
2015 Postgraduate Research Symposium

*Where the marginal matters: Strengthening
trans-disciplinary connections in postgraduate
health research on sex, drugs and risk*

21st August 2015

UNSW - The Kirby Institute

Wallace Wurth Building, Level 6
Corner of Botany Street and High Street, Randwick
University of New South Wales

Program and Abstracts

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Program

- 8.30 **Registration opens**
- 9.00-9.03 **Welcome** - Jason Grebely, The Kirby Institute
- 9.03-9.05 **Keynote Speaker Introduction** - Michael Farrell, National Drug & Alcohol Research Centre
- 9:05 - 9.35 **Keynote - When Opportunity Knocks..... An Accidental Researcher's Journey**
Professor Minoti Apte, University of New South Wales
- 9.35 - 10.15 **Epidemiology and Public Health**
Chairs: Fiona Shand (Black Dog Institute) and Kari Lancaster (NDARC)
- 9.35 - 9.50 **Oral Abstract 1 - NNRTI-based ART in Perinatally HIV-Infected, Treatment Naïve Adolescents in Asia**
David Boettiger, Biostatistics and Databases Program, The Kirby Institute
- 9.50 - 10.05 **Oral Abstract 2 - The contribution of geography and risk factors to inequalities in unintentional injury between Aboriginal and non-Aboriginal children in New South Wales, Australia**
Holger Moeller, Centre for Big Data Research in Health
- 10.05 - 10.10 **Short Oral Abstract 3 - survival trends for HIV+ patients receiving first line ART from the TREAT Asia HIV Observational Database (TAHOD-LITE)**
Nicole De La Mata, Biostatistics and Databases Program, The Kirby Institute
- 10.10 - 10.15 **Short Oral Abstract 4 - Onward transmission of hepatitis C virus infection among younger and older people who inject drugs in Vancouver, Canada**
Brendan Jacka, Viral Hepatitis Clinical Research Program, The Kirby Institute
- 10.15 - 10.45 **Coffee Break**
- 10.45 - 12.15 **Epidemiology and Public Health**
Chairs: Alys Havard (Centre for Big Data Research in Health) and Michelle O'Connor (SPHCM)
- 10.45 - 10.50 **Short Oral Abstract 5 - Environmental and lifestyle risk factors for younger onset dementia: Preliminary results from the INSPIRED study**
Monica Cations, School of Public Health and Community Medicine
- 10.50 - 10.55 **Short Oral Abstract 6 - Review of Australian hospital birth admissions of women with rheumatic heart disease (RHD)**
Geraldine Vaughan, University of Technology
- 10.55 - 11.00 **Short Oral Abstract 7 - Visualising linked health data to explore health service use around preventable hospitalisations**
Michael Falster, Centre for Big Data Research in Health
- 11.00 - 11.05 **Short Oral Abstract 8 - HIV testing self-efficacy is associated with higher HIV testing frequency and perceived likelihood to self-test among gay and bisexual men**
Muhammad Jamil, Aboriginal and Torres Strait Islander Health Program, The Kirby Institute
- 11.05 - 11.10 **Short Oral Abstract 9 - oral or poster**
Louise Birrell, National Drug & Alcohol Research Centre
- 11.10 - 11.15 **Short Oral Abstract 10 - Characteristics of gay men in sydney using hiv pre-exposure prophylaxis: baseline data from the prelude study**
Stefanie Vaccher, HIV Epidemiology and Prevention Program, The Kirby Institute

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- 11.15 - 11.20 **Short Oral Abstract 11 - Multimorbidity in older Australians: patterning by age, sex and socioeconomic status**
Sanja Lujic, Centre for Big Data Research in Health
- 11.20 - 11.25 **Oral Abstract 12 - Liver disease knowledge and acceptability of non-invasive liver fibrosis assessment among people who inject drugs in the drug and alcohol setting: the LiveRLife study**
Alison Marshall, Viral Hepatitis Clinical Research Program, The Kirby Institute
- 11.25 - 11.30 **Short Oral Abstract 13 - Transmitted Drug Resistance in Recently Infected HIV-positive Individuals from Four Urban Locations across Asia (2007-2010) – TASER-S**
Awachana Jiamsakul, Biostatistics and Databases Program, The Kirby Institute
- 11.30 - 11.45 **Break**
- 11.45 - 11.50 **Short Oral Abstract 14 - carefirst: a primary care based chronic disease management program for privately insured patients**
Rebecca Tinning, Medibank Private
- 11.50 - 11.55 **Short Oral Abstract 15 - The Highs and Lows of Methamphetamine use among Gay and Bisexual Men**
Mo Hammoud, HIV Epidemiology and Prevention Program, The Kirby Institute
- 11.55 - 12.00 **Short Oral Abstract 16 - Trends in end-stage liver disease among people notified with HBV or HCV in New South Wales, Australia: 2000-2014**
Reem Waziry, Viral Hepatitis Clinical Research Program, The Kirby Institute
- 12.00 - 12.05 **Short Oral Abstract 17 - Systematic development of multi-component community-based interventions to reduce alcohol related harms among Aboriginal people in three rural communities in Australia**
Mieke Snijder, National Drug and Alcohol Research Centre
- 12.05 - 12.10 **Short Oral Abstract 18 - Describing medication use and investigating correlates of sedative load among people with chronic non-cancer pain prescribed opioids**
Bianca Hoban, National Drug and Alcohol Research Centre
- 12.10 - 12.15 **Short Oral Abstract 19 - prenatal alcohol consumption prior to awareness of pregnancy**
Clare McCormack, National Drug and Alcohol Research Centre
- 12.15 - 12.20 **Short Oral Abstract 20 - Risk of Adverse Outcomes associated with antihypertensive drug use during pregnancy: A population-based cohort study**
Bilal Ahmed, Centre for Big Data Research in Health
- 12.20 - 1.20 **Lunch**
- 1.20 - 2.15 **Clinical and Interventional Research**
Chairs: Robyn Richmond (SPHCM) and David Boettiger (Kirby Institute)
- 1.20 - 1.35 **Oral Abstract 20 - Depressed substance users in treatment: How common and concerning is social anxiety?**
Katrina Prior, National Drug and Alcohol Research Centre,
- 1.35 - 1.50 **Oral Abstract 21 - Selecting an app for bipolar disorder management: Challenges and considerations**
Jennifer Nicholas, Black Dog Institute
- 1.50 - 1.55 **Short Oral Abstract 22 - "ibobbly" Indigenous suicide prevention app - need, process and preliminary results of pilot trial**
Joe Tighe, Black Dog Institute
- 1.55 - 2.00 **Short Oral Abstract 23 - Non-adherence to anti-viral therapy contributes to virological breakthrough in chronic hepatitis B virus patients**

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- 2.00 - 2.05 Suzanne Polis, Viral Hepatitis Epidemiology and Prevention Program, The Kirby Institute
Short Oral Abstract 24 - A pilot randomised controlled trial of a physical activity intervention in a low socioeconomic population: Focus on mental contrasting with implementation intentions
- 2.05 - 2.10 Shaun Abbott, School of Public Health and Community Medicine
Short Oral Abstract 25 - Pilot study to investigate the feasibility of an online self-compassion intervention for improvement of nutrition behaviours in overweight and obese people
- 2.10 - 2.15 Hania Rahimi-Ardabili, School of Public Health and Community Medicine
Oral Abstract 26 - Role of data analytics in clinical decision making in cancer care
John Lewis, Centre for Social Research in Health
- 2.15-3.50 **Social Research**
Chairs: Loren Brenner (CSRH) and Jennifer Nicholas (Black Dog Institute)
- 2.15 - 2.30 **Oral Abstract 27 - Prison based treatment for alcohol and related other drug use among Indigenous and non-Indigenous men**
Michael Doyle, Justice Health Research Program, The Kirby Institute
- 2.30 - 2.45 **Oral Abstract 28 - Laws prohibiting peer distribution of injecting equipment in Australia: A critical analysis of their effects**
Kari Lancaster, National Drug and Alcohol Research Centre
- 2.45 - 3.05 Break
- 3.05 - 3.10 **Short Oral Abstract 29 -What does sexual and reproductive wellbeing look like to adolescents living in Fiji Islands? Preliminary Findings**
Michelle O'Connor, School of Public Health and Community Medicine
- 3.10 - 3.15 **Short Oral Abstract 30 - Disentangling pre- and post-loss features in adolescent suicide bereavement: Findings from a systematic review**
Karl Andriessen, School of Psychiatry
- 3.15 - 3.20 **Short Oral Abstract 31 - Attitudes of men in homosexual male serodiscordant couples towards 'treatment as prevention'**
Benjamin Bavinton, HIV Epidemiology and Prevention Program, The Kirby Institute
- 3.20 - 3.25 **Short Oral Abstract 32 - Understanding correlates of amphetamine-type-stimulants (ATS) use among men who have sex with men (MSM) in Vietnam: a comprehensive socio-ecological perspective from a cross-sectional study**
Nga Vu, Centre for Social Research in Health
- 3.25- 3.30 **Short Oral Abstract 33 - Negotiating change in gay and bisexual men's relationship agreements**
Steven Philpot, HIV Epidemiology and Prevention Program, The Kirby Institute
- 3.30 - 3.35 **Short Oral Abstract 34 - Sex, drugs and ethics: Beyond the HREC**
Karen McMillan, School of Public Health and Community Medicine
- 3.35 - 3.40 **Short Oral Abstract 35 - Sex workers speak about their female clients**
Hilary Caldwell, Centre for Social Research in Health
- 3.40 - 3.45 **Short Oral Abstract 36 - social capital of men in prison living with hepatitis c**
Lise Lafferty, Justice Health Research Program, The Kirby Institute
- 3.45 - 3.50 **Short Oral Abstract 37 - Access to Mass Media and Awareness of Sexually Transmitted Diseases among the Truck Drivers in Dhaka City, Bangladesh: Do Mass Media Make Them Aware?**
Md Nazmul Huda, School of Public Health and Community Medicine

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- 3.50 - 4.10 **Break**
- 4.10 - 4.13 **3 Minute Thesis - Skeletal Marriage Counselling**
Scott Youlten, Garvan Institute of Medical Research
- 4.13 - 4.16 **3 Minute Thesis - Using Hormone Therapy to Treat Schizophrenia**
Ellen Ji, NeuRA Medical Research
- 4.16 - 5.00 **Navigating the Transition from PhD to Post-Doc**
Moderated Panel Discussion: Professor Alison Ritter and Professor Peter Gunning
Panel: Dr. Katie Harris (School of Women's and Children's Health), Dr. Jenny Iversen (The Kirby Institute, UNSW), Dr. Patti Shih (School of Public Health and Community Medicine, UNSW), Dr. Simon Rosenbaum (School of Psychiatry, UNSW), Dr. Jamee Newland (University of Sydney), and Dr. Paul Nelson (Bureau of Crime Statistics and Research, NSW Department of Justice)
- 5.00 **Closing words - Peter Gunning, School of Medical Sciences**
- End of Scientific Program
- 5.00 - 6.00 *Please join us for drinks*

Committees

Organising Committee

Jason Grebely, The Kirby Institute
Tim Slade, National Drug & Alcohol Research Centre
Janaki Amin, The Kirby Institute
Amie Lucas, The Kirby Institute
Michelle O'Connor, School of Public Health and Community Medicine
Nicole Cockayne, Black dog Institute
Jennifer Nicholas, Black dog Institute
Robyn Richmond, School of Public Health and Community Medicine
David Boettiger, The Kirby Institute
Kari Lancaster, National Drug & Alcohol Research Centre
Loren Brener, Centre for Social Research in Health
Alys Havard, Centre for Big Data Research in Health

Abstract Reviewers

John Lewis, UNSW
Awachana Jiamsakul, The Kirby Institute
Benjamin Bavinton, The Kirby Institute
Bianca Hoban, National Drug & Alcohol Research Centre
Brendan Jacka, The Kirby Institute
Chhorvoin Om, School of Public Health & Community Medicine
David Boettiger, The Kirby Institute
Evan Cunningham, The Kirby Institute
Hamish Robertson, UNSW
Hania Rahimi-Ardabili, UNSW
Hilary Caldwell, Centre for Social Research in Health
Jennifer Nicholas, Black dog Institute
Jessica Botfield, Family Planning NSW
Joe Tighe, Black Dog Institute
John Lewis, National Cannabis Prevention and Information Centre
Karen McMillan, School of Public Health and Community Medicine
Karl Adriessen, UNSW School of Psychiatry
Katrina Prior, National Drug & Alcohol Research Centre
Louise Birrell, National Drug & Alcohol Research Centre
Md Nazmul Huda, School of Public Health & Community Medicine
Mieke Snijder, National Drug & Alcohol Research Centre
Monica Cations, School of Public Health and Community Medicine
Nicole De La Mata, The Kirby Institute
Rebecca Tinning, Medibank Private
Reem Khaliel, The Kirby Institute
Sanja Lujic, Centre for Big Data Research in Health
Stefanie Vaccher, The Kirby Institute
Steven Philpot, The Kirby Institute

Session Chairs

Fiona Shand, Black Dog Institute

Kari Lancaster, National Drug & Alcohol Research Centre

Alys Havard, Centre for Big Data Research in Health

Michelle O'Connor, School of Public Health and Community Medicine

Robyn Richmond, School of Public Health and Community Medicine

David Boettiger, The Kirby Institute

Loren Brenner, Centre for Social Research in Health

Jennifer Nicholas, Black Dog Institute

When Opportunity Knocks..... An Accidental Researcher's Journey

*Professor Minoti Apte, Faculty of Medicine, UNSW, Ingham Institute for Applied Medical Research
Liverpool Hospital*

Biography



Professor Minoti Apte OAM, is a Professor of Medicine at UNSW and Director of the Pancreatic Research Group based at the Ingham Institute, Liverpool Hospital. She is internationally recognised for her pioneering work in pancreatic fibrogenesis. Her group was the first in the world to isolate and characterise pancreatic stellate cells, now known to play critical roles in the progression of pancreatitis and pancreatic cancer. Professor has held more than \$11 million in competitive research grants and her work has received over 4000 citations. She is currently the Editor-in-Chief of *Pancreatology*, one of the two leading journals in the field.

Professor Apte has served as Presiding Member of the Faculty of Medicine (2008-2011), and as **Chair** of the Faculty Board, Faculty Standing Committee and the Faculty Higher Degree Committee. She has been the Postgraduate Coordinator for the South Western Sydney Clinical School since 2001.

Professor Minoti Apte was awarded a Medal of the Order of Australia in 2014 and has received the 2015 NSW Premier's Award for Woman of the Year in recognition of her contribution to medical research, tertiary education and the Indian community.

Oral Abstracts

Oral Abstract 1

NNRTI-based ART in Perinatally HIV-Infected, Treatment Naïve Adolescents in Asia

Authors:

Boettiger DC¹, Sudjaritruk T², Nallusamy R³, Lumbiganon P⁴, Rungmaitree S⁵, Hansudewechakul R⁶, Kumarasamy N⁷, Bunupuradah T⁸, Saphonn V⁹, Truong HK¹⁰, Yusoff N¹¹, Do CV¹², Nguyen LV¹³, Razali K¹⁴, Fong SM¹⁵, Kurniati N¹⁶, and Kariminia A¹ for the TREAT Asia Pediatric HIV Observational Database.

1The Kirby Institute, UNSW Australia, Sydney, Australia; 2Department of Pediatrics, Faculty of Medicine, Chiang Mai University and Research Institute for Health Sciences, Chiang Mai, Thailand; 3Department of Pediatrics, Penang Hospital, Penang, Malaysia; 4Department of Pediatrics, Faculty of Medicine, Khon Kaen University, Khon Kaen, Thailand; 5Department of Pediatrics, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand; 6Chiangrai Prachanukroh Hospital, Chiang Rai, Thailand; 7YRGCARE Medical Centre, CART CRS, Chennai, India; 8HIV-NAT, The Thai Red Cross AIDS Research Centre, Bangkok, Thailand; 9National Centre for HIV/AIDS Dermatology and STDs and University of Health Sciences, Phnom Penh, Cambodia; 10Children's Hospital 1, Ho Chi Minh City, Vietnam; 11Hospital Raja Perempuan Zainab II, Kelantan, Malaysia; 12Children's Hospital 2, Ho Chi Minh City, Vietnam; 13National Hospital of Pediatrics, Hanoi, Vietnam; 14Pediatric Institute, Hospital Kuala Lumpur, Kuala Lumpur, Malaysia; 15Hospital Likas, Kota Kinabalu, Malaysia; 16Cipto Mangunkusumo General Hospital, Jakarta, Indonesia.

Introduction:

Adolescents have been neglected in HIV research. We evaluated rates and predictors of treatment response in perinatally HIV-infected adolescents starting non-nucleoside reverse transcriptase inhibitor (NNRTI)-based antiretroviral therapy (ART).

Methods:

Perinatally infected, antiretroviral-naïve patients initiated on NNRTI-based ART aged 10-19 years who had ≥6 months of follow-up were included. Competing risk regression was used to analyze predictors of NNRTI modification and clinical failure (WHO stage 3/4 event or death). Generalized estimating equations were used to investigate predictors of follow-up CD4<500 cells/mm³.

Results:

There were 534 adolescents eligible for analysis (56.2% female; median age at treatment initiation 11.8 years). NNRTI modification and clinical failure occurred at rates of 4.9 and 1.4 events per 100 patient-years, respectively. After five years of NNRTI-based treatment, median CD4 increased from 131 to 580 cells/mm³ and median height-for-age z-score increased from -2.3 to -1.6. Baseline WHO stage 1/2 predicted NNRTI modification (HR 1.51 versus stage 3/4, 95%CI 1.03-2.21, p=0.04) and poor CD4 recovery (OR 1.85 versus stage 3/4, 95%CI 1.31-2.62, p=0.001). CD4 count ≤200 cells/mm³ at ART initiation (HR 3.30 versus >200, 95%CI 1.22-8.90, p=0.02) and not using cotrimoxazole prophylaxis (HR 2.13 versus using, 95%CI 0.99-4.57, p=0.05) were associated with clinical failure.

Conclusion:

Despite late ART initiation, adolescents achieved good CD4 and height-for-age recovery, and the rate of clinical failure was low. Compared to patients with a history of WHO stage 3/4 illness at ART initiation, those with less advanced HIV tended to transition off NNRTI-based ART more rapidly and were less likely to achieve a follow-up CD4 ≥ 500 cells/mm³. These findings suggest that future studies should seek to determine the influence of HIV disease severity on ART adherence in adolescents.

Disclosure of Interest Statement: The TREAT Asia Pediatric HIV Observational Database is an initiative of TREAT Asia, a program of amfAR, The Foundation for AIDS Research, with support from the U.S. National Institutes of Health's National Institute of Allergy and Infectious Diseases, Eunice Kennedy Shriver National Institute of Child Health and Human Development, and National Cancer Institute as part of the International Epidemiologic Databases to Evaluate AIDS (IeDEA; U01AI069907), the AIDS Life Association, and ViiV Healthcare. The Kirby Institute is funded by the Australian Government Department of Health and Ageing, and is affiliated with the Faculty of Medicine, UNSW Australia. The content of this publication is solely the responsibility of the authors and does not necessarily represent the official views of any of the governments or institutions mentioned above.

Oral Abstract 2

The contribution of geography and risk factors to inequalities in unintentional injury between Aboriginal and non-Aboriginal children in New South Wales, Australia

Authors:

Möller H^a, Falster K^{a,b,c}, Ivers R^d, Falster MO^a, Randall D^a, Clapham K^e, Jorm L^a

^a Centre for Big Data Research in Health, Level 1 AGSM Building, UNSW Kensington Campus, Sydney 2052, Australia

^b National Centre for Epidemiology and Population Health, The Australian National University, Canberra, 2601, Australia

^c The Sax Institute, 13/235 Jones St, Ultimo NSW 2007, Australia

^d The George Institute for Global Health, Level 13, 321 Kent Street Sydney NSW 2000 Australia

^e The Australian Health Services Research Institute, University of Wollongong, NSW 2522

Background:

Australian Aboriginal children experience a disproportionately high burden of unintentional injury. They are also more likely than other children to live in remote and socioeconomically disadvantaged areas, which have higher underlying rates of injury. Our aim was to quantify the contributions of geographic clustering and area- and individual-level risk factors to inequalities in hospitalisations for unintentional injuries between Aboriginal and non-Aboriginal children in Australia.

Methods:

Using linked hospital and mortality data for the state of New South Wales (NSW), we constructed a retrospective whole-of-population birth cohort that included 1124394 children (35749 Aboriginal) born between 1 July 2000 and 31 December 2012. We estimated hazard ratios for first injury hospitalisation, overall and according to major injury mechanism, using multilevel Cox proportional hazards models, adjusting for geographic clustering and individual- (sex, low birth weight, prematurity, private health insurance) and area- (geographical remoteness, socioeconomic status) level factors.

Results:

Aboriginal children were 1.6 times more likely than non-Aboriginal children to be hospitalised for an unintentional injury. Adjusting for geographic clustering and individual- and area-level risk factors reduced the inequality (HR 1.39; 95% CI 1.34-1.44), but it remained substantial. After adjustment, the injury mechanisms with the largest inequalities for Aboriginal compared with non-Aboriginal children were poisoning (HR 1.76; 95% CI 1.57-1.98), injuries caused by smoke, fire, heat and hot substances (HR 1.76; 95% CI 1.55-2.00) and injuries due to cutting and piercing (HR 1.56; 95% CI 1.33-1.84).

Conclusion:

Geographic clustering and other measured risk factors explained only part of the higher burden of unintentional injury in Australian Aboriginal children. Injury prevention programs that specifically address injury risks in Aboriginal children and geographically-focussed interventions that target areas with high rates of child injury have the potential to improve Aboriginal child health and reduce health inequalities.

Oral Abstract 3

Survival trends for HIV+ patients receiving first line ART from the TREAT Asia HIV Observational Database (TAHOD-LITE)

Authors:

Nicole L. De La Mata¹, Nagalingeswaran Kumarasamy², Vohith Khol³, Oon Tek Ng⁴, Kinh Van Nguyen⁵, Tuti Parwati Merati⁶, Thuy Thanh Pham⁷, Man Po Lee⁸, Nicolas Durier⁹, Matthew Law¹

1 The Kirby Institute, UNSW Australia, Sydney, NSW, Australia

2 Chennai Antiviral Research and Treatment Clinical Research Site (CART CRS), YRGCARE Medical Centre, VHS, Chennai, India

3 National Center for HIV/AIDS, Dermatology & STDs, and University of Health Sciences, Phnom Penh, Cambodia

4 Tan Tock Seng Hospital, Singapore

5 National Hospital for Tropical Diseases, Hanoi, Vietnam

6 Faculty of Medicine Udayana University & Sanglah Hospital, Bali, Indonesia

7 Bach Mai Hospital, Hanoi, Vietnam

8 Queen Elizabeth Hospital, Hong Kong, China

9 TREAT Asia, amfAR - The Foundation for AIDS Research, Bangkok, Thailand

Background:

Antiretroviral treatment (ART) for HIV-positive patients has scaled up rapidly in Asia over the last ten years. The study aim is to describe the time trends in, and risk factors for, overall survival for HIV-infected patients receiving first line ART in Asia.

Methods:

We included HIV-infected adult patients from the TREAT Asia HIV Observational Database (TAHOD-LITE) who initiated an ART regimen with ≥ 3 antiretroviral drugs from 2003 to 2013 (n=16 546). Seven sites contributed data from 6 countries, patient follow up was to May 2014. We compared survival for each country and overall by time period of ART initiation using Kaplan-Meier curves. Patients were censored at most recent clinic visit. Factors associated with mortality were assessed (Cox regression models), stratified by site. Variables included year of ART initiation, age, sex, mode of HIV exposure, pre-ART viral load, pre-ART CD4 count, first ART regimen, previous mono/duo exposure, hepatitis B and C co-infection.

Results:

There were 880 deaths observed over 54 531.8 person years, a crude rate of 1.61 (1.51, 1.72) per 100 person-years. Overall, survival significantly improved in more recent time periods of ART initiation ($p < 0.001$), with survival probability at 4 years for those initiating ART in 2003-05 of 92.1%, in 2006-09 of 94.3% and in 2010-2013 of 94.5%. Factors associated with a higher risk of mortality included initiating ART in earlier time periods, older age, male sex, injecting drug use as mode of HIV exposure and lower pre-ART CD4 count. Concurrent with improved survival has been a move to earlier ART initiation, more tenofovir use, and greater routine monitoring of CD4 and especially viral load.

Conclusion:

These results confirm that HIV+ patients from resource limited settings have improved survival in more recent time periods. This is likely a consequence of a combination of treatment and monitoring changes over time

Oral Abstract 4

Onward transmission of hepatitis C virus infection among younger and older people who inject drugs in Vancouver, Canada

Authors:

Jacka B¹, Applegate T¹, Poon AF^{2,3}, Raghwani J⁴, Harrigan PR^{2,3}, DeBeck K^{2,5}, Milloy M-J^{2,6}, Kraiden M⁷, Olmstead A⁷, Joy JB², Marshall BDL⁸, Hayashi K², Pybus O⁴, Lima VD^{2,3}, Magiorkinis G^{4,9}, Montaner J^{2,3}, Lamoury F¹, Dore GJ¹, Wood E^{2,3}, and Grebely J¹

1 Viral Hepatitis Clinical Research Program, The Kirby Institute, UNSW Australia, Sydney NSW, Australia, 2 BC Centre for Excellence in HIV/AIDS, St Paul's Hospital, Vancouver BC, 3 Division of AIDS, Department of Medicine, Faculty of Medicine, University of British Columbia, Vancouver, BC, Canada, 4 Department of Zoology, University of Oxford, Oxford, UK, 5 School of Public Policy, Simon Fraser University, Vancouver, BC, Canada, 6 Department of Family Practice, Faculty of Medicine, University of British Columbia, Vancouver, BC, 7 BC Centre for Disease Control, Vancouver BC, 8 Department of Epidemiology, Brown University, Providence, RI, USA, 9 Virus Reference Department, Public Health England, London, United Kingdom

Background:

Understanding factors influencing transmission of HCV among people who inject drugs (PWID) is important for the design of treatment as prevention strategies. Phylogenetic co-clustering among younger participants and those with recent HCV seroconversion were evaluated among a cohort of PWID in Vancouver, Canada.

Methods:

Participants HCV antibody positive at enrolment or during follow-up (1996-2012) were tested for HCV RNA and sequenced (Core-E2). Time-stamped phylogenetic trees were inferred using BEAST with a Bayesian Skyline tree prior and SRD06 substitution model. Phylogenetic segregation (Association Index) was assessed by BaTS, and factors associated with clustering (maximum cluster age: 5 years) were identified using logistic regression.

Results:

Among 655 participants with HCV subtype 1a, 2b and 3a infection (26% female, 23% HIV+): 22% were younger (<27 years), and 11% had recent HCV seroconversion. When inferred cluster age was limited to <5 years, 15% (n=100) were in clusters/pairs. Younger age (vs. >40, AOR: 2.47, 95% CI: 1.26, 4.83) and HIV infection (AOR: 1.74, 95%-CI: 1.08, 3.77) were independently associated with clustering. Phylogenetic segregation of younger participants was significant across subtypes, suggesting younger participants are more likely to co-cluster with other young participants than randomly among remaining participants by chance, and vice versa. There was no significant segregation related to recent HCV seroconversion. Most participants were in clusters containing only those aged >27 years (61/100), while 52% (14/27) of younger participants clustered only with other young participants.

Conclusion:

In this cohort of PWID from Vancouver, phylogenetic clustering was associated with younger age and HIV co-infection. Age was associated with phylogenetic segregation, although younger participants co-clustered equally between themselves and older participants. These data suggest that HCV transmission among PWID is complex, with transmission occurring between both older and younger PWID. As such, treatment as prevention strategies will likely require broad scale-up across the PWID population.

Oral Abstract 5

Environmental and lifestyle risk factors for younger onset dementia: Preliminary results from the INSPIRED study

Induction:

Younger onset dementia (YOD) accounts for up to 9% of dementia cases, but little is known about its cause. Many environmental and lifestyle factors have been identified to increase risk of dementia in older people. It remains unknown whether these factors are also associated with its early emergence, as a vast majority of YOD epidemiological work references genetic influences alone. We aimed to investigate the risk for degenerative, non-autosomal dominant YOD associated with six potentially modifiable factors: traumatic brain injury, education, depression, cardiovascular risk factors, smoking and alcohol.

Method:

Participants with YOD were recruited via relevant health care professionals or self-referred, and their dementia diagnosis was confirmed by clinical consensus. Control participants were recruited via their GP clinic and matched by sex and five-year age group. Exposure data was collected using surveys and structured interviews with the participant and/or an informant.

Results:

At the time of reporting, participants included 59 control participants and 72 people with degenerative YOD, including Alzheimer's disease (61.1%), frontotemporal dementias (12.5%), vascular dementias (11.2%) and other dementias (15.3%). Control participants had significantly more years of education (M=15.4) than people with YOD (M=13.1; $p=0.001$). In addition, a higher proportion of people with YOD than control participants were ever smokers (65.3% vs 39.2%, OR=1.87), had a depression diagnosis in midlife or earlier (40.0% vs 30.6%, OR=1.52), and had sustained at least one stroke (11.8% vs 1.7%, OR=3.80), although these differences only approached significance. The risk of stroke remained near significance even after cases of vascular dementia were removed (OR=2.81). There were no significant differences in history of traumatic brain injury, hypertension, diabetes, hypercholesterolemia or alcohol consumption.

Conclusion:

Low education, depression, stroke and smoking are possible risk factors for younger onset dementia.

Oral Abstract 6

Review of Australian hospital birth admissions of women with rheumatic heart disease (RHD)

Authors:

Geraldine Vaughan on behalf of the RHD-P Australasian Maternity Outcomes Surveillance System Investigators: Sullivan EA¹, Jackson Pulver L², Carapetis J³, Walsh W⁴, Peek M⁵, McLintock M⁶, Professor Kruske S⁷, Belton S⁸, Brown A⁹, Comino E¹⁰, D'Antoine H⁸, Kane S¹¹, Remenyi B¹², Sherwood J¹³, Thomas S¹⁴, Vaughan G¹.

(Institutions) 1Faculty of Health, University of Technology Sydney; 2Muru Marri Indigenous Health Unit, UNSW Medicine; 3Telethon Kids Institute, WA; 4University of New South Wales and Prince of Wales Hospital; 5 University of Sydney Medical School Nepean, NSW; 6National Women's Health Auckland City Hospital NZ; 7School of Nursing and Midwifery, University of Queensland. 8Menziess School of Health Research, Darwin NT, 9South Australian Health & Medical Research Institute (SAHMRI), 10Centre for Primary Health Care and Equity, University of New South Wales, 11Lyell McEwin Hospital, SA, 12Royal Darwin Hospital and NT Cardiac, 13Faculty of Arts and Social Sciences, University of Technology NSW, 14Royal Darwin Hospital NT.

Introduction:

RHD is a disease of paradox in Australia. Whilst overall rare, Aboriginal and Torres Strait Islander peoples have among the highest rates of RHD in the world[1]. This preventable disease can have serious impact in pregnancy, where increased cardiac demands often unmask undiagnosed RHD[2].

Objectives:

Review hospital births of women with RHD (RHD-P) in selected Australian jurisdictions from 2004/05 to 2009/10, and determine trends over time.

Methods:

Records of hospital births for women aged 15-44 with a diagnosis of RHD during 2004/05 to 2009/10 in selected Australian jurisdictions. Hospital separations with ICD10-AM code 'Z37' were counted as hospital births. Rheumatic heart disease was defined as ICD10-AM code 'I05'-'I09'.

Results:

The report demonstrates the disproportionate number of Aboriginal and/or Torres Strait Islander women with RHD, particularly in Northern Territory (NT) where 94% of women with RHD-P are Indigenous. It is highly likely that Indigenous status is under-reported. Whilst rare (overall estimated rate of 4.5 per 10,000 births), RHD-P rates varied markedly by state, and rates of RHD-P among NT Indigenous women were 54 times that of the overall rate in Australia (figure 1). Numbers reported declined from 2004/05 (n=151) to 2009/10 (n=90), an overall decrease of 34%, with 40% decrease in NT (figure 2). However, a recent review of acute rheumatic fever (ARF)/RHD in the NT showed evidence of a reduction in recurrence rate of ARF by 9%/year since 1997, but no decrease in incidence of RHD[3].

Conclusion:

It is inconclusive whether the reported downward trend in RHD-P represents a true decline, or is an artefact due to overall small numbers and probable under-reporting. The results reinforce the importance of a mixed methods study* which is exploring barriers to access of optimal care for pregnant women, including a quantitative study of surveillance and health information systems related to RHD-P in Australia.

References:

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*The study is one of the outputs of the NHMRC-funded RHD in pregnancy study (#1024206), part of the Australasian Maternity Outcomes Surveillance System (AMOSS), a surveillance and research system that monitors rare, serious conditions in pregnancy.

Oral Abstract 7

Visualising linked health data to explore health service use around preventable hospitalisations

Authors:

Falster MO¹, Jorm LR¹, Leyland A²

¹ Centre for Big Data Research in Health, UNSW Australia

² MRC/CSO Social and Public Health Sciences Unit, University of Glasgow

Background:

Data visualisations have the potential to enhance understanding of complex patterns of information. However, only a few tools exist for visually exploring longitudinal health data, and these have not been widely adopted for research. This study demonstrates the utility of a simple new data visualisation, 'Trajectories of Individual Patient Service use' (TIPS), using a case study of 'preventable' hospitalisations – which are used internationally as an indicator of access to primary care, but for which the actual use of services leading up to hospitalisation is largely unknown.

Methods:

Linked data on hospital admissions, emergency department (ED) presentations, deaths, and Medicare claims for general practitioner (GP) and specialist consultations for 266,950 participants in the 45 and Up Study NSW were used to create TIPS around preventable hospitalisation. For each study participant, each type of service was plotted against time, with different coloured dots and lines representing hospital stays, consultations, and deaths. A variety of TIPS were explored, structured according to patient characteristics, such as number of preventable hospitalisations, date of first admission, and length of stay, while presenting time as either calendar year or centred on the first date of admission.

Results:

The use of TIPS revealed common usage patterns across health services, with a clustering of GP visits in the lead up to, and following, a preventable hospitalisation. People with more preventable hospitalisations, or a longer length of hospital stay, also had higher numbers of GP visits, ED presentations, other types of hospitalisation, and deaths.

Conclusions:

The TIPS visualisations provided a powerful tool for exploring and displaying patterns of health service use. For preventable hospitalisations, they demonstrated that admitted patients tended to have higher overall levels of engagement with the healthcare system and did not show evidence of limited access to primary care in the lead up to hospitalisation.

Oral Abstract 8

HIV TESTING SELF-EFFICACY IS ASSOCIATED WITH HIGHER HIV TESTING FREQUENCY AND PERCEIVED LIKELIHOOD TO SELF-TEST AMONG GAY AND BISEXUAL MEN

Authors:

Jamil MS¹, Guy R¹, Bavinton B¹, Fairley C^{2,3}, Grulich A¹, Holt M⁴, Smith K¹, Chen M^{2,3}, McNulty A⁵, Conway DP¹, Keen P¹, Bradley J¹, Russell D^{6,7,8}, Kaldor J¹, Prestage G^{1,9} on behalf of FORTH Study Group

1 The Kirby Institute, UNSW Australia, Sydney, Australia

2 Monash University, Melbourne, Australia

3 Melbourne Sexual Health Centre, Melbourne, Australia

4 Centre for Social Research in Health, UNSW Australia, Sydney, Australia

5 Sydney Sexual Health Centre, Sydney Hospital, Sydney, Australia

6 James Cook University, Townsville, Australia

7 University of Melbourne, Melbourne, Australia

8 Cairns Sexual Health Service, Cairns, Australia

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

Introduction:

Regular testing of individuals at higher-risk of HIV is central to current prevention strategies, and crucial for decreasing the time-to-diagnosis. Little research has been conducted on 'self-efficacy': the perceived ability to undertake HIV testing among gay and bisexual men (GBM). We examined self-efficacy in relation to HIV testing frequency and likelihood to self-test among GBM.

Methods:

Higher-risk GBM (>5 partners or condomless anal intercourse in previous 3 months) participating in a randomised controlled trial of HIV self-testing completed a survey on demographics, risk behaviour, HIV testing, and a new self-efficacy scale measuring confidence in perceived ability to undertake HIV testing. The self-efficacy scale comprised 8 items ('not at all confident'=0 to 'completely confident'=4; Cronbach's $\alpha=0.81$), and total self-efficacy score consisted of the sum of scores for all items. We determined the factors associated with ≥ 3 HIV tests in the past year and likelihood of self-testing in the future using logistic regression.

Results:

A total of 355 GBM were included. Median age was 33 years (inter-quartile range [IQR]=26-41), 35% reported ≥ 3 HIV tests in the past year, and 65% reported being 'very likely' to self-test in the future. Factors independently associated with ≥ 3 HIV tests were: higher self-efficacy score (adjusted odds ratio [AOR]:1.07 per unit increase, 95%CI:1.02-1.13, $p=0.007$); >10 partners in the past 6 months (AOR:1.81, 95%CI:1.07-3.06, $p=0.026$); consistent condom use with casual partners (vs. no partners/no anal intercourse; AOR:3.21, 95%CI:1.01-10.26, $p=0.049$); and any condomless anal intercourse with casual partners (vs. no partners/no anal intercourse; AOR:3.32, 95%CI:1.06-10.34, $p=0.039$). Only a higher self-efficacy score was associated with being 'very likely' to self-test in future (OR:1.08, 95%CI:1.03-1.13, $p=0.001$).

Conclusion:

HIV testing self-efficacy is independently associated with testing frequency and likelihood to self-test. Improving self-efficacy by enhancing GBM's knowledge and experience may lead to higher testing frequency. Our self-efficacy scale could be useful in identifying GBM likely to face difficulties with HIV testing and self-testing.

Disclosure of Interest Statement:

The research is funded through a NHMRC Program grant from the NHMRC and self-test kits were purchased from OraSure Technologies Inc. (Bethlehem, PA, USA). The Kirby Institute and the Centre for Social Research in Health receive funding from the Australian Government Department of Health.

Oral Abstract 9

Spotlight on the development of anxiety, depression and alcohol use in early adolescence

Authors:

Birrell L¹, Slade T¹, Newton N¹, Champion K¹, Barrett E¹, Kelly E¹, Nair N¹, Conrod P² & Teesson M¹

1Centre for Research Excellence in Mental Health and Substance Use, National Drug and Alcohol Research Centre, UNSW

2 Chercheure Agrégée, Psychiatrie, Université de Montréal, Centre de recherche du CHU Ste-Justine Université de Montréal

Background:

Alcohol use disorders are highly comorbid with anxiety and depressive disorders. All three cause significant disability and public health burden. Effective intervention and prevention relies on a clear understanding of their development. Previous studies focusing on the emergence of these symptoms tend to assume a single growth trajectory can adequately represent the whole population for each domain of interest. However, it is likely there is considerable variability in the natural trajectory of these symptoms and their development needs to be considered simultaneously. This study presents the natural trajectories of anxiety symptoms, depression symptoms and alcohol use in early adolescence.

Method:

As part of a larger ongoing substance use prevention trial, data was collected on 527 adolescents (mean age 13.4 years at baseline) from 7 schools in Sydney, Australia. Measures included scales relating to anxiety and depression symptoms, as well as the frequency, quantity and age of students' alcohol use. Adolescents were followed at four time points over 36 months.

Results:

Results showed that nearly half of the sample had consumed a full drink by 24-months and over 20% had engaged in binge drinking. In those with elevated mental health scores these rates were higher. Results will also present the trajectories of anxiety, depression and alcohol use.

Conclusion:

Uncovering the natural trajectories of anxiety, depression and alcohol use during early adolescence has important implications for identifying adolescents at high risk of developing comorbid conditions. Importantly this knowledge has the potential to inform effective intervention and prevention efforts at a population level.

Oral Abstract 10

Characteristics of gay men in Sydney using HIV pre-exposure prophylaxis: Baseline data from the PRELUDE study

Authors:

Vaccher S¹, Prestage G^{1,2}, Templeton DJ^{1,3}, Poynten, IM¹, Grulich A¹, and Zablotska I¹, on behalf of the PRELUDE Study Team

1 Kirby Institute, University of New South Wales, Sydney, Australia

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

3 RPA Sexual Health, Sydney Local Health District, Sydney, Australia

Background:

Sustained transmission of HIV amongst gay/homosexual men primarily contributes to new HIV diagnoses in Australia, and pre-exposure prophylaxis (PrEP) is currently the most efficacious HIV prevention strategy in high-risk individuals. PRELUDE is the largest clinic-based demonstration project investigating PrEP implementation in Australia. We describe characteristics of participants enrolled in the study.

Methods:

PRELUDE will complete enrollment of 300 participants by August 2015. In a preliminary sample (n=246, 19 June 2015), we used descriptive statistics to analyse baseline demographic and behavioural data, and assess the risk profile of our study population. We compared our sample to the community-based sample recruited in the 2013 Sydney Gay Community Periodic Survey (SGCPS).

Results:

PRELUDE participants were on average 37.8 year old men (range: 21-63 years) and mostly identified as gay/homosexual (92.7%). In the past three months, 89.8% had casual sexual partner(s). Of these, 60.5% and 30.5% had condomless anal intercourse (CLAI) with partner(s) of unknown or positive HIV serostatus, respectively. Overall, 40.8% of participants had used crystal methamphetamine in the previous three months, and 56.1% reported an STI diagnosis, most commonly chlamydia (24.0%), gonorrhoea (21.2%), and syphilis (4.1%). In comparison to the SGCPS sample, PRELUDE participants were significantly more likely to have used crystal methamphetamine recently (40.8% vs 13.9%; p<0.001), have a recent STI (56.1% vs. 14.5%; p<0.001) and have engaged in CLAI with casual partners (79.5% vs. 36.4%; p<0.001). We estimate that in our sample, HIV incidence without PrEP would be between 1.7 and 7.0 cases per 100 person-years.

Conclusion:

Participants who access PrEP through the PRELUDE study report practices that place them at very high risk of HIV infection, compared with a community-based sample of gay men. This is the ideal cohort to evaluate the roll-out of PrEP as these individuals may derive the most benefit from availability of PrEP.

Disclosure of Interest Statement:

The PRELUDE study is funded by the NSW Ministry of Health, with Gilead Sciences providing the study medication (Truvada).

Oral Abstract 11

Multimorbidity in older Australians: patterning by age, sex and socioeconomic status

Authors:

Lujic S,¹ Jorm L¹

¹Centre for Big Data Research in Health, UNSW

Background:

Multimorbidity (presence of two or more chronic conditions) is becoming increasingly topical locally and abroad. Our study investigated how multimorbidity varies by age, sex and socioeconomic status using a large cohort study in NSW.

Methods:

We used self-reported data from 267,091 participants in the 45 and Up Study and logistic regression to estimate odds ratios (OR) and 95% confidence intervals (CI) for multimorbidity for males and females, separately. Quartiles of socioeconomic status (SES) according to the ABS Index of Relative Socioeconomic Disadvantage were assigned using residential postcode. Interactions between age and SES were tested within each group. Ratio of ratios (ROR) were used to compare effect sizes between males and females.

Results:

A total of 82,840 (31%) participants (39,064 [32%] males and 43,776 [31%] females) had multimorbidity. The prevalence of multimorbidity was higher in older people and those of lower SES, and significant interactions between SES, age and sex were found. Among participants aged 45 to 64 years, multimorbidity was strongly associated with low SES (OR 1.38, 95% CI: 1.33-1.43 in low SES compared with high SES), and prevalence was similar for males and females across all SES quartiles. Males aged 64-84 had significantly higher odds of multimorbidity than females in this age group, across all SES quartiles (ROR 1.29, 95%CI 1.21-1.28 in high SES and ROR 1.23, 95%CI 1.15-1.31 in low SES quartile), while the odds of multimorbidity did not differ significantly according to either SES or sex in people aged 85+ years.

Conclusions:

Patterning of multimorbidity according to age, sex and SES suggests that primary and secondary prevention efforts targeting people of low SES aged 45-64 years, and males aged 64-84 years, regardless of SES, may have the greatest impact on the growing burden of multimorbidity in older Australians.

Oral Abstract 12

Liver disease knowledge and acceptability of non-invasive liver fibrosis assessment among people who inject drugs in the drug and alcohol setting: the LiveRLife Study

Authors:

Marshall AD¹, Micallef M¹, Erratt A¹, Telenta J², Treloar C³, Everingham H⁴, Jones SC², Bath N⁴, How-Chow D⁵, Byrne J⁶, Harvey P⁷, Dunlop A^{8,9}, Jauncey M⁶, Read P^{1,10}, Collie T¹¹, Dore GJ¹ and Grebely J¹

1The Kirby Institute, UNSW Australia, NSW Australia; 2Centre for Health and Social Research, Australian Catholic University, VIC Australia; 3Centre for Social Research in Health, UNSW Australia, NSW Australia; 4NSW Users and AIDS Association, Inc., NSW Australia; 5St Vincent's Hospital Sydney, NSW Australia; 6Australian Injecting and Illicit Drug Users League, ACT Australia; 7Hepatitis NSW, Australia; 8University of Newcastle, Newcastle, NSW, Australia; 9Drug and Alcohol Clinical Services, Hunter New England Local Health District, Newcastle, NSW, Australia; 10Kirketon Road Centre, NSW Australia; 11Coffs Harbour Drug and Alcohol Service, NSW, Australia

Background:

Although liver disease burden among people who inject drugs (PWID) is high, few strategies to enhance liver disease screening have been evaluated. The aim of this study was to assess factors associated with knowledge of baseline HCV and liver disease, acceptability of transient elastography (TE) assessment (FibroScan®), and willingness to receive HCV treatment among PWID participating in a liver health promotion campaign.

Methods:

The LiveRLife campaign involved: 1) educational resource development; 2) resource testing; and 3) implementation. Between May-October 2014, participants were enrolled in an observational cohort study with recruitment from four clinics in Australia [one primary healthcare facility, two opioid substitution treatment clinics, and one medically supervised injecting centre]. Participants received educational material, clinical assessment, TE assessment, dried blood spot testing, and completed a knowledge survey.

Results:

Of 253 participants (mean age 43 years), 68% were male, 71% had injected in the past month, and 75% self-reported as HCV positive. Median knowledge score was 16/23. In adjusted analysis, high knowledge (≥ 16) was associated with <daily injection (AOR 5.01; 95% CI, 2.64-9.51) and no daily injection in the past month (AOR 3.54; 95% CI, 1.80-6.94). Of three screening options (TE, liver biopsy and blood sample), TE was the most preferred method pre- (66%) and post-TE (89%). Most participants (88%) were 'definitely' or 'somewhat willing' to receive HCV treatment and 56% intended to start treatment in the next year. Overall, 68% had no/mild fibrosis (F0/F1, ≥ 2.5 - ≤ 7.4 kPa), 13% moderate fibrosis (F2, ≥ 7.5 - ≤ 9.4 kPa), 10% severe fibrosis (F3, ≥ 9.5 - ≤ 12.4 kPa), and 9% had cirrhosis (F4, ≥ 12.5 kPa). Sixty percent (n=152) returned for a follow-up nurse assessment.

Conclusion:

Acceptability of TE was high by PWID and the majority of people returned for a follow-up assessment by a nurse, supporting the inclusion of TE in HCV-related care.

Word count: 300

Disclosure of Interest Statement:

The study was funded from MSD, Australia. The Kirby Institute is funded by the Australian Government Department of Health and Ageing. The views expressed in this publication do not necessarily represent the position of the Australian Government. GD is supported by a National Health and Medical Research Council Practitioner Research Fellowships. JG is supported by a National Health and Medical Research Council Career Development Fellowship. SJ is supported by an Australian Research Council Future Fellowship.

Oral Abstract 13

Transmitted Drug Resistance in Recently Infected HIV-positive Individuals from Four Urban Locations across Asia (2007-2010) – TASER-S

Authors:

Jiamsakul A¹, Sirivichayakul S², Ditangco R³, Wong KH⁴, Li PCK⁵, Praparattanapan J⁶, Phanuphak P², Segubre-Mercado E³, Yam WC⁷, Sirisanthana T⁶, Singtoroj T⁸, Law M, on behalf of the TREAT Asia Studies to Evaluate Resistance – Surveillance Study (TASER-S)

Affiliations: 1 The Kirby Institute, UNSW Australia, Sydney, Australia; 2 Faculty of Medicine, Chulalongkorn University and HIV-NAT/ The Thai Red Cross AIDS Research Centre, Bangkok, Thailand; 3 Research Institute for Tropical Medicine, Manila, Philippines; 4 Integrated Treatment Centre, Hong Kong, China; 5 Department of Medicine, Queen Elizabeth Hospital, Hong Kong, China; 6 Research Institute for Health Sciences, Chiang Mai University, Chiang Mai, Thailand; 7 Department of Microbiology, Queen Mary Hospital, Faculty of Medicine, The University of Hong Kong, Hong Kong, China; 8 TREAT Asia, amfAR - The Foundation for AIDS Research, Bangkok, Thailand

Background:

The availability of HIV antiretroviral therapy (ART) has been associated with the development of transmitted drug resistance-associated mutations (TDRM). TDRM can compromise treatment effectiveness in patients initiating ART and the prevalence can vary in different clinical settings. In this study, we investigated the proportion of TDRM in treatment-naïve, recently infected HIV-positive individuals sampled from four urban locations across Asia between 2007-2010.

Methods:

Patients enrolled in the TREAT Asia Studies to Evaluate Resistance – Surveillance Study (TASER-S) were genotyped prior to ART initiation, with resulting resistance mutations analysed according to the WHO 2009 list. Patients with extensive TDRM without confirmation of treatment-naïve status, and those missing a protease or reverse transcriptase sequence were excluded.

Results:

A total of 451 patients were included with 366/451 (81.1%) reported to acquire HIV through homosexual exposure. Proportions of TDRM across the time period ranged from 0% to 8.7% - Hong Kong: 3/88 (3.4%, 95%CI 0.71%-9.64%); Thailand: Bangkok: 13/277 (4.7%, 95%CI 2.5%-7.9%), Chiang Mai: 0/17 (0%, 97.5%CI 0%-19.5%); and the Philippines: 6/69 (8.7%, 95%CI 3.3%-18.0%). There was no significant increase in TDRM over time across the four clinical settings. The median CD4 counts for patients with TDRM ranged from 348-370.5 cells/ μ L by site. Median CD4 counts for those without TDRM were between 308-408.5 cells/ μ L. The Philippines did not have CD4 counts available.

Conclusions:

The observed proportion of TDRM in TASER-S patients from Hong Kong, Thailand and the Philippines was low to moderate during the study period. Regular monitoring of TDRM should be encouraged, especially with the scale-up of ART at higher CD4 levels.

Funding:

The TREAT Asia Studies to Evaluate Resistance (TASER) is an initiative of TREAT Asia, a program of amfAR, The Foundation for AIDS Research, with support from the Dutch Ministry of Foreign Affairs through a partnership with Stichting Aids Fonds, and the U.S. National Institutes of Health's National Institute of Allergy and Infectious Diseases, Eunice Kennedy Shriver National Institute of Child Health and Human Development, and National Cancer Institute, as part of the International Epidemiologic Databases to Evaluate AIDS (IeDEA; U01AI069907). Queen Elizabeth Hospital and the Integrated Treatment Centre are supported by the Hong Kong Council for AIDS Trust Fund. TREAT Asia is also supported by ViiV Healthcare. The Kirby Institute is funded by the Australian Government Department of Health and Ageing, and is affiliated with the Faculty of Medicine, UNSW Australia. The content of this publication is solely the responsibility of the authors and does not necessarily represent the official views of any of the governments or institutions mentioned above.

Oral Abstract 14

A pilot study of a primary care based chronic disease management program for privately insured patients

Authors:

Ms Rebecca Tinning SPHCM UNSW, Medibank Private, A/Prof Andrew Hayen SPHCM, UNSW
Prof Nicholas Zwar, SPHCM UNSW, Ms Rebecca Bell SPHCM, Medibank Private

The CareFirst pilot aims to test the feasibility of supporting and enhancing existing chronic disease management procedures in General Practice for privately insured members who suffer from chronic disease

Objective:

The aim of this study is to demonstrate that enhanced chronic disease management in primary care will improve patient experience, improve health outcomes and reduce private health insurers benefit outlays.

Study population and setting:

The six month pilot is being implemented in six GP clinics in South East Queensland with an initial participating population of 150 Medibank members with chronic disease. Potential participants have been identified by GP's in participating clinics

The Intervention:

The CareFirst model supports and improves the effectiveness of usual chronic disease care in General Practice with the use of an enhanced care management IT platform, the provision of training in chronic disease management and behaviour change to primary care clinicians and the development and delivery of Personalised Self-Management Plans, self-management materials and telephonic support to patients.

Outcomes to be studied:

The study seeks to test if an effectively implemented chronic disease management programs in a primary care setting can improve patient health status and self-management leading to greater disease control. Additionally the use of semi-structured interviews of clinical staff involved in the delivery of the pilot as well as pilot participants will allow researchers to gain a deeper understanding of how the intervention was implemented, whether the clinicians and patients were satisfied with the program and gain insights into how it could be improved.

Oral Abstract 15

THE HIGHS AND LOWS OF METHAMPHETAMINE USE AMONG GAY AND BISEXUAL MEN

Authors:

Hammoud MA¹, Prestage GP^{1,2},

¹The Kirby Institute UNSW Australia, ²ARCSHS La Trobe University

Introduction:

Methamphetamine use among gay and bisexual men (GBM) is higher than in most other populations and has been associated with HIV infection. We investigated actual and perceived consequences of methamphetamine use among GBM.

Methods:

Flux is a cohort study of drug use among Australian GBM. A total of 1,551 GBM had completed the baseline survey by March 2015.

Results:

Over a quarter (29%) indicated having ever used methamphetamine; 15% used it in the previous six months. Most (83%) recent use of methamphetamine was on only a few occasions, but 17% had used it at least weekly and a further 30% used it about once a month.

While 58% of those who had used methamphetamine reported feeling not at all addicted, 20% felt at least somewhat addicted. 7% of methamphetamine users reported ever overdosing on it. 27% showed evidence of dependence according to the Severity of Dependence Scale.

Most common reasons for recent methamphetamine use were: fun (74%), curiosity (68%), and to enhance sex (67%). A minority of recent methamphetamine users reported harmful consequences of drug use, including: accidental self-injury (18%), broken friendships (16%) and late bill payment (18%). The majority reported positive consequences, such as helping them: have better sex (61%), gain confidence (55%), and meet new friends (55%).

Conclusion:

While rates of methamphetamine dependence and overdose appeared high, the majority of methamphetamine users did so infrequently and did not themselves feel addicted. They more often reported positive than negative consequences of drug use. Although the potential harms from methamphetamine use among GBM represent a significant issue, not all their methamphetamine use may be problematic, and so, they may not feel at risk by using it. Interventions seeking to reduce risks from methamphetamine use among GBM need to take account of these very different experiences of its use.

Oral Abstract 16

Trends in end-stage liver disease among people notified with HBV or HCV in New South Wales, Australia: 2000-2014

Authors:

Khalieel R¹, Grebely J¹, Amin J¹, Alavi M¹, Hajarizadeh B¹, George J², Matthews GV¹, Law M¹, Dore GJ¹.

¹The Kirby Institute, UNSW Australia, Sydney, Australia, ²Storr Liver Unit, Westmead Millennium Institute and Westmead Hospital, University of Sydney, Sydney, Australia.

Background:

In Australia, diagnosis of HBV and HCV infection requires mandatory notification, and high levels of screening have enabled the majority of those with chronic infection to be diagnosed (estimated 85% for HCV and 60% for HBV). Thus, population level HBV and HCV-related disease burden can be monitored through public health surveillance datasets.

Methods:

HBV and HCV cases notified to the NSW Health Department between 1993 and 2012 were linked to data on hospitalizations (2000-2014). Time trends in hospitalizations (incident and total) due to decompensated cirrhosis (DC, including ascites, esophageal varices with bleeding, hepatic failure, alcoholic hepatic failure, and alcoholic liver cirrhosis) and hepatocellular carcinoma (HCC) were evaluated [International Classification of Diseases (ICD 10) coding].

Results:

A total of 151,307 individuals were notified with HBV (n=54,399), HCV (n=93,099), or HBV/HCV (n=3,809). From 2000 to 2014, there were 24,130 (HBV=2,346; HCV=20,713, HBV/HCV=1,071) and 7,044 (HBV=2,583; HCV=4,180, HBV/HCV =281) hospitalizations for DC and HCC, respectively. The number of incident hospitalizations was 6,031 (HBV=907 and HCV=4,848, HBV/HCV=276) for DC and 2,055 (HBV=732 and HCV=1,244, HBV/HCV=79) for HCC. Among those with HCV; DC incident hospitalisations increased from 863 in 2001-2003 to 1,176 in 2010-2012 and HCV/HCC incident hospitalizations increased from 139 in 2001-2003 to 447 in 2010-2012. Among those with HBV; HCC incident hospitalizations increased from 145 in 2001-2003 to 190 in 2010-2012; while DC incident hospitalizations remained stable, with 200 in 2010-2012 and 201 in 2001-2003. Over the study period, estimated uptake of antiviral therapy has increased for HBV (2-5%), but remained low for HCV (1-2% per year).

Conclusion:

The burden of HCV-related hospitalizations due to ESLD has increased markedly. Population level monitoring of HCV ESLD burden will be particularly crucial to evaluate the impact of interferon-free regimens.

Oral Abstract 17

Systematic development of multi-component community-based interventions to reduce alcohol related harms among Aboriginal people in three rural communities in Australia.

Authors:

Mieke Snijder, Anthony Shakeshaft, Bianca Calabria and Chiara Stone

Background:

Community-based interventions are likely to reduce alcohol related harms among Aboriginal Australians, especially when they are developed in close collaboration with the community. This paper will showcase how a systematic approach was used in partnership with three local communities to develop multi-component interventions aiming to reduce alcohol related harms.

Method:

The systematic approach used in this study consisted of four components: 1) needs assessment using routinely collected data, community consultations and services mapping; 2) setting objectives; 3) literature searches identifying evidence based interventions; and 4) program development in collaboration with local stakeholders. An Implementation Committee in each community consisting of Aboriginal community members and community-based organisations (CBOs) was central to this approach.

Results:

The needs assessment showed that young people (17 to 25 years old) were most involved in alcohol related harms, but a lack of appropriate services or opportunities for work, education or alternative entertainment for this group existed in each community.

Implementation committees decided the interventions should primarily aim to reduce alcohol related crimes and emergency department presentations and improve community's feelings of safety and empowerment, by focusing on providing at risk young people and their families with better service delivery, alternatives to alcohol use and opportunities for empowerment.

Literature searches identified multi-component interventions to be most appropriate to target the identified issues.

The Implementation Committees decided on the implementation of multi-component interventions within three core components: 1) Improved service delivery; 2) Community activities and 3) Improved empowerment. Within each component, the Implementation Committees chose their own programs, appropriate to their community. To promote sustainability, the majority of the interventions were developed within existing services, in collaboration with CBOs.

Conclusion:

These results show how researchers can work together with Aboriginal communities in the systematic development of interventions, while using data and evidence based literature.

Oral Abstract 18

Describing medication use and investigating correlates of sedative load among people with chronic non-cancer pain prescribed opioids.

Authors :

Hoban B¹, Gisev N¹, Nielsen S^{1,2}, Larance B¹, Bruno R^{1,3} and Degenhardt L^{1,4,5,6}.

¹National Drug and Alcohol Research Centre, University of New South Wales, Sydney, NSW 2052, Australia,

²School of Psychology, University of Tasmania, Sandy Bay Campus, Hobart, Tasmania 7001.

Background:

Polypharmacy is extensive in people with chronic non-cancer pain (CNCP) and many of these medications are associated with adverse effects, including sedation. In addition there is a lack of literature describing medication use in CNCP. The aims of this study were to: i) describe medication use and sedative load (SL) in a cohort of people with CNCP prescribed opioids, ii) assess whether SL is associated with self-reported drowsiness/fatigue iii) assess correlates of SL including sex, age, unemployment and total oral morphine equivalent dose.

Methods:

A total of 1,166 CNCP patients prescribed opioids were recruited from community pharmacies across Australia and completed a diary of their medication use in the past week. SL was calculated using a previously published index. Associations with SL were examined using multivariate regression, controlling for demographic characteristics, physical and mental health, substance use and total oral morphine equivalent dose.

Results:

After the cardiovascular medications (56%, 95%CI=53.3-59.0) and medications for acid related disorders (44%, 95%CI=41.1-46.9; e.g. omeprazole), the most common medications (in addition to opioids) were antidepressants (55%, 95%CI=51.8-57.5) and benzodiazepines (28%, 95%CI=25.6-30.8) which are sedative medications. The mean SL for the group was 3.76 (S.D. 2.22) and ranged from 0-13. SL was associated with self-reported drowsiness/fatigue. Being female, younger, unemployed and a higher total opioid dose were associated with a higher SL.

Conclusion:

Among people with CNCP prescribed opioids sedative medications were among the most common medications used in the sample. Those with a higher SL score were more likely to be female, younger, unemployed and have a higher total oral morphine equivalent dose.

Oral Abstract 19

Prevalence and predictors of antenatal alcohol consumption prior to awareness of pregnancy

Authors:

Clare McCormack^{1,2*}, Delyse Hutchinson^{1,2,3}, Lucy Burns^{1,2}, Judy Wilson¹, Elizabeth Elliott⁴, Steve Allsop⁵, Jake Najman⁶, Craig Olsson^{3,7}, Sue Jacobs⁸, Richard P. Mattick¹

1. National Drug and Alcohol Research Centre, University of New South Wales, Sydney, Australia
2. Australian Centre for Perinatal Science, University of New South Wales, Sydney, Australia
3. Murdoch Children's Research Institute, Royal Children's Hospital, Parkville, Victoria, Australia
4. Paediatrics and Child Health, Sydney Medical School, University of Sydney, Sydney, Australia
5. National Drug Research Institute, Curtin University of Technology, Perth, Australia
6. Queensland Alcohol and Drug Research Education Centre, University of Queensland, Brisbane, Australia
7. Centre for Social and Early Emotional Development, Deakin University, Melbourne, Australia
8. Department of Obstetrics, Royal Prince Alfred Hospital, Sydney, Australia

* Corresponding author.

Email: c.mccormack@unsw.edu.au

Address: NDARC, UNSW, 22-32 King St, Randwick, NSW 2031 Australia

Phone: +61 425 254 227(M), +61 2 9385 9386 (W)

Aims:

Many women consume alcohol during pregnancy. However, previous estimates of prenatal alcohol consumption may not take into account alcohol consumption prior to pregnancy recognition. The purpose of this study was to examine prevalence and predictors of alcohol use by women prior to awareness of their pregnancy, and factors predicting whether women will cease, reduce, or continue alcohol use following pregnancy recognition.

Methods:

1487 women and their partners from antenatal clinics completed detailed interviews about alcohol and drug use in each trimester. Alcohol consumption before and after awareness of pregnancy was recorded separately. Results: Between conception and awareness of pregnancy, 59.4% of women consumed alcohol. Binge or heavy drinking was more common than light drinking during this period. Following awareness of pregnancy to the end of the first trimester, the rate of consumption decreased to 19.4% of women. Factors associated with alcohol use included income, age, education, smoking, and substance use.

Conclusions:

Most women reduce or cease consumption after becoming aware of the pregnancy. Strategies to reduce drinking in early stages of pregnancy may be needed. Demographic and social factors are related to alcohol use during this period.

Oral Abstract 20

Risk of Adverse Outcomes associated with antihypertensive drug use during pregnancy: A population-based cohort study.

Authors:

Bilal Ahmed, Alys Havard, Louisa Jorm
Centre for Big Data Research in Health, UNSW Australia

Background:

Antihypertensives are the second largest group of drugs prescribed during pregnancy. The primary goal of antihypertensive treatment in pregnancy is to avoid maternal and neonatal morbidity by limiting progression to severe hypertension. Despite this, there is a general disagreement in the safety of antihypertensive drugs during pregnancy. We therefore aim to investigate the risk of maternal, neonatal and infant outcomes associated with the use of specific antihypertensive drugs during pregnancy.

Methods:

A population-based cohort, comprising all women who gave birth in NSW between 2003 and 2012 and had chronic or gestational hypertension, will be identified. The cohort will be constructed from records in the NSW Perinatal Data Collection (PDC), with these records linked to the Pharmaceutical Benefit Scheme (PBS) data, NSW Admitted Patient Data Collection (APDC) and other administrative datasets. Confounding by indication i.e. the possibility that the underlying disease is the cause of any observed poor maternal and neonatal outcomes, rather than the drug being studied, is a major challenge in observational pharmacoepidemiological research. Likewise, the lack of blood pressures values in the datasets means that not adjustment can be made for the severity of hypertension, which is likely to be a strong confounder in the relationship between antihypertensive medication use and outcomes. This presentation will focus on the methodological approaches explored to address these problems.

This study will contribute methodological advances that will improve future observational studies of medication safety.

Oral Abstract 21

Depressed Substance Users in treatment: How common and concerning is social anxiety?

Authors:

Prior K¹, Ross J¹, Lejuez C², Mills K¹, Kaye S¹, Brady K³, Dore G⁴, Kihlas I¹, Cassar J, Ewer P¹, Larkin X¹, & Teesson M¹.

¹National Drug and Alcohol Research Centre, University of New South Wales, Sydney, NSW, Australia

²Department of Psychology, University of Maryland, Maryland, United States of America.

³ Department of Psychiatry, Medical University of South Carolina, South Carolina, United States of America.

⁴ Northern Sydney Drug and Alcohol Service, Royal North Shore Hospital, Sydney, NSW, Australia

Background:

Substance use disorders (SUDs) are strongly related to depression and social anxiety disorder (SAD). It is well established that depression among individuals with SUDs is associated with poorer physical and mental health, poorer treatment outcomes, and higher rates of attempted and completed suicide. What is less well known is the impact of SAD on individuals with comorbid depression and SUDs.

Methods:

This study will use data from the Activate project, which is a parallel, single blind, randomised controlled trial that seeks to evaluate the efficacy of Behavioural Activation Treatment for Depression in individuals in treatment for substance dependence.

Using the Activate data, alongside measures of SAD added to the baseline Activate questionnaire, this study aims to:

1. Provide new information on the prevalence of co-occurring SAD in a clinical sample of depressed, substance dependent individuals
2. Compare baseline characteristics of people with and without SAD in terms of their demographics, mental health and wellbeing.

Results:

Preliminary findings indicate that of the 132 participants recruited, 71.2% (n= 94) met DSM-IV criteria for SAD. Results demonstrated that those with comorbid SAD were older (M= 37.6 compared to 35.3), were more likely to be female (46.8% compared to 39.5%) and were less likely to have completed secondary school. Strikingly, individuals with co-occurring SAD had higher rates of having attempted suicide (38.3% compared to 28.9%), experienced higher levels of rumination (M= 27.9 compared to 25.2) and were less able to tolerate or withstand distress (M= 2.2 compared to 2.6).

Conclusion:

The high rates of co-occurring SAD amongst depressed individuals presenting to alcohol and other drug treatment services, and the associations this comorbidity has with ruminative thinking, distress tolerance and suicide attempts, is concerning. These findings are required to guide the development and implementation of appropriate treatments to this underserved population.

Oral Abstract 22

Selecting an app for bipolar disorder management: Challenges and considerations

Authors:

Nicholas J^{1,2}, Larsen M E¹, Proudfoot J¹, Christensen H¹.

¹ Black Dog Institute, University of New South Wales, Sydney, Australia

² School of Psychiatry, University of New South Wales, Sydney, Australia

Background:

With the ubiquity of mobile phone ownership, clinicians and consumers are increasingly using apps to enhance the management of chronic illnesses such as bipolar disorder (BD). While the evidence-based development of apps for BD is in its infancy, there has been an explosion of publicly available apps. Therefore, clinicians and consumers face challenges in selecting appropriate apps to facilitate BD management.

Methods:

A systematic review framework was used to assess apps. Searches of the Australian iOS and Android app stores identified English-language apps developed for BD. The comprehensiveness and quality of information provided, and the degree monitoring tools paralleled current resources developed for the disorder were assessed.

Results:

Of the 438 apps identified during the search, only 82 (19%) were relevant to BD, providing a variety of functions; 35 monitoring tools, 32 psychoeducation, 10 self-assessment tests, 4 community support, and 1 treatment. Overall, apps providing psychoeducation were neither comprehensive nor in line with best-practice guidelines. Approximately half of the mood monitoring apps failed to monitor additional critical information such as medication (57%) and sleep (49%), while none had duty-of-care notifications for severe extremes of mood, or suicidality. User-given star-rating was not significantly correlated with app quality ($r=-.11$, $P=.80$). Only 22% of apps provided a privacy policy and 38% password protection.

Conclusion:

Clinicians and consumers looking to use apps for BD management are faced with a number of challenges in app selection including; the identification of appropriate apps; privacy and security considerations; and app quality. Symposium attendees will learn important considerations when selecting apps, as evidence suggests these results are not unique to BD. This study is the first to investigate the state-of-the-science of apps for BD, and highlights the need for new frameworks for mobile mental health research to ensure the timely availability of evidence-based apps to the public.

Oral Abstract 23

Abstract 22 - "ibobbly" Indigenous suicide prevention app - need, process and preliminary results of pilot trial

Indigenous Australian youth (aged 15 to 34) have up to four times the risk of suicide compared with their non-Indigenous counterparts. Barriers to help-seeking include shame, feared loss of autonomy and negative attitudes towards healthcare providers. The use of mobile devices and apps continues to rise amongst young people, thus presenting opportunities to utilize these aids in overcoming help-seeking barriers. Apps have been shown to assist in several health-related areas, including weight loss and smoking cessation, although no apps have as yet been evaluated for suicide prevention. Moreover, there is a lack of research that scientifically evaluates suicide prevention interventions within Indigenous communities.

The Black Dog Institute's ibobbly mobile app for suicide prevention was launched in October 2013 and was the first suicide prevention app designed for Indigenous Australians. The app was developed in partnership with Indigenous artists and voice talents who created and digitised original images depicting aspects of mental health and wellbeing from an indigenous perspective. Further input from Indigenous community members ensured appropriate "real life" language was used that would resonate with the targeted participants. The content was based around self-assessments and self-help activities delivered through an Acceptance and Commitment Therapy framework.

A randomised control trial (RCT) was conducted in the Kimberley region of Western Australia in partnership with the Alive & Kicking Goals Suicide Prevention project. The RCT aimed to measure efficacy of the app in reducing suicide ideation, depression, psychological distress and impulsivity. Initial results are promising and the app has been very well received by various communities. Much recruitment occurred through word of mouth as participants recommended the app to family and friends indicating trust in the intervention. This trial was a pilot before a larger national trial is conducted with an updated version of the app later in 2015.

Oral Abstract 24

Non-adherence to anti-viral therapy contributes to virological breakthrough in chronic hepatitis B virus patients

Authors:

Polis, S.^{1,2,7} Kermeen, M.³ Holdaway, S.⁴ Ahlenstiel, G.^{4,5} Pavendranathan, G.^{6,7} Lee, A.³ George, J.^{4,5} Zekry, A.^{6,7} Zablotska-Manos, I.¹ Maher, L.¹

¹The Kirby Institute, UNSW Australia. ²St George Hospital, Center for Research in Nursing and Health, ³Concord Repatriation Hospital, Department of Gastroenterology, ⁴Storr Liver Unit, Westmead Hospital, ⁵Westmead Clinical School, University of Sydney, ⁶St George Hospital Department of Gastroenterology & Hepatology, ⁷St George Clinical Group School Medicine, UNSW Australia

Background:

Adherence to Hepatitis B virus (HBV) anti-viral therapies is imperative to achieve and maintain viral suppression. To date, there has been limited research on what defines adherence to HBV therapies. Our study aimed to investigate the relationship between missed days of HBV anti-viral therapy and HBV DNA virological breakthrough.

Methods:

A cross sectional survey of HBV patients undergoing oral anti-viral therapies was undertaken at three Sydney tertiary hospital sites. Patients consented to complete an online self-reported adherence questionnaire and to provide a copy of HBV serology and virology results from 12 months prior. Data were analysed in STATA.

Results:

The mean age of participants (n=277) was 46.6 years (SD 12.7) male (61%) and born in a country other than Australia (95%). Participants had been diagnosed with HBV for a mean 15 years (SD12) and had received HBV antiviral therapy for a mean 5.3 years (SD 4.7, range=30). In the last month, almost two thirds (65%) reported never missing a day of medication, 12% reported missing one day and 23% reported missing more than one day. Almost one in five (17.6%) reported missing 2 or more consecutive days. Virological response was assessed for 266 participants with HBV DNA undetected in 39%, detectable virus <20 iu/ml in 43% and detectable viral load in 14% of participants. Virological breakthrough, defined as a greater than 1 log₁₀ (10-fold) rise in serum HBV DNA, was reported in 17 participants. Virological breakthrough was associated with missing more than one day of HBV anti-viral medication (p <0.001)

Conclusion:

Our study found strong associations between the number of missed days of HBV anti-viral therapy and HBV DNA virological breakthrough. Study findings contribute to current knowledge and understanding of what level of adherence is required to minimise the risk of HBV DNA viral breakthrough.

Oral Abstract 25

A pilot randomised controlled trial of a physical activity intervention in a low socioeconomic population: Focus on mental contrasting with implementation intentions.

Authors :

Abbott S¹, Reynolds R¹, de Wit JBF².

¹School of Public Health and Community Medicine, Faculty of Medicine, University of New South Wales

²Centre for Social Research in Health, Faculty of Arts and Social Science, University of New South Wales

Background:

Low physical activity (PA) levels are a major public health concern in Australia. There is some evidence that PA interventions can increase PA levels via various methods, including online delivery. Low Socioeconomic Status (SES) people participate in less PA than the rest of the population, partly due to poor self-regulation behaviours associated with socioeconomic characteristics. Interventions that involve a particular method of self-regulation, Mental Contrasting with Implementation Intentions (MCII), has regularly achieved healthy behaviour change, but few studies focus on PA behaviour outcomes. In this study, a pilot randomised controlled trial will deliver MCII for PA behaviour change to individuals of relative disadvantage for the first time. The study will test the hypothesis that sedentary participants, who learn the MCII technique will be more physically active, have improved anthropometry and psychological indicators at the completion of a 12-week intervention compared to baseline and control.

Methods:

Eligible participants of relative socioeconomic disadvantage will be randomly assigned to either the 'PA Information Plus MCII Intervention Group' or a 'PA Information-Only Control Group'. Both groups will attend a baseline and 12-week face-to-face consultation; where PA, anthropometric and psychological data will be gathered. The intervention group will be guided through an MCII session at the baseline appointment to establish a PA goal to aim to achieve over 12 weeks. Other than these baseline and 12-week consultations, all participant interaction will occur online. All participants will receive a 'Fitbit' accelerometer to objectively record PA as a daily step count, along with a PA diary for the duration of the study. PA data will be recorded on a personalised online spreadsheet. Both groups will receive a standard PA information email at weeks 2, 4, and 8. The intervention group will also receive scripted follow-up online appointments to discuss goal progress.

Results:

Work-in-progress.

Conclusion:

Work-in-progress

Disclosure of interest:

I certify that neither I nor any of my supervising team has any material, personal or financial relationship to this area of study.

Oral Abstract 26

Pilot study to investigate the feasibility of an online self-compassion intervention for improvement of nutrition behaviours in overweight and obese people

Authors:

Rahimi-Ardabili H¹, Reynolds R¹, Zwar N¹

1. School of Public Health and Community Medicine, Faculty of Medicine, University of New South Wales, NSW, Australia

Background:

High rates of overweight and obesity pose a grand challenge to Australian public health. Due to poor nutrition and psychological habits, weight loss is usually difficult to achieve and sustain. Focusing only on diet restriction has also been associated with an increased risk of disordered eating. There is evidence that promoting healthier behaviours but not focusing on body weight may be particularly beneficial for weight loss. Relating to this concept is self-compassion. Self-compassion is giving oneself compassion in times of perceived inadequacy, failure or suffering. However, there has been little done in using it as a tool to aid weight loss. Goal-setting, self-monitoring and online interventions that comprise individualised feedback and support have also shown promise with weight loss. This study is a pilot study to explore the feasibility of methods for a future longer-term randomised controlled trial.

Methods:

Fifteen participants will be recruited from UNSW Kensington campus via online means and posters. Participants will fill in an online screening questionnaire, eligible participants will be directed to more questions in the online questionnaire, which will assess eating behaviour; level of depression, anxiety and stress; and level of self-compassion. Participants will then fill in a 3-day food diary online before they meet with a researcher in-person. In this meeting, body weight and height will be measured and the participant will set 2 goals to improve their nutrition and self-compassion. Participants will then self-monitor these goals online over a period of 4 weeks, with email reminders and online support. At the end of the study, participants will again fill in an online questionnaire and again meet with the researcher in-person to have his/her weight measured and take part in a 1:1 interview to find out the experience and thoughts of each participant over the 4 weeks.

Result:

Work in-progress.

Conclusion:

Work in-progress.

Oral Abstract 27

Applying “Big Data” and Business Intelligence Insights to Improving Clinical Care for Cancer

Background:

The current business intelligence capability of health information systems used in Australian health systems does not provide clinicians with sufficient actionable insights relevant to their own clinical settings.

Aim:

The research will explore ways:

1. To enhance linked operational EHRs/CISs across acute and primary care settings and where possible, complement with data from existing research datasets and measure if the combined dataset is better than each on its own as measured by quality metrics.
2. To measure if the application of data analytics techniques to the combined dataset (compared with each component dataset) would improve fitness for purpose as measured by “processes and/or outcomes” in cancer care

There is much potential to improve clinical outcomes by linking different multiple datasets of real time and retrospective data held in a diverse set of clinical, research and other repositories in many different organisations. This research aims to realise this potential by identifying the most effective ways to utilise the growing amount of data generated by cancer care information systems through improved data linkage and application of big data and emerging business intelligence applications. The accumulation of data is outpacing the ability of organizations to leverage the data for improving financial and clinical efficiencies and quality of care. It is believed that careful and attentive use of business intelligence (BI) in healthcare can transform data into knowledge that can improve patient outcomes and operational efficiency.

Methods:

The research will approach the topic using a socio-technical perspective as a theoretical framework , recognising the interaction between people and technology in the health workplace and how that interaction influences the extent of take-up of health information systems, including decision support tools based on big data and business intelligence technology. It will use a combination of quantitative and qualitative methods to review current clinical information systems, research, activity and clinical data repositories, to identify current strengths and weaknesses in providing clinicians with relevant, timely insights.

Consulting with clinicians, health service delivery planners and other stakeholders would use qualitative methods including structured interviews and rating scales to identify from their perspectives a preferred “future state”. The consultation process would be complemented by a literature review, which examines current cancer care decision-making processes within Australia and comparable jurisdictions internationally. The step would also involve a review of technological advances and metadata management that could make the process of data collection, data quality management and access easier. Quantitative measures of data entry effort, data quality and timeliness and extent of use by clinicians would supplement the qualitative methods.

Results:

The hypothesis is that data from linked real time operational systems should more accurately reflect the patient population than individual clinical and research datasets. It should also reflect other factors such as co-morbidities and adverse events, which may not have been recorded in individual research datasets. Also the clinical notes stored as unstructured data, in a real time operational system can provide a rich source of data.

The results will test the hypothesis that enhancing real time patient data with individual retrospective datasets will provide a richer dataset, which is more timely and reflective of real world clinical situations. This, when combined with contemporary big data and business intelligence capability, will enable clinicians to:

- Make more effective clinical decisions
- More accurately predict outcomes from treatment decisions;
- Generate new knowledge about the effectiveness of treatments.

Evaluation of results: Opportunities and potential improvements would be reviewed by clinician and IT developers for feasibility and where practical, trialled in clinical settings.

2. Background / Rationale

The current business intelligence capability of health information systems used in Australian health systems does not provide clinicians with sufficient actionable insights relevant to their own clinical settings. For example, a patient cohort in a clinical trial is likely to be different to the local clinical setting. As a result it is difficult to extrapolate or apply results.

Sebastian Schneeweis succinctly described the problem

“Physicians currently struggle to apply new medical knowledge to their own patients, since most evidence regarding the effectiveness of medical innovations has been generated by studies involving patients who differ from their own and who were treated in highly controlled research environments.”

Much information to support clinical decision-making currently originates from retrospective trials datasets. The research will explore ways to supplement retrospective datasets with real time patient data from operational clinical information systems.

It is essential to consider that characteristics of clinical trials datasets, which focus on managing experiments and testing hypotheses, are different from data direct from clinical information systems which are observational in nature. These fundamental differences will need to be addressed when looking for effective ways to combine them and generate meaningful information.

The research will focus on clinical decision-making in cancer care as a model for effective information delivery. There are multiple datasets held in a diverse set of clinical, research and other repositories in many different organisations. One early step of the study will identify the additional real-time datasets that exist and could be used. There is much potential to improve clinical outcomes by linking the different sets of real time and retrospective data available.

The growing capability of information systems to improve the quality and timeliness of decision-making through the use of big data and associated business intelligence software applications is making significant improvements to productivity in the commercial world. Australian health care settings have been slow to take up this capability and the potential for improving health outcomes has not yet been realised.

Big Data and to a lesser extent, Business Intelligence technologies are relatively new and still rapidly evolving. While they have been widely introduced in the commercial world, they are not widely used in the Australian

health system; hence there is very little research in the Australian context. This situation presents an opportunity to fill a significant knowledge gap.

The research will focus on using data generated from the existing UNSW electronic Practice Based Research Network (ePBRN) running in the Fairfield Local Government Area, part of the South West Sydney Local Health District as the core dataset to be enhanced. The research will make use of and build upon, existing initiatives to refine and extend the ePBRN infrastructure and protocols for data management and stewardship to support a primary health and integrated care “research laboratory”.

The research will take place within the overall context of the NSW health system and aim to identify new ways to enhance clinical decision-making in cancer care.

3. Hypothesis/ Research Questions

Hypothesis

Clinical decision-making and outcomes in cancer care can be improved by combining datasets from real-time clinical information systems with historical datasets from clinical trials and the subsequent application of big data and business intelligence techniques. Clinical decision-making and outcome improvements will be measured by clinician and patient feedback on usage, intervention changes and outcomes using structured interviews and surveys, supplemented by changes in survival rates and patient well being.

Research Questions

What are the most effective ways to utilise the growing amount of data generated by cancer care information systems?

What are the most useful applications e.g. data linkage and analytics, for generating improved clinical decision-making and outcomes?

Sub-Questions

Who are the potential users of enhanced datasets and data analytics?

What would they use such applications for?

What application characteristics and other socio-technical factors might discourage usage?

4. Design and methodology

The design and methodology will be comprised of:

1. A literature review, which examines current cancer care clinical decision-making, processes within Australia and comparable jurisdictions internationally. The step would also involve a review of technological advances that could make the process of data collection, data quality management and access easier.
2. Conceptual Framework and Measures using a socio-technical perspective as a theoretical framework, recognising the interaction between people and technology in the health workplace and how that interaction influences the extent of take-up of health information systems using decision support tools based on big data and business intelligence technology. It will use a combination of quantitative and qualitative methods to review current clinical information systems, data repositories, including ones developed for research, activity and clinical purposes to identify current strengths and weaknesses in providing clinicians with relevant, timely insights.

3. Qualitative Phase and Consultations with clinicians, health service delivery planners and other stakeholders using qualitative methods including structured interviews and rating scales to identify from their perspectives a preferred “future state”. Quantitative measures of data entry effort, data quality, timeliness and extent of use by clinicians would supplement the qualitative methods.
4. Combined data sets: comparative study to identify differences between the utility of combined datasets and existing separate datasets – including comparing data schemas, data quality and timeliness between combined and separate datasets.
5. Analytics applications: comparative study to identify differences in utility for clinical decision-making of different analytics techniques and applications that present the results of that analysis.

5. Data Collection

Data collection will involve locating and assessing the relevance of existing datasets for obtaining new clinical insights, identifying potential ways of linking different datasets e.g. through use of statistical linkage keys, common metadata and then addressing the barriers and enablers, such as privacy and ethical issues to linking them. Data will also be collected using structured interviews and surveys with clinicians and others, through literature reviews including technical reviews of big data and business intelligence applications.

6. Data Analysis

An initial analysis to support combining disparate datasets will take a horizontal slice of existing core systems, focusing on the UNSW ePBRN and other datasets such as the Cancer Registry, the NSW Health Cancer IM Dataset and map data items to a common set of metadata. The analysis would also look at data quality. Such datasets are held by multiple organisations including government agencies, universities, health service providers, research institutes and private corporations. The datasets will vary in size, scope and content. On their own they may make only a small contribution to improving clinical cancer care, but combined they are likely to generate more significant insights.

In addition, qualitative data from interview notes and survey results will be analysed to identify common themes and issues for resolution. Quantitative data will be analysed using statistical analysis software such as SPSS to identify levels of significance.

7. Anticipated outcomes / significance

The following outcomes are anticipated:

- Supplementing linked real time patient data with retrospective trials datasets will provide a richer dataset, which is more timely, as measured from the time a clinical event occurs to the time data describing it is available for analysis and also reflective of real world clinical situations e.g. number of occasions treatment instructions are not followed, numbers of unplanned re-admissions or adverse events;
- Data from combined datasets should more accurately reflect the patient population than that of a clinical trial;
- Insights gained will also reflect other factors such as co-morbidities and adverse events, which may have not been recorded in a clinical trial or research dataset;
- The availability of clinical notes as unstructured data in a real time operational system when linked to other datasets, can provide a rich source of insight for clinical decision-makers;
- The availability of data from linked real time clinical systems would enable comparisons to be made with evidence based data gathered from clinical trials. It should then be possible to analyse the differences (and results) between clinical trials and comparable real life clinical settings.

- When combined with contemporary business intelligence capability, the above outcomes will enable clinicians to:
 - o More accurately predict outcomes that guide treatment decisions;
 - o Generate new knowledge about the effectiveness of treatments.

8. Timeframe

The research will be conducted over a three-year/ six-semester timeframe. The indicative timeframe is:

Semester 1, 2015: Scope Clarification, Initial Literature Review
Semester 2, 2015: Initial consultation with Clinicians, Further Literature Review
Semester 1, 2016: Formulate, test & refine data gathering methodology, Further Literature Review
Semester 2, 2016: Data gathering – clinicians, technology review
Semester 1, 2017: Data Analysis, Initial draft of thesis
Semester 2, 2017: Refine and finalise thesis

9. Anticipated budget

Conduct Consultations (labour cost borne by student)	\$5,000
Conduct Comparative Studies (labour cost borne by student)	\$3,000

Oral Abstract 28

Title: Prison based treatment for alcohol and related other drug use among Indigenous and non-Indigenous men

Author:s

Doyle M¹ Butler T¹ Guthrie J² Shakeshaft A³

¹ Kirby Institute, UNSW Australia, ² National Centre for Indigenous Studies, Australian National University, ³ National Drug and Alcohol Research Centre, UNSW Australia.

Background:

The problematic use of alcohol and other drugs (AoD) among people entering prison, is well documented (NSW Inmate Health Surveys 1996, 2001 and 2009). Approximately 80% of men in prison have previously drunk alcohol and or used illicit drugs at harmful levels. However, there has been limited published research in Australia about prison based AoD treatment, particularly in relation to Aboriginal men. This is concerning given the much higher levels of imprisonment of Aboriginal people compared to other Australians at 1,857 versus 144 respectively per 100,000 population (2014).

This presentation will report on the findings of a PhD study that examined the treatment experiences of inmates undertaking the Intensive Drug and Alcohol Treatment Program (IDATP) in NSW. IDATP, which takes six months to complete, was established in 2013 and uses group and individual therapy approaches.

Methods:

This study draws from the qualitative section of the PhD project. Thirty one participants (14 Indigenous) were interviewed in depth, 26 of whom were re-interviewed 9 to 10 months after the first interview. The data analysis includes both pre and post intervention (IDATP) and Indigenous and non-indigenous comparisons.

Results:

Emergent themes include that most Indigenous inmates were more concerned about the group dynamic than whether the facilitator was Indigenous. A theme among both groups in the second interview was that the program content may have a stronger impact if one of the facilitators had overcome their own AoD use problems.

Conclusion:

The analysis is continuing and final conclusions will be delivered around April 2016 with a thesis submission date of the 30th August. However, preliminary findings have implications for peer based education and treatment within a prison context. Prison based programs may have greater credibility if one of the facilitation team has personally experienced AoD use problems. Indigenous men in prison may be more willing to discuss AoD use problems within an Indigenous only treatment group. Many of the findings from this PhD possibly represent new knowledge about AoD treatment provision to men in Australian prisons.

Oral Abstract 29

Laws prohibiting peer distribution of injecting equipment in Australia: A critical analysis of their effects

Authors:

Lancaster K.¹, Seear K.², and Treloar C.³

¹ Drug Policy Modelling Program, National Drug and Alcohol Research Centre, UNSW Australia

² Faculty of Law, Monash University

³ Centre for Social Research in Health, UNSW Australia

Background:

The law is a key site for the production of meanings around the 'problem' of drugs in public discourse. In this presentation, we critically consider the material-discursive 'effects' of laws prohibiting peer distribution of needles and syringes in Australia.

Methods:

Taking the laws and regulations governing possession and distribution of injecting equipment in one jurisdiction (New South Wales, Australia) as a case study, we use Carol Bacchi's poststructuralist approach to policy analysis to critically consider the assumptions and presuppositions underpinning this legislative and regulatory framework, with a particular focus on examining the discursive, subjectification and lived effects of these laws.

Results:

We argue that legislative prohibitions on the distribution of injecting equipment except by 'authorised persons' within 'approved programs' constitute people who inject drugs as irresponsible, irrational, and untrustworthy and re-inscribe a familiar stereotype of the drug 'addict'. These constructions of people who inject drugs fundamentally constrain how the provision of injecting equipment may be thought about in policy and practice. We suggest that prohibitions on the distribution of injecting equipment among peers may also have other, material, effects and may be counterproductive to various public health aims and objectives. However, the actions undertaken by some people who inject drugs to distribute equipment to their peers may disrupt and challenge these constructions, through a counter-discourse in which people who inject drugs are constituted as active agents with a vital role to play in blood-borne virus prevention in the community. Such activity continues to bring with it the risk of criminal prosecution, and so it remains a vexed issue.

Conclusion:

These insights have implications of relevance beyond Australia, particularly for other countries around the world that prohibit peer distribution, but also for other legislative practices with material-discursive effects in association with injecting drug use.

Oral Abstract 30

What does sexual and reproductive wellbeing look like to adolescents living in Fiji Islands? Preliminary Findings

Author:

O'Connor MAC1 Dr Razee H2 Dr Rawstone P3

1. School of Public Health and Community Medicine, UNSW
2. School of Public Health and Community Medicine, UNSW
3. School of Public Health and Community Medicine, UNSW

Background:

The term 'wellbeing' is frequently used in academic writing and mainstream media. However, the concept is elusive with no clear definition. Pacific Island countries and territories have recently committed to the Sexual Health and Wellbeing Shared Agenda 2015 – 2019 which emphasizes a need to focus on improving the sexual and reproductive wellbeing of vulnerable populations, particularly young people. In Fiji Islands nearly half of HIV cases are between the ages of 10 and 29 years, 10% of births are to adolescent mothers and 29% of women report their first sexual experienced as either forced or coerced. To improve these health outcomes, a greater understanding of young people's perceptions and practices is required. This presentation focuses on Fijian adolescent's conceptualization of wellbeing related to sexuality and reproduction.

Methods:

As part of a larger study, focus group discussions will be held in July and August 2015 with 15 – 19 year olds living in Fiji. Part of each discussion will explore how adolescents conceptualize wellbeing related to sexuality and reproduction. A maximum variation sample will be recruited using a purposive sampling technique to ensure that participants represent a wide range of adolescents in Fiji including iTaukei and Indo-Fijians, rural and urban and those who identify as male, female and transgender. The discussions will be recorded and transcribed verbatim.

Results:

The results will be coded thematically and the preliminary findings will be presented and discussed in relation to relevant wellbeing and social frameworks.

Conclusion:

The results of the study will contribute to our understanding of 'wellbeing' in relation to sexual and reproductive health from the view point of adolescents themselves. This is likely to have important implications for adolescent sexual and reproductive health service delivery, programs and policy.

Oral Abstract 31

Disentangling pre- and post-loss features in adolescent suicide bereavement: Findings from a systematic review

Authors:

Andriessen K., Draper B., Dudley M., Mitchell P.B.
UNSW School of Psychiatry, Sydney, Australia

Background:

During the past decades research and clinical interest in suicide bereavement has increased. However, due to paucity in studies specifically focused on suicide bereavement among adolescents, either in the family or peer environment, the impact of suicide on adolescents is still not well understood. This study aims to shed light on the current knowledge of adolescent suicide bereavement.

Method:

The research literature was analysed after a systematic search of major databases (PubMed, PsycINFO, Web of Science) and a hand-check of references of retrieved articles.

Results:

The review revealed that the impact of suicide and the bereavement outcome among adolescents is affected by (1) pre-loss features related to personal and family history of mental health, family life and stressors, suicidal behavior, type of kinship relationship and (especially) closeness of relationship, and (2) post-loss issues such as social support and quality of remaining relationships.

Conclusions:

Suicide should not be considered as an isolated event, and future research and clinical work with bereaved adolescents should consider a broad context. Pre- and post-loss features might be more important regarding the impact of the loss than the type of death per se. The finding that suicide bereavement does not have to be more severe than other bereavement, offers a perspective of hope for the bereaved young people.

Oral Abstract 32

Attitudes of men in homosexual male serodiscordant couples towards ‘treatment as prevention’

Authors:

Bavinton BR,¹ Jin F,¹ Zablotska I,¹ Prestage GP,^{1,2} Grinsztejn B,³ Phanuphak N,⁴ Grulich AE,¹ on behalf of the Opposites Attract Study Group

¹ The Kirby Institute, University of New South Wales, Australia

² Australian Research Centre in Sex, Health and Society, La Trobe University, Australia

³ Instituto de Pesquisa Clínica Evandro Chagas, Fundação Oswaldo Cruz, Brazil

⁴ Thai Red Cross AIDS Research Centre, Thailand

Introduction:

HIV-positive gay men tend to have more favourable attitudes towards treatment-as-prevention (TasP) than HIV-negative men; but both groups have typically been sceptical of TasP. Little research has explored attitudes of men in homosexual male serodiscordant couples (HM-SDCs).

Methods:

Opposites Attract is an ongoing international cohort study of HM-SDCs. At baseline, 255 couples reported demographics, attitudes and sexual behaviour; and the HIV-positive partner’s (HPP) viral load (VL) was tested. A scale of TasP optimism was constructed from six attitudinal items (scored 1-5; $\alpha=0.66$ for HPPs and $\alpha=0.69$ for HIV-negative partners [HNPs]). Scores greater than 3.5 were defined as having “higher TasP optimism”.

Results:

Mean optimism scale scores for HNPs and HPPs were similar (2.55 [SD=0.70] and 2.54 [SD=0.77] respectively). 6.6% of HNPs and 9.9% of HPPs had higher optimism. Older men had significantly higher optimism than younger men in both groups; HPPs in Thailand were significantly less optimistic than HPPs in Australia and Brazil. When controlling for age and country, reporting any condomless anal intercourse (CLAI) within the couple was strongly associated with higher TasP optimism for both HIV-negative (adjusted OR=5.4, 95%CI=1.4-21.2, $p=0.015$) and HIV-positive men (adjusted OR=4.1, 95%CI=1.3-13.0, $p=0.017$). In multivariate logistic regression models, age and country were both non-significant. Higher TasP optimism was also not associated with: HPPs’ antiretroviral use, side effects or VL; STI diagnoses; gay identity; or education.

Conclusion:

Both HIV-positive and HIV-negative men in this cohort appeared to have greater optimism towards TasP than seen in other samples of gay men. Reporting any CLAI with each other was strongly associated with higher TasP optimism within these couples. Despite different levels of gay community knowledge and dialogue about viral load and TasP in Australia, Brazil and Thailand, country of residence was not associated with TasP optimism after adjusting for levels of CLAI within the couples.

Disclosure of interest statement:

The Kirby Institute (formerly the National Centre in HIV Epidemiology and Clinical Research) receives funding from the Australian Government Department of Health and Ageing. The Kirby Institute is affiliated with the Faculty of Medicine, University of New South Wales. The Opposites Attract Study receives funding from the National Health and Medical Research Council and the Foundation for AIDS Research (amfAR). No pharmaceutical grants were received in the development of this study.

Oral Abstract 33

Understanding correlates of amphetamine-type-stimulants (ats) use among men who have sex with men (msm) in vietnam: a comprehensive socio-economic perspective from a cross-sectional study

Authors:

Nga Thi Thu Vu^{1,2}, Martin Holt¹, Huong Thi Thu Phan³, Huong Thi Le², Lan Thi La⁴, Gioi Minh Tran⁵, Tung Thanh Doan⁵, Trang Nhu Nguyen Nguyen⁶ and John De Wit¹

1: Centre for Social Research in Health, University of New South Wales Australia

2: Institut of Preventive Medicine and Public Health, Hanoi Medical University, Vietnam

3: Vietnam Administration for HIV/AIDS Prevention and Control, Ministry of Health, Vietnam

4: Hanoi Centre of HIV/AIDS Prevention and Control

5: Center for Community Health Promotion, Hanoi, Vietnam

6: Centre for Promotion of Quality of Life, Ho Chi Minh City, Vietnam

Introduction:

ATS use is associated with HIV-related sexual risk behaviors and is an emergent public health problem among MSM in Vietnam. The purpose of this study is to understand its individual, sociocultural and network correlates from a comprehensive socio-ecological perspective.

Method:

From September through to December 2014 we used peer-referral to recruit a convenience sample of 622 MSM from Hanoi and Ho Chi Minh City, Vietnam. Participants were interviewed face-to-face by well-trained interviewers. Data were double-entered and cleaned using Epidata 3.1. We calculated descriptive statistic for demographic characteristics, drug use and sexual behaviors. We conducted Principal Component Analysis to identify multi-item attitude-type scales and calculated Cronbach's alpha to test their internal consistency. We performed multivariate logistic regression to establish independent correlates of ATS use. Data analysis was conducted in STATA 13.0.

Results:

Participants identified mainly as gay/homosexual (74%), were young (75.5% <= 30 years), and well-educated (54% had at least undergraduate education). 28.3% had sex with both men and women and 29.1% reported selling sex. Nearly one-third (30.4%) had ever used ATS, including 23.6% who used methamphetamine, 20.9% who used ecstasy, and 4.3% who used speed. ATS were mostly used by smoking, inhaling and swallowing. One in five (20.1%) and one in ten (11.9%) had used methamphetamine and ecstasy, respectively, during sex. Increased ATS use in the last three months was associated with perceived methamphetamine use in their MSM network, ever having used alcohol, ketamine or poppers, selling sex in the last three months, amount of perceived homophobia and level of sexual exploration.

Conclusion:

ATS use is prevalent among MSM in Vietnam's large cities. Our findings identify a complex set of correlates associated with ATS use, including individual's behaviors, network characteristics and socio-cultural factors. Interventions to reduce ATS-related harms should consider addressing all these factors from a socio-ecological perspective.

Oral Abstract 34

Negotiating change in gay and bisexual men's relationship agreements

Authors:

Philpot S¹, Prestage G^{1,2}, Ellard J^{1,2}

¹ The Kirby Institute, UNSW Australia, ² Australian Research Centre in Sex, Health, and Society, La Trobe University

Background:

Research into the relationship agreements of gay and bisexual men (GBM) has tended to focus on what these agreements are, and their role in the relationship. These agreements are mostly considered at a single time point, with limited research exploring the ways in which these agreements change over time. This paper explores communication and the negotiation of change in GBM's relationship agreements.

Methods:

We conducted a thematic analysis of the free-text responses from the Monopoly Study survey, an online survey about relationships among 4215 Australian GBM.

Results:

We identified key themes that indicated different ways change was discussed between partners. One common theme was tension in changing agreements, where partners lacked communication, or disagreed about change. Occasionally, this led to a break in the existing agreement. Conversely, agreement changes were negotiated more easily when couples had open communication and were accommodating towards their partner's needs. Another common theme involved couples who discussed the potential for their agreement to change. These men did not see changing their agreement as an immediate issue, but were open to change in the future. Finally, men decided to change their agreements for a range of reasons including mismatched sexual desires, geographical distance, medical conditions and a desire for sexual exploration. HIV was rarely mentioned in agreement changes.

Conclusion:

GBM's relationship agreements often change over time, and these changes are communicated about in various ways that can lead to quite different outcomes. Open communication helps agreements transition in ways that are comfortable and safe for both partners. Conversely, disagreement or a lack of communication can lead to the breaking of agreements. That HIV was not a primary consideration in re-framing agreements suggests HIV prevention work needs to resonate in ways that are meaningful to GBM and their relationships as they negotiate changing their agreements.

Oral Abstract 35

Sex, drugs and ethics: Beyond the HREC

Author :

Karen McMillan¹

1. International HIV Research Group, School of Public Health and Community Medicine, UNSW.

Background:

When the topic is high-risk sexual practices or illegal drug use, research subjects often fall into the category 'hard-to-reach populations'. The hard-to-reach classification generally also signals to social, legal or political vulnerabilities. HREC (Human Research Ethics Committee) applications aim to ensure that the research is valid, has value, and does not put individuals at risk. Is this the extent of the researcher's duty of care to those vulnerable communities whose support they must enlist in order to gather data?

Method:

A critical reflection on the processes, practices and outcomes of a series of qualitative investigations into HIV prevention for sex workers in four Pacific island countries.

Results:

Participation in and the results of research have the potential to negatively impact on communities, and even future research opportunities, as well as on individuals. Not all ethical concerns can be foreseen prior to fieldwork and data collection. When working with hard-to-reach populations, the success of the research will reflect the generosity and trust of subjects who are often poor and disenfranchised. The term 'community engagement' downplays the one-sided nature of the research relationship.

Conclusions:

To ensure that research does no harm, researchers need to employ a reflexive approach over the course of the research, and not simply consider that having gained 'ethics approval' ensures that their practice will be ethical. To ensure that research has some value to community, researchers should think beyond the data collection period itself and consider the 'social legacy' resulting from participation in the research, as well as the utility value of the findings.

Oral Abstract 36

Sex workers speak about their female clients

Authors:

Caldwell H¹, de Wit J¹

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Political, moral and academic debates about the sex industry are increasingly addressing clients of sexual services, who are typically considered to be male. Despite growing media and marketing of sex to women there is little scholarly evidence that women buy sex. This study sets out to explore the phenomenon of women buying sex to address the empirical shortfalls and will inform and challenge theoretical perspectives such as heteronormative female roles, regarding gender, sexuality and power.

The study is a qualitative project using semi-structured, in-depth interviews with at least 25 key informants who are sex workers, peer service providers for sex workers, or opinion leaders and will follow with at least 25 women who have bought sex in Australia. Advertising for recruitment led self-selecting key informants to volunteer for 30 minute telephone interviews regarding their knowledge about women who buy sex in Australia. Recruitment of key informants is continuing through contact with sex worker organisations such as Sex Worker Outreach Projects and Scarlet Alliance and is being promoted through social media. Data generated from interviews with sex workers was analysed using a grounded theory approach.

Preliminary results highlight the diversity of female clients, and variations in rates of access for different types of sexual services. Sex workers spoke about the motivations of women to buy sex, and the specific behavioral, language and cultural differences between genders of clients.

These initial findings make clear that gender based descriptions of the sex industry do not address diversity in workers or clients.

Oral Abstract 37

Social capital of men in prison living with hepatitis c

Authors:

Lafferty L¹, Chambers GM², Guthrie J³, Butler T¹

¹The Kirby Institute (UNSW AUSTRALIA), ²NPESU (UNSW AUSTRALIA), ³National Centre for Indigenous Studies (ANU)

Background:

Social capital theory has been developed across a number of disciplines in recent years. Whilst a number of social capital measures exist in the mainstream, none have been designed to identify social capital among men in prison, specifically those living with hepatitis C (HCV); or to capture differences in social capital domains between Indigenous and non-Indigenous inmates. This study is the first of its kind to describe the social capital of prisoners living with HCV.

Methods:

Social Capital of Men in Prison is a mixed methods study being conducted in two parts: Qualitative interviews (n=30) to identify social capital within prison (Part 1); and implementation of the Social Capital Questionnaire among male inmates with HCV in NSW correctional centres (Part 2). Part 2 is a cohort study comparing the social capital of those who intend to access HCV treatment in custody (cases) with those who decline HCV treatment in prison (controls). Analysis of Part 1 data has been used to inform the development of the Social Capital Questionnaire for Part 2 of the study.

Results:

Part 1 qualitative analysis has shown that a number of dimensions of social capital in the mainstream literature are transferable to the prison context but are not necessarily translatable.

Conclusion:

The study aims to identify and measure the social capital among inmates living with HCV and to ascertain the social capital indicators (if any) which might be associated with HCV treatment uptake whilst incarcerated. This talk will describe the findings of Part 1 of the study and summarise key social capital domains to be captured by the Part 2 survey as well as present preliminary findings of differences in social capital between Indigenous and non-Indigenous inmates.

Oral Abstract 38

Access to Mass Media and Awareness of Sexually Transmitted Diseases among the Truck Drivers in Dhaka City, Bangladesh: Do Mass Media Make Them Aware?

Background:

Long distance truck drivers use the services of sex workers in major transportation routes because of their high mobility and long-time stay away from families. Consequently, they remain one of the key forces in the spread of Sexually Transmitted Diseases (STDs). In Bangladesh, though some studies were carried out to examine the association between mass media and awareness of STDs among women and sex workers, no study was conducted yet on the same among the truck drivers. Therefore, this present study was undertaken to assess the role of mass media in creating awareness of STDs among the truck drivers in Dhaka city, Bangladesh.

Methods:

Following purposive sampling technique, a total of 250 truck drivers were sampled from four truck/bus terminals in Dhaka city and were interviewed through a predesigned structured questionnaire.

Results:

The results of the study demonstrate that a significant number of respondents (88%) had heard of STDs. However, most of them (70%) did not have the awareness of STDs symptoms and of how to protect themselves from these diseases. Again, radio, newspaper and internet did not play significant role in making them aware of STDs. Moreover, respondents with higher degree of exposure to television were more likely to be aware of STD like HIV.

Conclusion:

Only television played mediocre role in disseminating information about STDs (e.g., HIV) among the truck drivers. Notably, most of the media propagated HIV/AIDS related information ignoring other major STDs like Gonorrhoea, Chlamydia, Herpes, and Hepatitis B. Therefore, this study concludes that mass media should play vibrant role in disseminating information not only about HIV but also about other STDs.

Keywords: STDs; awareness; truck drivers; mass media

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