV/AIDS and Hepatitis C Service(MHAHS), that have been gleaned after a decade of work in this area. The MHAHS has been involved in the development and implementation of numerous National and state-wide media campaigns directly targeted to specific CALD communities. During this paper, some of these campaigns will be discussed including the revelation of what worked and what was not so successful.

In addition, the paper will hear from two 'real life" ethnic media journalist in developing media stories around HIV/AIDS for their respective communities. These journalists will describe ways fro services to develop effective partnership and methods in order to work with the ethnic media. It will also explore unique characteristics of their own respective media outlets, as well as general principles for working with the ethnic media.

This paper is a must for individuals, services and organisations that are seeking to work with effectively with CALD communities.

CD4-GUIDED SCHEDULED TREATMENT INTERRUPTIONS (STIS)COMPARED TO CONTINUOUS THERAPY (CT): RESULTS OF THE STACCATO TRIAL

Satchell CS[1], Drummond FM[1], Cooper DA[1], Ananworanich J[3] and Hirschel B[4] on behalf of The Staccato Study Group
[1]National Centre in HIV Epidemiology and Clinical Research, University of New South Wales, Sydney, Australia, [2]St. Vincent's Hospital, Sydney, Australia, [3]The HIV Netherlands Australian Thailand Research Collaboration (HIVNAT), Bangkok, Thailand, [4]Geneva University Hospital, Geneva, Switzerland.

Stopping HIV therapy may reduce costs and side effects, but carries the risk of increased immune suppression and of emergence of resistance.
430 patients with CD4 counts > 350 cells/mm^3, and VL < 50 copies/mL were randomised 1:2 to CT (N=146), or STI (N=284), with treatment stops while CD4$^+$ exceeded 350 cells/mm^3. Median time on randomised treatment was 21.9 months. After 24 months, both groups were treated continuously for 12 to 24 weeks. 352 patients in Thailand received 1600 mg of SQV with 100 mg of RTV once daily with 2 NRTIs: ddI/d4T from 2002 until 3/2003, and TDF/3TC after that. In Swiss and Australian patients, HAART regimen used was defined by the treating physician.
The probability of restarting treatment in STI was 53% at 6 months, 64% at 12 months, and 74% at 24 months. In an ITT analysis, the percentage with VL < 50 copies/mL was 91.8 % in CT, compared to 90.3% in STI after re-treatment at the end of the trial.
At the end of randomised treatment, median CD4 counts were 374 cells/mm^3 in STI (60.5% > 350), and 601 cells/mm^3 in CT (96.2% > 350, $p < 0.002$). After re-treatment, median CD4 counts rose in STI from 374 to 459 after 12 weeks, with 85.9% > 350, compared to 96.9% in CT ($p < 0.01$).
During STI, 17 pts (5.8%) had symptoms of acute retroviral syndrome and oral and vulvo-vaginal candidiasis (p=0.03) and thrombocytopenia (p=0.06) were more frequently reported. In the CT patients, diarrhoea (p=0.04) and neuropathy (p=0.03) were more frequent.
Sequencing was attempted in 125 patients where resistance was most likely because of numerous stop-start cycles, problems with compliance, and/or viral breakthrough. Resistance mutations were seen in the RT gene (N=7) and in the protease gene (N=3).
During 484 patient-years of STIs, little evidence of treatment resistance emerged. Treatment-related adverse effects were more frequent in CT, but minor manifestations of HIV infection were more frequent in STI.

BILINGUAL EDUCATOR MODEL FOR THE SEXUAL EDUCATION OF CULTURALLY AND LINGUISTICALLY DIVERSE (CALD) COMMUNITIES IN QUEENSLAND

Gu Z, Muil, I
Ethnic Communities Council of Queensland, QLD, Australia

Language and culture are two major barriers for CALD people accessing information. Service agencies consistently, however, have difficulty in maintaining sustainable models of bicultural and bilingual workers.

ECCQ's HIV/AIDS, Hepatitis C and Sexual Health Program, funded by Queensland Health, has successfully engaged bilingual health educators to spread knowledge and information about prevention of HIV, Hepatitis and STI transmission and to encourage CALD people to undertake regular sexual health checkups.

Bilingual educators receive four days training prior to starting their education sessions with their communities. The training covers basic and essential knowledge and requisite skills. A template is provided to bilingual workers as a guide for conducting workshops. The workers then receive ongoing and updated training and support. A monthly group meeting is held to discuss issues, to share experiences, and to support each other.

The presentation will examine the role of bilingual and bicultural educators in community education, in assistance in the delivery of health information in certain settings, and in organizing health promotion activities in their own communities. These workers are also crucial links in feeding back to health services specific issues concerning their communities or identified impediments to getting the message heard. This is a crucial link for us in improving our education program and giving feedback to other related services.

The presentation will also discuss the challenges and possibilities of improving the bilingual educator model.

Clinical - Antiretroviral Session
Ian Thompson Session
11.00am – 12.30pm

PHARMACOKINETICS, THERAPEUTIC RESPONSE AND TOLERABILITY OF DOUBLE BOOSTED PROTEASE INHIBITOR (PI) ANTIRETROVIRAL (ARV) THERAPY WITH LOPINAVIR/RITONAVIR AND ATAZANAVIR ADMINISTERED ONCE AND TWICE DAILY

Bloch.M
Holdsworth House Medical Practice

Background: Lopinavir and atazanavir are PIs therapeutically boosted by ritonavir. We aimed to evaluate the pharmacokinetics, tolerability and short term efficacy of dual boosted PI regimen of lopinavir/ritonavir and atazanavir in HIV infected subjects. **Methods:** In an open label cross-over prospective steady state pharmacokinetic study, 12 male HIV-infected patients stable on ARV (plasma HIV RNA <50 copies/mL, CD4 T lymphocyte count 568 ± 204 cells/µL) were consented to an IRB approved study. Phase 1 consisted of lopinavir/ritonavir 400mg/100mg bd and atazanavir 150mg bd. On day 15, fasting lipids, chemistry, immunological and virological makers were measured. Following a standardized meal and medication, plasma concentrations of lopinavir, ritonavir and atazanavir were measured at 1, 1.5, 2, 3, 4, 6, 8 and 12 hours post dosing. In Phase 2, dosing was changed to lopinavir/ritonavir 800mg/200mg od and atazanavir 300mg od. On day 29, a second pharmacokinetic evaluation was performed and included a 24 hour sample. Plasma concentrations were determined using validated reverse phase high performance liquid chromatography with ultraviolet detection. **Results:** Phase 1 lopinavir, ritonavir and atazanavir mean ± standard deviation Cmin were 4644 ± 1965µg/L, 195 ± 82µg/L and 1196 ± 433µg/L respectively; Cmax lopinavir and atazanvir were 9799 ± 2275gµ/L and 2580 ± 762µg/l respectively; AUC0-12 were 87016 ± 27172µg/L.h and 21493 ± 6424µg/L.h respectively. Phase 2 lopinavir, ritonavir and atazanavir mean Cmin were 1424 ± 1423µg/L, 69± 38µg/L and 541 ± 245 µg/L respectively; Cmax were 14836 ± 4336µg/L and 3588 ± 811µg/L for lopinavir and atazanavir respectively; AUC0-24 172861 ± 62433µg/L.h and 21493µg/L.h respectively. Virological, immunological and lipid markers were maintained. Mean bilirubin was 14 ± 6umol/l at baseline, 44 ± 33umol/l in Phase 1 and 30 ± 19umol/l in Phase 2. There were no grade 3 or 4 adverse events. Mild gastrointestinal adverse events occurred in 8/11 (73%) of subjects. **Conclusions:** Dual-boosted combination therapy of lopinavir/ritonavir and atazanavir had satisfactory pharmacokinetic profiles, tolerability and short term efficacy when administered once or twice daily.

TRANSMITTED ANTIRETROVIRAL DRUG RESISTANCE: A 10-YEAR ANALYSIS OF VICTORIAN PATIENTS FROM 1996 TO 2005.

Morris J, Nicholls J, Chibo D, Carolan L, Gooey M, Middleton T, Papadakis A, Birch C.
Victorian Infectious Diseases Reference Laboratory, Melbourne, Australia.

Transmitted drug resistance (TDR) at the time of HIV infection is well documented. In general about 10% of newly infected patients have resistance mutations associated with at least one antiretroviral drug class (nucleoside reverse transcriptase inhibitor (NRTI) or nonnucleoside RTI (NNRTI) or protease inhibitor (PRI)). There is little or no knowledge of the incidence of TDR associated with the fusion inhibitor enfuvirtide (ENF).

Antiretroviral drug resistance mutations were sought in the RT, PR and gp41 regions of plasma virus of individuals living in Victoria with evidence of recent HIV infection (evolving western blot profile or evidence of seroconversion) in the previous 12 months.

Between 1996 and 2005, inclusive, there were 55 cases of TDR identified in 396 individuals (14%). There was no evidence of changing incidence of resistance to any particular drug class, although the overall incidence of TDR fell in 2005. The most commonly transmitted mutations were associated with resistance to NRTIs (37 patients), followed by NNRTIs (n=23) and PRIs (n=12). Multidrug resistance (the presence of mutations associated with more than one drug class) occurred in 11 patients. There was no evidence of TDR to ENF in the 55 patients identified with resistance to at least one other drug class. The most common mutations detected were M41L and K103N. Phylogenetic analysis of the polymerase sequence from patients with M41L and/or K103N mutations revealed virological links between recently infected patients in some cases.

There is an accumulation of evidence that initial therapy guided by baseline resistance testing results in a favourable treatment response, and genotyping for evidence of TDR is now recommended as part of the USA Guidelines for the use of Antiretroviral Agents in HIV-1 Infected Adults and Adolescents. An overall incidence of TDR of 14% in Victorian patients highlights the need for routine genotyping of HIV in an early stored plasma sample, prior to the initiation of antiretroviral drug therapy.

COMBINATION ANTIRETROVIRAL THERAPY WITHOUT A NUCLEOSIDE ANALOGUE: EXPERIENCE FROM 334 PATIENTS IN THREE COHORTS

Calmy, A.
St Vincent's Hospital

Background: Toxicity and resistance may limit the use of HIV nucleoside reverse transcriptase inhibitors (NRTI). We assessed the safety and activity of regimens that did not include an NRTI.
Method and Patients: We analyzed NRTI-sparing regimens from pooled data from three cohorts in Australia and France where HIV-RNA viral load, CD4+ lymphocyte counts and metabolic parameters are assessed prospectively.
Results: A total of 334 (3.9%) of 8477 patients were included in the present study for a median follow-up of 105 weeks. Therapeutic combinations were one NNRTI + one PI (58%), two PIs (26%), one PI (16%), one NNRTI + two PIs (8%). At baseline, median CD4+ lymphocyte count was 264 cells/mm^3 [interquartile range 164-446] and 25% of patients had plasma HIV-RNA below 500 copies/mL. Sixty-four percent of patients had HIVRNA below 500 copies/mL at six months (M6) and 68% at 24 months (M24). Mean CD4+ lymphocyte count increase was 60 cells/mm^3 [95% confidence Interval: 41-76] at M6 and 111 cells [82-140] at M24. Prognostic factors of having HIVRNA<500 copies at M6 included independently being undetectable at M0 and naïve for NNRTI. The proportion of patients with triglycerides>2.3 mmol/l increased from 32% to 63% at M6 and 62% at M24, and with total cholesterol>6.2 mmol/l from 18% to 38% at 6 months and 44% at M24, with an increased risk for patients treated with NNRTI+PIs. Forty-one percent of patients discontinued their NRTI-sparing regimen.
Conclusion: In these antiretroviral-experienced patients, NRTI-sparing therapy appeared to have satisfactory virological and immunological efficacy. However, hyperlipidemia was frequent and requires monitoring of cardiovascular risk-factors.

Key Words: nucleoside reverse transcriptase inhibitor, cohort, antiretroviral regimen

ACHIEVING CD4+ T-CELL GOAL AND COMPLETENESS OF FOLLOW UP IN SILCAAT

Harrod, ME[1], Collins, G[2], Jacoby, S[1], Pett, SL[1], Courtney-Rodgers, D[1], Carey, C[1], Emery, S[1], Cooper, DA[1] on behalf of the SILCAAT study group
Institutional Affiliation: [1]National Centre in HIV Epidemiology and Clinical Research (NCHECR), Darlinghurst, NSW, Australia, [2]Department of Biostatistics, University of Minnesota, Minneapolis, USA.

SILCAAT is an open-label study comparing the effects of SC rIL-2 vs. no SC rIL-2 on HIV-disease progression (ADI) and death in HIV-1-infected individuals over 5-7 years. Participants have baseline CD4+ T-cells of 50-299 cells/µL and plasma HIV-RNA (VL) ≤10,000 copies/mL on stable antiretroviral therapy (ART). Induction with rIL-2 consisted of 6 rIL-2 dosing cycles (4.5 MIU bid for 5 days every 8 weeks) in year 1, followed by intermittent dosing cycles for the trial's duration. The aim of this paper is to describe the availability of follow up data and the response to IL-2 cycling in SILCAAT patients.

A total of 1,971 patients were randomised into SILCAAT. The data presented here are based on a cohort of 1,695 patient, 849 of whom were assigned to rIL-2. Overall, 12.2% (n=207) in the primary analysis cohort are lost to follow up. The reasons for loss to follow-up are not re-consenting to version 4.0 (n=164) after study sponsorship change, withdrawing consent (n=9) and non attendance (n=34) for the last 12 months. In Australia, 8 patients (6.3%) are lost to follow up. Median length of follow up as of November 2005 was 54 months.

Mean increase in CD4+ count after one year in IL-2 patients (n=683) was 153 cells/µL; patients receiving six cycles or more gained on average 175.9 cells/µL (n=502) and those receiving five or less cycles gained 90.9 cells/µL (n=181). Ten percent of patients did not experience a CD4+ T-cell increase. Within the past year, 49.9 % of patients are at CD4+ goal, defined as an increase of 125 cells and 175 cells above baseline for patients in the 50-199 (n=192) and 200-299 stratum (n=156) respectively. A further 32.7 % (n=228) of patients have an increase in CD4+ count but are not at goal; 17.4 % (n=121) of patients have had no increase in CD4+ count in the past year.

Australian sites have been relatively successful in maintaining patients on SILCAAT. Cycling with rIL-2 has a sustained effect on CD4+ T-cell count and increased cycling is associated with increased gains. Promotion of cycling is an important goal of the SILCAAT trial.

HIV GENOTYPE ALGORITHM COMPARISON OF CREST VERSION 9, CREST VERSION 12 AND STANFORD FOR THE DETECTION OF LOPINAVIR RESISTANCE

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Lopinavir is a common protease inhibitor drug which is taken in combination with ritonavir (Kaletra®). Protease inhibitors inhibit viral replication by preventing the cleavage of the virus into its active components. Prolonged exposure to antiretroviral drugs can lead to mutations in the virus making the patient resistant to therapy and may result in cross-resistance to a class of antiretrovirals. Resistance to lopinavir is not well defined. Algorithms are designed to help interpret drug resistance of genotyping results however different algorithms show varying results.

EDTA plasma was collected from ninety-five patient samples from Alfred hospital, Geelong hospital, Bendigo hospital and Hobart hospital from September 2004 through to November 2005. HIV genotype testing was performed using the Abbot Viroseq genotyping kit. The sequences were analysised using the CREST version 9 (v9), CREST version 12 (v12) and the Stanford algorithms to determine lopinavir resistance.

Analysis of patient sequences using CREST v9 indicated no patients showed resistance to lopinavir whereas Stanford showed 65% of patients were susceptible to lopinavir. In comparison the Stanford algorithm showed 10% of patients with high level resistance, 18% of patients with intermediate level resistance and 4% of patients with low level resistance.

Analysis using CREST v12 algorithm interpreted 26% of patients as resistant to lopinavir in comparison to 33% of patients when analysed using the Stanford algorithm. All patients that were resistant using the CREST v12 algorithm were resistant using the Stanford algorithm (9% with high level resistance, 16% with intermediate level resistance). Using CREST v12, 72% of patients were reported to be susceptible to lopinavir whereas using CREST v9 all patients were reported to be susceptible to lopinavir.

CREST v12 is more sensitive for interpretation of lopinavir resistance than CREST v9. The CREST v12 algorithm produced similar resistance profiles to those from Stanford algorithm, however the Stanford algorithm interpreted more patients as resistant to lopinavir and provided more classification of resistance. Further investigation into individual mutations that may confer resistance is required.

REPORTING AND EVALUATION OF CLINICAL ENDPOINTS IN TWO PHASE III RECOMBINANT INTERLEUKIN-2 (RIL-2) STUDIES: ESPRIT AND SILCAAT

Lifson AR[1], Rhame F[2], Belloso WH[3], Dragsted U[4], El-Sadr W[5], Gatell JM[6], Hoy J[7], Krum EA[1], Nelson R[1], Pedersen C[8], Pett SL[9], Davey RT[10] for the ESPRIT and SILCAAT Research Group.
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ESPRIT and SILCAAT, are ongoing phase III, randomised, clinical endpoint studies evaluating the effects of subcutaneous rIL-2 plus antiretroviral therapy (ART) *vs.* ART alone on HIV-disease progression (ADI) and death in HIV-1-infected individuals. ADI include all CDC category C conditions plus 12 other infections/malignancies know to be associated with HIV-immunodeficiency. Both protocols share strict endpoint criteria and each reported event is reviewed by an endpoint review committee (ERC) who determine whether a case is a "confirmed", "probable" or "not meet criteria" for an endpoint.

To describe the reporting and evaluation procedures for ADI in ESPRIT and SILCAAT.

By May 2006, 473 events had been ERC-reviewed. Twenty-eight percent and 38% met criteria for a "confirmed" or "probable" end-point diagnosis respectively; 34% "did not meet the criteria." There were 15 ADI diagnoses with at least 5 events reported; the diagnoses most likely to be ERC-judged as "confirmed" or "probable" were cervical cancer (100%), non-Hodgkin's lymphoma (88%), cryptococcosis (82%), cryptosporidiosis (80%) and Hodgkin's lymphoma (77%). Seventy-five percent, 67% and 65% of reported cases of HIV encephalopathy, HIV wasting syndrome and multidermatomal *Herpes zoster* respectively were rejected as endpoints. Reasons for "rejections" included inadequate source documentation, lack of microbiological/radiological evidence and incompatible clinical syndromes. In 25% of reviews (n=116), cases were adjudicated after initial disagreement between ERC reviewers, of these, 12%, 44% and 44% were subsequently classified as "confirmed", probable" and "does not meet criteria" respectively.

It is critical in HIV clinical endpoint studies that procedures for reporting and review of ADI are standardised from the outset. Sites must provide high quality supporting documentation to avoid rejection of "real events". Moreover, the criteria against which events are judged should be reviewed periodically as "gold standard" tests for ADI change with the caveat that prior rejected or accepted events may need to be reclassified.

Exploding Community: Proliferation or Fragmentation ?
Philip Metcalfe Session
11.00am – 12.30pm

NUTLAND W
TERRENCE HIGGINS TRUST

Has gay community in the UK crumbled and disintegrated? Are a new generation of post-Thatcherite gay men discarding ‚community' for a consumer led individualism that disregards the needs and desires of those around them?
Is it true that ‚things ain't like they used to be?' or have gay men today ‚never had it so good?'. Research from the UK suggests that gay men's concepts and realities of ‚community' are burgeoning, dynamic and complex.
Based on research from the UK, I will argue that many constructs of gay ‚community' alienate gay men; that community attachment exploits rather than enables certain groups of men, including migrant gay men; and that tensions between gay men diagnosed pre and post-1996 further questions the concept of a unified ‚positive gay community'.

THROUGH A DARK GLASS CLEARLY: THE EMPLOYMENT AND ABERRATION OF COMMUNITY IN AIDS DISCOURSE

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

Taking as a point of departure Wittgenstein's aphorism "What can be said at all can be said clearly, and what we cannot talk about we must pass over in silence", this paper makes a plea for clarity in the employment of the term 'community'. The debates around the relevance of community to contemporary life, the 'death of community', and the transformation of community through globalisation are perennially obfuscated by a profound lack of conceptual clarity. If, rather than resorting to utopian-ist nostalgia or fantasism, or dystopic nihilism, we instead applied a critical gaze to the dynamism of social collectivity, we may find that community actually matters in the lives of gay men. This paper will examine community through the lenses of: population demographics; social category membership; homophily; affiliation; social practice; networks; and discursive social space.

FROM LIBERATION TO EQUALITY – THE CONSERVATISM OF GAY COMMUNITY IN THE AGE OF INDIVIDUALISM

Sean Slavin
Research Fellow
Australian Research Centre in Sex, Health and Society
La Trobe University

The contemporary period in Australia has seen the advance of neo-liberalism to an unrivalled hegemonic position. This has been accompanied by the virtual disintegration of the public sphere and the emergence of a cacophony of voices seeking to emplace the personal, the emotional and the domestic as the sole legitimate topics and spaces of social discourse.

While once the gay community was inherently political, forged in the struggle for gay liberation and later against AIDS, it has now become a more docile concept that describes the social expression of individual identity. Gay community might be just as well described as the gay market whereby consumption and expression are commensurable.

The hegemony of neo-liberalism finds expression in other fields. The struggle for liberation has been replaced by demands for equal rights to such normative institutions as marriage, which further fetishizes the personal and undermines the practice of politics in the public sphere.

The response to HIV has been rationalised and bureaucratised. Community organisations are hamstrung by their client status vis a vis government and the people they claim to represent could not be less engaged. With bureaucratisation comes conservatism, and through the process of rationalisation responsibility for health has shifted from the public to the private sphere, viz. individual gay men now make 'choices' about risk.

This paper challenges the diminishment of 'community' in the context of HIV prevention and gay men's health promotion and argues that the public sphere needs to be reclaimed as the political terrain through which progressive change might occur. Only through such a project might neo-liberal rationality be resisted and the goals of the Ottawa Charter for Health Promotion be realised.

REPRESENTING AND WORKING IN THE CONSTRUCT

Rankin I
AFAO

The community sector is a distinctive and vital pillar of the four sectors (Community, Health, Government and Research) in the Australian Partnership response to HIV/AIDS. In this early period of the 21st century we now have a history that facilitates critical reflection on the role and nature of being and drawing authority from our "communities". Just as the other sectors have experienced changes in their methods of operations, public engagement, reputation and achievements, so too have the community sector HIV based organisations.

A dynamic epidemic requires responsive organisations, especially those operating within changing environments such as the communities at risk of and living with HIV. Tracing the responses to changing understandings, opportunities and expectations hint at a range of potential futures for both community based organisations and the communities in which they are based.

Chair: Annmaree O'Keeffe, Australia's HIV/AIDS Ambassador
Lead presenters: Prof John Kaldor, National Centre in HIV Epidemiology and Clinical. Research; Dr Heather Worth, National Centre in HIV Social Research

AusAID Session
11.00am–12.30pm

'SHOULD WE WORRY ABOUT NUMBERS?' STRENGTHS AND WEAKNESSES OF HIV EPIDEMIC ESTIMATION

This session will reflect on the role of epidemic estimation and projection in guiding national responses. It will draw on lessons learned from a cross disciplinary study on the social, economic and security impacts of HIV on Indonesia, PNG and East Timor over the next twenty years. This session will consider the role of projection models in informing planning and supporting leadership, and the strengths and weaknesses of such models, particularly in the context of the recent study. A major constraint in modelling is the limited investment made by many countries in biological and behavioural surveillance and social research, and this also reflects on being able to predict the social and economic impact the epidemic will engender. Modelling needs to reflect the local complexity of epidemics but we have insufficient data on the nature of expanding epidemics in our region. Given the limitations to our knowledge, are there risks in over or under-estimating current or future HIV epidemics, and can these risks outweigh the benefits of conducting estimation and projection exercises?

The session will open with a presentation on the role of estimation and projection in guiding national responses. This will be followed by presentation of the methods and results of the recent study, as well as review of the implications of the work for national programs and policy.

Social Research - STI Testing and Experience
11.00am – 12.30pm

EVALUATION OF AN HIV AND STI TESTING CAMPAIGN TARGETING MEN WHO HAVE SEX WITH MEN IN VICTORIA, 2004

Goller J L[1,2], Guy R J[1,3], Leslie D[4], Lewis J[1], Batrouney C[5], Fairley C K[6,7], Ginge S[6], Hellard M E[1]
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2. Victorian Public Health Training Scheme, Department of Human Services, Melbourne, VIC, Australia
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4. Victorian Infectious Diseases Reference Laboratory, North Melbourne, VIC, Australia
5. Victorian AIDS Council, Gay Men's Health Centre, South Yarra, VIC, Australia
6. Melbourne Sexual Health Centre, Carlton, VIC, Australia
7. School of Population Health, University of Melbourne, Melbourne, VIC, Australia

In Victoria, between 1999 and 2005 annual HIV diagnoses rose by 104% (140 to 286) with 69 % of diagnoses among men who have sex with men (MSM). Notifications of sexually transmissible infections (STIs) among MSM also increased in this period. In 2004, the Victorian AIDS Council conducted a campaign entitled 'Check-it-Out'; the main objective to increase HIV / STI testing in MSM. To evaluate the impact on testing, we conducted a retrospective analysis of laboratory testing data from four Melbourne clinics with high case loads of MSM.

Between 2003 and 2004, the annual number of HIV and STI tests conducted among males increased: HIV by 2.9% (6603 to 6793), syphilis by 10.9% (6676 to 7513), gonorrhoea by 6.8% (9742 to 10403) and chlamydia by 11.1% (8992 to 9986). Between July 2002 and December 2004, there was no change in the monthly number of HIV tests in males ($p=0.48$) but a significant increase in the monthly number of STI tests; chlamydia by 6.4 tests per month ($p<0.001$) and gonorrhoeae by 6.5 tests per month ($p=0.002$) and syphilis by 4.0 tests per month ($p=0.001$). However the campaign did not influence this monthly trend of increasing STI tests.

While there was no evidence from this component of the evaluation that the campaign increased HIV / STI testing in Victorian MSM, the results highlight the importance of evaluating public health campaigns to inform the design of future interventions. Experience from this analysis also highlights the need for prospectively and purposively collected data. In March 2006, the Burnet Institute in collaboration with the Department of Human Services, the Victorian Infectious Diseases Reference Laboratory and Melbourne Sexual Health Centre implemented linked HIV / STI / hepatitis C sentinel surveillance at 17 clinics in Victoria. This system will provide demographic, risk behaviour and testing data for risk groups including MSM. The system will overcome limitations of retrospective data analysis and enable timely evaluation of future interventions in Victoria.

USING NEW TECHNOLOGIES TO INCREASE STI TESTING AMONGST GAY MEN IN INNER SYDNEY

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The use of technologies such as the Internet and sms messaging and e-mail notification systems are widespread and commonly used to promote the products and services of many organisations.

These technologies are the new additions to the www.whytest.org website and include an STI testing email/sms reminder and partner notification sms/email system. The website was redeveloped as part of an Party, Play Test Project for inner Sydney gay men.

This paper will explore the benefits and challenges of using new technologies to improve gay men's STI testing behaviours including the benefits of ubiquitous availability and familiarity with the internet and SMS messaging and comfort with new technologies.
Challenges of introducing the new technology included promoting the uptake of the sms and e-mail services. Issues around trust and privacy were key.

The campaign promotion focused predominantly on encouraging testing and promoting the website URL, it did not focus on promoting or explaining the web-site functions. Additional communication strategies that address this issue would need to used in future efforts.

HIV AND STI TESTING PRACTICES IN MSM AT TWO MELBOURNE GENERAL PRACTICES, 2000 TO 2004

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2. The Centre Clinic, St Kilda, VIC, Australia
3. Prahran Market Clinic, South Yarra, VIC, Australia
4. Victorian Infectious Diseases Reference Laboratory, North Melbourne, VIC, Australia
5. Department of Human Services, Melbourne, VIC, Australia

Between 1999 and 2005, Victoria experienced a six fold increase in syphilis notifications (16 to 116); 79% of diagnoses in 2005 were in men who have sex with men (MSM) and around half the infectious syphilis cases were co-infected with HIV. The Royal Australasian College of Physicians (August 2005) recommends annual testing for HIV and sexually transmissible infections (STIs) in MSM and more regular testing for men who attend sex-on-premises-venues, use recreational drugs or seek partners via the internet. We assessed implementation of these recommendations through analysis of HIV/STI testing data from two Melbourne clinics that see a high caseload of MSM.

We obtained HIV / STI laboratory testing data and data relevant to monitoring of HIV infections (2000–2004) from the Victorian Infectious Diseases Reference Laboratory for male patients attending the two clinics. Existing HIV infection was inferred using HIV diagnostic and monitoring results.

The proportion of males diagnosed with infectious syphilis increased over the five years; 0.0% in 2000 to 6.1% (95% CI 4.2 – 8.4) in 2004 among HIV positive men compared to 0.6% (95% CI 0.2 – 1.5) in 2000 to 1.4% (95% CI 0.9 – 2.0) in 2004 among HIV negative men. Annual syphilis testing increased more markedly among HIV positive men (523%, 90 in 2000 to 561 tests in 2004) compared to HIV negative men (168%, 677 in 2000 to 1814 tests in 2004). By year, an increasing proportion of HIV positive men were tested for syphilis (47.3% in 2000 to 81.4% in 2004), and all STIs (7% in 2000 to 31.1% in 2004). An increasing proportion of HIV positive men were tested for syphilis twice or more in a year (1.1% in 2000 and 20.1% in 2004).

Despite more regular STI testing of HIV positive men from two Melbourne clinics quarterly screening had not yet been achieved. In the United Kingdom and San Francisco quarterly syphilis testing of HIV positive males has been recommended as a strategy to control syphilis outbreaks. General practices that see a high caseload of MSM should consider internal STI testing policies that target HIV positive men as well as sexual behaviours.

SENDING OUT AN SMS: AN IMPACT AND OUTCOME EVALUATION OF THE WESTERN AUSTRALIAN DEPARTMENT OF HEALTH'S 2005 CHLAMYDIA CAMPAIGN

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The Western Australian Department of Health launched a 3-month chlamydia campaign in June 2005, aimed at increasing chlamydia testing in order to detect and treat undiagnosed infection, and reduce disease incidence. We undertook impact and outcome evaluation of this campaign.

Twenty-nine people aged 17-25 years were focus tested and 122 people aged 14-29 years were surveyed to investigate their awareness and opinions of this multi-media chlamydia campaign targeting young people, and to seek their recommendations on how to communicate sexual health information to young people. Forty-three general practice (GP) surgeries in the Perth metropolitan area were visited to examine the type, availability and standard of display of sexual health resources in GP waiting rooms, with particular focus on the chlamydia campaign resources. Chlamydia testing and notification data between 1 January 2005 to 30 September 2005 were analysed.

The majority of participants surveyed (63.2%) were aware of the chlamydia campaign. Recall of the campaign ranged from 27% for the website to 48.4% for the posters and print advertisements. Participants predominantly suggested television, radio, posters and magazines as effective media for communicating sexual health information and stated that they preferred to obtain this information through the internet or a health professional. Many participants suggested that sexual health should be promoted at schools and to younger audiences. The majority of participants (58.2%) rated SMS as an effective communication method. In the majority of GP waiting rooms audited (83.4%), the campaign posters and pamphlets were not displayed, however other sexual health pamphlets were available in 62.8%. Chlamydia testing increased during the campaign period by 21% in females and 29% in males, and notifications increased by 12% in females and 4% in males.

This study demonstrated a high level of awareness of the chlamydia campaign among the target audience. Their preferred media for communicating and obtaining sexual health information were television, radio, posters, magazines, the internet and health professionals.

This evaluation identifies SMS as an effective medium for communicating sexual health information to young people and demonstrates that targeted consumer and GP advertising can achieve increases in chlamydia testing and notification.

TIME SINCE LAST HIV TEST AND SEXUAL BEHAVIOURS OF HIV-NEGATIVE GAY MEN IN SYDNEY, AUSTRALIA

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Health and behaviour following HIV seroconversion have been substantially explored. However, the meaning of HIV negative test result and its effect on subsequent sex-related behaviours of gay men are unclear.

Ten consecutive cross-sectional Gay Community Periodic Surveys conducted during 2001-2005 at gay community venues, clinics and events used anonymous, self-complete questionnaires and collected information about sex behaviours and HIV status of gay men in Sydney, Australia. In a sample of 10,849 HIV-negative men, we estimated the association between time since last HIV test (< 6 months, 7-12 months, 1-2 years and more than 2 years) and sex behaviours in past 6 months, such as the number of casual partners, unprotected sex with casual partners (UAIC), sexual adventurism, drug use for sexual pleasure and HIV status disclosure.

In Sydney gay community, the rates and frequency of HIV testing have been increasing during 2001-2005. We also observed increases in UAIC, as well as in the use of viagra, crystal and other party drugs over the same time period. UAIC was most frequently reported in 6 months following the last HIV test (23% of men), and gradually decreased with time (18% of men with test in 7-12 months, 16% - 1-2 years, and 13% - more than 2 years following the test). Similar declines with time since the last test were observed in searching for casual partners on the Internet, using viagra, crystal or other party drugs. Disclosure of HIV-negative status to casual partners followed a similar decrease with time since last test, as well as being told by a partner about his status.

Although men with multiple sex partners and high self-perceived risk of HIV may undertake HIV testing more frequently, the inverse association between time since last HIV test and subsequent sex behaviours may indicate that gay men may perceive a negative HIV test result as reassurance of their low susceptibility to HIV. Therefore, in a period following HIV testing they may engage more often in behaviours that sustain HIV epidemic in gay community.

M CLINIC: A DEDICATED EVENING CLINIC FOR MEN WHO HAVE SEX WITH MEN TO INCREASE TESTING FOR SEXUALLY TRANSMITTED INFECTIONS

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Rates of sexually transmitted infections (STI)s among men who have sex with men (MSM) remain high in Sydney. Regular STI testing is recommended as one aspect of STI control, in order to reduce the duration of infection. During February 2006, a dedicated evening clinic for MSM, the 'M Clinic' was established at Sydney Sexual Health Centre (SSHC) to coincide with an STI testing awareness campaign developed by the STI in Gay Men Action (STIGMA) group. This paper will describe the development, social marketing and evaluation of the M Clinic.

We undertook a client survey in August 2005, the results of which showed that MSM clients preferred early evening times for appointments. The original evening clinic for general clients was not running at full capacity, therefore it was decided to reorient this clinic to target MSM only.

Social marketing techniques for promoting the M Clinic included logo branding and resource development in consultation with MSM clients. After focus group testing, the clinic was named 'M Clinic' which participants felt sounded serious, relevant to men and yet not too sexually provocative. The logo was used for promotional cards and all subsequent health promotion materials. The cards were distributed to sex-on-premises-venues, healthcare providers and gay community events.

Evaluation aims to determine whether provision of the M Clinic has increased the uptake of STI check ups and sexual health services by MSM. Preliminary data shows a 20% increase in MSM attendance at SSHC and higher rates of kept appointments compared to the previous evening clinic. An increase in men using SSHC counselling services during M Clinic hours has been noted.

Further data, including demographics, reason for attendance, diagnosis and sexual behaviour of MSM attending the clinic, will be presented.

CALD Workshop
11.00am – 12.30pm

ENGAGING THE CULTURALLY AND LINGUISTICALLY DIVERSE COMMUNITIES THROUGH THEIR MEDIA: A WORKSHOP

Paljor S, Luisi B and Montigny C

The launch of the new Australian HIV/AIDS and hepatitis C strategies marks the first time people from CALD background is identified as a priority group. While this is a welcome step in keeping the focus, the choice of CALD population also presents key challenges to the incumbent HIV and hepatitis C workforce in negotiating numerous cultural institutions within these priority communities.

Multicultural HIV/AIDS and Hepatitis C Service (MHAHS) employ bilingual staff from more than 20 language backgrounds to work successfully with numerous CALD communities in the area of HIV, hepatitis C and harm minimisation. Over the years it has implemented numerous state and national level ethnic media campaigns to increase awareness of HIV, hepatitis C and harm minimisation in specific communities.

This paper will workshop an overview of the template used by MHAHS in engaging with numerous ethnic media outlets and consequently with their respective communities. The workshop will also explain how working with the ethnic media and building a culturally competent HIV and AIDS workforce are inter-related.

Recent Trends in HIV Epidemiology
Margaret Macdonald Session
1.30pm – 3.00pm

ANAL SEXUALLY TRANSMISSIBLE INFECTIONS AS RISK FACTORS FOR HIV SEROCONVERSION: DATA FROM THE HIM COHORT

Jin F[1]; Prestage G[1]; Mao L[2]; Kippax S[2]; Pell C[3]; Donovan B[1,4]; Templeton D[1]; Cunningham P[5]; Kaldor J[1]; Grulich A[1].
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5. St. Vincent's Hospital, Sydney, Australia

Sexually transmitted infections (STIs) are believed to increase the risk of HIV acquisition, but there are relatively few studies in homosexual men. As HIV infection is mostly transmitted in this population through receptive anal intercourse, we examined anal STIs as risk factors for HIV seroconversion in a community-based cohort of homosexual men in Sydney.

The Health in Men cohort recruited participants from 2001 to 2004, and they were interviewed twice a year. By June 2005, participants had been followed for a median of 2.0 person years (PY), and 87% attended at least one follow up visit. Men were tested annually for HIV, and for gonorrhoea and chlamydia in the urethra and anus (strand displacement amplification, BDProbeTec). Participants also reported diagnoses of STIs since their last interview. Detailed information on sexual risk behaviours was collected every 6 months. Hazard ratios (HR) were calculated using Cox regression.

Among 1,427 participants enrolled, there were 38 HIV seroconversions by June 2005, an incidence of 0.94 per 100PY. A higher number of episodes of insertive and receptive UAI with HIV positive or HIV status unknown partners was each significantly associated with HIV seroconversion. In multivariate analysis of behavioural risk factors, HIV seroconversion was significantly associated with a higher number of episodes of receptive UAI with a partner of unknown HIV status (p trend<0.001) or with a partner known to be HIV positive (p trend<0.001). After controlling for these sexual behaviours, a study diagnosis of anal gonorrhoea remained strongly related to HIV seroconversion (RR=13.61, 95% CI 3.93-47.14). Most cases of anal gonorrhoea diagnosed were asymptomatic. Reporting anal warts was also associated with increased HIV incidence (RR=2.85, 95% CI 1.08-7.52).

HIV incidence in homosexual men in Sydney is about 1%. In addition to receptive UAI with HIV status unknown or HIV positive partners, certain anal STIs were independently associated with HIV seroconversion. Asymptomatic anal STIs may be important cofactors in HIV transmission. These findings suggest that frequent sexual health screening and prompt treatment of anal STIs may be an important means of HIV prevention in homosexual men.

SUSTAINED INCREASE OF HIV DIAGNOSES IN VICTORIA: EPIDEMIOLOGY AND TESTING

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4. The Centre Clinic, St Kilda, Victoria, Australia
5. The Carlton Clinic, Carlton, Victoria, Australia
6. The Prahran Market Clinic, Victoria, Australia

In Victoria annual HIV diagnoses have increased by 104% in the past seven years. This paper describes the Victorian HIV epidemiology using passive and sentinel surveillance data.

Passive HIV surveillance involves "case reporting" of new HIV diagnoses by doctors and laboratories to the Burnet Institute (on behalf of the Department of Human Services). Enhanced epidemiological data are also collected on each case. HIV sentinel surveillance is conducted at five medical clinics with a high case load of MSM and involves the collection of demographic, HIV and STI testing and sexual risk behaviour data on all MSM undergoing HIV testing.

In Victoria annual HIV diagnoses have increased by 104% in the past seven years (140 in 1999 to 286 in 2005), with a 28% increase between 2004 and 2005. The 2005 total is the highest since 1991. Over time an increasing proportion of diagnoses has arisen from MSM; 57% in 1999 to 72% in 2005. These 286 new diagnoses include 28 (10%) individuals who had been previously diagnosed positive in other states/territories and were tested in Victoria for confirmatory reasons, compared to eight cases (4%) in 2004. However, after excluding cases previously diagnosed positive interstate there was still a marked increase in HIV diagnoses in 2005; 258 cases in 2005 compared to 215 in 2004. Between 2004 and 2005 sentinel surveillance showed there was no statistically significant change in the number of HIV tests conducted per month among MSM and the proportion of MSM testing positive for HIV increased from 1.3% to 2.0%.

These data suggest there was a true increase in HIV diagnoses in 2005 as well as an increase in confirmatory testing reflecting enhanced efforts by the Victorian Infectious Diseases Reference Laboratory (VIDRL) to ensure all patients who are undergoing viral load testing have a documented HIV test. Based on sentinel surveillance data, the increase was unrelated to testing practices. Therefore, changes in sexual behaviour among MSM, increased STIs and increasing HIV prevalence among MSM are more likely to be contributing factors. Interventions need to be implemented immediately to curb the steep rise in HIV diagnoses observed.

DIFFERENCES IN TRENDS IN BEHAVIOUR AMONG GAY MEN IN BRISBANE, MELBOURNE AND SYDNEY

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The Gay Community Periodic Surveys conducted in Sydney, Melbourne and Brisbane have indicated changes in rates of unprotected anal intercourse (UAI) among gay men over time. Recent differences in trends in the rates of new HIV diagnoses among gay men in the three jurisdictions may be related to differences in trends in behaviour.
Repeated, cross-sectional surveys were conducted using anonymous, self-complete questionnaires with recruitment at gay community venues, clinics and large gay community events. Although these surveys commenced earlier, they have only been conducted consistently every year in all three cities since 2000.
Among men who reported sex with HIV sero-nonconcordant regular partners in the previous six months, there were significant upward linear trends for unprotected anal intercourse (UAI) with those partners among Sydney men (43.6% in 2000, 47.0% in 2002 and 48.3% in 2005; p=.01) but not among Melbourne or Brisbane men. Among HIV-negative men who reported sex with casual partners in the previous six months, there were significant upward linear trends for UAI with those partners among Melbourne men (22.2% in 2000, 29.3% in 2002 and 27.7% in 2005; p=.009) and among Brisbane men (25.3% in 2000, 30.0% in 2002 and 30.4% in 2005; p=.023) but not among Sydney men (27.3% in 2000, 29.3% in 2002 and 25.9% in 2005). Among HIV-positive men there were no overall significant trends in UAI with casual partners in any of the cities.
Absolute differences in behaviour across the three cities are relatively small in general. Since 2000, UAI with casual partners has remained stable among HIV-negative men in Sydney, but has increased in Melbourne and Brisbane. Trends in new HIV diagnoses may reflect these differences in trends in behaviour since 2000.

UPDATE FROM THE SEROCONVERSION STUDY: FAILURES OF HIV RISK REDUCTION IN GAY MEN

Jin F[1], Prestage G[1], Kippax S[2], Ellard J[2], Kaldor J[1], Grulich A[1] and the PHAEDRA/CORE01 study group
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Homosexual men have adopted risk reduction behaviours in which unprotected anal intercourse (UAI) occurs while minimising, but not eliminating, the risk of HIV infection. For HIV-negative men, these behaviours include sero-sorting (only having UAI with HIV negative partners), strategic positioning (having insertive but not receptive UAI), and having UAI with HIV-positive partners only when they have undetectable viral load. We aimed to document situations where such behaviours failed to prevent HIV acquisition.

Participants were recruited from the PHAEDRA/CORE studies, which enrol individuals with newly diagnosed primary HIV infection in Sydney and Melbourne. Participants who contracted HIV through homosexual contact were invited to complete a questionnaire-based interview on behavioural risk factors associated with HIV infection.

From September 2002 to June 2006, 156 men (66% of those eligible) were recruited. A high risk event (HRE) which had probably led to HIV seroconversion was identified by 141 (90%). In 51 (36%) men, the HRE occurred at the partner's home, 41 (29%) reported it was at their own homes, and in 34 (24%) the HRE occurred at a sex on premises venue. There were 39 men (29%) who reported the source person to be a regular partner, 90 (68%) reported casual partners, and another 4 (3%) reported both. The source person was believed to be HIV-negative at the time of the HRE in 23 men (17%). UAI was reported by 100 (71%) men at the HRE. In 10 men the highest risk behaviour reported was insertive UAI. Receptive UAI was reported by 20 (87%) of the 23 who perceived the source person to be HIV-negative, compared to 58% among men who thought the source person was HIV sero-nonconcordant (p=0.01). In 26 men, regardless of whether they knew the source person's HIV status at the HRE, the HIV viral load at the HRE was now known to the participant at the time of interview. Ten (38%) reported that the source person had undetectable viral load. Among them, 9 reported receptive UAI.

Nearly one third of new HIV infections in homosexual men may have been due to failures in HIV risk reduction.

PREVALENCE AND TYPES OF ANAL HPV INFECTION IN HOMOSEXUAL MEN WITH AND WITHOUT HIV INFECTION

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Homosexual men are known to be at greatly increased risk of HPV-related disease, including anal cancer and genital warts. There are few data on the prevalence of HPV and the range of genotypes in this population.

We performed a cross sectional study of HPV prevalence in anal ThinPrep specimens collected for anal cytology in consecutively presenting participants in the Health in Men and positive Health (pH) studies of HIV negative and HIV positive homosexual men in Sydney. HPV testing was performed using the Digene Hybrid Capture (HC) assay for detection of both high-risk (HR) and low-risk (LR) genotypes. For a subset of men in whom pre cytology-processing specimens were available, testing to determine HPV genotype was performed using Roche linear array.

HC HPV testing was performed on 310 men. After exclusion of 16 samples with inadequate volume, HC results were available in 293 (178 HIV negative, 115 HIV positive). Genotype results were available on a subset of 133 men with pre-processing samples available (36 HIV negative, 97 HIV positive). Using the HC test, HPV infection was detected in 81% (LR 57%, HR 69%). HIV positive men were more likely than HIV negative men to have LR genotypes (OR 3.6, 95% CI 2.1-6.1) and HR genotypes (OR 5.5, 95% CI 2.8-11). HIV positive men had a mean of 7.1 HPV types compared to 4.2 in HIV negative men; this was significant for both HR and LR types ($p < 0.001$ for each). Of the LR types, 6 or 11 were present in 37% of men, and there were 13 separate LR types for which the prevalence was at least 10%. Of the HR types, 16 or 18 were present in 39% of men, and there were 11 separate HR types for which the prevalence was at least 10%.

Anal HPV infection was nearly universal in these homosexual men. A wide variety of HPV types was present, and infection with multiple subtypes was the norm. These data suggest that HPV vaccines for homosexual men will need to be targeted against a wider range of HPV types than currently available.

THE CASE FOR AIDS SURVEILLANCE IN THE HAART ERA

McDonald AM, Jauncey M and Kaldor JM for the National HIV Surveillance Committee.
National Centre in HIV Epidemiology and Clinical Research, Sydney

National AIDS surveillance was established in Australia to monitor the pattern of advanced immunodeficiency due to HIV infection. Due to the effectiveness of antiretroviral treatment (ART) in delaying progression to AIDS and limiting AIDS related morbidity, the value of continued monitoring of AIDS has been questioned.

In Australia AIDS is defined as a case of laboratory confirmed HIV infection with a diagnosis of one or more illnesses indicative of advanced immunodeficiency. AIDS was made notifiable by doctors in all State/Territory health jurisdictions in Australia by 1985. Information sought at AIDS notification includes the date and country of birth of the person, the date of AIDS diagnosis, the ADI, CD4+ cell count, the person's report of exposure to HIV and the date of last medical contact or date of death.

Following the introduction of combination ART for HIV infection in mid 1996, AIDS incidence dropped from around 950 cases in 1994 to 200 – 250 cases each year in 2000 – 2005. National AIDS surveillance provided evidence of an increase in CD4+ cell count at AIDS diagnosis among those cases for which HIV infection was diagnosed at least three months prior to AIDS, and an increased proportion of AIDS diagnoses among cases for which HIV infection was newly diagnosed within 3 months of AIDS (defined as late HIV diagnosis). National AIDS surveillance has also provided evidence of declining population incidence rates of diagnosis of Kaposi's sarcoma and non-Hodgkin's lymphoma, improved survival following specific ADI and estimates of the number of AIDS cases averted due to ART use. Cohort studies may also provide information on the outcome of HIV infection but they are costly to establish and maintain, and their results may not be readily generalisable.

National AIDS surveillance has provided a population-based measure of the continuing effectiveness of ART in delaying progression to AIDS in Australia. However, the long term sustainability of ART in delaying AIDS is not known. Ongoing national AIDS notification is required to provide cost effective and population-based measures of AIDS incidence, morbidity and mortality in Australia.

Issues in HIV Affecting CALD Communities
1.30pm – 3.00pm

SEX AND DEATH: THE IMAGE OF HIV/AIDS IN VICTORIA'S AFRICAN COMMUNITIES

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African Australian people living with HIV/AIDS (PLHA) experience stigmatisation and avoidance from their communities, and this situation affects their quality of life and their access to adequate treatment. Understanding the origin of community attitudes may identify means for increasing the social support available to African Australian PLHA through community education.

We conducted a community-based qualitative inquiry among African communities in Victoria, in order to examine their knowledge of HIV and its transmission. We conducted 47 in-depth interviews with key informants and 17 focus group discussions with members of Victoria's Ethiopian, Eritrean, Somali, Sudanese and Coptic Egyptian communities, as well as providers of health and social services. These interviews and discussions explored issues of HIV transmission, diagnosis, and socio-cultural context, as well as current and preferred sources of information for these communities about HIV/AIDS.

Several factors contribute to fear and avoidance of PLHA within African communities: HIV is seen as a highly contagious, fatal disease without effective treatment, there is awareness of the actual routes of HIV transmission (sexual, blood-borne, and mother-to-child), but it is thought to spread in many other ways, such as casual contact, insect bites and sharing of household utensils. Despite this perception, PLHA are assumed to have acquired the infection through sexual behaviour that is viewed as immoral by the community. We discuss these perceptions and the apparent contradiction between the assumption of sexual acquisition of HIV infection and the fear of contagion through casual contact with PLHA.

We suggest that HIV/AIDS community education should place more emphasis on the absence of risk of HIV infection in most interactions between infected and non-infected people in African communities. Reducing community fear and avoidance of people living with HIV/AIDS, may improve their access to social support and health care services. It may also remove some barriers to screening and diagnostic testing, and improve the chances of early detection of asymptomatic HIV infection.

'THAT HIV VIRUS' – THOUGHTS AND EXPERIENCES OF CAMBODIANS DIAGNOSED WITH HIV IN VICTORIA

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In Victoria, the number of HIV diagnoses attributed to heterosexual contact increased from 146 diagnoses between 1995 and 1999 to 225 between 2000 and 2004; greater than 50% of diagnoses were from or had sexual partners from a country of high HIV prevalence (>1%); sub-Saharan Africa, Cambodia and Thailand.

A cross-sectional case series study was conducted among Cambodians diagnosed with HIV in Victoria who were clinically managed by two large hospitals with appointments over a three month period. A quantitative and open-ended questionnaire was administered to participants with the main aims of the study being to describe the experience of the participants when diagnosed with HIV and use of HIV treatment and support services.

Of the 13 Cambodians eligible, eight were recruited; five males and three females. Six of the participants had never been tested for HIV before their first positive test and when diagnosed seven were tested at a GP (n=4) or hospital (n=3) due to exhibiting clinical HIV/AIDS symptoms. At diagnosis, only three were provided with information about treatment, management and living with HIV. All participants saw a HIV specialist for their ongoing management of HIV. None of the participants had used HIV support services in the last 12 months. Three participants had not disclosed their HIV status to anyone outside of their medical team. More detailed response from open ended questions will also be presented.

The majority of Cambodians in this study presented late with HIV, which could be related to language and cultural barriers preventing access to information about health services for HIV and/or a lack of recognition by clinicians about the risk of HIV in Cambodian migrants and the need for HIV testing. A minority of participants received HIV information at the time of diagnosis, which may be due to lack of culturally and linguistically appropriate material and/or the inability for the doctor to communicate effectively to the patient. Service utilization outside of the HIV specialist and disclosure of HIV status was limited therefore having a Khmer speaking HIV advocacy agent or social worker present during clinic times may provide a support service this population may not otherwise utilise.

SEX WORKERS FROM CULTURALLY AND LINGUISTICALLY DIVERSE BACKGROUNDS REQUIRE CULTURALLY APPROPRIATE AND LANGUAGE SPECIFIC HIV/AIDS OUTREACH AND EDUCATION: MULTICULTURAL SEX WORKER PROJECTS IN AUSTRALIA DELIVER HIGH QUALITY SERVICES TO MEET THE NEEDS OF THESE TARGET GROUPS

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Sex worker communities in Australia have excelled at sharing information and supporting one another to employ high levels of self protection from HIV and STI's. Culturally and linguistically diverse sex workers require culturally appropriate and linguistically targeted services from their sex worker organisations. Multicultural projects targeting culturally and linguistically diverse sex workers use peer education to communicate HIV and STI education, and to build trust and dialogue with migrant and culturally and linguistically diverse sex worker communities. These communities are predominantly Asian; Thai, Chinese, Indonesian, Korean, Japanese, Chinese and Filipino. These sex workers experience diverse issues: migration, isolation (coming from small communities within Australia, distance from home, lack of family and support in Australia), disclosure and confidentiality issues within their community, language barriers, lack of access to recourse to justice (if non-citizens), access to appropriate services, industrial and employment arrangements that are unconventional in Australia (contracts), attention from Immigration officials and the Australian Federal Police in relation to trafficking allegations, prejudicial views about Asian women working in the sex industry and racism. The multicultural projects of sex worker organisations and projects recognise and understand these issues. In this presentation they will explain the work that they do, the way that their projects are resourced, the services that they most interact with, and the barriers that must be overcome to improve their work. There are currently three multicultural projects for sex workers in Australia with a total of 5 part time staff. These peer educators nationally constitute the Scarlet Alliance Migration Working Party. Through local outreach and national discussion the educators have a comprehensive understanding of culturally and linguistically diverse HIV/AIDS education for sex workers in Australia and by the end of the workshop you will also!

LATE HIV DIAGNOSIS OF PEOPLE FROM CULTURALLY AND LINGUISTICALLY DIVERSE BACKGROUNDS AND PERCEPTIONS OF 'RISK'

Körner, H.
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While the vast majority of newly diagnosed HIV infections in Australia in 1999–2003 were among gay and homosexually active men, among people from culturally and linguistically diverse (CALD) backgrounds there was a much higher proportion of heterosexual exposure. There was also a higher proportion of 'late' diagnoses and presentation with symptoms of AIDS. This paper reports on circumstances of late HIV diagnosis among HIV-positive people from a variety of cultural and ethnic backgrounds, the meaning of an HIV-positive diagnosis and perceptions of risk. The focus was on commonalities across cultures and ethnicities.

Data were collected through semi-structured in-depth interviews with 29 clients of the Multicultural HIV/AIDS and Hepatitis C Service and a sexual health clinic in Sydney.

An HIV test was usually motivated by a serious health crisis and initiated by health care professionals, not the participants themselves. Regular HIV tests among gay men were the exception. Participants were not aware of the relationship between HIV and AIDS. They interpreted an HIV diagnosis in the context of their knowledge and experiences with HIV/AIDS in their country of birth and the perceptions of HIV/AIDS in their ethnic communities in Australia. Risk was perceived in terms of 'risk group' membership not in terms of practices and behaviours. This perception of risk was also found among some GPs from CALD backgrounds.

Late diagnosis cannot be explained solely by association with country of birth, race or ethnicity. Rather, it is located within complex sets of social and cultural relations: the values attributed to HIV/AIDS and those infected, and the social and cultural relations of ethnic communities in Australia and mainstream society. These are enacted in health care seeking behaviour, perceptions of people with HIV, and perceptions of being 'at risk'.

BIRTHPLACE AND AIDS INCIDENCE IN AUSTRALIA, 1996 –2005

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AIDS does not affect all populations evenly. Differences in AIDS incidence occur both across and within countries. We describe demographic factors associated with AIDS incidence in Australia by region of birth.

Information on country of birth, year of arrival in Australia, date of HIV and AIDS diagnosis in Australia, age and exposure to HIV was extracted from the National AIDS Registry. Country of birth was categorised into nine regions using the Standard Australian Classification of Countries for Social Statistics (ABS). Age standardised AIDS incidence per capita resident population in Australia was calculated.

By 15 May 2006, 2,922 AIDS cases, newly diagnosed in Australia in 1996 – 2005, had been notified to the National AIDS Registry. Age standardised AIDS incidence among Australian born cases and cases born outside Australia declined from 2.0 and 2.2 per 100,000 population, respectively, in 1996 – 2000 to 1.1 and 1.4 in 2001 – 2005. In both 5 year intervals, AIDS incidence was highest among cases from sub-Saharan Africa (6.0 and 5.0 per 100,000 population) and South/Central America (4.8 and 2.7 per 100,000 population). Of 58.8% (505/859) of cases with reported year of arrival, median duration of residence prior to AIDS diagnosis was longest (26 years) for cases born in Europe, excluding United Kingdom and Ireland, and was 3 years, 7 years and 12 years for cases from sub-Saharan Africa, Asia and South/Central America, respectively. Exposure to HIV was attributed to male homosexual contact for 71.8% of Australian born cases and 69.4% of cases born in other industrialised countries, whereas it was attributed to heterosexual contact in 71.3%, 46.3% and 24.4% of cases from sub-Saharan Africa, Asia and South/Central America, respectively. In 2001 – 2005, HIV infection was newly diagnosed within 3 months of AIDS diagnosis in 31.2% of cases born in Australia and other industrialised countries and was 55.4%, 58.7% and 39.0% among cases from sub-Saharan Africa, Asia and South/Central America, respectively.

The recent pattern of AIDS incidence among Australian born cases was broadly similar to that among cases born in other industrialised countries whereas AIDS incidence among cases from sub-Saharan Africa and Asia was affected by late HIV diagnosis.

SEX WORKERS FROM CHINESE BACKGROUND IN AUSTRALIA PLACE HIGH LEVELS OF IMPORTANCE ON CONFIDENTIALITY AND TRUST FROM HIV SERVICE DELIVERY; RECENT EXPERIENCES OF ETHICAL BREACHES ILLUSTRATE THE NEED FOR UNAMBIGUOUS STRATEGIES WHEN TRAVERSING THE BOUNDARIES OF DISCLOSURE

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Chinese migrant sex workers in Australia place value on close cultural ties within the Chinese community in Australia. They gain much of their health support, HIV education, migration information and work practices from within the Chinese migrant sex worker community. This small community is a subset of the Chinese migrant community however individuals generally do not disclose their sex work status to non-workers. Privacy, confidentiality and control over disclosure are highly valued within this community and as such HIV education must be designed and funded with this in mind. Chinese multicultural peer education to migrant sex workers is relatively new and includes working with those that are newly arrived. These educators are working from the predominantly white and English speaking HIV/AIDS sector, and as such are working without Chinese-specific mentoring. These case studies of ethical breaches in relation to disclosure of sex work status within the Chinese migrant community illustrates the long term effect confidentiality issues have on that community. Loss of trust affects the ability of peer educators to communicate health messages and has negative effects on the health of the communities concerned. Specific strategies need to be developed to assist the Chinese migrant sex worker community to communicate issues and needs to the broader Chinese migrant community and mainstream HIV/AIDS services in Australia.

'Sex' TIs – Clinical
1.30pm – 3.00pm

NADIR CD4 COUNT PREDICTS ABNORMALITIES IN PAP SMEAR: WOMEN'S HEALTH IN A RESOURCE-LIMITED SETTING

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There are limited data guiding clinical care for HIV infected (HIV+) women in resource limited settings (RLS). We conducted this cross sectional study to examine associations between demographic, behavioural and clinical features and the presence of clinically important cervical cytological abnormalities in a cohort of HIV+ women in Bangkok, Thailand.

Pap smear and cytological examination was performed in 370 HIV + women with no gynaecologic symptoms. Prevalence of high grade squamous intraepithelial lesions (HSIL) was estimated and logistic regression models were used to examine associations with patient characteristics. Nadir CD4 count (nCD4) was defined as the most recent CD4 count before beginning antiretroviral therapy (ART), or CD4 count at time of pap smear for ART naïve patients.

42% of patients were ART naïve; 51% had a previous pap smear; 16% had a history of smoking; 60% were taking oral contraceptives (OC). Overall prevalence of low grade SIL was 11.2% and of HSIL was 5.2% with no significant difference between ART naïve and experienced women. There was a significant association between HSIL development and nCD4, and age at first intercourse. Neither smoking, OC use, ART use, condom use, income, parity nor partners/month were significant. After adjusting for other covariates in multivariate models, only nCD4 remained significantly associated with HSIL ($p = 0.006$). Compared to patients with nCD4 greater than or equal to 200 cells/mm^3 the odds ratio (OR) for developing HSIL was 3.1 (95% confidence interval 1.14 - 8.58) in those with nCD4 < 200cells/mm^3.

Nadir CD4 count was the most important predictor of HSIL development in this cohort of HIV+ women, and those with nCD4 < 200 cells/mm^3 had a significantly greater risk of HSIL development than those with nCD4 greater than or equal to 200 cells/mm^3. In RLS, all HIV+ women presenting with nCD4 < 200 should have frequent pap smears because of the risk of cervical cancer.

HERPES SIMPLEX VIRUS TYPES 1 AND 2 (HSV-1 AND HSV-2) AND HIV INFECTION IN HOMOSEXUAL MEN: DATA FROM THE HIM COHORT

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[7]Sexually Transmitted Infections Research Centre, University of Sydney, Australia.

HSV-2 infection has been reported to be a predictor of HIV seroconversion, and intervention studies are examining whether herpes therapy in HSV-2 seropositive people will prevent HIV infection. Reports that HSV-1 is becoming a common cause of genital herpes led us to examine the association between both HSV types and HIV acquisition.

Community-based strategies were used to enrol 1,427 initially HIV-negative homosexual men between 2001 and 2004 in Sydney. They were followed for a median of 2.0 person years (PY), and 87% attended at least one follow up visit. Men were tested annually for HIV, and for HSV-1 and HSV-2 using type specific ELISA, with Western Blot testing of specimens of borderline reactivity. Detailed data on sexual behaviour was collected 6 monthly. Hazard ratios (HR) were calculated using Cox regression, and were adjusted for reporting unprotected anal intercourse.

Seroprevalence of HSV-1 and HSV-2 at baseline was 75% and 23% respectively. In men aged less than 25, the seroprevalence was only 54% and 9%. In a multivariate model, infection with each HSV type was related to numbers of sexual partners of each sex. Among those susceptible at baseline, there were 33 seroconversions to HSV-1 and 28 to HSV-2, an incidence of 5.58 and 1.45 per 100PY, respectively. Incident infection with HSV-1 was more common in the young (11.5 per 100PY in those aged less than 25) and was related to frequent insertive oral sex with casual partners (HR 3.91, 95% CI 1.23-12.44, p=0.021). There were 38 HIV seroconversions, an incidence of 0.94 per 100PY. Baseline HSV-1 seropositivity, but not baseline HSV-2 seropositivity was related to HIV infection (HR 3.60, 95% CI 1.10-11.73 for HSV-1 and HR 1.22, 95% CI 0.59-2.52 for HSV2). After adjustment for unprotected anal intercourse, the association with HSV-1 was of borderline significance (HR=2.89, 95% CI 0.88-9.52).

HSV-1 was commonly sexually transmitted, particularly in the young, and prevalent infection was associated with incident HIV infection. HSV-1 associated genital herpes may be a neglected co-factor predisposing to HIV infection. This has implications for future trials of anti-herpes therapy in HIV prevention, and in public health strategies targeting genital herpes.

PARTNER NOTIFICATION FOR *C TRACHOMATIS:* CAN THE INTERNET ASSIST GPS?

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Objectives: To determine if General Practitioners (GPs) would use a web site to obtain a partner letter, treatment guidelines and patient brochure to assist with partner notification that appeared on laboratory results positive for *C trachomatis*.

Methods: Two surveys of GPs in Victoria were conducted before and after the initiation of a website that provided treatment guidelines, a printable client brochure and a partner letter for patients diagnosed with *C Trachomatis*.

Results (preliminary): 237 of 499 GPs (47%) participated in the first survey, whilst 109 of 237 GPs (46%) have participated in the second survey thus far. In the web site arm, 107 positive *C trachomatis* results were sent to GPs with the website address and a unique password and there were 59 (55%) website viewings. Partner letters (P = 0.04) and client brochures (P = 0.002) were used more frequently by GPs who had access to the website than GPs who didn't.

Conclusions: When a website was provided with useful documents on it up to 55% of GPs used it. GPs who had access to the website were more likely to provide a partner letter and patient brochure for clients to pass onto partners. This indicates that simple and inexpensive interventions can support general practitioners with strategies that may improve the control of *C Trachomatis*.

*This study will be completed by June 2006. Complete results will be presented at the conference.

LYMPHOGRANULOMA VENEREUM: THE FIRST FOUR CONFIRMED CASES IN NEW SOUTH WALES

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Background
Lymphogranuloma venereum (LGV) is a systemic sexually transmitted disease caused by C. trachomatis serovars L 1, 2 and 3. Until recently it has been rarely described in developed countries, mainly occurring in travellers returning from endemic areas. However there are increasing reports of cases in homosexual males in Europe and North America. We report the first four cases in New South Wales.

Methods
One hundred rectal swabs from homosexual men that were positive for C. trachomatis by Strand Displacement Analysis (BD Probe Tec™) were analysed by real – time PCR specific for LGV strains and by conventional PCR targeting the Outer Membrane Protein (OMP) gene. The amplified products from the conventional PCR were sequenced to determine the C. trachomatis serovar.

Clinical
Patient 1: (HIV infected, CD4 298) Presented in October 2004 with rectal bleeding. Colonoscopy revealed ulcerated, granulomatous inflamed mucosa with contact bleeding. Biopsies were consistent with Crohn's disease.
Patient 2: (HIV infected, CD4 256) Presented in February 2006 for investigation of tenesmus, rectal bleeding and discharge. High resolution anoscopy demonstrated an extensive ulcer distal to the dentate line. The biopsy revealed non – specific ulcerative changes.
Patient 3: (HIV infected, CD4 571) Admitted in September 2005 for investigation of severe rectal pain and ulceration accompanied by fevers and night sweats. Microscopic examination showed extensive ulceration with mixed inflammatory reaction.
Patient 4: (HIV infected, CD4 386) Visited his general practitioner in November 2005 with anal ulceration. A swab was positive for Herpes simplex type 2 and C. trachomatis. Biopsies were not performed and his symptoms resolved with valaciclovir and a single dose of azithromycin.

Results
Sequencing confirmed all four patients with LGV were infected with serovar 2b. Sequences were identical for the conserved region examined.

Conclusion
This is the first report to confirm infection with LGV serovar 2b in New South Wales. It is essential to differentiate LGV from other sexually transmitted C. trachomatis infections to enable the appropriate therapy to be administered, thus avoiding significant long – term complications.

THE DEVELOPMENT OF NEW NATIONAL NON-OCCUPATIONAL POST EXPOSURE PROPHYLAXIS (NPEP) GUIDELINES

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A review and revision of the first Australian guidelines for the management and post exposure prophylaxis of individuals who sustain nonoccupational exposure to HIV was commissioned by the HIV, AIDS and STI subcommittee of the Ministerial Advisory Committee on AIDS, Sexual Health and Hepatitis in December 2005. This is against the background of the production of Victorian NPEP guidelines in September 2005, the release of updated WA and NSW guidelines 2005 and 2006 respectively and the publication of the first guidelines on NPEP by the US Centers for Disease Control in January 2005.

The main aim of the project was to critically review the published literature and update the guidelines based on the best evidence available. Since 2001 there has been little new evidence published, and many of the recommendations and guidelines regarding NPEP result from the extrapolation of findings from treatment studies as well as animal studies and mother to child transmission studies. There is no published evidence about NPEP efficacy.

Critical to the development of NPEP guidelines is establishing "per act" risk estimates for single exposures. There are very few studies designed to answer this question and these are confounded by the reliance on disclosure by participants of their sexual activities in addition to having to factor in contact with partners of both known and unknown HIV serostatus. It should also be noted that although these calculations allow for population based estimates, due to the very heterogeneous nature of HIV transmission, risk estimates for an individual following a single exposure are difficult to make.

The recommendations in these new guidelines have not changed considerably. One significant difference is the move to recommend 3 drugs for receptive anal sex or sharing of infecting equipment with a source known to be HIV positive in the absence of other cofactors such as high viral load or ARV resistance. A table of recommendations based on risk estimates has been established. The process of revision and the evidence and assumptions underlying the guidelines will be presented and explored.

SCREENING FOR *CHLAMYDIA TRACHOMATIS* AT THE TIME OF ROUTINE PAP SMEAR IN GENERAL PRACTICE: A CLUSTER RANDOMISED CONTROLLED TRIAL

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The implementation of guidelines for chlamydia screening in primary care has been hampered by practitioners' relative lack of knowledge of the benefits of testing, time pressures, limited technical expertise and concerns about discussing sexual health.

To test the hypothesis that chlamydia-screening rates would increase if chlamydia tests were combined with Pap smears, we conducted a community-based, single-blinded, cluster-randomized clinical trial in 2004/05.
General practices were eligible to participate if at least one doctor (GP) performed > 15 Pap smears a year. Eligible women were those aged 16 -39 years attending the practices for any reason.

Intervention practices were instructed to routinely combine chlamydia and Pap smear screening and control practices were instructed to implement currently accepted targeted screening guidelines. Written consent to access de-identified pathology data was obtained from both participating GPs and women. Practices were block randomized to match for size and to minimize temporal effects.

34 eligible general practices participated (17 in each arm). Over the 12-month study period, 1120 chlamydia tests were performed in the intervention practices, compared to 521 in the control practices. Combined testing represented 54.6% (611/1120) of chlamydia testing in the intervention group and 52% (271/521) of the chlamydia testing performed by the control group, even though this was not recommended in the screening guidelines. No statistically significant differences were detected between the overall rate of positive tests in the intervention and control arms (4.2% vs. 4.0%). Denominator data of the total number of women seen in the control and intervention practices and calculations of the actual screening rates for chlamydia will be presented.
Combined CT/Pap screening is feasible, effective and requires little additional infrastructure support in settings where there is a functioning primary care system. We believe that implementation of this approach could represent an important public health innovation.

Prevention and Treatment: Harm Reduction in Asia
1.30pm – 3.00pm

ILLICIT DRUG ISSUES IN ASIA: THE CHALLENGES AND RESPONSES

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Objectives: A comprehensive situation analysis and country profile of Brunei Darussalam, Cambodia, China (including Hong Kong and Macao), Indonesia, Laos, Malaysia, and Myanmar. Philippines, Thailand and Vietnam were undertaken. The research covers a broad spectrum of drug-related issues, from law enforcement to research to policy to treatment and harm reduction. The focus is upon unsanctioned use of all drugs.

Methods: The project was desk based. Data sources included published and unpublished literature (over 800 articles and reports accessed) and information from over 250 key informants and institutions in Asia and elsewhere.

Results: The number of people using illicit drugs overall in Asia has increased. In some countries such as China and Indonesia this has been dramatic. Injecting of drugs other than heroin is not common, but a substantial rise in the use of amphetamine type substances as the most popular illicit drugs is causing serious alarm in the region. An increase in the number of female drug users (commonly associated with sex work) has been identified in some nations. HIV-related injecting risks are widespread, coupled with drug users experiencing high rates of multiple sexual partners and low rates of condom use. HIV infection among IDUs remains high (HIV prevalence among IDUs in Vietnam, Indonesia, Malaysia, China, Thailand and Myanmar are commonly above 50%). A common policy goal of reducing drug use, often to zero, impacts severely upon drug users. A common belief is that drug users should be treated, but many are coerced into inadequate treatment regimes with negative outcomes. Harm reduction programs remain minor in scale.

Conclusions: The illicit drug trade and use of drugs in Asia is complex and impacts on every level and sector of society. Harm reduction activities are developing, but need to be mainstreamed and scaled up.

THE PREVENTION TREATMENT NEXUS- STILL A WIDE GAP IN ASIA

Nick Walsh
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In many countries in Asia there remains a gap between the treatment and prevention of HIV and other blood borne viruses. Integrating antiviral therapy and the prevention of transmission are integral to effective treatment programs. There are a number of reasons such as utilising the peer influence of those already engaged in treatment services to deliver prevention and treatment information, reducing the possibility of resistant virus transmission and multiple virus infection (particularly in hepatitis C), to increase accessibility to treatment services and to utilize treatment validity to advocate for effective prevention initiatives.

Viet Nam's HIV epidemic has been driven largely by injecting drug use. Currently 106 000 individuals have been diagnosed with HIV, though it is estimated 250 000 have the virus. There remains a dichotomy in Viet Nam's approach to HIV prevention and treatment. Prevention efforts have focused on public behavioural change messages and compulsory internment in drug rehabilitation centres for periods of 6 months to 5 years. Needle syringe programs and substitution treatment projects have never grown beyond the pilot stage, lacking national government support. In contrast to this, treatment initiatives have grown significantly. Currently the Ministry of Health funds 2,700 places across the country. Added to this is the US government's PEPFAR initiative (President's Emergency Plan For AIDS Relief) with 1,000 individuals currently on ART and a projected treatment capacity of 22,000 by 2009. It is anticipated that The Global Fund initiatives will provide an extra 2,000 ART places by the end of 2006.

The implications of HIV treatment role out In Viet Nam, while actively neglecting HIV prevention, including effective substance use treatment options, will be discussed.

Also discussed will be the further example of Thailand. While Thailand's HIV epidemic has largely been driven by sexual transmission to which the prevention response has been marked and timely. the sharing of injecting equipment amongst other risk behaviours by drug users has contributed substantially. Recently the country has attempted to increase HIV treatment access through the 30 Baht scheme, without similar investment in adequate substance use treatment services. In reality, the sector has not recovered from the 2003 'war on drugs', and the effectiveness of and access to HIV treatment for drug users will continue to be sub optimal until this gap is addressed.

SCALING UP HIV TREATMENT, CARE AND SUPPORT FOR INJECTING DRUG USERS IN VIETNAM

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Introduction: People living with HIV/AIDS (PLWHA) in developing countries are rarely consulted about ways to promote their health and well-being. This study sought to identify and understand, from the perspective of PLWHA, challenges and opportunities for improving access to HIV treatment, care and support in Vietnam, a resource-limited setting with a HIV epidemic driven by injecting drug use.

Methods: PLWHA trained in participatory research methods completed fieldwork data collection and co-facilitated focus groups with injecting drug users (IDUs) in Ho Chi Minh City. Qualitative data were analysed in Vietnamese and English using an inductive approach to code and compare content and identify key themes.

Results: Results suggest considerable barriers to scaling up in this setting. Against a backdrop of punitive government policies, including mandatory detention of IDUs and sex workers, and widespread stigma and discrimination, many PLWHA lived with the fear of discovery and the threat of abandonment. Lack of confidentiality, limited financial resources and restricted access to "essential" medications provided powerful disincentives to health service utilization.

Conclusions: Opportunities for scaling up lie firstly in expanding access to confidential HIV counselling and testing. However, in the absence of affordable, quality care and access to antiretroviral therapy, IDUs are unlikely to see testing as worthwhile. Efforts to scale up also need to address structural barriers including stigma and discrimination, poverty and institutional capacity. Finally, PLWHA in Vietnam are a significant but underutilized resource and consideration should be given to approaches which build confidence and capacity within affected communities.

IDU'S PROGRAM IN INDONESIA

Sahrul Syah
JANGKAR (Indonesia Harm Reduction Network)

Backround
In these lately five years, Indonesia has conducted preventing infected disease program among Injecting Drug Users (IDUs), even it feels late, since today is noticed about 90, 000 – 150, 000 people live with HIV or dead because of AIDS, neither with an appropriate health service access nor supporting.
Nowadays, Harm Reduction agency in Indonesia is about 50 institutions in 22 provinces, which consist of NGO (non-government organization) and community that first exist for handling HIV/AIDS.
Unfortunately, government's attention include of good supporting in regulation related with health problem and law has not responded HIV epidemic yet among seriously infected IDU's., however today, almost in every hospital can be sure that there is patient who has a background as IDU's is possibly treated because of AIDS symptoms.
Double epidemic has happened too, which HIV virus is infected from IDUs couple, start from girlfriend or boyfriend, wife over the babies.
Developing program for IDU's in Indonesia recently is still dominated with preventing HIV/AIDS program only; it is because of too much target load from sub-contractor.

General purpose of activities

Reducing newly infection of HIV among the IDU's
Starting an information access of supporting basic health service for IDU's
Starting an information access of supporting addiction service
Starting an information access of supporting counseling service
Starting an information access of peer supporting group
Involving IDU's community for preventing the infection of HIV in their groups

Specific purpose of activities

Create a routine involving from IDU's group
Build a new perspectives and good support from the institution itself to IDU's
Build a good understanding from the society so that provide supports and getting involved in developing program for IDU's
Empowering IDUs and make them able to access the informations and improving self- capacity in living with HIV/AIDS or others infected disease.

Activities for IDU's community

Community mapping to find the population and mobilities
Outreaching the IDU's community
Outreaching the social community in the IDU's neighborhood
Outreaching the IDU's family
Building a peer supporting group

Related activities

Socialization and coordination to the law officers

Coordination with the basic health service servant

Socialization and coordination with the civil officers

Boundaries

Having no clear and written support from the government especially in Law Enforcement

Double stigma among the IDU's

There is an outreach of target load from sub–donor which impact of:

creativity barriers and improvisation of skill developing for the IDU's community especially for doing the whole activity.

Preventing program which has done is different because it is combined with what donor wants so impacts of no cooperation for the entire program

Having no database which appears the whole and complete image.

Opportunistic Infections – Clinical
3.30pm – 5.00pm

CEREBRAL TOXOPLASMOSIS IN HIV PATIENTS IN JAKARTA

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We conducted a retrospective study by reviewing medical charts of 88 presumtive cases of cerebral toxoplasmosis in Cipto Mangunkusumo hospital in Jakarta between January 2004 and March 2006. All of these patients showed neurological signs and symptoms, and focal brain lesion(s) on neuroimaging studies and received anti-toxoplasmic treatment.

The majority of patients were males (87%). The ages of patients ranged from 19 to 48 years with a mean of 27 years. Intravenous drug user's 81%. Focal brain lesion(s) was the reason for detection of HIV infection in 82% of these patients. CD4 cell count ranged from zero to 172 cell/uL with a mean of 37 cell/uL. Toxoplasma serology was perform on 54 patients and all of them were seropositive. Forty-one (47%) of the patients presented with abnormal mental status, almost all of the patients (83%) with headache. Fever were present in 43%, focal neurological signs and symptoms showed in 50%, and seizure were found in 33%. Multiple lesions on brain CT scan were seen in 70 (79%).

Sixty-three (72%) of the patients who received anti-toxoplasmic treatment showed clinical improvement and 45 of them (73%) had improvement by day 7. Response to treatment ranged from day 2 to day 30. Patients with pulmonary tuberculosis tended to have poor response. Response to anti-toxoplasmic treatment was significantly associated with level of consciousness on admission and contrast enhancement on focal brain lesion(s).

RISK OF ACTIVE TUBERCULOSIS AND PROGNOSTIC SIGNIFICANCE OF TUBERCULOSIS IN TAHOD PATIENTS

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8. HIV Project, Ruby Hall Clinic, Pune, India

Tuberculosis (TB) remains the most common opportunistic infection and the major cause of death among patients with HIV, especially in sub-Saharan African and Asian countries with high prevalence of TB. Using data from TREAT Asia HIV Observational Database (TAHOD), this paper aims to assess: 1) The risk of, and factors associated with, TB diagnosis; 2) The prognostic significance of TB diagnosis on overall survival.

The risk of TB diagnosis after entry to TAHOD was assessed in patients with prospective follow-up and no prior TB. To assess the impact of the background TB prevalence rate on the risk of TB diagnosis, sites were grouped into high and low/intermediate TB burden by WHO guidelines. TB diagnosis was fitted as time-dependent variable in assessing overall survival. Diagnosis of CDC category B disease, single or multiple diagnoses of AIDS other than TB, and antiretroviral treatment were also included as time-dependent variables.

By October 2005, 2979 patients had been recruited to TAHOD, of whom 639 (21.5%) had prior TB. During 2291.2 person years of follow up, 33 patients developed TB, rate of 1.44 per 100 person-years (95% confidence interval [CI] 1.02-2.03). Factors associated with TB diagnosis included mode of infection, CD4 count at entry to TAHOD, not being treated with antiretroviral therapy and coming from countries with a high TB burden. A total of 84 deaths were recorded among the 2218 patients during 3036.1 years of follow up, a rate of 2.77 per 100 person-years (95% CI 2.23-3.43). Compared with patients with CDC category A disease, mortality was raised in patients with CDC category B disease (hazard ratio, HR 1.83, p=0.179), TB diagnosis (HR 1.70, p=0.185), other single AIDS diagnosis (HR 2.89, p=0.002), multiple other AIDS diagnoses (HR 4.67, p<0.001) and TB and AIDS diagnosis (HR 3.44, p<0.001).

Although the overall rate of TB in TAHOD patients was higher than that seen in western countries, the risk factors identified were similar. Patients diagnosed only with TB had a somewhat better survival than patients diagnosed with other AIDS illnesses, albeit non-statistically significant, more similar to survival in patients with a CDC stage B illness.

CHARACTERISTICS AND OUTCOMES OF TUBERCULOSIS TREATMENT IN AN OUTPATIENT HIV CLINIC IN PHNOM PENH, CAMBODIA

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Cambodia has a high prevalence of both HIV and tuberculosis (TB). TB is the leading cause of death for people living with HIV despite rapid expansion in access to antiretroviral therapy (ART). This study prospectively investigated characteristics and outcomes of TB in an ambulatory HIV clinic.

TB screening included initial routine chest X-ray plus sputum microscopy and abdominal ultrasound if clinically indicated at initial or subsequent visits. Patients diagnosed with TB were referred to the National TB Program for directly observed short-course chemotherapy.

Data were available on 1024 consecutively enrolled adults. A previous diagnosis of TB was recorded for 145 (14.2%) patients and was associated with male gender ($p<0.001$). The majority of past diagnoses (106; 73.1%) were pulmonary tuberculosis (PTB). Diagnosis of TB during follow up occurred in135 (13.2%) patients (incidence 18.16 per 100 person years) and was associated with male gender, and low baseline CD4 count and WHO stage. Site of disease was PTB in 58 (43.0%), of which 29 (50.0%) were smear positive, extra-pulmonary (EPTB) in 67 (49.6%) and 10 (7.4%) both PTB and EPTB. Median CD4 at time of diagnosis of PTB and EPTB were similar (34 cells/mL and 46 cells/mL respectively, $p=0.97$). Of 97 (71.9%) patients who received ART 26 (26.8%) started ART before and 72 (74.2%) started ART after TB treatment commenced. The median time from commencing TB treatment to initiation of ART was 36 days. All patients received stavudine lamivudine and efavirenz. Change in treatment due to peripheral neuropathy occurred in 5 (5.1%) patients, liver toxicity in 2 (2.0%) and anaemia in 1 (3.0%) of patients who had been switched to zidovudine. TB treatment was successful in 108 (80.0%) patients, 1 (0.7%) required re-treatment, 7 (5.2%) died, 12 (8.9%) were lost and 7 (5.2%) transferred. No association was found between these outcomes and time from start of TB treatment to initiation of ART.

Diagnoses of TB are common in this ambulatory HIV clinic population. Smear positive PTB represents a minority of diagnoses. Despite advanced immunodeficiency across all forms of TB and deferral of initiation of ART in most patients, treatment outcomes were satisfactory.

NATIONAL EXTERNAL QUALITY ASSESSMENT OF HIV SEROLOGY TESTING IN THAILAND: FIVE YEARS' EXPERIENCE

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HIV serology testing in Thailand is mostly performed by public health laboratories, and the Thailand National Institute of Health (NIH) has provided external quality assessment (EQA) since 1994. Beginning in 2000, NIH broadened its EQA scheme to include non-public laboratories.

EQA panels were distributed to 226 laboratories, 13 times each, over 5 years (total 2938 panels). Each panel contained eight well-characterized samples (three negative; one each low, medium, and high positive; and one additional positive sample in duplicate). The following assays were used: machine-based enzyme immunoassay (MBA), microplate-based enzyme immunoassay (EIA), Western blot (WB), and several types of rapid tests. All laboratories re-tested samples with at least one additional assay when a positive HIV result was found. All test results, including repeat tests on a single sample, were included in percent error calculations. Laboratories included three groups: 120 government hospital laboratories, 75 private hospital and clinic laboratories, and 31 blood screening center laboratories. Response rate was high (93%) and similar across laboratory groups.

The overall median percent error ranged 0.3%-0.5% over the five years, with no significant trend over time ($P=0.6$). Rapid tests accounted for 67% of EQA panel testing, MBA for 18%, microplate-based EIA for 11%, and WB for 4%. Among assay types, WB had the highest median percent of errors at 1.8%; these were almost all false negative errors. Median percent errors for rapid tests, MBA, and microplate-based EIA were 0.3%, 0.3%, and 0.0%, respectively, significantly lower than for WB ($P<0.01$).

Laboratories in Thailand performed well on HIV serology EQA panels. Participation rates in the government-run EQA scheme were high for public, private and blood screening center laboratories. Technical assistance should be provided to improve WB interpretation and reduce false negatives; errors should be compared across laboratory groups.

OUTCOMES OF ART IN MALAYSIAN HIV PATIENTS REFLECT PRE-EXISTING OPPORTUNISTIC INFECTIONS

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Background: The increased availability of antiretroviral therapy (ART) for HIV-1 infection has resulted in large and rapidly increasing numbers of people starting ART with advanced immunosuppression and diverse ongoing secondary infections. It is expected that some such patients will develop Immune Restoration Diseases (IRD) as their T-cell function improves.

Methods: A prospective study was established to assess 50 consenting adult patients beginning ART with <200 CD4 T-cells/ μl in the University of Malaya Medical Centre, Kuala Lumpur. Clinical data has been compiled and peripheral blood mononuclear cells, plasma and serum have been cryopreserved at baseline and after 6, 12, 24 and 48 weeks, for studies of immune function. Here we describe the first 23 patients.

Results: The first 23 patients comprise 17 (74%) males and 6 females (26%), 18 were Chinese, 3 were Malay, 1 Indian and 1 Iban with median age of 41 years (range: 25 – 66 years). Only 2 patients were asymptomatic at presentation. Nine presented with *Pneumocystis jiroveci* pneumonia, 4 had pulmonary and/or extra-pulmonary tuberculosis; the remainder had penicilliosis, cryptococcal meningitis, cryptosporidiosis, neurosyphilis, recurrent bronchopneumonia or Kaposi's sarcoma prior to commencing ART. Oral candidiasis was a common co-infection. At recruitment, their median (range) CD4 T-cell counts were 29 (0-186) cells/μl. During the study these increased over 4-fold or to >200 cells/μl in 20 patients. Plasma HIV RNA levels decreased to <50copies/ml in 20 and to 851 copies in 1 patient of the 21 patients for whom these data were available. Seven patients experienced IRD. There were associated with cryptococcal meningitis (3), tuberculosis (2), histoplasmosis (1), herpes zoster (1), oesophageal candidiasis (1) and Kaposi 's Sarcoma (1). Two patients developed IRD within 2 weeks of ART, 3 patients within 3 months, 1 patient within 5 months and another at 9 months. Two patients died as a result of IRD, one was caused by disseminated histoplasmosis and the other by disseminated tuberculosis. All IRD patients donated extra PBMC samples for immunological studies. -

Conclusions: IRD are common and diverse among HIV-infected patients in Malaysia beginning ART with advanced immunosuppression. Most occurred within 6 months of ART. IRD are potentially fatal if not recognized and treated early. Further immunological studies are important to delineate the underlying mechanisms.

HIV-ASSOCIATED NEUROCOGNITIVE IMPAIRMENT AND SYMPTOMATIC PERIPHERAL NEUROPATHY ARE HIGHLY PREVALENT IN THE ASIA PACIFIC REGION

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Two debilitating diseases associated with advanced HIV disease are HIV associated dementia (HAD) and distal symptomatic sensory peripheral neuropathy (SN). 8.3 million HIV infected people live in the Asia Pacific region of whom 40% have advanced HIV disease. The burden of HAD and SN in the Asia Pacific (AP) region is unknown.

Between July 2005 and March 2006 we undertook a cross-sectional study at ten sentinel sites in eight countries of the AP region to determine the prevalence of HIV associated neurocognitive impairment and SN. We administered a neuropsychological test battery, a clinical SN screening tool, the CES-D depression screening tool and alcohol and substance use questionnaires to 658 HIV infected patients. The neuropsychological test battery was administered to161 local HIV negative controls to provide comparative norms. Patients were defined as moderately to severely neuropsychologically impaired if they had ≥-2SDs below the local controls' means in two of the four tests. Definite SN was defined as symptoms plus absent ankle reflexes plus vibration sense ≤10 seconds at the great toes. Probable SN was defined as symptoms plus one of the two remaining criteria. A score greater than 16 on the CES-D 20 was used to indicate a high likelihood of underlying depression. Univariate and logistics regression analyses were applied to the results.

12% of patients were neurocognitively impaired, 36% of patients scored higher than 16 on the CES-D tool and 19% of patients had definite or probable SN of whom 63% had exposure to d-drugs. Potential confounds including depression and prior CNS AIDS illness were not significantly associated with neurocognitive impairment (OR 1.49 (95% CI 0.88, 2.51 *p*-value 0.11), OR 1.28 (95% CI 0.50, 2.89, *p*-value 0.54) respectively). Prior exposure to d-drugs was significantly associated with SN (OR 3.20 (95% CI 1.56, 6.55, *p*-value <0.01).

These data imply that up to 1.0 million people in the AP region have HIV-related neurocognitive impairment, that 1.5 million people are suffering from SN- a large part of which may be related to nucleoside-related mitochondrial toxicity- and that depression is affecting over one third of HIV infected patients in the region.

Basic Science Attacking the Virus: Immunology of HIV and Related Infections 3.30pm – 5.00pm

HUMAN CYTOMEGALOVIRUS (HCMV)-SPECIFIC CD8+ T-CELL RESPONSES ARE REDUCED IN HIV-INFECTED INDIVIDUALS WITH A HISTORY OF HCMV DISEASE DESPITE CD4+ T-CELL RECOVERY

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Following immune reconstitution with HAART, human cytomegalovirus (HCMV) disease is rare and secondary prophylaxis can be ceased in individuals with CD4+ T-cell recovery. However, there are occasional reports of primary or relapsing HCMV disease despite apparent immune restoration. We investigated HIV-infected individuals with and without a history of HCMV end-organ disease using a novel, simple and semi-automated assay to assess HCMV-specific immunity.

A case-control (1:2) study was performed with cases defined as having a history of HCMV end-organ disease (n=15) and controls (n=30) matched by current CD4+ T-cell count. HCMV-specific CD8+ T cells responses were quantified using the Quantiferon-HCMV test (Cellestis, Melbourne, Australia). Briefly, heparinized blood was incubated with HCMV 8-mer peptides or a mitogen control, and IFN-γ in the supernatant quantified by enzyme immunoassay (EIA). Responses were also measured to other antigens such as tetanus toxoid, *Mycobacterium tuberculosis* antigen or human or avian purified protein derivative.

Of the individuals that responded to the mitogen control, 40/44 (91%) had a positive Quantiferon-HCMV test (median, IQR = 65, 105 IU/ml) and this correlated significantly with the mitogen response ($p<0.0001$) but did not correlate with the CD4+ T-cell count at the time of testing, CD4 nadir or HIV viral load. 5/15 cases were still receiving HCMV prophylaxis and mean time from HCMV disease was 5.6 years. Cases had a significantly lower Quantiferon-HCMV test than controls (median 15 vs 65 IU/ml, $p=0.02$) but there was no significant difference in response to mitogen or all other antigens. Compared with controls, cases also had a significantly lower nadir CD4+ T-cell count (mean, 24 vs 111 cells/□l, $p<0.001$) and significantly longer duration of HAART (mean, 7.6 vs 5.5 years, $p=0.02$).

In individuals with a history of HCMV disease and lower nadir CD4, HCMV-specific CD8+ T-cell responses are reduced even in the setting of CD4+ T-cell reconstitution.

CELLULAR IMMUNITY IN ACUTE HCV INFECTION

Jaqueline Flynn
Burnet Institute, Melbourne

In Australia, as in many countries, injection drug use (IDU) is the most frequent mode of HCV transmission. Few studies, however, have examined the natural history and immunopathogenesis of acute HCV infection in IDU. Difficulties lie in the potentially asymptomatic nature of HCV infection and the complexities of recruitment and follow up of IDUs.

The Australian Trial in Acute HCV (ATAHC) is a dual arm longitudinal study of opened label treatment (24 weeks of PEG-IFN). A pilot study was conducted to examine immune function and predictors for viral clearance through the evaluation of T cell responses in primary HCV infection.

To examine the cellular immunity in acute HCV infection the production of IFN-□ and IL-2 producing cells was assessed by ELISPOT using 10 HCV peptide pools spanning the entire HCV genome.

The prevalence of HCV-specific T cell responses was low compared to other viral infections. 63% of screening and 71% of week 12 samples had positive recognition of HCV peptide pools in IFN-□ and/or IL-2 ELISPOT assays, with predominant recognition of NS4/5. The breadth of IFN-□ and IL-2 responses was greater at screening (0-9 pools positive) compared to week 12 (0-5). Similarly the magnitude of IFN-□ responses was greater in screening samples (314 SFC/10^6PBMC) than week12 (211SFC). A more frequent recognition of HCV peptides was detected by IFN-□ producing cells (0-230 SFC) compared to IL-2 (0-150 SFC) in pre-treatment samples.

In agreement with previous findings a broad multispecific IFN-□ and IL-2 T cell response was present in individuals who clear the virus with and without treatment. The magnitude and breath of the immune response in treated patients who progress to chronic infection was dampened, with very low to undetectable T cell responses in an untreated individual who progressed to chronic infection.

Interestingly pre-treatment samples revealed an inverse correlation between HCV-specific T cell immunity and viral load, with both IFN-□ (R^2=⁻0.65) and IL-2 T cell responses (R^2=⁻0.71).

Examination of the early pathogenesis of HCV infection provides insight into patterns of immune function and predictors for viral clearance, which is critical for therapeutic and vaccine design.

T-CELL RECOGNITION OF POL AND REGULATORY GENES BY SIV-INFECTED MACAQUES: IMPLICATIONS FOR VACCINATION

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The importance of $CD8^+$ T cells in controlling HIV viral replication is well documented. Due to the importance of enzymes encoded by HIV polymersase (Pol), this region is under strict functional constraints and represents an ideal target for protective anti-HIV cytotoxic T lymphocyte (CTL) immune responses. Early regulatory proteins are also functionally important; however, escape mutations within regulatory proteins such as Tat are frequently observed. The aim of this study is to determine the specificity and kinetics of T cell responses directed against Pol and early regulatory proteins in simian immunodeficiency virus (SIV)-infected animals.

Thirty two macaques were infected with SIVmac251 and treatment with dual antiretroviral drugs tenofovir and emtricitabine (FTC) commenced three weeks post-infection. SIV-specific T cell responses were evaluated fortnightly by intracellular interferon (IFN)-□ staining using pools of overlapping SIV Pol peptides.

Pol-specific $CD8^+$ T cell responses were surprisingly low and transient. In the strongest Pol responder, less than 1.2% of $CD8^+$ T cells produced IFN-□ 14 weeks post-infection. Fine-mapping of Pol CTL epitopes in 2 animals identified responses against reverse transcriptase - one mapped to a minimal epitope and another narrowed to a pool of 10 peptides.

Interestingly, the frequency and magnitude of $CD8^+$ T cell responses to a pool of early regulatory proteins Rev, Tat, Nef, Vif, Vpr and Vpx (RTNVVV) was greater compared with Pol-specific responses. Twenty-one of thirty-two macaques had RTNVVV-specific IFN-□□responses which ranged from 1-10% of $CD8^+$T cells. In contrast to Pol-specific CTL, RTNVVV-specific responses were maintained at later timepoints. We mapped $CD8^+$ T cell responses to individual regulatory proteins for eleven animals and the frequency of responses was Nef > Tat > Vpr > Vif > Vpx > Rev. Compared with $CD8^+$ T cell responses, $CD4^+$ responses to Pol and RTNVVV were less frequent.

Regulatory proteins are targets for strong and persistent anti-SIV $CD8^+$ T cell responses more frequently than Pol. If these responses are not undermined by viral mutational escape, they should prove useful as vaccine antigens. For unclear reasons, Pol proteins are poorly recognized and refinements in antigen vaccine design are likely needed to improve T cell responses to Pol.

SEQUENCE COMPLEXITY OF THE HEPATITIS C VIRUS IN ACUTE INFECTION

Oon A[1], Micallef JM[2], Pan Y[3], Hellard M[5], Kaldor JM[2], Lloyd AR[4], Ffrench RA[5], Rawlinson WD[1,3], Dore GJ[2] and White PA[1] for the ATAHC Study Group
[1]School of Biotechnology and Biomolecular Sciences, University of New South Wales, Sydney 2052; [2]National Centre in HIV Epidemiology and Clinical Research, Sydney 2010; [3]Virology Division, Dept. of Microbiology, SEALS, Prince of Wales Hospital Randwick 2031;
[4]School of Medical Sciences, University of New South Wales, Sydney 2052; [5]Burnet Institute, Melbourne 3004.

The hepatitis C virus (HCV) exists within an individual as a spectrum of minor variants termed quasispecies. The genetic variation within a quasispecies contributes to persistence by allowing evasion of the host immune system and may also be implicated in treatment failure. A factor that may influence HCV quasispecies diversity is the presence of co-infection with the human immunodeficiency virus (HIV). The aim of this study was to examine the evolution and diversity of HCV quasispecies obtained from individuals with acute hepatitis C infection and additionally to compare quasispecies diversity between HCV mono-infected and HIV/HCV co-infected individuals.

Longitudinal sera samples were collected from subjects with acute HCV infection enrolled in the Australian Trial in Acute Hepatitis C (ATAHC) study, including those in untreated and treated (pegylated interferon monotherapy) arms of the study. Envelope glycoprotein 1 (E1) and the hypervariable region 1 (HVR1) were amplified in a single reaction using reverse transcription-polymerase chain reaction (RT-PCR). The E1/HVR1 amplicons were cloned into a TA cloning vector pCRII-TOPO. Ten to twenty clones were sequenced and the nucleotide diversity of the population calculated.

Quasispecies obtained from all subjects analysed displayed varied diversity values, ranging from 0 - 7.7 % mean nucleotide difference. The diversity of pre-treatment quasispecies in patients responding to treatment at week 12 appeared to be lower when compared to those not responding. HCV mono-infected individuals had a higher overall quasispecies diversity which ranged from 0 – 7.7% nucleotide distance for pre-treatment samples. Comparatively, subjects with HIV/HCV co-infection correlated with a lower overall quasispecies diversity with values ranging from 0.2 – 3.3%. Interestingly, it was found that two pairs of co-infected individuals were infected with the same HCV strain. Analyses of the HVR1 in these individuals revealed a 98% sequence homology which is suggestive of infection via a common source. Examination of HCV diversity has provided insights into the viral dynamics of acute hepatitis C infection which may in turn contribute to the understanding of the early stages of the disease.

PROPORTIONS OF REGULATORY T CELLS DECLINE IN THE FIRST FEW MONTHS OF ART, BUT NK CELLS,□□□T-CELLS AND INKT ARE MAINTAINED

Patricia Price[a], Dino Tan[a], Steven Roberts[a], Andrew Lim[a], Adeeba Kamarulzaman[b], Tan Lian Huat[b], Martyn French[b]
[a]*University of Western Australia and Royal Perth Hospital, Perth.*
[b]*University of Malaya Medical Centre, Kuala Lumpur*

The increased availability of antiretroviral therapy (ART) for HIV-1 infection worldwide has resulted in large and rapidly increasing numbers of people starting ART with advanced immunosuppression. Amongst patients whose CD4 T-cell counts increase and plasma viremia resolves, a proportion develop Immune Restoration Diseases (IRD) or fail to recover T-cell function. Robust NK cell responses may contribute to IRD or compensate for immunodeficiency.

PBMC from patients beginning ART at Royal Perth Hospital (RPH) or University of Malaya Medical Centre (UMMC) were cryopreserved and clinical outcome was documented. Clinical characteristics and co-infections experienced by the UMMC patients appear in a separate abstract (LH Tan). Proportions of T regulatory cells [$CD127^{lo}CD25^{+}$ and $CD152(CTLA4)^{+}$], NK [$CD3^{-}$,$CD16^{+}$,$CD56^{+}$], iNKT [$CD3^{+}$,V□24^{+},V□11^{+}], □□T-cells [$CD3^{+}$,□□TCR□] and activated CD4 T-cells [$CD4^{+}$,$CD25^{+}$,HLA-DR^{+}] were determined by flow cytometry. Production of interferon(IFN)□ by CD4 T-cells and NK cells was determined by ELISpot assay after stimulation with antigens, anti-CD3, CEF peptides (broad spectrum stimulation of CD8 T-cells) or K562 cells (pan NK cell stimulation). The reagents, methods and operator were the same at the two sites.

Preliminary analyses show proportions of iNKT and □□T-cells were low and unchanged after treatment. NK cell numbers and IFN□ responses did not correlate precisely, but both often rose on ART. All measures of Treg (CD127, CD25, CD152) and activation (HLA-DR) showed similar trends in individual patients. This was often a decline on ART. ELISpot responses to CEF peptides, Candida and anti-CD3 were generally correlated. This fits with prior evidence that IFN□ responses to Candida and anti-CD3 (but not CMV) are substantially mediated by CD8 T-cells, especially in HIV patients. Hence we can determine that CD8 T-cell responses were better preserved at baseline than CD4 T-cell responses. Overall Treg numbers did not correlate with CD4 or CD8 T-cell IFN□ responses (directly or inversely), but this remains to be examined in IRD patients.

The project is the first to correlate CD4 and CD8 T-cell and NK responses with numbers of putative regulatory cells during immune reconstitution in patients beginning ART, with opportunistic infections (Cryptococcus, Candida and tuberculosis) and IRD. Responses to these antigens will be presented.

INNATE IMMUNITY IN HIV INFECTION: THE EXPRESSION AND FUNCTION OF TOLL LIKE RECEPTORS

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[3]Department of Infectious Diseases, Monash Medical Centre, Clayton VIC, Australia
[4]Victorian Infectious Diseases Service, Parkville, VIC , Australia

Respiratory tract infections remain a frequent complication in HIV+ persons and represent a major global health problem despite the development of more effective antiretroviral therapy. Recent data suggests that the incidence of bacterial pneumonia may be unchanged despite the introduction of HAART.
The molecular mechanisms accounting for the higher risk of bacterial pneumonia in HIV+ persons remains incompletely understood. The family of mammalian Toll-like receptors (TLRs) serves an important role in the early host defence response in innate immunity. Expressed on cells near mucosal portals of entry, including macrophages and dendritic cells TLRs represent critical molecules in the first line of host defence to pathogenic bacteria. The expression and function of human TLR expression in HIV infection has not been well characterised.

To test the hypothesis that HIV infection is associated with impaired macrophage TLR- mediated innate immune responses, we examined peripheral blood from a variety of HIV patients stratified by CD4 count and negative controls. TLR2 and TLR4 expression was quantified on human monocytes using flow cytometry and specific TLR responses were elicited to various TLR ligands ex vivo. Supernatants from these cultures were tested for the presence of pro-inflammatory cytokines, TNF-α and IL-6. In addition the activation of the TLR pathway was examined to TLR ligand stimulation by measuring phospho MAP kinase by flow cytometry.

Expression of TLR2 on peripheral monocytes was significantly increased in patients with HIV in comparison to controls **(P=0.01)**. The level of TLR4 expression was diminished in comparison with normal controls **(P<0.05)** . The functional relevance of these findings was established by the demonstration reduced cytokine production (TNF-α and IL-6) and phospho-p38 kinase production after stimulation of monocytes with specific TLR ligands. Correlations of these results with HIV viral load will also be presented.

This is the first study to investigate how peripheral innate immune responses and TLR expression changes in vivo in HIV patients. It demonstrates a potentially important mechanism by which innate immunity may play an important role in the susceptibility of HIV patients to bacterial infection.

International: Maternal and Paediatric Issues
3.30pm – 5.00pm

MATERNAL HIV IN AUSTRALIA: BEST-PRACTICE, ISSUES AND CHALLENGES

Giles ML[1,2,3]
[1]Department of Medicine, Monash University, Melbourne, VIC Australia; [2]Infectious Diseases Unit, Alfred Hospital, Melbourne, VIC, Australia; [3]Burnet Institute, Melbourne, VIC, Australia

Women comprise approximately 10% of all people living with HIV in Australia and many are in their reproductive years. Mother to child transmission (MTCT) of HIV is significantly reduced with access to interventions during pregnancy, such as antiretroviral therapy to the mother and child, elective cesarean section and avoidance of breastfeeding. Reported rates of MTCT in developed countries utilizing these interventions are less than 2%.

This paper will discuss the current epidemiology of pregnant women with HIV in Australia and provide an update on the latest evidence to support the use of these interventions. In addition, more controversial issues such as the role of antenatal HIV screening in Australia and recommended mode of delivery in women with undetectable HIV viral loads at term will be addressed.

INTERNATIONAL: MATERNAL AND PAEDIATRIC ISSUES

Natraj S and Sands A

Since 1998 there has been much investment in programs in developing countries to prevent HIV infection in children that depend on testing pregnant women in the antenatal clinic. There are human rights and public health policy implications related to this antenatal HIV screening. We will discuss and explore these issues that have both technical and social dimensions. They include the concept of informed consent, the practical mechanisms to achieve confidentiality around testing, protocols to address indeterminate test results, the problem of false positive results in low prevalence settings, confirmatory testing strategies and the implications of delayed results, as well as the impact of HIV testing on the women's relationships.

SURVIVAL OF CHILDREN ON HAART – A MULTICENTER ANALYSIS OF MEDECINS SANS FRONTIERES DATA

Schaefer M [1], Sauvageot D [2], Humblet P [3] and AWG[1]
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2. Epicentre, Paris, France
3 AIDS Working Group of MSF Belgium, France, Holland, Spain, Switzerland

Treating children with HAART (Highly Active Anti-Retroviral Treatment) in resource-limited-settings is still a challenge. This presentation shows the results for children treated in 18 MSF projects between June 2001 and March 2005.

Data from children in MSF programs treating more than 30 children were included in the analysis and retrospectively analysed using the FUCHIA^ monitoring software (^Epicentre, Paris). Endpoints were death *and* as lost to follow-up. Probability of survival was calculated using the Kaplan Meier method. Outcomes were compared between different age groups.

A total of 2,061 children were included in the analysis. 85%of the patients were of African origin, 96% were treatment naïve. 80% (1,404) of the patients with documented clinical presentation (N=1,759) were classified as having CDC category B or C. 66% (480) of patients with documented CD4 at baseline (N=725) were severely immunocompromised according to new WHO criteria.
At the end of the observation period 5% (106) of the patients (N= 2,021) had died and an additional 6% (129) were lost to follow-up (dead+ lost to follow-up 11.6% [235]).
Due to low numbers of children 11 months and younger (25) they were excluded from the probability-of-survival analysis. Amongst the remaining patients (N=1,925) 77% (76) of deaths occurred during the first 6 months on treatment. The probabilities of survival (endpoint death + lost to follow-up) were 0.90 [0.88-0.91], 0.86 [0.84-0.88] and 0.82 [0.79-0.85] at 6, 12, 24 months, respectively and did not differ significantly between the age groups.

Treatment of children is feasible in resource limited settings. The high proportion of deaths during the first months on treatment indicates the vulnerability during this time period and the need of close monitoring. The low numbers of infants treated indicate the difficulties we still face with HIV diagnosis and care in the very young population.

Indigenous Issues
3.30pm – 5.00pm

SEXUALLY TRANSMITTED INFECTIONS (STIS) IN CENTRAL AUSTRALIA – TIME FOR CONCERTED ACTION

Kirsty Smith*, Kath Fethers, Annie Tangey, Gino Richter, Ahmed Latif
Tristate STI/HIV Project and Sexual Health and Blood Borne Virus Unit, NT Department of Health and Community Services, P. O. Box 721, Alice Springs, NT 0871 and Ngaanyatjarra Health Service, Alice Springs, NT

Objectives: STI control programs have been in existence in the Tristate cross border region of Central Australia since the mid 1990s. Screening for STIs is an important strategy of these programs and has been conducted regularly in the region for over 10 years. The main objective of the screening program is to identify and treat persons with STI as quickly as possible and to trace and treat sexual partners of persons with STI. **Methodology:** Voluntary screening was aimed mainly at young persons identified through community population lists. All subjects were tested for syphilis, HIV infection and gonococcal and chlamydial infection. **Results:** The trends in STI rates amongst 15 to 30 year olds in the NT region over a 3-year period are shown in the table below:

Year of screen	Gonorrhoea		Chlamydia		Gonorrhoea or Chlamydia	
	Males	Females	Males	Females	Males	Females
2004	12.6% (107/847)	14.0% (132/946)	8.0% (68/847)	12.2% (115/946)	16.3% (138/847)	20.8% (197/946)
2005	12.9% (77/595)	14.5% (95/656)	8.2% (49/595)	13.4% (88/656)	16.1% (96/595)	22.1% (145/656)
2006	9.5% (63/663)	11.3% (80/707)	12.5% (83/663)	15.4% (109/707)	17.2% (114/663)	22.1% (156/707)

Increase in cases of new syphilis infection was noted to occur in 2006 in both men and women. No HIV infection was found in persons screened.

Conclusion: High STI rates continue to be experienced in Central Australia. STIs facilitate the transmission of HIV infection and should HIV infection become established in the region there is a real risk of its rapid spread. There is a need for a multi-faceted approach to the control of this epidemic including addressing behaviour change.

IMPROVING THE ACCURACY OF ABORIGINAL AND NON-ABORIGINAL DISEASE NOTIFICATION RATES USING DATA LINKAGE

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2. School of Medicine, University of Notre Dame, Fremantle, WA, Australia 3. Centre for International Health Curtin University of Technology, Bentley, WA, Australia

Aboriginal and non-Aboriginal disease rates are often used as the basis for policy and funding decisions, so it is important for these rates to be calculated accurately. However, 30% of all disease notifications contain no information regarding Aboriginality.

Cases for which there is no information on Aboriginality are usually excluded from calculations of Aboriginal and non-Aboriginal disease rates. The Communicable Diseases Control Directorate (CDCD) uses another method of apportioning notifications with unknown Aboriginality to the Aboriginal and non-Aboriginal categories using the same proportions as those observed in notifications where Aboriginality was specified to calculate an estimated rate. Neither of these methods is ideal.

The Data Linkage Unit in WA provided the CDCD with a unique opportunity to improve the accuracy of Aboriginal and non-Aboriginal sexually transmitted infection (STI) and blood-borne virus (BBV) disease rate calculations.

Using data linkage, the proportion of STIs and BBVs with missing Aboriginality data was reduced from 26% to 6.8%.

After data linkage, there were negligible proportions of gonorrhoea and syphilis notifications, and less than 10% of chlamydia, hepatitis B and hepatitis C with missing Aboriginality data. Notifications with missing Aboriginality data in WANIDD were more likely to be identified as non-Aboriginal after data linkage.

Notification rates calculated by excluding cases where Aboriginality data were missing from WANIDD (WANIDD rate) provided an underestimate of the true rate in both Aboriginal and/or Torres Strait Islander (Aboriginal) and non-Aboriginal people.

Calculating the estimated rates by the apportioning method (described previously) resulted in an over-estimate of the true rate in Aboriginal people and an underestimate of the true rate in non-Aboriginal people.

Aboriginal:non-Aboriginal rate ratios of chlamydia, syphilis and hepatitis C decreased when Aboriginality data from data linkage was included when calculating ASRs and rate ratios. This result showed that although there is still a high incidence of STIs and BBVs in Aboriginal people, Aboriginality is most probably not as strong a risk factor for these infections as is often stated.

Data linkage is a useful tool for improving the completeness of Aboriginality data for the purposes of calculating more accurate STI and BBV disease notifications rates.

ABORIGINAL MEN AND WOMEN LIVING WITH HIV IN A SMALL REMOTE COMMUNITY: A DECADE OF EXPERIENCES IN MAINTAINING CONFIDENTIALITY

McGuckin R

DISADVANTAGE AMONG AUSTRALIAN PLWHA WHO ARE ABORIGINAL OR TORRES STRAIT ISLANDERS: FINDINGS FROM THE HIV FUTURES SURVEYS

Willis J.[1], Saunders M.[1], Grierson J.[1], Thorpe R.[1], Pitts M.[1], Hurley M.[1], McDonald K.[1]
[1]La Trobe University, Australian Research Centre in Sex, Health and Society, Melbourne, Victoria, Australia

Australia's HIV service delivery and prevention efforts are geared towards an epidemic that is 90% inner-urban gay men because the average Australian plwha is an anglo, 35+, inner-urban dwelling gay man. Aboriginal and Torres Strait Islander (ATSI) plwha resist these categories: women constitute a much higher the proportion of new ATSI HIV infections; ATSI plwha are much more likely to live in rural or outer-urban settings; ATSI plwha are much more often infected through heterosexual contact, injecting drug use or vertically; ATSI plwha are less likely to be gay-identifying. These differences contribute to post-ARV declines in new infections and the AIDS rate among Australian plwha not being reflected in ATSI HIV and AIDS rates.

A case-series analysis was carried out on ATSI respondents to HIV Futures 2,3, 4 and 5, a biennial national self-completed survey that provides a snapshot of Australian plwha lives, including health and broader social issues. The respondents represent about a third of the Indigenous Australians known to have contracted HIV.

ATSI plwha are disadvantaged in relation to access to treatments and other care and support services. Complex practices of discrimination have a serious impact on the ATSI experience of living with HIV including through less favourable treatment at medical services and at work, the need to change residence to avoid harassment, and having HIV status disclosed to another person without permission. ATSI plwha remain marginalised both in ATSI health and HIV sector initiatives. Homophobia, racism and HIV stigma all play a part in their disadvantage, and ATSI plwha have to look to alternative sources of support and care.

Surveys can never adequately represent qualitative differences where there is considerable diversity in lived experience, however stigma and discrimination are clearly the biggest contributors to ATSI plwha disadvantage, along with the inherent diversity of the epidemic in their communities.

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ORAL PRESENTATION ABSTRACTS

FRIDAY 13 OCTOBER 2006

FRIDAY 13 OCTOBER 2006

Case Presentation Breakfast
7.30am – 9.00am

GASTROINTESTINAL LEISHMANIASIS DUE TO *LEISHMANIA DONOVANI* IN A PATIENT WITH ADVANCED HUMAN IMMUNODEFICIENCY VIRUS TYPE 1

Hume SC, Aboltins CA, Thursky KA, Buising KL, Daffy JR, Waters MJ, Stanley PA
Infectious Diseases Unit, St Vincent's Hospital, Melbourne, VIC, Australia

A 42 year-old Eritrean-born man who had previously resided in the Sudan presented with 18 months of odynophagia in the setting of advanced human immunodeficiency virus (HIV) type-1 infection and poor compliance with highly active antiretroviral therapy. On physical examination there was a low-grade fever and hepatosplenomegaly. Full blood examination showed pancytopenia. Biopsy of the gastric cardia revealed *Leishmania donovani* amastigotes. Induction treatment was with initially standard then liposomal amphotericin. Monthly maintenance doses of liposomal amphotericin were then administered. After initial resolution, symptoms relapsed after 2 months. We discuss the clinical presentation, the difficulties in diagnosis and management of visceral leishmaniasis in patients with advanced HIV. Clinicians need to be aware of the possibility of visceral leishmaniasis in patients with HIV who have previously resided in at-risk areas of the world and the unusual clinical presentation in this setting.

IMMUNE RECONSTITUTION INFLAMMATORY SYNDROME (IRIS) KAPOSI'S SARCOMA: AN AGGRESSIVE CASE IN THE POST-HAART ERA

Darby J[1], Warren M[2], Wade A[1], Chipman M[2], Hoy J[1,3], Wright E[1,3]
[1]Infectious Diseases Unit, Alfred Hospital; [2]Department of Medical Oncology, Alfred Hospital; [3]Monash University, Department of Medicine, VIC, Australia.

A 42 year-old HIV-infected man with advanced HIV disease and Non-Hodgkin's Lymphoma (NHL) presented with febrile neutropenia and a tender left axilla

His past history includes: (1) ischaemic heart disease, requiring a coronary stent two years previously; (2) major depression necessitating multiple inpatient psychiatric admissions; (3) ex-heavy marijuana usage; (4) prolonged hospital admission due to a febrile illness during which NHL was diagnosed.

Four months prior to presentation, when NHL was diagnosed, the patient's CD4 count was 45 cells/uL (7%) and the HIV viral load was >100,000 copies/ml. He had not received highly active antiretroviral therapy (HAART) for 7 years and was therefore commenced on abacavir, lamivudine and ritonavir-boosted fosamprenavir. One week after his 6th cycle of cyclophosphamide, adriamycin, vincristine, dexamethasone and rituximab, he presented with bacterial lymphadenitis of the axilla secondary to methicillin-resistant *Staphylococcus aureus* infection and was treated with surgical drainage, intravenous vancomycin and granulocyte-colony-stimulating-factor with significant clinical improvement. His CD4 count was 62 cells/uL (12%) and his HIV viral load was 1,300 copies/ml.

Two weeks following presentation with lymphadenitis, he complained of swelling in his right leg and pain in his right inguinal region. A CT scan revealed sub-cutaneous oedema and significant right inguinal lymphadenopathy. Within days his right arm became markedly swollen with a diffuse, painful, haemorrhagic eruption followed by a similar eruption on his right thigh which subsequently ulcerated. A punch biopsy of the skin on his thigh was non-diagnostic. Open biopsy of the right inguinal lymph node demonstrated Kaposi's sarcoma (KS). Further staging revealed no visceral involvement by KS and no residual disease from the NHL.

The patient received 6 cycles of liposomal doxorubicin and there was prompt resolution of pain, swelling and the cutaneous lesions.

IRIS secondary to KS has been reported rarely. Despite the significant benefit of HAART for the treatment of KS, atypical presentations and progression of KS can occur with HAART. The ability to predict the occurrence of IRIS to HHV-8 and other pathogens remains an important area of future research.

CASTLEMAN'S DISEASE IN HIV: A CASE SERIES

Wade AJ[1], Polizzotto M[2], Chipman MP[3], Wright EJ[1,4], Lewin SR[1,4]
[1]Infectious Diseases Unit, Alfred Hospital; [2]Haematology Unit, Alfred Hospital; [3]Medical Oncology Unit Alfred Hospital: [4]Monash University, Department of Medicine, Melbourne, VIC, Australia.

A 29 year-old man with HIV infection presented with fatigue, sweats and pancytopenia one month after commencing HAART (zidovudine, lamivudine, efavirenz). His CD4 count was 127 cells/μL (7%) and HIV viral load 317,000 copies/mL. A computed tomography (CT) scan of his neck, chest and abdomen revealed a small submandibular node. Submandibular node and bone marrow biopsies revealed reactive cells. His pancytopenia resolved with cessation of HAART and he was discharged home.

Eight weeks later he was commenced on abacavir, tenofovir and ritonavir boosted atazanavir. Four weeks after starting the new regimen, he presented with fever, sweats, and lymphadenopathy. His CD4 count was 259 cells/μL (10%) and HIV viral load 300,000 copies/mL. On examination he was hypotensive and tachycardic, with splenomegaly and cervical lymphadenopathy. Investigations revealed pancytopenia and hypoalbuminaemia. A CT scan showed mediastinal, axillary, cervical and retroperitoneal lymphadenopathy. Cervical node biopsy was consistent with multicentric Castleman's disease (MCD), plasma cell variant. HHV8 was detected in serum by polymerase chain reaction (PCR). Following cyclophosphamide and prednisolone, there was resolution of systemic symptoms, pancytopenia, hypoalbuminaemia and splenomegaly.

Eight weeks later he presented with progression of MCD, with systemic symptoms, pancytopenia and hypoalbuminaemia. He was treated with 6 cycles of R-CHOP (rituximab, cyclophosphamide, adriamycin, vincristine, dexamethasone) with a good response. A recent CT demonstrated no lymphadenopathy.

We identified 8 cases of MCD in HIV-infected individuals that have presented to the Alfred Hospital post 1996 (n=2072). At the time of diagnosis, the mean CD4 count was 137 (range 30 – 314) cells/μL, and HIV viral load was 60,200 (range undetectable – 100,000) copies/mL. All had biopsy proven disease and 6/8 were HHV8 PCR positive. All were on HAART and 5/8 commenced or recommenced HAART less than 7 months prior to the diagnosis of MCD. Treatment included a variety of chemotherapy regimens (including rituximab) and ganciclovir, with a variable outcome.

The case and series illustrates that MCD is a rare complication of HIV infection, and can present early after initiation of HAART consistent with immune restoration disease. The optimal management of MCD in the setting of HIV remains unclear in the absence of large randomised clinical trials.

FLARE OF HIV-ASSOCIATED POLYMYOSITIS DURING TREATMENT INTERRUPTION

Ingram PR[1], Dyer J[1]
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Although its clinical presentation and response to therapy resemble those of idiopathic auto-immune polymyositis, little is known about the pathogenesis of HIV-associated polymyositis. A 49-year-old haemophiliac man initially developed weakness of neck flexion and proximal lower limbs in association with markedly raised serum creatine kinase (CK) in the early 1990s while taking zidovudine monotherapy. Muscle biopsy demonstrated an inflammatory polymyositis, but no evidence of mitochondrial myopathy. Treatment with oral corticosteroids and methotrexate resulted in improvement of muscle weakness and normalisation of CK, and these were gradually weaned over a period of some years. In 1996, he was commenced on a highly active combination antiretroviral regimen containing zidovudine, which resulted in sustained suppression of plasma viral load below limits of detection. In mid-2004, antiretroviral therapy was interrupted because of dyslipidaemia, insulin resistance, and gradually rising CK, which raised concerns about the development of a mitochondrial myopathy. Following initial normalisation of CK, there was an abrupt rise over the next 3 months, together with development of generalised weakness and muscle wasting. He was recommenced on high dose immunosuppressive therapy and antiretroviral therapy, resulting in progressive clinical and biochemical improvement. The flare of inflammatory disease activity observed in this case following loss of control of viral replication helps shed light on the immunopathogenesis and treatment of HIV-related auto-immune neuromuscular disorders.

Plenary 3
9.00am – 10.30am

FROM HIV PREVENTION TO UNIVERSAL ACCESS: A HEALTH AND HUMAN RIGHTS PERSPECTIVE

Tarantola D
University of New South Wales

THE RIGHT TO LOVE: REPRODUCTIVE HEALTH CARE AND DESIRE FOR CHILDREN AMONG, MEN, WOMEN AND ADOLESCENTS LIVING WITH HIV

Paiva V
Columbia University

THE WORLD TRADE ORGANIZATION (WTO) AGREEMENTS AND ACCESS TO MEDICINES

Drahos P
Australian National University

This talk outlines the WTO's decision in 2003 on the Implementation of Paragraph 6 of the Doha Declaration on TRIPS and Public Health. It considers the effects of free trade agreements on the Doha Declaration as well as generic manufacturers. It asks whether the rule complexity that is evolving in the area of trade and intellectual property is serving the goal of increasing access to medicines.

Co-infection with Hepatitis and HIV – Clinical
11.00am - 12.30pm

LIVER CANCER, HEPATITIS B AND C IN NEW SOUTH WALES 1990–2002: A LINKAGE STUDY

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Rates of hepatocellular carcinoma (HCC) have increased in Australia in the last 20-30 years. It has been hypothesized that these increases are primarily due to increases in hepatitis B (HBV) and C (HCV) prevalence. In Australia the proportion of HCC related to HBV and HCV infection is unknown.

All liver cancers notified to the New South Wales Central Cancer Registry from 1990 to 2002 (n=2727) were extracted and described. Crude and standardised rates were calculated by using the estimated Australian population. HCC notifications were probabilistically linked to HBV and HCV diagnoses notified to NSW Health and HBV, HCV, HBV/HCV co-infected and unlinked HCC groups were identified. Multivariate logistic regression models were fitted to identify factors associated with HBV and HCV linkage to HCC notification. Kaplan–Meier curves compared survival estimates between linkage groups.

The incidence of HCC increased from 1.4/100 000 in 1990 to 2.8/100 000 2002. Incidence varied by region of birth ($p<0.001$), with people born in Vietnam having the highest relative rate compared to those born in Australia (RR 11.7 95% CI 9.8-13.8). Of the HCC records 15.6% were kinked to HBV, 12.9% to HCV, 0.8% to HBV/HCV co-infection and 70.7% were unlinked. Median age at HCC diagnosis was 58, 67, 59 and 69 years for each group ($p<0.001$) and varied further when stratified by country of birth, being lowest (52 years) for Australian born with HCV linked HCC. Age group, year of HCC diagnosis and region of birth were associated with HBV and HCV infection. Median survival from HCC diagnosis was close to one year in all groups.

Increasing incidence of HCC in NSW is largely attributed to HBV and HCV. Risk of HBV and HCV linked HCC is strongly associated with country of birth, particularly Asian countries. Survival following HCC diagnosis remains extremely poor.

EFFICACY OF EARLY TREATMENT RESPONSE WITH PEGYLATED INTERFERON ALFA-2A (PEG-IFN) +/- RIBAVIRIN (RBV) IN HIV INFECTED INDIVIDUALS WITH ACUTE HEPATITIS C (AHC) TREATED WITHIN THE ATAHC STUDY

Matthews G [1], Hellard M [2], Haber P [3], Marks P [1], McCaughan G [3], Pan Y [4], White P [4], Rawlinson W [4] , Lloyd A [5], Kaldor J [1]and Dore G [1] for the ATAHC Study Group
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The Australian Trial in Acute Hepatitis C (ATAHC) is an NIH-funded national study, including an assessment of the safety and efficacy of PEG-IFN treatment for AHC in a predominantly injecting drug user population. AHC in the setting of HIV coinfection is increasing and may be associated with lower response rates to treatment.

HIV positive individuals commenced on PEG-IFN treatment in ATAHC with at least 12 weeks of follow-up were included in this assessment of early treatment response.

Twelve HIV positive individuals with AHC were included: 100% male; mean age 38years; median duration since HIV diagnosis 7 years; median nadir CD4 420 cells/mm^3 (range 179-780 cells/mm^3); all CDC class A; and 5/12 patients on HAART. Risk factor for AHC was self-identified as IDU in 67% and as homosexual contact in 33%. In 3/4 sexual contact attributed cases the partner was known to be HCV positive. 7/12 patients had a documented HCV seroconversion illness: median peak ALT 1514 IU/ml (range, 192-2800 IU/ml) and median estimated time from infection 16 weeks (range, 10 – 33 weeks). Five patients were diagnosed on HCV antibody seroconversion alone: median peak ALT 292 (range, 108-693 IU/ml) and median estimated time from infection 52 weeks (range, 28 – 60 weeks). HCV genotype (GT) was GT 1 in 8/12 (67%) and GT 3 in 3/12 (25%). Median HCV VL at baseline (BL) was 4.3 x 10^6 copies/ml (range, 3200 - >4 X 10^7 copies/ml).

The first two patients treated with PEG-IFN were HCV RNA positive at week 12 and discontinued treatment as non-responders. The protocol was subsequently modified to specify combination therapy (PEG-IFN/RBV) in the subsequent 10 HIV coinfected patients. At week 4 of PEG-IFN/RBV 9/9 patients with available results had a rapid virological response (RVR) defined as undetectable HCV by quantitative testing (LLD 3200 copies/ml). At week 12 of therapy 10/10 (100%) of patients had HCV VL< 50copies/ml by qualitative PCR.

Hepatitis C treatment early virological response rates in HIV patients within ATAHC suggest high efficacy despite a high proportion of GT1 patients and duration of infection greater than six months in many of the patients.

CHARACTERISTICS AND PREDICTORS OF HEPATIC FLARES WITHIN A RANDOMIZED STUDY OF HEPATITIS B (HBV) THERAPY IN ANTIRETROVIRAL NAÏVE HIV/HBV COINFECTED PATIENTS IN THAILAND

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The Tenofovir in HIV/HBV coinfection study (TICO) is a randomized (1:1:1) trial of tenofovir (TDF) vs lamivudine (LMV) vs TDF/LMV within an efavirenz (EFV) based HAART regimen initiated in 36 antiretroviral (ARV) naïve HIV/HBV coinfected patients in Thailand. Data on incidence, characteristics and predictors of hepatic flare (HF) are presented.

HF cases were defined as patients with ALT > 5 X ULN or ALT > 100 IU/ml increase from baseline (BL) within 12 weeks of HAART initiation. Study characteristics: mean age 35 years; 36% female; mean BMI 20; median BL CD4 count 36 cells/mm^3 (IQR 8-233 cells/mm^3); median BL HIV RNA 4.7 $\log_{10}$ copies/ml; median BL HBV DNA 8.0 $\log_{10}$ copies/ml; 61% HBeAg positive; 91% Genotype C infection. Eight (22%) HF cases were identified. Median time to HF was 61 days (range, 27-97 days). Median ALT at HF was 395 IU/ml (range, 178 – 2560 IU/ml). 7/8 HF patients were on cotrimoxazole+/-fluconazole (vs 20/28 non-HF, p=0.156) and 1 was on anti-TB medication (vs 8/28 non-HF, p=0.355). EFV was interrupted/changed in 2 HF cases with no change to HBV-active drugs. 6/8 patients were asymptomatic, 1 had jaundice/nausea and 1 patient (cirrhotic at BL) developed decompensated liver disease and died.

No significant differences were found between HF cases and non-HF cases in age, gender, treatment arm, BMI, alcohol intake, HBeAg status, median BL CD4 (52 vs 32 cells/mm^3), median BL CD8 (603 vs 588 cells/mm^3), median BL HIV RNA (4.9 vs 4.7 $\log_{10}$ copies/ml), or wk12 CD4 change (57 vs 60 cells/mm^3). HF cases had higher ALT (79 vs 36, p=0.008) and HBV DNA (9.89 vs 8.32 $\log_{10}$ copies/ml, p=0.011) levels at baseline. Mean HBV DNA level remained higher in HF cases at week 4 (7.51 vs 5.56 $\log_{10}$ copies/ml, p=0.003) and week 8 (6.22 vs 4.68 $\log_{10}$ copies/ml, p=0.019), but was similar at week 12 (4.54 vs 3.83 $\log_{10}$ copies/ml, p=0.845).

In patients with advanced HIV disease HF after initiation of HBV-active HAART is common and may be clinically significant, especially in advanced liver disease. Patients with higher BL HBV DNA and ALT may be at increased risk of hepatic flare.

HEPATITIS B AND C VIRUS COINFECTION AMONG PATIENTS WITH HIV IN TREAT ASIA HIV OBSERVATIONAL DATABASE

Zhou J[1], Dore GJ[1], Zhang FJ[2], Lim PL[3], Chen YMA[4] on behalf of the TREAT Asia HIV Observational database
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This paper aims to assess rates of hepatitis B (HBV) and hepatitis C (HCV) virus coinfection, and the impact of coinfection on response to antiretroviral treatment and overall survival, among patients with HIV infection in the TREAT Asia HIV Observational Database (TAHOD).

The effect of HBV or HCV coinfection on response to antiretroviral treatment was assessed in terms of CD4 count changes at 180 days, and time to undetectable HIV viral load (<400 copies/mL), after initiation of therapy. The effect of coinfection on overall survival after entry to TAHOD was also examined. In all analyses, patients who ever tested positive for HBV or HCV were regarded as coinfected for the duration of the study.

Up to December 2005, a total of 2979 patients have been recruited to TAHOD. An HBsAg test was available for 1641 patients, with a HBV prevalence of 10.4%. A HCV antibody test was available for 1469 patients, with a HCV prevalence of 10.4%. Mean CD4 change at 180 days after initiation of antiretroviral treatment was 131.9 cells/μL and patients with either HBV or HCV had a lower but not significantly different CD4 increase. Median days to reach undetectable viral load was 223 days and was not significantly associated with HBV or HCV. In univariate analysis, patients with HCV had increased mortality (unadjusted hazard ratio, HR 2.77, p=0.008). However, neither HBV (adjusted HR 0.83, 95% CI 0.25~2.72, p=0.759) nor HCV (adjusted HR 1.33, 0.55~3.24, p=0.519) was associated with increased mortality after adjustment for baseline CD4 count, HIV viral load, receipt of antiretroviral treatment and HIV disease stage.

Findings on the impact of hepatitis coinfection on antiretroviral treatment responses and HIV disease progression among an Asian collaborative cohort are similar to previous studies in western countries. However, the longer-term impact of hepatitis coinfeciton on both HIV disease and liver disease morbidity and mortality in Asian populations will need to be monitored.

SURVEILLANCE OF HEPATITIS B VIRUS (HBV) MUTATIONS DURING TENOFOVIR (TDF) TREATMENT IN HIV AND HBV CO-INFECTED INDIVIDUALS

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Co-infection with HIV and HBV is common due to shared modes of transmission and 6.7% of Australian HIV-infected individuals are co-infected with HBV. Tenofovir (TDF) is frequently used for management of HIV and also has activity against both wild type and Lamivudine (LMV)-resistant HBV. Most LMV resistance in HBV has been associated with combined rtL180M + rtM204I mutations. Recently, the rtA194T mutation together with the LMV-resistant mutations has been associated with TDF resistance. The aim of this study was to identify and characterize HBV mutations associated with on-going HBV replication in individuals receiving TDF +/- LMV.

Forty-five HIV-HBV co-infected individuals who had received TDF for at least 3 months were identified at three Melbourne tertiary centres. Twenty-nine of these patients had treatment samples available while receiving TDF (on-TDF), and of those, 25 also had samples available prior to TDF treatment (pre-TDF). Of the pre-TDF isolates, 16/25 (64%) were HBV PCR positive, and LMV-resistant mutations were identified in 8/16 (50%) of the viremic samples. In the individuals with on-TDF samples 6/29 (20.7%) were HBV PCR positive with a mean time on TDF of 13 months (range 3-27 months). LMV-resistant mutations were detected in 4/6 (66.7%) of these viremic samples. Four of the 6 individuals with HBV PCR positive on-TDF samples had been viremic prior to TDF treatment, and 2 did not have pre-TDF samples available. In the on-TDF treatment samples a unique polymerase mutation was identified in one (3.2%) individual; the HBV mutation was detected in the post treatment sample at rtK212M (patient A). The previously identified TDF-resistant mutations at rtA194T + rtL180M + rtM204V were not detected in any sample.

TDF resistance in HIV-HBV co-infection is selected at a much slower rate than for LMV. LMV-resistant mutations persist, and a fifth of patients are HBV PCR positive despite the addition of TDF. One novel mutation was identified in HBV isolated from a patient during TDF treatment.

HEPATITIS B SURFACE ANTIGEN SEROREVERSION IN HIV PATIENTS IN THE ERA OF HAART, A POPULATION PROFILE

Aitchison Stacey J[1], Yu, Jian H[1], Mijch Anne M[1], Watson Kerrie M[1]

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The aim of this study was to describe a population of HIV patients co-infected with Hepatitis B surface antigen (HepBsAg) for more than 6 months, who then became HepBsAg negative (HB seroreversion). A total of 236 HIV patients were coinfected with HepBsAg, 12.7% (n=28) of these had been HepBsAg positive for > 6 months and then subsequently became HepBsAg negative. Of these 28 coinfected patients, 75% (n=21) occurred in the era of highly active antiretroviral therapy (HAART).

These individuals became HepBsAg negative after a mean of 8.8 years following their chronic HepBsAg diagnosis. Ninety five percent (95%) were male with a mean age of 43.3 years.

CD4 cells/μL at the time of chronic HepBsAg diagnosis was a mean of 324 (SD 204), at time of starting HAART 230 (SD 142) and time of seroreversion to HepBsAg negative 362 (SD 260).

HIV viral load (copies/ml) at the time of chronic HepBsAg diagnosis was a median of 57100 (25^{th}, 75^{th} percentile 4300, 100000), at the time of starting HAART 21900 (4300, 38700) and at the time of seroreversion to HepBsAg negative 3600 (50, 87150).

These 21 patients were on the following Hepatitis B active antiretroviral treatments during the period spanning HB seroreversion. Eighty one percent (n=19) overall were on Lamivudine, with 76% (n=16) on Lamivudine only. A total of 14% (n=3) received no Hepatitis B active antiretroviral treatment while HepBsAg positive during the era of HAART. The mean length of time on Lamivudine was 2.89 (SD 2.5) years. Nineteen percent (n=4) were on Tenofovir, with 5% (n=1) on Tenofovir only. The average length of time on Tenofovir over this period was 1.28 years (SD 1.1). There was a total of 14% (n=3) who were treated with Lamivudine and Tenofovir sequentially. Fourteen percent (n=3) of patients were on both Lamivudine and Tenofovir simultaneously while HepBsAg positive, spending a mean of 1 (SD 1.1) year on combined therapy.

This investigation has found that 8.9% of individuals with chronic HB infection underwent seroreversion in the era of HAART. Factors identified with seroreversion will be presented.

Primary Care – Peter Meese Session
11.00am – 12.30pm

MULTIPLE MEASUREMENTS OF ADHERENCE TO ARV THERAPY IN PRIMARY CARE

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Difficulty with adherence is thought to be the leading cause of treatment failure in patients treated for HIV infection. The OneDa study (previously called TeddI) 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. This was the first major Australian study to use an objective measurement of adherence to antiretroviral therapy. Adherence is measured using electronic monitors (MEMS cap), patient self-report (MASRI questionnaire), therapeutic drug monitoring (TDM) and doctor's assessment. Prior to randomisation all patients have a 1 month baseline observation period during which their adherence to their current twice-daily combination therapy is evaluated. At week 0 they are randomised to continuing current therapy or switching to once daily treatment.

100 patients have been evaluated in the baseline month. These patients were treated at 4 primary care sites in Sydney and Melbourne. They are 98% male, average 44 years with the major mode of infection being 92% homosexual or bisexual contact. Adherence (doses taken/doses prescribed) in the baseline month was recorded to be 92.2 % by MEMS cap, 91.1 %.by MASRI visual analogue scale and 94.3 % by prescriber assessment. There was a wide range of adherence recorded by MEMS cap from 48 to 100 %. The percentage of days when the correct dose was taken was lower at 78.5% as recorded by MEMS cap.

In general, compliance in this well-controlled population is high. A more detailed analysis and comparison between these methods of adherence assessment will be presented.

RISK FACTORS DETERMINING ANTIRETROVIRAL DRUG TREATMENT FAILURE AMONG HIV/AIDS PATIENTS ATTENDING A GOVERNMENT HOSPITAL IN NORTHERN THAILAND

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1. Day Care Center, Lampang Hospital, Thailand
2. National Institute of Health of Thailand
3. International Medical Center of Japan, Tokyo, Japan

- Thai Government has began to distribute a generic antiretroviral drug (ARV) widely for HIV patients since 2002. This medicine is a combined tablet of d4T/3TC/nevirapine and named "GPOvir".
- Lampang Hospital is a government referral hospital in northern Thailand. Since it established a Day Care Center to provide comprehensive care for HIV patients in 1996, 2,625 HIV patients have been registered to HIV Clinic and 1,357 are now being followed up. Small number of HIV patients received dual therapy in 1996 and some started HAART in 1997.
- For the successful implementation and improvement of the ARV program, it is important to identify who is at higher risk of failure. This is particularly important in developing countries where viral load measurement is not readily available.
- Several biological factors have been reported to associate with failure of ARV therapy such as baseline CD4+ cell count, base-line viral load, sex, ARV history, younger age and poor adherence.
- The adherence of ARV drugs is known as the major factor determining the success of ARV but it remains difficult to monitor it.

From the study we conclude that ..
1. Previous ART experience was a strong risk factor for virological failure. Younger age was another factor for increased risk of virological failure. Female sex had better success than male but statistically not significant.
2. Treatment failure was not associated with CD4, viral load or clinical status at the time of starting GPOvir.
3. Income, education, marital status and having children were not associated with the virological outcome.
4. Simple self-evaluation of adherence in "good", "fair" or "poor" was very strongly associated with virological success (P=0.001). This tendency is maintained both for naïve and experience group (P=0.013, 0.124).
5. Change of adherence was significantly associated with the outcome ("Increasing adherence" had poorer outcome), which may reflect the adherence at the beginning of treatment and suggests as an effective way of adherence question.

TREATMENT LITERACY: A KEY ELEMENT IN ASSURING ADHERENCE

Chris W. Green[1]
[1]Spiritia Foundation, Jakarta

Antiretroviral therapy (ART) requires a very high level of adherence if it is to remain effective. Directly observed approaches are unlikely to be sustainable over the long periods required. More success has been achieved by patient empowerment through treatment literacy.

Traditionally, it has been the task of medical professionals to educate patients. However, in most of the developing world, doctors and nurses are often overloaded, and have little time for this task. They also often lack appropriate communication skills.

Training peer educators from the community, particularly people already on ART, is one solution. They offer credibility, and use more appropriate language. They have more time to spend with patients and to study in the narrow area in which they work.

Spiritia has developed a five-day interactive course, consisting of 25 modules, for basic training of treatment educators. This has now been used to train more than 100 community members, primarily members of peer support groups for people living with HIV (PLHIV). The aim is that each group should have at least one member who has a higher level of treatment literacy and can answer the basic questions raised by members and families. Groups are also supporting AIDS referral hospitals in counselling those needing to start ART, and providing adherence support to those on therapy.

It is crucial that community treatment educators are aware of their limitations, and do not try to 'play doctor'. However, they can also assist in interpreting between medical professionals and the lay community. They can also assist in identifying those side effects that require urgent referral.

Clearly, we must place great emphasis on quality of the training and the information provided. There are however challenges in obtaining recognition of the training and the trainees. Community organizations are wary of 'control' by professionals, and tend to be unwilling to be evaluated by groups whom they may feel poorly appreciate the challenges faced on the ground.

HOWDY PARTNER! PARTNERSHIPS IN RURAL SETTINGS PROVIDING SHARED CARE AND OUTCOMES FOR PLWHA

Farmer G.
ACON Mid North Coast Outreach Service NSW Australia.

Rural service provision for PLWHA provides many challenges for service providers. Often PLWHA have relocated from a city area where many services exist and are very easily accessed. In regional areas the responsibility to provide similar services often needs to be done in partnership between health services that exist in those areas.

The ACON Mid North Coast Outreach Service covers an area of around 22,000 sq km and employs two fulltime outreach workers. An Education and Community Development Officer and a Care and Support Worker/Aboriginal Community Development Officer are employed and provide services for PLWHA, the Indigenous Communities and GLBT communities. The ACON staff work very closely with local Area Health Services, Government Depts and other NGO's.

Often distance and isolation are major issues for clients living in rural areas so accessing services may often be difficult or indeed hard to coordinate when travelling into the townships to use these services. This is where working in partnership with other services can benefit the client and also provide a more holistic approach.

An example of a successful model are the HIV specialist clinics that are conducted monthly by the local Area Health Services on the Mid North Coast. Once a month a visiting HIV specialist travels to the region to provide specialist services for PLWHA. The clinic days are set up in a way that provides a "one stop shop" type service for the client when attending the HIV clinic. ACON staff are placed within the clinic as well as a comprehensive team of other specialist staff from Area Health. A case management framework is used in bringing services together to provide the maximum outcome for the client.

This presentation will cover issues faced by service providers and clients in regional settings, some of the dynamics that occur when clinical and psycho-social service providers work together and will examine some of the individual service provider and organisational frameworks that promote positive health and wellbeing outcomes for regional PLWHA.

RURAL PLWHA REFERRED TO A STATEWIDE CONSULTANCY SERVICE: THE IMPORTANCE OF PRIMARY CARE PROVISION

Vujovic O[1], Collins R[1] and Blyth K[1]
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In rural communities, a number of challenges face people living with HIV/AIDS (PLWHA) and their health care providers, including issues of access to primary and specialist (S100 prescriber) care, concerns regarding confidentiality and discrimination, concerns regarding competence of generic health care services and lack of access to counselling and peer support.

The Victorian HIV Consultancy (VHIVC) comprises a small multidisciplinary team (1.6 EFT clinical nurse consultant and 0.6 EFT HIV physician) with a statewide role. Originally established to support end-of-life care needs of PLWHA and their carers, the VHIVC has extended its role to include support for the complex and continuing care needs of PLWHA, especially those with limited access to mainstream HIV services. The VHIVC model is based upon the provision of a consultation service, predominantly to health care professionals; in some instances referred PLWHA may be taken on as VHIVC clients for an interim period. In response to increasing referrals of rural PLWHA and increasing consultation requests from rural health care practitioners, the VHIVC developed a multidisciplinary consultation model that aims to support rural care provision by provision of a consultation (secondary and tertiary) service, linkages and cross referrals to rural-based providers and delivery of targeted education.

In order to assess the care needs of rural PLWHA, consultation requests received over a twelve month period (May 2005 – April 2006) were analysed and mapped against the consultation model. For the purpose of this analysis, only consultation requests where the client was resident in, or moving to, an area outside metropolitan Melbourne were examined. During the period indicated, 23 consultation requests fulfilling the latter criteria were received. Although in many instances more than one question or request was posed, the most common principal reason was the request for onward referral to a general practitioner (10 cases), followed by requests for care co-ordination (5), rural linkages (3), specialist care (3), counselling (1) and other (1). Of the 23 PLWHA referred, 8 were accepted formally as clients of the VHIVC due to complex care needs requiring care co-ordination and/or clinical care provision by the VHIVC team. This analysis highlights the importance of successful engagement with local health care providers for optimal health maintenance of rural PLWHA.

RURAL PERSPECTIVES ABOUT THE ADAHPT TELEHEALTH PROJECT

Attwood R[1], Traill M[2], Wood L[3]
[1]ADAHPT, Sydney Hospital and Sydney Eye Hospital, Sydney, NSW, Australia
[2]Albury Sexual Health Service, Albury, NSW, Australia
[3] HIV, HCV and Sexual Health Program (North Coast Area Health Service), Port Macquarie, NSW, Australia

The 12-month ADAHPT Telehealth pilot project funded by a seeding grant from New South Wales (NSW) Health Telehealth Initiative concluded in June 2006. The aim of the project was to establish and evaluate whether the Telehealth network of NSW, through interactive videoconferencing, could improve case management for HIV positive clients with complex needs in rural NSW.

The clients of the service typically have diagnoses that make management complex, and which can impact on a person's ability to manage their day-to-day life effectively. These diagnoses can include AIDS Dementia Complex, other HIV-related cognitive impairment, mental illness, and/or drug and alcohol misuse. Management of these clients in rural areas is further complicated by factors such as limited availability of medical and other support services, confidentiality concerns, and travel distance.

Seen as a supplement to current face-to-face service provision, ADAHPT agreed to provide a range of case management services, using interactive videoconferencing, via the established NSW Telehealth network including clinical advice, consultation, peer support, education and training to nine rural Sexual Health Services in the North Coast, Greater Southern and Hunter/New England Area Health Services.

Recorded during an interactive videoconference over the Telehealth network, a Sexual Health Nurse from Albury Sexual Health Service (Greater Southern Area Health Service) and the HIV/HCV/Sexual Health Counsellor from the HIV, HCV and Sexual Health Program, Port Macquarie (North Coast Area Health Service) will provide a critique of the project via a facilitated interview. The interview will address 1) Re-orientating current clinical practice to incorporate interactive videoconferencing technology, 2) The role of interactive videoconferencing technology within HIV case management and 3) Drawbacks of interactive videoconferencing technology (including clinical).

To conclude the presentation, the ADAHPT project officer will draw upon the project report evaluation outcomes to highlight any future role for interactive videoconferencing within HIV case management.

BUYING TIME IN NSW PRISONS: SEXUAL PROTECTION AND REJECTION AMONG MEN

Yap L[1], Richters J[1], Butler T[2,3], Kirkwood K[2], Grant L[4], and Donovan B[5,6]

[1] National Centre in HIV Social Research, University of New South Wales, Sydney NSW 2052, Australia; [2] Centre for Health Research in Criminal Justice, Sydney; [3]School of Public Health and Community Medicine, University of New South Wales, Sydney; [4]NSW Department of Corrective Services, Sydney; [5]Sydney Sexual Health Centre, Sydney Hospital, and [6]National Centre in HIV Epidemiology and Clinical Research, University of New South Wales, Sydney.

Many studies have documented the sexual encounters, assaults and sexually coercive incidents among prisoners. Rarely explored are prisoners who found ways to minimise sexual threats to themselves. This study describes three male ex-prisoners who used their knowledge of prison and its culture to reduce their sexual risk by means other than submission and violence.

For one respondent, his primary strategy was to keep to himself and to try not to reveal any personal information to other inmates, such as, the length of his current sentence. He reasoned that those who wanted sexual favours would find it more difficult to know how much time he had remaining to plan their sexual approach within the tightly regulated prison system. The respondent further discussed rejecting the sexual advances by other inmates informing them that he was infected with a STI or that he was feeling ill from the effects of drug detoxification. He considered his strategy to be successful since men, rather than demanding anal sex, requested 'hand jobs' or blow jobs', not perceived to be 'sex' by prisoners.

In contrast, one respondent had a network of friends whom he met again inside prison and who protected him by pointing out inmates notorious for luring new prisoners inside their cells with food, drinks or drugs and forcing them to provide sex. Whereas another inmate avoided conversing with known gays and transgenders inside prison, even if he knew them and was friendly with them on the outside. He claimed to have avoided being an easy sexual prey by other inmates who may have incorrectly assumed that he was of the same sexual orientation.

Prisons are complex societies with their own inherent rules and organisations. The Sexual Health and Attitudes of Australian Prisoners Project (SHAAP) (2005-2008) is in the process of learning more about the sexual health, attitudes and behaviours of Australian prisoners.

Social Research – Risk & Prevention
11.00am – 12.30pm

POTENTIAL DIFFICULTIES AND CONFLICTS IN ROLLING OUT HIV VACCINATION: LESSONS FROM HEPATITIS B VACCINATION

Samuel R Friedman[1], Melissa Bolyard[2], Carey Maslow[3], Pedro Mateu-Gelabert[1], Milagros Sandoval[1], Paul Ritvo[4], Jonathan Zenilman[5]

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[2] Borough of Manhattan Community College, New York, NY

[3] Center for Comprehensive Care, St. Luke's /Roosevelt Hospital Center

[4] School of Kinesiology and Health Sciences and Department of Psychology, York University, Toronto, Ontario, Canada; and Departments of Medicine and Health Policy Management and Evaluation, University of Toronto, Toronto General Hospital, Toronto, Ontario, Canada

[5] Infectious Diseases Division, Johns Hopkins Bayview Medical Center, Baltimore, MD

There has been substantial investment in developing preventive vaccines for HIV. However, even after vaccine development, dissemination can pose many difficulties. Failures in attaining adequate coverage of hepatitis B vaccination among risk groups in the USA other than through childhood vaccination, and general failure in developing countries, provide an example of this.

Furthermore, HIV vaccination campaigns may face many difficulties in gaining access and acceptance. Such difficulties can take many forms. Fear of vaccine side-effects delayed or hindered polio vaccination campaigns in Nigeria, India, and elsewhere, allowing reinfection in 13 previously polio-free countries. Concern that hepatitis B vaccination might induce neurological disease led France to suspend HBV immunizations for pre-adolescents in 1998. In the United States, fears based on past programs like the Tuskegee syphilis study and the involuntary sterilization of many racial/ethnic minority women provide fertile grounds for anxieties and, perhaps, political opposition. Fears among some African Americans that HIV is a "white plot" to eliminate them could contribute to similar difficulties. Similar fears, based on past policies of racial/ethnic oppression, might exist in many countries. Political opposition to advances that reduce the medical consequences of "illicit" sex has arisen around human papillomavirus vaccine.

Stigmatization might also reduce HIV vaccine uptake rates. As Newman et al suggested, with a highly stigmatized infection like HIV, a positive antibody response to vaccination means that subsequent HIV antibody tests will return positive—and other people may react in ways that threaten economic or social well-being or create difficulty in sexual or drug-using relationships. Cost, access and logistics issues, particularly if the vaccine regimen involves more than one inoculation, could reduce vaccination rates in some countries.

Since successful hepatitis B vaccination can be detected serologically and differentiated from natural infection, we use community-based studies to investigate the extent and correlates of vaccination-induced immunity. Obstacles to future HIV vaccination initiatives may be studied by examining hepatitis B vaccination uptake and by attitudes toward current and future vaccination programs. 465 subjects in a minority neighborhood were interviewed and HBV-tested.

Vaccine-induced immunity was lower (13%) among subjects older than 25 than among younger subjects (53%). 25% of 101 subjects interviewed about vaccination attitudes did not believe vaccines were generally safe; 20% were distrustful of vaccination due to past programs like the Tuskegee syphilis study. Few reported anyone discouraging them from influenza or HBV vaccination. Mothers and doctors were reported as people subjects whose advice subjects would take seriously in deciding whether or not to be vaccinated.

Youth vaccination programs appear to have some limited success. Induced-immunity rates among 18 – 24 year olds were higher (53% versus 23%) than in an earlier (1997-1999) population-representative Bushwick study.(Friedman *et al*., 2005) However, even these rates are low—and the low rates (<45%) of vaccine-acquired immunity among the sex partners of IDUs and MSM (and among their partners as well) suggest considerable remaining potential for viral transmission.

Ways to improve vaccination implementation are needed, as are ways to develop and maintain community vaccine support even against potential organized opposition.

The low vaccination rates imply that vaccine delivery for marginalized populations needs improvement. Training indigenous health activists might increase vaccination rates. Willingness to serve as indigenous health activists is likely given existing levels of indigenous risk-reduction communication. Targeting mothers and doctors as pro-vaccination communicators may be effective since particularly influence subjects.

In contrast to HBV, HIV/AIDS vaccines will be highly visible, which may accentuate controversy and political entrepreneurship against them. It is noteworthy that 20%-25% of respondents believed vaccines were unsafe or would be reluctant to be vaccinated due to past Tuskegee-like events. Their co-believers might provide a popular base internationally for politicized campaigns against HIV vaccination.

Thus, small errors in conducting vaccine campaigns may have major consequences. Anti-vaccine campaigners use sporadic, non-vaccine-related cases of illness, stroke, or other misfortunes among vaccines to discredit vaccines. Careful monitoring of adverse effects and candid public explanations may help to counter such charges.

Although HIV vaccines are a decade off, research and planning now may minimize future sociopolitical and operational difficulties. This research should include qualitative studies of program implementation and on sources of public attitudes toward vaccination. Current research in HIV vaccine "community readiness" is encouraging, but much remains to be done.

PERSONAL, SOCIAL AND CONTEXTUAL ASSOCIATIONS WITH PROTECTED AND UNPROTECTED ANAL INTERCOURSE AMONG GAY AND BISEXUAL MEN IN MELBOURNE

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Unprotected anal intercourse (UAI) is the primary means of sexual transmission of human immunodeficiency virus among homosexually active men. Our understanding of the social, contextual and structural factors associated with the occurrence of UAI is far from complete. This paper describes individual, social network and encounter specific factors associated with protected anal intercourse (PAI) and UAI.

Analyses are made on data from a cross-sectional survey. A total of 733 sexual encounters reported by 202 men recruited from the gay community in Melbourne, Australia. Measures used include network characteristics, context measures and self-reported PAI and UAI.

Most men were Australian born (79.21%), college or university educated (60.40%), in full-time (46.53%) employment, HIV-negative (73.27%), without a history of injecting drug use (83.17%) and identified as gay (90.59%). Their mean age was 36.9 years. The men reported a total of 733 sexual events: most (56.3%) did not involve anal intercourse, and more involved PAI than UAI (30.6% versus 13.1%). PAI was more likely than no anal intercourse (NAI) if the participant's social network was majority gay, if the partner was an occasional or casual partner or was HIV positive. PAI was less likely if sex took place at a beat but more likely if it took place at a sauna. PAI was more likely if the partner was affected by drugs or alcohol. UAI was more likely than NAI if the participant had injected drugs in the year prior to interview. It was less likely if the partner was occasional or casual or was HIV positive but more likely if the partner's HIV status was unknown. UAI was much more likely than NAI if the encounter took place at a sex-on-premises-venue.

In this analysis it is the characteristics of the sexual encounter that predicts whether PAI or UAI rather than NAI takes place.

'THE CORE WITHIN THE CORE': RETHINKING HIV-POSITIVE GAY MEN'S CONTRIBUTION TO INCREASED SEXUALLY TRANSMITTED INFECTIONS IN BRITAIN

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In Britain, HIV-positive gay men report more high-risk sexual behaviour than negative men, and are over-represented in sexually transmitted infection (STI) surveillance statistics. Targeted health promotion tends to treat them as an undifferentiated 'core group'. But we hypothesised STI/HIV risk is not evenly distributed in this population and that simple criteria can identify a so-called 'core within the core', that accounts for a significant proportion of the risk in this population.

Data used came from a cross-sectional study HIV-positive gay men attending a central London outpatient service (n=361). The 'core within the core' – defined as the upper quartile of the distribution of reported sexual contacts in the last year (i.e. >30 partners) – was compared to all others. We also compared 'risk-clustering' between the two groups – defined as reporting ≥3 specified risk practices in the context of a single recent sexual episode.

Overall, the median number of sexual contacts in the last year was 12 (range 1-750). Men in 'the core' were significantly younger and more recently diagnosed, but otherwise similar to the other men in relation to sociodemographics and health measures. 'The core' were less likely to have a primary partner, but reported more regular sexual partners (fuck buddies). They reported significantly more episodes involving multiple partners ($p<0.0001$), sex on premise venues ($p<0.0001$), inconsistent condom use with casual partners ($p=0.0001$) and multiple recreational drug use during sex ($p=0.032$). Men in 'the core' were also significantly more likely to report 'risk-clustering' within a sexual episode ($p=0.001$).

The dual concepts of the 'core within the core' and 'risk-clustering' help explain HIV-positive gay men's involvement in recent STI diagnoses increases and can be used effectively to define populations where prevention interventions could be expected to have the greatest impact.

USE OF NON-OCCUPATIONAL EXPOSURE PROPHYLAXIS AGAINST HIV (NPEP) BY HOMOSEXUAL MEN: IMPACT ON HIV RISK BEHAVIOURS AND SUBSEQUENT HIV INFECTION

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NPEP is increasingly being used to prevent HIV in Australia. We examined the relationship between use of NPEP and future HIV infection in the Health in Men cohort of homosexual men in Sydney.

Community-based strategies were used to enrol 1,427 initially HIV-negative homosexual men between 2001 and 2004. They were followed up for a median of 2.0 person years (PY), and 87% attended at least one follow up visit. Men were interviewed annually on a wide range of subjects including sexual relationships and practices, injecting drug use and NPEP prescription. Serological testing for HIV testing was performed annually. Every six months, further information was collected on HIV risk behaviours. Reports of acts of non-concordant unprotected anal intercourse (NC-UAI) among men who received NPEP were compared with reports of acts of NC-UAI among men who had not received NPEP. The hazard ratio (HR) of HIV infection in men who were prescribed NPEP was calculated using Cox regression.

There were 38 HIV seroconversions, giving an incidence of 0.94 per 100PY. At baseline, 79% of men had heard of NPEP, and 6% of men had received it. By the fourth study interview, 95% of participants had heard of NPEP. Each year, between 2 and 3% of participants reported receiving NPEP. Of the men who had completed four study interviews, 13% had received NPEP. These men reported more non-concordant unprotected anal intercourse (NC-UAI) than those who had not received NPEP ($p < 0.001$). Men who had received NPEP at baseline continued to be at high risk. They were more likely than those who did not receive NPEP to report NC-UAI one year later (50% and 36%, p=.009). Men who had previously received NPEP were at increased risk of HIV in the future (incidence of 2.37 per 100 person years, HR 2.30, 95% CI 1.05-5.06).

NPEP use is relatively common among homosexual men in Sydney. Those who have previously received NPEP continue to report high levels of risk behaviour and have higher rates of HIV infection. Further HIV prevention interventions should be targeted to homosexual men who receive NPEP.

WHAT DISTINGUISHES CASUAL AND REGULAR PARTNERSHIPS AMONG HIV-NEGATIVE GAY MEN.

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Shifts in risk behaviour attributable to sex with casual or regular partners appear to be an important factor in understanding recent trends in HIV infections.
Of 1427 HIV-negative men enrolled into the Health in Men (HIM) cohort study between 2001 and 2004, 1017 completed a second annual follow-up interview between 2003 and 2005. Questions about familiarity with casual partners were introduced in 2003.
Of those completing a second annual follow-up interview, 69.4% reported having sex with a regular partner in the previous six months, including 12.6% with several regular partners. Of those with a primary partner: 22.2% had been in that relationship for five or more years; 53.7% were living together; 30.5% referred to this partner as their 'boyfriend', and 38.2% as their 'partner' while 7.0% described him as 'fuckbuddy'. The majority had negotiated agreements about sex, both inside (82.8%) and outside (76.6%) their relationship, but 28.1% of those who had agreed not to use condoms with each other had discarded the condoms within one month of commencing sex.
Most men (75.2%) reported sex with casual partners, including 22.5% who reported more than twenty casual partners in the previous six months, and 4.7% who reported just one casual partner. In total, men reported having sex with 16069 casual partners whose HIV status they did not know, and 1334 partners they believed to be HIV-negative. They reported unprotected anal intercourse (UAI) with 22.0% of their HIV-negative casual partners, 23.9% of whom were well-known to them beforehand. They also reported UAI with 8.5% of the partners whose HIV status they did not know, 6.0% of whom were well-known to them.
Partners categorised as 'regular' included men with whom participants had longstanding, intimate relationships as well as some men with whom their relationship was much shorter in duration and possibly less intimate. Partners categorised as 'casual' were mainly of short or no previous acquaintance, but a small proportion appeared to be men with whom participants had some ongoing intimate relationship, and this may have been a factor in their likelihood to engage in UAI with some of these men.

COST-EFFECTIVENESS OF HIV NON-OCCUPATIONAL POST EXPOSURE PROPHYLAXIS (NPEP) IN AUSTRALIA

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NPEP has been widely available to the community in Australia since 1998 and is funded by the state governments. To our knowledge, this is the first economic evaluation of NPEP in Australia.

We performed a retrospective cost analysis of a population-based observational cohort of 1601 NPEP patients between 1998 and 2004 in Australia. Costs were adapted to reflect current practice and combined with effectiveness measures to calculate the cost per seroconversion avoided. A healthcare provider perspective was used. Treatment costs included costs for consultations and outpatient visits during the six-month follow-up period, diagnostic tests and drugs. Other costs incurred at the state level for NPEP support services were also considered.

NPEP was provided through hospital outpatient clinics (57% of prescriptions), general practitioners (22%) and sexual health clinics (21%). In order to account for differences in terms of NPEP protocols and cost structures, we modelled the costs of each treatment setting separately and differentiated between two large Australian hospitals.

The average NPEP cost per patient was A$1616, of which A$848 (52%) was for drugs, A$331 (21%) for consultations, A$225 (14%) for pathology, and A$212 (13%) for other costs. Sexual health clinics, GPs and hospital based services had a similar average cost per NPEP patient.

Overall, the cost per seroconversion avoided was A$1,740,134 in our base case analysis. It was A$1,089,774 after unprotected receptive anal intercourse (UAI-R) and A$700,617 after exposure to a known HIV positive source. These ratios were very sensitive to assumptions about the risk of HIV transmission after UAI-R. With a rate of 2.76% instead of 0.82%, the average cost dropped to A$500,710 per infection avoided, A$323,773 after UAI-R exposure, and A$201,219 after exposure to a known HIV positive source. Although 88% of infections avoided were after UAI-R, 45% of the costs were incurred for other types of exposures where the cost-effectiveness ratio was over A$3 million per infection avoided.

Despite the lack of certainty about key factors such as PEP effectiveness and risk of HIV transmission after single exposure, these results indicate that it may not be cost-effective to provide NPEP after all types of risk exposures.

PNG Session
11.00am – 12.30pm

PLANNING FOR HIV/AIDS IN THE MEDIUM TERM IN THE HEALTH SECTOR IN PAPUA NEW GUINEA

Dr Daoni E
Technical Advisor STI/HIV of National Department of Health: PNG

Since the first case of HIV was detected in Papua New Guinea (PNG) in 1987 and to the end of December 2005 there are more than 13, 000 confirmed cases of HIV/AIDS. However, it is estimated that there are currently between 25, 000 to 68,000 undiagnosed cases of HIV in PNG. Since 1987 the initial responses to the epidemic was done by the National Department of Health (NDOH). This was transferred in 1999 to the National AIDS Council (NAC) after it was set up to manage the multi – sector response.
The health sector being a key technical sector in the HIV/AIDS response has not had any strategic plan and direction on how the sector will respond to HIV/AIDS.
In June 2006 key technical personal in the NDOH with its main partners met to determine the key programs that will be included in the Health Sector Strategic Plan for HIV/AIDS. These was followed by a workshop in July 2006 that included the members of the senior management of NDOH, NAC and the donor partners supporting the program in the department to finalized the strategic plan for the sector. The priority areas identified include:

1. Leadership, partnership and management
2. Control of sexually transmitted infections and Condom
3. Voluntary Counseling and Testing
4. Infection Control
5. Health Promotion
6. Gender
7. Provision of antiretroviral therapy, post exposure prophylaxis and Continuum of care
8. Management of Opportunistic Infections
9. Prevention of Mother to Child Transmission
10. Human resource management and development
11. Procurement, supplies and Logistic
12. Laboratory
13. Surveillance and research
14. Monitoring and Evaluation

With HIV/AIDS being a priority program for NDOH and its partners the program has attracted lot more resources compared to the other programs in the NDOH. With the impact of HIV/AIDS across all sectors and facets of the communities NDOH faces key challenges in the key areas of leadership, management, coordination, partnership, harmonization, convergence and monitoring and evaluation of the epidemic to ensure that its identified key focus areas and programs must have an impact by minimizing the scourge of the epidemic. The plan with the identified resources if managed well has the potential to strengthen the whole health system in the country.

The Strategic Plan for the Health Sector for HIV/AIDS for 2006 – 2010 and the key challenges for the sector's response will be presented here.

HIV NOTIFICATION SYSTEM IN PNG

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National HIV/AIDS Support Project, National AIDS Council Secretariat

By the end of 2005, a total of 11,470 cases of HIV and 2,693 cases of AIDS had been notified to the National AIDS Council Secretariat (NACS) through the passive surveillance system. HIV cases have been detected in all 20 provinces of the country with the National Capital District and the five highland provinces representing 87% of all new notifications made to NACS since 1987, although this distribution is largely related to the testing practices.
In 2005, 2887 new cases of HIV and AIDS were diagnosed in PNG and of these 2887 cases, 1209 (42%) were males, 1519 (53%) females and 159 (5%) were of unknown sex. Of these cases age was not reported for 910 cases (32%).
There were 479 new notifications of AIDS and 2408 cases of HIV.

Passive HIV/ AIDS surveillance has been in place in PNG since 1987, the year of detection of the first case of HIV in PNG. Demographic information such as sex, age, place of residence and origin, as well as information on the reason for testing and the likely mode of transmission of HIV is collected via a standardised notification form for each patient confirmed positive. Forms are completed by the healthcare worker who ordered the test. These forms are then transferred through the system to the surveillance unit of the National AIDS Council Secretariat (NACS) for analysis and reporting. However, due to concerns regarding the quality of data and frequent failures to submit notification forms this data pathway has recently been revised.
This paper looks at the new HIV/AIDS notification system and the new pathways for data management. This new system was introduced in July of this year in six provinces: Western and Eastern Highlands, East New Britain, Morobe, Kundiawa and Sandaun. The aim of this amended pathway is to minimise the loss of positive patients from the healthcare system, lead to improvements in the quality of patient care and simultaneously address many of the data quality issues related to the original model.

THE PNG NATIONAL HIV/AIDS SOCIAL MARKETING CAMPAIGN: IMPACT AND OUTCOME EVALUATION SURVEY

Movono I
National HIV/AIDS Support Project

The impact and outcome evaluation for the PNG National HIV/AIDS Social Marketing Campaign was designed to consist of quantitative surveys of target groups to ascertain levels of awareness, knowledge, understanding, risk and self-efficacy perceptions, attitudes, beliefs and behaviours.
The first survey was conducted in September 2001 (prior to the phase 1 campaign), identifying baseline levels against which to compare the results of the subsequent surveys. Subsequent surveys were conducted in December 2001 (Phase 1), December 2002 (Phase 2), February 2004 (Phase 3) and December 2004 (Phase 4). This current Phase 5 evaluation commenced in September and monitored the August 2005's Phase 5 campaign focusing on condoms and on high risk sexual behaviours.
These successive waves were designed to provide ongoing comparisons with which to evaluate and monitor campaign effectiveness in terms of: Campaign reception via various forms of media and community-based interventions, Campaign awareness, recall, impact and relevance, Changes in knowledge and understanding of HIV/AIDS issues, Expressed self-efficacy perceptions, behavioural intentions and actual behaviour change.

The last survey sampled 2,000 people, 500 from each of the 4 regions of the country with males slightly over numbering the females.
This paper will look at some of the interesting results and observations from these surveys and mainly focusing on condoms and high risk sexual behaviours.

WHY SEXUALLY TRANSMITTED INFECTIONS ARE HIGH IN TROBRIAND ISLANDS?

Elliot T, Kitau R
Community Medicine; School of Medicine and Health Sciences; UPNG

Trobriand Islands is widely known as the islands of love and made famous by the writings of Malinowski Bronsinki (1884-1942) on their magic gardens and sex dances and games. Its culture and tradition have been practiced in last two centuries and still practiced today and attracts national and international tourists. Losuia hospital was established in the 1940s for treating gonorrhoea, TB and yaws but despite this, gonorrhoea and other STIs still remain high today. This study identified activities and verified how traditional and cultural festivities contributed to the increase of STIs.

The PNG National Health Plan 2001-2010 stated that 100,000 admissions are due to sexually transmitted infections. In PNG, 2,143 gonorrhoea cases were reported between 1999 and 2003, 25.9% were from Milne Bay Province, with 33.8% of cases were from Kiriwina Good Enough district, 82% of all cases reported were from Trobriand Islands.

The aim of this study was to identify reasons for high incidences of STIs in Trobriand Islands with four specific objectives: (1) To assess knowledge of youths and staff on STIs; (2) To determine the distribution of STIs by time, place and person; (3) To verify whether the encouragement and practice of cultural festivities in Trobriand Islands contribute to the increase of STIs; and (4) To identify the cultural practices that contribute to high incidences of STIs.

The mila mala is the annual feast associated with the return of ancestral spirits to the village; kalibom is a slow rhythmic walk and during the walk man can hold girls breast breast/insert finger in a girl's vagina; and katuyausa is a ceremonial escape of girls. Health statistics from the health centre showed the STIs trends to rises between three peaks periods around the festival times.

When the Mila Mala festivities were supported with funding in 2003, 2004 & 2005 the number of reported STI cases increased during and after the festivals.

Basic Science – New HIV Therapies and Low Cost Diagnostics 1.30pm – 3.00pm

PROPERTIES OF APRICITABINE, A NEW NRTI FOR HIV INFECTION

Cox SW
Avexa, Melbourne, Victoria, Australia.

Apricitabine (ATC) is a deoxycytidine analogue in phase IIb development for the treatment of HIV infection. *In vitro* and *in vivo* studies indicate a promising tolerability profile, with low mitochondrial and myelotoxicity. ATC retains antiretroviral activity against clinical isolates resistant to both 3TC (M184V) and Thymidine Analogue mutations (TAMs) *in vitro*. A ten day monotherapy study in treatment naïve subjects showed a more than 1.6 $\log_{10}$ reduction in viral load over 10 days with no evidence of emergence of resistance. *In vitro* studies show resistance selection by ATC is slow and leads to low-level resistance to ATC.

ATC is not a substrate for CYP450 isoenzymes and is principally eliminated as unchanged drug in the urine. ATC shows linear pharmacokinetics upon single or repeat dosing and is dosed twice daily at present. ATC pharmacokinetics are not affected by food or gender. Clinical and *in vitro* studies have shown that ATC competes with FTC and 3TC for phosphorylation, and co-administration may result in clinically significant antagonism. This is likely to be true for all deoxycytidine analogues, and is consistent with experience with the thymidine analogues AZT and d4T. Co-administration with Septrin™ (Trimethoprim Sulphamethoxazole) reduces renal clearance of ATC and resulted in an increase in ATC AUC_{0-12} of 55% and in Cmax of 22%, similar to that seen previously for 3TC. A clinical pharmacology study examining co-administration of ATC with tipranavir is ongoing.

ATC is a candidate for the management of patients who are resistant to 3TC or FTC. An ongoing study in Australia and Argentina is currently investigating the potential for ATC to provide superior antiretroviral activity to 3TC in patients with the M184V mutation in reverse transcriptase who are failing treatment with 3TC.

HIV-1 PATIENTS 3 YEARS OR MORE POST A NEVIRAPINE HYPERSENSITIVITY REACTION SHOW NO DETECTABLE LYMPHOPROLIFERATIVE RESPONSES TO NEVIRAPINE (5-20□G/ML)

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Antiviral therapy reduces HIV-1 viral load and results in recovery of CD4 T-cell counts, however adverse drug reactions are not uncommon in HIV-infected patients. Specifically, the non-nucleoside reverse transcriptase inhibitor, nevirapine, has been associated with rash, fever and/or hepatitis in 4.9% of HIV-1 patients. The mechanisms responsible for nevirapine hypersensitivity have not been elucidated. Adoptive transfer experiments in the rat animal model suggest that the hypersensitivity reaction is mediated by CD4 T-cells. In addition, carriage of HLA DRB1*0101 with a CD4 T-cell % greater than 25%, is a risk factor for developing hypersensitivity in HIV-1 patients. Post exposure prophylactic regimens including nevirapine have also been associated with adverse events in healthy persons. These data suggest that nevirapine hypersensitivity is immune mediated. For these reasons we investigated lymphoproliferative responses to nevirapine in a group (n=6) of HIV-1 patients that experienced a nevirapine hypersensitivity reaction.

Patients were examined a median of 70 months (range 37-104) following the reaction. Median CD4 T-cell count and HIV-1 viral load at time of study were 812 (range 506-1144) cells/□L and 50 (range <50-186) HIV-RNA copies/mL respectively. Freshly isolated Peripheral Blood Mononuclear Cells (PBMC) were treated with Carboxyfluorescein diacetate, succinimidylester (CFSE) and exposed to a range of nevirapine concentrations *in vitro*. Data from the literature shows mean concentration of plasma nevirapine levels range from 6.56+/3.53 □g/ml in HIV-1 patients. Lymphoproliferation was evaluated by detecting the dilution of the CSFE signal in T-cells by flow cytometry. In addition, CD71 expression was used to determine early activation of CD4 and CD8 T-cells. We show that PBMC from previously hypersensitive patients show no evidence of specific proliferation at day 4 or 7 following culture with 5, 10 or 20μg/ml of nevirapine. However these PBMC did proliferate in response to anti-CD3 and PHA-stimulation. In addition PBMC isolated from a healthy control showed an inverse relationship between drug concentration and cell size and granularity and 7-Amino-Actinomycin D incorporation, indicative of toxicity. In conclusion we suggest that PBMC from patients more than 3 years post a nevirapine hypersensitivity reaction do not proliferate in response to drug stimulation at 5, 10 and 20μg/mL.

CHANGES OF HIV-1 VIRAL LOAD ARE ACCOMPANIED BY CHANGES IN THE NUMBERS OF MUTATIONS IN VIRAL MINORITY POPULATIONS

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Most multiply treated patients accumulate resistance associated mutations in the long run. This study originally intended to investigate the reasons for viral load re-increases in the absence of obvious genotypic changes of plasma viruses of patients in deep salvage therapy. We assumed samples to harbour newly developed resistant mutations not detectable by population sequencing.
23 samples of 12 heavily treated patients were chosen according to the occurrence of changes in viral load (VL) (7x VL increase of >0.5lg, 4x reduction of VL <0.5lg, 12x stable VL). As a control served a group of five patients, two of them treatment naïve and three receiving their first-line therapy with similar VL changes over time.

Genotypic drug resistance testing was determined using the ViroSeq Kit. Phenotypic drug resistance and viral replication capacity were determined using a recombinant virus assay. Molecular clones were generated and sequenced from each sample. The resulting 125 clonal sequences were compared to sequence analyses of corresponding viral plasma populations. Mutations detected only by clonal analyses were of interest. Remarkably, most of these mutations were unknown and not associated to drug resistance. None of the molecular clones harbouring those mutations led to the generation of infectious virions after transfection. However, the number of these mutations per 1000bp was higher in clones derived from patients with increasing VL (n=4.47) than for samples derived from patients with a decrease in VL (n=2.51) whereas the samples with stable VL (3.66) were in between (p=0.006, R^2=0.32). Interestingly, this was true for all patients independent of their pretreatment. Of note, absolute VL and the number of mutations did not correlate.

In conclusion, additional drug resistance mutations were rarely observed, and changes in viral load behaviour could not be explained by resistance. However, the re-increase of viral load was associated with increasing numbers of uncharacterized mutations in viral minorities. Appearance of these mutations -leading to an enrichment of replication incompetent viruses in the plasma- indicates either the recruitment of viral variants from the compartments or a direct influence of changes in the replication level on the viral mutation rate during stable non-suppressive therapy.

EVALUATION OF THE CAVIDI EXAVIR™LOAD QUANTITATIVE HIV RT LOAD KIT AS AN ALTERNATIVE HIV VIRAL LOAD MONITORING TEST FOR USE IN RESOURCE-CONSTRAINED SETTINGS

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The widely used molecular biology based viral load assays for monitoring HIV are not technically or economically feasible in most resource-constrained settings. Thus there is an increasing need for less expensive and simpler tests to monitor HIV disease progression in resource-constrained areas to allow for the appropriate use of antiretroviral therapy.

We have evaluated version 2 of a low cost manual reverse transcriptase assay, ExaVir™ Load assay CavidiTech AB (HIV RT) and compared it to a commercially available HIV RNA assay that quantifies viral load to assess the potential use of the RT assay to monitor HIV infection in resource-constrained settings.

Frozen plasma samples from HIV infected individuals previously quantified for HIV RNA using the COBAS Amplicor HIV-1 Monitor assay, ultra-sensitive preparation (RT-PCR) were re-tested for HIV RT activity.

The HIV RT assay showed good sensitivity with detectable HIV RT in 93% of samples (n=121) with HIV RNA >1,000 copies/ml and 73% (n=33) between 401-1000 copies/ml. A positive association was found between the HIV RNA copies/ml and HIV RT copies/ml equivalents (r=0.96; n=182). A decrease in association was observed when samples ≤2000 copies/ml were analysed (r=0.35; n=89). Ten samples were tested on the same HIV RT assay using plasma input volumes of 1ml (recommended), 0.5ml and 0.25ml and compared to HIV RNA. No significant difference between the dilutions was observed. All dilutions differed from the matched HIV RNA test by <0.32 $\log_{10}$. The HIV RNA results for each patient were reproducible using different volumes with variation for all patients <0.42 $\log_{10}$.

The HIV RT assay showed good association with the RT-PCR assay, and has sensitivity approaching that of RT-PCR. The HIV RT assay was reproducible using smaller sample volumes, making it useful for paediatric testing.

EVALUATION OF BLOOD STABILIZERS TRANSFIX™ AND CYTO-CHEX® BCT FOR USE IN LOW COST CD4+ T CELL MONITORING

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TransFix™ and Cyto-Chex® BCT (blood collection tube) blood reagents have been shown to maintain the integrity of whole blood for delayed immunophenotyping by flow cytometry. However, neither has been assessed for their potential use in conjunction with a low cost alternative manual CD4 test. We tested the ability of TransFix™ and Cyto-Chex® BCT blood stabilizing reagents to preserve CD4+ T cell measurements for HIV-seropositive blood samples utilizing the Dynal® Biotech T4 Quant Kit (Dynal).

TransFix™ blood stabilizing reagent was tested by Dynal at 1:5 and 1:10 dilutions over seven days with storage at room temperature. Cyto-Chex® BCT samples was also tested by Dynal over seven days with storage at; room temperature (18-22ºC), 37ºC and 37ºC with intermittent bursts to 42ºC on days two and three for four hours. Results for both stabilizers were compared to untreated whole blood tested at each time point using the manual method and by flow cytometry within 6 hours of collection.

Samples containing TransFix™ in both 1:10 and 1:5 dilutions displayed a significant decrease in CD4 counts using the Dynal assay (n = 11) from day 2/3 when compared to base-line untreated flow cytometry ($p<0.06$). Investigations into Cyto-Chex® BCT (n =20) used in conjunction with the Dynal assay showed a statistically significant decline in mean CD4 counts from baseline irrespective of storage temperature (p-value ≤ 0.002). Increases in temperatures 37ºC and above displayed a more profound decline in mean CD4+ T lymphocyte counts over time.

In conclusion, our findings indicated neither TransFix™ nor Cyto-Chex® BCT were suitable blood stabilizers when used in conjunction with low cost manual CD4 bead based methods. This may be attributed to steric hindrance caused by the stabilizer physically contracting the lymphocytes, thereby preventing the binding of the CD4 antibody-coated beads during the assay.

THE SUBJECTIVE INTERPRETATION OF SIMPLE/RAPID HIV TESTS: IMPLICATIONS FOR QUALITY

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The demand for quick access to knowledge of HIV serostatus has led to increased use of testing strategies utilising simple/rapid (S/R) HIV diagnostic tests at the point-of-care. This has resulted in trained, non-laboratory health staff, performing the tests at Voluntary Counselling and Testing centres. The move towards minimal training has led to concerns over the adequacy of training and implications for the quality assurance of test results.

We investigated the use of photographed results for the assessment of interpretation of 5 S/R tests. A panel of 5 samples, consisting of dilutions that approached the limit of detection for each test, plus positive and negative controls, were tested and the results photographed. These were sent to laboratories enrolled in the NRL External Quality Assessment Scheme (EQAS). Interpretations by 88 Australian and 66 International laboratories, with different levels of experience, were returned.

Discordant interpretations were analysed by Kruskal-Wallis and Chi-square. Experienced laboratory technicians were found to have higher accuracy of interpretation for the Abbott Determine™ HIV-1/2 ($p=0.034$), Trinity Capillus™ HIV-1/HIV-2 ($p=0.022$) and the Fujirebio Serodia® HIV ($p=0.017$) tests, compared with less experienced technicians. This emphasises that experience is important in the accurate interpretation of the S/R tests. The results also indicated that inexperienced and experienced readers could both interpret clearly positive and negative results, but that difficulty arose with weakly reactive samples. These results confirm that it was feasible to use photographed results for proficiency testing.

The present study elucidates concerns over the interpretation of weakly reactive samples, especially by poorly trained or inexperienced personnel and the effect this may have on the quality of S/R HIV tests. We have demonstrated that it may be feasible to establish an EQAS for S/R tests through the use of photographs to monitor the accuracy of interpretation.

Viral Hepatitis Epidemiology
1.30pm – 3.00pm

HIGH HEPATITIS C INCIDENCE IN NEW INJECTING DRUG USERS: A POLICY FAILURE

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4. NSW Department of Health, Sydney, Australia.

Introduction: Evidence of ongoing and possibly increasing risk of HCV transmission among injecting drug users (IDUs) in the UK and North America suggests that current drug policy has failed to adequately protect this group. In order to inform effective prevention there is a need for a better understanding of seroconversion characteristics, particularly among new IDUs and other vulnerable subgroups at high risk of infection. The current study aimed to determine incidence of HCV and associated risk factors among new IDUs in Sydney, Australia.

Methods: IDUS who had injected drugs in the last six months and did not know their antibody HCV serostatus to be positive were recruited through street-based outreach, methadone clinics and Needle and Syringe Programs (NSPs) in South Western Sydney. Anti-HCV negative IDUs (n=215) were enrolled and followed-up at 3-6 monthly intervals. New IDUs (n=204) were defined as aged below 30 years or injecting for six or less years at baseline.

Results: A total of 61 seroconversions were observed and overall incidence was 45.8 per 100 person-years. Independent predictors of seroconversion were duration of injecting < 1 year (IRR=3.10; 95%CI 1.47-6.54), female gender (IRR=2.0; 95%CI 1.16-3.45), culturally and linguistically diverse background (CALDB) (IRR=2.03; 95%1.06-3.89) and intravenous cocaine use (IRR=2.37; 95%CI 1.26-4.44). Incidence among new IDUs injecting for < 1 year was 98.2 per 100 person years and high incidence rates were observed in almost all subgroups except Anglo-Australian background (AAB) IDUs. While new IDUs shared common risk factors for HCV seroconversion, strong associations were observed between HCV seroconversion and sharing syringes, sharing injecting equipment other than syringes and backloading in CALDB but not in AAB new IDUs.

Conclusions: Incidence of hepatitis C virus infection among new IDUs in Sydney is unacceptably high. New initiates appear to be at increased risk of infection. Extremely high rates of incident infection among newly initiated CALDB new IDUs indicate an urgent need for enhanced policy and resource commitments to targeted harm reduction efforts designed to reduce the vulnerability of this group to HCV and other blood-borne infections.

ESTIMATING HEPATITIS C VIRUS INCIDENCE IN AUSTRALIA

Razali K, Law MG, on behalf of the Hepatitis C Virus Projections Working Group.
National Centre in HIV Epidemiology and Clinical Research, UNSW, Sydney, NSW, Australia;

To plan an appropriate public health response to the Hepatitis C virus (HCV) epidemic, good estimates and projections of the rates of HCV infection are required. The Hepatitis C Virus Projections Working Group (HCVPWG) was formed to provide this information, and the first step in doing so was to estimate the incidence of HCV in Australia between 1960-2005.

HCV exposure groups were categorised as injecting drug users (IDUs), migrant populations from selected countries of high HCV prevalence, and other non-IDU transmissions. The size of the IDU population in Australia was estimated based on several data sources: i) National Drug Strategy Household Surveys; ii) opioid overdose deaths and hospitalisations; iii) drug-related arrests; iv) HCV notifications; and v) the Needle and Syringe Programme. Incident cases of HCV among HCV-infected migrants arriving into Australia from countries of high HCV prevalence were estimated based on census data (country of birth) and immigration trends data. A small proportion of incidence was attributed to other routes of transmission by assuming a proportional incidence rate relative to the incidence among IDUs.

The modelled best estimate of past HCV incidence showed a consistent increasing rate of HCV infections to a peak of 14,000 new HCV seroconversions in 1999, followed by a decline in 2001 and 2002 coincident with a reduction in the heroin supply during this period. HCV incidence was estimated to plateau by 2004, and to be 9,700 (lower and upper limit of 6,600 and 13,200) new HCV infections in 2005. Of these, 88.7% were estimated to be through IDU, 7.2% among migrants and 4.1% through the receipt of blood or blood products or other transmission routes.

Mathematical models suggest that HCV incidence in Australia decreased from a peak of 14,000 new HCV infections in 1999 to an estimated 9,700 new HCV infections in 2005, largely attributable to a reduction in injecting drug use brought about by a reduction in the heroin supply. The numbers of people living with HCV in Australia is however estimated to be continuing to increase.

SURVEILLANCE OF HEPATITIS C IN VICTORIA: A NEW SYSTEM OF IDENTIFYING NEWLY ACQUIRED INFECTIONS

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2. Victorian Department of Human Services, Victoria, Australia

The Department of Human Services (DHS) manages Hepatitis C virus (HCV) surveillance in Victoria. Since July 2004, enhanced surveillance for HCV has been conducted by the Burnet Institute (BI) on behalf and in collaboration with DHS to improve identification of newly acquired infections. This paper will describe the results from a new enhanced surveillance system of identifying newly acquired HCV cases in Victoria.

The BI followed up notifications that met the following criteria: all individuals aged 16-19 years; or acute box ticked and/or clinical symptoms recorded on the notification form by the diagnosing doctor; or any prior negative HCV result reported on the laboratory report. The group aged 16-19 years was chosen to reflect a young population likely to have recently commenced injecting and be at risk of HCV seroconversion. The latter two groups chosen to most efficiently identify newly acquired cases. Diagnosing doctors were contacted to obtain enhanced information using a standard questionnaire. Patients were only contacted when doctors were unable to provide the required enhanced information.

The DHS received 4561 notifications between July 2004 and December 2005. The BI followed up 405 (9%) of all HCV notifications; 148 (37%) were classified as newly acquired infections. Of the 148 newly acquired cases, the median age was 23 years and the male to female ratio was 1.4:1. Injecting drug use was reported among 86% of newly acquired cases. The majority of the cases classified as newly acquired were tested at a general practitioner (56%) and the predominant reason for testing was as part of a drug and alcohol screen (32%), followed by exhibiting "clinical signs and symptoms of acute HCV" (27%).

This new strategy of following up HCV notifications was efficient in identifying newly acquired cases (37%). The epidemiological results and system attributes will be compared to previous Victorian enhanced surveillance systems and national newly acquired HCV data. The system may be a useful mechanism to monitor incidence over time and assess the effectiveness of population-based initiatives aimed at reducing HCV transmission.

ESTIMATES OF HEPATITIS B-RELATED LIVER CANCER AMONG VIETNAM BORN POPULATION IN AUSTRALIA

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The majority of chronic hepatitis B virus (HBV) infection in Australia is among people born in the Asia-Pacific region. People with chronic HBV are at high risk of hepatocellular carcinoma (HCC). Estimates and projections of hepatitis C virus-related liver disease burden have been undertaken in Australia, however, similar estimates are not available for HBV. The objective of this pilot study was to estimate HBV incidence and prevalence and incidence of HBV-related HCC among Vietnam born Australians, and to validate the HCC estimates against a recent HBV and HCC linkage study in New South Wales. Further estimates are planned for resident populations born in other high HBV prevalence countries in the Asia-Pacific region.

Estimate of chronic HBV prevalence among Vietnam born residents (11.7%) was taken from population-based seroprevalence studies in Vietnam, assuming that prevalence in Vietnam reflects prevalence among Vietnam born Australians. This chronic HBV estimate was applied to incidence of Vietnam born arrivals in Australia to derive HBV incidence and prevalence estimates. Age-specific incidence rates of HCC derived from a Taiwanese population-based study were used to estimate HBV-related HCC among the Vietnam born population. Comparison of HBV-related HCC was then made with data derived from a linkage project between the NSW HBV notifications over the period 1990 – 2002 and the NSW Cancer Registry. Australian HBV-related HCC rates were determined by multiplying the NSW rate by 2.47.

Incidence of chronic HBV among the Vietnam born population increased rapidly from 1976 through 1981, consistent with rapid increases in immigration, and reached a peak of approximately 1,000 in 1982. Subsequently, incidence declined to 200 – 300 in 2000 – 2005. Chronic HBV prevalence increased to about 16,000 in 2000 – 2005. Estimates of HBV-related HCC increased linearly from 2 in 1980 to 17 in 1990 and 38 in 2000, with further increases through 2005 (46). Cumulative HBV-related HCC over the period 1975 – 2005 was 601 cases. Estimates of HBV-related HCC among the Vietnam born Australian population from the linkage study were very similar to our modeled estimates, with both incidence estimates increasing from 17 in 1990 to 37-38 in 2000.

Our models estimate an increasing burden of HBV-related HCC among Vietnam born Australians. Similar estimates will be made for populations born in other high HBV prevalence countries of the Asia-Pacific region.

FINDINGS FROM AIVL'S HEPATITIS C AND VIETNAMESE IDU CONSULTATION

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AIVL has undertaken an extensive peer-based consultation process with Vietnamese people who inject illicit drugs to identify priority needs and issues and to inform the development of peer educational program to be developed as part of the project.

Consultation findings suggest that several characteristics influence vulnerability to and awareness of hepatitis C in this group: beliefs in fate and fatalism in reference to drug use and hepatitis; the importance of fictive kin relationships (for instance 'Big Brother/Little Brother' respect and influence) in the acquisition of knowledge concerning all areas of drug use; differing priorities and concerns; and issues relating to language (written text and spoken) which aid in confusion and misunderstanding in relation to Vietnamese drug users' understanding of many issue concerning hepatitis C.

Consultation has been found that this group are particularly influenced by peers – particularly older and more experienced IDU. Some misunderstandings in relation to hepatitis C appear unique to this peer-group; for instance that the hepatitis C virus lived in the air and that particular injecting practices (drawing air back into the syringe) could transmit the virus.

Given the vulnerability of the group to miss information passed through peer relationships, the tendency for younger IDU to rely on older more experienced users, and the localised nature of the group, it is recommended that this group of IDU would be responsive to a peer-based approach. This will see the development of a culturally appropriate, localised and peer-based approach to hepatitis C prevention that take account of social relationships and cultural realities rather than following a prescriptive, top-down approach.

This paper discusses the consultation findings in addition to the second stage of the project – a peer education program and development of relevant messages in relation to; responsibility/respect for other IDU, hepatitis C is not inevitable and treatment.

ACUTE HEPATITIS C TREATMENT UPTAKE IN THE VICTORIAN POPULATION

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3 National Centre for HIV, Epidemiology and Clinical Research

Hepatitis C treatment uptake in Australia is generally low. In this paper we describe the rate of acute hepatitis C treatment in Victoria by linking the passive notifications by doctors and clinicians to the Department of Human Services (DHS) with the Australian Trial in Acute Hepatitis C (ATAHC) clinical trial in acute hepatitis C treatment.

ATAHC is a nationwide clinical trial aimed at providing people with newly acquired HCV with pegylated interferon treatment. Subjects are eligible if they have seroconversion from negative to positive anti-HCV antibody within 24 months, or acute clinical hepatitis C and are enrolled within 6 months of anti-HCV antibody positive result. Patients are being recruited through referral from clinics and general practitioners. We aimed to increase the recruitment of eligible participants to the ATAHC study through the Victorian HCV enhanced surveillance system.

In the first 18 months of this study (May 2004 - November 2005), 4591 HCV cases were notified to DHS (crude population rate 61/100000); 414 (9%) of these were flagged as being potentially newly acquired (rate of 5.5/100000) and referred to Burnet for enhanced surveillance. Through follow-up of doctors and patients, 160 of these were confirmed as newly acquired (crude annual rate 2.1/100000); 87 of these 160 (54%) were potentially eligible for ATAHC (rate 1.2/100000) and were referred to ATAHC researchers. Fourteen (16%) were successfully enrolled in ATAHC (rate 0.18/100000) and seven had commenced on hepatitis C treatment by November 2005.(population rate 0.09/100000). Thus the crude rate of untreated but eligible acute hepatitis C was substantial higher than that of treated acute hepatitis C (1.11/100000 vs 0.09/100000). This gives a uptake proportion of eligible candidates of 7.5%, and a proportion of the total confirmed newly acquired hepatitis C cases receiving acute treatment in Victoria of 4.3%. A clear limitation is that these figures only refer to the tested Victorian population.

The use of hepatitis C surveillance system has been successful in identifying cases of newly acquired HCV which are often difficult to identify in a clinical setting. In addition, marginalised patients who may otherwise never have been referred to a clinic are able to access HCV treatment and specialist services. Despite this, only 7 out of 87 eligible individuals (8%) began acute hepatitis C treatment.

Community Education
1.30pm – 3.00pm

TOWARDS A *NEW POSITIVITY*

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The successes of HIV treatments over the past decade have led to dramatic changes in the lives of people living with HIV. In 1997 the AFAO and NAPWA Positive Information and Education (PIE) project documented the impact of the beginning of the 'treatment revolution' on service delivery targeting people living with HIV.

In 2006 'positive education' has a new profile. Educators and service providers have new challenges in responding to the contemporary needs of HIV-positive people. In mid-2006, AFAO—in consultation with NAPWA—conducted a series of one-on-one interviews, primarily with educators in AFAO and NAPWA member organisations. The aim was to determine how educators in each state and territory have managed this changing landscape, and as a result, what skills and capacity-building exercises might be developed to assist them in their ongoing practice. Fifty-three in-depth interviews have been conducted with educators from AFAO and NAPWA member organisations.

The consultation has yielded data covering a broad range of issues. The key needs of educators mostly centered on intra-sector improvements in the implementation of 'positive education' responses—including better communication and greater collaboration between agencies. Other themes that emerged from the consultation included the *New Positivity* and the impact that a *contemporary* HIV-positive identity—or perhaps lack thereof—has had on the development of adequate educational responses to a broader population of people living with HIV.

In particular, this issue generated attention around the need for improving inter-sector responses: for example, the relationship between 'traditional' community-based organisations, the medical sector and commercial enterprises, such as Internet providers and (gay) social venues.

Community-based participants highlighted the tension within organisations between intensive—predominantly care and support—service delivery to a comparatively small segment of the HIV-positive population and the need to also remain relevant to those who could be understood to share the aforementioned *New Positivity*. How do we connect with the new, fulfilling and multi-faceted lives of the modern HIV-positive person? Do we need to connect? What are the roles of educators and others in this process? And what should a new interface between education *and* care and support look like?

THINK AGAIN: UNDERSTANDINGS OF RESPONSIBILITY IN HIV EDUCATIONAL MATERIALS

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We analysed the language used in 74 HIV education posters and advertisements that targeted gay men. These posters were produced between 1988 and 2006. We also analysed interviews conducted between 1993 and 2006 with Sydney gay men who had recently acquired HIV infection ($N = 140$).

HIV educational materials targeting gay men demonstrated, over time, a shift away from a collective notion of responsibility towards one in which the individual was accountable. Interview narratives illustrated a complex relationship between responsibility, sexual practice, disclosure and risk.

The ways in which agency (the power to act) and responsibility were articulated in the posters and advertisements appeared in three distinct ways. These reflected the period in which the materials were produced. In the first period, prior to highly active antiretroviral therapy (HAART), HIV was conceptualised as a shared and community responsibility. In the second period, after the introduction of HAART, education messages focused on risk management and individual choice. In the third period, which began in response to increasing HIV infections in the early 2000s, there was an increasing emphasis on the rights and responsibilities of gay men as sexual citizens.

Responsibility and agency are articulated in myriad ways. Individuals are asked to take on different responsibilities based on serostatus. Responsibility is increasingly framed as private rather than public, and open to multiple interpretations.

A shift towards individual risk management has occurred alongside the development of new technologies (HIV antibody testing, viral load testing, and HAART). However, this focus on individual decision-making does not simply mean responsibility for the self, or self-interest. Recent HIV education messages address a reader who makes choices, while also taking account of the 'other'. This reflects the way in which gay men articulate agency and responsibility and therefore has the potential to reduce the risk of HIV transmission.

NO ONE HAS SEX LIKE THIS IN OUR COMMUNITY– WHAT NEWLY ARRIVED AFRICAN AND ARABIC WOMEN THINK ABOUT HIV PREVENTION INFORMATION IN AUSTRALIA

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

Over the past ten years there has been a significant increase in the number of people from the Horn of Africa and Arabic-speaking countries settling in Australia. The recent increase from these regions has made the provision of culturally appropriate information about HIV prevention necessary. The refugee experience, relevant to the majority of migrants from the Horn of Africa and Arabic speaking countries, has a strong influence on their educational level, literacy and their ability to access information.

In 2004, 8% of new HIV diagnoses in Australia were in people from Africa and the Middle-East.

The aim of the study was to explore knowledge and understandings of HIV prevention that women, men and young people from these communities develop from the materials and support structures available to them in Australia. Study participants often held a false sense of security concerning HIV in Australia, in part due to the absence of highly visible public prevention campaigns; very few were aware of the existence of HIV prevention material produced in Australia in their language.
This paper focuses specifically on what women from the Horn of Africa and Arabic speaking countries think about available information.
Women found the material about HIV prevention highly confronting: the mention of sexual practices, such as oral sex, led them to reject the material as a whole. Women were also sensitive to what they perceived as inappropriate literacy levels, and asked for material that was simplified and took into account their limited knowledge about health.

Women saw themselves as key information providers for their children, and were torn between rejecting sensitive material and their desire to acquire the information in order to pass it on. The preferred way to pass on information was face-to-face, through bilingual educators who understand the culture of the participants and can place the information in the context of their lives and religious beliefs.

While GPs were often the first port of call for health matters, their role as information providers was questioned, as they were perceived as having no time and only limited expertise to provide more than 'basic information'.

WHAT A RELIEF: THEY'RE TALKING SEXUAL HEALTH! DEVELOPING A SOCIAL MARKETING CAMPAIGN TARGETING GAY MEN IN A NON-METROPOLITAN AREA

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[1] Population Health, Hunter New England Area Health Service, Newcastle NSW., Australia; [2] ACON Hunter/MNC Branch, Newcastle NSW Australia.

Social marketing campaigns are a frequently employed and important tool used in HIV prevention and sexual health promotion targeting gay men. However, campaigns designed to reach populations of metropolitan gay men have also often been deployed in regional and rural areas with limited success.

While the prevention messages promoted may be relevant to non-metropolitan gay men, cultural and other differences mean that the language and images used are often viewed as inappropriate by and for regional populations. Dissemination at the few and generally shared homosexual/heterosexual spaces can be problematic.

The 'Relieve Yourself' regional social marketing campaign was an excellent example of a collaborative project between a government Area Health Service and a non-government community based organisation. This ACON/Hunter New England Population Health campaign promoted sexual health testing for gay and other men who have sex with men in mixed venues and the public domain. It formed one component of the gay men's Health In Sex (HIS) Project run by Hunter New England Population Heath (2002-2005).

This paper will cover steps taken in developing a localised, non-metropolitan campaign and will focus on identifying the barriers, opportunities and surprises encountered in the development, implementation and evaluation of a well designed and focus-tested campaign.

All campaign initiatives were fully evaluated and this paper will discuss the process of collaboration providing interesting insights into the usefulness of tailored regional sexual health promotion.

HIV/AIDS, SOCCER AND THE AFRICAN COMMUNITIES EVALUATION OF AFRICAN SOCCER

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.

In the last four years, the Multicultural HIV/AIDS and Hepatitis C Service (MHAHS) has worked with African communities to empower and increase their awareness and knowledge about HIV/AIDS issues. These communities have been mobilised around the crucial, yet sensitive, issue of HIV testing and prevention by the use of soccer and the development of partnerships with grass roots community organisations.

This paper describes the evaluation process and outcomes of a creative intervention, designed to raise HIV/AIDS awareness amongst the African communities in NSW, and demonstrates that community involvement, empowerment and partnership will result in capacity building.

OTHER VOICES, OTHER ROOMS: THE SECRET LIFE OF ARSE

McLean, M
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The Secret Life of Arse is an original radio serial that will air on JOY 94.9, Melbourne's popular gay and lesbian community radio station, in 2006. Its twenty episodes, of seven to ten minutes duration each, feature some of Australia's leading comedians. The serial blends comedy, narrative, mystery and MSM characters and themes with the aim of communicating the VAC / GMHC's main MSM sexual health and wellbeing messages to its target audience in novel, amenable and effective ways.

In addition to reinforcing four basic take-home health promotion messages (PEP, condom reinforcement, negotiated safety and regular sexual health checks) the serial also engages with the complex of issues commonly denoted by the term 'HIV in context' and has broader ambitions concerning community building.

Conceived, written and produced by a member of the VAC/GMHC Health Promotion Program, the serial addresses the ongoing challenge of effectively communicating our core HIV prevention and other MSM health and wellbeing information and strategies to our target audience in the face of rising HIV notifications and message fatigue after twenty years of HIV prevention education.
The serial also meets the HPP's challenge of working with an extremely limited budget and thinking and working strategically to best utilise available resources. This presentation will explore the narrative strategies used in the script to give the take-home messages more impact and introduce the serial's unlikely educators, Gray Brown, Gaye Brown and Ashley. The project's cost effectiveness and the role of volunteerism in its community building efforts will also be discussed.

The presentation will also consider both the radio serial as a form and comedy as a medium for health promotion. The presentation will include audio excerpts from the serial.

Health Care Systems International
1.30pm – 3.00pm

ESTABLISHING ANTIRETROVIRAL TREATMENT SERVICES IN PACIFIC ISLAND COUNTRIES AND TERRITORIES

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[1]Secretariat of the Pacific Community, Nouméa, New Caledonia

The Pacific Regional HIV/AIDS Strategy Implementation Plan was endorsed by leaders of the twenty-two island countries and territories of the Pacific Community in 2005. It guides responses to HIV and other STIs across the Pacific, including development of treatment services.

Outside of Papua New Guinea, the number of people diagnosed with HIV in the Pacific so far is relatively small but little testing has been done in many countries and it is likely that a significant pool of positive people will be diagnosed in the near future. Further, high rates of other STIs and the available social and behavioural research indicate high vulnerability to the rapid transmission of HIV once it becomes fully established in island populations.

Levels of socioeconomic development vary widely across the region. A few territories are currently able to provide standards of care similar to those in Australia and New Zealand but most people living with HIV in the Pacific do not yet have access to antiretroviral therapy or the clinical monitoring and care services they require.

The Secretariat of the Pacific Community, in collaboration with partners including the WHO, UNICEF and the Burnet Institute, is working to assist Pacific island countries and territories to develop and implement treatment, care and monitoring services rapidly. This presents many challenges including securing sustainable funds, overcoming geographical isolation, building local clinical capacity, combating institutional prejudice and securing access to laboratory services.

This presentation will present an overview of the current state of play, suggest some approaches to overcome the identified barriers and rally clinicians in Australia and New Zealand to contribute to the effort to provide appropriate care to people living with HIV in our region.

TUBERCULOSIS IN THE HIV INFECTED - EXPERIENCE DURING CLINICAL MENTORING IN VIET NAM

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[1] Family health International, Viet Nam, [2] RNSH St Leonards, NSW Australia

HIV still poses many challenges - one of the most important being Tuberculosis as it occurs in the HIV infected.

In 3 urban clinics in Southern Viet Nam supported by USAID through Family Health International, Viet Nam, Tuberculosis (TB) was seen in 50% of patients. For those presenting with TB, HIV testing allows early entry into HIV care. Recognition and treatment of TB in the HIV infected is often difficult and is one of the most important interventions that can be offered. Problems encountered with Tuberculosis and HIV highlights problems of separate programmes with difficulty of cross access between the programmes. The emphasis of the TB DOTS programme is on smear positive disease, treating infective disease and interrupting the chain of spread. TB in the HIV infected is often smear negative and extrapulmonary and cannot easily access TB treatment without complex review processes which work for traditional TB such as meningeal, milliary, pleural or pericardial disease, but not for glandular or other forms of TB seen with HIV. Diagnostic doubt in an environment of few biopsies and no cultures often leads to incorrect diagnosis, delay in diagnosis, progression of disease and unnecessary morbidity and death. Investigations for smear negative disease often involved a cost, in contrast to free care for smear positive disease. Treatment regimens were limited and probably not robust enough for TB/HIV co-infection and second and third relapses with presumed MDRTB were seen. The co treatment issues in terms of drug side effects, interactions and pill burden are important and treatment of each disease was handled separately. Infection control with suspected TB amidst a highly susceptible patient group was poor. Contact tracing was non-existent even amongst HIV infected family members.

Education of health care workers in both programmes is in progress and a team approach to care and to policy development is essential for better care in the TB/HIV co infected. Because of the many difficulties, Isoniazid preventive treatment is not an option outside strict clinical trial settings.

THE INDONESIA HIV/AIDS PREVENTION AND CARE PROJECT

Mackay T [1]
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The Indonesia HIV/AIDS Prevention and Care Project (IHPCP) is a partnership between the Governments of Indonesia (GOI) and Australia which aims to reduce the spread of HIV infection and reduce its impact on Indonesian society. The project is planned for five years implementation September 2002 to August 2007.

For the last four years, IHPCP has provided financial and technical assistance to 6 of 31 provinces in Indonesia (DKI Jakarta, West Java, Bali South Sulawesi, NTT and Papua). The specific objectives are; a) supporting policy development, planning and management of the response; b) reducing sexual transmission of HIV, c) reducing injecting drug use transmission of HIV, d) providing better care, support and treatment for people with HIV/AIDS. The value of the project is approximately $AUD 48 million ($37 m. from AusAID and $11 million from DFID through the Indonesia Partnership Fund)

IHPCP has had considerable success in facilitating and supporting local initiatives. It has prioritised strengthening the response to HIV and IDU as this currently fuels the expansion of the epidemic in Indonesia. It has also focused on strengthening the response to HIV in Papua that has the highest HIV prevalence in the country. It has tried to refocus communications around sexual transmission in provinces other than Papua to men who buy sex; it has tried to balance strengthening immediate service delivery needs for care, support and treatment while building a foundation of policy, strategy, planning and institutional capacity to support that service delivery. Along with others IHPCP has recognised that progam coverage has been very limited and attempted to increase this rapidly without sacrificing quality.

The number of bilateral and multi-lateral institutions becoming involved in providing international financial and technical assistance to the response in Indonesia is increasing rapidly. These institutions need to work more closely with each other and with the GOI and other Indonesian partners to ensure that domestic and international financial and technical resources are used efficiently and effectively. This requires joint analysis of the epidemic, the response mounted so far, adjustments that might be needed and then how best to provide the support required.

WHY SEXUALLY TRANSMITTED INFECTIONS ARE HIGH IN TROBRIAND ISLANDS?

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Trobriand Islands is widely known as the islands of love and made famous by the writings of Malinowski Bronsinki (1884-1942) on their magic gardens and sex dances and games. Its culture and tradition have been practiced in last two centuries and still practiced today and attracts national and international tourists. Losuia hospital was established in the 1940s for treating gonorrhoea, TB and yaws but despite this, gonorrhoea and other STIs still remain high today. This study identified activities and verified how traditional and cultural festivities contributed to the increase of STIs.
The PNG National Health Plan 2001-2010 stated that 100,000 admissions are due to sexually transmitted infections. In PNG, 2,143 gonorrhoea cases were reported between 1999 and 2003, 25.9% were from Milne Bay Province, with 33.8% of cases were from Kiriwina Good Enough district, 82% of all cases reported were from Trobriand Islands.
The aim of this study was to identify reasons for high incidences of STIs in Trobriand Islands with four specific objectives: (1) To assess knowledge of youths and staff on STIs; (2) To determine the distribution of STIs by time, place and person; (3) To verify whether the encouragement and practice of cultural festivities in Trobriand Islands contribute to the increase of STIs; and (4) To identify the cultural practices that contribute to high incidences of STIs.
The mila mala is the annual feast associated with the return of ancestral spirits to the village; kalibom is a slow rhythmic walk and during the walk man can hold girls breast breast/insert finger in a girl's vagina; and katuyausa is a ceremonial escape of girls. Health statistics from the health centre showed the STIs trends to rises between three peaks periods around the festival times.
When the Mila Mala festivities were supported with funding in 2003, 2004 & 2005 the number of reported STI cases increased during and after the festivals.

"MY SKIN IS DARK AND I AM BEAUTIFUL": A PRAGMATIC RESPONSE FOR SEXUAL HEALTH PROMOTION WITHIN CHURCHES IN THE CHRISTIAN PROVINCES OF PAPUA AND NUSA TENGGARA TIMUR, INDONESIA

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Faith based organisations are well placed to provide many needed services for the population as a complement to, or in the absence of functioning government institutions. Religious leaders have significant capacity in developing countries in mobilising people, raising awareness, moulding public opinion, and forming behavioural norms. This influence can be harnessed for HIV and AIDS programs by empowering religious leaders with accurate knowledge about sexuality.

Papua and NTT, two predominately Christian provinces in eastern Indonesia, are facing sexual epidemics of STI and HIV. This program is a pragmatic response to the challenges of creating an enabling environment within churches for sexual health promotion and minimising the propagation of inaccurate and harmful messages. The limitations of the 'ABC' (Abstinence, Be Faithful, Condoms) approach are evident when the 'C' is omitted by church leaders, due to conflicting ideology and idealistic expectations of human nature. Unless people are given the knowledge, tools and options to effectively manage 'A & B', as well as 'C', they are are not able to enjoy sexual health.

Priests and ministers are interested in sex and sexuality and can be effectively engaged in the promotion of sexual health. A course in Human Sexual Relationships and Sexual Health was developed for Christian Ministers of Religion. The course draws from the sciences of sexology and public health and makes use of selected sex-positive biblical references, including the erotic 'song of songs'. It provides participants with knowledge on how to promote happy and healthy sex lives for their congregations through understanding and knowledge about sexuality and better communication with partners.

The course has been taught to seminarians as well as experienced pastors in both provinces and has received positive evaluations. Participants are motivated to use the knowledge in their ministry, many even now promoting condoms as they understand the threat of HIV and STIs in their communities.

Paediatric and MTCT
3.30pm – 5.00pm

MISSED OPPORTUNITIES IN PREVENTION OF PAEDIATRIC HIV – HAS MUCH CHANGED?

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Effective prevention strategies to minimise perinatal transmission of HIV have been available in Australia since 1994. Current national guidelines recommend antenatal testing in those who identify risk factors for HIV acquisition. Despite this, children continue to be infected. We aimed to identify perinatally infected HIV positive children born in Australia in the past decade whose mothers were not tested for HIV during pregnancy.

We describe 14 HIV positive children born to 12 mothers living in Australia from 1996 to 2005. Of the 12 mothers, 6 were born in Australia and 6 were born overseas. HIV infection was attributed to heterosexual contact in all women. All mothers were clinically asymptomatic at the time of delivery. The median age of mothers at delivery was 24.5 years. The child's HIV infection was diagnosed within 31 days of the mothers HIV diagnosis in 12 children. One woman had previously been tested in another state prior to the delivery of her two children.

Had maternal HIV diagnosis been made antenatally, perinatal HIV intervention strategies (ARV +/- cesarean section + postnatal measures ie. formula feeding + 6 weeks ARV to infant) would have achieved a > 98% reduction in HIV transmission in all of these infants. Instead, without these prevention strategies, the transmission risk in these children was in the order of ≥25%, with incremental risks if breast feeding had continued.

Almost all of these 14 cases could have been prevented by testing the mothers for HIV during pregnancy. These cases highlight problems with an antenatal testing policy and is an argument for routine antenatal testing.

BUILDING TRUST AND OPENNESS FOR SAFE(R) INFANT FEEDING

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Trust and openness (or lack of it) in social relationships impacts how women choose and sustain infant feeding to prevent HIV transmission in the resource-limited context of East Africa. This paper explores ways to promote open and trusting conditions for negotiating disclosure of HIV status, accessing replacement milks and dealing with social pressures.

Qualitative data came from interviews with 20 key informants and 10 HIV-positive mothers or their relatives. 13 focus group discussions with community members were conducted in four sites in the Dodoma region of Tanzania.

Results are presented through several cases of HIV-positive mothers. Many factors contribute to how a woman's disclosure of her HIV status to her partner and family precedes and leads to their absence or support in choosing and maintaining infant feeding. Hiding the infant feeding method chosen, sharing invented stories or openly communicating HIV status are strategies used to deal with social pressure to breastfeed. Alternatively some women choose to breastfeed in ways that obscure their HIV status. Counselling, community counselling and involvement of people living with HIV are perceived as processes which can open up social spaces for building trust, reducing stigma and talking about HIV status and infant feeding.

Respondents describe numerous paths to accessing HIV prevention services through chains of relationships. Sustainability for infant feeding is perceived related more to trust in relationships than the supply of milk itself. Infant feeding methods were evaluated with reference to the relationships in which they are situated, such as cow milk obtained from a neighbour, wet-nursing from a relative, formula milk from a shopkeeper.

Attention to building trust and sharing knowledge between health providers and other community members, women and their families can facilitate the support of infant feeding to prevent HIV transmission. For example, co-operative relationships and information exchange between modern and traditional healers and midwives strengthens community support for women to feed their infants to prevent HIV transmission. Community education permits social network members to gain parity in their knowledge about HIV prevention and to learn to trust the capacity of available resources, such as breast milk, to be used in safer ways.

VARIABLE UPTAKE OF RECOMMENDED INTERVENTIONS TO REDUCE PERINATAL HIV TRANSMISSION IN AUSTRALIA 1982-2004

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Mother to child transmission (MTCT) of HIV is significantly reduced by use of interventions such as antiretroviral therapy to the mother during pregnancy and to the newborn child; elective cesarean section; and avoidance of breastfeeding. Recommendations to avoid breastfeeding have existed since 1985, evidence supporting the use of zidovudine (AZT) during pregnancy since 1994 and evidence for elective cesarean section in preference to normal vaginal delivery since 1999. We aimed to determine the uptake of these interventions in Australia between 1982 and 2004.

A prospective voluntary national surveillance system used to identify perinatal HIV exposure provided data on 272 mothers and 348 children. Most women were born in Australia (57%) and their mean age was 27 (95% CI 15.4, 38.6). We assessed the uptake of interventions in women who were aware of their HIV status during pregnancy (n=235) for the years following the introduction of that recommendation. Since 1985, 4/235 (2%) women chose to breastfeed. Since 1994, 121/193 (63%) women were prescribed AZT during pregnancy. Since 1999, 69/153 (45%) women delivered by elective cesarean section. Factors significantly associated with use of AZT at any time during pregnancy was the year of the mother's HIV diagnosis (mother's diagnosed after 1997 were more likely to have used AZT; OR 2.44 95% CI 1.11, 5.35 p-value=0.026) and location of delivery (mothers delivering in states other than Western Australia and New South Wales were more likely to have used AZT during pregnancy; OR 3.95 95% CI 1.70, 9.20 p-value=0.001). Women were more likely to have an elective cesarean section if they delivered in a state other than Western Australia (OR 33.5 95% CI 6.91, 162.52, p-value <0.001).

There is variable uptake of evidence-based recommendations for interventions to reduce perinatal transmission by women in Australia who are aware of their HIV status during pregnancy. Most women avoid breastfeeding, only two thirds of women are prescribed AZT and less than half deliver by elective cesarean section. Location of delivery is significantly associated with differences in clinical practice and highlights the need for national recommendations regarding management of HIV infected women during pregnancy.

UNDERSTANDING TRADITIONAL AND MODERNISING MASCULINITIES IN PREVENTION OF MOTHER TO CHILD TRANSMISSION PROGRAMS IN TANZANIA

Burke.M
Nchsr

Prevention of Mother to Child Transmission programs present many challenges to program implementers. The performance of masculinities in reproductive health is drawing increasing interest. The performance of traditional and modernising masculinities in PMTCT programs is explored.

Key informant interviews (14), and interviews of male community members (23) explore a range of factors. These interviews are coded and analysed according to Glaser's Grounded Theory via an N-Vivo program.

Three major masculinities emerged from the texts – traditional, modernising and absent. This traditional masculinity positions the man as reluctant to discuss with his partner, as discrediting women's position as able to educate and as the primary decision maker in all important domains of life including the domain of reproductive health. He sees HIV as an externalized threat that is best responded to by the traditional methods of isolation and stigma. He distinguishes and recognises distinctive gender domains. A traditional masculinity is currently hegemonic but stressed by the challenge of HIV and PMTCT. A modernising masculinity welcomes discussion with his partner, is willing to learn from a partner, and seeks at least in some part, joint decision making in the couple. There is a framework of openness in communication, and a greater equity in power within gendered relationships. A modernising masculinity is formed out of various new and globalising phenomena including electronic media and HIV. An absent masculinity may be due to economic or social influences including HIV itself. The absence of a performed masculinity provides a space for others to act without the constraints of previously present masculinities.

HIV is framing and being framed by the enacted masculinities of a community. PMTCT programs by moving HIV status from a hidden to a public setting further challenge and interacts with masculinities present. These masculinities are under relentless stress from HIV. The performance of masculinity is a key contributor to community acceptance and support of PMTCT programs. The implications of the range of masculinities enacted in PMTCT programs needs careful consideration in planning and strategizing PMTCT programs.

SINGLE-DOSE NEVIRAPINE PERINATAL COMBINED WITH ZIDOVUDINE AND MOTHER TO CHILD TRANSMISSION RATE AT LAMPANG HOSPITAL THAILAND

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Objective: To study the transmission rate of HIV from mother to child after the combination of Zidovudine (ZDV) and Nevirapine (NVP) intrapartum prophylaxis was implemented at Lampang hospital Thailand.
Materials and methods: April 2002 to July 2004, HIV infected pregnant women who delivered at Lampang hospital were treated with single dose Nevirapine 200mg orally, followed by oral ZDV 300mg every 3 hours, at the onset of labor until delivery. The newborns were given ZDV syrup 2mg/kg/dose every 6 hours for one week, and NVP syrup 2mg/kg single dose between 48 and 72 hours after birth. All mothers agreed not to breast-feed and were formula-fed. There were 2 pregnant women were already treated with anti retroviral drugs, AZT, 3TC, d4T and AZT, 3TC, NVP. And one pregnant women had no intrapartum AZT,NVP prophylaxis.
Setting: Lampang Regional Hospital
Subjects: 72 HIV infected pregnant women and their 73 infants.
Main outcome measures: Perinatal HIV infection was defined as: 1) at least one positive plasma HIV RNA, or 2) two positive HIV DNA PCR at different time, or 3) positive anti-HIV at 18 months or more.
Results: From April,2002 to July,2004, 72 HIV infected pregnant women gave birth their babies, 71 infants, and one pair of twin. At the age of 18 months we found two of them were infected, the transmission rate was 2.78% (95% CI = 0.48-10.6).When we analyzed, did not find the relationship between the transmission rate and maternal age, gravidity, gestational age, mode of delivery, ruptured membrane time before delivery, type of ARV drugs regimen, baby weight, AZT doses during labour, and fetal sex.
Conclusion: The vertical transmission rate of HIV in pregnancy at Lampang hospital had decrease to 2.78%(95% CI=0.48-10.6).

ASSISTED REPRODUCTION FOR HIV DISCORDANT COUPLES

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Many individuals with HIV infection accessing combination antiretroviral therapy are well, with no imminent risk of opportunistic disease or death, and can anticipate a good prognosis for many years. Increasingly, couples discordant for HIV infection are wishing to have their own children. This paper will discuss the experience of the discordant couple program at the Royal Women's Hospital which uses assisted reproductive technology to achieve pregnancies, while reducing the risk of HIV transmission between partners.

To date, 30 couples and one HIV infected male without a partner have been referred to the program. Of the 30 couples, one failed to keep their appointment, six attended the clinic but decided not pursue treatment, three couples still intend to pursue treatment but are yet to provide screening semen samples, one couple have provided screening samples but are yet to provide storage samples, seven couples and one HIV infected male without a partner have stored sperm and either not yet started treatment or stopped at this stage and 12 couples have undergone assisted reproduction by artificial insemination (AI), in vitro fertilization (IVF) or intracytoplasmic sperm injection (ICSI).

Of the completed cycles there have been 33 AI, 7 ICSI, 1 IVF and 6 frozen thawed embryo transfer (FET). Two pregnancies have been achieved with AI (twins and singleton- pregnancy rate 6%), one twin pregnancy with ICSI and 3 singletons with FET (pregnancy rate 50% per oocyte collection). There has been one miscarriage and the female partners remain HIV negative.

This paper will also discuss aspects specific to HIV of the patients referred such as year of diagnosis, antiretroviral therapy, CD4 count and HIV viral load at time of referral, history of AIDS or opportunistic infections and co-morbidities.

Metabolic Complications – Clinical 3.30pm- 5.00pm

EXPOSURE TO PIS AND NNRTIS AND RISK OF MYOCARDIAL INFARCTION (MI): RESULTS FROM THE D:A:D STUDY

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Prior data from the D:A:D study showed a progressive increase in the risk of MI with longer exposure to combination antiretroviral therapy (cART). Here, we investigate if this association differs by drug class and the possible mechanisms for any association.

An observational study of 23,400+ HIV-infected patients from 11 cohorts in Europe, Australia and USA. Results are based on follow-up to February 2005. Incidence rates of first prospective MI (/1000 person-years of follow-up (PY)), and relative rates (RR) for factors associated with MI from Poisson regression models are reported. Two different models assess (i) the association with years on cART, and (ii) the association with years on PI and NNRTI, separately. Both models are adjusted for demographic factors and risk factors for MI.

By 2005, 345 patients experienced an MI over 94,469 PY (3.65/1000 PY). Increased time on cART was associated with a risk of MI (adjusted RR 1.16/year of exposure [95% CI: 1.09-1.23]). The risk of MI has decreased over calendar time (RR for 2003/4 vs 1999: 0.50 [0.32-0.77]); an effect that is removed by adjusting for latest lipid levels (RR for 2003/4 vs 1999: 0.82 [0.49-1.37]). MI incidence increased from 1.53/1000 PY in those not exposed to PIs to 6.01/1000 PY in those exposed for >6 years (RR/year of exposure: 1.17 [1.12-1.23]). The incidence also increased slightly with NNRTI exposure (RR/year: 1.07 [1.00-1.14]). After adjustment for the other drug class and other known risk factors for MI, the relative rate per year of PI exposure was 1.16 ([1.10-1.23], p=0.0001), while for NNRTIs it was 1.05 ([0.98-1.13], p=0.17). These associations persisted, although were reduced slightly, after controlling for years of NRTI use. Total cholesterol (1.24/mmol/L [1.14-1.34]), HDL cholesterol (0.76/mmol/L [0.53-1.08]), and triglycerides (1.42/doubling [0.85-2.38]) were associated with the risk of MI; adjustment for these reduced the effect of PI and NNRTI exposure to 1.10 [1.03-1.17] and 1.01 [0.93-1.10], respectively.

Increased PI exposure is associated with an increased risk of MI, which is partly explained by dyslipidemia. Conversely, although there were fewer years of experience, we found no evidence that increased NNRTI exposure is associated with risk of MI.

INCIDENCE OF METABOLIC SYNDROME, CARDIOVASCULAR DISEASE AND TYPE 2 DIABETES MELLITUS AFTER INITIATION OF ANTIRETROVIRAL THERAPY IN HIV-INFECTED ADULTS

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Metabolic Syndrome (MS) is a clustering of factors, including central obesity, hypertriglyceridaemia, hyperglycaemia, hypertension and low levels of HDL cholesterol. It identifies adults at risk of cardiovascular disease (CVD) and/or type 2 diabetes mellitus (T2DM) in general populations. Antiretroviral therapy (ART) is associated with many MS abnormalities as well as an increased rate of CVD.

881 HIV-infected adults, who initiated their first ART regimen were evaluated for prevalence and incidence of MS and subsequent diagnosis of CVD and T2DM over 3 years. MS was defined by the International Diabetes Federation (IDF) or the Third Report of the National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III) (ATP-III).

The prevalence of MS at baseline was 11% and 9% (ATP-III and IDF criteria respectively). During follow-up, progression to MS among participants without MS at baseline was 32% (ATP-III) and 22% (IDF). In addition to established risk factors (older age, high body mass index, greater dyslipidaemia, hypertension and elevated fasting glucose), receipt of a protease-inhibitor (PI) containing regimen was associated with a greater risk for developing MS (ATP-III) compared to receiving a non-nucleoside reverse transcriptase inhibitor (NNRTI)-based regimen without a PI (adjusted relative risk [RR]=1.53; 95% CI 1.11-2.10). The presence of MS at baseline was associated with an increased risk of T2DM at 3 years (ATP-III: RR=4.37; 95% CI 2.24-8.52; p<0.001; IDF: RR=2.89; 95% CI 1.35-6.20; p=0.006) and CVD (ATP-III: RR=2.58; 95% CI 0.99-6.7; p=0.051 and IDF: RR=2.97; 95% CI 1.14-7.74; p=0.026). Incident MS during follow-up (ATP-III and IDF) was also significantly associated with an increased risk of T2DM and non-significantly with an increased risk of CVD-related events. The predictive value of individual MS components for subsequent T2DM and CVD was low.

Rapid and frequent progression to MS within 3 years of commencing initial ART regimens is associated with increased risk of CVD and T2DM. MS before ART was a stronger risk factor for development of CVD than incident MS. The presence of MS at ART initiation identifies individuals in whom preventive strategies should be considered.

POLY-L-LACTIC ACID INJECTIONS FOR FACIAL LIPOATROPHY: A RANDOMISED, MULTICENTRE TRIAL

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Facial lipoatrophy (LA) can be disfiguring, can stigmatise and affect self esteem and quality of life, and adherence to antiretroviral therapy (ART). In the absence of proven therapies for LA attention has turned to cosmetic approaches. Small, uncontrolled studies of poly-L-lactic acid (PLA) have found acceptable safety and efficacy over 48 weeks. However, studies with objective endpoints are lacking.

We are studying the efficacy, safety and durability of PLA for facial lipoatrophy in a 24-week randomised trial with 96-week total follow-up. Key eligibility criteria were moderate or severe facial LA, lipodystrophy in at least 1 other site, and stable combination ART for ≥ 12 weeks. Participants were randomised 1:1 to receive 4 open-label PLA treatments (5 mL into each cheek) every 2 weeks from week 0 (imm), or 4 PLA treatments from week 24 (def) by an experienced practitioner. Randomisation was stratified by age, current protease inhibitor (PI) use and current thymidine nucleoside analogue (tNRTI) use. The primary endpoint was mean change from baseline in facial soft tissue volume (FSTV) by spiral computed tomography at 24 weeks. Secondary endpoints included change from baseline in subjective facial LA severity, peripheral fat by dual-energy X-ray absorptiometry (DEXA), quality of life, ART adherence and HIV viral load. Safety and toxicity parameters were also evaluated. Analysis was by intention to treat.

Over 5 weeks from December 2005, 103 adults at 18 (hospital [7]; primary care [11]) Australian sites were screened, and 101 (93 men; 8 women) randomised. HIV stage at screening was: asymptomatic 48%, symptomatic 17% and AIDS 35%. Mean age was 49 (±7.8) years, mean BMI 22.9 kg/m^2, mean FSTV 26.7 cm^3, and mean limb fat mass 3.1 kg [12%]. Patient-assessed facial LA was severe in 52 (27 imm; 25 def) and moderate in 49 (24 imm; 25 def) subjects. Agreement between physical examination and self-assessed facial LA was significant (kappa=0.502; p<0.001). At baseline 64 participants were receiving a PI and 14 a tNRTI.

The last recruited participant will complete the week 24 study visit and scans in August 2006.

CHALLENGES IN MANAGEMENT OF TREATMENT-EXPERIENCED VIROLOGICALLY NON-SUPPRESSED PATIENTS WITH MULTIPLE HIV-1 DRUG RESISTANCE

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Management of antiretroviral treatment-experienced patients with multiple drug-resistance and virologic failure continues to be a challenge to clinicians. Advances in treatment in the past few years with more potent protease inhibitors such as tipranavir and darunavir with or without the fusion inhibitor enfuvirtide have led to more successes in viral suppression in patients with prior treatment failure. The US DHHS Antiretroviral Guidelines Panel has modified the goal of therapy for these patients from merely to preserve immune function and prevent clinical progression to re-establish maximal viral suppression. This presentation will focus on the safety and efficacy of these newer agents and address the role of resistance testing in designing new regimens and predicting responses to therapy.

Social and PH BBV
3.30pm – 5.00pm

POSITIVE WOMEN: EPIDEMIOLOGY AND PREVENTION

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In recent years the annual number of HIV diagnoses among women in Australia has increased. This paper describes the changing Victorian HIV epidemiology and options for future prevention strategies among women.

Victorian HIV surveillance data were analysed to describe the epidemiology among women, predominant exposure groups and changes across two time periods (1996 to 2000 compared to 2001 to 2005).

Between 1996 and 2005 there was a total of 2031 new HIV diagnoses reported in Victoria, 190 (9%) among females. The proportion of total diagnoses among females increased from 8% (n=67) to 10% (n=123) across the two time periods (1996-2000 and 2001-2005). Of the 190 diagnoses, the most common risk exposure category was heterosexual contact (n=167, 88%) followed by injecting drug use (n=14, 7%). Of the heterosexually acquired infections, the main risk category was sexual contact with a male born in a high HIV prevalence country - countries within sub-Saharan Africa, Cambodia, Myanmar, Thailand and specific countries in the Caribbean (n=95, 57%); followed by sexual contact with a bisexual male (n=24, 14%) and sexual contact with a male with HIV with other or no specified risk (n=24, 14%). Of the 95 women who reported acquiring HIV through heterosexual contact with a male born in a high HIV prevalence country; 75 of the women were also born in a high HIV prevalence country and 64 (85%) of these 75 women reported acquiring HIV overseas. Of the 24 women who reported acquired HIV through heterosexual contact with a bisexual male; 85% reported acquiring HIV in Australia. The epidemiology of the main exposure categories will be discussed in more detail.

In Victoria HIV diagnoses among women have increased, mirroring trends observed in other developed countries. Epidemiological information in conjunction with social research should be used to inform future prevention strategies targeted towards heterosexual women. Options such as increased awareness, personal prevention and negotiating safe sex will be discussed.

CO-INFECTION WITH HIV AND HEPATITIS C

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This paper examines the experiences of living with HIV when co-infected with hepatitis C. Co-infection adds considerable complexity to clinical management of HIV. There is a sizeable literature on the clinical implications of co-infection. Little literature, however, addresses the lived experience of HIV/hepatitis C co-infection.

These results are drawn from the HIV Futures 5 survey, a cross-sectional nationwide study of clinical and social aspects of the lives of PLWHA. The study was conducted in 2005 and obtained a sample of 973. 14.7% reported being co-infected with hepatitis C.

The co-infected sample were younger (44 years v 46) and had been HIV positive for longer (13.6 years v 11.6 years). 40.4% reported IDU in the previous year. Co-infected PLWHA were more likely to rate their health and well being as poor or fair. There were no differences in CD4 and viral load counts. They were more likely have had hepatitis B (40% v 29%), less likely to have cleared the virus, and to have had hepatitis A (34% v 26%). They were equally as likely to be on ARV (78.9% v 74.4%), to have never used (9.8% v 10.1%) or stopped using ARV (11.3% v 15.4%).

Co-infected PLWHA were more likely to report discrimination and disadvantage. 16.8% reported less favourable treatment due to hep C. More co-infected PLWHA had experienced: disclosure of their HIV status without permission (65% v 50.3%) and less favourable treatment at a medical service (35.4% v 27.2%). They were more to not be employed (67.7% v 45.2%), on a benefit (65.9% v 41.3%) and in unsuitable housing (25.7% v 14.7%).

While many aspects of living with HIV are shared regardless of hepatitis C status, some issues are likely to affect co-infected PLWHA more than their peers. This has important implications for responses by community organisations (both HIV specific and hepatitis specific) and for those involved in clinical and health management.

EXPERIENCE OF HEPATITIS C TESTING AMONG INJECTING DRUG USERS

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Testing for blood-borne viral infections (BBVI), including hepatitis (HCV) and HIV provides a useful opportunity for health promotion, risk reduction assessment and counselling, and increases opportunities for HCV treatment assessment, yet little is known about drug users' experience of testing. This paper aims to describe the experiences of testing among a group of injecting drug users recruited through primary health care and drug treatment services. 229 participants were recruited to the study. Almost all those interviewed had been tested for HIV (96%) and HCV (97%) and the median number of times that participants had been tested was five. Reasons for seeking testing were similar for both HIV and HCV, the most common being to protect others (72% and 74% respectively), blood/needle exposure (66% and 70%, respectively) and to receive early treatment (66%, both). The most common locations for testing were general medical practices (GPs) (53%), specialised clinics (45%) and methadone clinics (43%). Preferred locations were similar for HIV and HCV testing: methadone clinics (47% and 48%, respectively), GPs (42% both), specialised clinics (32% both). The most common reasons for not obtaining results were being scared or afraid of finding out results (64%), anxious about waiting for results (64%), having trouble keeping appointments (62%) and concerns about being treated differently if the results were positive (54%). The majority of participants (HIV 62%, HCV 59%) reported that they would prefer pre-test counselling to be delivered via written information or to talk with a counsellor (includes nurse/clinician) and would prefer test results to be delivered face-to-face (HIV 83%, HCV 80%). High prevalence of previous testing suggests good uptake and high acceptability among this population. Specialised services for drug users such as methadone clinics and primary healthcare are good places to provide access to encourage testing.

AUSTRALIAN TRENDS IN ARV UPTAKE AND EXPERIENCE 1997-2005

Grierson J[1], Thorpe R[1], Pitts M[1]
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It is now ten years since the announcement of the success of combination therapy. ARV has reduced the number of deaths from AIDS. However, problems with these therapies, such as side effects and difficult treatment regimens, have been well documented. This paper assesses the changes in ARV uptake, experience and attitudes over an eight year period.

The results reported here are drawn from the HIV Futures surveys, five cross-sectional Australian nationwide studies of multiple aspects of the lives of PLWHA, both clinical and social. The study was conducted in 1997 (N=925), 1999 (N=921), 2001 (N=894) 2003 (N=1059) and 2005 (N=973). The studies included detailed assessments of treatment experience and attitudes of respondents.

There had been a sustained decrease in proportion of sample using ARV between 1997 and 2003 (78%, 74%, 72%, 70%) although 2005 data show an increase with 75% of respondents currently using ARV. The proportion that has never used ARV has remained steady at around 13%.

The proportion taking breaks from ARV also rose from 37% in 1999 to 47% in 2003, although in 2005 this proportion has decreased to 42%. Indeed, only 18% had taken a break in the two years prior to the 2005 survey. Those on ARV were also experiencing fewer difficulties in 2005 than they had in previous surveys and generally had more positive attitudes to ARV.

These findings suggest that the negative impact of antiretrovirals on the lives of PLWHA is lessening, although significant problems still remain. Changes in the clinical / pharmacological environment and in the HIV positive population itself are leading to subtle but important differences in the experience and perception of antiretroviral treatments.

LIVING AND WORKING WITH HIV: RESULTS FROM HIV FUTURES SURVEYS 1997-2005

Pitts, MK[1], Grierson J[1], Thorpe, R.[1]
[1]Australian Research Centre in Sex, Health and Society, La Trobe University Melbourne, VIC, Australia.

There have been marked changes to the experiences of living with HIV since the widespread implementation of highly active anti-retrovirals, (ARVs) in Australia. These generally more positive experiences may result in better employment prospects and consequently better social and economic circumstances.

We examine the current employment experiences of People Living with HIV/AIDS (PLWHA) who completed Futures 5 (F5) in 2005 and were aged 65 years or less. Their health status, well-being and experiences of discrimination in the workplace are examined. Of the total of 936 PLWHA in Futures 5 who were 65 years or less at the time of survey, 33.7% were employed full-time, 17.1% reported part time employment, and 3.8% were students. Of those unemployed (10.9%) or not working (19.5%) at the time of the survey, 19.1% reported having stopped working at the time they were diagnosed with HIV. Adjusting for age, employed PLWHA had significantly better self reported health and better self reported well being; they also reported significantly higher CD4 counts. Employed PLWHA were less likely to be currently on ARVs and twice as likely to report never having been on ARVs.

We compared F5 findings with the findings from the previous four studies conducted in 1997, 1999, 2001 and 2003 to gain a comprehensive picture of how employment status and experiences have changed over time for PLWHA in Australia. Full-time employment rates remained constant between 1997 and 2003 but were significantly higher in F5. Part time rates have remained relatively stable over the surveys.

RESISTING MEDICALISATION: USE OF COMPLEMENTARY MEDICINE BY PEOPLE LIVING WITH HIV/AIDS

Thorpe, R D.
Australian Research Centre in Sex, Health and Society, La Trobe University, Melbourne

Data from the HIV Futures 4 survey suggests that over half of People Living with HIV/AIDS (PLWHA) in Australia use some kind of Complementary Medicine (CM) and that CM users are as likely as non-users to be using orthodox medicines for HIV. This research looked at how a group of Australian PLWHA used CM alongside orthodox medicine in the context of living with a chronic illness of uncertain outcome.

This research draws on data from a qualitative study using grounded theory thematic analysis. In-depth, semi-structured interviews were conducted with 18 PLWHA living in and around Melbourne. All participants except one had used antiretroviral treatments (ARV) at some point and all were using some kind of CM at the time the interviews were conducted.

The ways in which participants perceived health and used CMs had changed since becoming HIV positive and especially with the realisation that they would be living with HIV and using ARV for the foreseeable future. Similarly, the ways in which participants perceived CMs were related to attitudes towards ARV, for example CMs were seen to be safe compared with 'toxic' drugs, and CM use was perceived to introduce choice and autonomy into everyday health management. Use of CM could therefore be seen to de-medicalise the experience of living with HIV. However, the majority of participants tended to research CMs over the Internet, or to obtain information from peers or publications rather than consulting CM practitioners. This tendency to self-prescribe CMs in a pragmatic manner was related to a perception that CM practitioners complicated the experience of living with HIV by broadening the scope for intervention. Overall, CMs were found to have the potential to exert both de-medicalising and re-medicalising influences on the lives of these participants, and the ways they were used represented a compromise between these two influences.

Treatment Rollout in Regional Countries – it's not just about drugs 3.30pm – 5.00pm

CLINICAL MENTORING PROVIDES CLINICAL EXPERTISE FOR RAPID SCALE-UP OF HIV/AIDS SERVICES IN DEVELOPING COUNTRIES

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[2]The Centre Clinics, Victorian AIDS Council

Lack of clinical expertise has been identified as a major barrier to scale-up of HIV/AIDS prevention and treatment services in developing countries. The International Center for Equal Healthcare Access (ICEHA) offers clinical mentoring programs that rapidly create practical expertise among local health professionals in developing countries by direct transfer of skills from HIV/AIDS and infectious diseases medical experts.

ICEHA clinical mentoring programs work with existing national treatment guidelines and complement local didactic HIV training. Programs are supported by both local and central program management. Coordinating program launch and duration with respect to ARV availability optimizes the impact. Close partnerships with local organizations ensures local logistics and strong quality control. ICEHA relies on experienced health professionals to volunteer 6 - 12 weeks of their time to coach their counterparts in a structured local clinical setting. ICEHA trains, prepares and supports volunteers before, during and following their field assignment. ICEHA clinical mentors include physicians, nurses, pharmacists, social workers, and health educators. Clinical mentors generally deploy in teams. Each setting receives a series of teams to reinforce lasting behavior changes in health systems.

Analysis of the series of clinical mentors at a pilot setting shows that within 6 months an HIV outpatient clinic can increase its patient flow from 0 to 1200 patients. After a series of approximately 4 Clinical Mentoring teams the clinic becomes "mentored out" with the staff demonstrating the skills to provide the best care possible given the resources available. ICEHA clinical mentoring has been replicated in 5 countries (Cambodia, Ethiopia, Fiji, Lesotho, Vietnam) each starting with a pilot which rapidly scaled. To date, ICEHA has trained and deployed clinical mentors who have provided more than 3000 days of clinical mentoring in 5 countries, Cambodia, Ethiopia, Kiribati, Lesotho, and Vietnam. Additional country programs continue to be added in Africa, Asia, Oceana and South America.

ICEHA clinical mentoring is an effective method to rapidly develop local expertise to provide the best HIV and infectious diseases care and AIDS prevention within developing countries' available resources.

ROUTINE VIRAL LOAD IN RESOURCE-LIMITED-SETTINGS: UNNECESSARY LUXURY OR NECESSITY?

Calmy A , Von Schoen-Angerer T , Lee H [2], Garcia F , Ford N [3], Boulle A [4], Schaefer M [5]
Access Campaign, Geneva, Switzerland; [2] Imperial College, Cambridge University, UK; [3] Médecins Sans Frontières, Cape Town, South Africa; [4] University of Cape Town, South Africa; [5] Médecins Sans Frontières, Australia

Viral load (VL) is the standard of care to diagnose HIV infection in infants and assess antiretroviral treatment (ART) efficacy in developed countries, but WHO does not routinely recommend it in resource-limited-settings. Currently used assays are not adapted due to complexity of procedures, need for cold-chain shipment of reagents and cost.

MSF undertook a consultative process among researchers, physicians, policy makers and virologist to discuss necessity, define the minimum needs and potential specifications of VL assays in resource-limited settings (RLS).

Two main areas of necessity for VL were defined: 1. Infant diagnosis: its importance is underlined by the evidence that undiagnosed and untreated those children carry a high mortality risk. A threshold of 10,000 copies was regarded as acceptable to diagnose HIV infection in infants.
2. Need for switch and treatment monitoring: the aim in RLS being to safeguard second-line therapy in contexts with no drug option for a salvage therapy; here, VL can be used to determine optimal to sequencing of the two available drug regimens. We suggest that the switch should not occur before VL levels reach 10'000 copies. The group did agree this threshold would represent a good balance between the risk of over-switching and the risk of waiting for clinical or immunological failure. For monitoring, VL measurement at 4 months was suggested to detect early virological escape allowing a quick intensive adherence intervention. A detection level of 400 copies had been found useful based on data from the MSF South Africa program.

A simple test providing semi-quantitative information (sensitivity level of 400 copies, threshold of 10'000 copies) is highly desirable and responds to the needs of diagnosing HIV in infants, detecting early adherence problems and providing useful information on when to change treatment regimen. The test should be easy-to-use, give point-of- care results, be battery-powered, portable, and free from cold-chain considerations. A dipstick-based HIV RNA test would fulfil these specifications.

The need for such a test will increase as current treatment cohorts mature. MSF decided to collaborate with the Diagnostics Development Unit at Cambridge University, which is developing a rapid HIV viral load test, called SAMBA (Simple AMplification BAsed nucleic acid test).

THE ROLE OF PEER SUPPORT WORKERS IN ADHERENCE SUPPORT AT THE SOCIAL HEALTH CLINIC, PHNOM PENH, CAMBODIA

Chel S [1], Roeun M [1], Khem C [1], Keo S[1], Mea S[1], Huffam S[1,2], Elliott J[1,2], Saphonn V[1], Kaldor J[2], Cooper D A[2], Mean C V[1].
[1]National Center for HIV/AIDS, Dermatology and STIs (NCHADS) Ministry of Health Cambodia, [2] The National Center in HIV Epidemiology and Clinical Research (NCHECR), University of New South Wales, Sydney, NSW, Australia.

Adherence is key to the success of antiretroviral therapy (ART). We describe the central role that HIV positive Peer Support Workers (PSW) play in supporting adherence at the Social Heath Clinic (SHC), an ambulatory HIV Clinic in Phnom Penh, Cambodia where nearly 600 patients have commenced ART.

Three PSW are employed by the SHC as part of a multidisciplinary team. They provide HIV/AIDS education, ART readiness counseling and adherence support. The PSW also provide pre enrollment information and support to patients regarding research projects undertaken at the clinic.

The PSW lead structured activities in the SHC waiting room including interactive discussion about HIV transmission, prevention and treatments.

Prior to commencing ART, all patients complete at least 3 treatment preparedness sessions with the PSWs. The PSW evaluates patients' treatment readiness and with the treating doctor participates in decisions regarding the timing of commencement of ART.

At treatment commencement all patients review their dispensed medication with a PSW who provides information on the correct use of ART. On each return visit the patient meets with the PSW to discuss any adherence related difficulties they may be experiencing and together they conduct a pill count and review the patient's treatment diary.

All patients are encouraged to participate in a peer support group, where education and other activities are tailored to the needs of the group by the PSW.

The active and visible involvement of HIV positive PSW's as part of the clinic team provides inspiration to patients for adherence to treatment and care. The PSW's first hand knowledge of the potential pitfalls and strategies to overcome them gives them credibility with patients and they are well placed to offer realistic advice and encouragement. It also promotes the greater involvement of people living with HIV / AIDS in treatment and ensures that adherence support is well grounded in the lived experience of those affected by HIV/AIDS.

The employment of HIV positive Peer Support Workers as a part of the team at this ambulatory HIV clinic positively contributes to the provision of comprehensive care and support.

HEALTH LABORATORY SERVICE PROGRAM FOR HIV/AIDS IN INDONESIA

Drg Akila M.Martha,[1] Drg. Widyapranata Bambang,MM[2] Dr Silitonga Nurlan,MMed[3]
Directorate of Medical Support Service - Ministry of Health Republic Indonesia,[1] World Health Organization (WHO)[2] Jakarta, Indonesia HIV/AIDS Prevention and Care Project (IHPCP) – AUSAID[3]

A comprehensive and high quality laboratory service is needed for optimum prevention, care support and treatment for HIV/AIDS program in Indonesia. Not only for HIV testing but also diagnostic laboratory for other opportunistic infections. Until recently, comprehensive and good quality laboratory service is still a big challenge to be accessed by Indonesian people in general.

Global campaign 3 by 5 has created positive support to strengthen comprehensive and quality laboratory service in Indonesia. In mid 2004, Indonesian government on national and regional level, with funding and technical support from Global Fund AIDS TB & Malaria, WHO, Family Health International-USAID, IHPCP-AUSAID and in collaboration with local institutions in Indonesia, have mutually conducted a series of activities to strengthen laboratory service, covering: a) developing and updating HIV testing guideline for screening, surveillance and diagnostic, as well as diagnostic for opportunistic infections, b) training of laboratory technicians from various hospitals, NGOs and Community Health Centers (Puskesmas) in several provinces, c) monitoring of laboratory service in 25 referral hospitals for anti retroviral therapy, d) setting up quality assurance, d) setting up laboratory service referral system in Indonesia, and e) procurement for CD4 and VL machines.

Lessons learned and conclusions from ongoing supports so far noted several factors that can influence the success of laboratory service strengthening program: a) partnership, b) training should be continued with mentoring and advocacy, c) program or activity planning that is integrated to the existing system, and d) national/regional planning that is strategic, comprehensive, integrated, with funding availability.

NUTRITION KNOWLEDGE, ATTITUDE AND PRACTICE OF HEALTH PROFESSIONALS CARING FOR PLHA IN INDONESIA

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[2] Indonesia HIV/AIDS Prevention and Care Project, Indonesia.

In 2005 UNAIDS/WHO estimated that 170, 000 people were living with HIV/AIDS (PLHA) in Indonesia, with a large proportion acquiring HIV through injecting drug use. Malnutrition, particularly among people who inject drugs is common and when compounded by HIV infection may accelerate HIV disease progression. Recent improvements in access to antiretroviral therapy in Indonesia has the potential to positively impact on the nutritional status of PLHA. Side effects related to HIV or ART may mitigate potential improvements in nutritional status. Dietary advice to reduce symptoms may minimise these negative effects.

Financial constraints and chronic food insecurity are frequently reported to affect dietary intake. Access to affordable nutritious foods are an important priority for many PLHA in Indonesia.

Nutrition counselling is an underutilised tool in the care of PLHA. This study aimed to determine the nutrition Knowledge, Attitude and Practice (KAP) of health professionals providing care to PLHA in hospitals participating in the Indonesia HIV/AIDS Prevention and Care Project (IHPCP).

A self-administered, survey was implemented among staff from two key HIV care and treatment hospitals in Indonesia (RSPI and RS Wahidin).

Forty-five attending health professionals, (HP) including nurses (16), doctors (12), nutritionists (12) and counsellors (5), completed the KAP survey in Bahasa Indonesia. Most respondents 44/45 (98%) felt that nutritional status was important to the health of PLHA, with 91% rating nutrition as very important. Nutritional problems in their HIV patients were reported sometimes (6/44); often (28/44) or very often (10/44). The most common nutrition related issues included poor appetite, weight loss/wasting, candidiasis, diarrhoea, and nausea. Lack of nutrition knowledge was also an issue identified for PLHA.

Few staff felt they had 'advanced HIV specific nutrition knowledge' and described limited confidence in providing nutritional advice. However the majority of the HPs provided some type of nutrition intervention. Further training in nutrition and HIV was a need identified by participants.

Nearly 90% of the HPs surveyed reported that PLHA 'often' presented with nutrition related problems. Increasing the capacity of staff to provide nutrition interventions for PLHA is one strategy to enhance care and treatment currently being implemented by IHPCP.

18th annual

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Wednesday 11 to Saturday 14 October 2006

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ORAL PRESENTATION ABSTRACTS

SATURDAY 14 OCTOBER 2006

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Nursing
9.00am – 10.30am

GROUP COGNITIVE BEHAVIOUR THERAPY (CBT) FOR HIV+ GAY MEN

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Following the introduction of antiretroviral therapy, there is increasing focus on the mental health aspects of living with a chronic, life threatening illness. Many HIV + people experience depression and/or anxiety. While individual CBT is effective in treating depression and anxiety, group programs have also been shown to be effective and may provide additional benefits. It was hypothesised that a group CBT program for HIV+ gay men would provide benefits from socializing with people experiencing similar issues, in addition to the recognized benefits of CBT.

Two closed, eight-session pilot groups were run at Albion Street Centre. Each weekly session was 3 hours, with a 20 minute mid-session 'social' break. Participants were taught CBT skills, including cognitive restructuring, problem solving and goal setting. Materials were designed specifically for the group, and emphasis was placed on enjoyment and social interaction as well as acquisition of knowledge and skills. There were also opportunities to discuss topics chosen by the group, such as disclosure.

Participants were HIV+ gay men with a diagnosis of anxiety or depression or another mental health problem. Ages ranged from 34 to 70. Time since diagnosis ranged from less than one year to greater than 15 years. Many participants had previously attended support groups or individual therapy. The retention rate across the two groups was 82%. One of the 9 participants in Group 1 dropped out; 2 of 8 in Group 2 dropped out. Reasons for dropping out were health-related (2) and homelessness (1).

Of the 14 participants who completed the group program, 13 reported having benefited; in most cases, psychometric data supported qualitative reports of benefit. Favourable reports included the following: hearing others' examples facilitated learning CBT principles; group learning was less confronting hence more accessible than individual therapy; hearing the experiences of other HIV+ men was beneficial; the group setting facilitated development of interpersonal skills. Several participants also reported liking the structured format. A number of participants reported making positive significant changes in their lives during the group program.

Findings supported hypothesis that a group CBT program can provide benefits not available in individual CBT to HIV+ gay men.

DEATH KNELL FOR THE HOSPICE? PALLIATIVE CARE PROVISION FOR HIV IN THE NAUGHTIES – A SACRED HEART PERSPECTIVE

Tank K
Sacred Heart PCS, St Vincent's Hospital, Sydney, NSW, Australia

In an attempt to meet the changing needs of people living with advanced HIV in NSW, Sacred Heart Palliative Care Service is attempting to bring palliative care back from behind the hospice walls and into the community. As people are living longer there has been a significant shift from end-stage or 'terminal' care to that of symptom control in advanced disease, the emphasis is on living well, rather than dying well.

The HIV Palliative Support Project aims to provide advice and support to services caring for people with advanced HIV. Through the use of promotional material, information booklets and onsite consultation or via telehealth, the service aims to support both HIV and sexual health services that have limited contact with palliative care services and vice versa. The key is to assist both types of service to the common goal-optimal comfort and symptom control in advanced HIV disease. This presentation will describe some of the key strategies.

THE BEST OF BOTH WORLDS: COLLABORATION BETWEEN HEALTH PROMOTION & CLINICIANS IN HIV/STI/PEP EDUCATION

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Where education of health care workers (HCW) is required, it is important to ensure that information provided is credible, current and accessible. Health promotion officers (HPO) have particular expertise in the development of interventions which can effectively reduce morbidity across a variety of priority populations many of whom could be accessed via primary health care settings. However, HPOs may not have the in-depth knowledge of up to date clinical practice or clinical systems necessary to deliver their message in ways that facilitate HCW compliance and enhanced service delivery. Clinicians rarely have the time to devote to large-scale education development and evaluation.

One component of the Health In Sex (HIS) Project involved collaboration between health promotion officers and clinical nurse consultants in a number of GP and HCW initiatives. These initiatives were aimed at providing HIV, STI & PEP education and resources that were either developed or amended to suit the local setting, resulting in a review of clinical processes and providing links to local specialist clinicians and units.

The GP/HCW initiative included:
- Non-occupational PEP information for Health Professionals Fact Sheet for GPs, Practice Nurses & Emergency department staff
- STIGMA guidelines with local contacts for GPs
- PEP Training for Emergency Department staff
- GP Practice Nurse Workshop "Looking after your patient's sexual health"
- Provision of resources through an ordering system e.g. "Creating a safe clinical environment for MSM" brochure; Practitioner tips on taking a sexual history" package

All initiatives were fully evaluated. This paper will discuss the process of collaboration and the successes achieved in providing health care worker education on HIV, STIs and PEP.

ESTABLISHING A NURSING TELEPHONE INFORMATION LINE FOR VICTORIANS TO ACCESS HIV POST EXPOSURE PROPHYLAXIS (PEP)

Cockroft E, Beltchev MA, Keogh JL, Pitt HB, Pierce AB, Slamowicz R, Earle M, Price B, Wright EJ.
Victorian NPEP Service, Infectious Diseases Unit, The Alfred, Bayside Health, Melbourne VIC Australia.

On 10 August 2005, the Victorian NPEP Service was launched. NPEP (Non-occupational post exposure prophylaxis) is a 28 day course of antiretroviral medication to reduce the risk of HIV transmission after a potential exposure in the community setting. The 24 hour nursing telephone information line (TIL) is the key point to access the service. Nurses can assess risk, provide information and refer callers to appropriate sites to access NPEP. The TIL has been promoted to the community by the Victorian AIDS Council.

The TIL is coordinated by the NPEP Clinical Nurse Consultant. Additional Registered Nurses (Div1) provide 24 hour coverage. The role is independent as nurses work off-site. Therefore, nurses with a strong background in sexual health and infectious diseases were recruited. In addition, 3 modules of an NPEP education package were completed, including sexually transmissible infections, a learning package on NPEP and a study day on telephone counseling skills.

Protocols were developed to support nurses to make decisions about referring callers to access NPEP and dealing with complex calls. Nurses are able to refer callers to 13 medical sites across Victoria (metro and rural); including S100 accredited General Practitioners, Emergency Departments and Infectious Diseases Units. The service has educated each site on NPEP guidelines and provided Starter Packs of NPEP pharmaceuticals. Additional support is available from the on-call Infectious Diseases Physician at The Alfred.

From 10 August 05 - 28 Feb 06, the TIL received 251 calls. The average call time was 14 minutes (range 1min -1hr30min). Most callers rang because of an exposure (147) or NPEP information (45) and the information was for themselves (199). Other callers were health care workers (19) or people on behalf of friend/relative (18). Monday was the day of the week with the most number of calls.

Limitations of the TIL are that outcomes of referrals are not always known, as callers may remain anonymous. Also, that nurses cannot advise on prescribing drugs for significant risks that are not included in protocols.

Overall, the establishment of the PEP TIL has been successful and provides a new information resource to the community.

EFFECTS OF INFORMATION PROCESSING IMPAIRMENT ON EVERYDAY TASKS IN PEOPLE WITH AIDS DEMENTIA COMPLEX

Ranka J[1], Chapparo C[1]
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A common and clinically important complication of late HIV-1 infection is AIDS Dementia Complex (ADC). Research conducted outside medicine has focused on identifying the type of neuropsychological or information processing impairment present. Correlations of neuropsychological profiles with measures of function have produced a preliminary staging of the disease. Little is known, however, about the exact impact on the functional capacity of people as they perform meaningful everyday tasks in typical performance contexts.

The purpose of this paper is to describe a study in progress that seeks to identify and describe the impact of information processing impairment on task performance in real-world contexts in people diagnosed with ADC using an ecological measurement model.

Twenty men between the ages of 25-45 who are diagnosed with ADC, living in a home environment in the Sydney metropolitan area and currently being seen by an occupational therapist are being recruited. The instrument being used is the Perceive, Recall, Plan and Perform (PRPP) System of Task Analysis. The PRPP System was selected because it is a reliable, criterion-referenced measure that has been used successfully to identify the impact of information processing impairment on everyday tasks in other studies. Consenting participants are being assessed performing two self-selected tasks that pose difficulty and are desired goals. Performance is rated in terms of how well a person performs a task to expected levels according to set criteria. Information processing is assessed in terms of the impact impairments make on task performance. This occurs through the use of behavioural *descriptors*. *Descriptors* are verbs that denote observable dimensions of the perceive, recall, plan and perform aspects of information processing. Performance of each *descriptor* behaviour is scored according to set criteria ranging from no difficulty to definite difficulty. When data collection is complete, the results will be analyzed using traditional statistical models as well as Rasch analysis methods.

Identifying the impact of information processing impairment on real-world performance of tasks using a criterion-referenced measurement model will enable occupational therapists to more specifically tailor therapy to the individual performance needs of clients as they live and age with HIV/AIDS.

PROVISION OF HIV CLINICAL CARE AND SUPPORT FOR PLWHA WITH HIGH LEVEL CARE NEEDS IN THE COMMUNITY

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[1] Victorian HIV Consultancy, The Alfred, Melbourne, VIC, Australia.
[2] Victorian HIV Service, The Alfred, Melbourne, VIC, Australia.

In the highly active antiretroviral therapy (HAART) era, the population of people living with HIV/AIDS (PLWHA) has increased, both due to a fall in the number of opportunistic infections and mortality from HIV and a rise in new HIV infections. Comorbidities, such as hepatitis co-infection, psychiatric illness, cognitive problems or drug and alcohol issues, are increasingly seen as are the problems of multiple drug resistance or therapy-related toxicity. A new challenge is posed by the increasing numbers of individuals with identified "high level care needs", due to either physical frailty as a direct consequence of HIV or ageing in association with medical morbidity unrelated to HIV.

This paper will examine two clients of the Victorian HIV Consultancy (VHIVC), who were referred for care planning and support in the setting of an imminent move to residential care in a community nursing home. Both clients had high level care needs, one as a result of HIV and one as a consequence of an unrelated medical problem. Interventions were put in place with the ultimate goal of supporting the individuals' physical, mental and emotional needs. Initially, formal education sessions were held for staff of the two facilities. Ongoing routine HIV clinical care was provided to both individuals by members of the VHIVC team. Regular secondary consultation with nursing home staff and the general practitioner was an integral element of care provision.

During the course of care planning and provision, specific care needs unique to PLWHA living in community-based high level care facilities were identified, as were a number of gaps in current service provision; these provide an opportunity for future service planning and delivery.

IDU Workshop
9.00am - 10.30am

BRIDGING THE DIVIDE – BRINGING 2 SECTORS TOGETHER FOR ONE PURPOSE A SYMPOSIUM ON THE TREATMENT OF HEPATITIS AND HIV IN DRUG USERS

Walsh, N.[1,2], Austin, K.[1], Kelsall, J.[3], Brogan, D.[3], Watson, K.[4], Sasadeusz, J.[5], Mijch, A.[6], Maher, L.[7], Dunlop, A.[1], and N. Crofts[1].
[1] Turning Point Alcohol and Drug Centre; [2] Monash University; [3] VIVAIDS; [4] St Vincent's Hospital, Melbourne; [5] Royal Melbourne Hospital; [6] Infectious Disease Unit, The Alfred Hospital; [7] National Centre in HIV, Epidemiology and Clinical Research

Injecting drug users and other drug users are at higher risk of key chronic infectious diseases such as HIV, hepatitis B and hepatitis C. The management of chronic disease requires medium to long term engagement between the individual and the health service. It is well known that injecting and other substance use users are less likely to engage with health service for disease management than the general population. There are a number of reasons for this – functions of both the patient and health services.

It is our opinion that the infectious disease sector and the alcohol and drug sector are relatively discrete entities. Although substance using patients are to various extents engaged in both sectors, the sectors are not engaged with each other. Thus infectious disease clinicians and many gatroenterologists are unfamiliar with the management of substance use and its treatment, while alcohol and drug clinicians are to a large extent unfamiliar with the management of endemic infectious diseases such as hepatitis B and C, and important conditions such as HIV.

We are proposing a symposium for the 2006 ASHM conference which attempts to bridge this divide. The symposium will utilise Turning Point Alcohol and Drug Centre's experience in drug use epidemiology and treatment, key infectious disease clinicians and gastroenterologists with experience working with substance use users, key researchers bridging both sectors and drug users themselves.

The symposium will follow the mini presentation and discussion format: (1) presentation discussion of relevant substance use epidemiology (2) presentation discussion of the harm reduction and the treatment of drug use – particularly opiate dependence, alcohol dependence and methamphetamine abuse (3) presentation discussion of hepatitis B and C treatment in the context of substance use and substance use treatment(4) presentation discussion of HIV treatment in the context of substance use and treatment (5) The view from drug users perspective (6) an interaction panel/floor discussion of the key components of integrating infectious disease and substance use treatment. The symposium should last around 1.5 - 2 hours. Participants will obtain cross discipline knowledge in drug use and the treatment of hepatitis and HIV in drug users.

Structured Treatment Interruptions – Clinical 9.00am – 10.30am

EPISODIC CD4-GUIDED USE OF ART IS INFERIOR TO CONTINUOUS THERAPY: RESULTS OF THE SMART STUDY

Drummond FM on behalf of the SMART Study Group

Despite declines in morbidity and mortality with combination antiretroviral therapy (ART), effectiveness is limited by adverse events, difficulty with adherence, and HIV resistance. Strategies are needed to maximise benefits and minimise risks of ART.
HIV-infected individuals with CD4+ count > 350 cells/mm^3 were randomised to viral suppression (VS) (continuous use of ART) or to drug conservation (DC) (episodic use by deferral of ART until CD4+ count decreased to < 250 cells/mm^3 and then ART use until CD4+ count increased to > 350 cells/mm^3). The primary endpoint was development of an opportunistic disease or death from any cause (OD/death). A composite of major cardiovascular and metabolic events was an important secondary endpoint.

A total of 5,472 patients (2,720 DC and 2,752 VS) were followed an average of 16 months. Average age was 44 years; 27.2 % were women; 55.6 % were white and 29.1 % Black; median baseline and nadir CD4+ cell counts were
597 cells/mm^3 and 250 cells/mm^3, respectively; 71.7 % had baseline HIV-RNA ≤ 400 copies/mL. OD/death occurred in 118 DC and 46 VS participants; hazard ratio (HR) DC/VS = 2.6 (95 % CI: 1.9 - 3.7, P < 0.0001). HRs (95 % CI, P value) for all-cause mortality and major cardiovascular and metabolic events were 1.8 (1.2 - 2.9, P = 0.007) and 1.7 (1.1 - 2.5, P = 0.01).

Episodic CD4+ cell guided ART as used in SMART significantly increases risk of OD/death compared to continuous ART and does not provide benefit in terms of reducing adverse events that have been associated with ART.

PROGRESSION OF OPPORTUNISTIC DISEASE OR DEATH (POD) IN THE RANDOMISED SMART STUDY: WHY WAS THE RISK OF POD GREATER IN THE CD4+ GUIDED DRUG CONSERVATION (DC) ARM VS THE VIROLOGICAL SUPPRESSION (VS) ARM?

Emery S on behalf of the SMART Study Group.

The SMART Study (n=5472) demonstrated a 2.5 fold greater risk of POD in the DC versus VS arm. Factors associated with this finding were investigated.

POD (n=164) event rates were calculated based upon proximal CD4+ cell count and plasma HIV RNA levels (pVL). A series of Cox models were used to determine the extent to which differences between arms in CD4+ cell counts and pVL during follow-up could explain the observed differences in POD.

After adjustment for the latest CD4+ cell count and pVL as time-updated covariates the hazard ratio (HR) for DC vs VS was reduced from 2.63 (95% CI: 1.87 - 3.68) to 1.44 (0.98 - 2.10). When follow-up time was stratified according to the latest CD4+ cell count, there was a higher rate (per 100 person/yrs) of POD in the DC group compared to the VS group at higher CD4+ (> 350 cells/μL) but not at lower strata. In the higher CD4+ cell count strata, the overall median pVL in DC vs VS groups were 10,000 copies/mL and ≤ 400 copies/mL respectively.

The higher overall CD4+ cell count and lower pVL in the VS vs DC arms during follow-up appear to explain much of the difference in risk of POD between the treatment arms. The residual excess risk in the DC group with latest CD4+ counts ≥ 350 cells/μL may be linked to the higher concurrent pVL with consequential impact upon immunocompetence not reflected by CD4+ cell count alone.

THE EFFECT OF EPISODIC CD4-GUIDED ANTIRETROVIRAL THERAPY ON QUALITY OF LIFE: RESULTS OF THE QUALITY OF LIFE SUBSTUDY OF SMART

Anderson J
Carlton Clinic

The effect of episodic CD4-guided antiretroviral therapy on quality of life: results of the Quality of Life substudy of SMART – Anderson J StC on behalf of the SMART Study Group

The Strategies of Management of Antiretroviral Therapy (SMART) study is an international, randomised trial with 5,472 participants comparing an episodic CD4-guided antiretroviral treatment (ART) strategy (drug conservation, or DC arm) with continuous ART (viral suppression, or VS arm). It was hypothesized that episodic ART might improve quality of life (QOL) by reducing time spent on ART.

A subset of SMART study participants enrolled in 64 U.S. sites had health-related QOL assessments (current health state, assessed by visual analog scale, and SF-12) at baseline, months 4, 8, and 12, and annually thereafter. The DC and VS strategies were compared longitudinally for changes in the visual analog scale, each of the 8 SF-12 dimensions, and physical (PCS) and mental (MCS) health components.

1,225 patients participated in the substudy. Most (76%) were on ART at enrolment; 25% women; and median CD4 count was 575 (IQR, 455 – 784) cells/mm^3. At study entry, mean current state of health scores was 75 (out of 100). Fifty percent rated their health as very good or excellent on the SF-12 general health question. Mean follow-up was 2.4 years. During follow-up, current health state and general health perception declined in the DC group and increased in the VS group (p=0.07 for difference in current state of health and p=0.01 for general health perception). DC patients also scored lower in the energy dimension of the SF-12 (baseline = 60 out of 100 and average change of -1.7 versus +0.2; p=0.03) and on the physical summary score (PCS; p=0.03 through year 1, p=0.1 through follow-up). Differences in other SF-12 dimensions and the MCS between groups were small and not statistically significant.

Episodic use of ART as in SMART did not improve quality of life. Physical functioning, general health perception, and energy scores worsened among patients in the DC group compared to the VS group.

OVERVIEW OF TREATMENT INTERRUPTION STUDIES

Hoy J[1,2], and Drummond F[2]
Alfred Hospital, Melbourne, Australia, and the National Centre in HIV Epidemiology and Clinical Research, Sydney, Australia

While treatment advances have resulted in marked improvement in survival and reduction in HIV related morbidity, long term treatment carries the risks of treatment fatigue, development of resistance, metabolic toxicity and cardiovascular risk, and a financial burden. Hence, consideration and evaluation of treatment interruption as a treatment strategy to circumvent some of these problems was embraced. However, just as earlier attempts aimed at autovaccination failed, the safety and efficacy of CD4 guided treatment interruptions has not been established.

Although cohort studies have suggested that structured treatment interruptions (STI) at high CD4 cell counts may be safe, several large randomized STI studies have been presented in the last 12 months which challenge this approach. Where does the SMART study sit in relation to these other studies? The results of recent STI studies which compared the long-term consequences of two antiretroviral-management strategies: continuous therapy versus scheduled treatment interruption will be presented. The difference in trial design, primary endpoint and size will be emphasised to enable clinicians to discuss the issues with their patients. The SMART study results have already been presented.

The Trivacan (ANRS 1269) Trial was also terminated prematurely. This study enrolled 326 treatment naïve patients (CD4 cell counts of 150 - 350 cells/µl). The patients received HAART for 6 – 18 months before randomisation to continuous vs. CD4 guided (stop at 350 and restart at 250) vs. fixed time interruption (2 months off/4 months on) therapy. The primary endpoints were death or severe morbidity. The CD4-guided arm was stopped by the DSMB, as the incidence of severe morbidity was 2.5 fold that in continuous arm (the most frequent event was bacterial infections).

Two studies found conflicting results to SMART and TRIVACAN. The STACCATO Study enrolled 432 patients who had persistently suppressed HIV viremia since commencing HAART and CD4 counts >350 cells/µl, and randomised them to continuous vs. week on/week off therapy vs. CD4 cell guided interruption (stop/start at 350 cells/µl). The fixed schedule interruption arm was stopped early due to virological failure in >50% and the study concluded at the end of the 96 week randomised period with a fixed 12 week re-treatment period. There was no difference in the proportion of individuals with suppressed viremia at the end of study (primary endpoint), they found no increase in the development of resistance or clinical deterioration.

The WINDOWS Study (ANRS 106) enrolled 390 patients all virologically controlled with CD4 counts >450 cells/µl and CD4 nadir >100 cells/µl. Patients were randomised to continuous therapy vs. fixed interruption (8 weeks on/8 weeks off) with a 96 week follow-up. The study's primary endpoint was CD4 <300 cells/µl (3.1% of interruption patients vs. 1.5% of controls) and they were able to show that this type of interruption was non-inferior to continuous therapy.

Policy International
9.00am- 10.30am

UNIVERSAL ACCESS - GOOD POLICY OR IMPOSSIBLE DREAM?

Reis E
Australasian Society for HIV Medicine

This paper will analyze the development policy of 'Universal Access', currently being promulgated by the United Nations Joint Program on HIV/AIDS (UNAIDS) and the World Health Organisation (WHO). This policy is a response to the increasing global HIV epidemic and the failure of previous policies to reach targets of reduced transmission rates and increased access to HIV treatments, in particular antiretroviral therapies, in developing countries.

Some might contend that universal access, a policy seemingly focused on a particular health issue, is not broad enough to be considered development policy. However, as the HIV epidemic has continued and its social, economic and institutional dimensions have become more obvious, increasing study has been focused on understanding health policy responses in the wider context of development strategies. (Lee K et al, 2002; Moatti J et al 2003; WHO 2005)

This analysis will consider the aims and objectives of universal access, the context of this policy's development, the values and ideologies it reflects, and the strategies it advocates for implementation. An assessment will be made as to whether universal access is an implementable policy, given the circumstances and contexts of HIV epidemics and responses to date.

STIGMA, DISCRIMINATION AND VIOLENCE AGAINST WOMEN IN THE ERA OF UNIVERSAL ACCESS TO HIV PREVENTION, CARE AND TREATMENT: A CRITICAL POLICY ANALYSIS

Worth, Heather
National Centre in HIV Social Research, UNSW

The '3 by 5' program and its successor, Universal Access to HIV/AIDS Prevention, Care and Treatment, are responses to the obviously inequitable global distribution of ART, the realization that HIV would be an accelerator of the very socio-economic and political forces which ensured its uneven spread in the first place. Part of the unevenness in the HIV arena is gender inequality, including stigma, discrimination and violence, which still remains at the heart of much of the spread of HIV and is one of its most deadly impacts.

While HIV-related violence against women was identified very early in the epidemic, in the acceleration of the roll-out of treatments this central issue has been forced into the background. This paper discusses the lack of gender analysis in various new global policy documents, the downplaying of stigma, discrimination and violence towards women, and the ways in which women are positioned in the documents primarily as child bearers (recipients of PMTCT).

INTELLECTUAL PROPERTY AND ACCESS TO MEDICINES: WHAT SHOULD AUSTRALIA BE DOING?

Drahos P
Australian National University

Abstract: Australia appears to be following the US policy of asking for TRIPS plus standards in free trade agreements (eg Malaysia, China). This policy will not serve the goal of increasing access to medicines. What should Australia be doing instead

A POSITIVE RESPONSE TO THE WHITE PAPER: A VISION OF NAPWA'S FUTURE ROLE IN REGIONAL CAPACITY BUILDING

Rock, J.M [1]
Rule, J.S [2]
International Portfolio Convener, National Association of People Living With HIV/AIDS (NAPWA) Sydney, New South Wales, Australia [1]

International Projects Manager, National Association of People Living With HIV/AIDS (NAPWA) Sydney, New South Wales, Australia [2]

In any discussion with positive people and groups in the Asia Pacific region on their key issues and priorities, two themes emerge, access to affordable treatment (both ARV's and OI treatments), and addressing stigma and discrimination.

Experience in Australia and developing countries shows that positive involvement and leadership is necessary for an effective response to both these issues. Positive communities in the region do not yet have the capacity to address these issues effectively. Capacity Building in support of the regional positive response should be geared towards these two themes.

The only way to effect change for the individual is through supporting active PLWHA Groups who can develop community awareness and education, and carry out lobbying and advocacy work in their own contexts.

Informed networks of plwha's, along with government departments and other organisations, can be at the forefront of educating and preparing others for treatments leading to better treatment efficacy, and of advocating for access to affordable treatments.

Developing treatments literacy and advocacy work does not happen without the context of an effectively operating PLWHA organisation. Part of the capacity building requirement must be directed initially to ensuring the sustainable effective operation of PLWHA Groups. In resource poor settings this would also involve highlighting personal self-care strategies, supporting day care centre operations and providing spaces for positive people to come together.

This abstract looks at what Napwa has learned from its work through the AusAID, Australian HIV and AIDS Partnership Initiative (AHAPI) project in East Timor, PNG and with APN+ in Bangkok, as well as other work, and suggests a way forward that is consistent with the Government White Paper on overseas aid, and addresses Capacity Building issues in specified Asia Pacific countries.

It will look at likely specific capacity building components and activities, as well as mechanisms for delivery of such programs. It will also investigate the power of positive-positive interventions and the distinct role that Napwa can play.

WE NEED WOMEN'S VOICES

Paxton S
Positive Response; Burnet Centre for International Health; Australian Research Centre in Sex, Health & Society, La Trobe University

The Policy Project, funded by USAID, conducted research on involving women in HIV/AIDS policy-making processes. Twenty-one in-depth telephone interviews were conducted with ten key stakeholders working closely with positive women at national or international level and eleven positive women leaders from the focus regions of Asia, Africa, and Latin America and the Caribbean.

Despite the Ottawa Charter for Public Health and the Paris AIDS Summit Declaration, involvement of people living with HIV, and particularly women, in AIDS policy making and program design and implementation remains tokenistic. This leads to policies and programs that are insensitive to the needs of people living with HIV and ineffective for the majority of the public. Many decisions around positive women's reproductive health are made without consulting women and may cause them harm and have little effect on HIV prevention efforts. For example, "opt-out" HIV testing of pregnant women is increasingly common. Usually only the mother is tested, often without pre-test counselling. It leaves a woman diagnosed with HIV and dealing with the trauma of her status, to make difficult and often ill-informed reproductive choices and subjects her to the possibility of human rights abuse by health care workers, family and society.

There are enormous benefits to involving women in HIV policy-making, including better-informed policies that are more responsive and relevant to women's lives, improved public health services for everybody, and more equitable approach to resource allocation. There are also great challenges to overcome before women's unique expertise is appreciated and utilised, particularly the breaking down of non-participatory power structures and building women's confidence to address men in authority, as well as addressing women's economic survival and access to ARVs.

People living with HIV, particularly young women, need to be supported to create sustainable peer support and advocacy organisations. They require training, mentoring and opportunities to engage effectively in policy decisions. They must be trained as HIV educators and counsellors and employed extensively within the education and public health sector to create more sensitive and effective HIV awareness programs and eliminate AIDS-related discrimination.

Plenary 4 & Closing
11.00am – 12.30pm

ANTIRETROVIRAL TREATMENT IN THE REGION

Mijch A
Alfred Hospital - Infectious Disease Unit

The SE Asia and Western Pacific/Oceania Region account for an estimated 7.5 million individuals living with HIV in 2005/2006. Prevention and treatment guidelines have been developed in many countries, substantially based on WHO recommendations, most recently revised in mid 2006.
Access to integrated care programs is dependent on many factors including drug availability, health systems, healthcare provider training and accessibility and appropriate, agreed models of care delivery. Models differ according to country need and resource.
TAHOD, regional providers and clients and reported evaluations identify many successful programs but ongoing challenges are identified.

HSV-2 AND HIV: INTERACTIONS & INTERVENTIONS

Celum C
University of Washington

Increasing evidence demonstrates a substantial link between the epidemics of sexually transmitted HIV-1 and HSV -2 infection. Over 18 prospective studies have demonstrated that prevalent HSV-2 is associated with increasing the overall risk of HIV-1 acquisition up to 3-fold fold. Per-sexual contact transmission rates among couples from Rakai, Uganda indicate that at all levels of plasma HIV-1 RNA in the source partner, HSV-2 seropositive HIV-1 susceptible persons have a 5-fold greater risk of acquiring HIV-1 compared with HSV-2 negative persons. In vitro and in vivo studies suggest mucosal HIV-1 shedding is more frequent and in greater amounts during mucocutaneous HSV-2 replication, including subclinical mucosal reactivations. Most HIV-1 infected persons are co-infected with HSV-2 most of whom experience frequent subclinical and clinical reactivations of HSV-2. Subclinical HSV reactivation elevates systemic and genital HIV-1 RNA levels and daily suppressive HSV-2 therapy reduces plasma HIV-1 RNA by 0.6 log10. These data show that greater attention to the diagnosis and treatment of HSV-2 among HIV-1 infected persons is warranted, especially those who continue to be sexually active, those not on antiretroviral therapy, or not well suppressed by antiretrovirals. Ongoing proof-of-concept trials employing acyclovir are assessing whether it is possible to prevent HIV acquisition among HIV susceptible persons with HSV-2 infection and HIV transmission in HIV-discordant couples which will directly test the hypotheses that indicate HSV-2 increases susceptibility to and infectiousness of HIV.

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SOCIAL RESEARCH

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POSTER ABSTRACTS

POSTER ABSTRACTS

BASIC SCIENCE POSTER ABSTRACTS

P49
PLASMA INTERLEUKIN-18 LEVELS ARE ASSOCIATED WITH IMMUNE RESTORATION DISEASE, VIRAL LOAD AND CD4+ T CELL COUNT IN HIV-1 INFECTED PATIENTS

Chin E SS[1], Price P[1], Lim A[1], Lee S[2], French M[2]
[1]Department of Pathology, University of Western Australia, and [2]Department of Clinical Immunology, Royal Perth Hospital, Perth, Western Australia

Interleukin-18 (IL-18) is a pro-inflammatory cytokine with the ability to stimulate IFN release and proliferation of CD4+ T cells. IL-18 is present at elevated concentrations in HIV-1 infected patients but plasma levels decrease as patients respond to combination antiretroviral therapy (ART) and achieve viral suppression. However, persistent elevated production of IL-18 may promote viral replication and disease progression.

Suppression of HIV-1 viral load and restoration of the immune system may promote opportunistic infections or inflammatory diseases within the first six months of treatment. These symptoms are termed Immune Restoration Disease (IRD) and are caused by imbalances in regulatory cytokine expression. Elevated IL-18 levels may be a cause or effect of IRD and abnormal IL-18 levels may affect CD4+ T cell responses.

A cohort of HIV-1 infected patients (n=6) with a stable response to ART and satisfactory CD4+ T cell recovery was matched with a cohort of patients (n=8) with the same selection criteria diagnosed with IRD. IL-18 levels determined by ELISAs of longitudinal plasma samples from both cohorts were correlated with clinical outcome, CD4+ T cell count and viral load. Plasma samples spanned the IRD (up to 24 weeks after ART) and the subsequent 4 years.

IL-18 levels were also correlated to cytokines such as IFN and IL-5 via a cross sectional study of a cohort of patients with stable responses after 82 (40-107) weeks on ART.

Patients diagnosed with IRD after ART had higher concentrations of IL-18 than matched patients with uneventful immune reconstitution. IL-18 concentrations in HIV-1 patients were inversely correlated with CD4+ T cell count ($p=<10^{-6}$) and directly correlated with HIV-1 levels ($p=<10^{-6}$). However, in patients diagnosed with IRD, IL-18 plasma concentrations were correlated with viral load (p=0.03), but not with CD4+ T cell counts. Examination of IL-18 levels and CD4+ T cell numbers pre, during and post IRD suggests IRD dysregulates IL-18 control of CD4+ T cell numbers.

Plasma levels of IL-18 also correlated with IFN (p=0.002) and IL-5 (p=0.017) levels in HIV patients stably treated with ART.
In conclusion, IRD increases IL-18 levels. This may affect the regulation of CD4+ T cell numbers, the production of multiple cytokines and control of HIV-1 replication.

P50
EVALUATION OF AQUEOUS EXTRACT OF BABOOL PODS FOR *IN VITRO* ANTI – HIV ACTIVITY

Khan T. A.[1], Tatke P.A. [1], Mahajan K. [2], Kothari S. [2], Deshmukh R. [2], Gabhe S.Y. [1]
[1] C.U.Shah College of Pharmacy, SNDT Women's University, Mumbai, India.
[2] Haffkine Research Institute, Parel, Mumbai, India.

Ayurveda is the ancient Indian system of natural medicine. It has been in practice for more than 5000 years. This system utilizes the vast natural reserves of Indian forests enriched with plant diversity. AIDS has assumed an epidemic proportion across the globe. Millions continue to die of AIDS especially in the developing countries. The current anti - retroviral therapy is not effective enough as it is accompanied by the limitations of high cost, severe side effects and development of mutant strains. Rational design of novel drugs from traditional medicine offers new prospects in modern healthcare. Our current research work is an effort towards exploring medicinal plants for anti-HIV activity for a cheaper and safer option to existent anti-retroviral therapy. The present study aims at screening the aqueous extract of babool i.e *Acacia nilotica* (Fam: Mimosaceae) pods for potential anti -HIV activity.

The anti - HIV activity of the aqueous extract was measured in terms of its effect on viral infection and replication. Infection was measured by the microtiter syncytium formation assay. Replication was measured by virus - associated Reverse Transcriptase activity. The H9 cell line was used for these assays. Phosphate buffered saline (pH 7.2) was used as a positive control while Azidothymidine (AZT) was used as the negative control in both the assays.

The aqueous extract of *Acacia nilotica* exhibited a dose related inhibition of the enzyme Reverse Transcriptase. It exhibited a 46.13% inhibition of Reverse Transcriptase at a concentration of 200 µg/ml. HIV infectivity was halved at this concentration.

The aqueous extract of *Acacia nilotica* pods possesses a statistically significant inhibitory activity against the viral enzyme Reverse Transcriptase. These results provide a rationale for conducting bioactivity -guided fractionation of the aqueous extract of *Acacia nilotica* pods and structure elucidation of the active molecules.

P51
DEVELOPMENT OF A GENOTYPE RESISTANCE TEST OF GP41 REGION FOR PATIENTS RECEIVING FUSION INHIBITORS

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Genotypic testing for resistance to antiretroviral drugs has become widely accepted as a routine method to guide antiretroviral therapy. While there are commercially available laboratory tests to assess viral resistance in the protease and RT regions of the genome, there are no commercially available genotyping assays to assess viral resistance to the more recent fusion inhibitor drugs. Fusion inhibitor T-20 (enfuvirtide) is a synthetic peptide that inhibits the conformational change of gp41 necessary for fusion of virions to host cells. A single amino acid substitution in gp41 can reduce the efficacy of T-20. Genotypic testing of the gp41 region would allow clinicians to assess fusion inhibitor susceptibility and recommend optimal antiretroviral regimens for patients initiating or receiving fusion inhibitors. Our objective was to develop a genotypic resistance assay that assessed the gp41 region.

Cultured HIV virus was spiked into HIV-seronegative plasma at dilutions ranging from 200,000 to 200 copies/ml. Viral RNA extraction was performed using the Viroseq genotyping assay (Abbott Diagnostics). Primers were developed from conserved sequence to amplify a 1.2kb segment that included the full gp41 region. RT-PCR was carried out using the Roche Titan One Tube RT-PCR system. Sequencing was performed using Big Dye terminator chemistry encompassing codons 1-161 of the gp41 region. Sequences were compared to consensus sequence (NL4.3) and identified mutations interpreted using the CREST algorithm to determine antiretroviral resistance.

Samples with concentrations above 2000 copies/ml amplified successfully. Sequence analysis indicated concordance of sequencing results and fusion inhibitor susceptibility in all samples amplified. While current literature indicates major resistance mutations for fusion inhibitor drugs occur between gp41 codons 36 to 45, this assay amplifies the full gp41 region allowing for ease of extended sequencing should novel mutations be identified in other regions of gp41.

Preliminary investigations indicate we have developed a molecular based assay for sequencing the gp41 region of the genome which is sensitive to below 2000 copies/ml HIV RNA (similar to the Viroseq assay). This assay requires further optimization for use with patient samples. Optimization and validation of this assay is currently underway with funding generously provided by Roche.

P52
POLYMORPHISMS IN IMMUNE-RELATED GENES MAY PREDICT IMMUNE RESTORATION DISEASE IN HIV PATIENTS RESPONDING TO ART

Roberts S[b], Patricia Price[a], Ann Rosenow[a], Suzanna Temple[a], Martyn French[a,b]
[a]*School of Surgery and Pathology, University of Western Australia*
[b]*Clinical Immunology and Biochemical Genetics, Royal Perth Hospital, Perth.*

Immune restoration disease (IRD) is experienced by 10-30% of immunodeficient HIV patients who respond to highly active antiretroviral therapy (ART). IRD result from an immunopathological response to the antigens of opportunistic pathogens. The aim of this study is to investigate polymorphisms in immune-related genes that may have an impact on the presentation of IRD in HIV patients who respond to ART.

DNA was collected from 79 HIV patients who commenced ART with <100 CD4 T-cells/⊠l. Patients were grouped into the following cohorts: Hepatitis C virus (HCV) IRD (n=12), Herpes virus IRD (n=24), mycobacterial IRD (n=12) and those who did not experience IRD (n=31). This included three patients with two IRD each. PCR-restriction fragment length polymorphisms and Taqman assays were used to type all patients for polymorphic loci in the *IL1A, IL1B, IL4, IL6, IL10, IL12, IL18, TNFA, BAT1* and *HSP70A1B* genes. We compared patients who developed IRD with patients who did not develop IRD.

Carriage of the rare allele at IL1A+4845, IL1B-3953, IL4-589, IL10-592, IL10-1082, IL18-137 and IL18-607 was similar in patients with and without IRD. Patients who experienced herpes virus IRD had increased carriage of allele 2 at TNFA-308 (56% *vs* 22%) and decreased carriage of allele 2 at IL12B(3'UTR) (9% *vs* 26%) relative to patients without IRD. Patients who experienced mycobacterial IRD had decreased carriage of allele 2 at TNFA-308 (8% *vs* 22%) and never carried allele 2 at BAT1(intron 10). This gene lies adjacent to *TNFA* and allele 2 is a specific marker of the disease-associated haplotype (HLA-A1,B8,DR3). Patients who experienced HCV IRD were more likely to be homozygous for allele 2 at HSP70A1B+1267 than non-IRD controls (42% *vs* 6%).

The results establish that distinct polymorphisms in immune-related genes influence the type of IRD that a patient experiences. Results of a multivariate statistical analysis will be presented.

P53
MUTATIONAL ANALYSIS OF HIV-1 CO-RECEPTORS AND THEIR LIGANDS IN CHINESE POPULATION

Bo-Jian Zheng[1], Xiu-Ying Zhao[1], Shui-Shan Lee[2], Ka-Hing Wong[2], Kenny C. W. Chan[2], Fai Ng[1], Chris C. S. Chan[1], Wing-Cheong Yam[1], Kwok-Yung Yuen[1], Mun-Hon Ng[1].
The HIV Research Laboratories, Department of Microbiology, the University of Hong Kong[1]; Integrated Treatment Centre, Department of Health[2]; Hong Kong, China.

Background: Current knowledge concerning the role of HIV co-receptors CCR5 & CXCR4 and their natural ligands, RANTES and SDF-1, in pathogenesis of HIV infection varies with geographical location of study subject.

Method: Polymorphisms in CCR5, CXCR4, RANTES and SDF-1 genes from a study cohort of 1099 Chinese were identified and compared between uninfected and HIV infected individuals and between HIV patients with slow disease progression and fast disease progression. Selected mutants were further characterized phenotypically.

Results: The CCR5 gene was the most polymorphic, with 17 mutations being identified in promoter and ORF region, followed by RANTES gene, with 3 mutations being identified in promoter region. CXCR4 and SDF-1 genes were relatively conserved, with 1 synonymous mutation being identified in the former and 2 in the latter.

Six nonsynonymous mutations in CCR5 coding gene were characterized *in vitro* studies. Mutants 118delF, G106R caused a reduction in reactivity for N-terminus-specific antibody and abrogated the reactivity for the ECL-2-specific antibody. Functional studies further showed that HIV co-receptor activity was reduced by G106R and abrogated by 118delF.

There was marked linkage disequilibrium between the alleles located near the promoter (–28G/A and –403G/A) and intron (In1.1C/T) of the RANTES genes, which resulted in 4 haplotypes. The haplotype-IN-I correlated to the lowest level of RANTES expression and was also more prevalent among HIV patients than in healthy donors.

The two SDF-1 mutants neither associated with HIV infection/pathogenesis, nor associated with variation in its transcription. However, up-regulated SDF-1 transcription was correlated with advanced disease progression.

Conclusion: The results are in general agreement with previous findings. They also suggest that the conformational change in CCR5 may directly affect HIV infection. Moreover, it was found that RANTES and SDF-1 expression appeared to correlate with HIV infection. This implicates CCR5 and CXCR4 and their natural ligands in HIV pathogenesis.

CLINICAL MEDICINE POSTER ABSTRACTS

P54
A MANAGEMENT DILEMMA: HAEMOPHILIA, HIV, HEPATITIS C AND SLE

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A 47-year-old man presented with 6-weeks of headache and one-week of abdominal pain. Co-morbidities included haemophilia (5% factor VIII activity); well controlled HIV (CD4 700 cells/uL or 28%, viral load <50 copies/mL) treated with lamivudine, tenofovir and ritonavir-boosted lopinavir; and compensated liver cirrhosis (Child's Class A) due to hepatitis C, refractory to PEGinterferon and ribavirin therapy (19 weeks from March to August 2005).

Examination demonstrated a blood pressure of 200/100mmHg, without fundoscopic or focal neurological signs. His abdomen was distended from ascites with focal peritonism in the right iliac fossa. A maculopapular exanthem across his back, manifesting in late September 2005, had improved.

CT brain was normal, but MRI brain which showed increased deep white matter hyperintensities attributable to hypertension or HIV encephalopathy. Abdominal CT scans performed three weeks apart revealed persistent thickening of the ileocaecal bowel wall and loculated ascites: confirmed as a transudate without infection. Left ventricular hypertrophy was evident on electrocardiogram, whilst echocardiography showed normal ventricular systolic function. An angiotensin converting enzyme inhibitor (ACEi) was commenced with some headache relief. However, renal function had deteriorated compared to two-months earlier, with an active urinary sediment, creatinine clearance of 42mL/min and proteinuria >9g/day. Zidovudine was substituted for tenofovir. Autoantibody screen revealed a positive ANA (1:1280, homogeneous) and dsDNA (titre >100), with low C3 and undetectable C4, a pattern suggestive of active systemic lupus erythematosus (SLE). Consequently, prednisolone at 1mg/kg was commenced.

The diagnostic dilemma was whether all symptoms were attributable to a new diagnosis of SLE. The differential diagnoses for his renal disease were HIV nephropathy, and hepatitis C-related glomerulopathy with headache and abdominal findings also having a wide differential. Empiric treatment for SLE with two immunosuppressive agents in the absence of a tissue diagnosis was considered but a percutaneous renal biopsy was performed exhibiting diffuse proliferative lupus nephritis (WHO Class IV). Therapy with prednisolone and mycophenolate with adjunctive ACEi and statin therapy were instituted.

This case highlights the complexity of making a new diagnosis in patients with multiple co-morbidities. Both congenital and acquired immunodeficiency syndromes may be associated with autoimmune disease however the temporal relationship implicates PEGinterferon as a potential precipitant.

P55
EFFICACY OF ONCE DAILY COMBINATION ANTIRETROVIRAL THERAPY (ARV) WITH EFAVIRENZ, EMTRICITABINE AND TENOFOVIR IN ACUTE PRIMARY HIV INFECTION (PHI)

Bloch. M

Background: Protease inhibitor (PI) containing ARV taken 2 or more times daily has been used effectively in PHI. With evolution of HIV therapy there has been simplification involving reduction in pill burden and dosing frequency. We aimed to assess the efficacy of once daily non-nucleoside (NNRTI) containing ARV in context of PHI.
Methods: Eligible consenting patients attending 2 primary care practices in Darlinghurst, NSW with acute PHI having ≤4 bands on Western Blot, HIV viraemia and PHI symptoms were commenced on combination ARV consisting of efavirenz 600mg, emtricitabine 200mg and tenofovir 300mg once daily for 48 weeks. Sampling for T lymphocyte, plasma HIV RNA, routine haematology and biochemistry were performed 4 weekly until week 12, then at 24 and 48 weeks. Storage samples were taken for assessment of specific HIV immunity. Efficacy of once daily combination was compared with control cohorts where ARV was taken more frequently than once daily.
Results: 16 men who have sex with men (MSM) enrolled and completed the study. 1 subject with transmitted NNRTI resistance changed efavirenz to once daily boosted PI combination at 4 weeks. Mean plasma RNA log 5.45 ± 0.6 copies/ml at baseline decreased to log 1.69 ± 0.1 copies/ml at month 12. At week 4, 8/16 (50%) had HIV plasma RNA <400 (log 2.6) copies/ml, at week 12 100% had HIV plasma RNA <400 copies/ml and at week 24, 100% had plasma HIV RNA <50 (log 1.69) copies/ml. Mean CD4 T lymphocyte count increased from 496 ± 228 cells/cmm at baseline to 700 ± 307 cells/cmm at week 48. Mean CD8 T lymphocyte decreased from 837 ± 429 cells/cmm to 703 ± 221 cells/cmm at week 48. Therapy was well tolerated with 1 serious adverse event not related to therapy
Conclusions: Once daily combination of efavirenz, emtricitabine and tenofovir was safe, well tolerated and highly effective in acute PHI

P56
ESPRIT (EVALUATION OF SUBCUTANEOUS PROLEUKIN® IN A RANDOMISED INTERNATIONAL TRIAL): BASELINE AND ON-STUDY PREDICTORS OF CD4+ T-CELL RESPONSE WITH SUBCUTANEOUS (SC) RECOMBINANT INTERLEUKIN (RIL-2) AT MONTH 36

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ESPRIT, evaluates intermittent SC rIL-2 plus antiretroviral therapy (ART) provides clinical benefit compared to ART alone in HIV-1-infected individuals with CD4+ T-cells ≥300 cells/μL. rIL-2 administration consists of three dosing cycles (7.5 MIU q12h for 5 days every eight weeks) in the first 6 months with additional cycles given thereafter to achieve/sustain the CD4+ T-cell target.

The objectives were to identify the predictors of CD4+ T-cell response in patients who initiated ≥3 rIL-2-dosing cycles prior to month 8 in whom month 36 data were available.

1,416 (68%) of 2090 randomised to rIL-2 had initiated ≥3 rIL-2 dosing cycles and had CD4+ T-cell data at month 36. At month 36, the median change from baseline CD4+ T-cell was 220 cells/μL; 53% of participants had a ≥ 200 CD4+ T-cell/μL increase from baseline.

Response was defined as CD4+ T-cell ≥200 cells/μL increase from baseline. In patients with baseline and month 36 data available the positive baseline predictor of CD4+ T-cell response at month 36, was a plasma HIV RNA below LLQ (p=<0.001). The negative baseline predictor of response was a longer duration of ART therapy (p=<0.001).

The on-study positive predictors of CD4+ T-cell response at month 36 were receipt of more rIL-2 (greater amount, more cycles and receiving more than 3 cycles); p=<0.001 for all parameters. On-study negative predictors of CD4+ T-cell response at month 36 were a missed dose or dose reduction in any cycle (p=<0.001), and grade 3 or 4 dose-limiting toxicity (p=<0.001).

rIL-2 patients should be encouraged to continue cycling with rIL-2 in order to achieve/sustain CD4+ T-cell target.

P57
MYCOBACTERIAL IMMUNE RESTORATION DISEASE AFTER HIGHLY ACTIVE ANTIRETROVIRAL THERAPY - A RETROSPECTIVE CASE SERIES

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In a retrospective case-series, probable and confirmed mycobacterial immune restoration disease (IRD) cases were identified from the Alfred Hospital HIV Database that started highly-active antiretroviral therapy (HAART) between 1996 and 2005. IRD was defined using the AIDS Clinical Trials Group proposed criteria.

Of nineteen patients with IRD identified, only seventeen records were available for analysis. The group was predominantly male (84%), with mean age of 37 years. Median duration of known HIV-1 infection was 4 years. Median CD4 cell count at HAART commencement was 65 cells/mm^3 (range 3-240) with corresponding median HIV viral load (HIV-VL) of 273,000 copies/ml. 58% had AIDS defining illness prior to the IRD diagnosis.

Mycobacterium avium complex (MAC) was identified in 14 (82%); tuberculosis (TB) accounted for remaining 3 patients. For MAC IRDs, bacteremia was the most common presentation (79%), whilst lymphadenopathy (50%) and respiratory symptoms (7%) were less frequent. Two patients with TB IRDs had lymphadenopathy and two had evidence of pulmonary disease.

The median time from HAART to IRD symptoms was 103 days (range 4-314). Commonest symptom was fever (70%); those without fever predominantly had TB. Median CD4 count and HIV-VL at IRD diagnosis were 40 cells/mm^3 and 100,000 copies/ml respectively. The viral and immunological changes from HAART to IRD diagnosis was a median increase of 5 cells in CD4 (range -180 to +201) and reduction of 272,950 copies/ml in HIV-VL. Proportion of patients with CD4 count below 100/mm^3 and 50/mm^3 at IRD diagnosis were 90% and 60% respectively.

All patients safely continued HAART during the IRD except one who interrupted ARVs due to bone marrow toxicity. Median time to symptom resolution was 52 days (range 15-262).

This case-series describes the natural history of mycobacterial IRDs in the HAART era. Our results were similar to existing data suggesting early onset of mycobacterial IRDs after HAART initiation. There was high proportion of MAC bacteremia and extra-pulmonary involvement. Of interest, IRDs are generally seen when the CD4-cell counts have not significantly risen from baseline. This suggests that functional recovery rather than quantitative increase of CD4+ T cells plays a significant part in IRD pathogenesis.

P58
THE EFFECT OF ENFUVIRTIDE RESISTANCE MUTATIONS ON VIRAL FITNESS IN PATIENTS RECEIVING LONG-TERM THERAPY

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Enfuvirtide (ENF, Fuzeon) is the first clinically available antiretroviral drug targeting the HIV fusion process. It became available in Australia in 2000 and since then more than 300 patients have been treated as part of therapy.

ENF is a 36 amino-acid biomimetic peptide, analogous to the C-terminal heptad repeat element (HR2) within gp41. The drug acts as a competitive inhibitor of fusion by competing with HR2 for binding to the HR1 domain of the viral gp41 protein, thereby blocking the entrance of HIV into the target cell. Decreased susceptibility to ENF has been associated with mutations in the HR1 region of gp41 involving amino acids 36-45. Mutations in HR2 have also been proposed to be involved in resistance.

We followed 8 patients treated with ENF to document the temporal generation of resistance mutations in HR1 and HR2. Sequence data (genotype) was generated on HIV strains present in all patients. Drug resistance phenotyping and virological fitness assays were also performed on representative strains from 4 patients. These results were correlated to the viral load, CD4+ cell count and clinical history.

All 8 patients developed mutations in the HR1 region associated with ENF resistance. These mutations developed as early as 4 weeks post initiation of therapy and persisted after therapy ceased. Phenotyping results correlated with development of resistance mutations. Despite high-level phenotypic resistance in these viruses, there was no apparent effect on virological fitness. In one patient a V38M mutation was present 18 months after cessation of T20. No notable mutations were identified in the HR2 contributing to resistance. In some patients with virological failure and ENF resistance, there was some evidence of stabilisation of CD4 counts and percentages.

P59
ESCALATING HYPERLIPIDAEMIA IN A PATIENT WITH HIV INFECTION – UNEXPECTED CAUSE IDENTIFIED

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A 50 year old male patient with HIV infection was referred to our hospital outpatient clinic by his General Practitioner (GP) due to alarmingly elevated lipid levels. The patient's most recent results consisted of a Cholesterol of 21.5 mmol/L (Reference Range: 3.6 – 6.9 mmol/L) and Triglycerides of 66.0 mmol/L (Reference Range: 0.3 – 2.2 mmol/L).

The patient had been on stable antiretroviral therapy, comprising Combivir and Nevirapine, for three years. The patient's most recent CD4 cell count was 800 x 10^6/L and HIV viral load < 50 copies/mL. The patient had a history of hypertriglyceridaemia and Type II Diabetes mellitus.

The GP had ceased the patient's antiretrovirals pending review at the hospital clinic. The patient had a strong family history of Ischaemic Heart Disease, and he had recently been commenced on Aspirin 100mg daily. The patient's lipid results had been continuing to escalate despite treatment with Fenofibrate and Fish Oil Capsules by his Endocrinologist.

Fasting lipids performed by a different laboratory at this visit found the patient's Cholesterol to be 25.1 mmol/L (Reference Range: <5.5 mmol/L) and Triglycerides 86.9 mmol/L (Reference Range: <2.0 mmol/L).

A possible contributory factor to the patient's escalating hyperlipidaemia was identified – his antidepressant Mirtazapine. Since, Mirtazapine has been associated with rare cases of hypercholesterolaemia and hypertriglyceridaemia. As a result of this finding, Mirtazapine was ceased and an alternative antidepressant prescribed.

One month after ceasing Mirtazapine, with no other changes being made to the patient's therapy, the patient had a fasting Cholesterol of 3.3 mmol/L (Reference Range: <5.5 mmol/L), Triglycerides of 5.7 mmol/L (Reference Range: <2.0 mmol/L) and an HDL Cholesterol of 0.8 mmol/L (Reference Range: 0.9 – 1.6 mmol/L). These results confirmed that Mirtazapine had indeed been contributing to the patient's hyperlipidaemia.

This case highlights the importance of considering concomitant medications as possible causes of adverse drug reactions, including hyperlipidaemia, in HIV positive patients.

P60
HIV DRUG RESISTANCE PREVENTION PROGRAM IN INDONESIA

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In 2004 Indonesian government provides free ARV service to Indonesian people in line with WHO 3by5 program. Actually since 1999, working group on AIDS Medical School University of Indonesia already provides ARV service but the PLWA should pay from their own pocket. When the government program started there were already around 300 people on ARV. Since national access for all program launched there is rapid scaling up of ARV use. Until May 2006 there are around 6000 ARV users in Indonesia.

Early warning indicators such as adherence rate, loss of follow in ARV service indicate that problem of HIV drug resistance will arise in Indonesia.

To prevent HIV Drug resistance in Indonesia a working group was established by Department of Health in August 2005. This working group consists of epidemiologists, clinicians, laboratory experts and administrators. This working group is a part of surveillance systems conducted by Indonesian CDC.

The main task of this working group is to maintain good ARV service, recorded early warning indicators and conduct HIV Drug Resistance Threshold survey and HIV Drug Resistance monitoring. HIV Drug Resistance Threshold survey is conducted in Jakarta in 2006 using 5 VCT Centers. Ninety new infected people will be examined for genotypic resistance test. The result of this survey will be distributed to all stakeholders to inform the situation of HIV Drug resistance in Jakarta. In HIV Drug monitoring program 100 people will be examined for genotypic resistance test before and after one year ARV use both of these surveys are supported by WHO.

Keywords: HIV drug resistance, ARV, early warning indicators

P61
THE OUTCOME OF HIV INFECTED PATIENTS AFTER INTENSIVE CARE ADMISSION

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The long-term prognosis and life expectancy of HIV-infected patients has continued to improve over the last decade with advances in antiretroviral therapy. Various studies have looked at HIV-infected patients who have been admitted to the intensive care unit (ICU). Whilst prognostic factors and short-term outcomes have been studied at length, long-term outcomes, particularly in the highly active antiretroviral therapy (HAART) era, have not been well described. We performed a retrospective study of the outcome of HIV-infected patients admitted to the Prince of Wales Hospital (POWH) ICU over a 6year period in the HAART era

A retrospective medical record review of all HIV-infected patients admitted to the POWH ICU between 1999 and 2005 was performed and clinical, epidemiological and laboratory data collated. We reviewed mortality in the ICU, in hospital, and in the long term.

Twenty-four HIV-infected patients underwent 26 separate admissions to ICU. All subjects were male, with a median age of 48.5 years (range 32 to 65). Twenty (83%) patients had a preadmission diagnosis of HIV. Thirteen (59%) patients were markedly immunodeficient, 6 of whom were receiving HAART. HIV-related conditions accounted for 42% of reasons for ICU admission. The median Acute Physiology and Chronic Health Evaluation (APACHE) II score was 18.5 (range 3 to 39), with inotropic and ventilatory requirements in 11 (46%) and 21 (87.5%) patients respectively, and a median ICU stay of 5.5days (range 1 to 74). ICU and in-hospital mortality was 33% and 46% respectively, with 7 of the 11 deaths being AIDS-related. Median follow-up was 38months (range 5months to 5years). Of the 13 subjects (54%) who survived hospital admission, there was 1 loss to follow-up and 2 subsequent deaths, both of which were unrelated to HIV. Nine subjects were functionally independent and 1 subject was in rehabilitative care for a condition unrelated to original reason for ICU admission.

HIV-infected patients who survive their ICU admission at POWH have good long-term outcomes in the HAART era.

P62
CAN A SCREENING TOOL DETECT MINOR COGNITIVE CHANGES OVER TIME?

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Neuropsychological testing is frequently employed to assess cognitive functioning in patients with suspected AIDS dementia complex (ADC). It is often time consuming and expensive. Due to the changing nature of HIV disease and ADC, it is important to develop a validated and sensitive screening tool that can be employed to measure changes in cognitive functioning over time. The HIV Dementia Scale (HDS) was developed in the pre-HAART era and was designed to be used as a predictive index in clinical practice, in order to help identify patients requiring more in-depth testing. The aim of the current study was to investigate whether a neurocognitive screening tool (HDS) can detect changes in cognitive performance over a two year follow-up period. It was predicted that changes in HDS scores could detect changes in a neuropsychological test battery at follow-up.

HIV seropositive participants (n = 80) were recruited as part of a larger study and completed neuropsychological tests including the HDS at baseline and two-year follow-up. Performance on the HDS was compared against a neuropsychological test battery, including the Cambridge Neuropsychological Test Automated Battery (CANTAB) and the Grooved Pegboard (GPB).

Results: Z-scores were calculated for participant performance on the CANTAB measures and Grooved Pegboard, based on test supplied normative data. All CANTAB measures at baseline and follow-up, apart from Stocking of Cambridge (SOC) which measures spatial planning and problem solving, were significantly below zero. Pearson's correlation scores revealed that HDS total change scores did not significantly correlate with change in CANTAB scores or change in GPB scores ($p>0.05$).

Participants displayed minor cognitive impairment on a neuropsychological test battery at baseline and follow-up. Additional analysis will indicate the screening tool's ability to detect minor cognitive changes over time.

P63
AN UNUSUAL CASE OF LATE MOTHER-TO-CHILD HIV-1 TRANSMISSION

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The case is that of a male baby born in 1995 who seroconverted to HIV at the age of 16 months. The baby was given zidovudine at at birth and for 6 weeks and the anti-HIV+, HBsAg+ and anti-HCV+ mother had received IV zidovudine during the latter half of pregnancy and during labour. The baby had not been breast fed at any stage and apart from receiving IM injections of hepatitis B vaccine and Konakion at birth had no additional contributing risk factors. At age of 3 months he developed a generalised rash (face spreading to body); HIV was not isolated and HIV RT-PCR was negative. At age 1 y repeat HIV RNA again was not detected. His CD4 was 1440/uL. Surpisingly, at age 16 months HIV RNA was detected at 1100 copies/mL. There was a total absence of clinical signs: no lymphadenopathy, etc. Anti-HBc negative; anti-HBs positive; CD4=1820/uL. He was commenced on ART at the age of 3 years after his HIV load was reported as 19,600 copies/mL. He has remained on ART and apart from an ear abscess and an episode of segmental pneumococcal pneumonia from which he recovered rapidly, he has done extremely well… apart from noticeable lipoatrophy of his face. The late development of HIV seroconversion and HIV PCR positivity remains unexplained. No seroconverting illness was evident. Leroy *et al. Lancet* 1998; **352**:597-600 showed no late transmission in non-breast-fed children. The parents of this case remain adamant he was not breast-fed at anytime. Do extremes of incubation periods exist for HIV infection? Could the virus exist in a privileged site isolated from detection and the immune system for a period of time?

P64
FOLLOW UP OF PATIENTS WHO WERE TREATED AT PRIMARY HIV INFECTION (PHI), ACHIEVED VIROLOGICAL SUPPRESSION, AND THEN FOLLOWED A STRUCTURED UNTERRUPTION STRATEGY (STI)

Proportion who restarted their therapy, has there been any progression?

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Strategies to limit time on therapy have been examined. One of those strategies was the use of STI to stimulate virological control. This approach has been controversial especially since the results of the Smart study. We have done a follow-up of the Pulse study to ascertain longer term effects of STI in a different group of patients. Pulse patients were treated at seroconversion, as opposed to the Smart cohort who enrolled chronically HIV infected patients.

To determine whether STIs would be beneficial, the Pulse study enrolled a group of patients identified at PHI and commenced on a potent antiretroviral regimen (ARV). They were randomized 1:1 to hydroxyurea 500mg bd or not. ARVs were administered for 24 to 52 weeks followed by up to 3 STI. Therapy was reinitiated during STI if viral load reached >5000copies/mL.

68 male patients median age 35.5 commenced protocol treatment during acute or early PHI. 43% acute and 57% early. These patients had a baseline median of 4 Western Blot bands and 5 PHI symptoms. Baseline median viral load and CD4 were 605,200 copies/mL and 513 cells/µl respectively. Patients were followed for a median of 215 weeks, and treated on protocol ARVs for a median of 48 weeks. 25 had one interruption, 6 had 2 and 37 patients had 3. Hydroyurea in a previous analysis was found not to influence virological control. 33 patients (after a median of 98 weeks from baseline) commenced long term treatment (LTX). They had a median of 75 weeks from last protocol TX to LTX. Last median viral load and CD4 before instigation of LTX was 20,300 copies/mL and 475 cells/ul. Over the median f/u time of 215 weeks since baseline patients spent a median of 121 weeks off ARV's.

By a median of four years almost half of the patients initiated LTX after a STI strategy. Median time to commencement of this therapy for these patients from stopping protocol ARV was one and a half years. Unlike Smart there have been no Aids defining illnesses recorded. Follow –up needs to continue to ascertain whether this was a safer method of STI.

P65
SEVERITY AND TYPES OF CLINICAL EVENTS BY PROXIMAL CD4 CELL COUNTS IN THE SMART STUDY

Hoy J on behalf of the SMART Study Group

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The SMART study demonstrated an increased risk of opportunistic diseases or death (OD/death) in patients on CD4-guided antiretroviral therapy (ART) (drug conservation, DC; stop ART CD4>350, (re)start ART CD4<250) compared to those on continuous ART (viral suppression, VS). Clinical events (OD and death) are described by severity and type, and by proximal CD4 cell counts.

OD were classified as serious (SOD) and non-serious (NSOD). SOD were those associated with higher risk of mortality: DMAC, CMV, toxoplasmosis, cryptococcosis, PML, AIDS dementia, wasting, lymphoma, and visceral KS. NSOD were all other HIV-related OD. Rates are per 100PY time in CD4 cell strata <350 or ≥350.

Of 5,472 patients (mean follow-up 16 months; 3700 PY in each arm), 164 patients had an OD/death: 118 in DC (rate=3.3) and 46 in VS (rate=1.3) [HR=2.63, P<0.0001]. For proximal CD4 cell counts ≥350, the rates of OD/death, SOD, NSOD, and death for DC arm were 2.3, 0.2, 1.1 and 1.2, and for the VS arm were 0.9, 0.1, 0.3, and 0.6.. For proximal CD4 <350, the respective rates in DC were 5.4, 0.7, 3.1 and 2.1 and for VS were 5.3, 0, 2.6, and 3.3.

Lymphoma (n=5) and wasting syndrome (n=4) were the most common SOD.
Of the 15 SOD, 5 of 13 (38%) in DC, and 2 (100%) in VS occurred at CD4 ≥350, (e.g. DMAC (VS=1, 646); wasting (DC=3, 359-826); lymphoma (DC=1, 362, VS=1, 644) and dementia (DC=1, 1091). Of the 78 NSOD, 26 of 61 (43%) in DC, and 10 of 17 (59%) in VS occurred at CD4 ≥350. (e.g. PCP (DC=1, 404), oesophageal candidiasis (DC=12, 350-1050, VS=4, 426-1223). NSOD comprised oesophageal candidiasis (n=31), PCP (10), recurrent bacterial pneumonia (9), chronic HSV (8), KS (7) Herpes Zoster (6), tuberculosis (5) and pulmonary candidiasis (2) and occurred at all CD4 cell levels. Seven of 85 deaths were AIDS-related. At the time of an OD/death, 67 patients (57%) in DC group and 18 (39%) in VS Group, were off ART.

The rates of OD/death, NSOD, and death for the CD4 ≥350 strata were significantly greater in the DC than VS group. 54% (7 events) of SOD and 46% (36 events) of NSOD occurred at higher CD4 cell counts than expected in clinical practice.

P66
PREDICTORS FOR THE INITIAL CD4 DECLINE AFTER ANTIRETROVIRAL TREATMENT INTERRUPTION IN THE SMART STUDY

Hoy JF on behalf of the SMART Study Group

The SMART study is an international, randomised trial comparing a CD4-guided antiretroviral treatment (ART) interruption strategy (drug conservation or DC arm) with continuous ART in 5,472 patients with CD4 > 350 cells/mm^3 at study entry. We describe the CD4 cell count decline after stopping ART.

In the DC arm, patients were to discontinue ART at baseline, and re-initiate at CD4 < 250 cells/mm^3. CD4 was collected at baseline, months 1, 2, 4, 6, 8, 10, 12, and every four months thereafter. This analysis is restricted to DC patients who were on ART and discontinued ART at baseline; we describe changes in CD4 through the first 12 months off ART, censored at ART re-initiation. Predictors for CD4 decline were determined by multivariate regression.

1,938 patients were included in the analyses; mean age 47 years, 24% women, 28% Black, 26% had prior AIDS, median baseline CD4 (IQR) was 636 (489 – 833) cells/mm^3, nadir CD4 234 (133 – 344) cells/mm^3, 82% had baseline HIV RNA $\leq$ 400 copies/ml. Of patients included in this analysis, 578 stayed off ART for $\geq$ 12 months. During the first month, CD4 declined by a median of 127 (13 – 247) cells/mm^3, during the first 2 months by 188 (80 – 317) cells/mm^3, and by 12 (2 – 22) cells/month from month 2 to 12. Steeper CD4 decline during the first month was associated with: high CD4 at study entry (-19 cells/mm^3 per 100 cells higher count at baseline), low CD4 nadir (-21 cells/mm^3 per 100 cells lower nadir count), baseline HIV RNA $\leq$ 400 copies/ml (-31 cells/mm^3), and prior AIDS (-28 cells/mm^3), p-values all $\leq$ 0.01. Age, sex, race, highest prior HIV RNA, and duration of ART use were not significant.

The CD4 decline was steepest during the first 2 months. High CD4 at discontinuation, low CD4 nadir, HIV RNA $\leq$ 400, and prior AIDS were independently associated with steeper initial CD4 decline.

P67
STILL'S DISEASE IN A PATIENT WITH HIV

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A 42-year-old man with HIV infection for 18 years presented with a 10 day history of fevers and rigors; associated severe, progressive, asymmetric, large joint polyarthropathy; and a transient rash. He was antiretroviral naïve (nadir CD4+ count 420 cells/μL) with an HIV viral load at presentation of 400 copies/mL.

His admission was complicated by worsening of symptoms, particularly temperatures over 40°C. Microbiological cultures of blood, urine and synovial fluid were negative and a chest radiograph was unremarkable. Serum ferritin was markedly elevated at 25 000 μmol/L. The patient fulfilled the diagnostic criteria for probable Still's disease.

Treatment with high dose oral prednisolone (1mg/kg/day), and early introduction of methotrexate as a steroid sparing agent, resulted in some initial improvement. His CD4+ count declined (180 cells/μL) prompting initiation of antiretroviral therapy with tenofivir, emtricitabine and efavirenz. Ongoing severe generalised arthralgia necessitated high-dose opiates. Following six weeks of high dose prednisolone therapy several complications manifested: a Cushingoid appearance, central serous retinopathy with scotoma and osteopenia. He was now severely incapacitated by pain and housebound.

Subsequently, anakinra, a novel interleukin-1 receptor antagonist, was obtained on compassionate grounds. A dramatic and sustained clinical response ensued, facilitating steroid cessation and amelioration of pain. Currently, the patient is highly functional, working full-time, with excellent virological and immunological control (CD4+ count >800 cells/μL, HIV viral load <50 copies/mL).

This case illustrates a rare clinical entity co-existing with HIV. To our knowledge there is only one published description of HIV and Still's disease and this is the first case where anakinra has been used successfully. Immunosuppressive agents in patients with HIV infection and the link between autoimmune disorders and HIV infection via immunomodulation will be considered in the discussion.

P68
STUDY OF LIPODYSTROPHY IN TREATED HIV PATIENTS AND EVALUATION OF THEIR PSYCHOLOGICAL PROBLEMS

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Highly active antiretroviral therapy (HAART) has dramatically reduced the morbidity and mortality of HIV-infected patients. However, several metabolic side effects have been described to be associated with longterm HAART. These include hypertriglyceridaemia, hypercholesterinaemia, insulin resistance, impaired glucose tolerance and lactic acidaemia. Lipodystrophy (LD) may produce psychological problems. This report aims to study the prevalence of LD and psychological effects in treated HIV patients.
Currently, 151 HIV-infected patients (91 male and 60 female, age 27–63), admitted in HIV centre for medical treatment for their disease. A cohort of patients treated with different regimens of HAART for periods from 1–4 years was assessed for clinical LD. Blood analysis included plasma viral load, fasting glucose, cholesterol and triglicerydes. LD is characterized by a redistribution of fat tissue, consisting of peripheral fat loss (particularly in the face and extremities) and central fat storage (particularly intra-abdominal). In addition, in these patients, a questionnaire was specifically designed to measure anxiety, depressive symptoms, social distress and anxiety, social support, quality of life and body image alteration.
The results show there is a high correlation between patient and physician quantification of LD or fat accumulation (r=0.52–0.8, P<0.001). LD syndrome was observed in 43 patients . Central obesity was noted in 23 patients. High total cholesterol level was observed in 21 patients, high TG level in 33 and high glucose levels in five of them. Overall, there was a close correlation among the severity of LD, social distress and depression (r=0.6, P<0.001).
LD is a major health problem in HIV-infected patients who are treated with highly active antiretroviral therapy (HAART). LD is often accompanied by cardiovascular risk factors like insulin resistance, diabetes mellitus, hyperlipidaemia and a disturbed endothelial function. Severe LD causes depressive symptoms and anxiety.

P69
PARASITE IN CHRONIC DIARRHEA AMONG PEOPLE LIVING WITH AIDS IN CIPTOMANGUNKUSUMO JAKARTA

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Until April 2006 Working Group on AIDS School of Medicine University Indonesia already treated 1400 PLWA. Most of them with low CD4 and already accompanied with Opportunistic Infections. One of frequent opportunistic infection is chronic diarrhea beside tuberculosis and toxoplasmosis. Chronic diarrhea is also one reason for hospital admission. In tropical countries causes of chronic diarrhea in Indonesia are various e.g. bacterial, fungal and parasites

To find out causes of chronic diarrhea among PLWA in Ciptomangunkusumo hospital

Stool from chronic diarrhea patients are examined for parasites. Specimens were examined directly (or after formaldehyde ether concentration on stool specimen) by microscope using 2% Lugol/Eosin to find any parasites

There were 155 stool specimens, age range 21-30 year (73%), 92,4% male and 7.6% female, mean CD4 is 87.5, risk factor for HIV are IDU 65%, sex 17%, other 18%. The incidence of parasite are B. Hominis 69%, Cyclospora 6%, Cryptosporodium 5%, giardiosis 3%, and multiple infection 14%.

B. hominis is the most frequent parasite found in chronic diarrhea among PLWA in Ciptomangunkusumo

P70
HEPATITIS B ADJUVANT STUDY

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The current recombinant hepatitis B vaccine typically contains aluminium hydroxide as an adjuvant. The aim of this study is to determine whether replacement of aluminium hydroxide with inulin microparticles improves the safety and immunogenicity of existing HBsAg vaccines. Inulin is a natural storage polysaccharide derived from Compositae plants such as dahlias and chicory. Certain unique isoforms of inulin have been found which form micro-particles in water suspension and are potent stimulants of both humoral and cellular immunity.

In this single centre, phase 1/2 study 24 healthy adults aged between 18-40 years, with no history or evidence of hepatitis B infection or vaccination, will be randomised to receive 3 intramuscular injections of HBsAg alone (control group) or HBsAg plus either 5 or 10 micro grams of inulin adjuvant.

The primary endpoints include the incidence of moderate and severe adverse events compared to HBsAg alone, proportion of individuals developing protective levels of HBsAg antibody (>10mIU/ml) compared to HBsAg alone and the geometric mean anti-HBsAg levels compared to HBsAg alone. The secondary endpoints include kinetics of immunological responses to HBsAg-antibody isotypes, T-cell proliferation, T-cell cytokine production and cytotoxic assays.

Currently two-thirds of the subjects have been enrolled. No adverse events related to inulin administration were observed.

If inulin proves to be a more potent adjuvant this could enhance the effectiveness of hepatitis B vaccination in the groups that respond poorly to the current vaccine such as the immunosuppressed, renally impaired and elderly subjects.

P71
PREVALENCE OF CUTANEOUS REACTION WITH NEVIRAPINE BASED ART IN INDONESIAN PATIENTS

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Cutaneous reaction to nevirapine based antiretroviral therapy (ART) had been reported in 6 to 10% of patients. Those with higher CD4 counts at ART commencement seem to have an increased risk of rash. Anecdotal evidence suggests a higher incidence in Indonesian patients commencing ART with low CD4 count. To determine if this concern was valid we undertook a case review study.

Data from all patients at RSPI commenced on ART from August 2004 up to April 2006 were reviewed. Data on ART commencement and any ART toxicities were collected on a standardized form at 6 monthly intervals.

Two hundred and twenty patients were commenced with ART. Two hundred and fourteen patients were with a nevirapine based regimen and 6 with a non-nevirapine based regimen. The average (mean) CD4 count at commencement of ART was 32 (range from 0 to 269). Fourty-five percent of patients had TB co-infection. The incidence of skin rashs were 26.2% in patients on nevirapine based treatment compared with 16.7% on non nevirapine ART. In patients with TB co-infection these rates were 29.3% on nevirapine based treatment and 1% on non-nevirapine treatment respectively.

Cutaneous reactions with nevirapine are more common in Indonesian patients despite patients with low CD4 counts. Genetic factors may be influencing this reaction.

Keywords: ART, CD4, cutaneous, HIV, nevirapine

P72
INFERIOR CLINICAL OUTCOMES WITH EPISODIC CD4-GUIDED ANTIRETROVIRAL THERAPY AIMED AT DRUG CONSERVATION (DC) IN SMART STUDY: CONSISTENCY OF FINDING IN ALL PATIENT SUBGROUPS

Read T on behalf of the SMART Study Group

Episodic CD4+-guided DC strategy in SMART study was found to be inferior to continuous ART (viral suppression, VS) in delaying progression of disease (POD), including death. Consistency of this finding was assessed in subgroups of patients defined by baseline characteristics.

Patients with CD4>350 cells/mm^3 at entry were randomised to DC group (start ART at CD4+ <250 and stop at CD4+>350 cells/mm^3) or VS group. Expanded Cox models with an interaction term between treatment and the subgrouping factor used to assess hazard ratio (HR) consistency across subgroups.

A total of 5.472 patients were enrolled: 95% of patients ART experienced; mean age 46; 27% women; 30% Black; median CD4+ 598 cells/mm3; median CD4 percentage 30%, median nadir CD4+ 251 cells/mm^3; 71% HIV RNA < 400 copies/ml, 24% AIDS, 2.3% hepatitis B & 15.1% hepatitis C co-infection. Overall, HR (DC/VS) was 2.5 (P<0.0001) for POD. This finding was consistent (P value for interaction > 0.05) for subgroups defined by: age, sex, HIV risk, prior AIDS, nadir CD4+ count, prior CD4+ trajectory, baseline CD4+ count, CD4 percentage, ART naïve/experienced, on/off ART, years on ART, ART class exposure, HIV mutations and hepatitis B/C. However, HR varied by race (3.6 Blacks vs 2.0 others, P=0.02) and by HIV RNA level in patients on ART at entry (3.8 HIV RNA < 400 vs 1.1 > 400 copies/mL, P<0.0001).

HR for DC/VS groups for POD was consistent in a number of subgroups with no patient subgroup having lower POD rate in DC arm. Patients with HIV RNA < 400 copies/ml (on ART at Entry) had significantly higher HR estimates (DC/VS), as this subgroup of patients had low POD rates in VS arm. Episodic ART as per SMART design is inferior to VS across a number of a priori defined subgroups

P73
THE PHARMACOKINETIC PROFILE AND SAFETY OF SAQUINAVIR-RITONAVIR ADMINISTERED ONCE DAILY WITH ATAZANAVIR OR TWICE DAILY WITH A NUCLEOSIDE BACKBONE USING THE SAQUINAVIR-500 MG FORMULATION IN HIV-1 INFECTED SUBJECTS

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Once-daily protease inhibitor (PI) regimens may provide sustainable treatment options in previously treated patients. As part of a 48 week study examining the safety and efficacy of saquinavir (SQV), ritonavir (RTV) and atazanavir (ATV) once daily without nucleoside-reverse-transcriptase-inhibitors (NRTIs) we performed a planned week 4 interim analysis to describe the safety and pharmacokinetic (PK) profile of a SQV formulation change (FC) from the 200 to 500mg formulation in two regimens: SQV/RTV bid with NRTIs and SQV/RTV/ATV qd without NRTIs.

HIV-1 infected subjects (HIV RNA<400 copies/mL) were allocated to two groups; Arm1, patients on NRTIs with SQV/RTV 1000/100mg bid (n=11) and Arm2, patients on NRTIs with another PI (n=13). Arm1 underwent SQV FC from 200 to 500 mg. Arm2 commenced SQV/RTV/ATV once daily without NRTIs and underwent SQV FC with random allocation to both formulations (SQV dosed at 1600 or 1500 mg daily depending on formulation). 7 days after any changes to therapy, serial plasma samples for PI pharmacokinetic (PK) profiles were collected over 12 or 24 hour periods based on current dosing schedules. On completion of this phase, all patients were assigned SQV/RTV/ATV 1500/100/300mg qd using the SQV-500mg formulation without NRTIs. Safety analyses were performed on PK days and at week 4. Geometric mean (GM) area under the time curve (AUC), 95% confidence intervals (CI), GM ratios (GMR) and coefficient of variation (CV) for PK parameters were calculated.

No significant changes were observed in RTV or ATV pharmacokinetics between SQV formulations. SQV AUC parameters were not significantly altered for the two SQV formulations (23.32 versus 18.76, GMR 0.80 (95% CI 0.47-1.36) and 50.31 versus 44.79, GMR 0.88 (95% CI 0.68-1.14) g.h/mL for the 200 versus 500mg formulations in Arms1 and 2 respectively). SQV CV was lower with the 500 formulation in Arm1 (61 versus 82%). Scleral icterus was the commonest adverse event (n=4, 16%).

In HIV-1 infected patients, the PK profiles of SQV/RTV/ATV and SQV/RTV plus NRTIs are not significantly altered by the use of the SQV-500mg compared to the -200mg formulation. Inter-patient variability in SQV plasma exposure in an NRTI-containing regimen was reduced.

P74
CD4-GUIDED SCHEDULED TREATMENTS INTERRUPTIONS (STIS) COMPARED TO CONTINUOUS THERAPY (CT): RESULTS OF THE STACCATO TRIAL

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Stopping HIV therapy may reduce costs and side effects, but carries the risk of increased immune suppression and of emergence of resistance.
430 patients with CD4 counts > 350 cells/mm^3, and VL < 50 copies/mL were randomised 1:2 to CT (N=146), or STI (N=284), with treatment stops while CD4$^+$ exceeded 350 cells/mm^3. Median time on randomised treatment was 21.9 months. After 24 months, both groups were treated continuously for 12 to 24 weeks. 352 patients in Thailand received 1600 mg of SQV with 100 mg of RTV once daily with 2 NRTIs: ddI/d4T from 2002 until 3/2003, and TDF/3TC after that. In Swiss and Australian patients, HAART regimen used was defined by the treating physician.
The probability of restarting treatment in STI was 53% at 6 months, 64% at 12 months, and 74% at 24 months. In an ITT analysis, the percentage with VL < 50 copies/mL was 91.8 % in CT, compared to 90.3% in STI after re-treatment at the end of the trial.
At the end of randomised treatment, median CD4 counts were 374 cells/mm^3 in STI (60.5% > 350), and 601 cells/mm^3 in CT (96.2% > 350, p < 0.002). After re-treatment, median CD4 counts rose in STI from 374 to 459 after 12 weeks, with 85.9% > 350, compared to 96.9% in CT (p < 0.01).
During STI, 17 pts (5.8%) had symptoms of acute retroviral syndrome and oral and vulvo-vaginal candidiasis (p=0.03) and thrombocytopenia (p=0.06) were more frequently reported. In the CT patients, diarrhoea (p=0.04) and neuropathy (p=0.03) were more frequent.
Sequencing was attempted in 125 patients where resistance was most likely because of numerous stop-start cycles, problems with compliance, and/or viral breakthrough. Resistance mutations were seen in the RT gene (N=7) and in the protease gene (N=3).
During 484 patient-years of STIs, little evidence of treatment resistance emerged. Treatment-related adverse effects were more frequent in CT, but minor manifestations of HIV infection were more frequent in STI.

P75
2006 HIV NEUROPATHY SCREENING PROGRAM

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Sensory neuropathy (SN) is the commonest neurological complication of HIV infection, and can have a profound negative impact on quality of life. Both distal sensory polyneuropathy, due to HIV itself, as well as antiretroviral toxic neuropathy (ATN) due to d4T, ddC or ddI (d-NRTIs) exposure have been described. ATN has been attributed to the mitochondrial toxicity of d-NRTIs. In 2001 we documented that SN affected 44% of out patients attending the Alfred Hospital. ATN predominated, with a history of exposure to d-NRTIs being the main independent SN risk. Since 2001, concern about mitochondrial toxicity has resulted in lower rates of NRTI use in our clinic. Rates of SN, and in particular, the contribution of ATN, require definition in the face of changing antiretroviral prescription patterns. We will therefore undertake a clinical screening program of HIV+ outpatients (estimated n>200) attending the Alfred Hospital to define the prevalence and risk factors for SN in 2006. The ACTG Brief Peripheral Neuropathy Screen will be used to demonstrate the presence of clinical SN. Demographic and treatment details will be examined as possible risk factors for SN. We will compare this data with the results of a screening program undertaken using the same methods in the same clinic in 2001, when antiretroviral prescribing patterns were different in order to establish whether the prevalence and/or risk factors for SN in the context of HIV have changed with alterations in HIV management strategies.

We hypothesize that SN remains a high prevalence problem among patients with HIV in Australia, despite a reduction in d-NRTI use in this country. However, rates of SN may be lower among individuals diagnosed with HIV in the last 5 years, in association with a reduced likelihood of having been exposed to d-NRTIs.

P76
PARAMETRIC MODELS OF IMMUNOLOGICAL FAILURE IN HIV-INFECTED THAIS RECEIVING ANTIRETROVIRALS AT HIV-NAT AND VALIDATION USING THE TAHOD

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There is a need for simplified CD4 monitoring, particularly in developing countries. We developed parametric models to predict immunological failure using data from Thai HIV-infected patients receiving antiretroviral treatment (ART) in prospective clinical trials at HIV-NAT. Models were validated using data from the TREAT Asia HIV Observational database (TAHOD).

Two models were fitted to predict CD4 count return to baseline. Variables in two models were baseline CD4 for model 1 and baseline CD4 and CD4 as a time dependant variable for model 2. In order to assess the goodness of fit of the models, patients were divided into low, medium and high risk groups based on the predicted probabilities of failure, and the number of observed and predicted failures were compared. Predicted failures were the summation of the probability of failure in each patient calculated from the parametric models.

In the HIV-NAT database for model 1, we found 129 observed failures (OF) vs 125 predicted failures (PF), 125 OF vs 119 PF and 129 OF vs 138 PF ($p = 0.567$), in the low, medium and high risk groups respectively. For model 2 we found 51 OF vs 46 PF, 53 OF vs 57 PF and 51 OF vs 51 PF ($p = 0.686$) respectively. Applying the models to the TAHOD database we found 91 OF for model 1 vs 89 PF, 97 OF vs 74 PF and 74 OF vs 42 PF ($p < 0.001$) and 53 OF for model 2, 53 OF vs 57 PF, 40 OF vs 35 PF and 33 OF vs 27 PF ($p < 0.346$), in the low, medium and high risk groups respectively

Models developed from HIV-NAT data did not predict observed outcomes as accurately when applied to the TAHOD. This might be because the TAHOD is an observational database which does not have systematic follow-up results available as at HIV-NAT. However, the models did reasonably discriminate low to high risk patient groups in TAHOD. These results will inform further research to determine the potential for implementation of simplified monitoring strategies which will help reduce costs in developing countries.

P77
EVALUATION OF THE EFFICACY OF MONITORING HIV POPULATIONS USING DRIED BLOOD SPOT COLLECTION METHOD IN CONJUNCTION WITH A LOW-COST HIV-RT ASSAY

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In order to address the issue of HIV patient management in developing countries, practical, field-friendly and inexpensive methods of blood collection to be employed with low-cost HIV monitoring tests needs to be investigated.
Previous research has reported dried blood spot (DBS) technology as yielding accurate and reproducible results when quantifying HIV RNA using nucleic acid based techniques. In addition, adopting DBS as a blood collection tool will enable greater facilitation of international quality assurance programs. Batching of filter papers at regional clinical sites and mailing to central laboratories whereby low-cost HIV-RT assays are conducted are all a means of gearing to improve patient treatment suitable for resource-limited settings. This study will evaluate the potential of DBSs for use with an established commercial low-cost manual RT assay.

HIV seropositive subjects (n=90) will be recruited from the Alfred Hospital Infectious Diseases Outpatients clinic. Blood will be collected by venipuncture into EDTA blood collection tubes. Dried blood spots will be prepared in duplicate by applying 50 µl of the EDTA blood onto Whatman® No.903 Protein Saver Cards. Extraction of RNA will then be performed using a chaotrope, organic reagent and detergent solution.

Quantitation of HIV reverse transcriptase measured using the ExaVir™ Load assay version 2 Cavidi Tech AB (HIV-RT) will then be compared with those obtained from matched fresh-frozen plasma samples analysed by the HIV-RT assay and also with the ultra-sensitive preparation RT-PCR assay (Roche Amplicor HIV-1 Monitor). The HIV-RT assay has shown good sensitivity and specificity indicating excellent association (r=0.96) between HIV RNA copies/ml and HIV RT copies/ml equivalents.
Furthemore, we would like to examine optimal storage conditions (time, temperature) for DBSs that may affect compatibility with the HIV-RT.

We hypothesise that using dried whole blood stored on filter paper as a collection method and subsequently testing these specimens by a low-cost HIV-RT assay will ultimately increase access to HIV disease monitoring and drug therapy for individuals residing in economic-poor countries.

P78
INTEGRATED HEPATITIS C TREATMENT AT A DRUG TREATMENT CENTRE

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Successful treatment of hepatitis C and HIV in injecting drug-using populations is enhanced by concomitant treatment of substance use. Unfortunately there is little integration between blood borne virus treatment services and substance use treatment. Here we describe a 'one stop shop' model of on site substance use and hepatitis C treatment in Melbourne, Australia.

Turning Point Alcohol and Drug Centre is a specialist substance-use treatment centre providing methadone and buprenorphine maintenance pharmacotherapy for opiate dependence. Clinicians are also accredited hepatitis C antiviral prescribers. During treatment for opiate dependence, BBV screening identifies potential candidates for BBV treatment. Interested clients can then receive counseling, immunization, therapy or disease progression monitoring. BBV therapy is initiated on site after substance use stability is achieved, and although treatment is conducted within funding criteria, emphasis is made on managing co-morbidities effectively to facilitate therapy rather than excluding potential candidates. Hepatitis C therapy is directly observed at an onsite pharmacy. Ongoing management of HCV treatment occurs in consultation with specialist infectious disease clinicians and gastroenterologists from nearby hospitals.

VIVAIDS, the Victorian drug user representative group, provides peer counselling, education and referral onsite in the clinic and at the NSP.

At June 2006, 45 clients had been screened. Mean age 38, 29% female. Hepatitis serology of those tested was HAVAb 33%, HBsAg 5%, HBsAb 84%, HBcAb 44%, HCVAb 90%, HCVRNA 79%. HCV genotypes were 32% 1, 5% 2, 52% 3 and 5% 6 (not all individuals received every test). HCV antiviral therapy and a dispensing pharmacy to be popular among clients. The mainstay of treatment remains opiate pharmacotherapy. This model of care facilitates a coordinated management of IDU's treatment goals in a sympathetic environment.

COMMUNITY PROGRAM POSTER ABSTRACTS

P79
ASSISTING PEOPLE LIVING WITH HIV/AIDS (PLWHA) ACHIEVE WELLNESS THROUGH EFFECTIVE UTILISATION OF HEALTH PROMOTING PROGRAMS

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Increasingly apparent in the era of Highly Active Anti-Retroviral Therapy (HAART) is the need for programs that focus on symptom management and enhancement of quality of life. During 2005 and 2006 Positive Directions introduced a range of programs to address the physical and psychological health of PLWHA in Queensland. Four evidence based programs were selected: The Chronic Conditions Self Management Program (CCSM), The Life Enhancement Action Program (LEAP), Just Walk It, and the Cognitive Behavioural Therapy (CBT) Program for Mood Management.

The Stanford Model CCSM program is a 6 week community-based self-management course grounded in social learning and self-efficacy theory. The program offers a range of information and tips to assist participants to manage their health and enhance their quality of life.

LEAP is a structured group nutrition and exercise program conducted over 8 weeks. Exercise plans are individualised and supervised by a personal trainer and nutrition information sessions are delivered by a qualified dietitian.

Just Walk It is a Heart Foundation community based walking program which uses volunteer walk organisers to lead small walking groups in their local area. Just Walk It has been shown to improve quality of life and fitness in participants.

The CBT Program for Mood Management is an abbreviated version of the Centre for Clinical Interventions original 11 week program. The group program provides a structured evidence based application of psychological practice to affective and anxiety disorders.

Program implementation occurred throughout the state at selected locales. Recruitment to the programs was achieved through use of existing service provider networks, client contact, mail outs and promotional material. Participant selection criteria differed depending on the specific requirements of the program.

A range of valid and reliable pre-post test measures and program evaluations were completed by all participants. Overall results of the programs were encouraging and demonstrated the utility of selective, indicated and universal program implementation for this population.

This poster will illustrate the selection process and methodology behind implementing these programs, outcomes across the programs and future directions for program implementation in Queensland for PLWHA.

P80
THE HIV BALANCING ACT MANAGING THE NEEDS OF CHILDREN AND CAREGIVERS IN THE FAMILY

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More effective treatment of HIV means that families, where one or more member lives with HIV infection, can face longer-term challenges that threaten emotional and physical wellbeing. This session will present the unique and specific presentations of families affected HIV/AIDS to ACON's Family Support Project between 2004 and 2006. We will explore individual families, their journey to great acceptance and integration of HIV in their shared lives. We will pose questions and some solutions to the changing pattern of need in families affected HIV/AIDS. The session will focus on the ways that ACON assists meeting the developmental and care needs of children, the difficulties poses by HIV to the development challenges of children, ensuring child and adolescent safety and stimulation as well as their access to mainstream education and social opportunities beyond the home. The session will explore the needs of parents and other caregivers including the challenges posed by one or more parent living with HIV/AIDS, the problems and solutions to disclosing HIV to children and the ways in which family pressures can interfere with the need for rest, respite and support so necessary to the wellbeing of people with HIV/AIDS.

P81
GENESIS THE CHANGING NEEDS OF NEWLY DIAGNOSED GAY MEN

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2 People Living with HIV/AIDS NSW

Since the advent of highly active antiretroviral treatment (HAART) in 1996, there have been significant changes to health outcomes for people with HIV/AIDS. ACON and PLWH/A NSW recently commissioned a consultation in to the HIV Health Promotion needs of newly diagnosed and post-1996 gay men in Sydney (Authors: Spina, A; Fowler D)., The sample included 23 participants in four focus groups in Sydney. ACON and PLWHA also facilitated discussion groups with gay men beyond the investigation sample (n=25) to further undercover the current lived experience and views expressed by newly diagnosed gay men.

This presentation will investigate what people with HIV are thinking and feeling about HIV in their lives at this point in our history. The session will highlight what PLWH/A NSW and ACON have learned about services for health promotion and HIV treatment and what gay men with HIV themselves believe we should be doing with services and programs that we deliver to them now.

P82
AGEING DISGRACEFULLY TOWARD HEALTHY AGEING FOR PEOPLE WITH HIV/AIDS, GAY MEN, LESBIANS, BISEXUAL AND TRANSGENDER PEOPLE

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While Australian governments recognize the importance of responding to the diversity of the aged population in order to successfully implement healthy ageing policies, it is rare for government policy or strategy to acknowledge the existence of older gay, lesbian, bisexual or transgender (GLBT) people and even rarer that they consider the needs of people living with HIV or AIDS. This, in spite of key thinkers on the issue recommending that, as GLBT equality reorients mainstream culture, the aged care system must also respond in kind.

US studies on gay and lesbian population estimate that around 3%-8% of citizens in the developed world identify as gay men or lesbians. They observe a growing wave of people with AIDS and ageing GLBTs who need access to community care services, residential aged care services and to the organisations which advocate for the elderly. And the best thinking on HIV/AIDS suggests that ageing will be highly complicated health and welfare challenge for HIV positive people. Governments and aged care organisations need to respond to this growing constituency. Yet, aged care services are not yet ready for the growing number of ageing people with HIV/AIDS and GLBTs who are now, and will be in the future, come knocking at their doors. Governments are ignoring the issue altogether and GLBT communities themselves have not yet grappled with the issue of ageing GLBTs in their midst.

This paper will outline the central themes in ACON's Healthy GLBT Ageing Strategy 'Ageing Disgracefully'. It will highlight the social determinants that impede the healthy ageing of GLBT people, the specific issues for ageing people with HIV and AIDS and how to reorientation health services to prevent health problems and the health promotion activities that would promote healthy ageing for people with AIDS and GLBT people in to the future.

P83
FROZEN IN TIME CHANGES & CHALLENGES IN THE LIVES OF PEOPLE WITH HIV/AIDS

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More effective treatment of HIV means that more people with HIV/AIDS are living longer with chronic emotional and physical health problems. This session will present the leading presentations of people with HIV/AIDS to ACON's Brief Counselling Project between 2001 and 2006. The session will explore the changes in presentations related to mental illness, drug and alcohol, HIV and sexual health and the emerging psychosocial challenges of living longer term with a life threatening illness. We will explore individuals and their journey to great acceptance and integration of the changes in their lives. The session will focus, in particular, on delays and resistances in individual change processes and the ways in which individuals have overcome those obstacles. We will pose questions and some solutions to the changing pattern of need in people with HIV/AIDS.

P84
INCREASING HIV CARE COMPETENCY IN THE DISTRICT HEALTH SYSTEM

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An estimated 62,000 adults and children are living with HIV and AIDS in Nepal. However the actual reported cases of HIV infection are only. This huge gap in the estimated and actual numbers calls for an in-depth analysis of the shortcomings in mitigating the epidemic.

As per our field experiences, Stigma and discrimination are the greatest barriers to preventing further infections as well as providing adequate care, support and treatment. It not only undermines prevention efforts but also contains the care and treatment responses by limiting peoples' access to health services, as they may fear a lack of confidentiality or experience discriminatory behaviors from health care providers (HCPs). These situations are precipitated to a great extent by the isolation; exclusion and silence of health care providers thus as a result limit our ability to provide the extent of care and support needed by people living with HIV and AIDS.

The number of trained health workers available including health administrators and training staff is critical to country capacity to deliver services. However, since health care issues related to people living with HIV and AIDS in the context of Nepali Health System is a new dimension in itself, health workers in this area are not prepared. Often health personnel have received no in service training or even basic information about HIV/AIDS.

The best ways to bridge the gap is to actively train and involve health service providers in better responding to HIV/AIDS. Hence the AMDA AIDS Prevention and Care Project has adopted the strengthening of the district health system as one of the strategies for its programs. Guided by these it has provided Basic Orientation on HIV and AIDS, Training on Universal Precautions and Post Exposure Prophylaxis, and PMTCT orientation for the district health care providers in the government sector. This has ultimately helped the public sector health infrastructure from community level services to the district level faculties to become competent enough to deal with HIV related complications and thus made Care and Support services even more accessible and affordable for the PLHAs.

P85
LIVING POSITIVELY: A PERSONAL HEALTH COACH PILOT PROJECT

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This presentation will outline the Living Positively project, which is a 12-month pilot project jointly funded by the Victorian AIDS Council/Gay Men's Health Centre (VAC/GMHC) and People Living With HIV/AIDS Victoria (PLWHA-Vic). This community-based project has been operating since December 2005 at the Positive Living Centre in Prahran, Victoria.

Due to improvements in medications, many people with HIV are now living longer and this has presented a number of new challenges and complexities in terms of living well with HIV. The aim of the project was to recruit a number of HIV positive participants who were motivated to make some lifestyle changes, for example around diet and nutrition, increasing exercise or smoking cessation. Participants in the project would be provided with one-on-one support and encouragement via fortnightly meetings with the project officer to work on goals and develop skills in these areas.

The overall aim of the project was to see if one-on-one support was as effective in changing behaviours and increasing healthy living skills as broad based community health promotion programs, by providing individualised coaching to help participants achieve their health and life goals.

Strategies that were used to assist with motivation whilst participating in the project included: contracts of commitment, goal setting, monitoring through fortnightly meetings and the use of a personal diary to track goals and monitor achievements.

Initial evidence indicates that many of the participants have achieved their desired goals or feel that they have made significant progress towards their goals. In terms of benefits, participants have indicated that having a support person has really helped with motivation and also seeing the rewards from their efforts was seen to be a clear motivator. More qualitative and quantitative data will be available once more participants have exited the program.

Evaluation measures include assessing the degree to which goals were achieved during the duration of the project and also through follow-up evaluations, which will assess if goals and skills learnt have been sustained.

P86
"THE MORE YOU ROOT AROUND…" INCREASING STI TESTING AMONG SEXUALLY ACTIVE GAY MEN

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Epidemics of STI have taken hold in sexually active gay men in Sydney over the last decade. Gonorrheae and chlamydia are well established and syphilis has been increasing until the end of 2005. Reducing these figures has been a challenge for health services and community based organisations. In December 2005 ACON released it 'More Tests' campaign. This campaign aimed to speak to highly sexually active gay men in a culturally specific tone and language. It was also aimed to reduce the plethora of STI messages into an easily understood and processed message that encouraged frequent STI testing. Subsequent data from a number of inner-city sexual health centres indicate a marked increase in gay and other MSM presenting for STI testing from December 2005. This paper will outline the development of the campaign including the specific messages and its outcomes. It will also place this campaign among the other STI education strategies that were developed by STIGMA around this time.

P87
A CHALLENGING EXPERIENCE: INSIGHTS OF DOING AN EVALUATION OF A HOME-BASED CARE PROGRAMME FOR PLWHA IN MUMBAI, INDIA

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Programme evaluation can be a stressful experience for programme managers and staff but also for the evaluator, particularly if the evaluator is a 'foreigner'. The international literature notes many constraints to doing such programme evaluations. This paper describes the research, logistical and personal difficulties that were encountered whilst undertaking, over a three month period between February and May, 2006, an evaluation of a hospital-initiated home based care programme for people living with HIV/AIDS (PLWHA) in Mumbai, India.

Research and logistical difficulties included : lack of understanding of importance of monitoring and evaluation; reluctance of key HIV Cell staff to understand the process involved; long delays/refusal in presentation of requested documents; registered HIV Cell clients in the community being unwilling to be interviewed; working in a cross-cultural context; inability to speak the language and having to work through an interpreter for interviews and the lack of infrastructure support as an invited visitor in a developing country context.

Despite the difficulties, data were eventually forthcoming. This presentation will focus on the difficulties encountered during the evaluation process, how they were overcome and lessons learned.

P88
A WHOLE LIFE: STRUCTURAK AND SOCIAL BARRIERS AND ENABLERS FOR PEOPLE LIVING WITH HIV IN AUSTRALIA, REFLECTIONS ON A STRENGTHS BASED APPROACH

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[2]Team Leader, Positive Futures Project, Bobby Goldsmith Foundation

"The re-medicalisation of HIV presents continuing challenges to the community sector" (HIV Futures 4)

Against the background of uncertainty about the long term effectiveness of HAART, the mainstreaming of HIV health care plus significant and ongoing changes to the welfare system, there is genuine concern among People living with HIV that there will be significant structural and social barriers preventing them from being able to access an appropriate range of care and support services. The diversity and complexity of the health care needs of people living with HIV is only likely to increase as the population of Australia ages.

In order to overcome these barriers, the response of community organisations to the improvements in health and longevity of People living with HIV will need to focus on:

- ensuring people living with HIV have information and can also develop the necessary skills to help them care for themselves and when that is not possible that there is sufficient access to appropriate mainstream services
- ensuring that organisations have the flexibility and capacity to deliver the most appropriate services and programs
- developing collaborative and effective communication strategies between government, health services and community organisations
- the broader determinants of health including housing, employment and income support
- individual and collective approaches that build on strengths

This presentation will identify the key challenges facing organisations and People living with HIV as we seek to build the capacity not only of People living with HIV but also of PLWH/A organisations across Australia.

P89
PROVIDING CONTINUUM OF CARE AND SUPPORT FOR PLWHAS THROUGH COMMUNITY PARTNERSHIP AND NETWORKING IN RESOURCE POOR SETTINGS

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To improve the quality of life for the People Living with HIV AIDS (PLWHAs), there has to be treatment made available so as appropriate care and support. It is very appropriate for families and community support groups to take ownership in the provision of continuum of care, treatment and support in resource poor settings. These should also enhance adherence for the PLWHAs that are initiated on Anti retroviral (ARV) drugs at the respective health facility.

Angau Memorial General Hospital (AMGH) has been one of the first hospitals in Papua New Guinea (PNG) to pilot the Anti-retroviral-therapy (ART) roll out programmes in March 2004, serving more than half a million people within the province as well as the 3 regions (MOMASE, Highlands and Islands) of Papua New Guinea. Since then, there were 84 PLWHAs, and 34 (40%) were recruited for ART per World Health Organization (WHO) criterion. Out of the total that were recruited for ART, 17 (50%) PLWHAs have died whilst on ARV drugs and 17 (50%) are currently doing well.

All the PLWHAs (17) that are now on ARV drugs are well supported and cared for by their family members and close relatives (17, 100%) and additional support provided by Faith Based Organizations (FBOs) (4, 23%).

Those (PLWHAs) that have died (17), 7 (20.6%) had very poor social support. There was evidence of stigma and discrimination. These patients have been non compliant with their ARV drugs also. There has been poor nutritional support as well as care at home. 5 patients (14.7%) that have died had good social support; however, due to the overwhelming opportunistic infections (OIs) and other underlying medical problems including Chronic Obstructive Airway Disease (COAD) with cor pulmonale, they have died. At times diagnosis and management of OIs and other AIDS related diseases have not been easy, given the limited resources.

It is now for the community including Community Based Organizations (CBOs), Non-government Organizations (NGOs) and FBOs to take ownership of the continuum of treatment, care and support at the community level in order to empower and improve the quality of life of the PLWHAs.

There is an ongoing partnership-network establishment down to the District s as well as in the rural areas where the bulk of the population (80%) is, through the Morobe Provincial AIDS Committee Secretariat (MPACS).

The positive impact of community partnership has been evident in the tuberculosis programmes (TB DOTS) in 2005 when FBOs provided treatment for TB patients under the *D*irectly *O*bserved *T*reatment (DOT) or supervised treatment in Lae District. The cure rates (CR) for 2001, 2002 and 2004 were 60.9%, 49.7% and 66.3% respectively. These were all below the WHO set targets (85% or more). The default rate (DR) for the same years were 17.3%, 14% and 22.2%, respectively. All were more than the WHO set targets (less than 10%). Towards the end of 2004 and 2005, when FBOs were trained (20) and did DOT, the first quarter results for 2005 have gone far beyond the WHO set targets (CR=90%; DR=7%).

The same can be done for the continuum of treatment (ARV drugs), care and support for PLWHAs through the families concerned and networking partners, especially FBOs and the PLWHA organization.

P90
LEAVING HOME – STORIES FROM HORIZON PLACE

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Horizon Place is a supported accommodation service that was developed in response to a gap in HIV services within Victoria. The service provides an option that allows a supported transition of people into the community from hospital. The service has expanded into a 13 bed facility with 24 hour care, current housing 8 long term residents. Prior to this Fairfield House (a sub acute service at The Alfred) was seen as the only alternative for this group. It became evident that this was not an appropriate long term housing option for people who were capable of more independent living. In addition access to mainstream residential services such as aged care or community based psychiatric services was not appropriate for this patient group or they did not meet their admission criteria.

Residents have required this level of care because of a range of health and psychosocial issues including; mental health diagnoses, HIV dementia, drug and alcohol issues, intellectual disability, advanced HIV disease, mobility issues or a combination of these. The service has a close association with Fairfield House. Long term residents of Horizon Place usually come via Fairfield House where they are assessed through that service before transfer to ensure a detailed care management plan is organised from the multidisciplinary team. The model of care has worked particularly well where individuals have had medical and psychosocial issues that have required stays within hospital for extended periods of time resulting in a loss of functioning or independence. The model works to provide a transition to more independent living which for some individuals with significant cognitive or physical disabilities occurs over an extended period of time. This poster will highlight the cases of three residents who have made a successful transition back into the community from Horizon Place, outlining the important role the service provides between acute/ sub acute services and the

P91
THE INDONESIAN COMMUNITY HARM MINIMISATION PROJECT

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Australia is culturally diverse and HIV and hepatitis C infection rates reflect this. Some 21% of national HIV notifications annually are among people born in non-English speaking regions of the world. The most recent national estimates of hepatitis C infection show 15% of notifications are from culturally and linguistically diverse (CALD) backgrounds, more than previously estimated and with the most common mode of transmission being unsterile medical procedures overseas.

The pattern of HIV and hepatitis C infection among CALD communities in Australia largely reflects prevalence rates in countries-of-origin. Given recent increases in HIV prevalence and incidence in Indonesia, as well as higher prevalence of hepatitis C there (2.1%), the Multicultural HIV/AIDS and Hepatitis C Service (MHAHS) prioritised the Indonesian community for harm minimisation work.

This paper describes a one-year community development project focused on raising awareness of harm minimisation principles and services with the Indonesian community in NSW. The community was mobilised through consultation and advisory structures, workshops, and media involvement, resulting in capacity building, which was launched at a major community event. The paper demonstrates that long term goals, including the empowerment of people to determine their own health, are achievable through consistent partnership with a community itself.

P92
CROSS-CULTURAL CONVERSATIONS ENCOURAGING SELF-EXPRESSION OF HIV POSITIVE WOMEN AND ADOLESCENTS ACROSS CULTURES

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The HIV pandemic, its devastating effects upon Australia's neighbors, requires us to work better to reduce the negative impacts of stigma and discrimination on women with HIV from other cultures both within Australia and in those countries. In 2006, ACON established a partnership with *Life Home Project*, an HIV community project in Phuket, Thailand to host a visual art project to display the visual expressions of living with HIV by positive women and adolescents in Sydney and Thailand. What are the challenges to this sort of exchange across countries and cultures? What are the positive benefits to women and adolescents in Australia and Thailand to these sorts of exchanges? What issues emerge in the development of this sort of project? This presentation will present the establishment challenges and solutions found to working across cultures and building connections between people across countries.

P93
THE QUEENSLAND, AUSTRALIA HIV CLINICAL TRIALS REGISTER – BENEFITS AND LESSONS TWO YEARS ON

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In Queensland, individual HIV services and clients did not know the full existence of HIV clinical trials undertaken in the state. This disadvantaged both the clinician and the client. This presentation examines the redevelopment and implementation of an HIV Clinical Trials Register after it was first designed in 2004. In 2006, as part of an enhancement process of the unit's website, the clinical trials register was updated.

The aim was to develop a single, comprehensive and up to date database of all HIV clinical trials undertaken in Queensland. Through enhancing awareness of the range and type of clinical trials undertaken, greater participation by clients and clinicians was encouraged, facilitating improved treatment access for persons with HIV. After consultation with all stakeholders (Client Advocacy organisations, HIV clinicians, trial sites, and pharmaceutical companies), a web based clinical register was developed on a publicly accessible website. www.som.uq.edu.au/hivandhcvprojects

The importance of a central clinical register, accessible to both clients and clinicians was indicated through the consultation process but this only manifested itself in full after the website was established. Secondly, open and transparent consultation was an essential component of the register's development. Finally, the integrity of the register's host is critical in gaining trust of the stakeholders given the sensitivity of the information involved.

P94
CURRENT PRACTICE IN TESTING ADMITTED CHILDREN FOR HIV SEROSTATUS AT PORT MORESBY GENERAL HOSPITAL (PMGH)

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There is a considerable overlap between the common presenting diseases in paedatric cases in resource limited settings and the World Health Organisation's Clinical Case Definition for Paediatric HIV infection.

Common medical reasons for admission to the paediatric wards at Port Moresby General Hospital include diarrhoea, failure to thrive, malnutrition, pneumonia, meningitis, tuberculosis and malaria. Selection of which children are tested for HIV antibodies on the basis of clinical criteria consequently presents a challenge.

In a case control study design, retrospective data on demographic (e.g. age, sex, place of usual residence) and presenting clinical characteristics (e.g. fever, cough, diarrhoea, vomiting, malnutrition) of 94 children tested for HIV antibodies between 1st December 2005 and 3rd April 2006 was collected. Similar data was collected for a control group of 94 untested children. A comparison between demographic and presenting clinical characteristics of the children tested for HIV antibodies and the control group is presented. In a cross sectional study design, a comparison of demographic and presenting clinical characteristics was made between 35 seropositive cases and 75 seronegative cases tested between 1st Aug 2005 and 3rd April 2006. Predictors of testing and predictors of positivity were also determined and are presented.

P95
IMMUNOLOGICAL AND VIROLOGICAL RESPONSES CORRELATED WITH EVOLUTION OF RESISTANCE IN PATIENTS TREATED WITH ANTIRETROVIRAL AGENTS

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To counteract the HIV evolutionary changes, treatment regimens must be updated. We assessed the changes in CD4 cell count, VL levels and frequencies of mutations in relation to HIV Evolution of Resistance (EoR) in a cohort of twenty-nine HIV-infected Australian patients.

Overall, number of patients with primary EoR to NRTIs (52%) was similar to number of patients with secondary EoR to NRTIs (48%) (P=1.000, F-test), while this was not correct in case of primary and secondary EoR to PIs (0% versus 28%) (P=0.004).

In patients with EoR to NRTIs, there was a significant decrease in mean value of CD4 cell count during the first 36 months (P=0.0466, t-test) and no significant change in mean value of CD4 cell count during the last 48 months (P=0.8464). In contrast, in patients without EoR to NRTIs, there was no significant change in mean value of CD4 cell count during the first 36 months (P=0.8371) and a highly significant increase in mean value of CD4 cell count during the last 48 months (P=0.0077). In the patients with EoR to PRIs, there was no significant decrease in mean value of CD4 cell count during the first 36 months (P=0.6187) and a significant decrease in mean value of CD4 cell count during the last 48 months (P=0.0348). In contrast, in patients without EoR to PRIs, there was no significant decrease in mean value of CD4 cell count during the first 36 months (P=0.6647) and a significant increase in mean value of CD4 cell count during the last 48 months (P=0.0493).

During the first 36 months, there were no significant changes in mean values of VL levels in patients with EoR to NRTIs, without EoR to NRTIs, with EoR to PRIs, or without EoR to PRIs (P=0.7104, 0.7958, 0.6375 and 0.7302, respectively). During the last 48 months, there was no significant change in mean value of VL levels in patients with EoR to NRTIs, with EoR to PRIs, or without EoR to PRIs (P=0.4386, 0.7142 and 0.1855, respectively). In contrast, there was a significant decrease in mean value of VL levels during the last 48 months (P=0.0477).

EPIDEMIOLOGY POSTER ABSTRACTS

P96
PREPARING FOR BED INCIDENCE TESTING: ASSESSING THE QUALITY OF HIV SURVEILLANCE TESTING IN THAILAND

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The recently validated BED assay allows HIV incidence estimation using cross-sectional samples; however, BED testing of HIV false-positive samples can produce false-positive BED results and incidence overestimation. To prepare for BED testing in Thailand, we assessed the quality of national HIV serosurveillance testing among pregnant women (ANC) and female sex workers (FSW).

National HIV sentinel serosurveillance is conducted in a cluster sample of 24 (of 76) provinces. For each province, consenting FSW in a random sample of sex establishments receive linked anonymous testing; ANC samples come from routine opt-out clinical testing. HIV surveillance testing is performed locally by hospital or provincial laboratories. Prior to annual surveillance rounds in 2004 and 2005, local surveillance and ANC staff were trained on specimen collection and handling techniques. During 2004, all HIV-positive and 5% of negative ANC and FSW samples were sent to Thai National Institute of Health (NIH). Samples were screened by enzyme immunoassay (EIA) and confirmed by another EIA or gel particle agglutination (GPA), depending on sample volume. During 2005, all HIV-positive ANC samples, along with all HIV-positive and HIV-negative FSW samples were sent to NIH. Samples were screened by EIA and confirmed by another EIA and GPA. Samples reactive by two (2004) or three (2005) assays were considered true positives.
NIH received 768 HIV-positive and 2572 HIV-negative samples in 2004, 644 HIV-positive and 6823 HIV-negative in 2005. Virtually all samples (99.9%) were acceptable quality for testing; however, 13.0% in 2004 and 3.8% in 2005 were low volume, hemolyzed, or lipemic. Re-testing identified 0.4% false-positives in 2004, 0.5% false-positives in 2005, and no false-negatives.

The vast majority of locally tested HIV surveillance specimens were accurately classified. Sample quality should continue to be monitored and directed training conducted as needed.

P97
EXERCISE AND HIV – WHO IS DOING HOW MUCH?

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Randomized, controlled trials demonstrate benefits from exercise among people with HIV, including improved cardiovascular fitness, strength, quality of life and self-efficacy, as well as reduced fatigue. Physical activity may also be important in reducing the risk of cardiovascular disease and diabetes – important conditions among patients using highly active anti retroviral therapy (HAART). The prevalence and degree of physical activity undertaken by HIV+ Australians in the era of HAART has not been described.

The aims of this study were
1. To describe the physical activity of outpatients attending an Infectious Diseases (ID) clinic, and assess compliance with the American College of Sports Medicine physical activity guidelines
2. To examine whether patients attending for ongoing HIV care have different physical activity levels from those at tending with other infections
3. To assess demographic associations with physical activity

All patients attending the Alfred Hospital ID clinic over four weeks were invited to complete the International Physical Activity Questionnaire Short Form (IPAQ) to measure physical activity. 347 patients attended during the study period, and 261 (75%) agreed to participate. This included 191 HIV+ patients (87% response rate) and 70 non-HIV patients (55% response rate). Age (mean and range) was similar in both groups. HIV+ patients were more likely to be male ($p<0.001$).

Activity categories on the IPAQ were not different between groups nor were the intensity, frequency and duration of physical activity. Overall, 75% of HIV+ and 77% of non-HIV study participants met recommended physical activity guidelines. There were no significant differences in age or gender between those who did and did not meet physical activity guidelines in either group.

This cross sectional study found that 75% of HIV+ outpatients meet physical activity recommendations. 25% of patients were classified as "inactive". Given the likely benefits of physical activity in this population, these data demonstrate a need to improve the uptake of appropriate physical activity among people living with HIV and to identify barriers to this. As neither age nor gender was associated with reduced physical activity, interventions will need to be directed at the whole population.

P98
LONG-TERM NON-PROGRESSION IN HIV INFECTION: UPDATE OF THE AUSTRALIAN COHORT

Gelgor L[1], Anderson B[2], Baker, D[3], Finlayson R[4], Genn W[3], McFarlane R[3], McMurchie M[3], Kelleher T[1], Kaldor J[1] on behalf of the Long Term Non-progressor study group, [1]National Centre in HIV Epidemiology and Clinical Research, University of New South Wales, Sydney NSW, Australia; [2]St Leonards, Sydney NSW, Australia; [3]407 Doctors, Darlinghurst, Sydney NSW, Australia; [4]Taylor Square Private Clinic, Darlinghurst, Sydney NSW, Australia.

The Australian long-term non-progressor cohort was established in 1994 to investigate viral, genetic and immunological factors that may influence disease progression. Individuals were eligible for inclusion to the study provided they had documented HIV infection and remained asymptomatic for at least 8 years with a $CD4^+$ count above 500/µl. This cohort has been followed clinically on an annual basis, with specimen storage and regular recording of $CD4^+$ counts, viral load, clinical disease and therapeutic intervention. Specialised analyses also undertaken, included chemokine receptor polymorphisms, HLA typing, viral sequencing and enumeration of CTL responses.

A total of 110 people were recruited into the cohort as long-term non-progressors, of whom 26 have been lost to follow up, 3 have died, 9 developed AIDS, 2 were untreated but had a $CD4^+$ count < 350/µl and 35 commenced antiretroviral treatment but were not recorded as having AIDS. Median time to progression from HIV diagnosis was 13.1 years.

Of the remaining cohort members, there were 35 (32%) untreated whose most recent CD4 count was above 350/µl, and 25 (23%) whose most recent viral load was below 5000 copies/µl. The median duration of infection in this subgroup of sustained nonprogressors was 19 years (Range 8-22 years). Survival analysis using the Log rank test for comparison indicated that a higher $CD4^+$ T cell count ($p<0.002$), lower HIV-1 RNA ($p<0.003$) and a low β2 microglobulin ($p<0.001$) at study entry were significant predictors of sustained nonprogression. Age at study entry, p24 antigen, frequency of certain HLA Class 1 alleles or CCR5Δ32 or CCR2b heterozygosity did not significantly affect survival in the sustained non progressors compared to the progressors ($p > 0.05$).

This study demonstrates the existence of a phenomenon of viral control that is sustained in a substantial proportion of the cohort. Initially recruited on the basis of immunological preservation, almost a quarter of the cohort has demonstrated ongoing viral load control. This phenomenon is not explained in the cohort by known genetic polymorphisms or viral mutations. Continued studies of long-term non-progression contribute to understanding the pathogenesis of HIV-1 infection and for the development of improved treatment strategies.

P99
PHYLOGENETIC ANALYSIS OF HIV-1 STRAINS

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The variability of sequences within the HIV genome during infection enables the study of the virus's evolution and spread through populations using sequencing and phylogenetic analysis. Increasingly phylogenetic analysis is also being used to demonstrate the relationship between HIV-1 strains in individuals with possible transmission links.

Sequencing of the more variable *env* V3 region and more stable p17 *gag* region provide sufficient genetic information to reconstruct HIV-1 transmission histories. Nucleotide sequences are analysed and alignments of sequences are made using sequence alignment editing software. Nucleotide transition and transversion ratios and the shape parameter (a gamma-distributed measure of the variation of substitution rates across the sequence) are calculated for the aligned data set. A phylogenetic tree is then constructed incorporating these parameters using a model that best describes the data set to optimise the tree topology. Bootstrap values are calculated on 1000 replicates of the aligned data set to test the strength of the phylogenetic relationships.

From the perspective of a public health laboratory these methods of reconstructing phylogenetic histories can be used to support or refute epidemiological evidence suggesting possible HIV transmission between individuals. The methods will be used to characterise the HIV strains of newly infected individuals living in Melbourne, to assess the spectrum of HIV lineages currently being transmitted and to investigate the evolution of HIV within individuals over time. A working example will be given.

P100
THE DEVIL WE KNOW: UNDERSTANDING OF HIV/AIDS IN VICTORIA'S AFRICAN COMMUNITIES

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African immigrants often have experience and knowledge of HIV/AIDS acquired prior to their arrival in Australia. This knowledge affects their attitude toward people living with HIV/AIDS (PLHA) and their assessment of the relevance of HIV/AIDS to African communities in Australia. Understanding current understanding of HIV/AIDS within African communities is for the development of public health information in Australia.

We conducted a community-based qualitative inquiry among African communities in Victoria, in order to examine their knowledge of HIV and its transmission. We conducted 47 in-depth interviews with key informants and 17 focus group discussions with members of Victoria's Ethiopian, Eritrean, Somali, Sudanese and Coptic Egyptian communities, as well as providers of health and social services. These interviews and discussions explored issues of HIV transmission, diagnosis, and socio-cultural context, as well as current and preferred sources of information for these communities about HIV/AIDS.

We found that African communities possess complex understanding of biological, medical, social, cultural and political aspects of HIV/AIDS. Examples are: the distinction between HIV and AIDS; the means by which HIV causes symptomatic illness; the tension in African communities between sympathy for people living with HIV/AIDS and fear of them; the physical effects of HIV-related disease; the interplay between public health and humanitarian concerns in immigration policy; and access to treatment for HIV in developing countries. Most of this understanding arises from personal experience and public health information in Africa, rather than information provided in Australia. It is important to understand existing knowledge within African communities in order to provide appropriate information that will enable them to reduce the risk of HIV infection and improve the care of members of these communities who are affected by HIV/AIDS.

P101
COMPARISON OF TWO ASSAYS FOR IDENTIFYING INCIDENT INFECTION AMONG CASES OF NEWLY DIAGNOSED HIV INFECTION

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Estimates of sensitivity and specificity were compared for the detuned ("sensitive-less sensitive") and BED assays for diagnosing early HIV infection, using as the reference standard available information on HIV antibody testing history and clinical diagnoses of primary HIV infection among cases of diagnosed HIV-1 infection.

Consecutive cases of HIV infection among people who were voluntarily tested at St Vincent's Hospital, Sydney, as part of their clinical assessment, were tested using the detuned and BED assays. Cases with both a detuned and a BED test result were matched to cases of newly diagnosed HIV/AIDS notified to the National HIV/AIDS Registry, to retrieve information on HIV/AIDS diagnoses and prior testing history.

Among 219 cases of HIV infection diagnosed at St Vincent's Hospital in 2005, the estimate of sensitivity of the detuned and BED assays was similar among 23 cases with evidence of HIV acquisition within 30 days of assay specimen date (both 95.6%), among 18 cases with evidence of HIV acquisition 30 – 180 days (both 77.7%) and among 16 cases with evidence of HIV acquisition 180 – 365 days prior to assay specimen date (detuned 62.5%; BED 50.0%). Specificity of the detuned and BED assays among 52 cases for which HIV infection was diagnosed at least 180 days prior to assay specimen date was 82.7% (both assays) and was 72.2% and 83.3%, respectively, among 18 cases with AIDS. Among 92 cases without evidence of timing of HIV acquisition for which infection was diagnosed within 180 days of assay specimen date, 34 (37.0%) and 32 (34.8%) were diagnosed with early infection by the detuned and BED assays, respectively.

In a population predominantly affected by HIV-1 subtype B, the detuned and BED assays provide comparable estimates of sensitivity and specificity. They complement surveillance for newly acquired infection by providing a basis for more complete ascertainment of the recent pattern of HIV transmission.

P102
MAKING SENSE OF THE TOWER OF BABEL - ADVANTAGES AND MULTIPLE APPLICATIONS OF A COMMON SYSTEM FOR HIV/SEXUAL HEALTH DATA COLLECTION, EXTRACTION, AND DOWNLOADING (SHIP)

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Previously, we have reported at ASHM the use of a relational database (SHIP) to manage HIV/Sexual Health data at clinic (dis-aggregated) and population (merged, dis-aggregated) levels.
Here, we update previous data (1992-2005).
Since 1992, four clinics (above) have provided pooled data for approx 600 HIV pts, using indicators (such as median/mean CD4, viral load,AIDS, ARV uptake) over time. Trends include the remarkable changes seen with HAART in 1995-6. In addition, a recent retrospective analysis of STI diagnoses and treatments shows the continued burden of chronic viral STI (HSV,HPV), despite successful HAART treatment, as well as an increase in the incidence of acute bacterial STIs (chlamydia, gonorrhoea, syphilis) in 2002-2004, almost certainly reflecting an increase in unsafe sexual behaviour.
Presently, 66 clinics in NSW, Qld, NT, WA use SHIP, (59 SHC/HIV, 5 Family Planning, 1 AIDS dementia, 1 General Practise).
The use of this common database system by a large number of clinics has also contributed to other projects such as the Australian HIV Observational Database (NCHECR), and the development of Minimum Data Sets in Queensland and New South Wales, and should facilitate further management, surveillance, and research.

P103
ESTIMATION OF MORTALITY RATES FOLLOWING HIV AND AIDS IN AUSTRALIA,1980-2003: A POPULATION BASED STUDY

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Changes in mortality following HIV and AIDS have not been thoroughly investigated since commencement of the HIV epidemic in Australia.

The results of a linkage between HIV and AIDS diagnoses and the National Death Index (NDI) to the end of 2003 were used to estimate mortality rates following HIV/AIDS. Standardized Mortality Ratios (SMRs) were calculated for deaths following HIV prior to and after AIDS in three periods of treatment in Australia; before Antiretroviral Therapy; period 1(≤1989), pre- and early- HAART; period 2 (1990-1996) and late-HAART; period 3 (1997-2003). Crude mortality rates were calculated as the number of deaths per 1000 person-years. Based on these rates, the total number of people living with HIV was estimated.

Between 1980 and 2003, there were 1,789 deaths following HIV prior to AIDS and 6,730 deaths after AIDS diagnosis, after linkage with the NDI. For deaths following HIV prior to AIDS, the SMRs were 2.99, 1.22 and 1.6 in periods 1, 2 and 3 respectively. Mortality rates after AIDS were greater than mortality prior to AIDS with SMRs of 137.84, 28.64 and 4.55 in periods 1, 2 and 3 respectively. The crude death rate following HIV before AIDS increased from 9.7/1000 person years during period 1 to 14.8/1000 person years during period 2, and to 22.2/1000 person years in period 3. Death rates after AIDS decreased from 590/1000 person years in period 1 to 422/1000 person years in period 2, and to 77.4/1000 person years in period 3. The number of new HIV diagnoses increased to 1,276 in 1990 then decreased to 780 in 2003 while AIDS diagnoses increased to 950 in 1994 then decreased to 252 in 2003. Total people living with HIV in Australia was estimated to be 7,873 in 1989, and was estimated to have increased to 12,828 in 2003.

Mortality following AIDS decreased rapidly with the introduction of effective antiretroviral treatment in Australia in 1996. Mortality in people with HIV prior to AIDS remains low, but if anything has increased slightly since 1996. The number of people living with diagnosed HIV/AIDS in Australia has increased during the era of effective treatment.

P104
COMPETING RISK COVARIATE ANALYSES

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Many HIV observational studies are examining individual causes of death. This paper uses data from the Australian HIV Observational Database (AHOD) to illustrate how competing risk analyses can be performed in a straightforward manner using widely available statistical software.

In this analysis we compare risk factors for HIV-related and non-HIV related deaths. A usual analysis would perform two separate Cox-regression analyses, one for each cause of death, censoring patients with the cause of death not under consideration at the time of death. A competing risk analysis can be performed by first reshaping the dataset. Each patient has two observations, one for each cause of death, with the status of patients who died as either an event or censored as appropriate to the observation. Conventional Cox analyses can then be applied to the reshaped data, either stratifying or adjusting for event-type and including interactions between covariates and event-type, to give a competing risk assessment of covariate effects.

By May 2004 there were 75 deaths, 35 directly attributed to an AIDS illness (defined as HIV related) and 40 not attributed to an AIDS illness (non-HIV related). In this analysis we consider two covariates; age at entry to AHOD and CD4 count at entry. The usual separate Cox analyses where age 35-44 years and 45 + years were compared to the < 35 years age group gave the following results: 35-44yrs (HR=0.97, p=0.946; and HR=1.94, p=0.246) and 45+yrs (HR=1.09, p=0.847; and HR=4.44, p=0.006) for the risk of HIV related and HIV-unrelated deaths respectively.

After applying an event-stratified analysis to the reshaped data, using interaction terms between age, CD4 and event-type gives the following age interaction terms (35-44 yrs: HR=2.00, p=0.327; 45+ yrs HR=4.08, p=0.045). It can be shown that the results of this analysis are equivalent to the usual two separate analyses (eg 1.94=0.97*2.00; 4.44=1.09*4.08; etc). The hazard ratios in the usual separate Cox analysis can be exactly reproduced in a competing risk analysis by fitting separate dummy variables for each covariate to each event-strata. Using the competing risk approach it is possible to formally test whether covariate effects differ for the competing causes of death.

P105
TRENDS IN HIV-PREVALENCE AMONG GAY MEN IN BRISBANE, MELBOURNE AND SYDNEY

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Internationally, and particularly in developing countries, trends in the population prevalence of HIV are often used to describe the evolution of the HIV epidemic. Trends in prevalence in community-based samples of gay men may provde similarly useful information. HIV prevalence among gay men would be expected to have changed in recent years to reflect recent upward trends in the age of new HIV diagnoses and the increasing length of survival following diagnosis of HIV.
Repeated, cross-sectional surveys were conducted using anonymous, self-complete questionnaires with recruitment at gay community venues, clinics and large gay community events since 1996 in Sydney and 1998 in Melbourne and Brisbane. Men were asked to report their HIV status, based on their most recent HIV test result. Results from men recruited at clinics were excluded from this analysis.
Levels of HIV testing were high (89.1% ever tested, 69.9% tested in the last 12 months in Sydney in 2005) and have not declined over time. Among men in Sydney, there was a significant downward linear trend in HIV prevalence (11.6% in 1996, 12.4% in 1999, 10.9% in 2002 and 8.5% in 2005; p<.001). The decline was present in men aged less than 25 (p=.001), 25-34 (p<.001), 35-44 (p<.001) but there was no trend in those aged 45 or more. Similar, though less strong, trends were observed among Melbourne men aged less than 25 (p=.048), 25-34 (p=.025), and 35-44 (p.017) but not among those aged 45 or more. Among Brisbane men these trends also existed for men aged less than 25 (p=.003), 25-34 (p=.004), but not among those aged 35 or more.
There is evidence of declining HIV prevalence in young gay men in Australia, which probably reflects declining incidence in this population. Surprisingly, prevalence declined in men aged up to 44, despite the increasing survival from HIV-related disease.

p106
A MATHEMATICAL MODEL OF HIV TRANSMISSION AND THE HIV EPIDEMIC IN DEVELOPING COUNTRIES IN THE ASIA-PACIFIC REGION

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The HIV Epidemiological Modelling and Impact (HEMI) study was funded by the Australian Government through AusAID to be undertaken in relation to Papua New Guinea, Indonesia and Timor Leste. One part of the study involved the development of mathematical models that could be used to estimate the current levels of the HIV epidemic, as well as to predict the course of the epidemic under a range of intervention scenarios.

A generic HIV-transmission model was developed, that could be adapted for use in each country under various scenarios. The model incorporates the different HIV-exposure groups among adult populations such as female sex workers, clients of sex workers, men who have sex with men, injecting drug users as well as general population heterosexual contact. Mother to child transmission was also modelled. The model takes into account the population age structure, distinction between urban and rural populations and progression of the HIV-infected populations through the disease stages.

Behavioural and intervention parameters that were applied to represent different levels of intervention include condom use, prevalence of other sexually-transmitted infections and uptake of antiretroviral therapies. The parameter estimates are based on best available data, and/or assumptions based on expert opinions and regional data.

In Papua New Guinea, the model estimated that the epidemic in 2005 had an overall adult HIV prevalence of 2.0% (6.2% in urban and 1.1% in rural areas). There was an estimated 64,000 people living with HIV/AIDS, with the numbers expected to rise to over 500,000 by 2025 with current levels of intervention. Assuming a range of mid or high level prevention and treatment interventions, the models suggested that the numbers living with HIV could be reduced to 350,000 or 200,000 by 2025 respectively.

While mathematical models are simplifications of the real dynamics of HIV transmission in human populations, they provide key inputs for the quantitative assessment of economic and social impacts, as well as the cost-effectiveness analysis of future intervention efforts. They also allow key decision makers to see the projected figures of the epidemic, thus giving them the information and opportunity to act.

P107
CALIBRATION OF A HEPATITIS C VIRUS PROJECTION MODEL USING LINKAGE DATA

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A large linkage project performed of Hepatitis C virus (HCV) notifications in New South Wales with the NSW Central Cancer Registry and the National Death Index provides population-based estimates of long-term sequelae following HCV infection that could be used to calibrate models from the Hepatitis C Virus Projections Working Group.

Four endpoints were calibrated against the NSW linkage data over the period 1995-2002. These were HCV-related: i)hepatocellular carcinoma (HCC); ii) opioid overdose deaths; iii) liver related deaths; and iv) all-cause mortality. Since the models project national estimates, the linkage data, except for overdose deaths, were multiplied by 2.6, reflecting the proportion of the HCV epidemic attributed to NSW. Overdose deaths were multiplied by 2.1, reflecting the disproportionately greater heroin injecting occurring in NSW.

The models assumed that HCC incidence rate and liver-related deaths following cirrhosis were both at 2% per annum. Overdose deaths were modelled as 0.5% per year in regular injecting drug users (IDUs), and 0.1% in occasional IDUs.

Comparisons between the modelled estimates and the linkage data show reasonably good calibration for HCC cases and all-cause mortality. The estimated HCC was between 70 cases in 1995 and 100 cases in 2002. All-cause mortality was estimated between 1,000 in 1995 and 1,600 in 2002. Comparison of annual opioid deaths shows some agreement. However, the models underestimate the rate of increase observed between 1995-1999, and do not entirely capture the rapid decrease in overdose deaths from 2000 onwards. The linkage data showed a peak of overdose deaths at 430 in 1999 compared to 320 estimated by the models. Comparison of observed liver deaths with the modelled numbers showed poor agreement. A good agreement would require an increase in liver deaths to 5% per annum following cirrhosis in the models.

The poor agreement between projected and linked liver deaths could reflect differing coding of causes of deaths, underestimates of the numbers of people with cirrhosis following HCV, or underestimates of rates of liver death following cirrhosis. The reasonably good agreement between most of the modelled estimates with observed linkage data provides some support for the assumptions used in the models.

P108
ACCEPTABILITY OF BLOOD BORNE VIRUS TESTING METHODS AMONG INJECTING DRUG USERS

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Increasing opportunity for early blood borne virus (BBV) detection via regular screening of at risk populations is an important harm reduction strategy. Providing alternatives to venous blood collection may increase acceptability of regular testing among injecting drug users (IDUs). Participants (n=229) recruited for a validation study of hepatitis C virus (HCV) antibody testing using oral fluid were asked about the acceptability of different specimen collection methods (oral fluid, capillary blood, and venous blood). Preferences were documented for each participant before and after specimen collection. The prevalence of HCV, HIV and hepatitis B (HBV) was 86%, 5% and 5% respectively. Prior to specimen collection, the acceptability of all three collection methods for BBV testing was high (>90%). Oral fluid remained the preferred method for all types of BBV testing after sample collection (53% HCV, 48% HIV, 51% HBV), followed by venous sampling (26% HCV, 35% HIV, 28% HBV) and preferences did not differ significantly by age, gender or length of injecting career. The main reasons for preferring oral fluid were specimen collection being easy, pain-free and non-invasive, with one in ten citing poor venous access. Preferences for venous sampling were primarily related to the reliability and accuracy of virus detection in blood. Conversely, concerns about oral fluid testing were related to accuracy, consternation about, and confusion with, DNA testing and lack of knowledge about the test. Findings suggest that oral fluid testing is an acceptable and preferred alternative for BBV testing. Information and education regarding the nature and diagnostic value of oral fluid testing is necessary prior to its implementation for surveillance purposes among this population.

INDIGENOUS HEALTH POSTER ABSTRACTS

P109
THE K.I.S.S. (KOORI'S INTO SAFE SEX) PROJECT

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The aim of the K.I.S.S. project is to raise awareness of HIV, Sexually Transmitted Infections (STIs) within the Aboriginal communities in the Illawarra region with an emphasis on safe sex and STI testing.

The objectives of the project are to increase knowledge of HIV and STIs, to increase the use of condoms within the community, to facilitate access to sexual health clinics and to increase early detection of HIV and STIs.

The project model consisted of a multi faceted approach including linking to an existing activity in the Aboriginal community, the development of a series of T-shirts with accompanying K.I.S.S logo, the delivery of sexual health education sessions along with the provision of outreach HIV and STI testing.

In order to increase the reach of the K.I.S.S project the local football team received sponsorship to wear the K.I.S.S logo on their football jerseys.

The results of the project that will be explored in this paper include outcomes from education sessions and uptake of STI testing and the reach of the K.I.S.S project.

P110
PROMOTING TREATMENT FOR PEOPLE LIVING WITH HIV/AIDS HELPS TO REDUCE STIGMA IN WESTERN NEPAL

Suresh T.
Prashanti Home

In Nepal there is an estimated 70,000 people living with HIV/AIDS. Most of these people are poor and have very limited access to health care services. After diagnosed with HIV they are likely to stay at home and wait to die then do any work. Most of them only seek support after having tuberculosis and other opportunistic infections. Many feel that they are dying of AIDS when they start losing weight due to TB. They do not know that TB can be treated among people living with HIV/AIDS as well.

In Chitwan a western district of Nepal people living with HIV/AIDS run a care home called Prashanti Home. There are 30 people and 5 children in this care home at present. Half of the people are on TB treatment. After they start recovering from TB treatment they go out in their village and help one new person with TB to come to stay in our center. While staying in our center we provide counseling to the person and motivate him to get tested for HIV. Out of 57 people we tested in last 6 months 13 got tested HIV positive. Then we look at their CD4 count and put them on Anti Retroviral Treatment if needed.

This is a very innovative way to integrate TB and HIV. Without addressing these two together in poor communities like ours we will lose more and more people everyday due to TB which is actually curable disease. People recovering from TB treatment can be the best messengers to spread the knowledge on treatment. There is lesser stigma in TB than HIV so it is better to convince person with TB to do HIV testing. Sharing experiences like these will be helpful in future to tackle TB/HIV epidemic in poor countries.

P111
INEQUITY OF ACCESS TO HIV PREVENTION: EXPERIENCE FROM AN ETHNIC GROUP OF BANGLADESH

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This descriptive qualitative study was carried out to explore the underlying causes of inequity in accessibility to HIV/AIDS prevention programs among the *Rakhayene* tribe living in a remote southern costal region of Bangladesh. A total of seven in-depth interviews and two focus group discussions were conducted with the tribal leaders and general members of that particular ethnic minor group. The investigators collected information from the study participants regarding accessibility to on-going HIV/AIDS prevention programs of the country and the data were transcribed, compiled and analyzed accordingly to find out the key themes expressed by the participants. The findings of this study reveled that the *Rakhayene* population was not directly under coverage of the existing HIV/AIDS prevention programs running by the government and non-governmental organizations in other areas of the country. The respondents mentioned some important discrepancies like 'no specific intervention program' related to HIV/AIDS prevention addressing the *Rakhayene* group, 'inaccessibility to mass media' due to language-barrier and lack of education etc. The locality of the ethnic group was situated in a remote southern costal-belt of the country and absence of well-established infrastructures such as bridges, highways and lack of ferries were the main reasons behind unavailability of intervention programs on HIV/AIDS for them, as reported. The leaders of the *Rakhayene* group believed that they were vulnerable for contracting HIV/AIDS and they demanded for comprehensive awareness programs in their own local language, which would be easily accessible to them. Concerned agencies, both governmental and non-governmental, should come forward to minimize this loop-hole pointed out by the study participants and can contribute to create healthy societies through inclusion and equity in this particular aspect of health care services in Bangladesh.

P112
SOCIAL AND BEHAVIOURAL INTERVENTIONS IN SEXUAL HEALTH FOR ABORIGINAL AND TORRES STRAIT ISLANDER (ATSI) AUSTRALIANS: A SYSTEMATIC REVIEW TO REVEAL GAPS IN THE PUBLISHED EVIDENCE BASE

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Recent Australian policy recognises the critical importance of social and cultural issues to Indigenous health program success, including sexual health. Good behavioural interventions are critical for promoting safer sex in the absence of effective STI and HIV vaccines. Cultural and social contexts of clinical service delivery also impact on the success of screening and treatment.

A systematic review investigated ATSI-specific Australian research into social and behavioural interventions in sexual health between 1990 and 2004. Electronic databases, journals and bibliographies were searched, abstracts examined, and study quality assessed for reports that met inclusion criteria. We included individual behavioural interventions, community social interventions and clinical interventions with a social/cultural component. Inclusion criteria were: clear aims; detailed description of intervention package and design; and findings reported for outcome measures.

Sixty two Indigenous sexual health studies were reviewed. They provided mainly low-level evidence including: the constructive impact on screening participation of computer assisted recall, education about and improved confidentiality in HIV testing, and urine PCR testing for gonorrhoea and chlamydia; the value of supervised treatment; the value of enhanced integration of sexual health into comprehensive primary care delivery and expanded co-ordinated active case finding. Most included studies succeeded at improving ATSI participation in health promotion activities because of culturally-appropriate methodology, and provided well-argued though often subjective accounts of culturally appropriate 'best practice'.

The review indicated valuable improvements to ATSI screening participation, but critical gaps in the evidence base: little baseline information for designing and evaluating interventions; few successfully evaluated interventions at individual, small group or community level for behaviour change, for improving sexual health literacy, or facilitating safer sex; few proven strategies for improving ATSI testing and treatment of STIs and HIV; little easily accessible information on successful interventions; inadequate documentation of processes and indicators of community participation and approval in intervention design and implementation.

INTERNATIONAL AND REGIONAL ISSUES POSTER ABSTRACTS

P113
MEN AND PMTCT IN TANZANIA – INCLUDED OR EXCLUDED

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Prevention of Mother to Child Transmission programs present many challenges to program implementers. The role of the male partner in reproductive health is drawing increasing interest. The role of male factors in PMTCT programs is explored.

445 community men have been surveyed; and a further group of 46 men whose partners have participated in a PMTCT program (i.e. received Nevirapine) have been surveyed.

In the community survey, most men expect their partner to seek their permission before VCT (379/445, 85.2%). Most men would prefer their partner to be tested before pregnancy (363/445, 81.6%); and not during pregnancy (51/445, 11.5%). Being tested in pregnancy was considered "too late". 80.4% men (358/445) believed he was infected if his partner was positive. 77% men (342/445) believe a child born to a positive mother is positive. Hence expecting a pregnant woman to disclose a positive result to her husband, means he likely assumes a proxy concordance, and is presented this result outside a framework of pre and post test counselling.

In the survey of 46 partners, nearly all (44/46) men expect their partner to seek their permission before VCT. Most men would prefer their partner to be tested before pregnancy (42/46); and not during pregnancy (3/46).Though all believed there was a way of preventing transmission (46/46), all respondents (46/46) indicated a positive woman should not become pregnant again, in effect, ending her reproductive life. Unprompted, the following methods of transmission prevention were listed – hospital medicine (40/46), not breast feeding (29/46), surgery (9/46), and exclusive breast feeding (1/46). Only 19/46 were able to identify that both mother and child needed to take this medicine.

Men in preferring VCT prior to pregnancy and in expecting their female partner to seek permission prior to VCT are in a contrary position to PMTCT program strategists. New models for facilitation of partner disclosure within PMTCT programs are needed. The role of men needs to be addressed to win community acceptance and support of PMTCT programs.

P114
EVALUATION OF A HOSPITAL-INITIATED, HOME BASED CARE PROGRAMME FOR PLWHA IN MUMBAI, INDIA

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As the number of people living with HIV/AIDS (PLWHA) increases, many countries are embracing the concept of home-based care (HBC) as an extension of the care provided by a formal health facility. Monitoring and evaluation (M&E) of the services provided by HBC programmes is essential to ensure their efficacy, acceptance, value and sustainability.

For several years the KJ Somaiya Medical College and Hospital in Mumbai, India have had a programme providing pre and post-test counselling and social support for PLWHA. Since 2002, following a successful funding application to Catholic Relief Services for a 3 year pilot project, the HIV Cell has also been providing HBC and nutritional supplementation for 25 of the most vulnerable clients. However, the programme is continuously expanding and it is now an integrated care programme that provides HBC, nutrition supplementation for vulnerable women and children, nutrition counselling for all clients and activities to increase HIV awareness in the community. It also has programmes to support orphans and vulnerable children, HIV sensitisation sessions for all hospital staff and undertakes skill training of HIV affected people to enable them to earn an income.

Positive findings from the evaluation are of a dynamic programme with caring HIV Cell staff, and involvement of the total organisation of KJ Somaiya, with senior hospital management participating in all HIV Cell activities for PLWHA.

Concerns about the program were: the criteria and processes by which those who received nutrition supplementation are selected; the lack of regular, organised peer support meetings; unavailability of on-going training for the community health care workers and the infrequency of staff sensitisation programmes. The hospital protocol requires hospital in-patients to be referred to the HIV Cell for pre-test counselling, however, in 2005, only 2.2% of hospital in-patients were referred. On-going funding for sustainability is problematic.

Many of these aspects could readily be addressed with the support of the senior programme coordinator and hospital management. This would improve the transparency and operation of what is an affirmative and vibrant programme.

P115
POST TRAUMATIC STRESS DISORDER AMONG AIDS PATIENTS ON ANTI RETRO VIRAL THERAPY

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A chronic or life threatening disease can be a traumatic event in an individual. Although the relations between neuropsychiatric symptoms, the immune system and other parameters remain unclear, the emergence of neuropsychiatric complications like depression or PTSD during HIV infection or AIDS can have serious implications. This study intends to examine the prevalence of PTSD among AIDS patients on antiretroviral therapy. It also addresses the possible correlations between stress reactions, gender, substance abuse other demographic, social parameters. The cross sectional study involved 98 patients (out of 1400) attending the antiretroviral therapy centre at the government Rajaji hospital. After institutional ethical committee clearance and informed consent, they were administered with the Impact of Event Scale - Revised (IES-R) adapted for HIV patients, translated and duly validated. We also included a demographic questionnaire survey which was administered along with the IES – R. Of the 98 patients chosen for the study 58.16% were males and 41.84% were females. 38.78% were diagnosed with HIV infection in the last 12 months. IES – R score was 30 and above in 25.53% (n=25), between 25 and 29 in 9.18% (n=9), between 15 and 24 in 43.87% (n=43) and between and 14 in 21.42% (n=21). Among the 25 patients with high scores, 80 % were females, 48% were either living alone or had experienced the death of a spouse, 60% had either HIV positive spouse or a HIV positive child, and 40% had low CD4 counts. Strong correlation is found between women, living alone, HIV positive spouse, low CD4 counts and stress reaction. Assessment of these patients with clinical interviews is needed. More studies are essential on the impact of stress reactions and disease progression. Given the magnitude of the problem and the multiple psychological stressors that persons with HIV face in India, more research is needed. Also the need to incorporate routine psychiatric counseling and assessment into HIV patient care must be explored.

P116
THE EXPERIENCE OF CLINICAL MENTORING IN A NEW HIV HEALTH CARE SERVICE IN THU DUC, VIETNAM

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Lack of practical clinical expertise has been identified as a barrier to scale-up of HIV/AIDS prevention and treatment services in developing countries. The International Center for Equal Healthcare Access (ICEHA) offers clinical mentoring programs that link clinical HIV expertise from developed countries, through 6-12 week volunteer mentoring placement, with the need for expertise in resource limited settings. Clinical mentors build practical expertise among local health professionals by direct transfer of skills to their colleagues.

In January and February 2006, Dr Nick Medland from Melbourne was posted at the Thu Duc Outpatient Clinic (TD OPC), a new project of Family Health International and the Ho Chi Minh City AIDS Committee. It is the only free HIV service in a district of more than 350,000 people with one of the highest HIV prevalences in Vietnam.

TD OPC is a community-level service, occupying a single buiding in a suburban street. Staffed with dedicated nursing, medical, counselling and support staff, mostly new to HIV, it provides voluntary counselling and testing VCT, home-based care and medical care, and psycho-social support in a client-focussed manner.

The new clinic had a high and increasing patient load, with advanced HIV infection, significant medical and psychosocial challenges and high rates of tuberculosis co-infection. Mentoring covered clinical pathways, clinical and laboratory assessment, appropriate use of available pharmaceuticals, prophylaxis and treatment of opportunistic infections and use of clinical guidelines.

A dramatic increase in the confidence and effectiveness of interventions was observed. Extrapulmonary tuberculosis and the availability of antiretrovirals were the greatest outstanding challenges.

Physician clinical mentors have an immediate impact on the provision of HIV/AIDS treatment and prevention services in resource poor settings. A series of physician clinical mentors catalyze lasting changes in health systems.

P117
A SURVEY OF HIV INFECTION CONTROL KNOWLEDGE AND PRACTICES OF HEALTH CARE WORKERS IN TWO INDONESIAN HOSPITALS

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Infection control practices vary from country to country based on availability of resources, finance and knowledge. As part of the Indonesia-Australia HIV/AIDS Prevention and Care Project – Phase II (IHPCP), a survey of HIV infection control knowledge and practices of health care workers (clinical and non-clinical staff) was conducted at two hospitals in Indonesia (one based in Jakarta and the other in Makassar) in March 2006. The study was a questionnaire based survey, consisting of true or false and multiple choice questions.

A total of 82 forms were returned from clinical and non-clinical staff in both hospitals. The majority (96%) responded that Standard Precautions should be used for all patients, while 53 (65%) said they would use "more" Standard Precautions if a patient had HIV; 27 (60%) of clinical staff stated they would wear gloves when having direct contact with patients with HIV; 48 (59%) of all staff surveyed stated that bed linen used by a patient with HIV had to be washed separately and specially treated before it could be used again, while 11 (13%) said the linen should be discarded and destroyed; 53 (65%) stated that blood spills from patients with HIV had to be cleaned up differently than blood spills from other patients; and 22 (60%) of non-clinical staff said eating utensils used by patients with HIV had to be washed separately and differently from those used by other patients.

On the practice of hand washing, 33 (73%) of clinical staff stated they would wash their hands immediately before any direct patient contact, while 38 (84%) would wash hands after any direct patient contact. Over a quarter (27%) of all staff surveyed believed that if they wore gloves they did not have to wash their hands and only 44 (54%) would wash their hands whenever they got blood or other body substance on them.

In this survey health care workers of the participating hospitals reported unnecessary precautionary measures when they are aware of a patient's HIV status. These practices are inconsistent with Standard Precautions and reinforces the need for further education and training of health care workers.

P118
INJECTING DRUG USERS IN VIETNAM: AUSTRALIA'S ROLE IN CREATING PARTNERSHIPS AND SUPPORTING THE IMPLEMENTATION OF HARM REDUCTION STRATEGIES TO PREVENT THE SPREAD OF HIV

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The HIV epidemic in Vietnam is being fuelled by the unsafe methods of injecting drug users. There are various degrees of awareness and understanding of HIV in injecting drug users in Vietnam, with indications of a large knowledge gap in safe injecting practices and the rationale behind them. According to UNAIDS, injecting drug users (IDUs) comprise of 50-60% of reported HIV infections in Vietnam, and 28% of IDUs share equipment.

Vietnam has primarily criminalized injecting drug use, but has recently implemented pilot needle syringe programs. Needle syringe programs are one aspect of an evidence-based comprehensive harm reduction strategy which has proven to curb epidemics in other regional countries, such as Australia. They may also be a contact for other relevant HIV and illicit drug services, such as HIV and transmission education, drug substitution programs, voluntary counseling and testing, access to anti-retrovirals, and sexual health promotion, but may be restricted in access (such as prisons, where needle-sharing is common amongst inmates).

These initial NSP efforts in Vietnam should be supported through culturally and provincially relevant mechanisms, utilising expertise gained from successful harm reduction outcomes, as has been demonstrated by collaborations between public health services, legislative bodies, and law enforcement in countries such as Brazil and Australia, where HIV epidemics amongst injecting drug users have been minimized.

Harm reduction strategies in Australia have proven to increase the quality of life of injecting drug users, in addition to being cost-effective, and prevent further infection of HIV and other blood-borne viruses. It is a critical time to explore the potential benefits of creating harm reduction partnerships between regional governments that will provide a platform for shared knowledge in harm reduction, and decrease the stigma associated with injecting drug users.

NURSING AND ALLIED HEALTH POSTER ABSTRACTS

P119
A RETROSPECTIVE REVIEW OF CLIENTS OF CULTURALLY AND LINGUISTICALLY DIVERSE BACKROUNDS ATTENDING FOR SEXUAL HEALTH SCREENS

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The recent NSW Sexual Health Strategy emphasised the need to target clients from culturally and linguistically diverse (CALD) backgrounds because of increases in sexually transmissible infections (STIs). Nursing staff of the Division of Sexual Health have noticed, furthermore, that the uptake of services such as hepatitis A and B vaccinations and the levels of compliance with Australian screening guidelines appear to be lower among the CALD client group.

Ensuring that the health needs of CALD clients are effectively addressed is an integral component in the provision of holistic effective health care. As client advocates and health educators, nurses have a key role to play in ensuring appropriate and equitable access to care.

Our poster aims to provide an overview of the extent to which the sexual health needs of clients of CALD background are being met. In preparation for our poster, the medical records of clients of CALD background returning positive diagnoses for bacterial and viral STIs were audited retrospectively. Information was sourced on areas such as clients' reasons for testing for STIs; their eligibility for Medicare; whether they were symptomatic at presentation; their STI risk profiles; their screening and vaccination histories; their preferred spoken language; and whether an interpreter had been used for their consultation.

Our sample size is limited, and we have not audited the records of non-CALD clients or clients from other clinics. Nevertheless, it is hoped that issues of particular significance for clients of CALD background will be highlighted with the aim of improving service delivery. It is anticipated that the findings from our poster will emphasise some areas warranting special consideration for nurses and other clinicians working in the field of sexual health with clients from CALD backgrounds.

P120
BUSTING THE BLUES: SEVEN YEARS ON!

A Review Of Changing Programme Focus To Parallel Client Needs In Holistic Approach To HIV, Depression And Social Anxiety.

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Many medical and allied health professionals working in the area of HIV/AIDS management have consistently observed a high incidence of depression and anxiety in people living with HIV/AIDS.

Since its inception in 1999, the Blues Busters program has offered more than 150 HIV positive men strategies to enhance their skills in managing depression and anxiety. Blues Busters provides information on different approaches to dealing with mild to moderate depression and anxiety. The program is holistic in nature and provides information on different approaches to the treatment of depression and anxiety and is delivered in a strengths based best practice men's health model.

This review considers the requirement of allied health workers to adapt to the many changing needs of clients in respect of long-term HIV management due to antiretroviral medications. Workshop evaluations have ensured that the diverse and changing nature of living with HIV is considered in designing programs to respond to the broad client needs. This is particularly relevant when including a range of clients from the inner city environs, to outer metropolitan suburbs and regional areas.

P121
SEXUAL HEALTH NURSING IN QUEENSLAND – THE ROAD AHEAD

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Since 1999, Queensland Sexual & Reproductive Health Nurses (QSRHN) have been endorsed by the Queensland Nursing Council under the Sexual & Reproductive Health Endorsement - Drug Therapy Protocol (SRH-DTP). This endorsement is granted under the Provisions of Section 77 (3) of the Nursing Act 1992 and authorises QSRHN to practice in an expanded advanced clinical role including the supply of approved restricted drugs in accordance with the Health (Drugs and Poisons) Regulation 1996 (Section 175(4)).

QSRHN and key stakeholders in close collaboration with Family Planning Queensland (FPQ) identified that it was essential that a supporting mechanism for defining competency standards in relation to the SRH-DTP be developed in order to determine what is best practice for the QSRHN expanded scope of practice. It was also identified that standardisation of clinical practice was required to assist training and ongoing professional development of QSRHN and ensure competency of practice is achieved and maintained in accordance with best practice Health Management Protocols and the Health (Drugs and Poisons) Regulation 1996 .

This presentation will discuss the consultation process and close collaboration between Queensland Health and FPQ involved in the development, approval and implementation of the Queensland Competency Standards for the Advanced Sexual & Reproductive Health Nursing Officers and the Queensland Clinical Practice Guidelines for Sexual & Reproductive Health Nursing Officers incorporating Health Management Protocols. It will also highlight the progress since their instigation in 2005 and show how these two documents now form the basis for Griffith University Graduate Certificate in Sexual Health and Master in Advanced Practice (Sexual Health).

P122
CARING FOR PEOPLE WITH HIV AND/OR AIDS (PHA) WHO INJECT DRUGS – AN INDONESIAN HEALTH CARE WORKER (HCW) PERSPECTIVE

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[2] RS Penyakit Infeksi Prof. Dr.Sulianti Saroso, Jakarta, Indonesia
[3] RS Dr Wahidin Sudirohusodo, Makassar, Indonesia
[4] Kepala Pukesmas Kassi-Kassi, Makassar, Indonesia
[5] Kepala Pukesmas Jumpandang Barau, Makassar, Indonesia

In countries with high HIV incidence associated with injecting drug use (IDU), many PHA in health care settings are doubly discriminated against by HCWs. This may impact upon long-term prognosis as PHA are reticent to return for care, support and treatment (CST). The quality of care for PHA in these countries is affected by insufficient human and infection control resources, inadequate knowledge and skill in HIV/AIDS CST and harm reduction; and limited capacity for health services to maintain HCW safety.

As part of the Indonesian HIV/AIDS Prevention and Care Project a survey assessing HCW knowledge, attitude and practice towards PHA who were current or past IDU was implemented to nurses from two designated HIV/AIDS treatment hospitals and two community health centres. Forty-eight of fifty surveys disseminated were returned. Results showed that the majority of HCWs surveyed felt they had an 'average' knowledge about HIV/AIDS (69%) and harm reduction (65%). Although 69% of respondents felt comfortable in caring for IDU, most respondents felt that IDU were untrustworthy (71%), did not care for themselves (89%) and were aggressive or violent (67%). Only 40% of HCWs stated that they were comfortable caring for PHA and the majority (85%) were not comfortable caring for people who refused to have a HIV test. HCWs were also unsure about hospital policies relating to illicit drug use, their legal responsibilities and who was responsible for drug and alcohol assessment of patients. Identification of inpatient drug intoxication and withdrawal was mostly through change in patient behaviour. Treatment and management of patients withdrawing from illicit drugs usually involved one (or a combination) of: observation, psychological support, administration of analgesics or referral to another service. Survey results also indicated that pain was not often pro-actively assessed using quantitative tools (e.g. pain management scale) but was usually subjective, through complaints or requests for pain relief.

Results of the survey highlighted some of the barriers to the provision of comprehensive and non judgemental health care for PHA who use drugs. Key issues included HCW attitudes and lack of clarity regarding hospital policies and individual responsibilities towards PHA/ IDU triage, assessment and care.

P123
DIETITIANS IN HIV AUSTRALIA (DIHIVA) IN THE BEGINNING…

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The formation of the national Dietitians network, Dietitians In HIV Australia (DiHIVA), was initiated by Jane Anderson and developed by 16 HIV experienced Dietitians from around Australia in response to a need for communication and collaboration on a national level between Dietitians working with a HIV caseload. The group was formed independently of the Dietitian's Association of Australia (DAA) to enable membership of those Dietitians who are not registered with DAA.

Identified goals of the group include: to provide support for peers; to raise nutrition profile in the HIV community; to identify and standardise care, based on evidence-based practice, including maintenance of resources, practice and journal review; to share information on clinical, community and international activities; to collaborate on research and with existing interest groups (within Australia and internationally) and to have input into national research and policy development, such as with the Futures Studies.

In accordance with these goals an e-group was established and the following issues have been discussed, information shared and/or projects commenced regarding: a project newsletter providing information on HIV/AIDS Nutrition strategies in the Asian region (Albion St Centre), Journal reviews and links, Basal Energy Requirements, and a research project to review the nutritional services and information currently being collected (coordinated by M. Batterham, University of Wollongong).

It is envisaged that the members of DiHIVA will be recognized as leaders in the identification of nutrition-related community needs and gaps in service provision, in addition to being the driving force behind the provision and implementation of the highest quality, effective community-based initiatives and individual nutritional strategies.

This poster will provide information regarding the national interest group for Dietitians working with People Living With HIV/AIDS (PLWHA). The information presented in the poster will focus on the development, goals and proposed actions of DiHIVA, and how this will benefit PLWHA within Australia.

P124
NURSE INFORMATION SHARING AND RESOURCE E-GROUP

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The Albion Street Centre (ASC) is a major HIV/AIDS and Hepatitis Care and resource facility both nationally and within the Asian Pacific region. Albion Street Centre is often approached to host health care workers (HCWs) from these regions and provide educational programmes and clinical placement.

A large proportion of these health care workers who participate in programmes at the ASC are Nurses. Providing Nurses with these clinical opportunities has been well accepted, however, they often return home to where inadequate support or availability to resources may hinder ability to review and further develop skills acquired during their placement.

Consequently we plan to develop a method by which Nurses who had been to ASC could stay connected and have support to transfer what they have learnt to clinical practice in their region. One method in which this could be achieved would be through the initiation of the Nurse Information Sharing and Resource E-group. The literature, although limited, explains the advantages of distance communication through chat rooms by enriching learning opportunities, enhancing communication and improving practice.

It was therefore hypothesised that the facilitation of an E-group that supported Nurses may be beneficial in regions where professional and/or geographical isolation are evident. This method could provide the mechanism to discuss issues, exchange protocols, carry out improvement activities and notify members of conferences and courses. Furthermore, through clinical and evidence based information sharing, improvements in Nursing professionalism and practice would be achieved and discrimination when caring for people living with HIV/AIDS reduced.

This poster presentation displays how Nurses can develop this form of networking and the positive implications it will bring to its members especially pertaining to Nursing based support on clinical issues in HIV/AIDS, hepatitis and STIs.

P125
NEUROPSYCHOLOGICAL ASSESSMENT IN A COHORT OF HIV POSITIVE MEN

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Over the last decade, there has been increasing research and clinical interest in the effect of HIV disease progression on the central nervous system (CNS) as it relates to cognitive, social and occupational functioning. In the field of neuropsychology, there has also been particular research interest in clarifying the domains of cognitive functioning affected by the virus at different stages of illness progression and their correspondence to other medical markers of HIV progression. There has also been interest in identifying neuropsychometric test protocols that are sensitive to changes in cognitive functioning, as well as clarifying the functional implications of CNS penetration.

This study consisted of reviewing the neuropsychological testing results of 44 HIV positive men who had been referred by their health care provider for neuropsychometric assessment at the psychology unit of an inner-city community health clinic. An internal audit of all neuropsychological assessments was carried out with the aim of a) identifying areas of cognitive change commonly observed in individuals who are HIV positive, b) to identify neuropsychometric tests that are sensitive to these areas of change, c) to inform neuropsychological assessment procedures within the psychology unit, and d) examine outcomes of the assessment. The results indicated considerable variability in neuropsychological functioning across HIV positive clients. The results of the audit also revealed the need for greater standardisation of assessment tools and reporting procedures at a service level. Overall, however, the findings indicated that in a HIV clinic setting, a neuropsychology assessment provides helpful additional information for clients and their health care providers regarding client's current cognitive functioning. The results of the assessment may also assist in informing medication regimes, work and study options, or the capacity to make decisions regarding public health issues, or personal living and financial arrangements. These findings provide support for the utility of neuropsychological assessment in providing additional information for health practitioners that may inform better client care.

P126
ROLE-BASED REHABILITATION: A CONCEPTUAL ILLUSTRATION OF OCCUPATIONAL THERAPY IN HIV/AIDS CARE

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[4]Positive Central, Redfern Community Health Centre, Sydney, Australia

Advances in medicine have resulted in a shift in the allied health focus of care with people who have HIV/AIDS from a palliative model to a rehabilitation model. Occupational therapists working in the Sydney area addressed this shift by establishing a core focus group that aimed to re-conceptualize practice and articulate clearly what services occupational therapy provides and could provide to best meet the performance and participation needs of clients with HIV/AIDS at any level of health and living. A spiraling and reflective action research design was used to structure this process. The core services being provided were listed, contextual constraints identified and views about what services could be developed were discussed. A literature review was carried out and the theoretical and research evidence base for practice established. This was followed by a conceptual modeling process whereby views about occupational therapy in general and practice that is specific to HIV/AIDS were listed, synthesized, categorized and illustrated schematically. The result is a framework for practice is best described as 'role-based rehabilitation'.

Role-based rehabilitation is a client-centred, occupation-focused perspective on practice where a client's past, present and future roles and role performance needs form the pivotal point around which services are organized. Contextual variables that impact on role performance are also considered including physical, sociocultural and political-economic factors. Although specific to occupational therapy, the key assumptions and processes reflected in this model may be of interest and relevant to all allied health personnel.

The purpose of this paper is to present this model for practice and illustrate its use in the development of comprehensive and integrated occupational therapy services across the spectrum of HIV/AIDS care including acute management, primary rehabilitation and community-based programs, as well as in palliative care.

P127
IN-HOUSE CLIENT AUDIT OF SEXUAL HEALTH SERVICES

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The Albion Street Centre (ASC) introduced sexual health screening to its existing services in the late 1990s. More recently, and to formalise this service, it has been necessary to establish the ASC Division of Sexual Health (DoSH). The creation of DoSH has enabled the monitoring and administration of sexual health service provision while providing the foundation to formalise, support and promote professional development.

The NSW Government Department of Health 'STI Strategy / 2006 – 2009' highlighted the need for further planning, expansion and implementation of screening and education programmes within existing Human Immunodeficiency Virus (HIV) and Sexually Transmitted Infections (STIs) services. To address this strategy the nurses at ASC undertook a client focused survey to assess the effectiveness of services provided by DoSH.

The survey combines both client satisfaction and the effect of sexual health related information, behaviours and understanding of STIs. Client satisfaction surveys in the past have been found to provide valuable information when planning the delivery of client care services, enabling an expanded and diversified assessment for the healthcare providers to offer improved client-friendly services.

The survey has been designed to capture client responses from several areas including; client social demographics; sexual health history and STI knowledge base pre- and post-screening; safe sex practice and health promotion awareness; and service provision client assessment. These areas have been predominately targeted to assist in assessing clients' perceptions of service provision and clients' needs with the aim of improving future sexual health education strategies.

This poster illustrates the responses of clients and discusses the aims and outcomes of the current services. In addition, the information gathered will assist in providing an ongoing comprehensive STI service.

P128
ASSESSMENT OF 'DOING' IN AIDS DEMENTIA CARE

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Occupational therapists who work in residential and supported living contexts with clients who have AIDS Dementia Complex (ADC) face unique problems in identifying 'doing' goals when the potential to 'do more' is questionable. In particular, therapists find it difficult to identify specific task performance goals, measure progress and provide objective evidence of outcome when change is slow.

The purpose of this paper is to present an assessment method being used by occupational therapists working in Sydney with clients who have ADC, and to demonstrate how this method is being used to set goals, tailor intervention to the specific performance needs of clients and to measure program effectiveness.

The assessment method is derived from a standardized, criterion-referenced occupational therapy tool known as the Perceive, Recall, Plan & Perform System of Task Analysis (PRPP System). Stage One of this instrument is based on procedural task analysis methods whereby everyday tasks are broken down into the key procedural steps required for task completion. Clients are then observed performing identified tasks and errors noted using the protocol of the assessment. These may include errors of omission (a step is left out), errors of accuracy (a step is performed inaccurately), errors of repetition (a step is repeated too many times), or errors of timing (too much time is spent on a particular step). Percentage calculations are then carried out to determine a mastery score. Sub-scores are also calculated to determine the percentage impact of error type. Therapists use mastery scores to set specific task performance goals and measure change. Error typology scores are used to identify the aim and focus of intervention as well as specific instructional strategies required to achieve improved mastery.

A case study of a client with ADC performing the familiar everyday tasks of preparing a shopping list and shopping for food will be used to illustrate key points in this paper, and demonstrate how this assessment method contributed to the design of ongoing therapy for this client.

PRIMARY CARE POSTER ABSTRACTS

P129
PRIMARY HEALTH CARE PROJECT ON HIV AND DEPRESSION

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The Primary Health Care Project on HIV and Depression commenced in 2006 with funding from the National Health and Medical Research Council General Practice Clinical Research Program.

The three-year project aims to:
(a) describe, measure and compare depression among homosexual men – with and without HIV – and hetero sexual men, and identify the factors associated with de pression in these three groups;
(b) assess the manner in which patients' depression is man aged by General Practitioners (GPs) and by the patients themselves, especially those living with HIV;
(c) develop the research capacity and skills of GPs in the as sessment and management of depression in their patients, particularly among people living with HIV (PLWHA).

The project will be conducted in General Practice clinics with a high caseload of HIV-positive patients in Sydney, Adelaide and the Northern Rivers/North Coast area of NSW. The study methods comprise semi-structured interviews with HIV s100 GP prescribers and their patients, questionnaires completed by male patients attending clinics, questionnaires completed by s100 GPs following consultation with consenting patients, and data extraction forms completed by clinic/research nurses or GPs from the clinic notes of selected consenting patients.

Expected benefits to the community include:

- A detailed picture of the complex interactions between depression and HIV infection;
- The building of research capacity among participating health care professionals;
- A set of recommendations specifically relevant to the assessment and management of depression in PLWHA for health care professionals; and
- The development of education courses and training manuals for general practitioners working with PLWHA and the production of a web-based self-help management tool for PLWHA.

The project represents a unique collaboration between the National Centre in HIV Social Research at The University of New South Wales and the Discipline of General Practice at The University of Sydney, along with General Practitioners in New South Wales and South Australia, and the following community partners: Australasian Society for HIV Medicine (ASHM); National Association of People Living with HIV/AIDS (NAPWA); Australian Federation of AIDS Organisations (AFAO); and the Clinical Research Unit for Anxiety and Depression (CRUfAD)

P130
PERCEPTION, CONCERNS AND EXPECTATIONS OF DOCTORS, NURSES AND HOSPITAL MANAGERS ON HIV/AIDS PROGRAM INTRODUCED TO THE TEACHING HOSPITAL OF UNIVERSITAS KRISTEN INDONESIA, JAKARTA

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Department of Public Health, Faculty of Medicine–Universitas Kristen Indonesia, Jakarta.

HIV/AIDS cases in Indonesia are increasing every year, and injecting drug users (IDUs) contribute the biggest number of the cases, especially in big cities, such as Jakarta. The Teaching Hospital and the Faculty of Medicine of Universitas Kristen Indonesia (UKI) prepare to become institutions that provide good service on care support and treatment of HIV/AIDS and to equip the medical students with competence of dealing with patients with HIV/AIDS.

Prior to implementation of programs, study was carried out to learn the perception, concerns and expectations of the health personnel in the hospital and the faculty of medicine. Hundred and thirty nine respondents, consisting of general practitioners, specialists, medical lecturers, paramedics and hospital managers, were assessed using a questionnaire through a descriptive, cross-sectional method.

Around 97% respondents are aware of the category of high risk people and 70% thinks that masks, gloves and special clothes are essential when they engage with patients. On universal precaution, around 97% uses disposable syringe to prevent the spread of HIV/AIDS. Around 99% feels it is necessary to have guidelines to take care of patients with HIV/AIDS. Moreover, 78% is ready to undergo an HIV test. Also 97% respondents agree topics on HIV/AIDS should be integrated to the curriculum of medical faculty.

Although most of the respondents are seemingly well informed with HIV/AIDS, there is a gap in the capacity and capability in dealing patients with HIV/AIDS. Trainings, apprenticeship in different hospitals, manuals and guidelines for hospital use, and learning modules for medical students, and good network are, recommended to speed the learning process in dealing with HIV/AIDS.

PUBLIC HEALTH AND PREVENTION POSTER ABSTRACTS

P131
COMMUNITY AND FAMILY SUPPORT FOR (EXCLUSIVE) BREASTFEEDING

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Exclusive breastfeeding is an important public health measure for child survival and HIV prevention in East Africa. Yet few women follow recommended health policy to exclusively breastfeed in an optimal way or for sufficient length. Study participants recommended what can be done to support women to exclusively breastfeed in the context of HIV prevention.

These results are part of a study exploring the role of social ties in preventing post-natal transmission of HIV to infants. 20 key informants and 10 HIV-positive mothers and their relatives were interviewed. 13 focus group discussions were conducted with community members in Central Tanzania.

Some health workers, traditional midwives and young mothers had high levels of knowledge about breastfeeding. There was little knowledge about exclusive breastfeeding amongst male and older respondents. Crying in babies is often (mis)understood to indicate unsatisfied thirst and is resolved with additional water. Elder female relatives and traditional midwives are influential in teaching new mothers about breastfeeding.

Most health workers believed an HIV-positive woman should not choose to breastfeed. Yet when exclusive breastfeeding was discussed as a possible option, particularly in combination with using antiretrovirals, others in women's social networks expressed relief that children of HIV-infected mothers could still breastfeed relatively safely.

Breastfeeding conceals a woman's HIV status from the community. Even so, family members could undermine the exclusivity of the method, due to shared child care practices, unless they are educated and informed of her HIV status. Breastfeeding was perceived as particularly suitable when household resources are low. However, increased maternal nutrition is needed to support exclusive breastfeeding and live with HIV infection. Hence participants questioned the ability of women who are symptomatic, stressed or resource-poor to produce adequate milk to practice breastfeeding exclusively.

Trust in breastfeeding to prevent HIV transmission is built through in-depth education, counselling and witnessing positive outcomes of breastfeeding. Participants argued that information about exclusive breastfeeding could not be convincingly circulated within networks but needed to be taught in-depth to all in the community in an interactive way. Family members may need to know a mother's status to avoid undermining exclusive breastfeeding.

P132
THE IMPACT A SMALL CLINIC IN THE SOUTHERN 'BURBS' HAS ON PEOPLE LIVING WITH HIV / AIDS

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The South Eastern Illawarra Health Area of Sydney provides a unique service to people living with HIV/AIDS (PLWHA). An increasing number of clients live outside the inner city area and often find difficulties utilising the services and networks designated within the inner city.

The unique multidisciplinary structure of the team ensures both continuity and availability of links to all services and support at all times, acting as a single fail safe gateway to all clients.

Waratah Clinic provides both personal contact and a unique non face to face support to PLWHA in the region. Special services can also be accessed via referral by the multidisciplinary team thus not leaving the PLWHA feeling "short changed".

The nursing, allied health and medical team members have evolved a local multi-disciplinary approach focusing on advocacy to meet the broad client needs. By establishing this base and rapport, and ensuring that all team members are informed of all actions, a quality service is delivered with the client's needs assessed on a regular basis.

The nursing role expands from educating, resourcing and counselling, to advocating and initiating care out of normal clinic hours. Feedback has identified that our service plays an integral part in PLWHA within the St George area. The Clinic proves to be an essential service for these clients and resource, delivering a professional relaxed clinical environment, where the client feels comfortable with staff members from all disciplines and is attending a clinic that individualises responses as needed and has a major impact on their wellbeing and satisfaction.

P133
POZ GUYS AND STI'S IN NSW MOBILISING POSITIVE MEN ON HIV AND STI PREVENTION

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There are a range of impediments to talking directly to gay men with HIV about HIV and STI prevention. In the current climate of increased and increasing STI transmission the need to mobilize gay men with HIV to take care of their sexual health is highlighted. The delivery of generic health promotion campaigns – that speak to HIV positive and negative gay men collectively – are not viewed as the most effective way to target behavior change in gay men with HIV. This presentation will present the challenges faced and solutions found as ACON has moved to develop campaigns that speak directly to HIV positive gay men about HIV and STI prevention.

P134
VCT COMBINED WITH CARE: BETTER ACCEPTANCE YIELDED

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People face difficulties in accessing VCT services due to low risk perception, inadequate knowledge, indirect costs, time constraints and stigmatization. Field experience shows that one of the major reasons is the unavailability of any care services after diagnosis. Available facilities also are simply limited to the OI prophylaxis only. Thus people already shocked and depressed being positive are further tensed due to the unavailability of other services.

The AMDA AIDS Prevention and Care Project in its true sense demonstrates that individuals who can access effective care are the most likely to get an HIV Test. the operations of STI/VCT ad Care clinics in a single site has had a positive impact on the demand for VCT. Though the already existing STI clinics started in 2001 paved a smoother path for VCT (in 2004) since high risk populations were already visiting these centers the further addition of Care Services was accepted as a lifeline by PLHAs.

At present, Community home based care (CHBC) is also carried out for PLHAs screened at AMDA/VCT, Makwanpur district. CHBC services complements with STI/VCT/Care services as PLHAs receive psychosocial support, nutritional support, primary health care, and necessary treatment for common OI treatment. Complicated cases are referred to the care team and or higher centre as needed, referral for CD4 count and ART services are also done, all expenses of travel and test fees paid by the project.

As a result, 327 accessed VCT, of whom 24.46% tested positive and 100% PLHAs are receiving Clinical Care and CHBC services regularly. Community acceptance of not just care but also VCT for those not diagnosed yet and reduction in stigma and discrimination was achieved.

The valuable lessons learnt were that interaction by, care givers and community increases risk perception, VCT supported by Care and Support Services establishes VCT as entry point for HIV prevention, rural people are open to HIV testing when a hope lies that they shall not be abandoned with the results but will receive some kind of care, home based counseling is accepted and community Care-givers are better received.

P135
SOCIAL CAPITAL IN HIV PSYCHOTHERAPY MOBILISING PROFESSIONAL COUNSELLORS TO DELIVER VOLUNTEER-BASED COUNSELLING

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The provision of medium and longer-term counselling psychotherapy has been identified as a major gap in service provision to people with HIV/AIDS across Australia and in New South Wales. In 2005, ACON moved to resolve this gap in Sydney by establishing a pilot program utilizing professionally trained counsellors from within affected communities who deliver volunteer-based medium-term counselling to people with HIV/AIDS. What are the challenges in the provision of medium term counselling using volunteers from affected communities and how have we overcome them? What issues emerge in counselling over the longer term for people with HIV/AIDS and how do those issues differ from those presented in brief, solution-focused psychotherapy? This session will present the parameters of this pilot project, the unique challenges faced and solutions found through the formal evaluation of the pilot program.

P136
RE-ATTENDERS FOR NON OCCUPATIONAL POSTEXPOSURE PROPHYLAXIS – EXPERIENCE FROM A TERTIARY REFERRAL CENTRE, AUSTRALIA

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The Victorian NPEP Service was launched in August 2005, resulting in increased awareness and availability of NPEP in Victoria. This is likely to result in an increase in NPEP prescription, and potentially also an increase in those using NPEP on more than one occasion. The aim of this study was to review NPEP presentations at The Alfred in an attempt to identify factors associated with repeat presentation.

A retrospective case record review was carried out of all patients attending The Alfred on more than one occasion for NPEP between December 2000 and August 2005. A total of 611 patients presented for NPEP during this time; fifty patients (8.2%) presented more than once with a total of 70 representations. The majority were male (n=47, 94%), with an average age of 34.7 (range 18-58). Of these 50 patients, 33 attended twice, 13 three times and 4 patients attended 4 times. The time between attendances varied between 1 and 28 months, with an average of 11 months. A high proportion of the exposures (23, 32.8%) occurred at a sex on premises venue (SOPV).

Partner data was available for most presentations. The source partner(s) was unknown in 53 (75.7%) cases and known in only 13 (18.6%) cases. The HIV status of the source was not known for the majority of exposures (44, 63%), however, twenty (28.6%) exposures occurred with a partner who was known to be HIV positive. Condom use was well documented and demonstrated low rates of use; in 42/70 (60%) representations condoms were not used. Study of patterns of condom use demonstrated little change in patterns of use between initial and subsequent presentations.

No HIV seroconversion was documented although follow-up was poor in this group of patients; no follow up was documented in 36% at 4 weeks, 53% at 3 months and 3% at 6 months. In 17 (24.3%) cases there was no documented follow-up at all. Although this is a retrospective study and the quality of the data is limited, it suggests that for this group of patients, standard education and counselling practices may have limited success. Patients in this group need to be identified and more intensive supports and interventions offered.

P137
IMPACT OF SOME SOCIAL PRECONCEPTION ON SEX DURING MENOPAUSE PERIOD OF WOMEN IN HANOI

The Luong, Nguyen

I. Preamble

Knowledge of menopause in Vietnam still is a challenge for both researchers and the community. The change in sex during menopause period is an issue, which was mentioned in many international studies and needs to pay attention to but so far this issue has not been studied in Vietnam yet.

II. Objective

- To study some changes in sex during menopause period of women in Hanoi City
- Review of the impact of the cultural factor on sex

III. Subject and Method of the study

1. Subject:

The subject of this study is women who have natural menopause for 2 years and above and now are living in Hanoi City. This study does not cover the women, who have unnatural menopause due to some other reasons such as ovariotomy, hysterectomy or radioactive ray treatment.… This research also does not include too old unwalkable women and those women, who underwent hormone replacement treatment.

2. Method:

A cross-sectional survey, which combines description and comparison, was carried out in Hanoi City. The data were processed in computer by software EPI-INFO 2002 and AnSWR5

IV. Result :

1. Characteristics of the Subject of this study

1,006 women participated in this research have average age of 59.36 ± 6: The mean of menopause age is 47.87 ± 3.4. Menopause in women aged from 46 to 50 years makes up highest percentage (53.7%).

2. Some troubles in sex and reproductive organs

The menopausal women have sex life are 16.1%. This rate is reduced with the time of menopause. The differences are statistically significant. ($P<0.01$)

Among the menopausal women having sex life, the rate of women with lessened sexual desire is very high (95.8%).

The rate of menopausal women having transitional dyspareuria is 61.7%, this rate of the groups having menopause for ≤ 5 years, 5-10 years and >10 years is 58.3%; 59.1% and 71.4% respectively.

The rate of menopausal women having genital prolapse in our study is 11.3%. Among them the women having anterior prolapse make up highest percentage (4.4%). Though it has not yet affected the work and life, but the anterior prolapse causes urinary incontinence as well as a lot of troubles in daily activities. We also made statistics that the rate of vaginal prolapse of third degree was 1.4% and this symptom almost happened with the group having menopause for more than 10 years. It means that the longer menopause period is, the more serious vaginal prolapse becomes.

3. Impact of social preconception on sex issue

The social conception on the sex-related issues of this group is negative. Even the subject of this study (72,4%) also consider the sex in these ages as unacceptable. Despite that there is still a demand on sex and many difficulties in sexual intercourse but due to social preconception, the approach to sex supporting service still remains low (0,6%).

V. Recommendation

It is recommended to have a strategy for efficient interference in order to change the social preconception on sex so that the menopausal women can improve their life quality

SOCIAL RESEARCH POSTER ABSTRACTS

P138
THE COST-EFFECTIVENESS OF NON-OCCUPATIONAL POST-EXPOSURE PROPHYLAXIS (NPEP)?

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NPEP programs have been introduced for high risk sexual and injection exposures in NSW and Victoria in recent years. Economic analyses are part of the decision making process, in tandem with consideration of ethics and evidence-based medicine, about how to allocate scarce resources to maximise health outcomes. However there has been limited discussion to date of the cost-effectiveness of NPEP.

Results of a literature review of cost-effectiveness studies of NPEP and other HIV prevention interventions for men having sex with men (MSM) showed that a PEP program in San Francisco cost US$14,450 per Quality Adjusted Life year gained(QALY) and US$223,270 per HIV infection averted. NPEP after receptive anal sex with a partner of unknown or HIV+ status was cost-saving.
However NPEP for insertive anal sex cost more than US$500,000 per QALY gained and for oral sex over US$11 million per HIV infection averted.

Individual behaviour interventions such as safe sex skills building and small group sessions were the most cost-effective at US$5,000 and US$36,000 per HIV infection averted, while peer-leader community level programs cost around US$70,000 per HIV infection averted.

Key factors affecting the cost-effectiveness of NPEP included the transmission probability of the risk behaviour and the proportion of known HIV+ source partners in men accessing NPEP.

NPEP for men reporting recent receptive anal sex appears cost saving.
When compared to individual behaviour modification and community level interventions, NPEP programs for risk behaviours such as insertive anal sex and receptive oral sex appear relatively costly interventions.
The author will discuss possible research and policy responses as well as the limitations of the current evidence base.

P139
HEALTH CARE WORKERS AND HEPATITIS C DISCRIMINATION: IS CONTACT ASSOCIATED WITH LESS PREJUDICE AND BETTER TREATMENT?

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People with hepatitis C (HCV) face stigma and discrimination because of the association of this disease with injecting drug use (IDU). The small but growing body of social research in this area consistently describes the negative experiences that people with HCV encounter from health care professionals. This is particularly worrying because HCV positive people may have regular contact with the health care system. Since the publication of the C Change, the report of the Anti Discrimination Board of New South Wales conducted in 2001, there has been an emphasis in Australia on lowering HCV related discrimination amongst health care professionals. Consistent with a substantial literature in social psychology, research into HIV/AIDS has shown that contact between health care workers and a stigmatised group tends to lower negative attitudes and increase positive interactions with that group. The current study was conducted to examine the general medical treatment experiences of people with HCV compared with the treatment of people without HCV attending the same treatment facilities. Sixty health care workers (doctors and nurses), 120 of their clients with HCV (acquired from injecting drug use) and 120 of their clients without HCV (and non injecting drug users) attending the same treatment services were administered a series of instruments assessing attitudes and treatment experiences. Facilities such as liver clinics, hospital drug health departments, and drug and alcohol treatment services were chosen as recruitment sites to assess whether greater contact with the target population would result in reports of more positive treatment experiences. Findings suggest that increased health care worker contact with clients with HCV is associated with less prejudicial thoughts and feelings towards injecting drug users and HCV positive individuals. Despite this favourable finding, HCV positive clients reported less satisfaction than HCV negative clients with their health care experiences and less positive feelings towards their health care workers.

P140
HIV AND SEXUALLY TRANSMITTED INFECTION (STI) TESTING CAMPAIGN FOR THAI GAY MEN: A RESPONSE TO THE CHANGING FACE OF GAY SYDNEY

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The Australian gay community has become more diverse. Previous research highlighted that gay men from Asian backgrounds are less likely to have had HIV and STI tests, and less likely to know the HIV status of their sexual partners compared to their Anglo-Celtic counterparts. With the recent increase of HIV notifications among Thai gay men in Sydney, a partnership of health services was formed in 2005 to develop and implement culturally appropriate strategies to increase HIV and STI testing rates in this priority sub-group of men who have sex with men (MSM).

This paper will describe the development and evaluation of the Thai gay men campaign implemented in April 2006.

Following consultations with the Thai community, strategies to target this group were identified. These included ethnic and gay media work, resource development and distribution, community networking, and working with doctors seeing Thai MSM.

Two mainstream gay media and two Thai media publications published three articles about STI and HIV testing and published advertisements in Thai language. Resources relevant to Thai gay men included information cards, posters and pamphlets. These were distributed to community gateways including shops, hair salons and restaurants.

To ascertain the impact of the campaign, we reviewed the number of calls made to the sexual health information line listed on all campaign materials, the number of Thai gay men attending the sexual health clinics and the qualitative outcomes of focus groups following the campaign.

P141
PILOT OF NON-INVASIVE (ORAL FLUID) TESTING FOR HIV WITHIN A CLINICAL SETTING

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There has been extensive experience within Australia in the use of non-invasive testing for other sexually transmissible infections, particularly urine collection for the identification of chlamydia and gonorrhoea. The ease of such testing has widened the geographical and social range of outreach for early detection within core populations. Non-invasive testing has found acceptability within social settings as disparate as rural indigenous communities, high schools and urban Sex on Premises venues. However, the application of non-invasive testing to HIV has not been investigated within the Australia setting.

To assess the potential of oral fluid testing for HIV as an adjunct to outreach surveillance or epidemiology studies, the Brisbane Sexual Health & AIDS Services and QHPS conducted an evaluation of the Orasure HIV collection system and assay within a clinical setting- a limited study comparing oral fluid collection with conventional phlebotomy performed in parallel. The study was designed to demonstrate whether the Orasure system was comparable in sensitivity, specificity, laboratory processing to conventional HIV blood testing.

200 known HIV positive males were recruited through the AIDS Medical Unit (AMU), an ambulatory HIV/AIDS treatment centre located in the inner city of Brisbane, and offered oral fluid testing. 200 males of unknown HIV status (presumed negative) and identified as men having had sex with men were recruited through the Brisbane Sexual Health Clinic (BSHC) and offered oral fluid testing in addition to standard blood testing for HIV as part of their routine sexual health checks. On completion of the specimen collection, participants recruited through the Brisbane Sexual Health Clinic were asked to complete a brief written questionnaire assessing their response to the oral fluid collection and preference between blood and oral fluid collection.

The performance of the Orasure HIV test and participant reactions to oral testing will be reported.

P142
THE DEVELOPMENT OF A SEXUAL RISK BEHAVIOUR SCREENING TOOL: RAPID ASSESSMENT – PSYCHOLOGY, ALCOHOL AND DRUGS (RAPAD)

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Since 1999, increases in HIV and STI notifications in Victoria have been a major concern. Previous research has shown that mental health problems such as mood disorder (depression, dysthymia) and drug and alcohol use may lead to increased sexual risk taking behaviours. Although many validated tools exist to measure mental health problems, drug and alcohol use and sexual risk taking behaviour, no tools currently exist which incorporate all three domains. The aim of this study was to examine the predictors of risk taking behaviours for HIV/STI transmission in men who have sex with men (MSM); and to develop and validate a practical clinic based assessment tool that will identify MSM at risk of HIV/STI transmission.

Participants (HIV positive and negative MSM) complete a structured diagnostic interview (Mini International Neuropsychiatric Interview [MINI]), as well as a depression screen and sexual risk behaviour questionnaire. STI test results act as a biological measure of sexual risk behaviour. A five minute follow-up phone call three months after the initial interview records sexual risk behaviour and drug/alcohol use since baseline.

Baseline results: Sixty MSM have been recruited to date having an average age of 42 years, with 75% of the cohort being HIV positive. Twenty-five percent have been diagnosed with a current major depressive episode, and a further 12% with dysthymia. The sexual behaviour questionnaire revealed that 3/4 of participants reported three or fewer sexual partners in the previous six months. Forty-five percent of participants reported not using a condom the entire time with their most recent sexual partner.

Further testing and additional analysis will indicate any relationships between baseline measures of mood disorder and drug/alcohol use and sexual risk behaviour at follow-up. The development of the RAPAD screening questionnaire will also be further explored.

P143
ANXIETY, BELIEFS AND COGNITIONS: THEIR ASSOCIATION WITH SEXUAL RISK TAKING IN HIV SERODISCORDANT GAY MALE RELATIONSHIPS

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This study looked at unsafe sex practices in HIV serodiscordant relationships and the role psychosocial issues, particularly beliefs and cognitions amongst PLWHA and their negative partners play.

Subjects were gay males (not partner matched) in HIV serodiscordant relationships. 76 participants; (37 positive, 39 negative) completed short response questions regarding their relationship, risks and demographics and the following scales: Depression, Anxiety and Stress Scale ($DASS^{21}$); Beliefs Scale (B scale); Mental Adjustment to AIDS Questionnaire (MAAQ); Primary Communication Inventory (PCI); Self-efficacy Scale (SE); Sexual Risk Cognitions Questionnaire (SRC); and Mental Adjustment to HIV Survey.

HIV positive men had significantly higher overall anxiety scores ($DASS^{21}$, $p=0.01$), lower SE scores ($p=0.002$) and higher HIV related anxiety on the physiological arousal, sexual inhibition and fear around HIV/AIDS scales of the MAAQ ($p=0.05$, $p=0.034$, $p= 0.012$) when compared to the HIV negative men.

Forty-nine percent (49%) of participants identified unprotected anal intercourse (UAI) and/or oral sex (with/without ejaculation) in their relationships. These men had higher SRC scores ($p=0.001$) and nonverbal communication scores (PCI, $p=0.04$), faulty beliefs regarding viral load and sexual positioning (B scale) ($p=0.02$), rated maintaining safe sex as more difficult ($p=0.045$), and the HIV positive partner had been diagnosed longer ($p=0.016$). Of those who had UAI vs. those engaging in oral sex alone, the UAI group found it harder to disclose HIV status ($p=0.053$) though had significantly fewer occasions of UAI than oral sex ($p<0.005$).

The general anxiety of positive men in HIV serodiscordant relationships appears to be higher than that of negative men, and particularly anxiety regarding HIV transmission. Risk taking in serodiscordant relationships appears to be related to the beliefs and cognitions around risk and the difficulty felt in maintaining safe sex practices. These are key areas for practitioners to address in working around risk taking in serodiscordant relationships.

P144
HIV-POSITIVE MEN WHO HAVE SEX WITH MEN (MSM) THAT REPORT 'FISTING' HAVE POORER SEXUAL HEALTH. WHY?

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'Fisting', usually thought of as an esoteric sexual practice, primarily among MSM, provides limited actual potential for STI/HIV transmission, yet numerous recent reports have linked fisting with outbreaks of infectious syphilis, acute Hepatitis C, lymphogranuloma venereal (LGV) and HIV-seroconversion. This would suggest the need for a re-examination of 'fisiting' to better understand its importance in sexual health of MSM.

Cross-sectional study of 408 HIV-positive MSM attending a central London HIV-outpatient clinic between July 1999 and August 2000. Participants completed computer-assisted-self-interviews (CASI) detailing their two most recent sexual episodes (within the last 6 months) involving different partners. 'Fisters' (participants with 1+ report(s) of insertive and/or receptive fisting with the most recent or second most recent sexual partner) were compared to other men ('non-fisters') in relation to sociodemographics, recent sexual health, drug use, sexual partnership and other behavioural risks.

In total, 13.5% (n= 55) reported 'any fisting' with either the most recent or second most recent sexual partner [insertive fisting 11.8%; receptive fisting 2.2%]. Men who reported 'any fisting' were younger than 'non-fisters' (mean ages: 36.1 and 39.1 respectively, p=0.009), more likely to be asymptomatic (p=0.006), but to report an STI diagnosis/es in the last year (p=0.012). In respect to sexual networks, 'fisters' were significantly more like to have primary partners (p=0.042), and also to report sexual episodes with multiple partners (p=0.011). Behaviourally, 'fisters' reported more unprotected anal intercourse (p<0.0001); rimming (p=0.042); use of sex toys (p<0.0001) and multiple recreational drugs (p<0.001) in the context of a single sexual episode, than the other men.

The link between self-reported fisting and generally poorer sexual health in this sample seems to be explained by the strong correlations between fisting, partnerships and other behavioural risks in the context of single sexual episodes.

P145
PROVIDING ANTIRETROVIRAL THERAPY FOR AN IRANIAN HEALTH INSURER: ASSESSING THE COSTS

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The purpose of the study was to determine a stable long term premium that should be charged bye an Iranian health insurer to provide antiretroviral therapy (ARV), along with associated doctor consultation, hospitalization and administration costs, to its AIDS patients.
Methods were based on the demographic projections and the expected costs of ART, hospitalization, doctor consultation and additional costs we were able to assess a long term sustainable premium that health insurers in Iran could charge to provide ART members.
We estimated that the fund's current (2003) average HIV prevalence rate is 0.009%. Based on high degree of variability of the premium on differing prevalence rates, drug costs, medical inflation and the need for to build up adequate solvency margins, we recommend that the fund charge a monthly premium of 20758200 Iranian Rials per principal increasing with inflation, this premium varies by industry and amounts to 10440 Iranian Rials for an average family.
We demonstrated that for a moderate increase in health insurance premium, health insures in Iran could afford to provide ART to its members.

P146
HIGH RISK BEHAVIOR BLOOD DONORS THREATEN BLOOD SAFETY IN KHUZESTAN PROVINCE

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Because the blood transfusion is the important mode of infectious agents transmission, the blood safety play great role in public health. In the first step of provide blood supply, because the window period in all infectious disease especially hepatitis and HIV, blood donors selection has vital role. Almost all the sexual transmitted diseases such as HIV and hepatitis B are asymptomatic and can be transmitted through the blood product. Recognize the high risk behavior blood donors help us to increase the blood safety and the potential risk factors.

In this cross sectional study we studied the21392 blood donors admitted to Ahwaz blood transfusion center by non random simple sampling and after reading the educational brochures about transfusion transmitted diseases and response to physician answer , physical examination and hemoglobin check if hadn't proper characters for blood give rejected temporary or permanent .[19659(91.9%) male, 1733(8.1%) female; 17-65 years age ,20-24 y 28.7% and 25-29 y 21.9 %;11114(52%) married,10278(48%) single;10298(48.1%) free job, 3879(18.1%) staff, 2890(13.5%) no job or housekeeping job,1328(6.2%)student, 1201(5.6%)military].

We found that the major cause of rejection is high risk behavior 44.8 %(9593/21392) and after then: hyper or hypotension12.6 %(2685/21392), medication 9.5 %(2028/21392), 8.6 %(1840/21392).we found significant difference between age, sex, marital status, job, education and cause of rejection. ($p<0.05$)the high risk behavior was more found in single, low educational level ,free job and 20-29 years old blood donors. The female blood donors were safer than male about the high risk behavior.
Because the hepatitis and HIV are transfusion transmitted and sexual transmitted and with attention above data and the high risk behavior blood donors can threaten the blood supply. With educational program and encourage the young single to marriage and safe contact we will prevent from spreading the infectious agent and provide the safe blood and public health. Detection the viral infection in high risk Behavior recommended.

P147
SOCIETAL AND CULTURAL NORMS AND SEXUAL PRACTICES: IMPLICATIONS FOR THE USE OF MICROBICIDES IN HIV PREVENTION

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Though there have been tremendous scientific advances made in microbicide efficacy, can microbicides halt the seemingly unstoppable spread of HIV, particularly amongst women? Or will microbicides end up being the costly pink elephant in the fight against HIV? Sadly, the latter might be true unless a concerted effort is undertaken to understand the cultural norms, practices and beliefs regarding sex, particularly in regions where the practice of "dry" sex is the norm. A review of the limited available studies pertaining to vaginal lubrication during sex highlights that there are still significant gaps in our knowledge and understanding of this controversial topic.

Despite the fact that vaginal practices have been reported in widespread regions from sub-Saharan Africa to South East Asia to the Caribbean, it is not yet clear how women and indeed men from differing cultures view lubrication during sex, and the type and amount of lubrication that would be acceptable for the protection against HIV. Additionally, there is limited research done on the pressures that women may experience from their male partners and society to engage in vaginal practices. These issues will most certainly affect microbicide acceptability and use, but they have been sadly overlooked.

In addition, issues such as accessibility and availability of the microbicide to the general population are crucial, if it is to be implemented as an effective strategy for HIV prevention. Culturally sensitive education programs, with strong community participation aimed at both men and women is vital to ensure social acceptability and correct usage of a microbicide. A strong political and bureaucratic commitment is essential for the development of effective national strategies and policies against HIV. As such, appropriate responses and programs need to be developed at the local level, with clear goals and objectives, framed by cohesive national guiding principles that have been informed and have addressed the abovementioned issues.

P148
SOPV HEALTH PROMOTION OUTREACH PROJECT IN RESPONSE TO RISES IN HIV NOTIFICATIONS

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As a response to ongoing increases in HIV notifications in Queensland an outreach project was developed to provide a weekly psychosocial intervention at "dry" sex on premises venues (SOPV) in Brisbane. A project officer was employed to provide a visible presence at SOPV with the aim of promoting safer sexual behaviours and reducing sexual risk taking among patrons. As a means of readily engaging and facilitating discussions about safer sexual behaviours, HIV/sexually transmissible infections and sexual health testing, two separate surveys were developed and administered consecutively to patrons (n = 157) from August 2005 to June 2006. During both surveys opportunities were sought to provide safer sex education, motivational counselling and skills building to enhance safer sexual behaviours, and to provide appropriate referrals (e.g., sexual health screening, counselling). Consequential outcomes included self-reported individual determinants of sexual risk behaviours and sexual health testing and the development of a new resource to raise awareness regarding post-exposure prophylaxis (PEP) among patrons and medical staff. Participants reported on a number of other key sexual health issues including prompts and barriers to HIV testing, acceptability of alternative methods of HIV testing, strategies to reduce sexual risk taking, knowledge of PEP and specific factors related to episodes of unprotected anal intercourse. These quantitative and qualitative findings will be discussed in detail. A further outcome of this initiative was the effective partnering between the health department, private industry and a community HIV/GLBT organisation.

P149
OF COURSE I PREFER A MAN ..... A MODEL OF MALE ONLY STAFFED SEXUAL HEALTH CLINIC

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Despite an increase in testing for sexually transmissible infections (STIs) among men who have sex with men (MSM) who undertake risky sexual practices, STI notifications remain high in inner-Sydney. STI detection and treatment and HIV prevention programs are important aspects of controlling STIs. Access to user-friendly primary health care or specialist services with the capacity to diagnose and treat STIs is critical for individual and community health.

A sexual health clinic for men only was established in 2001 as a model for providing comprehensive and user-friendly STI screening, testing and treatment for MSM in the inner-west of Sydney. The clinic is managed by the SSWAHS Sexual Health Service and includes all male medical, nursing, counselling and receptionist staff. The clinic operates weekly with afternoon and evening hours and is located at a community venue in Newtown, a gay suburb of Sydney.

The clinic has proved popular with MSM community members. The model of delivering a male-only service at a community venue was evaluated in 2006 using a self-administered survey with 110 MSM clients. Details of the findings will be presented including discussion of client preferences for staffing, reasons for attendances, and referral pathways.

P150
BEHAVIORAL CHANGE COMMUNICATION & ADOLESCENTS/ YOUTH

TS Raja Kumari, Mahila Vikasa Samstha (MVS), NGO, Visakhapatnam, Andhra Pradesh, India.

From the experience of working with street children since 2001, it is understood that these children are neglected and not given priority in any intervention programs particularly counseling needs of these children completely ignored. And is opined that there is an urgent need for Behavioral Change Communication to save our future generations, adolescents/ youth of the streets.

As stated in Article 24 of Universal Declaration of Human Rights, the child by physical & mental immaturity needs special safeguards & care. Services are available for children but there are many who are not reached by any service, they are street children, UNICEF reports say there are 100 million of them across the globe & 11 million are in India.

Visakhapatnam is a fast growing industrial city of Andhra Pradesh, India city and has around 5000 street children of which only 10% are institutionalized. FXB an NGO addresses counseling needs of children living in 3 institutions who account for 1.4%.

The risk behavior makes them vulnerable to STI/HIV/ AIDS and is compounded by lack of counseling & care.

From different destinations every day close to 30 new children arrive in the city & nearly the same number leave; their mobile nature can take the infection afar.

There are roughly 100 children, including few girls who live on railway platform of those 75% are drug addicts & 60 % indulge in both homo & heterosexual acts.
The above two groups of children are not given any information to lead healthy risk free life.

Institutionalized are better informed about HIV & are in advantageous position than their counter parts on the street.

The study recommends the following

- Periodic counseling to bring attitudinal change.
- Peer approach is apt to reach those who are difficult to reach & for that peers are to be motivated with attractive rewards.
- A research to initiate action plan with interventions is essential to reach larger unmet groups & save future generations

P151
CONDOM USE AMONG BROTHEL BASED FEMALE SEX WORKERS IN COLOMBO, SRI LANKA

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Sri Lanka is a country with a low HIV prevalence. Biological sero-surveillance surveys among sex workers have observed the HIV prevalence to be less than 0.1% over the last ten years. The presence of risk factors such as increasing sex trade, internal and external migration, conflict situation, influx of refugees from neighbouring India and unprotected sex may fuel an epidemic**.** Although prostitution is illegal the sex trade is flourishing especially in the capital city**.** Since there are no red light areas and this business goes on in a clandestine manner reaching out to them is difficult. This descriptive cross sectional study was carried out with the objective of gathering information on knowledge and usage of condoms among a sample of 340 brothel based female commercial sex workers in the district of Colombo. Random cluster sampling technique was used to select the sample. An interviewer administered pre tested questionnaire was used to collect data with informed consent of the respondents. Ethical clearance was granted. Consistent condom use was practiced by 50% but 70% had had used condoms during the last sexual act. Sixty eight percent uses even with regular partners. Statistically significant higher proportion of younger women, those with a reasonable education and had had worked overseas was more likely to use condoms consistently. There was no association between condom use and fee charged. Condom free sex was provided by 21% charging a higher fee. Slippage and breakage was not very common. Almost all were aware that condoms provide dual protection against conception and infection. Condoms were available in the brothels and had easy access to them. Almost 50% were not carrying condoms for fear of police arrests. A comprehensive prevention programme similar to Kolkata's Sonagachi project is warranted as piecemeal sporadic programmes are ineffective.

P152
EXPERIENCES AND PERCEPTIONS OF HIV-INFECTED INDIVIDUALS WITH 100% ADHERENCE TO HAART – A PHENOMENOLOGICAL STUDY

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Few studies have explored what makes HIV-infected individuals have 100% adherence to highly active antiretroviral therapy (HAART). With the present qualitative study we aimed to elicit perceptions and experiences of such HIV-infected individuals. The study used a phenomenological approach to provide insights and understandings of people's experiences. Phenomenological approach was chosen since it permits the researchers to construct a phenomenon under-study as experienced by people in their everyday life, allowing broader overview of the studied phenomenon. Thus, it enables the researchers' to stay true to lived experiences of participants by focusing on participants' views (*emic*) instead of imposing the researchers' own views (*etic*). We planned to carry-out two part study: first with patients categorized as having 100% adherence and second with those having poor adherence. In the present paper we will discuss only the first part of the study. Our primary aim with this part of the study was to understand from patients' own perspectives and experiences what makes them to have 100% adherence to HAART. Our secondary aim was to assist, based on our findings in both phases of the study as well as with the available knowledge on HAART adherence, in the development of suitable strategies or interventions to facilitate optimal adherence for those individuals with poor-adherence to HAART.

A purposive sample of 10 participants (7 males and 3 females) who were regular clients of the HIV Referral Clinic at Melbourne Sexual Health Centre undertook in-depth interviews. Subsequently all interviews were transcribed verbatim and analyzed using phenomenological analysis method as proposed by Giorgi.

We will present some demographic and clinical characteristics of our study participants (N = 10). Additionally, we will discuss the themes that emerged from our data analysis, including those related to: the decision to go on HAART, management of HAART on daily basis and relationship with the health care professionals. Finally, a brief discussion of our findings will be presented and some possible implications in improving the care and support of HIV-infected individuals on HAART

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DO CONDOMS CAUSE RAPE AND MAYHEM? THE LONG-TERM EFFECTS OF CONDOMS IN NEW SOUTH WALES PRISONS

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Despite Australia's success in containing the HIV epidemic in the general population and within specific high risk groups, it took the better part of a decade, between 1987 and 1996, of political controversy before condoms were allowed into NSW prisons. Opponents argued that: (1) condoms would encourage prisoners to have sex; (2) condoms would lead to an increase in sexual assaults among prisoners; and (3) prisoners would use condoms to hide and store drugs and other contraband. These arguments have rarely been examined using objective evidence.

We examine several data sources (NSW Inmate Health Surveys (IHS) in 1996 and 2001 and official reports from the NSW Department of Corrective Services) to ascertain whether these concerns were justified. The 1996 IHS involved 657 men and 132 women randomly selected from all prisons, with a 90% response rate. The 2001 survey involved 747 men and 167 women inmates with an 85% response rate.

Analysis of the IHS data showed that there was no evidence of an increase in either consensual male-to-male sex (6.3% in 1996 vs 2.4% in 2001, $p<0.001$) or male sexual assaults (2.6% in 1996 vs 0.3% in 2001, $p<0.001$) following the introduction of condoms into NSW prisons. Official reports of sexual assaults in NSW prisons also did not increase between 1996 (0.3/100 inmates) and 2001 (0.2/100 inmates).

Prison officers' concerns that condom kits would be used for concealing contraband were justified. While prisoners may have used condom kits to store contraband, this does not appear to have led to an increased use of drugs in prison: in both 1996 and 2001, 23% of prisoners reported having injected in prison.

Although there was initially strong opposition to condoms in prison, this soon dissipated, as most of their perceived fears did not eventuate. Condoms did not cause rape and mayhem.

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PRESENTING AUTHOR INDEX

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

There are many other organisations that contribute to the success of the ASHM conferences; we appreciate their support.

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