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Paper Ref	31
Theme	HIV/AIDS Theme B: Antiviral Therapy
Presentation Type	HIV/AIDS Poster

SPIRIT: SWITCHING TO RILPIVIRINE/EMTRICITABINE/TENOFOVIR DF SINGLE-TABLET REGIMEN FROM BOOSTED PROTEASE INHIBITOR MAINTAINS HIV-1 VIROLOGIC SUPPRESSION THROUGH WEEK 48 IN HIV-1 INFECTED SUBJECTS

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Introduction: Rilpivirine/Emtricitabine/Tenofovir DF (RPV/FTC/TDF) is a potent and well-tolerated once-daily single-tablet regimen (STR). This is the first study to evaluate switching from boosted protease inhibitor (PI+RTV)-based antiretroviral therapy (ART) to the STR RPV/FTC/TDF.

Methods: SPIRIT is a phase 3b, open-label, international, 48-week study to evaluate the safety and efficacy of switching from a PI+RTV+2NRTI regimen to RPV/FTC/TDF in virologically-suppressed HIV-1 infected subjects. Subjects were randomized 2:1 to switch to RPV/FTC/TDF at baseline or remain on their current PI+RTV+2NRTI regimen with a delayed switch to RPV/FTC/TDF at Week 24. The primary endpoint was non-inferiority (12% margin) of RPV/FTC/TDF to PI+RTV+2NRTI regimens in maintaining plasma HIV-1 RNA <50 copies/mL (virologic suppression) at Week 24 using FDA Snapshot analysis.

Results: A total of 476 subjects were randomized (317 RPV/FTC/TDF; 159 PI+RTV+2NRTIs). Baseline characteristics were similar across treatment arms. The primary endpoint of non-inferiority at Week 24 was met (HIV-1 RNA <50 copies/mL 93.7% RPV/FTC/TDF vs. 89.9% PI+RTV+2NRTIs; difference 3.8%, 95% CI: -1.6 to 9.1)). Through Week 48, virologic suppression was 89.3% for subjects switching to RPV/FTC/TDF at baseline, and 92.1% at Week 48 for subjects who switched to RPV/FTC/TDF at Week 24. Statistically significant favorable changes in mean lipids (mmol/L) were evident at Week 24 for total cholesterol (-0.65), LDL (-0.41), and triglycerides (-0.60) among subjects switched to RPV/FTC/TDF at baseline compared to those who stayed on a PI+RTV+2NRTI regimen. A post-hoc analysis of mean lipid changes (mmol/L) at Week 24 in the immediate switch arm by baseline ART demonstrated total cholesterol decrease for FTC/TDF -0.54, ABC/3TC -1.16, other NRTIs -0.96; LPV -0.93, ATV -0.36, DRV -0.59, other PI -0.91.

Conclusion: Switching to the STR RPV/FTC/TDF from a PI+RTV+2NRTI regimen in virologically-suppressed, HIV-1 infected subjects maintained virologic suppression, improved total cholesterol, LDL, and triglycerides regardless of baseline ART.

Disclosure of Interest Statement: SPIRIT is a Gilead Sciences sponsored Phase IIIb study. The corresponding author R Abbas is an employee of Gilead Sciences.

Paper Ref	37
Theme	HIV/AIDS Theme B: Antiviral Therapy
Presentation Type	HIV/AIDS Poster

SAFETY AND TOLERABILITY OF SWITCHING FROM TWICE DAILY RALTEGRAVIR PLUS EMTRICITABINE/TENOFOVIR DF TO ELVITEGRAVIR/COBICISTAT/EMTRICITABINE/TENOFOVIR DF IN VIROLOGICALLY SUPPRESSED, HIV-1-INFECTED SUBJECTS AT WEEK 24

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Introduction: Pill burden, dosing frequency, and concerns about safety and tolerability are important obstacles to maintaining adequate adherence. Raltegravir (RAL) is indicated for twice daily dosing and when taken with emtricitabine/tenofovir DF (FTC/TDF), becomes a daily multiple tablets regimen. elvitegravir/cobicistat/emtricitabine/tenofovir DF (EVG/COBI/FTC/TDF) is the first FDA- and TGA-approved single-tablet regimen that combines EVG, an integrase strand transfer inhibitor (INSTI), with COBI, a novel pharmacoenhancer, and the preferred nucleos(t)ide backbone of FTC/TDF.

Methods: Virologically suppressed HIV-infected adult subjects on FTC/TDF and twice daily RAL for ≥6 months were eligible to enroll in this 48 week single arm open label study. Objectives were to evaluate the tolerability and safety of a regimen simplification to once-a-day EVG/COBI/FTC/TDF, while maintaining virologic suppression. The safety and efficacy of EVG/COBI/FTC/TDF was assessed at Week 24. This study is ongoing through 48 weeks.

Results: Forty eight subjects in the US enrolled, and switched to EVG/COBI/FTC/TDF. The median age was 44 years, 96% were male and 83% were white. The median time on RAL + FTC/TDF treatment was 34 months. At baseline, the median CD4 count was 714 cells/mL and estimated glomerular filtration rate (eGFR) was 105 mL/min. All assessed study subjects remained virologically undetectable (HIV RNA <50 copies/mL), maintained high CD4 cell counts and stable eGFR (median 102 mL/min). Overall, EVG/COBI/FTC/TDF was well tolerated with no study drug discontinuation through Week 24.

Conclusion: Switching to EVG/COBI/FTC/TDF may be a viable option for patients wishing to simplify from their twice-daily RAL+FTC/TDF regimen.

Disclosure of Interest Statement: GS123 is a Gilead sponsored Phase IIIb study The corresponding author R Abbas is an employee of Gilead Sciences.

Paper Ref	487
Theme	HIV/AIDS Theme D
Presentation Type	HIV/AIDS Quick Fire Oral

JUSTICE FOR WHOM? RESOLVING SEXUAL VIOLENCE IN BENA, EASTERN HIGHLANDS PROVINCE, PAPUA NEW GUINEA

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Background: In Papua New Guinea (PNG), sexual violence (SV) is widespread and best practices are being implemented to improve responses to SV. One area has been legislate and programing reform. Such reforms aim to increase access to legal support for victims of SV to pursue prosecution of the perpetrator, a process predicated on the reporting such acts.

Methods: As part of a qualitative longitudinal study on masculinity in Bena, Eastern Highlands, young men were interviewed on three occasions; the final interview addressed men's knowledge and experiences of SV (N=18). Interviews were conducted in Tok Pisin, digitally recorded, transcribed verbatim, translated into English and coded in Nvivo 9.

Results: SV is common in this community and most knew that such violence was illegal, yet many believed that there were times when (and to whom) SV was justified. Despite the illegal nature of SV, most acts of SV recounted were not dealt with through the law enforcement agencies. Local, culturally sanctioned means of dealing with SV in the community were preferred; responses depended on the relationship between the "victim" and the perpetrator. Local approaches to resolving SV were important for maintaining ongoing social and reciprocal relationships rather than individual justice to an individual victim. Compensation is ordered for "victim's" relatives validating the damage of SV to the collective.

Conclusions: The stark contrast between best practices which privilege the international criminal justice system, a system that advocates pro-prosecution which finds an individual person accountable for SV and how SV is resolved locally begs the question of justice for whom? The former is based on western notions of individual personhood and responsibility while the latter is based on reciprocal social relationships. The ways that SV is resolved locally will only change as wider socio-cultural structures do.

Disclosure of interest statement: The NACS Masculinities study is a qualitative longitudinal study to investigate constructions of masculinity, sexuality and agency among male youth in Papua New Guinea. It is funded by the PNG National AIDS Council Secretariat and carried out by the Papua New Guinea Institute of Medical Research.

Paper Ref	176
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Poster

WHY DO WE NEED TO VACCINATE MALES AGAINST HPV?

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Background: From mid-2007 Australia funded a universal free HPV vaccination program for young females, which achieved high coverage rates. In 2013, Australia has become the first country to extend the free HPV vaccination program to boys aged 12-13 years. A catch-up program includes boys aged 14-15. The aim of this study was to look at current and expected impact of the vaccination program on genital warts in men.

Methods: Eight Australian sexual health services provided data on all new patients. We compared trends in proportion of patients diagnosed with genital warts in the pre-vaccination (2004 to mid-2007) and vaccination (mid-2007 to 2012) periods. Furthermore, we used a mathematical model of HPV transmission to predict the impact of male vaccination on the incidence of genital warts.

Results: In the pre-vaccination period, there was no change in proportion of men diagnosed with genital warts. In the vaccination period, there were significant declines in proportions of <21 (87.6%, compared to 90.3% decline in women) and 21-30 year old (57.6%, compared to 72.2% in women) heterosexual men diagnosed with genital warts; from 12.1% in 2007 to 1.5% in 2012 and from 18.2% in 2007 to 7.7% in 2012 respectively. There was no significant decline in diagnosis in men >30 years of age, or in homosexual or bisexual men. Results of the model are in-line with this decline in men. With the introduction of male vaccination program, the model predicts a much lower incidence, approaching elimination, in coming decades.

Conclusion: Although there has been a decline in the proportion of young heterosexual men diagnosed with genital warts suggesting herd immunity, the decline is slower than that of young females and no decline is observed in homosexual/bisexual men. The male vaccination program will lead to near elimination of genital warts in both females and males in Australia.

Disclosure of interest statement: The study was funded by CSL Biotherapies. CKF owns shares in CSL Biotherapies. CKF, AEG, DGR, and RJG have received honoraria from CSL Biotherapies. BD and RJG have received honoraria from Sanofi Pasteur MSD. CFK, DGR, AEG, HA and BD receive research funding from CSL Biotherapies. CFK, BD and AEG have received honoraria from Merck. AEG has received travel funding from Merck, and sits on the Australian advisory board for the Gardasil vaccine. TRHR is a site investigator for a Merck HPV vaccine study.

Paper Ref	247
Theme	HIV/AIDS Theme D: Social concomitants of living with HIV
Presentation Type	HIV/AIDS Quick Fire Oral

ENUF: CROWD SOURCING VOICES TO RESIST HIV STIGMA AND PROMOTE RESILIENCE

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Introduction: HIV stigma and discrimination is well recognised as a global systemic barrier to effective HIV prevention, testing, treatment and care. Almost all PLHIV have a personal story of how stigma has discounted, constrained and impaired their full participation in civil society.

Methods: The ENUF campaign provides a platform for anyone to speak about their experiences of HIV stigma and resilience and have their voice heard through social marketing and media promotion. This innovative crowdsourced and crowdfunded protest campaign focuses on challenging stereotypes, assumptions and the unfairness of discrimination while promoting resilient behaviours and experiences.

The campaign speaks truth to the endurance of stigma by encouraging people to submit their personal experiences. The entire community including businesses, organisations and individuals has been invited and enlisted to support and promote the campaign in order to shed light on the multiple manifestations of stigma and to share their experiences using both traditional and new media formats.

Results: Launched at ASHM in 2012, the campaign has gathered upwards of 60 submissions from individuals, which have become the text for over 40 campaign messages. Over 2000 people have signed the ENUF pledge and the campaign is reaching over 500 individuals direct through Facebook and Twitter with a reach of 163,231 individuals. Additionally, eight high profile ambassadors have been recruited to spread the word about the campaign, to encourage participation and speak directly to the effects of HIV stigma.

Conclusion: The campaign continues to grow and expand its reach into the community. Feedback from individuals has shown how powerful and persuasive the voices of the lived experiences of stigma and resilience are making to affect social change.

Disclosure of Interest Statement: Living Positive Victoria receives no government funding for this campaign, relying upon the generosity of community and private donations to enable this campaign.

Paper Ref	21
Theme	HIV/AIDS Theme D: People Who Inject Drugs
Presentation Type	HIV/AIDS Poster

THE DARK CLOUD OF HIV HANGS OVER OUR IDUS

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Over 7000 people are infected with HIV daily. Of the 13 .2 million IDU worldwide, 3.3 million are in South and South-east Asia and 91,000 in Pakistan. Syringes are cheap (10 c), but costly for IDUs who share routinely. Our Society provides NSP, condoms and medical care for IDUs in Bahawalpur, Pakistan.

In 2012, we visited 5 drug hotspots and recruited 50 IDU participants. We examined their drug use, sexual risk behaviour, attitudes and HIV testing experience. They were mostly males (98%), with a mean age of 24.4 yrs (R: 15 - 54 yr), Muslim (88%) and mostly illiterate (60%). All were local Bahawalpur IDUs (100%), who slept on the streets (84%) and their source of income was scavenging from garbage (82%). IDUs thought their family (67%) and the community (62%) hated them. Their first use of drugs was at a mean age 18.7 yrs (R: 15 - 54 yrs). All injected Morphine tablets, Pheniramine and Diazepam liquid (100%) and many shared syringes (82%). Most have had sexual intercourse (94%), with sex workers (40%), had a sexual preference for females (86%), but few used condoms (16%) or knew about safe sex (16%), or STDs (24%). Over half had genital itch (54%). Disturbingly few IDUs knew about HIV (12%), none had been tested for HIV (0%), yet many were interested in being tested for HIV (90%).

Pakistani IDUs experience significant stigma, harms from injecting, have a low awareness of HIV and no experience with HIV testing. More funding is urgently needed for NSP, HIV education, safe sex promotion and drug treatment to reduce these harms and thwart the impending epidemic of HIV transmission in our IDU community as Pakistan recently moved into a concentrated phase of its HIV epidemic.

Paper Ref	568
Theme	HIV/AIDS Theme B: Delivery Of Care
Presentation Type	HIV/AIDS Poster

“HIV - THAT’S THE LEAST OF MY WORRIES”: CO-MORBIDITIES IN AN AGING GENERAL PRACTICE COHORT

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Introduction: Following the peak years of HIV infection in the mid-1980s there is a large cohort of people living with HIV who are aging into their sixties and seventies. In general HIV can be managed as a chronic illness. However other health problems may be increasingly important in the health care of this aging population.

Methods: We performed a chart review of randomly selected files for HIV +ve patients cared for in a Sydney general practice. 10 file were reviewed for each 10-year age bracket from 20 to 80 years. The files were examined for significant co-morbidities which were defined as health problems requiring regular oral medication or that were potentially life-threatening.

Results: 1717 HIV files were included in the chart review with 60 examined. Inactive files were excluded. The frequency of co-morbidities recorded was strongly associated with age.

The commonest 10 health problems recorded were depression (20), genital herpes (20), gastro-oesophagal reflux (11), hypertension(10), asthma (9), hyperlipidaemia (8), neuropathy (8), erectile dysfunction (7), hepatitis C infection (7) and amphetamine abuse (6).

Conclusion: Not unexpectedly aging was strongly associated with the frequency of recorded co-morbidities. A wide range of health problems was recorded. This has implications for medical services and training needs for health care workers as our patients age.

Disclosure of Interest Statement: No pharmaceutical grants were received in the development of this study.

Table available on online searchable database

Paper Ref	675
Theme	Sexual Health: Other
Presentation Type	Sexual Health: Oral Presentation

UNDERSTANDING “WHAT’S GOING ON WITH OUR MOB”- KNOWLEDGE OF STIS AND BBVS AS REPORTED BY YOUNG ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLE IN THE GOANNA SURVEY.

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8. Aboriginal Medical Service Western Sydney, Mount Druitt, NSW.
9. Kirby Institute, University of New South Wales, Kensington, NSW.
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Introduction: Aboriginal and Torres Strait Islander young people are a population prioritised in all national and jurisdictional STI and BBV strategies, largely because of higher notification rates of STI and BBV reported among this population. However very little is known of levels of knowledge of this population.

Methods: A national cross sectional survey asking questions of knowledge, risk behaviour and health service utilisation was administered using hand held personal digital assistants at Aboriginal and Torres Strait Islander community events in every jurisdiction during 2011-2013. Aboriginal organisations and staff were engaged at every level of the project ensuring a self determination approach was applied to this research.

Results: A total of 2 877 surveys were completed. 60% were female, median age of respondents was 21, 51% of surveys were collected from residents in major cities, 36% from regional centres and 9% from remote areas. 57% of respondents were single at time of survey and of those in a relationship 53% reported their partner to be of Aboriginal and/or Torres Strait Islander. Participant scores on each of the knowledge questions were aggregated to form a composite knowledge scale, with scale scores ranging from 0-12. A score of 12 corresponds to all questions answered correctly. Mean composite scores overall for knowledge was 9.1. Mean scores were lower in the younger age groups; 8.5 for 16-19 year olds compared with 9.9 in the oldest age group 25-29. Males overall had a lower mean score; 8.8 compared with 9.3 for females. Notable exceptions for lower levels of knowledge irrespective of gender and or remoteness were poor levels of knowledge of outcomes associated with Chlamydia infection particularly poor outcomes in pregnancy and hepatitis B transmission knowledge.

Conclusion: This data provides baseline knowledge information from young Aboriginal and Torres Strait Islander people. Levels of knowledge were lowest for the youngest age groups among males and for more remote residents. Greater efforts are required to ensure safe sex and sexual health information is appropriate and accessible for young people, males, and translatable in communities where English is not the primary spoken language.

Paper Ref	256
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Quick Fire Presentation

MIND THE GAP, A PARTNERSHIP APPROACH: ABORIGINAL AND MAINSTREAM ORGANISATIONS PARTNERING IN SEXUAL HEALTH AND DIVERSITY IN RURAL VICTORIA.

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Victorian Aboriginal Community Controlled Health Organisation¹, Family Planning Victoria²

Mind the Gap is a rural and regional community engagement project delivered in partnership by Family Planning Victoria (FPV) and Victorian Aboriginal Community Controlled Health Organisation (VACCHO) from 2009 to 2012. The focus was on the prevention of HIV, Sexually transmissible Infections (STIs) and Blood Borne Viruses (BBVs) in Aboriginal and non-Aboriginal Gay, Lesbian, Bisexual, Transgender, Intersex and Queer (GLBTIQ) young people and their social networks.

The Mind the Gap model has three arms, Sexual Health and Diversity Enterprise (SHADE), a community grants project; Q&A Emerging Young Leaders Program, an adaptive leadership program for GLBTIQ young people and the Mind the Gap social networking site to connect alumni from Q&A. These projects used community development and self-determination as the guiding principles to connect and remain engaged through the life of the project. These interconnected strategies were designed to address specific aspects of engagement and capacity building within rural Aboriginal and sexually diverse young people.

Specific programs included “Deadly Sex Factor” Aboriginal talent show, Koori youth camps and a Guinness World record attempt for the most Chlamydia tests in one day.

The success of the Mind the Gap project relied on engaging Aboriginal communities, with the support of VACCHO acting as ‘cultural brokers’ between FPV staff and community leaders. The FPV and VACCHO partnership developed over the three years, culminating in the signing of memorandum of understanding and on-going collaborations. Partnership development and capacity building within the participating Aboriginal Community Controlled Organisations was a key focus of the project.

This presentation will focus on the outcomes of the program evaluation and showcase how these partnerships and strategies promoted an Aboriginal community led response to sexual health and diversity in rural Victoria.

Disclosure of Interest: VACCHO and FPV and their staff have no conflicts of interest

Paper Ref	100
Theme	Sexual Health: Reproductive Health
Presentation Type	Sexual Health: Poster

SURVEY OF YOUNG PEOPLE WHO ACCESSED EMERGENCY CONTRACEPTION IN 2012 AT HEADSPACE GEELONG

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GP, headspace Barwon

Introduction: Anecdotal evidence at headspace Geelong suggested that a high proportion of young emergency contraceptive (EC) users engage in risky behaviours including involvement in unhealthy relationships. To properly inform our management we wanted to assess if this was in fact the case.

Methods: Headspace provides primary care to young people aged 12 to 25 years. To assess variables associated with EC use all women who accessed EC at headspace Geelong in 2012 self completed a brief survey.

Results: In this study (N=99,100% participation rate) 47/99 young women had accessed EC previously and 57/99 had previously used oral contraception. 33/99 needed EC because of condom failure. 31/99 had been with a casual partner and 42/99 had been drinking/using drugs at the time. 1 of the 99 had experienced forced sex and 8 did not want to have sex as much as their partner did. Those who had experienced unwanted or unequally wanted sex were more likely to have been drinking compared to those young women who had equally wanted sex (OR 4.83); 5 of the 9 were with their regular partner. The mean age of participants was 16.3 years.

Conclusion: This survey concurs with overseas studies in demonstrating that young EC users are at current and ongoing sexual risk. Additionally it shows that unwanted/unequally wanted sex amongst the group is high. Early sexual health affects future wellbeing. These young women should therefore be reviewed regularly by a professional able to care for sexual, physical and emotional health. The medical community has a responsibility to inform pharmacists - who are often the first point of contact for these women- of this need for review. The addition of a mental health screen (such as a K10) to the survey would add valuable information. The phenomenon of normalized unequal sex amongst teens warrants further research.

Disclosure of Interest Statement: The author has no conflict of interest to disclose. No funding was received for the research.

Paper Ref	200
Theme	Sexual Health: Psycho-social
Presentation Type	Sexual Health: Quick Fire Presentation

THE ASK SHARE KNOW PROJECT: A RESEARCH TRANSLATION STUDY OF THREE CONSUMER QUESTIONS TO ENHANCE TREATMENT DECISION MAKING.

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Introduction: Involving consumers in healthcare decisions is important for high quality care. We previously tested a brief, consumer-led intervention consisting of three questions in a trial employing trained, standardized patients. The intervention enhanced discussion of evidence and increased patient involvement. We now report a research translation study which tested implementation with real patients at a reproductive and sexual health clinic.

Methods: We worked with clinic staff to build a website with video clips demonstrating the questions in action, and produced supporting materials (pamphlet, consultation summary sheet, fridge magnet). Before their consultation, patients were invited to view a 4-minute video-clip on a supplied tablet and given the other materials and access to the website (www.askshareknow.com.au). They completed questionnaires at baseline (T1), immediately post-consultation (T2) and two weeks later (T3).

Results: 195 patients agreed to participate and provided baseline data. 155 watched the video clip; 121 and 95 completed post-consultation questions at T2 and T3 respectively. 84/121 (69%) asked at least one of the questions in their consultation, and 29% asked all three questions. Question asking was strongly associated with decision making. Among those who made a treatment decision, 87% asked at least one question and 43% asked all three questions, compared with 50% and 14% respectively of those who did not make a decision ($P < 0.0001$). 84% of those who made a decision rated the questions as very (53%) or somewhat helpful (31%) for decision making. 95% of all patients reported they would definitely (72%) or probably (22%) recommend the questions to others. Two weeks later 82% could recall Question 1, 47% could recall all three questions, and 83% reported they would ask the questions again.

Conclusion: Implementation of this brief, effective and cheap intervention was feasible within routine clinical practice, and supports evidence-based, patient-centred care.

Disclosure of Interest Statement: The research was supported by a grant from the Informed Medical Decisions Foundation. No support was received from a pharmaceutical company. The authors have no conflicts of interest to declare.

Paper Ref	215
Theme	HIV/AIDS Theme C: Biomedical Prevention
Presentation Type	HIV/AIDS Oral Presentation

FEW GAY MEN KNOW ABOUT EVIDENCE FOR TREATMENT AS PREVENTION

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3. National Centre in HIV Social Research, University of NSW.

Background: Knowledge about the evidence for treatment as prevention (TasP) among Australian gay men has not been explored in detail.

Methods: TAXI-KAB was a national online survey of Australian gay men recruited during late 2012. 897 men responded to questions about knowledge and beliefs about TasP.

Results: Most men were gay (88.9%) or bisexual (8.8%). Mean age was 39 years. 90.1% had ever been tested for HIV; 171 reported being HIV-positive. Over 90% of all men understood that HIV treatments were effective and improved the health prospects of PLHIV, although 46.3% believed that treatments are toxic and will eventually cause long-term damage. 66.3% of men had no knowledge of the trial evidence for TasP among heterosexual couples; 26.0% believed this trial evidence applied to sex between men. Seemingly contradictorily, while the majority (62.7%) believed that HIV transmission was still likely to occur even when an HIV-positive man is on treatments, two thirds (63.7%) nonetheless believed HIV-positive men should go on treatments to protect their partners from infection. HIV-positive men were somewhat better informed about the evidence for TasP, but nearly half (44.2%) had not heard of this. HIV-positive men were less skeptical about TasP, but were as likely to agree they should use treatments to protect their partners as were non HIV-positive men.

Conclusion: Although most gay men recognise that HIV treatments have improved the health prospects for PLHIV, many are also quite pessimistic about their long-term effects. The majority, including nearly half of HIV-positive men, also appear to be unaware of the trial evidence for TasP and are highly skeptical about the possible effects of treatments on reducing HIV transmission during sex between men. Improved understanding among among gay men of the role of, and evidence for, treatment in prevention is critical to community level implementation of combination prevention.

Disclosure of Interest Statement: The Kirby Institute, The Australian Research Centre in Sex, Health and Society (ARCSHS) and the National Centre in HIV Social Research (NCHSR) receive 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. ARCSHS is affiliated with La Trobe University. NCHSR is affiliated with the Faculty of Arts, University of New South Wales. No pharmaceutical grants were received in the development of this study.

Paper Ref	324
Theme	HIV/AIDS Theme D: Gay & MSM
Presentation Type	HIV/AIDS Poster

GAY MALE SERODISCORDANT RELATIONSHIPS: TRENDS AND CORRELATES IN GAY COMMUNITY PERIODIC SURVEYS

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Background: Gay male serodiscordant relationships (SDR) are a potential context of high HIV transmission risk, yet relatively little has been reported on their characteristics and trends.

Methods: We used 1996-2011 Gay Community Periodic Survey data from three eastern Australian states. In men reporting regular partners, we assessed HIV seroconcordance and unprotected anal intercourse (UAI). Analytic methods included chi-square test for trend, while correlates of being in SDR were examined with multivariate logistic regression adjusted for trends over time.

Results: Having a regular partner was reported 53,376 times. During 1996-2011, 79.4% of men were HIV-negative and two-thirds were aged over 30 years. The proportion in SDR decreased over time, from 10.8% in 1996 to 6% in 2004 ($p < 0.001$), with no change from 2004-2011. Approximately one-third of HIV-positive men were in SDR; remaining stable throughout 1996-2011. The proportion of negative men in SDR decreased from 8% to 4% ($p < 0.001$). Overall, 38.9% of men in SDR had UAI with their regular partner (UAIR). Men in SDR were less likely to have UAIR (adjusted odds ratio [aOR]=0.41, 95%CI=0.37-0.44), more likely to have been tested for HIV in the previous 12 months (aOR=1.35, 95%CI=1.23-1.48), and more likely to be over 30 years of age (aOR=1.94, 95%CI=1.74-2.15) than men in non-SDR. Relationship length and UAI with casual partners (UAIC) were not associated with being in SDR. Amongst men reporting SDR ($n=3,843$), UAIC differed by serostatus: 26.8% of positive men and 18.7% of negative men had UAIC ($p < 0.001$).

Conclusion: These findings indicate that a small proportion of gay men may be in SDR, but these relationships are relatively common for HIV-positive men. UAI within such relationships is not uncommon. It remains unclear how much the practice of serodiscordant UAI contributes to HIV transmission risk as HIV-negative men practise various risk-reduction strategies with both regular and casual partners.

Disclosure of Interest Statement: The Kirby Institute, the National Centre in HIV Social Research (NCHSR), and the Australian Research Centre in Sex, Health and Society (ARCSHS) receive 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. NCHSR is affiliated with the Faculty of Arts, University of New South Wales. ARCSHS is affiliated with La Trobe University. The Gay Community Periodic Surveys are funded by state and territory health departments. No pharmaceutical grants were received in the development of this study.

Paper Ref	330
Theme	HIV/AIDS Theme C: Biomedical Prevention
Presentation Type	HIV/AIDS Oral Presentation

UNDETECTABLE VIRAL LOAD IS ASSOCIATED WITH INCREASED UNPROTECTED ANAL INTERCOURSE IN GAY SERODISCORDANT COUPLES

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Background: In serodiscordant heterosexual couples, undetectable viral load is associated with a substantially reduced HIV transmission risk. No studies in gay male serodiscordant couples (SDCs) have been reported.

Methods: Opposites Attract is an ongoing cohort study of gay SDCs recruited via clinics and community-based advertising. HIV-Positive Partners (HPPs) have VL tested at baseline; HIV-Negative Partners (HNPs) have HIV antibody tests and report sexual behaviour and partner's perceived VL. Associations between unprotected anal intercourse (UAI) and VL were examined with logistic regression and Wilcoxon rank-sum test.

Results: As of April 2013, 64 couples were enrolled. At baseline, 84.4% (n=54) of HPPs were taking ART and 76.6% (n=49) had undetectable VL. Overall, 68.8% (n=44) of HNPs reported any UAI with their partners: 59.4% of HNPs reported any insertive UAI, 37.5% reported receptive UAI without ejaculation, and 21.9% reported receptive UAI with ejaculation. 78.1% of HNPs believed their HPP's last VL test result to be undetectable. The HNP's perception of his partner's VL was mostly in accord with the baseline test results. In the couples with perceived undetectable VL, 78.0% reported UAI in the last three months. In comparison, only 35.7% of couples in which the HPP's VL was perceived to be detectable (n=8) or where the VL result was not known (n=3) reported UAI (OR=0.16, 95%CI=0.04-0.56, p=0.005). Overall, the median number of UAI acts in the last three months was 4 (range=0-183, mean=18.5, SD=34.0). The median number of UAI acts was 6.5 in couples where the HNP believed his partner's VL was undetectable. This compared to 0 in couples where the perceived VL was detectable or was not known (p=0.007).

Conclusions: Among Australian gay male SDCs, perceived undetectable VL is strongly related to increased practice of UAI. Studies of HIV transmission risk in this population are an urgent research priority.

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. ARCSHS is affiliated with La Trobe University. No pharmaceutical grants were received in the development of this study.

Paper Ref	152
Theme	HIV/AIDS Theme D: People Who Inject Drugs
Presentation Type	HIV/AIDS Quick Fire Oral

GROWING PAINS: A FIRST LOOK AT DRUG USE IN A POST-CONFLICT COUNTRY

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Introduction: In February 2013, Fundasaun Timor Hari'i (FTH) commissioned a Rapid Assessment and Response (RAR) among the People Who Inject Drugs (PWID) in Dili and Bobonaro Districts.

Timor-Leste is still considered to have a low-level epidemic, with an estimated national HIV prevalence of approximately 0.1845%, which is non-generalized. Most HIV infections would appear to have been acquired through heterosexual contact, with other routes of transmission likely to occur less often.

The RAR aimed at assessing the nature and extent of injecting drug use, types of drugs used, sexual practices and demographic characteristics of drug users.

Methods: Research methods included:

- Stakeholder meetings, discussions with organisations working in the field
- Literature review
- Key informant interviews with drug users
- Drug user questionnaires
- Focus group discussions
- Social observation

Results:

- 61% of drug users interviewed were aged 18-26 years old with over 45% of all interviewees having begun using drugs before the age of 19.
- 43% of interviewees had used drugs intravenously within the last 3 months.
- Most common illicit drugs used were methamphetamine, heroin, cannabis and MDMA.
- 61% of PWID's reported sharing needles, with 32% reporting they share all the time.
- Three quarters of those men interviewed had sex with a sex worker and 68% of all interviewees had sex with someone who was not their regular sexual partner.
- 84% of those individuals interviewed had never been tested for HIV although 36% believed they were at high risk of infection.

Conclusion: The next step for FTH is to develop a HIV prevention program for PWID based on harm reduction principles. This program will be multi-layered, including political advocacy, further research and a peer education program and condom distribution. FTH will continue to work closely with the MoH to advocate for drug services as well as developing organisational referral pathways to other services available.

Paper Ref	495 and 600
Theme	HIV/AIDS Theme A: Laboratory development, safety & quality
Presentation Type	HIV/AIDS Oral Presentation and Poster

STRENGTHENING LABORATORY QUALITY MANAGEMENT SYSTEMS USING NRL STEPS

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Introduction: NRL is a not-for-profit and independent organisation that supports laboratories performing testing for human infectious diseases to achieve high quality and accurate test results. NRL is also designated a WHO Collaborating Centre for Diagnostics and Laboratory Support for HIV/AIDS and other Blood-borne Infections.

Since its establishment in 1985, NRL has delivered high quality education and training in quality management systems, quality assurance programs, evaluation of test kits, validation of testing algorithms and laboratory testing using a model called NRL STEPs (Sustainable Training, Education and Partnerships).

Methods: NRL STEPs is a structured, stepwise approach to strengthening laboratory systems. Using NRL STEPs, our laboratory capacity building model identifies areas for improvement; responds to needs through education and training; and ensures sustainability of improved laboratory services.

Integral to any laboratory quality management system are external quality assessment schemes (EQAS; also known as proficiency testing). EQAS serve to monitor the performance of laboratory processes and test kits.

Results: Using NRL STEPs, NRL has worked with partners in Indonesia, Vietnam, Mongolia and Fiji to establish national EQAS, resulting in:

- national EQAS for HIV, HCV and HBV being provided to 43 blood transfusion laboratories in Vietnam;
- EQAS for HIV being implemented in six provinces in Indonesia;
- pilot EQAS for HIV, HCV, HBV and Syphilis being provided to 30 provincial laboratories in Mongolia with a view to expanding to >350 laboratories; and
- pilot EQAS for HIV, which will be delivered in Fiji by the end of 2012.

Conclusion: In order to build the elements of quality in laboratory testing, NRL works with partners to enable change that will lead to measureable and sustainable improvements. NRL STEPs provides the foundation for laboratories to deliver accurate test results and better patient outcomes. Using NRL STEPs, national EQAS have been implemented in several regions, contributing to the improvement of laboratory quality.

Disclosure of Interest Statement: Nothing to declare

Paper Ref	326
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

“RESPECT TEST” – PARTNERS PROMOTING STI/HIV TESTING FOR ABORIGINAL COMMUNITIES IN SOUTH AUSTRALIA

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Background: Evidence suggests community participation both in the development and implementation of health promotion campaigns; helps facilitate community engagement. Epidemiology reports from SA Health indicate higher rates of STIs within the South Australian Aboriginal populations, 49% of Gonorrhoea cases in 2011 were in Aboriginal people, as were 39% of infectious Syphilis cases (SA, Health 2012). There is also evidence to suggest testing for STIs and HIV, especially in rural and remote settings, remains highly stigmatised in many South Australian Aboriginal communities.

Methods: A steering committee comprising staff and community representatives from the Aboriginal sector and the AIDS Council of SA, met to develop, plan and implement the campaign.

Results: The cultural significance of ‘respect’ was identified as a pivotal concept within all Aboriginal communities; subsequently the term respect became the principle theme of the campaign. Evidence suggests a deterrent to testing is the perceived sense of ‘shame’ associated with STI and HIV testing. Calling the campaign the “Respect Test”, aims to remove the ‘shame’ usually associated with sexual health, STI’s and HIV. Instead, the “Respect Test” reorients the individual’s thinking to one of ‘respect’. The logical slogan for the campaign is “Respect test – Respect yourself, Respect your Partner, Respect your Mob”. The involvement and participation of Aboriginal community members was vital for the campaign development. Colleen from Narla photography & Dwayne from Boma’s Graphic design were integral to the ‘look’ of the overall campaign. Models for the campaign posters were all local South Australian Aboriginal identities.

Images of same-sex attracted couples on the posters, as well as a heterosexual couple, an older man, a young woman and young man promote diversity.

Conclusions: The campaign is to be implemented state-wide. The campaign aims to impact on STI and HIV awareness, increase testing rates for HIV and STIs in Aboriginal communities and reduce “shame” and stigma surrounding HIV and STI testing.

Disclosure of interest statement: The AIDS Council of SA, Inc. are funded by SA Health - STIs and BBVs (SaBS). The Aboriginal Health Council of SA is the membership-based peak body for South Australia and is a community controlled organisation in its own right. No pharmaceutical grants were used in the development of this campaign.

Paper Ref	677
Theme	Sexual Health: Other
Presentation Type	Sexual Health: Oral Presentation

WHERE DO WE GO? HEALTH SERVICE UTILISATION OF YOUNG ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLE: FINDINGS OF THE GOANNA SURVEY.

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Introduction: Aboriginal and Torres Strait Islander young people aged 16-29 are a population prioritised in all national and jurisdictional STI and BBV strategies, largely because of higher notification rates of STI and BBV reported among this population. However very little is known of levels of health service utilisation of this population.

Methods: A national cross sectional survey was administered using hand held personal digital assistants at Aboriginal and Torres Strait Islander community events in every jurisdiction during 2011-2013. Aboriginal organisations and staff were engaged at every level of the project ensuring a self determination approach was applied to this research.

Results: A total of 2877 surveys were completed. 60% were female, median age of respondents was 21, 51% of surveys were collected from residents in major cities, 36% from regional centres and 9% from remote areas. 57% of respondents were single at time of survey. Overall 41% of respondents reported that they had been tested for STIs in the last year (males 39%, females 44%). People aged 16-19 reported lower STI testing rates in the last year than for people aged 20-24 and 25-29. Of those that had been tested, Aboriginal medical services were the most common place where STI testing occurred 55% then followed by private general practice 34%. Overall 30% of respondents reported they had been tested for HIV. Overall 55% of respondents reported having an adult health check in the last year. Aboriginal Medical services were reported as the best way to seek help for STI and BBV advice as well as for alcohol and other drug issues.

Conclusion: Health service access for young Aboriginal and Torres Strait Islander people appears reasonable. Lowest levels of testing for both STIs and HIV occurs in the age group 16-29 years. Males attend less frequently and reported lower testing rates compared to females. Strategies to address male health are required as are strategies to ensure testing occurs more frequently when people aged 16-29 attend health services.

Paper Ref	414
Theme	HIV/AIDS Theme C: Behavioural Research & Interventions
Presentation Type	HIV/AIDS Poster

REASONS WHY MEN DECLINE RAPID HIV TESTING

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Background: From October 2011 onwards, men who have sex with men (MSM) attending four sexual health clinics in Sydney, Australia were offered free rapid HIV testing (RHT) using the 20 minute Alere Determine HIV Combo assay. We determined uptake of RHT, and factors associated with declining RHT at Western Sydney Sexual Health Centre (WSSHC).

Methods: Eligible MSM, aged over 18 years, were offered RHT and conventional HIV serology. We extracted demographic, HIV testing and sexual behaviour data on all men eligible for RHT, along with reasons for declining, in the period November 2011-December 2012. Logistic regression was used to assess factors associated with declining.

Results: Of the 483 eligible MSM, 481 (99.6%) were offered RHT, and 397 accepted (83% uptake). Among 84 men who declined, the main reasons were: time constraints (33%), not wanting a rapid test this time (11%), fear of false reactive results (12%); too anxious (11%); not at risk/had a recent test (7%) and other clinical priority (7%). The proportion declining RHT decreased over time; 27% in 2011, and 16% in 2012. In the multivariate analysis, the following factors were independently associated with declining RHT: presenting with sexually transmissible infection (STI) symptoms (adjusted odds ratio (AOR)=4.4, 95%CI:2.6-7.6), being an existing client (AOR=3.1, 95%CI:1.5-6.5), never had a rapid test before (AOR=22.4, 95%CI:3.0-170.1) and always using condoms in the past 3 months (AOR=1.9, 95%CI:1.1-3.2).

Conclusion: WSSHC successfully integrated RHT into their clinic flow with nearly all eligible men offered RHT. Although most men who were offered RHT accepted, time constraints and presenting with STI symptoms were key reasons for declining. The service has now switched to a ten minute rapid test and will continue to monitor acceptance, to assess whether test incubation time affects RHT uptake.

Disclosure of Interest Statement: The Kirby Institute and National Centre in HIV Social Research receive funding from the Australian Government Department of Health and Ageing and the New South Wales Ministry of Health. The Sydney Rapid HIV Test study was supported by a National Health & Medical Research Council Program Grant and the New South Wales Ministry of Health. Alere provided the Determine HIV Combo rapid test kits used free of charge, but did not influence the study design, analysis of data or reporting of results.

Paper Ref	118
Theme	Sexual Health: Psycho-social
Presentation Type	Sexual Health: Poster

THE BURDEN OF BACTERIAL VAGINOSIS: WOMEN’S EXPERIENCE AND THE PSYCHOSOCIAL IMPACT OF LIVING WITH RECURRENT BACTERIAL VAGINOSIS

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Background: Bacterial vaginosis (BV) is a common vaginal infection, causing an abnormal vaginal discharge and/or odour in up to 50% of sufferers. Recurrence is common following recommended treatment. Limited data are available on women’s experience of BV and the impact on their self-esteem, sexual relationships and quality of life. The aim of this study was to explore the experiences and impact of recurrent BV on women.

Methods: A social constructionist approach was chosen as the framework for the study. Thirty five women with male and/or female partners were interviewed face-to-face or by telephone about their experience of recurrent BV.

Results: Women’s experiences varied depending on a number of factors including the frequency of recurrences, the severity of symptoms - the more severe the symptoms generally the greater the impact – and the psychosocial impact on their lives. Women commonly reported feeling embarrassed, ashamed, ‘dirty’ and very concerned others may detect their malodour and abnormal discharge. The biggest impact of recurrent BV was on women’s self-esteem and sex lives, with most women attributing BV to some form of sexual contact. Women regularly avoided sexual activity, in particular oral sex, as they were too embarrassed and self-conscious of their symptoms to engage in these activities. Women often felt confused about why they were experiencing recurrent BV and frustrated at their lack of control over recurrences.

Conclusion: Recurrent BV impacted on women broadly and significantly in this study. Experiences varied according to frequency of episodes, severity of symptoms and the impact on women’s lives. Further support and acknowledgement of the psychosocial impact is required when managing women with recurrent BV.

Disclosure of Interest: In the conduct of this study a small grant was utilised from the Australian Lesbian Medical Association/ACON. Dr Jade Bilardi is in receipt of a National Health and Medical Research Centre (NHMRC) Early Career Fellowship GNT1013135.

Paper Ref	396
Theme	Sexual Health: Reproductive Health
Presentation Type	Sexual Health: Oral Presentation

PRESCRIPTION RATES FOR LONG-ACTING REVERSIBLE CONTRACEPTION IN AUSTRALIA, 2008 - 2011

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Introduction: Unplanned pregnancies can have significant physical, social and/or economic costs. Long-acting reversible contraceptives (LARCs) offer a safe, effective and convenient method of birth control, however few studies examine patterns of uptake of LARCs in Australia. This analysis reports on prescription rates for Mirena and Implanon in Australia between 2008–2011 across age groups and geographic regions.

Methods: Prescription rates from 2008–2011 for Implanon and Mirena for women aged 10–54 were calculated, using data from the Pharmaceutical Benefits Scheme and Australian census data, standardised to the 2011 female population. Logistic regression was used to assess change in rates over time adjusted for age group and residential location (metropolitan versus non-metropolitan).

Results: Multivariate analysis shows prescription rates for Implanon increasing at an average of 11.42% per year between 2008–2011. 84,065 prescriptions were recorded in 2011, with an age-standardised rate of 1223 per 100,000 females (95%CI: 1215, 1231). Across all study years, rates were highest among 20–29 year olds, reaching 2096 per 100,000 (95%CI: 2073, 2118) in 2011, decreasing significantly with age thereafter ($p<0.01$). 2011 rates were higher in non-metropolitan than metropolitan areas (1869 versus 1141 per 100,000, $p<0.01$).

Multivariate analysis shows rates of Mirena prescriptions increasing at an average of 14.65% per year between 2008–2011. 84,722 prescriptions were recorded for Mirena in 2011, with an age-standardised rate of 1231 per 100,000 females (95%CI: 1223, 1240). Rates were highest among 30–39 year olds across all study years, reaching 2043 per 100,000 in 2011 (95%CI:2021,2070). 2011 rates were significantly higher in non-metropolitan than in metropolitan areas (1499 versus 1199, $p<0.01$)

Conclusion: Uptake of both Implanon and Mirena is increasing every year, with the rate of uptake for Mirena higher than for Implanon. Prescriptions for LARCs are significantly higher for women in non-metropolitan than in metropolitan areas.

Disclosure of Interest Statement: There are no disclosures of interests relevant to this work.

Paper Ref	381
Theme	Sexual Health: Biomedical
Presentation Type	Sexual Health: Poster

ISOLATION OF NEISSERIA GONORRHOEAE FROM THE TONSILS AND POSTERIOR OROPHARYNX BY CULTURE: IMPLICATIONS FOR OPTIMAL DETECTION

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Background: Culture is relatively insensitive for the detection of pharyngeal gonorrhoea but is critical for the determination of antimicrobial resistance and surveillance. Sampling technique appears to be important for the optimal detection of pharyngeal gonorrhoea using culture; however, there are limited data on the specific anatomical areas within the pharynx from which *Neisseria gonorrhoeae* can be isolated. The aim of this study was to compare isolation rates of *N. gonorrhoeae* from the tonsils and posterior oropharynx.

Method: Men who had sex with men (MSM) attending the Melbourne Sexual Health Centre who were screened for pharyngeal gonorrhoea using modified Thayer Martin medium were recalled and re-swabbed prior to treatment. The repeat swabs consisted of careful swabbing firstly from both tonsils followed by swabbing of the posterior oropharynx using a separate swab. These were immediately plated onto separate modified Thayer Martin media and cultured.

Results: 61 MSM who were screened for pharyngeal gonorrhoea and who tested positive by culture were recalled for repeat swabbing. The median interval between the initial positive screening test and repeat swabbing was 7 days. The positivity rates from the repeat swabs of the tonsils and posterior oropharynx were 69% (n=41) and 52% (n=32) respectively (p=0.01). The repeat tonsillar and posterior oropharyngeal swabs were both positive in 51% (n=31) of men and were both negative in 30% (n=18) of men.

Conclusion: *Neisseria gonorrhoeae* can be cultured from the tonsils as well as the posterior oropharynx. While the yield from tonsillar swabbing was significantly higher than swabbing of the posterior oropharynx, swabbing from only one of these sites had low sensitivity. Based on culture, many cases pharyngeal gonorrhoea appear to be transient and self limiting.

Disclosure of Interest: No conflict of interest declared

Paper Ref	382
Theme	Sexual Health: Biomedical
Presentation Type	Sexual Health: Poster

THE CONTRIBUTION OF MACROLIDE RESISTANCE MUTATIONS TO FAILURE OF AZITHROMYCIN TREATMENT IN MYCOPLASMA GENITALIUM INFECTION

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Background: Current recommended treatment for *Mycoplasma genitalium* (Mg) is azithromycin. Macrolide resistance mutations (MRM), predominantly on the 23SrRNA gene of Mg, have been found to be associated with failure of azithromycin. We aimed to determine the efficacy of azithromycin in a prospective cohort of Mg-infected STI clinic attendees and to determine the contribution of MRM to treatment failure.

Method: We commenced an observational cohort study in July 2012 in which participants diagnosed with Mg at Melbourne Sexual Health Centre (MSHC), and treated with 1g of azithromycin, were offered additional testing at days 14 and 28 to determine efficacy of azithromycin. Testing for MRM using high-resolution melt analysis (HRM) was conducted on day 0 and on all persistently positive samples at days 14 and 28. Participants were managed on the basis of clinical symptoms and not detection of MRM.

Results: All (100%) of the planned participants have been recruited; 144(90%) have completed the study. 86/144 (60%: 51-68%) participants were Mg PCR negative at day 28 (responder). 58/144 (40%: 32-49%) did not respond to 1g azithromycin: 24 out of 58/ (42%) had a persistently positive PCR for Mg on day 28 without risk of re-infection (definite failures) and 34 out of 58 (58%) had persistent signs and symptoms of MG prior to day 28 and required interim treatment with moxifloxacin (probable failures). Of the 58 failures, 100% had MRM detected: 80% at baseline and 20% at day 14. Of the 86 azithromycin-responders 11/86 (13%) had MRM detected at baseline.

Conclusion: The azithromycin cure rate for Mg in this clinic cohort was only 54%. MRM were detected in virtually all cases of azithromycin-failure, and were uncommon in azithromycin-responders. The majority of MRM were detected prior to treatment. These findings have implications for the use of macrolides as current recommended treatment for *M. genitalium*.

Disclosure of Interest: No conflict of interest declared

Paper Ref	59
Theme	HIV/AIDS Theme B: Antiviral Therapy
Presentation Type	HIV/AIDS Poster

RENAL SAFETY OF ELVITEGRAVIR/COBICISTAT/EMTRICITABINE/TENOFOVIR DF (STB) AND COBICISTAT-BOOSTED PROTEASE INHIBITOR REGIMENS IN HIV-1 INFECTED PATIENTS WITH MILD TO MODERATE RENAL IMPAIRMENT

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Introduction: Elvitegravir/cobicistat /emtricitabine/tenofovir DF (STB) is licensed for use in treatment-naïve HIV-1 infected patients with creatinine clearance (CrCl [Cockcroft Gault]) \geq 70 mL/min. Study 118 assessed renal safety of STB and cobicistat (COBI)-containing regimens in patients with mild to moderate renal impairment.

Methods: Phase 3, openlabel, multicenter, two-cohort study in HIV infected patients with CrCl 50 to 89 mL/min. The STB cohort enrolled treatmentnaive patients and the COBI cohort virally suppressed patients receiving ritonavir-boosted atazanavir or darunavir plus 2 nucleos(t)ide reverse transcriptase inhibitors; ritonavir was switched to COBI. Actual GFR (aGFR) using iohexol clearance was measured in a subset of patients.

Results: 106 patients (STB 33; COBI 73) were treated for a median exposure of STB 40 and COBI 32 weeks. Mean age (years) were STB 50; COBI 54, male 82%; 82%, White 42%; 77%. Baseline CrCl (mL/min)(median [IQR]) was 73 (65 to 81) in the STB and 71 (62 to 81) in the COBI cohort. At Week 24, small reductions from baseline in CrCl (median [IQR]) were observed in both cohorts (STB: -5 [-13 to 1]; COBI: -4 [-7 to 2]). No changes in aGFR (n=14) were observed at Week 2, 4, and 24 (geometric least square mean ratio vs. baseline: 106%, 108%, and 108%). No renal SAE was reported. Three patients discontinued STB due to reduced CrCl, likely as a result of the inhibitory effect of COBI on tubular secretion of creatinine, which resolved post-discontinuation; none had features of proximal tubulopathy. High rates of virologic suppression (HIV-1 RNA $<$ 50 c/mL) were achieved or maintained (85% in both cohorts) at Week 24.

Conclusion: In patients with mild to moderate renal impairment, both STB and COBI were well-tolerated with no new renal safety signal.

Disclosure of Interest Statement: Study 0118 is a Gilead Sciences sponsored Phase IIIb study Dr Bloch has received funding from, acted as an advisor for and/or participated in clinical research for: Gilead Sciences, Janssen, Merck, Bristol Myers Squibb ViiV Healthcare, Abbvie.

Paper Ref	62
Theme	HIV/AIDS Theme B: Antiviral Therapy
Presentation Type	HIV/AIDS Poster

96-WEEK EFFICACY AND SAFETY OF ELVITEGRAVIR/COBICISTAT/EMTRICITABINE/TENOFOVIR DF – SUBGROUP ANALYSES BY BASELINE HIV-1 RNA AND CD4 CELLS

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Introduction: Elvitegravir/cobicistat/emtricitabine/tenofovir DF (STB) demonstrated noninferiority at Week 48 to efavirenz/emtricitabine/tenofovir DF (ATR) and to ritonavir-boosted atazanavir (ATV+RTV) plus emtricitabine/tenofovir DF (TVD) in treatment naïve patients irrespective of baseline HIV-1 RNA and CD4 cells. We report the integrated Week (W) 96 data.

Methods: Integrated analyses of efficacy and safety of two randomized, double blind, double dummy phase 3 studies with subgroup analyses by HIV disease characteristics.

Results: 1408 patients were randomized and treated (STB 701; ATR 352; ATV+RTV+TVD 355). High rates of virologic suppression were maintained through W96 (84% vs. 82% vs. 82%); the difference (95% CI) vs. ATR was 2.3% (-2.6 to 7.2); vs. ATV+RTV+TVD was 1.4% (-3.4 to 6.3). These findings were consistent across ranges of baseline HIV-1 RNA and CD4 cells.

Rates of adverse events (AEs) leading to discontinuation were similar in the 3 groups (5% vs. 7% vs. 6%), as were those of serious AEs (13% vs. 9% vs. 14%), and deaths (0.1% vs. 0.6% vs. 0.8%). Fewer STB patients, compared to ATR, reported neuropsychiatric (44% vs. 66%; P<0.001) and rash (21% vs. 31%; P=0.001).

Through W96, renal discontinuation was infrequent (1.4% vs. 0 vs. 0.6%); 3 STB and 1 ATV+RTV+TVD patients discontinued after W48. Four STB patients discontinued due to proximal tubulopathy through W48 with no new cases identified since then.

Median changes in serum creatinine (µmol/L) at W96 in 3 groups (+11 vs. +1 vs. +7) were unchanged from W48 (+12 vs. +1 vs. +7). STB had smaller median increase (mmol/L) in total and HDL cholesterol (vs. ATR) (+0.31 vs. +0.47; P=0.001; +0.16 vs. +0.12; P=0.002) and smaller increase in triglycerides (vs. ATV+RTV+TVD) (+0.05 vs. +0.18; P=0.003).

Conclusion: Through Week 96, STB demonstrated high rates of virologic suppression across wide ranges of baseline HIV-1 RNA and CD4 cell counts with a satisfactory safety profile.

Disclosure of Interest Statement: Studies 102/103 were Gilead sponsored Phase III registration studies Dr Bloch has received funding from, acted as an advisor for and/or participated in clinical research for: Gilead Sciences, Janssen, Merck, Bristol Myers Squibb ViiV Healthcare, Abbvie.

Paper Ref	29
Theme	HIV/AIDS Theme B: Antiviral Therapy
Presentation Type	HIV/AIDS Poster

STAR STUDY: SINGLE TABLET REGIMEN RILPIVIRINE/EMTRICITABINE/TENOFOVIR DF IS NON-INFERIOR TO EFAVIRENZ/EMTRICITABINE/TENOFOVIR DF IN ART-NAÏVE ADULTS REGARDLESS OF BASELINE VIRAL LOAD AND CD4+ COUNT

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Background: Simplified antiretroviral treatment (ARV) regimens improve quality of life and long-term medication adherence. This is the first study to directly compare the safety and efficacy of two single tablet regimens (STR).

Methods: Randomised, open-label, international, 96-week study to evaluate the safety and efficacy of Rilpivirine/Emtricitabine/Tenofovir DF (RPV/FTC/TDF) and Efavirenz/Emtricitabine/Tenofovir DF (EFV/FTC/TDF) in treatment-naïve HIV-infected adults.

The primary endpoint was the proportion of subjects with HIV-1 RNA <50 c/mL at Week 48 by the FDA snapshot algorithm (12% non-inferiority margin). Additional outcome analyses stratified by baseline HIV-1 RNA and CD4+ cell count were performed.

Results: A total of 786 subjects were randomized (394 RPV/FTC/TDF; 392 EFV/FTC/TDF). Baseline characteristics were similar across treatment arms, with mean CD4+ count 391 cells/mm³ and HIV-1 RNA 4.8 log₁₀ c/mL.

Overall, RPV/FTC/TDF was non-inferior to EFV/FTC/TDF (86% vs 82%) at Week 48 (difference 4.1%, 95% CI [-1.1% to 9.2%]). A statistically significant difference in efficacy was demonstrated for baseline HIV-1 RNA ≤100,000 c/mL, 89% RPV/FTC/TDF vs 82% EFV/FTC/TDF (difference 7.2%, 95% CI [1.1% to 13.4%]), and non-inferiority for >100,000 c/mL, 80% RPV/FTC/TDF vs 82% EFV/FTC/TDF (difference -1.8%, 95% CI [-11.1% to 7.5%]).

A statistically significant difference was also seen for baseline CD4+ >350 cells/mm³, 89% RPV/FTC/TDF vs 81% EFV/FTC/TDF (difference 8.6%, 95% CI [1.8% to 15.3%]) and non-inferiority for ≤ 350 cells/mm³, 81% RPV/FTC/TDF vs 83% EFV/FTC/TDF (difference -2.2%, 95% CI [-10.6% to 6.1%]).

Overall, virologic failure (VF) was 8% for RPV/FTC/TDF vs 6% for EFV/FTC/TDF (difference 2.7%, 95% CI [-0.9%, 6.2%]), and similar trends in VF were seen regardless of baseline HIV-1 RNA or CD4+ count.

There were fewer study drug discontinuations due to AEs with RPV/FTC/TDF (3%) compared to EFV/FTC/TDF (9%).

Conclusion: STR RPV/FTC/TDF demonstrated non-inferior efficacy, irrespective of baseline HIV-1 RNA or CD4+ count, and improved tolerability compared to the STR EFV/FTC/TDF.

Disclosure of Interest Statement: STaR is a Gilead Sciences sponsored Phase IIIb study.

Dr Bloch has received funding from, acted as an advisor for and/or participated in clinical research for: Gilead Sciences, Janssen, Merck, Bristol Myers Squibb ViiV Healthcare, Abbvie.

Paper Ref	86
Theme	HIV/AIDS Theme A
Presentation Type	HIV/AIDS Oral Presentation

PREVALENCE OF HIV-ASSOCIATED NEUROCOGNITIVE DISORDERS USING A NEW COGSTATE-BASED SCREENING AGAINST STANDARDISED NEUROPSYCHOLOGICAL ASSESSMENT IN AN AUSTRALIAN HIV-INFECTED AND HIV-NEGATIVE COMMUNITY COHORT

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Introduction: HIV-associated neurocognitive disorders (HAND) are not routinely evaluated in primary care due to lack of a screening strategy. We developed a new screening procedure to determine HAND prevalence against a standard neuropsychological (NP) test battery.

Methods: In a prospective observational study we collected complete baseline data. The screening included standard questionnaires for mood, drug and alcohol use and activities of daily living; and a newly designed 20-minute computerized CogState battery assessing 5 cognitive domains. CogState data were transformed into age-corrected z-scores. HIV+ Patients with co-morbidities were not excluded to form a representative community group but excluded in HIV- group to form a local reference). Those screened with HAND, a random HIV+ with normal screen, and a random HIV- sample also completed a standard NP battery assessing 8 cognitive domains. NP data were transformed into demographically-corrected T-scores. Screening and NP testing HAND used the American Academy of Neurology 2007 criteria. Participants were blinded to screening results; the NP examiner was blinded to screening and HIV status.

Results: Enrolled were 254 HIV+ subjects (median age 49 years, 93% male MSM, 65% tertiary-educated, 82% on cART, median nadir CD4 270 cells/mL, 15% CDC category C₁); and 72 demographically matched HIV- controls. HAND screening prevalence was 28.3% (HIV-associated dementia 3.9%, mild neurocognitive impairment 14.2% and asymptomatic neurocognitive impairment (ANI) 10.2%) versus 12.5% impaired in HIV- (all ANI), (p=0.009). Of 75 who completed the standard NP, HAND prevalence in HIV+ was 51.0% by NP and 47.2% by screening (ns) The HAND screening versus NP battery sensitivity was 64% and specificity 79%.

Conclusions: HAND prevalence ranged between 28%-51% in a well-controlled HIV+ community cohort and was significantly higher than in HIV- controls. The CogState-based screening yields HAND rate similar to those of a two-hour NP battery but has a moderate sensitivity that may be improved by developing with comprehensive demographic corrections.

Disclosure of Interest Statement:

This study was funded by Viiv Healthcare through an unrestricted medical grant. Viiv Healthcare were not involved in study design, data collection, analysis of results or presentation of the data.

Paper Ref	129
Theme	HIV/AIDS Theme B: Antiviral Therapy
Presentation Type	HIV/AIDS Oral Presentation

TRENDS IN FIRST LINE ANTIRETROVIRAL THERAPY IN ASIA

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Background: Antiretroviral therapy (ART) has evolved in response to research findings, drug availability and experience in HIV management. The aim of this analysis was to describe the trends in first line ART use in Asia over the past decade and evaluate whether these trends have contributed to reduced treatment modification and failure.

Methods: Patients enrolled in the TREAT Asia HIV Observational Database and receiving first line ART were included. Treatment modification was defined as ≥ 1 drug change and failure was defined according to the WHO 2010 criteria. Logistic regression was used to determine predictors of antiretroviral use. Predictors of modification and failure were analyzed using Cox models.

Results: Data from 7461 eligible patients were analysed. Non-nucleoside reverse transcriptase inhibitors (NNRTIs) have gained popularity over protease inhibitors (PIs) in the past 10 years. The adjusted odds of starting an NNRTI in 2011/12 were 6 times what they were prior to 2002 ($p < 0.01$). Since 2005, lamivudine/emtricitabine has been used by almost 100% of ART initiators whilst tenofovir and zidovudine are replacing the use of stavudine (figure 1). Efavirenz and nevirapine use has changed little over time whilst the waning demand for first line PIs is now dominated by lopinavir and atazanavir. First line treatment modification was associated with earlier year of ART start, older age, homosexual and intravenous drug use exposure groups, and prior exposure to mono/dual ART. Treatment failure was associated with earlier year of ART start, low baseline CD4 cell count and previous exposure to mono/dual ART.

Conclusions: The observed trends in first line ARV use in Asia reflect changes in availability and global treatment recommendations. In conjunction with other improvements in HIV care, these changes have resulted in a declining rate of treatment modification and treatment failure over the past decade.

Disclosure of Interest Statement: The TREAT Asia 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), and the Dutch Ministry of Foreign Affairs through a partnership with Stichting Aids Fonds. The Kirby Institute is funded by the Australian Government Department of Health and Ageing, and is affiliated with the Faculty of Medicine, The University of New South Wales. The content of this publication is solely the responsibility of the authors and does not necessarily represent the official views of any of the institutions mentioned above.

Figure 1 – Lamivudine/emtricitabine has gained in popularity whilst tenofovir and zidovudine are gradually replacing stavudine (viewable on online searchable database)

Paper Ref	186
Theme	HIV/AIDS Theme B: Clinical Trials
Presentation Type	HIV/AIDS Poster

ENROLLING TO AN INTENSIVE CLINICAL TRIAL FOCUSED ON HIV CURE: STRATEGIES TO ENHANCE RECRUITMENT.

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Background: Successful recruitment is a mandatory component of conducting clinical trials. Clinical trials focused on HIV cure may require different recruitment strategies due to their intensive nature and lack of immediate clinical benefit. This study analysed recruitment methods to a clinical trial focused on HIV cure.

Methods: Recruitment strategies for a clinical trial that examined the effects of 14 days Vorinostat on HIV transcription in 20 people living with HIV receiving antiretroviral therapy (ART) were compared. The study involved 9 hospital visits with blood draws over 3-months and 2 separate rectal biopsies. Mean recruitment rates were compared by t-test.

Results: Initial strategies included: meetings with high caseload GPs, web- and clinic-based advertising and three community fora resulting in one referral that enrolled. Traditional strategies over 14 months included: reviewing medical records and study promotion in the Alfred Hospital. 120 potential subjects were identified, of these: 15 enrolled, one withdrew and 2 screen failures yielding 12.5% (15/120) of potentially eligible patients recruited or 0.2 subjects/week. The final strategy involved a single advert over 3 weeks and one editorial during June 2012 in a high profile newspaper for the Australian gay and lesbian community. 22 enquiries were received over 1 month of which: 7 were enrolled yielding 31.8% (7/22) of potentially eligible patients recruited (1.6 subjects/week, $p < .01$ for difference in recruitment rate). Additionally 22 individuals could not be screened due to full enrolment but agreed to be contacted for future HIV cure trials.

Conclusion: High profile media in the gay and lesbian community proved a rapid and successful recruitment strategy for this study while traditional methods were less effective. These results suggest strong interest from communities affected by HIV in trials directed at HIV cure, despite the intensive nature of the studies. These findings will inform recruitment strategies for upcoming clinical trials focused on HIV cure.

Disclosure of Interest Statement: The clinical trial to which subjects were recruited was supported in part by a research grant from the Investigator Initiated Studies Program of Merck Sharp & Dohme Corp.

Paper Ref	137
Theme	Sexual Health: International
Presentation Type	Sexual Health: Poster

FEMALE STI SERVICE IN A DISTRICT HOSPITAL A SITUATIONAL ANALYSIS IN GOALPARA DISTRICT

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Background: Genital infection is one of the most prevalent Gynaecological morbidity in rural and poor community of India. Socio-economic variables like early marriage, multi parity, polygamous husband, improper genital hygiene, inaccessibility of Health Service are some of the major contributing factors for increased prevalence of STI in rural area. The study area Goalpara district of Assam has poor women literacy rate, poor economic condition, women unemployment, low social status of women and comparatively lack of health resources.

Methods: Situational analysis done in 200 bedded multi-disciplinary Govt. sector Civil Hospital catering more than eight lakh population of the District. The hospital has separate Gynaecological department with own OPD rooms, indoor ward, Labor room and shared operation complex. Gynaecological examination room is doubled up with the ANC. Separate gynecological examination setup is not available. Diagnosis of STI is more of a presumptive one as specialized laboratory facility is not available. Separate STD clinic is attached with general Medicine OPD and as such females are not referred to that clinic due to lack of privacy and insensitive cultural environment

Results: Analysis of the situation reveals that:

Therapeutics and preventive STI service is not getting importance in the Hospital policy.

Lack of manpower and physical resources is inadequate to fulfill the required demand.

Over all perception of Hospital staff including Doctors about the STI issue is not encouraging.

Conclusion: Providing accessible, affordable and appropriate STI service through a culturally sensitive way is a major objective in Reproductive Health service which is endorsed by Govt of India and incorporated in different implementing programmes like NRHM. But much needs to be done in rural and remote areas to provid the much talked "Reproductive rights" to the people.

Disclosure of interest statement: This paper does not have any external or internal funding and as such does not have any claim of interest.

Paper Ref	169
Theme	HIV/AIDS Theme B: Delivery Of Care
Presentation Type	HIV/AIDS Poster

ENGAGING NEW HIV DIAGNOSES IN CLINICAL CARE – AN AUDIT OF NEW DIAGNOSES OF HIV INFECTION IN 2012 IN MEN WHO HAVE SEX WITH MEN (MSM) AT SYDNEY SEXUAL HEALTH CENTRE (SSHC).

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Background: The NSW HIV strategy emphasises the importance of early HIV diagnosis and treatment as central to HIV prevention efforts. Retention in care of those newly diagnosed with HIV will be critical to the success of this approach. To assess our clinic's performance an audit of all new HIV diagnoses in MSM at SSHC from January to December 2012 was performed.

Methods: A retrospective review was conducted using database searches and individual clinical files. The variables studied were age, country of birth, clinician contact, SMS reminder set for next follow-up. Lost to follow-up was defined as not having been seen at the clinic for greater than 6 months after last visit for HIV care and not being known to have transferred care.

Results: 58 MSM were diagnosed with HIV infection. Mean age at diagnosis was 31.8 years (range 18-54).

24 (41%) were born in Australia or New Zealand, 14 (24%) in SE Asia, 12 (21%) in Europe/UK, 6 (10%) in Central/ South America, and 2 (4%) in USA.

At 6 months, 18 (31%) had transferred care to another service: 4 at the time of diagnosis and 14 subsequently. 5 (8.6%) patients were lost to follow-up.

93% (54/58) received an SMS reminder that follow-up was due.

Conclusion: Overall the rate of retention in care for patients with a new HIV diagnosis was high. 8.6% (5/58) were lost to follow-up after diagnosis and baseline monitoring. These results are encouraging when compared to those predicted by USA models of continuity of care. Our aim is to improve retention in care by continuing use of SMS reminders and to develop an alert that patients have failed to return so that strategies to re-engage them in care can be implemented.

Disclosure of Interest Statement: None

Paper Ref	535
Theme	HIV/AIDS Theme B: Diagnosis & monitoring
Presentation Type	HIV/AIDS Poster

INITIATION OF TREATMENT AT THE TIME OF HIV DIAGNOSIS IN NSW, EARLY REVIEW OF SURVEILLANCE DATA JANUARY TO JUNE 2013

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Background: The NSW HIV Strategy 2013-2015 embraces the test and treat public health approach to HIV. However, current attitudes and practices of initiation of early treatment initiation are not well understood. Since January 2013, surveillance for HIV notifications has included information on whether treatment was initiated and reasons for deferral.

Method: NSW HIV surveillance data was analysed for notifications reported between January and June 2013 to describe the immunological, virological, and clinical profile of patients in relation to their treatment management at the time of diagnosis. Analysis included type of diagnosing doctor and postcode.

Results: Preliminary analysis for a subset of notifications reported during January 2013 shows of 25 new HIV cases reported, 24 were male, median age at diagnosis was 35 years. At the time of diagnosis, the median CD4 count recorded was 366 cells/ μ L and viral load 72,002 copies/mL. Most cases (72%) were reported by doctors who were not known to have extensive experience in HIV management. At the time of notification, 20% had commenced treatment, 52% had ART initiation deferred and for 28% the ART treatment status was not reported. The median CD4 count at the time of diagnosis was 246 cells/ μ L for cases started on ART, 364 cells/ μ L for those with ART deferred, and 366 cells/ μ L for those with unknown ART status. Among 20 cases where ART initiation was deferred or unknown, 15 were diagnosed by doctors not experienced in HIV, of which 10 were referred to an HIV specialist for ongoing management.

Conclusion: Preliminary analysis suggests that initiation of treatment at diagnosis was higher for patients diagnosed by doctors experienced in HIV management despite median CD4 counts below 500 at diagnosis. Findings from the complete period will be important for informing the promotion of the individual and public health benefits of early treatment for people newly diagnosed with HIV.

Disclosure of Interest Statement: Nil

Paper Ref	166
Theme	Sexual Health: Psycho-social
Presentation Type	Sexual Health: Oral Presentation

SEXUAL IDENTITY, RISK, AND BISEXUAL BEHAVIOR AMONG MEN IN VIENTIANE, LAOS, 2010

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Introduction: Men who have sex with men are a priority population for HIV control in Laos, but encompass men diverse in identity and behaviour. Men with bisexual behaviour are a particularly hidden population. We describe and compare demographic and sexual behaviour characteristics among male participants who report bisexual behaviour according to self-identified sexual orientation.

Methods: Bisexual men and their sexual partners were recruited in Vientiane (2010), Laos using modified snowball sampling. Analysis was limited to men reporting male and/or transgender and female sex partners in their lifetime. Identity was derived from the Kinsey Scale; *self-identifying bisexual men* identified as bisexual, predominantly/exclusively homosexual; *non-identifying bisexual men* identified as exclusively/predominantly heterosexual. Comparisons were made using chi-square and Kruskal-Wallis equality-of-populations rank tests.

Results: Twenty-eight (32%) self-identifying (median age 23) and 60 (68%) non-identifying (median age 22) bisexual men were recruited.

The median number of total sex partners in the past year was eight (interquartile range [IQR]=4-24) among non-identifying and 6.5 (IQR=5-10) among self-identifying bisexual men ($p=0.45$). In the past year, less non-identifying (47%) than self-identifying (93%) bisexual men reported male partners ($p<0.01$), while more non-identifying (67%) than self-identifying (32%) bisexual men reported kathoey partners ($p<0.01$). Non-identifying bisexual men reported more female partners (median=5, IQR=3-11.5) than self-identifying bisexual men (median=2, IQR=2-3) ($p<0.01$).

Consistent condom use was low with both regular partners (7% overall) and casual partners (35% overall) and did not differ by identity. More non-identifying (53%) than self-identifying (29%) bisexual men reported weekly alcohol consumption ($p=0.03$), while less non-identifying (20%) than self-identifying (54%) bisexual men answered all HIV-knowledge questions correctly ($p<0.01$).

Conclusion: Bisexual men reported high-risk behaviours for HIV and STI transmission. The majority of bisexual men were non-identifying; targeted HIV prevention initiatives are particularly needed to reach this sub-group, who reported lower HIV knowledge and some riskier behaviours than self-identifying bisexual men.

Disclosure of Interest Statement: The authors have no conflicting interests regarding this study.

Paper Ref	556
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

HARNESSING THE POTENTIAL OF SITE-SPECIFIC INTERVENTION AND CLOSED ONLINE ENVIRONMENTS TO PROMOTE SEXUAL HEALTH TO YOUNG PEOPLE

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Background: The progression of technology away from traditional forms of media (newspapers, magazines) to social networking sites (SNS) has resulted in the immediate dissemination of ideas on a large scale. Increasingly amongst young people, SNS are used to create discussion and to seek advice about sexual health. As such, health promotion organisations have a unique opportunity to harness social media platforms to create and cultivate safe online spaces for young people to share sexual health information and messages.

Methods: Recent research amongst young people aged 16-22 reveals a large proportion of young people prefer to access sexual health information through closed online social media communities. In line with this, YEAH (Youth Empowerment Against HIV/AIDS) has developed a method of targeting young people with sexual health messages through both national and state specific closed Facebook groups and an international email campaign.

Results: Within the past nine months YEAH's flagship closed national Facebook group of young sexual health peer educators has grown to more than 100 active members who regularly share and discuss sexual health messages. In 2012 YEAH launched the RedAware email campaign, which has grown to have more than 2,000 young subscribers who receive monthly updates on current sexual health initiatives, information and ways to take action.

Conclusions: As YEAH approaches the 12-month milestone of its social media strategy, continuing monitoring and evaluation of the strategy's effectiveness will inform ongoing engagement and development in this area. Site specific interventions and closed online social media environments need to be cultivated by organisations to harness the positive potential of new technologies in sexual health promotion. Such interventions and environments allow young people to break down traditional barriers to accessing reliable sexual health information and create two-way discourse around sexual health.

Disclosure of Interest Statement: Youth Empowerment Against HIV/AIDS is a not-for-profit organisation, funded by the Commonwealth Department of Health and Ageing.

Paper Ref	153
Theme	HIV/AIDS Theme D: Social & Behavioural Research
Presentation Type	HIV/AIDS Oral Presentation

UNIQUE IMPACTS OF HIV DISCLOSURE IN HEALTH CARE AND WITHIN INTERPERSONAL RELATIONSHIPS

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Background: Limited research has explored the unique impact of HIV-positive disclosure in healthcare and within interpersonal relationships. This study compared the impact of disclosing an HIV status to family, friends, sexual partners and health care providers on perceived stigma, health and wellbeing among people living with HIV (PLHIV) in Australia.

Methods: PLHIV in Australia were targeted via print and online media to take part in a brief online questionnaire. Participants completed measures of perceived HIV-related stigma and treatment-related stigma, social support, resilience, stress, anxiety, depression, health satisfaction and quality of life. Demographic data, including age and education, were also collected.

Results: A total of 697 valid responses were received. As expected, multivariate regression analysis indicated that disclosing to health care providers independently predicted higher health satisfaction. Disclosing to family and friends was associated with lower perceived treatment-related stigma. Additionally disclosing to friends was related to lower perceived general HIV-related stigma. While disclosure to family and to sexual partners predicted higher perceived social support, disclosing to family was also an independent predictor of diminished health satisfaction and quality of life. Outcome measures of resilience, stress and depression were not related to disclosure to any of the groups. Age was additionally unrelated to disclosure to any of the groups, while higher education independently predicted disclosure to family.

Conclusions: The findings from this study indicate that HIV disclosure to different groups of people has differing, albeit not always positive, impacts on the health and wellbeing PLHIV. These results shed light on the choice to selectively disclose an HIV-positive status among PLHIV, along with the health and social consequences of this selective disclosure.

Disclosure of Interest Statement: Funding for this research was received from the Department of Health and Ageing and the Levi Strauss Foundation.

Paper Ref	295
Theme	HIV/AIDS Theme C: Prevention Programs
Presentation Type	HIV/AIDS Oral Presentation

COMBINATION PREVENTION WITH CONFIDENCE? : A REVIEW OF WHERE COMMUNITY HIV HEALTH PROMOTION EVALUATION IS MOST, MODERATELY AND LEAST DEVELOPED

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Background: HIV prevention and health promotion interventions operate at a number of levels ranging from individual through to broad community and structural levels. With the mobilisation of combination prevention, it is critical that we understand how the different levels work, and work in synergy.

Methods: The ESAPP (Evidence Synthesis and Application for Policy and Practice) Project aimed to

- Identify the areas of community HIV prevention where the published evidence of effectiveness and quality practice is most, modestly, and least developed;
- Identify where the monitoring and evaluation methods used in day to day practice in community organisations to contribute to that evidence are most, modestly, and least developed;

The project focused on concentrated epidemics similar to Australia. A systematic literature search was undertaken of recent published and unpublished articles and reports, and this was supplemented through liaison with key community organisations in Australia as well as Europe and North America. Over 600 documents were utilised in the review.

Results: The investment in developing effective approaches to building evidence has not been consistent across health promotion approaches. While individual focused behavioural strategies have had the most attention, evaluation of key aspects of combination prevention at the community and structural level have had little investment. The evaluation of the synergies between strategies – central to combination prevention - has had even less attention.

Conclusion: There is inconsistent evidence across HIV prevention and synergies of combination prevention are not well understood. Practitioners and policy makers need evaluation to be driven by an understanding of the program within a broader system and positioned as a quality improvement and strengthening processes. Without the strengthening and sharing the evaluation of interventions conducted outside of research trial contexts then most real time/real world evidence will be lost and result in policy and strategy based on incomplete evidence.

Disclosure of Interest Statement: The ESAPP Project was funded by the Commonwealth Department of Health and Aging. The Australian Research Centre in Sex, Health and Society (ARCSHS) receives funding from the State, Territory and Commonwealth Government Departments. No pharmaceutical grants were received in the development of this study. ARCSHS is affiliated with La Trobe University.

Paper Ref	297
Theme	HIV/AIDS Theme C: Prevention Programs
Presentation Type	HIV/AIDS Poster

DEVELOPMENT OF A MONITORING, EVALUATION AND LEARNING (MEL) AND QUALITY IMPROVEMENT (QI) FRAMEWORK FOR COMBINATION PREVENTION

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Background: In light of the changing HIV prevention landscape and resurgent and emergent epidemics in Australia and internationally it is essential that the elements of combination prevention are maximised by working in synergy. A review of literature across levels of community based HIV prevention found the development of evidence across these levels is inconsistent and the synergies between the components of combination prevention are not well understood.

Methods: Drawing on reviews of: evidence building approaches across community based HIV prevention; new developments in evaluation and systems thinking; and community sector capacity building, a draft MEL and QI framework was developed. The draft framework underwent an iterative presentation and refinement process through consultation meetings and workshops with a selection of national, state and territory community HIV organisations. This approach led to the application of the framework to practice through a range of example projects and programs at the individual, group, community and structural intervention levels.

Results: The framework acknowledges the complexity of the constantly evolving health, social and political systems in which HIV prevention operates, the strengths of the partnership response, and endeavours to incorporate the rigour of program logic, program theory, continuous quality improvement and systems thinking.

The MEL&QI framework and its application aims to simultaneously look at the project, program and system factors to understand the role of and relationship between the components of HIV prevention in order to guide planning and evaluation. The Framework emphasises the dynamic relationship between evidence, theory and quality practice of the whole, not just the parts.

Conclusion: Identifying where and how programs contribute to the overall work in HIV prevention allows for the development of a more accurate program theory on which to base evaluation decisions, and to guide the development of a more integrated and combined response to HIV.

Disclosure of Interest Statement: The ESAPP Project was funded by the Commonwealth Department of Health and Aging. The Australian Research Centre in Sex, Health and Society (ARCSHS) receives funding from the State, Territory and Commonwealth Government Departments. ARCSHS is affiliated with La Trobe University. No pharmaceutical grants were received in the development of this study.

Paper Ref	307
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Oral Presentation

WHAT DO WE KNOW WORKS? FINDINGS FROM A SYSTEMATIC RAPID REVIEW OF EFFECTIVE PROGRAMS TO REDUCE STI IN YOUNG PEOPLE

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Introduction: A systematic rapid review was conducted to synthesise the available evidence regarding public health interventions most effective in reducing STI in young people.

Methods: The review analysed the evidence for public health intervention across different settings, intervention types, and socio-demographic groups. Young people were defined as less than 30 years of age. The review was limited to systematic reviews, meta-analyses and economic evaluations.

Results: The level and type of evidence varied significantly. Evidence about interventions based within schools and primary care included a high proportion of experimental and quasi-experimental studies. Whereas interventions that operate at broader community wide or structural levels, where it is difficult or inappropriate to conduct in controlled experimental contexts, needed to rely on adapted or non-experimental methodologies. Also, due to the complexity of sexual health interventions operating across different health promotion levels it can be difficult to determine the relative impact of a particular intervention from the combined impact of other related interventions.

Conclusion: Programs were most effective in increasing protective behaviours for STIs when they:

- were skills, self-efficacy and motivation based programs rather than knowledge based programs;
- targeted multiple components of young people's lives and context in which they live and addressed multiple domains across the interpersonal, social and structural level;
- were explicitly based on recognised behavioural and social theories.

Evidence showed that no single public health intervention had a sustained long term impact on the sexual health of young people and young adults. Overwhelmingly this pointed towards programs that target multiple aspects of young people's lives and context and were based within broader interpersonal, social and system level behavioural theories.

Specific findings will be presented for programs based within: schools; primary care; mass media; communication technology and social media programs; at-risk or minority youth; Community, Structural and multi-level programs; as well identified research gaps.

Disclosure of Interest Statement: This review was funded by the Victorian Department of Health. No pharmaceutical grants were received in the development of this study. The Australian Research Centre in Sex, Health and Society (ARCSHS) and the Australian Institute for Primary Care and Ageing are affiliated with La Trobe University.

Paper Ref	252 and 603
Theme	HIV/AIDS Theme A
Presentation Type	HIV/AIDS Oral Presentation and Poster

INVESTIGATION OF IMMUNE MARKERS THAT MAY EXPLAIN ASSOCIATION OF CMV ANTIBODY TITRES AND CARDIOVASCULAR RISK IN HIV+ INDIVIDUALS STABLE ON HAART

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Background: HIV patients stable on HAART have both high plasma cytomegalovirus (CMV) antibody titres and increased risk of cardiovascular disease (CVD), parameters that correlate in healthy persons. We examined the contribution of immune activation and autoimmunity to this correlation in HIV+ individuals stable on HAART.

Methods: Plasma samples from 70 HIV+ individuals stable on HAART for 14(2-29) years and 120 age-matched healthy controls were assayed for total immunoglobulin G (IgG) reactive with CMV, human fibroblasts, HIVgp41, cardiolipin and immunoglobulins (GAM) reactive to heterologous smooth muscle. A correlation between anti-cardiolipin and anti-HIVgp41 antibodies was sought as evidence for cross reactivity. Samples from HIV+ individuals were further assayed for the immune activation markers sCD40L, sCX3CL1 and sTNFR. Patients attended clinic at St Vincent's Hospital, Darlinghurst NSW. Clinical data were compiled and Framingham scores calculated to assess of risk of CVD.

Results: CMV antibody titres correlated with Framingham scores ($p=0.009$, Spearman $R=0.317$). Nadir CD4 T-cell counts displayed a strong inverse relationship with CMV antibody ($p=0.0004$, Spearman $R=-0.42$). A multivariate model identified nadir CD4 T-cell count, Framingham score, total IgG, sCD40L and sCX3CL1 as factors associating with levels of CMV antibody. There was no association with sTNFR.

Preliminary data suggests HIV patients have higher levels of CMV antibody and a higher incidence of anti-smooth muscle antibody than healthy controls. Anti-smooth muscle antibody levels correlated with total IgG and anti-CMV pp65 in HIV+ individuals. The incidence of anti-cardiolipin antibodies was higher in HIV patients than healthy controls.

Conclusion: Elevation of CMV antibodies in HIV patients is not a simple consequence of generalised immune activation but may reflect high antigenic load before HAART. Anti-smooth muscle antibodies show a strong relationship with B-cell activation as measured by total IgG. Associations between CMV, autoimmunity and CVD are being investigated further.

Disclosure of interest: The project was funded by the University of Western Australia, the Medical Research Foundation of RPH and the NHMRC. No pharmaceutical grants were received in the development of this study

Paper Ref	561
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Poster

SEX IN THE WEST: CHANGES IN NEPEAN AND BLUE MOUNTAINS SEXUAL HEALTH AND HIV CLINICS SERVICE PROVISION 2002 COMPARED TO 2012

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Introduction: The Nepean and Blue Mountains Sexual Health and HIV Clinics (NBMSHHC) have been providing services to their communities for over twenty years. The profile of clients attending, and services provided continue to change. A comparison is presented of these respective profiles as recorded in the years of 2002 and then ten years later in 2012.

Methods: A clinical audit was undertaken of patients at NBMSHHC presenting in the years of 2002 and 2012. This was accessed from the services data base. Basic comparative statistical analysis was used to reflect on changes in presentation and practice. Further qualitative assessment of key informants will elucidate factors contributing to observed profiles and changes.

Results: These services were demonstrated to have improved access to clients in the key priority groups of those who are intravenous drug users (IVDU), indigenous people, men who have sex with men (MSM), sex workers (SW), and HIV infected. Youth presentations have decreased due to triage to youth focused services nearby. An increase in over fifty five year olds accessing services is noted.

Services to clients with HIV have increased and the client profile has changed significantly. The 2012 group is more likely to be older, married or in a defacto relationship, more culturally diverse, and to have a higher proportion of females.

Conclusion: NBMSHHC services have needed to continue to adapt and change with community and client needs. A higher proportion of services are being directed to key priority groups. The service will need to continue to monitor community needs and creatively respond to new challenges.

Disclosure of Interest Statement: There is no conflict of interest to declare.

Paper Ref	99
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Poster

DEADLY SEXY HEALTH; SEXUAL HEALTH PROMOTION IN THE VICTORIAN ABORIGINAL COMMUNITY CONTROLLED HEALTH SETTING.

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Victorian Aboriginal Community Controlled Health Organisation (VACCHO)

The rate of sexually transmissible infections in the Victorian Aboriginal population remain at higher rates than non-Indigenous Victorians. Adding to this burden is the lack of a dedicated Aboriginal sexual health workforce. The Victorian Aboriginal Community Controlled Health Organisation (VACCHO) has developed the "Deadly Sexy Health Kit" as a capacity building resource for Aboriginal health workers and other Koori workers to deliver blood borne virus, sexual and reproductive health education workshops in their local communities.

The Deadly Sexy Health Kit is comprised of a series of flexible tools to ensure that the workshops are engaging, interactive and on message, including lesson plans, DVDs, activities and discussion points that are culturally relevant.

The development of the kit was a response to the high demand from Aboriginal Health workers for resources and skills in Sexual health and Blood Borne Viruses. The VACCHO Sexual Health team were often called to present at community health days, youth camps, women's and men's health activities and other community driven wellbeing programs. The kit's development was an opportunity for Aboriginal workers to be the local faces of Sexual health activities.

The Deadly Sexy Health Kit is accompanied by training sessions that build on Aboriginal health worker skills attained through VACCHO's certificate 3 and 4 provision. This training includes an introduction to the purpose and effective use of the kit and training is delivered in local regions where workers can support each other and develop strong local referral and support pathways for community members.

The Deadly Sexy Health Kit will be evaluated six months after implementation. It is anticipated that this kit will move towards a locally based Sexual health education model that strengthens capacity of Aboriginal Community Controlled Health Services and their Communities.

Disclosure of Interest: There is no conflict of interest from VACCHO or the presenters.

Paper Ref	257
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	HIV/AIDS Oral Presentation

MOB IN THE MARGINS: HIV AND INJECTING DRUG USE IN VICTORIAN ABORIGINAL COMMUNITIES

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Victorian Aboriginal Community Controlled Health Organisation¹

Aboriginal people in Victoria make up 0.6% of the population, yet are over represented in rates of injecting drug use (11% in Victorian Needle and Syringe Program (NSP) survey), methadone prescription and incarceration, all are risk factors for HIV transmission. At a national level, HIV rates are at similar levels in both Indigenous and non-Indigenous populations, but HIV exposure rates through injecting drug use are six times higher in the Indigenous community.

The Yiaga ba Wadamba project (Woi-wurrung phrase meaning 'find and renew'), was conducted by VACCHO in partnership with Anex. VACCHO spoke with 69 urban and rural Aboriginal people who inject drugs about their injecting practices, sexual health, and use of health services. Many spoke about the shame, isolation and the stigma they experience as a result of their drug use.

Some of the other findings included barriers to accessing sterile injecting equipment and these included service location and hours of operation, a lack of cultural safety, concerns about confidentiality or anonymity and potential or prior experiences of discrimination.

Due to the ongoing stigma associated with HIV and injecting drug use, sustained strategic responses in Aboriginal health services can be challenging. In this presentation, VACCHO will explore some of these challenges and how on-going efforts to keep HIV and harm reduction on the agenda of Aboriginal Community Controlled health sector needs to be inventive and have varied approaches.

VACCHO has delivered Aboriginal health worker training and peer education, developed strong partnerships in harm reduction, developed resources and worked with our member ship to re-orientate service delivery to be more accepting of harm reduction and see that NSPs are a health promotion strategy to keep HIV current.

The ultimate aim for these strategies is the reduction of the rates of HIV in Victorian Aboriginal people who inject drugs and embed Blood Borne Virus prevention in Aboriginal health services.

Disclosure of Interest: There is no conflict of interest from VACCHO or the presenters.

Paper Ref	571
Theme	Sexual Health: Reproductive Health
Presentation Type	Sexual Health: Poster

A NEW PRESCRIPTION FOR THE FUTURE OF ABORTION SERVICES IN AUSTRALIA?

THE IMPLICATIONS FOR RURAL, REGIONAL AND REMOTE WOMEN'S ACCESS TO ABORTION SERVICES IN QUEENSLAND FOLLOWING THE APPROVAL OF MIFEPRISTONE FOR EARLY MEDICAL ABORTION.

Calcutt C¹

Introduction: Access to safe and legal abortion is a vexed issue in Queensland and many women face significant barriers when seeking this option.

Children by Choice is a Queensland-wide unplanned pregnancy counselling service and also provides financial assistance to women seeking abortion who are experiencing financial disadvantage, violence and those living in regional, remote and rural (RRR) areas. In 2010-11, 49% of Children by Choice's client contacts identified the cost of abortion as a barrier to access. In addition 21% identified geography as a problem. In 2011-12, the average travel distance for our RRR clients who received financial assistance to access abortion was 857km each way.

Many health professionals and women's health advocates hope that the TGA approval of mifepristone in 2012 for use in Australia for early medical abortion will improve access to services for Queensland women. Internationally, mifepristone has been used safely and effectively for early medical abortion up to 63 days LMP for over two decades. Best practice guidelines and international evidence show that local provision of early medical abortion is preferable rather than women having to travel large distances to access a service.

Australian general practitioners who complete free online training will be able to prescribe the drug. This offers the opportunity for the provision of early medical abortion by local GPs to their patients outside of the current day hospital settings. However, there are a number of issues such as government cost subsidisation of the drug to make it more affordable, gestational limitations, professional indemnity insurance, navigating Queensland abortion law and the development of local referral and support pathways, which need to be addressed before the availability of mifepristone can improve RRR Queensland women's access to abortion. This presentation will also discuss some of these concerns and explore solutions.

Paper Ref	642
Theme	HIV/AIDS Theme A
Presentation Type	HIV/AIDS Oral Presentation

CHARACTERIZATION OF HIV LATENCY IN A CHEMOKINE MODEL OF Preactivation LATENCY.

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Background: HIV remission occurs in specific instances after bone marrow transplant or early antiviral therapy. Clinical trials are defining strategies to clear HIV with viral activators but the critical reservoir of latent virus remains uncertain. The optimal model for determining effective reactivation is unclear but we have proposed a primary cell model of pre-activation latency and now show chemokine effects leading to establishing latency.

Methods: Resting CD4+ T cells sorted from normal buffy coats were infected with X4 virus and qPCR used to identify viral entry (total HIV DNA), nuclear entry (2LTR circles) and integration (Alu-LTR). Productive infection was measured by RT. We used a range of inhibitors including those to the PLC/calcineurin/NFAT and the PI3K pathway including downstream factors AP1, ERK1/2, p38, JNK and NFkB downstream of chemokine receptor CCR7 to map pathways required for the development of latency.

Results: We confirmed that chemokines increase the rate of viral entry into the nucleus and that microtubule inhibitors block early entry. Calcineurin inhibitors of NFAT do not inhibit integration. PI3K inhibitor and downstream inhibitors of NFkB, ERK1/2, JNK, and AP1 block integration but p38 did not. HIV mutants for NFkB binding do not integrate in chemokine treated cells.

Conclusions: Chemokines effectively induce latency in resting T cells because they 1] they increase pre-integration complex movement into the nucleus and 2] increase nuclear integration controlled by pathways depending on NFkB and JNK/AP1.

Disclosure of Interest Statement: No competing interest for authors.

Paper Ref	309
Theme	HIV/AIDS Theme D: National Programs & Policy
Presentation Type	HIV/AIDS Poster

CAN INTERNATIONAL POLICY INSTRUMENTS INFORM DOMESTIC HIV POLICY?

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¹⁻³ Australian Federation of AIDS Organisations

Introduction: The 2011 United Nations Declaration on HIV/AIDS (UNPD) aimed to deliver shared understanding and global commitment to address priorities in HIV prevention, care and support. Typical of instruments of its ilk, the UNPD was primarily considered an instrument framed to ensure application to the policy and programming efforts of developing countries. The Australian Federation of AIDS Organisations (AFAO) and its members decided to highlight the UNPD's domestic applicability and leverage its utility to re-energise Australia's domestic HIV response

Methods: A meeting of AFAO member organisations identified key and emerging issues supported by UNPD commitments but not effectively addressed by Australia's current HIV response, including recent developments in HIV science. An extensive list of proposed actions was developed and mapped against the 6th National HIV Strategy and UNPD priorities to expand and strengthen existing initiatives. A number of targeted print resources were developed, including a lengthy document outlining required actions and their rationale, and a series of targeted factsheets to engage political interest. These have been used to brief stakeholders and political leaders.

Results: The process enabled the identification of points of difference and development of national consensus on issues and approach among community sector HIV organisations, including those representing the interests of men who have sex with men (MSM), sex workers and people who use drugs. Analysis and critique of the 6th National HIV Strategy through a UNPD 'lense' provided a platform to consider core requirements of the pending 7th strategy. Highlighting the relevance of the UNPD to Australia's domestic HIV response proved a useful mechanism to secure meetings with politicians. Many of the issues articulated have been progressed.

Conclusion: Framing shortcomings in domestic HIV policy and programming in the context of international commitments (and expectations) provided a focus to drive forward Australia's domestic response.

Disclosure of Interest Statement: None.

Paper Ref	642
Theme	HIV/AIDS Theme A
Presentation Type	HIV/AIDS Oral Presentation

CHARACTERIZATION OF HIV LATENCY IN A CHEMOKINE MODEL OF PREAMBIVATION LATENCY.

Paul U Cameron^{1,2}, Suha Saleh¹, Fiona Wightman¹, Kee Lee¹, Candida da Fonseca Pereira^{1,3}, Jenny Anderson¹, Gabriela Khoury¹, Sharon R Lewin^{1,2}

1Department of Infectious Diseases, Monash University, 2Infectious Disease Unit, The Alfred Hospital, 3Centre for Biomedical Research Burnet Institute, Melbourne, Victoria, Australia.

Background: HIV remission occurs in specific instances after bone marrow transplant or early antiviral therapy. Clinical trials are defining strategies to clear HIV with viral activators but the clinical reservoir of latent virus remains uncertain. The optimal model for determining effective reactivation is unclear but we have proposed a primary cell model of pre-activation latency and now show chemokine effects leading to establishing latency.

Methods: Resting CD4+ T cells sorted from normal buffy coats were infected with X4 virus and qPCR used to identify viral entry (total HIV DNA), nuclear entry (2LTR circles) and integration (Alu-LTR). Productive infection was measured by RT. We used a range of inhibitors including those to the PLC/calcineurin/NFAT and the PI3K pathway including downstream factors AP1, ERK1/2, p38, JNK and NFkB downstream of chemokine receptor CCR7 to map pathways required for the development of latency.

Results: We confirmed that chemokines increase the rate of viral entry into the nucleus and that microtubule inhibitors block early entry. Calcineurin inhibitors of NFAT do not inhibit integration. PI3K inhibitor and downstream inhibitors of NFkB, ERK1/2, JNK, and AP1 block integration but p38 did not. HIV mutants for NFkB binding do not integrate in chemokine treated cells.

Conclusions: Chemokines effectively induce latency in resting T cells because they 1] they increase pre-integration complex movement into the nucleus and 2] increase nuclear integration controlled by pathways depending on NFkB and JNK/AP1.

Disclosure of Interest Statement: No competing interest for authors.

Paper Ref	226
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Oral Presentation

CHLAMYDIA AND THE URBAN ABORIGINAL MEDICAL SERVICE

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Introduction: Despite the high proportion of young people annually accessing general practice, including Aboriginal Medical Services (AMS), testing for Chlamydia trachomatis remains relatively low in urban areas.

Methods: A project officer was employed within the Institute of Urban Indigenous Health (UIH) to serve a mentoring and facilitation role for the SE Queensland network of AMS and their sexual health workers, with a view to improving testing, management and follow-up of chlamydia and other STIs by community controlled medical services. The officer has been operational for three years, conducting weekly visits to AMS within the UIH network, identifying obstacles to routine Chlamydia screening within clinics, collecting and analysing test data and promoting greater uptake of testing amongst clinicians and health workers.

Results: A number of impediments to Chlamydia testing was identified including reluctance by clinicians, low prioritization, poor collection and analysis of test data, poor communication between clinicians and health workers, and variable interpretations of the Adult Health Check MBS Item 715. Two key initiatives by the UIH, the standardization of the Adult Health Check, and the implementation of standard medical data collection software (MMeX) allowing for the easy collection, analysis and reporting of test data, appear to have had a positive impact on chlamydia testing rates

Conclusion: The ability to routinely report back to clinicians and health workers the results of their testing and to benchmark those results with previous efforts provides a continuous quality improvement cycle that facilitates communication and awareness between clinicians and health workers.

Disclosure of Interest Statement: This research is funded by the Queensland Government National and International Research Alliances Program (NIRAP) Grant "Improved surveillance, treatment and control of chlamydial infections".

Paper Ref	72
Theme	HIV/AIDS Theme B: Clinical Trials
Presentation Type	HIV/AIDS Poster

STRATEGIC TIMING OF ANTIRETROVIRAL TREATMENT: THE START STUDY

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Background: The START study is an international randomized trial to determine whether starting antiretroviral therapy (ART) early (before CD4 drops to less than 500 cells/mm³), rather than waiting until CD4 drops to less than 350 cells/mm³ reduces the occurrence of serious morbidity and mortality. The primary composite endpoint is the development of a serious AIDS event, a serious non-AIDS event, or death from any cause. The original sample size was 4,000 participants, to be followed for a minimum of 3 years to yield 370 primary events, providing 90% power to demonstrate a 28% difference between treatment arms.

Following a review of accumulated primary endpoints, coupled with an examination of the cohort characteristics relative to the key study design assumptions, the study team re-calculated the trial sample size in January 2013. As a consequence the study now requires recruitment of 4,600 subjects with a minimum of 3 yrs follow-up to yield 213 primary events.

Methods: Patterns of recruitment and baseline characteristics are summarized.

Results: 4057 participants were enrolled into the START study as of 18 May 2013. Their mean age was 36 (SD: 10) years; 25% female; and 48% white. 58% of participants were most likely to have become HIV infected through sexual contact with a person of the same gender. The median estimated time since HIV diagnosis was 1.0 (IQR: 0.0-3.0) years. 2.9% and 3.9% of participants were co-infected with hepatitis B and C virus, respectively. The median HIV RNA level was 4.1 (IQR: 3.5-4.6) log₁₀ copies/mL. Median CD4+ count was 648 (IQR: 582-756) cells/μL.

Conclusions: START remains a very important study in HIV medicine. It is estimated that, with just over 88.2% of total enrolment to-date, the goal of 4,600 participants will be reached by the end of 2013.

Disclosure of Interest Statement: The START protocol is primarily supported by the U.S. National Institutes of Health through grants from the Division of AIDS, NIAID, and other NIH institutes. Antiretrovirals are donated by Abbott Laboratories Inc., Bristol-Myers Squibb, Gilead Sciences Inc., GlaxoSmithKline Inc., Merck & Co. Inc. and Tibotec Pharmaceuticals Ltd. (Janssen Therapeutics).

Paper Ref	91
Theme	HIV/AIDS Theme B: Antiviral Therapy
Presentation Type	HIV/AIDS Poster

RALTEGRAVIR USE IN HIV-2: A CASE STUDY

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The integrase inhibitor raltegravir is an effective component of anti-retroviral therapy (ART) for human immunodeficiency virus type 1 (HIV-1) but experience in its use in human immunodeficiency virus type 2 (HIV-2) is limited.

Management of HIV-2 is challenging for a number of reasons. Firstly, all current ART has been developed to treat HIV-1, with no HIV-2 specific treatments available. Due to the structural differences between HIV-1 and HIV-2, available ART may not provide optimal viral suppression. Additionally, HIV-2 has an intrinsic resistance to the non-nucleoside reverse transcriptase inhibitors and several protease inhibitors. Choosing an appropriate regimen and monitoring treatment response can also be difficult due to a lack of access to resistance assays and viral load testing for HIV-2. Lastly, of the 34 million people estimated to be infected with HIV worldwide, only 2 million are infected with HIV-2. Most HIV-2 infections occur in West Africa, meaning what little experience there is of HIV-2 management is in the use of older regimens with higher pill burden and unfavourable side effect profiles.

We present the case of a 58 year old man with HIV-2 who started treatment (abacavir/lamivudine and un-boosted atazanavir) 12 years after diagnosis with a pre-treatment viral load of 30,471 copies/ml and CD4 count of 230 cells/microL (14%). Six months after initiating treatment his viral load remained detectable (13,400 copies/ml and CD4 count 200 cells/microL, 16%) resulting in a change of regimen to tenofovir/emtricitabine and raltegravir. The viral load became undetectable within one month (CD4 360 cells/microL, 24%) and 18 months later continues to be undetectable with a CD4 count of 410 cells/microL (25%). This case describes the successful management of a man with HIV-2 and adds to the evidence that tenofovir/emtricitabine and raltegravir can be an effective treatment option for HIV-2.

Disclosure of Interest Statement: No pharmaceutical grants were received in the development of this study

Paper Ref	165
Theme	HIV/AIDS Theme B: Antiviral Therapy
Presentation Type	HIV/AIDS Poster

ATAZANAVIR – ASSOCIATED RENAL CALCULUS: A CASE STUDY

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Atazanavir is a protease inhibitor commonly used as part of anti-retroviral treatment (ART). There is a known association of renal calculi with older protease inhibitors (e.g. indinavar), but a relationship with atazanavir has only recently been described.

We present the case of a 58 year old HIV positive man with extensive treatment history. He attended our service initially on a regimen of abacavir/lamivudine, tenofovir and boosted atazanavir. Due to intolerable ritonavir side effects, his regimen was changed to abacavir/lamivudine, raltegravir and unboosted atazanavir. Side effects resolved and he maintained good virological control.

Three years later he presented with frank haematuria and a CT urogram revealed a 5mm right renal calculus. As the calculus was causing minimal symptoms and also his extensive resistance history, no change was made to his therapy. He represented 18 months later with loin pain and the calculus was demonstrated to be mid ureteric. A stent was inserted and he was commenced on allopurinol. After 1 month his pain persisted and CT showed no change in the calculus, which was subsequently removed endoscopically, along with the stent.

The stone was analysed and found to contain atazanavir. At this time a serum atazanavir level showed a low-normal trough of 163ng/ml. CT showed no remnants of the renal calculus but the presence of a 12mm gallstone in the gallbladder neck. Due to the association between atazanavir, renal and gallbladder stones his atazanavir was ceased. He was changed to raltegravir, etravirine and boosted darunavir but after 6 weeks again felt unable to continue with ritonavir. Therefore boosted darunavir was replaced with unboosted fosamprenavir. Currently the patient is tolerating his regimen and has good virological control. This case demonstrates the need to review atazanavir based ART in the context of a patient presenting with a renal calculus.

Disclosure of Interest Statement: No pharmaceutical grants were received in the development of this study.

Paper Ref	244
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Poster

MYCOPLASMA GENITALIUM INFECTION IN SYMPTOMATIC CLIENTS PRESENTING TO A NORTH QUEENSLAND SEXUAL HEALTH SERVICE.

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Mycoplasma genitalium (MG) is a sexually transmitted infection that was first isolated in 1981. Its role as an important sexually transmitted infection (STI) is now established; MG has been associated with urethritis, cervicitis and endometritis, pelvic inflammatory disease and tubal infertility, and increased risk of acquiring HIV infection. There is limited data available on the prevalence of MG in Australia; recent research shows prevalence rates ranging from 1.3 – 3.3%.

Symptomatic clients presenting to Cairns Sexual Health Service have been routinely tested for MG since 2012. Between Jan 2012 and April 2013, 334 clients were tested; 39 (12%) were positive for MG.

Aboriginal and Torres Strait Islander clients had a MG positivity rate of 18%. There were similar rates of infection detected in all age groups ranging from 10 – 13%, except those over 40 years (7.5%). Positivity rates between males and females were similar; males 11%, females 13%. Amongst those who tested positive for MG, 36 (92%) had sexual partners of the opposite sex.

Clinical symptoms in MG positive males included dysuria, penile discharge and urethral tingling. MG positive female clients reported vaginal discharge, dysuria, dyspareunia, lower abdominal pain, intermenstrual bleeding and post coital bleeding. Of the female clients who tested positive for MG, 63% were co-infected with another STI or vaginal infection and 20% of males had another STI detected.

More research is required to determine MG prevalence in the Australian population and to identify high risk groups. Our data, whilst limited to symptomatic clients, demonstrates a high positivity rate in Aboriginal and Torres Strait Islander people. Screening of this group, whether symptomatic or not, should be considered.

Disclosure of Interest Statement: No pharmaceutical grants were received in the development of this study.

Paper Ref	497
Theme	HIV/AIDS Theme B: Diagnosis & monitoring
Presentation Type	HIV/AIDS Poster

HIV RAPID TESTING: IMPLEMENTATION IN A SEXUAL HEALTH CLINIC

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² James Cook University

In June 2013 Queensland became the first state to implement rapid HIV testing using point of care tests (PoCT) as part of regular clinical practice. The costs of the tests are covered by the Ministerial Advisory Committee (MAC) on HIV/AIDS with the goal of advancing Queensland's response to HIV prevention by allowing health professionals to test and potentially treat HIV earlier.

The Alere Determine Combo HIV 1/2 Ag/Ab is the first TGA approved HIV PoCT in Australia and gives results within 20 minutes by collecting a fingertip blood sample. Cairns Sexual Health has been the first sexual health clinic to use the tests and to date 12 tests have been performed in the first 3 weeks of them being available, with one reactive result. By October we estimate that 100 tests will have been performed.

The primary goal of introducing rapid HIV tests was to increase client access to HIV testing. It was decided to offer the test to those at higher risk of HIV, whilst continuing to offer routine testing to others where appropriate. Clinicians collaborated to develop a flow chart to implement testing. All clients are seen by the triage nurse who identifies those suitable for a test. When the client is seen by the clinician the test is commenced whilst informed consent is established. The clinician needs to be prepared to give a positive test; the immediacy of this may be a challenge, but one that is overcome with good preparation. Clients report satisfaction with receiving a result during the visit and reduced anxiety in waiting for results for several days.

Some targeted media and advertising about the PoCT has occurred, we anticipate this will lead to enquiries and requests for rapid HIV testing.

The implementation has been effective in screening people at higher risk of HIV.

Disclosure of Interest Statement: No pharmaceutical grants were received for this study. Dr Russell is the Chairperson of the Ministerial Advisory Committee

Paper Ref	184
Theme	HIV/AIDS Theme C: Epidemiology Of HIV
Presentation Type	HIV/AIDS Oral Presentation

THE CHANGING FACE OF HIV-1 DIVERSITY IN WESTERN AUSTRALIA - A 12 YEAR ANALYSIS.

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Introduction: With Western Australia's (WA) close proximity to countries with high a prevalence of HIV-1 and with the increase of 457, student and spouse visa holders, WA is facing a change in HIV-1 diversity. In this study we aim to monitor HIV-1 mobility in WA and to determine whether direct transmission events occur.

Methods: 1183 HIV-1 sequences from 2000-2012 underwent HIV-1 subtype identification based on sequencing the protease and reverse transcriptase gene and submission to Stanford HIV drug resistant database. BIOEDIT and MEGA 5.1 software were used for phylogenetic analysis. Maximum likelihood was inferred with +100 bootstrap trees, General Time Reversible (GTR) model with gamma distributed rate of heterogeneity with invariant sites (G+I). Evidence of direct transmission was identified with a genetic distance of <1.5% and a bootstrap value of ≥98%. To determine the robustness of this framework we included multiple time point sequences, unrelated B cohort and deleted drug resistant sites.

Results: There was limited HIV-1 diversification in WA in 2000-2005. Since 2005 we have identified an increase in C and CRF01_AE subtypes, to the point where B subtypes marginally dominate non B subtypes 52% to 48% by 2012. We identified 27 non B (11 C, 14 CRF01_AE, 1 CRF02_AG and 1 A subtype) and 45 B clusters. Many Non B clusters appear as pairs (93%) whilst only 56% of B subtype clusters were paired. We identified 2 B-subtype clusters with 11 and 15 patients. Interestingly, one large B-subtype cluster, with known contacts, was not identified by using the analysis framework. Also interestingly, utilising unrelated B subtype sequences or deleting drug resistant sites had little impact on phylogenetic tree construction.

Conclusion: This study provided an insight into HIV-1 transmission dynamics in WA with the results suggesting new intervention strategies are required focusing on visa holders, travelers, MSM and heterosexuals.

Disclosure of Interest Statement: Nothing to disclose

Paper Ref	185
Theme	HIV/AIDS Theme A: Immunology & pathogenesis
Presentation Type	HIV/AIDS Oral Presentation

AN OPTIMISED EIGHT-COLOUR FLOW CYTOMETRY PROTOCOL FOR THE ANALYSIS OF MONOCYTE HETEROGENEITY AND MONOCYTE ACTIVATION MARKERS DURING HIV INFECTION.

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¹School of Veterinary and Life Sciences, Murdoch University, Perth, WA

²Royal Perth Hospital, Department of Clinical Immunology, Perth WA 6000.

Introduction: Monocytes are a heterogeneous cell population having specialised functions and differing phenotype. They are a link between innate immune system and adaptive immune system therefore, to identify if immune activation exists in HIV-1 individuals with controlled viremia and recovered CD4 T cell counts, we assessed cell surface monocyte activation markers (MAM) within the monocyte subsets.

Methods: An eight colour flow cytometry protocol was optimized by evaluating CD45, CD56, NKG2C, CD14, CD16, CD163, CD64 and CD143 in a cocktail and their appropriately matched isotype controls. Utilising this method we assessed MAM in 81 HIV infected individuals from the Western Australian HIV cohort (viremic and non viremic) and 24 normal healthy controls.

Results: The results from this pilot study show little effect of HIV status, CD4 T cell count or age on monocyte subsets however females had lower proportion of classical monocytes than males. The results from MAM analysis did reveal an influence of HIV status on CD64 and CD143 expression on all monocyte subsets (p<0.01). There was no influence of HIV status on CD163 expression on classical or intermediate monocytes however, of interest, the non classical monocyte analysis did revealed an effect of HIV status, but not viral load, on CD163 expression. There was no effect of age or gender with any activation marker on any monocyte subsets. CD4 T cell count was associated with viral load and CD64 expression on classical monocytes only.

Conclusion: Monitoring markers of monocyte activation provides a valuable insight into immune activation in HIV individuals. The expression of pro-inflammatory CD16+ monocytes suggests important effects of HIV on innate immunity and this technique appears to be viable and potentially useful for monitoring HIV disease.

Disclosure of Interest Statement: Nothing to disclose

Paper Ref	598
Theme	HIV/AIDS Theme A: Immunology & pathogenesis
Presentation Type	HIV/AIDS Poster

AN OPTIMISED EIGHT-COLOUR FLOW CYTOMETRY PROTOCOL FOR THE ANALYSIS OF MONOCYTE HETEROGENEITY AND MONOCYTE ACTIVATION MARKERS DURING HIV INFECTION.

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Conclusion: Monitoring markers of monocyte activation provides a valuable insight into immune activation in HIV individuals. The expression of pro-inflammatory CD16+ monocytes suggests important effects of HIV on innate immunity and this technique appears to be viable and potentially useful for monitoring HIV disease.

Disclosure of Interest Statement: Nothing to disclose.

Paper Ref	493
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Oral Presentation

CAN A NEW DUAL DETECTION POINT-OF-CARE TEST FOR SYPHILIS BE USED TO REDUCE OVER-DIAGNOSIS OF ACTIVE INFECTION IN HIGH PREVALENCE POPULATIONS?

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Introduction: Most point-of-care tests for syphilis detect treponemal antibodies and can result in over-diagnosis of active infection because antibodies persist after successful treatment. Consequences include over-treatment and psycho-social implications. A new point-of-care test (DPP Screen and Confirm) may be able to distinguish active from past infection and reduce the extent of over-diagnosis.

Methods: We evaluated the DPP test using sera stored at two Australian laboratories. This test simultaneously detects treponemal and non-treponemal antibodies which are indicative of active infection. The individual DPP test lines were compared to relevant reference test results (treponemal immunoassays [IA] and Rapid Plasma Reagin [RPR]), with quantitation by endpoint titration. The combined DPP test line outcomes were also compared with reference test results categorised as high-titre/active (IA reactive, RPR>8); low-titre/active (IA reactive, RPR=1,2,4), past/treated (IA reactive, RPR non-reactive) and no syphilis (IA and RPR non-reactive).

Results: A total of 1005 sera were tested. DPP treponemal line sensitivity compared to laboratory IA tests was 89.8%(95%CI 87.3-91.9%) and specificity was 99.3%(97.0-99.9%). DPP non-treponemal line sensitivity compared to RPR tests (reactive=RPR>1) was 94.2%(91.8-96.0%), increasing to 98.3%(96.3-99.2%) among RPR>8. Specificity was 62.2%(57.5-66.6%). As a combined outcome, the DPP correctly identified 381 (94.3%) of high-titre/active, 109(90.1%) of low-titre/active, 58(27.5%) of past/treated infections and 189(78.4%) with no syphilis. Among past/treated infections 105(49.8%) were incorrectly classified as active infection and a further 48(22.8%) incorrectly classified as no syphilis or false positives.

Conclusion: The sensitivities of the DPP treponemal and non-treponemal test lines were high, and its use would result in identification of over 93% of active syphilis infections. Almost half of the past/treated infections that would be designated for treatment using a treponemal-only test would be diagnosed as negative or past/treated with the DPP test. Thus the DPP test could avoid some over-treatment though its potential benefits will depend on the prevalence of past/treated infection in a population.

Disclosure of Interest Statement: No interests to disclose

Paper Ref	339
Theme	HIV/AIDS Theme B: Clinical Trials
Presentation Type	HIV/AIDS Poster

PREGNANCIES AMONG HIV PATIENTS AT THE SOCIAL HEALTH CLINIC (SHC), PHNOM PENH, CAMBODIA.

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Background: In 2010, there were an estimated 1,606 HIV-infected pregnant women in Cambodia. These patients may many challenges including: AIDS progression, unwanted pregnancy and vertical HIV transmission concerns. The magnitude of the impact of pregnancy and its underlying factors among female HIV infected patients is unknown. This study aims to estimate the proportion of female HIV infected patients who become pregnant and to describe the baseline characteristics associated with the occurrence of pregnancies among women attending the Social Health Clinic (SHC).

Method: Data were collected from female, HIV-infected patients aged >15 years, not pregnant at enrollment, registered from 2004 to 2011 at the SHC. Logistic regression was used to assess characteristics associated with pregnancy. Backwards elimination was used to build a multivariate model.

Results: Of 1,532 women, 107 (7.6%) became pregnant during follow up (2004-2011). The median age was 32 years (IQR 27-38). 31% of women becoming pregnant were aged between 15-25 years old, while only 16% of those not pregnant were in this age group. Overall 26% of women drank alcohol. In multivariate analysis older age 35 years was negatively associated with the risk of becoming pregnant compared to age group 15-25 years [OR: 0.14, 95% CI: 0.07 to 0.27] while currently drinking alcohol positively associated with the pregnancy [OR: 3.04, 95% CI: 1.52 to 6.05]. CD4 >500 cell count/mm³ [OR: 3.10, 95% CI: 1.78 to 5.42] and current ART use [OR: 7.13, 95% CI: 3.70 to 13.73] were significantly associated with a greater likelihood of pregnancy.

Conclusion: Pregnancy among HIV infected women was more likely to occur among those of a younger age and also was strongly associated with alcohol use, ART use and higher CD4 cell counts. This finding requires further investigation but suggests family planning might still be very relevant at ART clinics.

Disclosure of Interest Statement: None

Paper Ref	392
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Poster

MIND THE GAP: INNOVATIVE HEALTH PROMOTION ACTIVITIES CONDUCTED IN REGIONAL NSW TO IMPROVE TESTING RATES FOR SEXUALLY TRANSMISSIBLE INFECTIONS

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Background: The NSW Aboriginal Sexual and Reproductive Health Program provided funding to six NSW Aboriginal Community Controlled Health Services from 2010 onwards to support Sexual and Reproductive Health Worker positions. These workers conducted activities to improve access and outcomes related to sexual and reproductive health. We describe the initiatives undertaken by Coomealla Health Aboriginal Corporation.

Methods: At Coomealla Health Aboriginal Corporation, a range of programs were undertaken in young Aboriginal people to increase sexual and reproductive health knowledge, raise awareness about sexually transmissible infection (STI) testing and increase confidence about accessing health services. The programs were run on houseboats, during touch football team meetings, as part of an “Annual Golf Day” and other locations at the health service and in the community. Many of the programs also integrated STI testing as part of a health check. Data were extracted from the health service patient management system to determine changes in attendance in the 12 month period before the Workers started (March 2010-February 2011) compared to 1 year after the Worker started (March 2011-February 2012).

Results: In the 12 months before the health promotion initiatives started, 121 individuals aged 15-25 years attended the service, increasing by 39% to 168 from March 2011 to February 2012 after the Worker started. These young people accounted for 319 consultations in the 12 months before the Worker started increasing two fold to 683 consultations in year 1 during the initiatives. Increases were seen in both males and females.

Conclusions: Funded Sexual and Reproductive Health worker positions have improved health service access through a range of community and health service based health promotion initiatives.

Disclosure of Interest Statement: The Sexual and Reproductive Worker employed at Coomealla Health Aboriginal Corporation was funded by the NSW Ministry of Health under the National Partnership Agreement on Indigenous Early Childhood Development. No pharmaceutical grants were received in the development of this study.

Paper Ref	312
Theme	HIV/AIDS Theme A: Diagnostics development
Presentation Type	HIV/AIDS Oral Presentation

DETECTION, QUANTITATION AND MOLECULAR EPIDEMIOLOGY OF HTLV-I IN THE NORTHERN TERRITORY.

Chibo, D

Background: Diagnosis of Human T-lymphotropic virus type I and II (HTLV-I and HTLV-II) infection is based on serological techniques including EIA, CMIA and Western blotting (WB). Among many samples tested, the proportion of sero-indeterminate results is high and use of the polymerase chain reaction (PCR) in these situations may help to resolve these. With the high prevalence of HTLV-I in the indigenous population in central Australia, we tested HTLV-I reactive samples by PCR and performed phylogenetic analysis on the positives to add to the existing knowledge of the molecular epidemiology of the virus in this region of Australia.

Methods: An in-house real-time PCR assay was used to detect HTLV-I and/or II in the blood of patients screened for HTLV-I antibodies at Royal Darwin Hospital. HTLV-I proviral load (pVL) quantitation was performed using the MT2 cells as the positive control and the albumin gene to normalise peripheral blood mononuclear cell (PBMC) numbers. Results were confirmed using the Digital Droplet PCR system (Bio-Rad), a third generation PCR technique enabling absolute quantitation of nucleic acid copy number. The envelope and LTR regions of virus-positive samples were sequenced and phylogenetic analysis undertaken for molecular epidemiological purposes.

Results: Of the 57 samples tested, HTLV-I was detected in 50. Four WB indeterminate and 3 WB positive samples were PCR negative. pVLs ranged from 18 to 64,516 HTLV-I copies/10⁶ PBMCs. Phylogenetic analysis revealed 45 strains were related to the HTLV-I Australo-Melanesian subtype C group of viruses while a single virus was related to the HTLV-I cosmopolitan subtype A group of viruses.

Conclusion: Not all HTLV-I positive individuals have the virus detectable in blood samples at a given point in time. Strains other than the previously recognised subtype C virus rarely infect individuals living in this part of Australia.

Disclosure of Interest: None

Paper Ref	135 and 595
Theme	HIV/AIDS Theme A: Transmission & Co-Infection
Presentation Type	HIV/AIDS Oral Presentation and Poster

PREVALENCE AND TYPES OF HUMAN PAPILLOMAVIRUS IN HUMAN IMMUNODEFICIENCY VIRUS INFECTED FEMALES IN EASTERN INDIA

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Background: Virtually all cervical cancers are caused by Human papillomavirus (HPV) infections, with just two HPV types, HPV-16 and HPV-18, responsible for about 70% of all cases. Human Immunodeficiency virus (HIV) infected women represent one of the highest risk groups for the development, progression, and recurrence of HPV induced cervical precursor lesions and cervical cancer. The aim of this randomized case control study was to evaluate the prevalence of HPVs in HIV-positive females and in HIV-negative females in Eastern India.

Methods: Pap smear was taken from HIV-positive females (cases) attending antiretroviral therapy (ART) centre and HIV-negative females (controls) attending Gynaecology outpatient department (OPD) from December 2010 to June 2012. Detection and typing of HPV was done by polymerase chain reaction (PCR) using consensus primers followed by PCR using type specific primers and sequencing.

Results: Cervical scrapes were taken from 216 cases and 76 controls. The HPV was prevalent in 58 (26.85%) cases and in only one control (1.31%). On sequencing the following HPV types were recorded among cases : HPV-16 (31.0%), HPV-31 (15.5%), HPV-58 (15.5%), HPV-35 (13.8%), HPV-52 (8.6%), HPV-18 (3.4%), HPV-33 (3.4%), HPV-56 (3.4%), and HPV-66 (1.7%), HPV-67 (1.7%), HPV-68 (1.7%) and only one control was positive for HPV-35.

Conclusion: In a tertiary care hospital in Eastern India the prevalence of HPV among HIV-positive females were much higher as compared to HIV- negative females attending general OPD. As most of the cases had high-risk HPV types, it is recommended that regular HPV screening should be done at the ART centre. Hence HPV testing in HIV-positive women may help to reduce frequent cervical cancer screening.

Disclosure of interest statement: Center of Excellence in HIV Care at Department of Medicine is funded by National AIDS Control Organization (NACO), India. No pharmaceutical grants were received in the development of this study.

Paper Ref	194
Theme	HIV/AIDS Theme D: Gay & MSM
Presentation Type	HIV/AIDS Oral Presentation

THE EPIDEMIOLOGY OF SEXUALLY TRANSMITTED INFECTIONS AND VIRAL HEPATITIS AMONG MEN WHO HAVE SEX WITH MEN IN MAINLAND CHINA: A META-ANALYSIS AND DATA SYNTHESIS

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Background: HIV and syphilis prevalence has increased substantially among men who have sex with men (MSM) in China. This study aims to assess the magnitude in other sexually transmitted infections (STIs) and viral hepatitis infections (VHIs) among this population.

Methods: Chinese and English peer-reviewed articles were searched from five electronic databases (PubMed, Embase, Wanfang Data, VIP Chinese Journal Database and China National Knowledge Infrastructure) up to March 2013. Pooled prevalence estimate for each STI and VHI from available studies were calculated. Odds ratios for STIs and VHIs prevalence among MSM were compared with the adults in the general population and male sex workers (MSW).

Results: Eighty-eight articles (11 in English and 77 in Chinese) with a total of 35203 MSM were included in this review. The national prevalence level of STIs/VHIs between 2003 and 2011 were: 6.32% (3.54-11.02%) for chlamydia, 1.86% (1.27-2.73%) for gonorrhoea, 8.92% (7.75-10.24%) for HBV, 1.25% (1.00-1.55%) for HCV, 66.25% (57.38-74.10%) for any HPV genotype, 10.64% (6.24-17.57%) for HSV-2, and 13.45% (11.78-15.23%) for syphilis. MSM have consistently higher risk of STIs than the general Chinese population (chlamydia: OR=1.43, 1.31-1.56; gonorrhoea: OR=2.42, 1.63-3.59; HBV: OR=1.97, 1.57-2.48; HCV: OR=48.40, 6.38-367.09; syphilis: OR=28.38, 28.38-31.14). However, as a subgroup of MSM, MSWs were 1.43 (1.31-1.56), 2.42 (1.63-3.59) and 2.26 (1.37-3.72) more likely to be infected with chlamydia, gonorrhoea and HCV than the broader MSM population.

Conclusions: Prevalence levels of STIs among MSM in China are greater than levels in the general population and MSWs have greater prevalence of STIs compared with the broader MSM population.

Disclosure of Interest Statement: The Kirby Institute is funded by the Australian Government Department of Health and Ageing and is affiliated with the Faculty of Medicine, University of New South Wales. The views expressed in this publication do not necessarily represent the position of the Australian Government.

Paper Ref	446
Theme	HIV/AIDS Theme D: Women & HIV
Presentation Type	HIV/AIDS Poster

HOW PREPARED ARE THE OVERSEAS WORKERS' WIVES FOR HIV: AN EXPERIENCE FROM BANGLADESH

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Background: The overseas workers are greater in proportion of reported HIV positive cases in Bangladesh; yet, this group is still out of the national HIV/AIDS surveillance system. As HIV transmission from them who have returned and are HIV positive has been mostly restricted to their spouses, it is important to identify what knowledge gaps exist in the field.

Methods: 133 wives of overseas workers were interviewed through in depth interview and Key informant interviews (KII) were conducted with health service professionals.

Results: 89% of them have low to moderate level of HIV knowledge; intolerant and rejecting attitudes towards PLHIV, NOT informed about the preventive effects of condoms and have a low perception of individual risk. Practice of low condom use, fear of social discrimination and marital disharmony poses further risk. Not being able to freely talk about HIV, is fairly common in our study areas (76%). Print media is more accessible to them as they are not generally allowed to watch or hear subjects on TV or radio that deals with sexual topics (72%). Women have very low control over their sexual relationship and cannot make decisions about safer sex practice. Testing for HIV is of less importance to them, even for those who know about their husband's pre- or extramarital sexual relationship.

Conclusion: Empowering the women in terms of sexual decision making and communicating comprehensive HIV knowledge through community volunteer/peer group should be in place immediately. The VCT services should be available to these women to support in understanding their test result and its implications.

Disclosure of Interest Statement: This research by Eminence is funded by World Health Organization, Bangladesh. No pharmaceutical grants were received in the development of this study.

Paper Ref	447
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

SRH SERVICE UTILIZATION IN PERI-URBAN BANGLADESH: PROSPECTS AND WAY FORWARD

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Problem Identification: Improved access of urban poor to Sexual and Reproductive Health (SRH) services is a growing challenge for Bangladesh given its 3.3% urban growth rate. Recent research has discovered that poor urban women and men resort to informal providers for common SRH problems.

Settings: To contribute towards the MDGs by improving the health status, particularly SRH in urban areas, a 5 year project was implemented among the poor and underserved men, women and young people of three coastal districts of Bangladesh. 663,975 urban people were targeted to receive services through static clinics, mini-centres and mobile outreach. The project addressed their basic need by increasing the availability of services leading to an improved quality of life.

Development of project: A comprehensive range of SRH services were designed to be provided through static, mini and satellite clinics. Community based awareness raising and IEC activities were carried out creating an enabling environment for people to exercise SRH rights.

Summary of results and lessons learned: End of project survey shows, 77% urban beneficiaries know the availability of SRH service in project clinics and 54% are using it. 63% know about the clinics' STI/STD service and 74% adolescents reported having access to the clinic; women (88%) tend to know the availability of SRH clinic better than the men (67%). Urban men reported having increased knowledge (81.1% endline, 70.5% baseline) on the symptoms of STI. Seeking SRH service in the urban clinic have a significant association with the age of women ($P=0.016$). Moreover, one third of the women know that post natal care is available in these clinics. The project has demonstrated increase of SRH service utilization from formal health care providers and knowledge among all beneficiaries. Scaling up this service delivery approach with larger population coverage can be an ideal peri-urban model for Bangladesh.

Disclosure of Interest Statement: This research by Eminence is funded by Marie Stopes, Bangladesh. No pharmaceutical grants were received in the development of this study.

Paper Ref	448
Theme	Sexual Health: Psycho-social
Presentation Type	Sexual Health: Oral Presentation

PERCEPTION AND PRACTICES OF YOUNG URBAN BANGLADESHI MALE AND FEMALE ON SEXUAL AND REPRODUCTIVE HEALTH AND RIGHTS

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Background: The knowledge of sexual and reproductive health and rights (SRHR) is critical to youth's ability to protect themselves from unwanted sexual or reproductive outcomes; e.g. unwanted pregnancy, sexually transmitted infections, HIV etc.

Objective: The objective of this study was to determine the present status of urban young male (YM) and female (YF) of Bangladesh age 15-24 years towards issues relating to SRHR, and their opinions about sexual rights of marginalized youths.

Methods: A population based cross-sectional survey was conducted among 200 YM and YF aged 15-24 years in four divisional cities of Bangladesh.

Result: 15% YF know that sexual intercourse without any family planning makes a woman pregnant; 15% did not know any cause of pregnancy. 26.4% youth had their first sexual intercourse against their will; 75% married YM had to marry against their will. 34.4% urban YF believes that limiting sexual intercourse to one uninfected partner prevents HIV. Perception on SRHR is positively related to educational status of urban youth. 25% YF with 'no education' thinks husbands have the right to bit wife against 7.7% women finishing 12th class. 75% youth finishing 12th class against 28% youth finishing fifth standard believe in equal rights for homosexuals. 50% YM knows an ART center against 30% female. 90.3% married YF said they are unable to make family planning decisions by their own.

Conclusion: Stronger communication needs to be fostered between urban youth on SRHR, leadership initiatives need to be encouraged, and innovative mechanisms (e.g. social networking) needs to be introduced.

Disclosure of Interest Statement: This research by Eminence is funded by Indian Alliance for HIV/AIDS. No pharmaceutical grants were received in the development of this study.

Paper Ref	397
Theme	HIV/AIDS Theme D: Social & Behavioural Research
Presentation Type	HIV/AIDS Poster

THE COFFEE GROUP: TEN YEARS ON AND STILL GOING STRONG!

Coady J

Waratah Clinic St George Hospital Sydney NSW

The Coffee Group at St George Hospital was initiated in 2003 to meet an identified service gap for HIV positive clients living in the outer metropolitan areas of Sydney, with many disconnected from city based services and community. This review considers the requirement of allied health workers to monitor and address client needs in facilitated support programs. Initially an informal, open and inclusive group was established with social work input.

Over time, community venues were sought to ensure confidentiality, establish rapport and connection for the participants. Initial review was undertaken after two years and reported in 2005. This documented the initial group processes, its growth and developmental issues, including pre-affiliation, power and control, intimacy, and differentiation. Subsequently, the group has undergone further challenges and developments. These dynamics will be explored with evaluation from the group, how they sustained its ownership, and provided for new members. An empowerment and strengths based focus acknowledges their adapting to the changing world of living with HIV.

Their participation shows positive outcomes. Group members demonstrate resilience, agency, mutual respect, accepting their differences, acquiring specific roles, and forming a comfortable identity. Ageing and dealing with health co-morbidities are major themes, leading them to provide active peer support. Recently, they suffered the death of two members, requiring support to their group framework.

This year nursing education was introduced, with relevant presentations reflecting their age and demographics. Topics range from diabetes and heart health, to liaising with GPs and clinics regarding shared care. This ensures discussion re broad HIV issues, adjusting to changing health and end of life issues.

Member evaluation and group assessment processes will be highlighted to assist workers facilitating such programs to remain sustainable in the long-term and continue to meet client needs.

Disclosure of Interest Statement: No pharmaceutical grants were received in the development of this program.

Paper Ref	395
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Poster

MEN'S GROUP SESSIONS CAN IMPROVE ACCESS AND SEXUALLY TRANSMISSIBLE TESTING RATES IN YOUNG ABORIGINAL MEN

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Background: The NSW Aboriginal Sexual and Reproductive Health Program provided funding to six NSW Aboriginal Community Controlled Health Services from 2010 onwards to support a Sexual and Reproductive Health worker position. We describe the impact of men's health sessions run by the male Sexual and Reproductive Health worker at Biripi Aboriginal Corporation Medical Centre on health service access and testing for sexually transmissible infections (STIs) in young men.

Methods: The male Sexual and Reproductive Health worker started at Biripi Aboriginal Corporation Medical Centre in August 2010 and undertook weekly sexual health workshops at the health service and within the community with young men. To evaluate the impact of these initiatives, de-identified routine clinical data, were extracted from the Patient Information Management System. We compared the number of young men aged 15-25 years who attended the service and the number of individuals tested for chlamydia and gonorrhoea in the 12 month period before the Worker started (August- 2009-July 2010), year 1 (August 2010-July 2011) and year 2 (August 2011-July 2012).

Results: In the 12 months before the Worker started, 88 men aged 15-25 years attended the service, increasing by 45% to 128 in year 2. There was also an increase in the proportion of young men tested for chlamydia; with 13% of 15-25 year old men tested in the 12 months before the Worker started, increasing to 21% in year 2. Similarly, the proportion of Aboriginal males aged 15-25 years tested for gonorrhoea increased from 11% in the 12 months before the Worker to 21% in year 2.

Conclusions: The men's sessions run by the male Sexual and Reproductive Health worker resulted in more young men attending the service and being tested for STIs. Men's clinics are an important component of a comprehensive and cultural approach to sexual health in Aboriginal communities.

Disclosure of Interest Statement: The Sexual and Reproductive Worker employed at Biripi Aboriginal Corporation Medical Centre was funded by the NSW Ministry of Health under the National Partnership Agreement on Indigenous Early Childhood Development. No pharmaceutical grants were received in the development of this study.

Paper Ref	478
Theme	HIV/AIDS Theme D: Culturally & linguistically diverse populs
Presentation Type	HIV/AIDS Quick Fire Oral

WHEN YOU CANNOT DANCE, BUT YOU CAN RECITE: PROMOTING THE SEXUAL HEALTH OF YOUNG PEOPLE WITH REFUGEE BACKGROUNDS

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¹Multicultural Health Support Service, Centre for Culture, Ethnicity and Health (CEH), Victoria, Australia

Background: Edutainment, the use of entertainment to educate, has traditionally benefited the learning of individuals from communities with rich oral traditions. This presentation reports on the valuable lessons learnt from the implementation of 'Hip Hop for Health Project', an edutainment project that was implemented in refugee communities in Victoria. The project, by the Multicultural Health and Support Service (MHSS), a program of the Centre for Culture, Ethnicity and Health, has been running since 2010. It was informed by the popularity of hip-hop among young people, including those with refugee backgrounds.

Method: The project uses dance and music to pass on sexual health messages to young people and the public. The dance crews are required to attend several sexual health education training sessions and use that information to compose 'sexual health' lyrics. The groups then take part in a competition with audience coming from the general public.

Results: The success of the project in reaching young people with refugee backgrounds in Melbourne has been significant. However, it has not been able to engage effectively with young people from particular refugee communities that do not have a strong dance and song culture; hip-hop has not been as popular with them. To reach young people from communities where poems and storytelling are used to educate people about their culture, religion, language and health issues, the program is seeking ways to include other art forms.

Conclusion: The presentation discusses some of the ways that edutainment projects such as can be refined to increase their reach and to young people with refugee backgrounds and diverse cultural backgrounds.

Paper Ref	377
Theme	HIV/AIDS Theme C:Prevention Education & Workforce Issues
Presentation Type	HIV/AIDS Oral Presentation

EFFECT OF TESTING EXPERIENCE AND PROFESSION ON STAFF ACCEPTABILITY OF RAPID HIV TESTING IN PUBLIC SEXUAL HEALTH CLINICS IN SYDNEY

Conway DP¹, Guy R1, McNulty A^{2,3}, Couldwell DL^{4,5}, Davies SC⁶, Smith DE^{3,7}, Keen P¹, Cunningham P^{8,9}, Holt M¹⁰ on behalf of the Sydney Rapid HIV Test Study

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Introduction: Rapid HIV testing (RHT) is well established overseas, yet few studies have evaluated the acceptability of RHT among clinical staff over time. We assessed staff acceptability of RHT before and after implementation in Sydney sexual health clinics.

Methods: From October 2011 onwards, men who have sex with men attending four Sydney sexual health clinics were offered RHT using Alere’s Determine HIV Combo assay. Clinic staff completed anonymous questionnaires containing a range of acceptability statements immediately after being trained to use the assay and 6-12 months later. Differences in mean scores between survey rounds were assessed via T-tests, with stratification by profession and the number of tests performed.

Results: Sixty-eight staff were trained with 99% of available staff completing the first questionnaire and 93% the second. RHT was rated as highly acceptable among staff at baseline and acceptability scores improved between survey rounds. Confidence in conducting rapid testing (p=0.004) and the delivery of non-reactive results (p=0.007) increased, while the belief that rapid testing was disruptive declined (p=0.001). Testing experience differed between professions with nurses performing more rapid tests than doctors or other staff (p=0.005). By the second round, acceptability of RHT was greater for nurses compared with doctors and for staff who had performed a greater number of tests. The number of tests performed appeared to have a stronger influence over acceptability than professional role.

Conclusion: The acceptability of RHT to clinic staff increased with time and experience of RHT and was higher among nurses. Differences in responses between professions may reflect differences in staff roles, the type of patients seen by staff and the model of testing used, all of which appear to affect the number of tests performed by staff. These findings emphasise the importance of training and experience in the conduct of RHT towards building staff confidence.

Disclosure of Interest Statement: The Kirby Institute and National Centre in HIV Social Research receive funding from the Australian Government Department of Health and Ageing and the New South Wales Ministry of Health. The Sydney Rapid HIV Test study was supported by a National Health & Medical Research Council Program Grant and the New South Wales Ministry of Health. DPC was supported by a scholarship from Australian Rotary Health/Sydney CBD Rotary Club and The Kirby Institute. Alere provided the Determine HIV Combo rapid test kits used in the first year free of charge, but did not influence the study design, analysis of data or reporting of results.

Paper Ref	379
Theme	HIV/AIDS Theme C: Epidemiology Of HIV
Presentation Type	HIV/AIDS Oral Presentation

FIELD PERFORMANCE OF THE ALERE DETERMINE HIV COMBO ASSAY IN RECENT HIV INFECTION AND OVERALL IN THE SYDNEY RAPID HIV TEST STUDY

Conway DP¹, Holt M², McNulty A^{3,4}, Couldwell DL^{5,6}, Smith DE^{3,7}, Davies SC⁸, Cunningham P^{9,10}, Keen P¹, Guy R¹ on behalf of the Sydney Rapid HIV Test study

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Introduction: Alere's Determine HIV Combo is the first assay licensed in Australia for rapid HIV testing (RHT) at the point of care. Clinicians implementing RHT need local performance data to guide its use.

Methods: From October 2011 onwards, men who have sex with men attending four Sydney sexual health clinics were offered testing using the Determine HIV Combo and conventional HIV serology. Rapid test performance overall was compared with conventional serology (4th generation HIV antibody, HIV p24 antigen and Western blot) and sensitivity in recent infection was assessed. Recent infection was defined as a positive 4th generation HIV antibody test plus at least one of: a negative or indeterminate Western blot; a positive p24 antigen test; or a history of testing HIV negative in the previous three months.

Results: In a 20-month period, 2383 men had 3081 tests performed with five invalid results excluded from analysis. Of 39 men confirmed as HIV-positive, 13 (33%) had evidence of recent infection, of which nine had reactive rapid tests (all antibody reactive only) and four were false negatives. Hence, sensitivity in recent infection was 69.2% (95% confidence interval 38.9-89.6), compared with 87.2% (71.8-95.2) for sensitivity overall. There were 3020 true negative rapid tests and 17 false positives (4 antigen, 12 antibody and one antigen/antibody), giving specificity of 99.4% (99.1-99.7). Negative and positive predictive values for the rapid test overall were 99.8% (99.6-99.9) and 66.7% (52.0-78.9), respectively.

Conclusion: The rapid test antibody component detected more than two thirds of those with recent infection. However, the antigen component did not increase test sensitivity for recently infected patients. Hence, identifying and performing conventional serology in patients at risk of recent infection is recommended. A formal assessment of test performance in seroconvertors is warranted. These data require cautious interpretation given the small number of HIV-positive men involved.

Disclosure of Interest Statement: The Kirby Institute and National Centre in HIV Social Research receive funding from the Australian Government Department of Health and Ageing and the New South Wales Ministry of Health. The Sydney Rapid HIV Test study was supported by a National Health & Medical Research Council Program Grant and the New South Wales Ministry of Health. DPC was supported by a scholarship from Australian Rotary Health/Sydney CBD Rotary Club and The Kirby Institute. Alere provided the Determine HIV Combo rapid test kits used in the first year free of charge, but did not influence the study design, analysis of data or reporting of results.

Paper Ref	388
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

CLIENTS AT M CLINIC, A NOVEL COMMUNITY/PEER-WORKER BASED CLINICAL SERVICE TARGETING GAY AND BISEXUAL MEN, PREFER NON-TRADITIONAL METHODS FOR HIV/STI TESTING AND RESULT DELIVERY

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Introduction: M Clinic, managed by the Western Australian AIDS Council (WAAC), opened in Perth in 2010. A novel community/peer-worker based clinical service targeting gay, bisexual and other men who have sex with men (MSM), it complements traditional hospital-based sexual health clinics (HSHCs) operating in Perth and Fremantle. We assessed MSM client HIV and sexually transmissible infection (STI) testing and result delivery preferences at these services.

Methods: From March to July 2012, MSM attending M Clinic, Sauna Clinic, Fremantle SHC and Royal Perth SHC were invited to complete anonymous client questionnaires assessing HIV/STI testing and result delivery preferences. Chi-square tests were used to assess differences between clients at WAAC clinics and HSHCs.

Results: Of 373 participants, 257 (68.9%) were recruited at M Clinic. Ever testing for HIV (88.4%) and STIs (89.7%) did not differ by clinic type; though compared with HSHC MSM, WAAC clinic clients were less likely to have tested for STIs in the last year (p=0.042). Overall, 71.4% of participants preferred alternative delivery of HIV negative results by telephone, email or text message. Compared with HSHC MSM, WAAC clinic clients were more likely to prefer receiving positive HIV (p=0.001) and STI (p=0.006) results via alternative methods rather than in person. No recent check-up was more common among WAAC clinic clients as a reason for testing (p<0.001). WAAC clinic clients were more likely to worry about confidentiality (p=0.025) and HSHC MSM more likely to report not having had sex recently (p=0.013) as reasons for not testing. Self-collection of anal swabs was more common at WAAC clinics (p<0.001), consistent with their clients' preference for self-collection (p<0.001).

Conclusion: Compared with HSHC MSM, M Clinic clients were more likely to prefer non-traditional methods for HIV/STI testing and result delivery. These findings may inform planning for community/peer-worker based services targeting MSM in other jurisdictions.

Disclosure of Interest Statement: The Kirby Institute and National Centre in HIV Social Research receive funding from the Australian Government Department of Health and Ageing and the New South Wales Ministry of Health. The Western Australian AIDS Council, M Clinic, Fremantle Sexual Health Service and Royal Perth Sexual Health Clinic receive funding from the Western Australia Department of Health. The WASHS project was supported by a National Health & Medical Research Council Program Grant. DPC was supported by a scholarship from Australian Rotary Health/Sydney CBD Rotary Club and The Kirby Institute.

Paper Ref	261
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

CHANGING LANDSCAPES IN SEX WORKER HEALTH PROMOTION FROM STREET TO SCREEN

Cox C; Sex Workers Outreach Project NSW

Introduction: With less and less sex work being street based traditional outreach models need to change and adapt. Whilst face to face outreach still has a place internet outreach and most especially social media outreach is becoming increasingly important for health promotion.

With increasingly widespread uptake of internet technology street based work has declined markedly with many street based workers becoming internet based. This has meant that outreach now needs to be restructured and move online also.

This presentation will discuss the most effective methods of online outreach. Keeping outreach relevant and interesting to an adapting an evolving population within an industry with a high participant turnover plus adapting quickly to technological and platform changes in what is proving to be an ever changing electronic medium

Methods: Tools and methods of outreach that will be discussed will include

- Email lists, digests and stream conversion programs
- Social media; Facebook, Twitter, You Tube, Vimeo and Google+,
- Online Forums, what works and what doesn't
- Websites, blogging and micro blogging
- Sex work advertising sites
- Sex workers themselves on social media
- Sex workers and mobile based platforms especially with relevance to locations where fixed line internet and other platforms are not available
- The best use of limited funds in health promotion to reach wide audiences with targeted and non-targeted messaging

Results: Using the SWOP Male Outreach Project as an example of the use of internet technology very significant increases in market penetration, brand recognition and subsequent community engagement in health messaging and promotion will be detailed

Conclusion: As sex work market places change due to the influences of technology health promotion models and methods must also adapt.

Disclosure of Interest Statement: None.

Paper Ref	268
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Poster

CRIMINALISATION OF HIV POSITIVE SEX AND SEX WORKERS

Cox C

Scarlet Alliance; Australian Sex Workers Association

Introduction: The 2008 Scarlet Alliance Needs Assessment found a number of problems and barriers to HIV positive sex workers accessing health services

These were discrimination issues at both a personal and legal level which will be discussed with particular reference to the ACT sex worker jailing and recent media on the Melbourne HIV positive sex worker arrest

Heavy legislative discrimination by the state has a flow on effect in that many HIV positive sex workers see government funded service providers as an integral part/extension of the legislative discrimination and avoid engagement with them

Legislative responses are not in line with the National Guidelines and send very negative messages to the public about HIV positive sex workers. They are also absurd as the presence of money does not increase the risk of transmission of any known STI.

The National Guidelines put criminal responses as the last response when others are being put at risk by unsafe behaviours but it seems to be that sex work itself is unofficially considered an unsafe behaviour as the criminal response seems to come very early in the process when sex workers are concerned.

There needs to be a whole cultural shift in how sex workers and most particularly HIV positive sex workers are viewed.

The major steps in this must come from government in decriminalising sex work, decriminalising HIV positive sex workers in states where their activities are currently criminal and removing disclosure laws in those states where they exist for positive people and this must be supported by affirmative action in and by the health sector.

Disclosure of Interest Statement: None.

Paper Ref	506
Theme	HIV/AIDS Theme D: Women & HIV
Presentation Type	HIV/AIDS Quick Fire Oral

MY JOURNEY: EXPLORING THE EXPERIENCES OF WOMEN LIVING WITH HIV IN AUSTRALIA

Cristian S. G.

My Journey Project Officer, Positive Women Victoria

Background: Women living with HIV are living long and often healthy lives in Australia. However isolation, stigma and discrimination remain prominent concerns for these women. This study sought to identify the primary concerns and experiences women encounter across a life span of living with HIV.

Method: This paper presents the findings from a qualitative study of women living with HIV in Australia. A combination of semi-structured interviews, workshops and online surveys were conducted with 32 women living with HIV in Victoria, South Australia and Tasmania.

Results: Participants spoke of the continuing impact of isolation, fear of rejection and importance of support from other women living with HIV. However participants demonstrated resilience, hope and confidence in the future and for the future of the women that will come after them. The five themes that emerged addressed the impact of initial diagnosis, continuing to deal with disclosure and discrimination, establishing intimate relationships, self-care and hope in the future. The study also identified the limited opportunities women can access to discuss how HIV has impacted upon their lives.

Conclusion: With HIV no longer regarded as a 'death sentence' but rather a 'life sentence' this paper will explore the impact of HIV on the lives of women after the initial years post-diagnosis. This study indicates while women are largely positive about the future, the impact of HIV related stigma still presents a real concern for women in almost every aspect of their lives.

Paper Ref	541
Theme	HIV/AIDS Theme B: Workforce Issues & Professional Practice
Presentation Type	HIV/AIDS Poster

EVALUATING HIV CLIENTS EMERGING NEEDS IN AN URBAN AUSTRALIAN COMMUNITY SETTING – THE ROYAL DISTRICT NURSING SERVICE HIV PROGRAM.

Crock EA¹, BURK N¹, FRECKER, J¹, MORATA O¹

Royal District Nursing Service, Melbourne, Australia

Introduction: The HIV Program at Royal District Nursing Service (RDNS) serves People Living with HIV (PLHIV) in Melbourne, Victoria. Emerging issues including co-morbidities, accelerated ageing and changing demographics pose challenges for community nursing services in maintaining staff skills and knowledge. The project reported here evaluated RDNS' HIV Program in relation to HIV clients' current and projected needs to provide evidence for Program development.

Methods: A formative evaluation of the RDNS HIV Program was undertaken. The evaluation was based on action research, utilising mixed methods: HIV client and RDNS staff surveys, 15 interviews with HIV sector workers and HIV Program reporting data. This paper reports on client survey and Program data. The client survey was completed from March–April 2013. Data were analysed through Survey Monkey[®]. Qualitative data was thematically analysed. Program reporting data was examined from 2001-2012.

Results: Reporting data indicates human resource use has increased significantly from 2001-2012. 86 client responses were analysed (72% response rate). Results indicate HIV Program clients are, on average, 10 years older than PLHIV in Australia generally. The Program cares for significant proportions of women, refugees, indigenous people and long-term survivors. Many experience mental health problems, cognitive impairment, co-morbidities and homelessness. Results demonstrate the HIV Program provides care coordination, medication management, psychosocial support, health promotion, health education and mental health support. Ethical values (trust, confidentiality, respect, and advocacy) are particularly important to clients.

Conclusion: RDNS' HIV Program clients have high support needs. The Program plays a significant role in their engagement and retention in HIV care. This study contributes to knowledge regarding a cohort not previously described. The HIV Program must grow to respond to emerging issues. Recommendations for Program development are made. Additional specialist roles may be needed to meet increasing service demand as PLHIV age and the epidemic diversifies.

Disclosure of Interest Statement: The Royal District Nursing Service HIV Program is funded by the Sexual Health and Viral Hepatitis Team, Public Health Branch, Victorian Department of Health. No pharmaceutical grants were received in the development of this study.

Paper Ref	557
Theme	HIV/AIDS Theme B: Workforce Issues & Professional Practice
Presentation Type	HIV/AIDS Poster

STAFF HIV-RELATED KNOWLEDGE, ATTITUDES AND PRACTICE IN A COMMUNITY NURSING SETTING IN MELBOURNE, AUSTRALIA

Crock EA¹, BURK N¹, FRECKER, J¹, MORATA O¹

Royal District Nursing Service, Melbourne, Australia

Introduction: The HIV Program at Royal District Nursing Service (RDNS) cares for People Living with HIV (PLHIV) in Melbourne, Victoria. The project reported here evaluated RDNS' HIV Program in relation to HIV clients' changing needs to provide evidence for Program development. This paper reports on RDNS' staff's educational preparation regarding HIV (including ageing, co-morbidities, cultural and diversity competence, ethics, law).

Methods: A formative evaluation of the RDNS HIV Program was undertaken. The evaluation was based on action research, utilising mixed methods: HIV client and RDNS staff surveys, 15 interviews with HIV sector workers and HIV Program reporting data. This paper reports on staff survey data. Knowledge, attitudes and practice (KAP) questionnaire was sent to 968 eligible staff between March 6th –April 6th 2013. Data were analysed through Survey Monkey[®]. Qualitative data was thematically analysed.

Results: 372 staff responses were received (38%). The KAP survey revealed knowledge gaps in domains investigated: HIV pathophysiology, epidemiology, medical management, vulnerable populations, HIV prevention, legal and ethical issues. Few reported expert skills. Staff reported willingness to care for PLHIV however fewer were comfortable, citing lack of knowledge and experience. Some expressed lack of support for the HIV Program, suggesting it 'de-skills' other staff. A surprising proportion are concerned about occupational exposure, even in 'no risk' situations. There was unease about whether pregnant staff should visit PLHIV, often related to concern about CMV infection. A significant number support the use of documented 'alerts' regarding HIV clients, justified in terms of infection prevention.

Conclusion: Knowledge gaps should be addressed for 'best practice' provision of HIV care in the community. Whilst attitudes were mostly positive, a significant number expressed fear of occupational infection. Sustainability problems are identified relating to insufficient education. The reappointment of an HIV educator and additional specialist nursing roles are recommended.

Disclosure of Interest Statement: The Royal District Nursing Service HIV Program is funded by the Sexual Health and Viral Hepatitis Team, Public Health Branch, Victorian Department of Health. No pharmaceutical grants were received in the development of this study.

Paper Ref	650
Theme	HIV&AIDS: Theme B
Presentation Type	HIV/AIDS Poster

SUPPORTING DOCTORS NEW TO DIAGNOSING HIV

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Australasian Society for HIV Medicine

The Australasian Society for HIV Medicine has sought ways to provide support to medical practitioners and their patients in a timely manner. Some years ago it was recognised that many doctors only provided one (or possibly 2 related) HIV diagnoses over an eight year period (Ward et.al., 2008). While many doctors had received some training in HIV it was unlikely that this had been kept current if the need to use it was so infrequent.

ASHM worked with laboratories to develop a program where by labs when confirming a new diagnosis of HIV, from a doctor they did not know, would offer a service from ASHM to assist them. The service was voluntary. The call was made by medical practitioners experienced in HIV. The program has been evaluated exceptionally well. Practitioners are appreciative of the service, which was delivered in a timely manner, getting to doctors before they had to convey the result.

The program ran in NSW and WA. In the first year the program was run through one laboratory in NSW and one in WA, as a pilot. This allowed for development of a system and protocols for communicating with the newly diagnosed doctors. The program was then expanded to all reference laboratories in NSW. This required some coordination as it was the private lab which had initially tested the sample and who would communicate with the diagnosing doctor. The program in WA continues.

It was stopped in 2012 with the introduction of a more comprehensive HIV Support Program, which is managed by NSW Ministry for health and local health districts which now contacts and follows-up new diagnoses with the aim of providing contact tracing and monitoring the patient's progress to treatment.

This presentation provides the baseline against which the new program should be benchmarked. The ASHM Program cost in the vicinity of \$75,000 per annum. In its third year it provided direct support to 80 diagnoses. 41 Doctors were assisted in year 1, 41 in year 2 and 80 in year 3. Surveillance data was not available to indicate how many GPs were in the potential group of recipients of this service, but 80 is in the ball-park of previous years. Considerable resources were developed by the project and they continue to be used by the NSW Health Program.

Paper Ref	220
Theme	HIV/AIDS Theme B: Clinical Programs
Presentation Type	HIV/AIDS Poster

THE UTILITY OF CUSTOMISED GROWTH CHARTS FOR HIV EXPOSED, UNINFECTED INFANTS.

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Background: Fetal growth restriction is a major cause of perinatal morbidity and mortality so accurate diagnosis is important. Early data conflict regarding whether receipt of cART during pregnancy is associated with low birth weight infants. Previous studies have reported improved prediction of adverse perinatal outcomes by the use of customised growth charts adjusted for maternal characteristics. The aim of this study was to determine the effect of *in utero* exposure to cART on birth weight in a heterogeneous maternity population in a resource rich setting.

Methods: Women receiving cART from two institutions in Melbourne were eligible for inclusion. Only singleton pregnancies with delivery after 37 weeks were included. Infant weights were plotted on standard population growth charts and on customised growth charts adjusted for maternal height, weight, ethnic origin, parity and sex of the foetus.

Results: Between 2008 and 2012, 76 HIV positive women delivered 94 babies. Four women (4%) had a detectable HIV viral load (>400 copies/mL) at delivery. There were no cases of HIV transmission. 75% of women were born outside Australia and were from 30 different countries, predominantly African and Asian countries. Of the 94 babies, 23 were excluded from the analysis (3 sets of twins, 11 deliveries <37 weeks, 6 missing birth weight). Of the term, singleton newborns 21/71 (29.6%) were <10th centile for gestation using standard population growth charts.

Conclusion: Assessment of birth weight centile by population growth charts returns a high rate of small-for-gestational age in cART exposed infants. Customised growth charts taking into consideration maternal weight, height, ethnic group and parity may provide different rates of small-for-gestational in this population. Given the diverse ethnicity of women affected by HIV in Melbourne, establishing the true effect of cART exposure in infants is important to predict who are at risk of the co-morbidities associated with low birth weight.

Disclosure of Interest Statement: There are no disclosures of interest.

Paper Ref	640
Theme	HIV/AIDS Theme A
Presentation Type	HIV/AIDS Oral Presentation

HIV INFECTION, INFLAMMATION AND AGEING: HOW ARE THEY LINKED?

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What do HIV infection and healthy ageing have in common? There is good evidence that changes occur in T cells as we age such as a reduction in naïve T cells as well as T cell diversity, a reduction in memory T cells, and an increase in differentiated, senescent CD8+ T cells (CD27-CD57+). Attention has recently turned to changes that occur in monocytes during healthy ageing. Of particular note there is an increase in CD16+ (inflammatory) monocytes. Shared changes in plasma biomarkers include an increase in pro-inflammatory markers including ultrasensitive CRP and cytokines such as IL-6, and an increase in markers associated with heightened coagulation including D dimer.

How does inflammation play a role? These shared immune characteristics in both HIV infection and normal ageing give rise to functional immune changes that include poor monocyte function, a decrease in replicative capacity of lymphocytes, reduced tumour and pathogen surveillance. These changes are juxtaposed on evidence of chronic inflammation and immune activation.

Is there a clinical association with these changes in the immune system? Clinically these changes are associated with reduced vaccine responses, and an increase in age associated non-communicable diseases such as cardiovascular diseases, non-AIDS cancers, frailty, bone and kidney disease and neurocognitive decline.

What evidence do we have that HIV infection is associated with accelerated ageing? There is a reduction in telomere length, the classical marker of immune ageing, in both monocytes and T cells.

Does HIV accelerate changes in the immune system associated with ageing? In our studies in HIV+ women changes in the innate immune system occur about 10-14 years earlier in HIV+ women compared to uninfected control women.

What are the main drivers of the development of non-communicable diseases in both HIV infection and healthy ageing? These include chronic endotoxemia resulting from microbial translocation, chronic co-infections, HIV viremia in HIV+ patients as well as the cumulative effects of life-long antigenic exposure, thymic involution and oxidative stress.

What role do monocytes play in the development of non communicable diseases in HIV+ patients? Monocyte activation is likely to be central to the development of diseases such as cardiovascular disease. For example: foam cells are activated monocyte-derived macrophages that are trapped within a growing atherosclerotic plaque, accumulating lipid. The identification of ageing biomarkers particularly those reflecting changes in the innate immune system may be a useful predictor of age-related diseases both in HIV infection and in the wider community.

Paper Ref	430
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

PEE FOR 3

Crowley M¹, Tyson B¹, Anderson C¹, Yelverton J², Ryan A³

¹ Dubbo Sexual Health – Western NSW LHD, ² Dubbo City Council, ³ Family Planning NSW Dubbo Centre

Introduction: Dubbo Sexual Health (DSH) is a member of the Dubbo Youth Interagency network which coordinates events for Youth Week. The Dubbo Youth Council requested an activity aimed at raising awareness of sexually transmitted infections be considered for Youth Week 2013. Due to the high rates of Chlamydia in 15 – 25yr age group, a Chlamydia awareness campaign “Pee for 3” was planned.

The aim of the campaign was to provide Chlamydia information to youth, offer an opportunity for testing and inform young people where they can access STI testing in their local area. DSH partnered with Family Planning NSW Dubbo Centre and Dubbo City Council over a number of events held during Youth Week 2013 including the Triple J “One Night Stand” festival at Dubbo Showground.

Methods: The campaign ran from 8th – 12th April 2013.

Any person aged 16 – 25 years testing for chlamydia during this week went into a draw for a prize (1 x \$300 and 3 x \$100 gift cards).

Chlamydia testing kits and promotional flyers were made available at a variety of locations around Dubbo. Two youth drop-in clinics were organised, enabling young people to speak with clinicians.

Education sessions were conducted at the local TAFES and Dubbo College Senior Campus. At two key youth events a stall provided information on sexual health and Chlamydia testing kits. Local media promoted the campaign.

Results: 623 young people received education on chlamydia and safer sex practices

106 people (males 37: females 69) provided urine samples during the “Pee for 3” Campaign. Six (5.6%) samples tested positive for Chlamydia (2 males & 4 females) All were contacted and attended Sexual Health for treatment and contact tracing. Aboriginal people represented 40% of participants

Conclusion: The campaign provided Chlamydia information to young people in a creative and innovative way whilst fostering new partnerships with local community organisations.

Disclosure of Interest Statement: Dubbo Sexual Health is funded by NSW Health.

Paper Ref	433
Theme	HIV/AIDS Theme B: Delivery Of Care
Presentation Type	HIV/AIDS Poster

PSYCHOSOCIAL PRESENTATIONS AT AN HIV AMBULATORY CARE SETTING

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Introduction: Mental health (MH) amongst HIV-positive populations has been highlighted as a major issue. This study describes presentations at psychology intake in an inner city public health HIV ambulatory care setting.

Disclosure of Interest: Diagnoses, clinical-interventions and psychosocial issues for new intake presentations were recorded by clinical psychologists over an 8 week period.

Results: There were 178 occasions of service for 106 individuals (97 men, 9 women, mean age M=43.4±11.2). Seventy-three percent were HIV positive with 7% co-infected with Hepatitis C. Presentations were primarily self (49%) or internal-referrals (31%).

MH concerns were most prevalent (29%), followed by HIV (27%), welfare (15%), relationship (14%), Alcohol and Other Drugs (AOD) (11%), and sexual health (4%) presentations.

Depression was the most common MH presentation (37%) followed by anxiety (28%) and suicide risk (13%). Over 38% reported two or more MH issues. The most common co-morbidity was depression/anxiety (11%). Twenty-three percent had pre-existing psychiatric diagnoses.

Marijuana (29%), alcohol (29%) and amphetamines (21%) were the main AOD issues. For health concerns, HIV specific issues accounted for 27% of presentations followed by adjustment to diagnosis (18%), PEP (13%), medication management (12%), and HIV disclosure (7%). For relationship problems, 17% related to sero-discordance issues. For welfare issues, housing difficulties were the most common (28%), followed by legal (23%), employment (23%) and financial (18%) issues.

Case management was completed for 52% of cases, 34% were referred for in-house psychological treatment, 32% involved feedback to another healthcare worker, 20% involved pre/post test counselling, 18% required an external referral and 14% received brief psychological interventions.

Discussion: This study highlights the breadth of psychosocial difficulties experienced by HIV positive populations, with MH issues being most significant. Psychological services provide an important clinical intervention for HIV-positive individuals. MH services are essential in meeting the needs of HIV positive individuals and compliment emerging biomedical treatment developments.

Paper Ref	469
Theme	Sexual Health: Sexuality
Presentation Type	Sexual Health: Quick Fire Presentation

SELF REPORTED LACK OF NOCTURNAL TUMESCENCE IN A SAMPLE OF AUSTRALIAN MEN WHO HAVE SEX WITH MEN WITH ERECTILE DYSFUNCTION: POSSIBLE IMPLICATIONS FOR ETIOLOGY

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Introduction: Nocturnal tumescence (NT) has long been used as a diagnostic screening tool for a range of issues. Research supports that a lack of, or lackluster, NT is strongly associated with organogenic erectile dysfunction (ED) and weakly associated with psychogenic ED. Nevertheless, the use of self-report, as opposed to objective measurement, of NT is thought to over-estimate the rate of organogenic ED. A recent (2012) study using endocrinological and urological investigation suggested around 30% of ED is organogenic. The current study aims to compare this rate to the rate of self-reported lack of NT in an Australian sample of men who have sex with men (MSM) with ED.

Methods: MSM from Australia (N = 473) attempted an online survey using the International Index of Erectile Function for MSM scale (IIEF-MSM) as part of another study. The six question abbreviated version of the scale (EF-6) was used to determine ED. A further question from the full IIEF-MSM assessed the perceived frequency of NT. Only those men who had attempted all forms of sexual activity in the past four weeks were included in the analysis. The percentage of those reporting no NT, who also met the cut off score for ED, was calculated.

Results: Of the 237 men included, 28.3% (N = 67) were assessed as meeting criteria (score < 16) for moderate or severe ED by the EF-6. Of this group, 42% (N = 28) reported no NT.

Conclusion: Our result appears to indicate a higher level of organogenic ED than a recent study, which used more thorough multifaceted diagnostic techniques. This supports the literature that suggests self-reported lack of NT over-estimates organic ED. Alternatively, MSM may experience higher rates of organogenic ED. Further research is indicated.

Disclosure of Interest Statement: Part funding provided by an Eli Lilly grant.

Paper Ref	486
Theme	Sexual Health: Sexuality
Presentation Type	Sexual Health: Quick Fire Presentation

ERECTILE DYSFUNCTION (ED) RATES ASSESSED IN AN AUSTRALIAN COHORT OF MEN WHO HAVE SEX WITH MEN (MSM)

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Introduction: Prevalence of erectile dysfunction (ED) reported in the general population range widely. There do not appear to have been studies using well standardised measures of ED in men who have sex with men (MSM) in Australia. The current study investigated the level of ED in an Australian MSM population.

Methods: A cross-sectional internet survey of Australian MSM was undertaken. Participants completed the MSM version of the International Index of Erectile Function (IIEF-MSM) together with age. Results are analysed using the 6 question ED score (EF-6) for those who attempted active anal intercourse (AAI) and those who attempted all forms of sex (AFS) [AAI, passive anal intercourse & non-intercourse sexual activity e.g. masturbation/oral sex] in the past 4 weeks.

Results: The mean age for the whole sample (N = 473), AAI group (n = 324) and for AFS group (n = 237) were: 40.8, (±13.4), 40.1, (±12.9) and 39.7 (± 13.3) years respectively. EF-6 scores [mean (±SD)] were 20.7 (±7.3) for AAI and 21.4 (±7.6) for AFS group.

Significant negative correlations were found between age and EF-6 for AAI (R = - 0.391, p <0 .0001) and AFS (R = - 0.386; p < 0.0001). EF-6 scores < 16, suggesting moderate to severe ED, were found in 29.6% and 28.3% of the AAI and AFS groups respectively. ED rates of >40.0% were found in the >50 year olds.

Conclusion: This appears to be the first Australian study using the IIEF-MSM assessing the level of moderate to severe ED in MSM. The study found higher ED rates with increasing age. Rates of ED were higher compared to one large international study but similar to those in a study of HIV positive MSM in Europe. Both studies used MSM versions of the IIEF.

Disclosure of Interest Statement: Part funding provided by an Eli Lilly grant.

Paper Ref	488
Theme	Sexual Health: Biomedical
Presentation Type	Sexual Health: Quick Fire Presentation

PREDICTORS OF PHOSPHODIESTERASE TYPE-5 INHIBITOR (PDE-5I) USE IN AN AUSTRALIAN COHORT OF MEN WHO HAVE SEX WITH MEN (MSM)

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Introduction: Phosphodiesterase type-5 inhibitors (PDE-5Is) have been successful in assisting men with erectile dysfunction (ED). Research has suggested that these medications are used recreationally in both heterosexual males and men who have sex with men (MSM). The current study was undertaken to assess the impact of ED and other factors on PDE-5I use in an Australian MSM population.

Methods: A cross-sectional internet based survey of Australian MSM was undertaken. Participants were asked to provide information on their use of PDE-5Is, demographic variables and to complete the MSM version International Index of Erectile Function (IIEF-MSM). The six item ED score (EF-6) was used in the analysis. Univariate and binary logistic regression (BLR) analyses were undertaken for those attempting active anal intercourse (GP 1, n=324) and those attempting all forms of sexual activity (GP 2, n=237). Independent variables included in the BLR were age, casual partner, regular partner, smoking and EF-6 score.

Results: Univariate analysis of GP 1 and 2 found age, EF-6 and having sex with casual partners were associated with PDE-5I use. BLR analysis found significant models for both analyses [GP1: (N = 308, $\chi^2 = 95.8$, df = 2, p < 0.0005; GP2: N= 227, $\chi^2 = 73.44$, df = 2, p < 0.0005]. Age [GP1: OR 1.07 (95%CI 1.05, 1.10); GP2: OR 1.07 (95% CI 1.06, 1.09)] and EF-6 [GP1: OR 0.90 (95% CI 0.86, 0.94); GP2: OR 0.89 (95% CI 0.85, 0.93)] were found to be predictors of PDE-5I use for both analyses.

Conclusion: The current results suggest that ED and age are the primary factors predicting PDE-5I use in this sample. While sex with a casual partner was associated with PDE-5I use in the univariate analyses, which may suggest a contribution of recreational use or psycho-social factors, it did not remain significant in the multivariate analyses.

Disclosure of Interest Statement: Part funding provided by an Eli Lilly grant.

Paper Ref	489
Theme	HIV/AIDS Theme B: Diagnosis & monitoring
Presentation Type	HIV/AIDS Oral Presentation

SENSITIVITY EVALUATION OF SIX RAPID TESTS FOR DETECTION OF HUMAN IMMUNODEFICIENCY VIRUS INFECTION

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3.Kirby Institute, University of New South Wales, NSW 2052, Sydney

Background: Field application studies of rapid HIV tests (RHTs) have provided valuable insight into acceptability and performance of RHTs, particularly specificity. However, field studies are unable to assess test sensitivity and limit of detection of different RHTs. Laboratory evaluation by testing larger numbers of specimens with acute and confirmed HIV infection is required.

Methods: We evaluated six candidate RHTs and conventional diagnostic laboratory assays on panels of well characterised serum and plasma samples. Samples from 50 antiretroviral treatment naïve individuals were tested with a HIV incidence ELISA and categorised as recent infection (within 155 days) (n=25) or established HIV infection (>155 days) (n=25). A further 59 samples from individuals with laboratory evidence of acute HIV infection (reactive fourth generation conventional HIV-1/2 Ag/Ab test, detectable HIV-1 p24 antigen or nucleic acid, negative or evolving HIV western blot) were used to assess test sensitivity in terms of limit of detection. Of the 59 acutely infected individuals, 38 had follow-up samples available (mean 6.89 days, range 2-7 days) from the index sample. A further 50 samples collected from individuals found to be seronegative by the conventional HIV-1/2 Ab/Ag 4th generation laboratory screening test were included to assess specificity.

Results: Compared with the conventional laboratory test algorithm including Abbott Architect HIV 1/2 Ag/Ab combo, the sensitivity of the six rapid tests in acute infection was: Alere HIV-1/2 Ag/Ab Combo 87.5%; Alere HIV-1/2 Antibody 84.1%; Trinity Uni-Gold HIV-1/2 Antibody 76.3%; Insti HIV-1/2 Antibody 72.5%; Biorad Multispot HIV-1/2 Antibody 72.5%; and Orasure Oraquick HIV-1/2 Antibody 61.7%. Sensitivity in patients with known HIV infection for the rapid tests was 100%, except for the Orasure Oraquick HIV-1/2 Antibody (96.1%). Specificity for the rapid tests was 100%, except for the Orasure Oraquick HIV-1/2 Antibody (98.0%).

Conclusions: These results confirm that RHTs are less sensitive than conventional laboratory tests in detection of acute HIV infection. The introduction of rapid tests at the point of care have been shown to be acceptable to men who have sex with men and provides an additional tool to potentially increase testing. However, our evaluation highlights systems are needed to ensure that men seeking RHTs who have a recent risk exposure, also have conventional HIV laboratory tests.

Disclosure statement: The NSW State Reference Laboratory for HIV, St Vincents Centre for Applied Medical Research and The Kirby Institute each receive funding from the Australian Government Department of Health and Ageing and the New South Wales Ministry of Health. The manufacturers of the rapid test kits used did not influence the study design, analysis of data or reporting of results.

Paper Ref	540
Theme	HIV/AIDS Theme B: Living With HIV & Community Programs
Presentation Type	HIV/AIDS Poster

IMPLEMENTATION OF HIV RAPID TESTING INTO ROUTINE GENERAL PRACTICE IN SYDNEY NSW AUSTRALIA

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2. East Sydney Doctors 102 Burton Street, Darlinghurst NSW 2010
3. Kirby Institute, University of New South Wales Darlinghurst NSW 2010

Background: The first rapid test for diagnosis of HIV infection at the point of care was registered for use in the Australian setting in December 2012. A range of conditions were applied by the therapeutic goods regulator including non-laboratory testing sites having a formal relationship with an accredited pathology laboratory, engagement in external quality assurance schemes and adequate operator training to ensure the quality management of tests. We describe the steps undertaken to implement these requirements at a Sydney clinic conducting a high volume of HIV testing.

Methods: In May 2013, the NSW State Reference Laboratory at St Vincent's Hospital in Sydney engaged with a high HIV case load general practice to support the implementation of a program for the quality performance of HIV rapid tests. This is the first example of NSW GP based rapid HIV testing (RHT) program outside a clinical trial. The implementation involved significant process mapping and training with all clinic staff to identify the pre and post analytical barriers to ensure RHTs were efficiently incorporated in the clinic workflow as a whole of practice activity.

Results: The NSW Reference Laboratory extended its quality management system to 'umbrella' the primary care site and address the conditions of registration and to comply with many of the elements of medical testing accreditation applicable to medical laboratories. Key elements of this arrangement included provision of a standardised training program run for 2-3 hours outside of clinical hours, with content consistent with the national training curriculum being developed by ASHM, development of training documentation, provision of quality procedures, test reagent management, quality control materials, calibration and maintenance of equipment and the testing environment, records and reports and ongoing support for technical troubleshooting and processes for efficient confirmation of reactive results.

Conclusion: This program highlights the important role that laboratories can play in supporting primary care sites to strengthen the quality performance of tests outside the conventional pathology laboratory environment. Further evaluation of this program will be required to assess the impact that routine availability of rapid HIV tests will have on rates of uptake and frequency of testing for HIV and other related sexually transmissible infections.

Disclosure of Interest Statement: NSW State Reference Laboratory for HIV, St Vincents Centre for Applied Medical Research and The Kirby Institute each receive funding from the Australian Government Department of Health and Ageing and the New South Wales Ministry of Health. The manufacturers of the rapid test kits used did not influence the study design, analysis of data or reporting of results.

No funding was received in the development of this study.

Paper Ref	277 and 604
Theme	HIV/AIDS Theme A
Presentation Type	HIV/AIDS Oral Presentation and Poster

PREVALENCE OF CSF ALZHEIMER’S DISEASE-LIKE PROFILES IN MIDDLE-AGED HIV+ INDIVIDUALS

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Introduction: The study aimed at determining the prevalence of Alzheimer’s disease (AD) risk in aging and chronically HIV-infected (HIV+) persons who are successfully treated with combination antiretroviral therapy (cART)

Methods: 43 adult males and 1 female with stable chronic HIV disease [aged 57 ± 8 years, HIV duration 20 (5-25) years, undetectable plasma and CSF HIV RNA] were enrolled under a prospective observational study. All underwent standard neuropsychological testing, APOE genotyping and a CSF lumbar puncture to assess CSF Aβ1-42, h-tau and p-tau concentrations. To provide external CSF references, we tested 3 HIV-negative controls aged 64±2 and 5 AD patients aged 63±6 years. CSF was examined blind to the AD or HIV-associated neurocognitive disorder (HAND) status and *vice versa*. Risk for AD was evaluated using published cut-offs, which combines the three CSF biomarkers.

Results: Based on the cut-offs: no elderly controls had a CSF-AD profile; all AD patients had at least one CSF-AD profile. Of the HIV+ individuals, 11.4% had a CSF-AD profile. Logistic regressions showed that APOE ε4/ε4 (p=0.03), having previously diagnosed severe HAND (p<0.03) and having lower current neurocognition (p<.002) were associated with a CSF-AD like profile.

Conclusion: Some patients with chronic HIV disease have 10-fold higher risk for AD based on CSF biomarkers, relative to the general population of the same age. However, it is not clear if this finding has the same clinical significance as in the general population. Known genetic factors for this age group were associated with a CSF-AD like profile, as well as past HAND and lower current neurocognition. Our research argues for renewed research effort to understand the consequences of brain aging in HIV+ persons.

Disclosure of Interest Statement: NHMRC 568746 (Cysique, CIA); MSD; CogState Cysique 2012 salary support. No pharmaceutical grants were received in the development of this study.

Paper Ref	163
Theme	HIV/AIDS Theme B: Diagnosis & monitoring
Presentation Type	HIV/AIDS Oral Presentation

ANALYSIS OF TRANSMITTED DRUG RESISTANCE BETWEEN 2010 TO 2012

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Background: With baseline genotyping now part of standard-of-care treatment, transmitted drug resistance (TDR) continues to be an important issue in the management of HIV infection, with attention largely focussed on the protease inhibitors (PRI) and reverse transcriptase inhibitors (RTI). With the increasing use of the integrase inhibitor (INI) Raltegravir over the last five years, there has also been concern that TDR to this class of antiretroviral (ARV) drug may occur.

Methods: Drug resistance genotyping was performed on blood samples collected between 2010 and 2012 from 195 Victorian patients infected within the previous 12 months. Generated PR, RT and IN sequences were analysed using the Stanford database web-based algorithm. Individual TDR mutations occurring during this time were compared to previous years and related to ARV treatment regimens used at those times.

Results: 177 of the 195 samples were genotyped across all three regions. No viruses had resistance to INI. 22 patients (11.3%) had virus that was resistant to PRIs and/or RTIs. Compared to data from 2004 to 2009, there was a decline in the prevalence of the RT-associated mutations K103N (from 32% to 4%) and an increase in the prevalence of Y181C (from 9% to 18%). The level of TDR in the PR region remained stable.

Conclusions: The decrease in frequency of K103N and in the increase in Y181C may indicate a decrease in prescribing of Nevirapine and Efavirenz and an increase in the use of the second line NNRTIs Etravirine and Rilpivirine. The lack of transmitted resistance to INIs is consistent with a low level of resistance to this class of drugs in the treated population. However, continued surveillance in the newly infected population is warranted as the use of INIs increases.

Disclosure of Interest Statement: NONE.

Paper Ref	15
Theme	Sexual Health: Biomedical
Presentation Type	Sexual Health: Poster

MYCOPLASMA GENITALIUM IN INCARCERATED MEN FROM FAR NORTH QUEENSLAND

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Introduction: In men, *Mycoplasma genitalium* (MG) is a sexually transmitted infection (STI) known to cause urethritis and urethral discharge. There is a paucity of literature regarding the prevalence of MG. To date, no research has been conducted on the prevalence of MG in Queensland, in incarcerated populations or in a primarily Aboriginal or Torres Strait Islander population.

Methods: From November 2012 to February 2013, men entering a correctional facility in Far North Queensland (FNQ) were offered entry into the study. Upon consent participants were interviewed and a urine sample obtained. Samples were tested for MG by quantitative real-time PCR using an assay targeting the MG 16S rRNA gene, with positive samples tested for macrolide resistance mutations in the MG 23S rRNA gene using High Resolution Melt Analysis. Study subjects testing positive for MG were offered treatment and a follow-up urine test four weeks post-treatment to establish whether clearance of the pathogen had been achieved.

Results: Out of 140 samples 8 individuals tested positive, thus the overall prevalence was 5.71% (95% CI, 1.82–9.60). Of this cohort 101 participants identified as Aboriginal or Torres Strait Islander and of this group 7 tested positive resulting in a prevalence of 6.93% (95% CI, 1.89–11.97). Of the remaining 39 non-Aboriginal or Torres Strait Islander participants, 1 individual tested positive resulting in a prevalence rate of 2.56% (95% CI, 0–7.75). Of the 8 positive samples, 2 samples were infected with a strain carrying macrolide resistance mutations.

Conclusion: This study suggests MG may be an important STI in men from FNQ and it is the first to report positivity in Aboriginal or Torres Strait Islander populations. Although based on limited data, this data highlights the need for further research to determine the burden of MG on susceptible Australian populations to inform future screening guidelines.

Disclosure of Interest Statement: We would like to acknowledge the following financial contributors: Cairns Sexual Health Service, The Royal Australasian College of Pathologists and James Cook University.

Paper Ref	318
Theme	HIV/AIDS Theme C: Biomedical Prevention
Presentation Type	HIV/AIDS Oral Presentation

PROVIDING HIV RESULTS VIA SMS ONE DAY AFTER TESTING: MORE POPULAR THAN RAPID POINT-OF-CARE TESTS

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Introduction: Uptake of HIV testing may increase with convenience and speed of receiving results. We determined the popularity of receiving HIV test results by SMS and compared this with rapid HIV point-of-care testing (POCT).

Methods: From October 2011, North Shore Sexual Health Service (NSSHS) has offered rapid HIV POCT to men-who-have-sex-with-men (MSM). From December 2012, NSSHS has offered the option of receiving traditional HIV serology results (if negative) by SMS to mobile phone one business day after venipuncture. Clinicians determined if MSM needed to return in person for a result. Otherwise, after discussing the options with their clinician, MSM were able to choose between having a POCT, receiving their result by phone 5-7 days after venipuncture, or sent by SMS to their mobile phone. We evaluated patient satisfaction with the SMS method by follow-up phone survey.

Results: From December 2012 to May 2013, 271 HIV tests were performed in 234 MSM. Of these tests, 4.7% were POCT, 7.3% were received in person, 21% by phone, and 61% were sent by SMS. SMS was sent by the next business day in 96% of those electing the SMS method. Opinions about receiving HIV results by SMS were: 94% satisfied, 85% would choose this method for the next test, and 91% were satisfied with the privacy of SMS. Of 48 MSM who had previously had a POCT, 35 elected a result by SMS. Feedback from clinicians indicated that MSM valued the better performance of traditional HIV serology, and a longer visit time hindered the popularity of POCT.

Conclusion: The majority of our MSM patients elected HIV test result by SMS compared with phone or POCT, were satisfied with this method and would choose it again for future testing. Our patients appeared to value the better accuracy of traditional HIV serology over POCT.

Disclosure of Interest Statement: No funding support was sought or provided for this project.

Paper Ref	417
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

ADOLESCENTS' AND YOUNG ADULTS' DISCLOSURE OF DIVERSE SEXUALITY AND GENDER VARIANCE TO PHYSICIANS AND OTHER HEALTH PROFESSIONALS: IMPLICATIONS FOR SEXUAL HEALTH AND WELLBEING

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Introduction: This research is based on a Young and Well Cooperative Research Centre pilot project with self-identified sexuality diverse and gender variant youth across Australia in 2012. This research related to the first aim of this study: to gain an understanding of the experiences of young people who identify as gender and sexuality diverse across a broad range of issues such as identity, health and wellbeing, education, technology, and access to services.

Methods: 1417 participants undertook a nationwide online survey targeted at gender variant and sexuality diverse young people aged 16-27 years. Qualitative methods were also used including: 1 focus groups and 2 interactive workshops which were conducted with self-identified sexuality diverse and gender variant youth at Twenty10, and 1 focus group and 1 individual interview were conducted with staff at Twenty10—a community not-for-profit organisation for gender variant and sexually diverse young people based in Sydney, Australia.

Results: Just under half of the participants from the national survey (47%) have not told their general practitioner or any other physician about their sexuality diversity, or gender variance. 32% told their general practitioner and this person was supportive, while 5% said their GP was not supportive. 16% don't attend a physician at all. Many participants felt uncomfortable approaching their sexuality and/or gender variance with physicians because they believed that physicians were often ill informed about gender variance and sexuality diversity, and were sometimes unsupportive and homophobic/transphobic.

Conclusion: There is a need for further education of doctors and other health professionals to employ best practice models in relation to the disclosure and management of adolescents' and young adults' diverse sexualities and gender variance to improve sexual health and wellbeing, and to increase the rates at which these populations visit a physician/health professional.

Disclosure of Interest Statement: N/A

Paper Ref	155
Theme	Sexual Health: International
Presentation Type	Sexual Health: Poster

INTERGENERATIONAL DIFFERENCES IN SEXUAL HEALTH KNOWLEDGE AMONG THE QUEENSLAND SUDANESE AND SOUTH SUDANESE COMMUNITIES

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Introduction: Little is known about the sexual health of refugee background young people and how they interact with their parents regarding this culturally and socially sensitive topic following arrival in Australia. Without an understanding of how young people and adults are thinking, feeling and communicating, it is difficult to determine this groups' sexual health needs post arrival. This study explored the sexual health knowledge, attitudes and behaviors of the Queensland Sudanese and South Sudanese communities.

Methods: A concurrent converging triangulation mixed method was used and involved the concurrent separate collection and thematic analysis of data from 11 semi-structured interviews with 16 to 24 year old community members and five community focus group discussions (FGD) with parents and elders. Findings from the interview and FGD phases were compared and contrasted to provide a multidimensional intergenerational perspective.

Results: Results from the interviews and FGD with 19 participants indicated that impact of change was the overarching theme. Freedom of youth and the Australian 'open' attitude to talking about sex were identified as having a strong influence on behaviours of young people and changing traditional parenting roles. While not seen as a negative by young people, participants of all ages agreed attitudes and barriers to talking about sex strongly influences their ability to understand each other's perspectives.

Conclusion: While there was disparity in the acceptance of changing sexual health attitudes and beliefs and associated patterns of behaviours between the age groups, consistency of themes demonstrated an intergenerational awareness. However, in order to reduce interfamilial confusion and conflict, parents and young people need access to similar information early post arrival. For this population interventions tailored towards their contextualised lived experience would be beneficial.

Disclosure of Interest Statement: This research is part of the first authors Doctor of Philosophy through Griffith University. The study was supported by the Queensland Nursing Council Novice Researcher Grant (RAN 1034) and Centaur Memorial Fund for Nurses Scholarship. No pharmaceutical grants were received.

Paper Ref	427
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Poster

HEPATITIS B TESTING AND POSITIVITY IN FOUR ABORIGINAL COMMUNITY CONTROLLED HEALTH SERVICES: DATA FROM THE REACCH COLLABORATION

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Background: Hepatitis B infection remains an important cause of morbidity and mortality worldwide despite now being preventable by a highly effective vaccine. In Australia, Aboriginal and Torres Strait Islander people are a priority population for hepatitis B program and policy responses because high rates of infection have been recorded compared to non-Indigenous Australians, particularly in remote communities. There is nevertheless little current information available regarding susceptibility of the Aboriginal population.

Methods: We undertook a retrospective, cross-sectional study among clinic patients at four Aboriginal community controlled health services in four Australian states. De-identified records from electronic patient records systems over the period 2009-12 were analysed. A record was included if it referred to a clinical visit at which at least one type of serological test for hepatitis B was undertaken. Analysis was undertaken of the type of testing used, and among those who were tested at the same visit for hepatitis B surface antigen, core antibody and surface antibody, marker combinations were analysed by age and sex and Aboriginal status.

Results: During the study period, 2,518 individuals aged 15-54 were recorded as having been tested for HBsAg, HBsAb or HBeAb at participating services, representing 13.4% of all people who had a clinical visit in the study period. Testing was most frequent in Aboriginal women aged 15-19 (22.1%). There were 703 Aboriginal patients who were tested concurrently for all three markers, of whom 40.8% were susceptible, and 4.8% had chronic infection. The proportion susceptible varied little with age, while the prevalence of chronic infection increased with age.

Conclusion: Prevalence of chronic infection in this study was found to be approximately 5%, or more than 10 times the estimated prevalence for the non-Aboriginal Australian-born population. A substantial proportion of clinic patients are susceptible to HBV. The findings indicate the potential benefit of routine testing and vaccination in this population.

Paper Ref	431
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Oral Presentation

ANTENATAL STI AND BBV TESTING AT ABORIGINAL MEDICAL SERVICE WESTERN SYDNEY

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Background: Specialist antenatal services are an integral and effective component of service delivery in many Aboriginal community-controlled health services (ACCHSs). Sexual health screenings in ACCHS-led antenatal programs has not been thoroughly documented. The new Clinical Practice Guidelines - Antenatal Care Module 1 recommend that all pregnant women be screened for syphilis, HIV, hepatitis B infection with screening for chlamydia in women aged under 25. This study examined guideline adherence in antenatal STI screening advance of an evaluation of the effectiveness, culturally appropriateness and accessibility of existing services.

Methods: This project was undertaken as a component of the REACCH collaboration. Service-wide testing for sexually transmitted and blood borne viral infections in addition to demographic information including pregnancy status was extracted via GRHANITE software. Overall STI and BBV testing and positivity in clients identified as pregnant in the system was examined.

Results: A total of 203 pregnant women with 229 pregnancies attended the service in the time covered in this study. The mean age of pregnant women was 23.7 (SD=5.9) with a range of 15 (the youngest age covered by this data collection) to 40. Of the 203 women, 176 (87%) were Aboriginal or Torres Strait Islander with 19 (9%) non-Indigenous and 8 (4%) not identified. Across the four years of data reported here, the percentage of clients tested for syphilis 69%, HIV 66% and Hepatitis B infection 72% and chlamydia 80%. Across all age group, 63% of clients had all recommended STI tests and 89% had chlamydia testing in accordance with guidelines. The prevalence of chlamydia was 14.4% in women aged under 25 compared to 1.2% of women aged 25 and older.

Conclusion: These results add to the evidence base on specialised antenatal care services within Aboriginal Community Controlled Health Services. Rates of STI testing are generally comparable to other specialist services.

Disclosure of Interest Statement: REACCH is funded by the National Health and Medical Research Council.

Paper Ref	463
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Poster

IMPLEMENTING AND EVALUATING STI QUALITY IMPROVEMENT INITIATIVES AND A SERVICE-BASED MODEL OF CARE WITHIN GOONDIR HEALTH SERVICES

[Delaney-Thiele D](#)

Background: Recent studies suggest that Community Controlled Health Services are a primary contact point for Aboriginal and Torres Strait Islander people in accessing Sexually Transmissible Infection (STI) testing, treatment and education. However, testing rates are typically not high enough to impact on positivity. The aim of this project was to develop and document a clinic-wide approach quality improvement project to incorporate STI testing, treatment and follow up into routine clinical practice.

Method: This project was part of the REACCH (Research Excellence in Aboriginal Community Controlled Health) collaboration. Community participation was maximised in quality improvement was maximised the establishment of a research committee, development and implementation of a staff STI knowledge survey and the delivery of STI and research training. Other activities included the extraction of routine clinical data from patient information management systems (PIMS) via GRHANITE, two clinical audits and all-staff feedback sessions, PIMS template modifications and health promotion activities. The project was managed by a service-based Aboriginal researcher who actively encouraged all-of-clinic participation and who was supported by the REACCH team.

Results: The baseline staff survey identified a number of gaps in STI knowledge and a lack of ownership for STI testing. Clinical data indicated a low rate of testing, particularly in young men, and gaps in follow up. Following the intervention, the rate of chlamydia testing in 15-29 year olds increased from zero to 15% of men and 5 to 47% of women aged 15-29. A detailed clinical audit found a marked improvement in documentation.

Conclusion: Implementing sexual health quality improvement is a challenge in Aboriginal Community Controlled Health Services that deal with competing priorities and urgent health issues. This project took a systematic and inclusive approach to increasing testing, treatment and follow up and initial results are very promising. The engagement of a service-based research officer with the support of academic researchers was a key element in developing and implementing the program.

Disclosure of Interest Statement: REACCH is funded by the National Health and Medical Research Council.

Paper Ref	466
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Poster

THE ROLE OF ABORIGINAL HEALTH WORKERS IN STI TESTING AT AN ABORIGINAL COMMUNITY CONTROLLED HEALTH SERVICE

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Background: Aboriginal Health Workers (AHW) screen a high percentage of patients who attend Aboriginal Medical Services. Screening typically includes taking observations (height and weight) and specimen collection including urine. This project examined the role of AHW in successful screening for sexually transmitted infections via an analysis of quantitative data and the optimal conditions for health worker participation in STI screening based on discussions with health workers.

Method: This research examined the role of AHW in a regional Aboriginal Community Controlled Health Service where a program of research and quality improvement has been in place. A mixed methods approach was used, including an analysis of STI testing and patient visits derived from Patient Information Management systems via GRHANITE software, a staff survey and interviews with clinical team members.

Results: A total of 3,116 people aged 15-54 attended the clinic between 2009 to mid-2013 with a total of 25,890 medical consultations (including a doctor or nurse) and a total of 697 tests. Factors predicting STI testing were sex (OR = 171), age (OR = 399), the visit including an AHW (OR = 3.06) and a nurse (OR = 15.7). A staff survey (n=22) identified client relationships with the clinical team including AHW as an important factor in testing (64%) and follow up (68%). A total of 8 in-depth interviews were conducted with clinic team members involved in quality improvement. Perceptions of the role of AHW in testing and within the clinical team varied both within and between clinics with most workers agreeing that AHW had a key role in testing and that training and service-specific guidelines would support their role in screening.

Discussion: Aboriginal Health Workers play a key role in service delivery. This contribution should be given careful attention in developing models of sexual health quality improvement.

Disclosure of Interest Statement: REACCH is funded by the National Health and Medical Research Council.

Paper Ref	678
Theme	Sexual Health: Other
Presentation Type	Sexual Health: Oral Presentation

DRUG AND ALCOHOL USE OF YOUNG ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLE: FINDINGS OF THE GOANNA SURVEY.

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Introduction: Aboriginal and Torres Strait Islander young people aged 16-29 are a population prioritised in all national and jurisdictional STI and BBV strategies, largely because of higher notification rates of STI and BBV reported among this population. However very little is known of levels of health service utilisation of this population.

Methods: A national cross sectional survey was administered using hand held personal digital assistants at Aboriginal and Torres Strait Islander community events in every jurisdiction during 2011-2013. Aboriginal organisations and staff were engaged at every level of the project ensuring a self determination approach was applied to this research.

Results: A total of 2877 surveys were completed. 60% were female, median age of respondents was 21, 51% of surveys were collected from residents in major cities, 36% from regional centres and 9% from remote areas. Overall 17% of people aged 16-29 reported never drinking alcohol, including 24% of people aged 16-19, but 11% of 20-24 year olds. However of those that did drink alcohol, the level of consumption considered very risky (seven or more drinks on an occasion) was higher among males compared with females (44% vs. 33%, respectively) and increased with age (32% vs. 42% among 16-19 and 20-24 year olds respectively). Overall 42% and 43% of males and females respectively smoked tobacco. Just over a third (37%) of young people reported smoking cannabis in the last year and around 10% of males and females reported doing so daily. More daily use occurred in increasing age groups. Overall 15% of participants reported using methamphetamines, and 17% reported using ecstasy in the last year. No increases in use were observed with increasing age groups.

Discussion: This data supplements other national available data and provides comparative data to other population groups. Increasing harm minimisation strategies to reduce alcohol and other drug use in young people are required, especially among young males.

Paper Ref	391
Theme	HIV/AIDS Theme D: Gay & MSM
Presentation Type	HIV/AIDS Poster

THE ACT PACT PROGRAM: FINDING HIV AND SEXUALLY TRANSMITTED INFECTIONS THROUGH OUTREACH CLINICS

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Background: Staff from 5 health care agencies in the Australian Capital Territory (ACT) developed the Partnership Approach to Comprehensive Testing (PACT) Project in 2002. This project is embedded into the core business of Canberra Sexual Health Centre. Through this collaboration outreach clinics incorporating sexual health education and screening are provided to at-risk populations. Clinics are offered using a 'pulsed' approach (weekly sessions for 2-5 weeks, 3 times a year).

Methods: Data from the PACT Program collected between 2005 and 2012 were analysed. These data were collected from attendees - men who have sex with men (MSM), sex workers, vulnerable youth and female clinic attendees at clinics conducted in sex-on-premises venues, brothels, youth centres, an HIV/AIDS support organisation. Rates of sexually transmissible infections (STI) and blood borne viruses (BBV) were determined.

Results: 92 clinics in 14 different venues, providing 1780 occasions of service to 624 people. STI and/or BBV screening was conducted on 988 occasions.

There were 42 cases of chlamydia: 28, 5, 3 and 6 cases among MSM, youth identifying as queer, sex workers and vulnerable youth respectively. Rectal screening identified the majority of chlamydia among MSM. Per test infection rates were 5.8%, 5.3%, 1.4%, 7.3% for MSM, youth identifying as queer, sex workers and vulnerable youth respectively. 10 new cases of gonorrhoea, 3 new cases of HIV, 9 cases of syphilis, 11 new cases of hepatitis C and 2 new cases of hepatitis B were detected.

Conclusions: This interagency collaboration found cases of STI and BBV which may otherwise have gone undetected demonstrating the public health value of outreach activities targeting hard-to-reach populations. Rectal screening of MSM for chlamydia should be strongly encouraged because of its superior case finding effectiveness.

Paper Ref	42
Theme	HIV/AIDS Theme B: Social & Behavioural Research
Presentation Type	HIV/AIDS Oral Presentation

YOUNGER AGE, RECENT HIV DIAGNOSIS, AND NO ANNUAL STI TESTING IS ASSOCIATED WITH CURRENT ART NON-USE AMONG HIV-POSITIVE GAY MEN IN AUSTRALIA

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Introduction: While more than half of HIV-positive gay men in Australia are currently taking some antiretroviral treatment (ART), better understandings of those who are not taking any ART for HIV are urgently needed. Key demographic, clinical and behavioural factors associated with gay men’s current non-use of ART were systematically examined.

Methods: Data from 2,050 HIV-positive men who had participated in the nation-wide Gay Community Periodic Surveys (GCPs) between 2010 and 2012 were extracted. Stratified univariate chi-square tests and multivariate logistic regression were used to identify factors associated with ART non-use at the time of the survey.

Results: The mean and median age of the participants were 44 years old (SD=10.4). Just about one-fifth were recruited from clinic sites with the rest from community venues and events. The majority (94.0%) identified as gay or homosexual and 75.7% of the men were of an Anglo-Australian background. More than half had been living with the diagnosis between 10 and 12 years with only 6.4% being diagnosed since 2010. More than three-quarters of the men (n=1,555) were on combination ART and a similar proportion (n=1,558, 76%) claimed that their viral load was undetectable at the time of the survey.

Under 30 years of age and having an HIV diagnosis within the last three years were associated with reported ART non-use. After controlling for recruitment sites, not having an annual screening for other sexually transmissible infections (STIs) was independently associated with non-use of ART at the time of the survey. In addition, ART use or non-use did not differ by CD4+ cell count at the time of the survey, engaging in any unprotected anal intercourse, or having a non-HIV-positive regular partner.

Conclusion: Engaging younger men who have recently HIV seroconverted in patient-centred, routine and quality clinical care and support is critically warranted.

Disclosure of Interest Statement: The National Centre in HIV Social Research and the Kirby Institute receive research project funding from the Australian Government Department of Health and Aging. Additional funding for the Gay Community Periodic Surveys is provided by the departments / ministries of health in the Australian Capital Territory, New South Wales, South Australia, Queensland, Victoria and Western Australia.

Paper Ref	429
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Oral Presentation

IMPROVING HEPATITIS B MANAGEMENT IN AN URBAN ACCHO

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Background: Aboriginal and Torres Strait Islander people are a priority population for hepatitis B (HBV) prevention, testing and treatment with current estimates of the prevalence of active infection between 2-4% in urban settings. The Victorian Aboriginal Health Service (VAHS) has provided universal childhood vaccination from the early 1990s. The aim of this project was to evaluate HBV-related clinical practice within VAHS through examination of clinical data including testing, immune status and follow up of chronic infection, and to implement evidence-based practice as per current guidelines.

Method: This project was part of the REACCH collaboration. HBV testing data of all patients attending VAHS from 2009-2012 aged 15-54 were extracted from the clinical database (Communicare) using GRHANITE® software. All serological markers relating to HBV immunity and infection were examined. A chart audit was undertaken to further examine immune and infection status, and management of chronic HBV infection. Changes were implemented to improve testing protocols, target immunisation of those at high risk of HBV infection, and better manage those with chronic HBV infection.

Results: Of the total 5427 individuals who attended the medical service within VAHS in this period, 815 (15%) were tested for HBV. Of those tested, testing in accordance with current guidelines, increased from 6.4% to 71.8% in the study period.

The findings of the chart audit (n=279) were; 53% Immune Vaccinated, 22% Resolved infection, 20% Non-immune, 3% Chronic infection.

The changes implemented were (i) a routine testing protocol (HBVsAb and HBVcAb +/- HBVsAg), (ii) addition of HBV immune/infection status as a Clinical Item in Communicare and (iii) development of a Communicare template and recall system to support management of chronic HBV infection.

Conclusion: Clinical audit and implementation of protocols consistent with current guidelines has improved HBV-related practice at VAHS.

Disclosure Of Interest Statement: No conflict of interest by authors.

Paper Ref	179
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Oral Presentation

A YES, NO, MAYBE LIST TO PROMOTE HEALTH PROTECTIVE SEXUAL COMMUNICATION

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Introduction: Recent focus groups suggest that young people have high levels of knowledge about safe sex, but do not always put this into action. One reason is a lack of confidence in talking about sex with partners. Learning from entertainment media, this project aimed to make talking about safe sex ‘sexy’ rather than ‘scientific’ (which is how safe sex knowledge is usually conveyed by schools and public health campaigns), by using a ‘Yes, no maybe’ list.

Methods: 100 university students were given a list of 62 sex acts to discuss with partners. 12 weeks later 126 students were surveyed.

Results: The list included ‘unprotected sex’ as one possible option. Of the 126 students surveyed 12 weeks after the distribution of the list, 35% had seen the list. Of those who had seen the list and had sex with at least one new sexual partner, 69% had discussed condom use with all new partners. Of those who had not seen the list and had sex with at least one new sexual partner, only 46% had discussed condom use with all sexual partners. Of those who saw the list and had sex with a new partner, 54% had sex without a condom, with 29% regretting it. Of those who did not see the list and had sex with a new partner, 62.5% had sex without a condom, and 49% regretted it.

Conclusion: The idea of the list was to create a fun or ‘sexy’ environment where unprotected sex might be discussed and Health Protective Sexual Communication fostered. In the future, further data collection with a larger sample size would be beneficial.

Disclosure of Interest Statement: This research was funded by a National and International Research Alliances Program grant from the Queensland Government.

Paper Ref	145
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Oral Presentation

ACTIVE RECALLING INCREASES FOLLOW UP ATTENDANCE RATES FOR MEN HAVING SEX WITH MEN (MSM) PRESCRIBED NON OCCUPATIONAL POST EXPOSURE PROPHYLAXIS (NPEP) – 2 ½ YEAR PROSPECTIVE REVIEW

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Background: Studies have shown that attendance rates of patients for review following NPEP, particularly at the three and six month intervals are not satisfactory. The follow-up of patients taking NPEP is important for the following reasons:

1. To increase compliance rates of NPEP regime completion
2. Ensure HIV seroconversion has not occurred
3. Allow regular STI screening in at risk patients
4. Reinforce education / behavioural counselling to decrease future high risk behaviours

A pilot study we conducted of 13 patients receiving NPEP showed significant improvement in follow up attendance rates with active recalling. As a result this has become standard practice at our institution and we now present prospective data of MSM attendance for NPEP over the last 2 ½ years.

Method: Patients attending for NPEP are actively recalled by the clinic nurse/counsellor via phone call, sms or email to remind them of their upcoming appointment. Follow up attendance rates were prospectively collected and medical files reviewed for evidence of changes in high risk behaviour on subsequent visits.

Results: A total of 52 MSM patients attended our institution for NPEP between September 2010 and February 2013. 44% of the study cohort was aged less than 25 years. 5 were excluded from analysis as they continued their management at another clinic. Of the remaining 47 patients;

- 36/47 (76.6%) attended their 3 month appointment (compared to previously reported rates of 30-51%)
- 32/47 (68%) attended their 6 month appointment (compared to previously reported rates of 20%)

Of the 11 patients who did not attend their 3-month appointment, 6 still completed NPEP treatment. 23/47 patients (49%) reported new risk reduction behaviour on subsequent visits. 3 patients later acquired HIV though in all these cases it was unrelated to the initial risk behaviour incident for which NPEP was administered.

Conclusion: This follow up study suggests active recalling increases subsequent clinic attendance post NPEP, providing opportunity for essential STI screening / monitoring, education and further risk reduction counselling. A large proportion 23/47 (49%) reported risk reduction behaviour following this practice.

Disclosure of Interest Statement: No corporate grants or sponsorship were received in the development of this study.

Paper Ref	234
Theme	HIV/AIDS Theme C: Community Prevention Strategies
Presentation Type	HIV/AIDS Poster

“MADE FOR US, BY PEOPLE LIKE US”: EXPERIENCES OF HIV TESTING AND BEING DIAGNOSED AT A COMMUNITY-BASED, PEER-LED SERVICE

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Introduction: Regular testing for HIV by those gay men at greatest risk of acquiring HIV infection is crucial to its control. Information about the barriers to and motivations for testing among those recently diagnosed with HIV can provide insights into how to increase testing in this population.

Methods: The HIV Seroconversion Study collects both quantitative and qualitative data from people in Australia recently diagnosed with HIV. Between 2007 and 2013, 506 gay and bisexual men completed the online survey. In 2012 qualitative interviews were conducted with 12 men diagnosed with HIV at the M Clinic in Perth, a community-based, peer-led service. Logistic regression was used to calculate statistical associations.

Result: Common reasons for avoiding HIV tests prior to diagnosis were: not having experienced an illness that made them worry (39.5%) and fear of testing positive (39.5%). Motivations for being tested at the time of their diagnosis were: having an illness that caused them to worry (32.4%) and part of a regular testing pattern (27.1%). In multivariate analysis, greater social engagement with other gay men was associated with having tested for HIV more recently prior to their diagnosis (aOR 1.28; 95% CI 1.09-1.50; p=0.002). Men diagnosed at the M Clinic appreciated being able to speak openly with peers without being judged, and described reduced testing fears because they felt M Clinic would provide appropriate support through the range of services offered and links to peers.

Conclusion: Providing men with a range of convenient, culturally sensitive and non-judgmental HIV testing opportunities is likely to encourage some men to test and test more frequently. Further, the more favourable experiences of, and outcomes for, those who are diagnosed in such settings is likely to enhance the role of social influence and word of mouth to encourage testing within those men’s networks.

Paper Ref	235
Theme	HIV/AIDS Theme C: Community Prevention Strategies
Presentation Type	HIV/AIDS Poster

MITIGATING RISK: SOMEWHERE IN-BETWEEN REGULAR AND CASUAL

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Introduction: Agreements about sex with seroconcordant regular partners in committed relationships have been demonstrated to provide some protection against acquiring HIV. However, not all kinds of regular partnerships may provide the same level of protection.

Methods: The HIV Seroconversion Study collects both quantitative and qualitative data from people in Australia recently diagnosed with HIV. Between 2007 and 2013, 506 gay and bisexual men completed the online survey, including 95 who also provided a qualitative interview. Participants were asked details about their relationship with the person from whom they believe they acquired their infection.

Results: While the majority (61.0%) of men report sex with a casual male partner on the occasion they believe they acquired HIV, the majority of those who believed they acquired HIV from a regular partner indicated this was through sex with a fuckbuddy (22.6%), and only 11.4% indicated it was through sex with their 'boyfriend'.

When compared with those men who acquired their infection from their boyfriend, men who believed a fuckbuddy to be the source of infection were less likely to know the HIV status of that partner (40.2% versus 8.7%; $p < 0.001$). Nonetheless, they tended to have been having sex with their fuckbuddy longer than their boyfriends: 30.2% had first had sex with their fuckbuddy within the three months prior to the high-risk event versus 45.2% of boyfriends ($p = 0.086$). Only 6.4% reported that the source of their infection was a boyfriend of more than three months standing.

Conclusion: Few gay men appear to acquire HIV from long-term committed regular partners. Tools to assist gay men in negotiating agreements between men in short-term and non-committed relationships may assist in HIV prevention. PrEP may eventually offer an appropriate alternative option for some men in these situations.

Paper Ref	248
Theme	HIV/AIDS Theme D: Social & Behavioural Research
Presentation Type	HIV/AIDS Oral Presentation

YOUNG GAY MEN, SEX, RELATIONSHIPS AND HIV RISK

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Background: HIV and STI prevention routinely emphasise communication and negotiation between partners as to condom use and sexual agreement with secondary partners. In this paper, we present analysis of young gay men's expectations of fidelity in early dating relationships, and their negotiation of 'fidelity rules' with new relationship partners.

Methods: Data for this paper come from in-depth interviews with 26 gay-identified men, aged 18-30, in Melbourne, Sydney, Brisbane, Central Victoria, and Cairns in 2011.

Results: Monogamy was favoured by many of the young gay men interviewed however the sexual opportunities and pressures of the gay 'scene' and an emphasis on youthful sexual experience as a rite of passage meant that participants balanced competing desires for sexual autonomy and monogamous partnered relationships simultaneously. In early dating relationships, participants described different rules for fidelity based on their perceptions of a relationship's future, and assessments about the trustworthiness or character of relationship partners. While communication was often described as an important relationship ideal, early romantic and dating relationships were more often characterised by silence and a reluctance to acknowledge the possibility of infidelity, or non-monogamy as an alternative. Clarification about the status of a relationship might formalise the relationship in ways that threaten individual sexual autonomy, or the romantic ideal.

Conclusion: Young gay men negotiate competing and contradictory ideas about sex and relationships, and appear to balance desires for stable, committed, putatively monogamous relationships with sexual autonomy typified by casual and serial dating. The complexities inherent in communication between new sexual and relationship partners, and the reliance on social norms, romantic ideals or unconscious strategies to manage the emotional and sexual risks of new relationships raise new and important issues for HIV prevention with young gay men.

Disclosure of interest statement: This project has been funded by a National Health and Medical Research Council project grant. No pharmaceutical grants were received in the development of this study.

Paper Ref	325
Theme	HIV/AIDS Theme C: HIV/AIDS Surveillance
Presentation Type	HIV/AIDS Poster

ESTIMATING HIV INCIDENCE AMONG KEY POPULATIONS IN SOME SENTINEL PROVINCES IN VIET NAM IN FROM 2010 TO 2012

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Background: Vietnam's HIV sentinel surveillance system began annual collection of behavioral data among injection drug users (IDU), female sex workers (FSW), and men who have sex with men (MSM) in 7 provinces in 2010, expanded to 12 provinces in 2011, and to 29 provinces in 2012. These data provide a better understanding of the HIV epidemic among these key populations.

Methods: Samples ranging from 150-300, depending on estimates populations sizes, of IDU, FSW, and MSM were approached and consented. Respondents were asked 20-30 questions and provided a blood specimen for HIV testing and future BED incidence assays. HIV incidence density ratio (IDR) was calculated as HIV-infected and less than one year of exposure, (reported time since initiation of risk behavior) divided by (person-year contributed by each recently infected) + (1 person-year for each negative respondent)

Results: IDR among IDU was 5.76, 1.23, and 2.02 per 100 person-years at risk in 2010, 2011, and 2012 respectively. IDR among FSW was 0.99, 0.67, and 0.82 in 2010, 2011, and 2012 respectively. IDR among MSM was 0.9, 3.1, and 1.57 in 2010, 2011, and 2012 respectively. IDR among MSM-IDU was 2.9, 2.2, and 2.43 in 2010, 2011, and 2012 respectively. MSM & MSM-IDU are not mutually exclusive in this analysis. BED results are pending.

Conclusions: Estimated HIV incidence within this survey sample suggests that new HIV infection occurs at epidemic sustaining levels among these key populations and is closely related to drug injection. Although reliant on self-reports, BED assay will be used to strengthen these estimates. HIV prevention efforts should increase focus on young, new initiates to risk behaviors, particularly drug injection. Improvement of the sampling of sentinel surveillance is a key next step to achieve more representative samples.

Disclosure of Interest: No disclosure of interest.

Paper Ref	331
Theme	HIV/AIDS Theme D: Gay & MSM
Presentation Type	HIV/AIDS Oral Presentation

HIV INFECTION AND ACCESS TO HIV PREVENTION SERVICES AMONG MEN WHO HAVE SEX WITH MEN IN SOME SENTINEL PROVINCES IN VIETNAM IN 2010 AND 2012

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Backgrounds: Viet Nam’s HIV sentinel surveillance system began collecting behavioral data among men who have sex with men (MSM) in 4 provinces in 2010 and expanded to 8 provinces in 2012. These data provide a better understanding of risk behaviors. This aims to determine HIV prevalence and coverage of prevention services among men who have sex with men (MSM).

Methods: Cross-sectional surveys were conducted. Participants were selected based on geographic mapping exercise and through peer educators. To collect key behavioral and programmatic indicators, 30 behavioral questions were added to the serosurveys among MSM.

Results: 1009 and 1960 MSM provided blood and interviews in 2010 and 2012. HIV prevalence among MSM and drug injecting-MSM were 6.0% vs 1.3% and 11.1% vs 9.7%, in 2010 and 2012. MSM receiving free condoms and syringes in the last month were 39.8% vs 45.5% and 36.9% vs 40.8%, respectively in 2010 and 2012. MSM receiving sexually transmitted infections screening in the last 3 months were 13.2% and 23.7% in 2010 and 2012. HIV testing in the past year and knowing the result were 20.7% and 45.3% in 2010 and 2012 respectively.

Conclusions: HIV prevalence was high among drug injecting-MSM and varying among provinces. Access to HIV prevention services increased but still at low level and varied by service and province. Access to HIV prevention efforts needs to be broadened with a focus on drug injecting-MSM

Disclosure of Interest Statement: No disclosure of interest

Paper Ref	172
Theme	HIV/AIDS Theme B: HIV Associated Diseases
Presentation Type	HIV/AIDS Oral Presentation

PREVALENCE AND PREDICTORS OF MULTIMORBIDITY AMONG PEOPLE LIVING WITH HIV IN REGIONAL NEW SOUTH WALES, AUSTRALIA

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Background: In contrast to co-morbidity, multimorbidity among people living with HIV has not been well studied. Multimorbidity is the co-occurrence of more than one chronic health condition in addition to HIV. Higher multimorbidity increases mortality, complexity of care and health care costs while decreasing quality of life. Our aim was to describe the prevalence of and factors associated with multimorbidity among HIV positive patients attending a regional sexual health service.

Method: We conducted a record review of all HIV positive patients attending a regional sexual health service between 1/7/2011 and 30/6/2012. Sociodemographic, general health and HIV related data were collected. Two medical officers reviewed records for chronic health conditions and to rate multimorbidity using the Cumulative Illness Rating Scale (CIRS). We used univariate and multivariate linear regression analyses to determine factors associated with higher CIRS score.

Results: 189 individuals were included in the study, the mean age was 51.8 yrs and 92.6% were men. One quarter (25.4%) had ever been diagnosed with AIDS and almost all (94.2%) were prescribed antiretrovirals. Multimorbidity was extremely common with 54.5% of individuals having 2 or more chronic health conditions in addition to HIV, the most common being a mental health diagnosis, followed by vascular disease. In multivariate analysis, older age, having ever been diagnosed with AIDS and being on ARV regimen other than 2 nucleosides and NNRTI or PI were associated with higher CIRS score. Current CD4 count, current viral load and body mass index were not associated with multimorbidity.

Conclusion: This study highlights high levels of multimorbidity among HIV positive patients. To our knowledge it is the only study looking at associations with multimorbidity in the Australian setting and it identifies 2 important factors, age and ever having AIDS. Care models for HIV positive patients should include assessing and managing multimorbidity particularly in older people and those that have ever been diagnosed with AIDS.

Disclosure: DS is on the advisory board for Boehringer Ingelheim. DE and NE have received travel grants from commercial entities to attend educational meetings. No pharmaceutical grants were received in the development of this study.

Paper Ref	350
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Oral Presentation

UNPACKING CHLAMYDIA IN VICTORIA: RETROSPECTIVE ANALYSIS OF SURVEILLANCE DATA TO ESTIMATE REINFECTION

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Background: Chlamydia is prevalent among young Australians. The latest national surveillance report (2011) shows a rate of diagnosis of 1400 per 100,000 population aged 15-29 years. In Victoria, the number of notifications in 2011 was 19,238; 81% in 15-29 year olds; however notifications continue to rise in all age groups. International evidence suggests chlamydia reinfection is responsible for a substantial burden of infections. Given the associated health risks, monitoring reinfection in the population is important to understand disease burden and evaluate interventions. We describe the rate of reinfection and time between infections in Victoria, 2004-2011.

Methods: Chlamydia notification data from the Victorian notifications database, 2004-2011 were used to conduct a retrospective cohort study. Individuals' records were linked over time to identify reinfection. Notifications within six weeks were excluded. Two age groups were created for comparison, 15-29 years and >29 years. Two periods (P1: 2004-2007), (P2: 2008-2011) were used to identify change over time.

Results: There were 97,838 notifications of chlamydia in individuals aged >15 years in Victoria; 58% among women, 79% among individuals aged 15-29 years. Reinfections accounted for 15% (n=14,084) of total notifications, of which 11% were diagnosed within six months of a previous positive (n=1567). Time between positive diagnoses remained stable over time; median 2.4 years.

The proportion of reinfections did not differ by sex or age group but increased significantly between time periods; 5.5% in P1 to 9% in P2 (p=.0001).

Conclusion: We found reinfections are contributing to increasing notifications of chlamydia in Victoria. Current guidelines recommend repeat testing three months after a positive chlamydia diagnosis which could be impacting detection of these infections. The proportion of notifications that are reinfections has increased suggesting improvements are warranted in monitoring treatment failure, sexual behaviour counseling post-diagnosis, partner testing and treatment, and follow-up to encourage repeat testing.

Disclosure of Interest Statement: Nothing to disclose.

Paper Ref	369
Theme	HIV/AIDS Theme C: HIV/AIDS Surveillance
Presentation Type	HIV/AIDS Oral Presentation

HEPATITIS C TESTING AND INFECTION IN HIV-POSITIVE MEN WHO HAVE SEX WITH MEN IN MELBOURNE, VICTORIA.

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Introduction: Over the past five years there have been increasing reports of HCV transmission in HIV-positive men who have sex with men (MSM) globally. Victoria observed similar increases in HCV notifications in this group. What remains unclear is whether this increase is due to increased transmission or increased detection or a combination of the two. This paper investigated the reasons for increased HCV notification in HIV-positive MSM in Victoria.

Methods: HCV testing records of HIV-positive men who attend three high MSM caseload clinics in Melbourne, Victoria were examined. HIV viral load test records between April 2006 and December 2011 were used to identify all HIV-positive patients attending the clinics; their HCV test records were then retrospectively linked over the same period.

Results: Three thousand and seven HIV-positive men attended the clinics during the study period; 2190 (73%) were tested for HCV at least once, 250 (11.4%) tested HCV positive. The prevalence of co-infection declined from 11.9% in 2006 to 7.4% in 2011 ($p=0.01$). The number of HIV-positive men tested for HCV increased each year although the proportion tested remained stable (~75%) and testing frequency did not change (average=1.4 test/person/year). Sixty three incident infections were observed. The HCV incidence rate among HIV-positive men in this cohort was 1.55/100PY with no significant change over the study period.

Conclusions: We found that HCV incidence in HIV-positive MSM remained stable and prevalence declined in HIV-positive MSM throughout the study period. Although increased HCV transmission cannot be excluded, our results suggest the increase in HCV case notifications among HIV-positive men may be explained by an overall increase in HCV testing in this population. The steady increase in the number of HIV-positive MSM who remain well and consequently routinely tested for HCV may be contributing to the increase in HCV notifications.

Disclosure of Interest statement: Nothing to disclose.

Paper Ref	525
Theme	HIV/AIDS Theme C: Epidemiology Of HIV
Presentation Type	HIV/AIDS Oral Presentation

ARE MEN RETURNING? A COHORT ANALYSIS OF HIV TESTING AMONG MSM IN VICTORIA, 2007 TO 2011.

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Introduction: Diagnoses of HIV in Australia remain at historic highs with the majority occurring among men who have sex with men (MSM). Frequent HIV testing to reduce undiagnosed infections is an essential component of HIV prevention. This research aims to describe HIV testing among MSM.

Methods: HIV testing data (2007- 2011) from HIV negative MSM attending Victorian Primary Care Network for Sentinel Surveillance (VPCNSS) sites for HIV testing were included. We examined patterns of repeat HIV testing within 365 days of a previous (index) test. Poisson regression was used to assess trends in repeat testing over time and logistic regression used to examine predictors of returning for a test within 365 days.

Results: In total, 32915 tests from 13286 individuals were included. The number of tests increased from 3135 in 2006 to 7010 in 2011 (p<0.01). Younger MSM (16-29 years) accounted for 42.2% of tests in 2011. The number of tests <365 days of an index test increased over the follow up period (p<0.01). A divergence in the rate of tests and the rate of returning for a test <365 days was seen; this effect was greater among older MSM (>=30 years, p<0.01). Younger MSM were more likely to return for a HIV test <365 days (AOR 1.24, 95%CI: 1.13-1.37) and MSM who reported inconsistent condom use less likely to return for testing (AOR 0.93, 95%CI: 0.88-0.98).

Conclusion: There was an increase in number of HIV tests among MSM; however the number returning for testing <365 days remained stable at around half of all tests. Younger MSM returned for testing in the analysis, however the data suggests infrequent testing among other risk groups. Current guidelines recommend three monthly testing for high risk MSM. Future research should be aimed at informing strategies for increased testing among high risk groups.

Disclosure of Interest Statement: AL Wilkinson is supported by a NHMRC Public Health scholarship.

Paper Ref	551
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

CHLAMYDIA TESTING AND SEXUAL RISK BEHAVIOURS OF LGBTI YOUTH AT MELBOURNE BASED SERVICES

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Background: Young people and LGBTI individuals have elevated risks of STI infections. Young LGBTI individuals also have worse outcomes in terms of physical and mental health. Most sexual health campaigns target young people as a homogeneous population, potentially ignoring at risk sub-populations. By further analysing risk behaviours and outcomes we aim to inform targeted health campaigns.

Methods: Chlamydia testing and sexual behaviour data from two inner city youth health clinics, 2007 to 2012, were used to compare condom use, partner number and chlamydia positivity between young people (16-24 years) of different sexual orientations. Sexual orientation was assigned based on reported number of male and female partners.

Results: During the study period, 6473 chlamydia tests were conducted at these clinics with 60% accompanying behavioural surveys; the majority amongst individuals who reported sex with only the opposite sex (90%). The proportion chlamydia positive in this group was 14% in men, 6% in women and <5% in same-sex attracted attendees.

Over half tests (54%) in men who reported sex with only men (MSM) were among those reporting >5 male sex partners in 12 months, compared to 32% of tests in men who had sex with both sexes (MSMW) and 29% of tests in women who had sex with both sexes.

One third of tests in MSM were in those reporting they always used a condom compared to 20% of tests in MSMW and 10% of tests in men who had sex only with women.

Conclusion: These analyses show chlamydia positivity and sexual behaviour differed by sexual orientation which has implications for sexual behaviour counselling, testing and health promotion. The analysis may be biased given young heterosexual women are over represented, however these results highlight the differences within the specific populations of youth and highlights the need more targeted research and reporting of outcomes.

Disclosure of Interest statement: Nothing to disclose

Paper Ref	552
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Oral Presentation

CHLAMYDIA PREVALENCE IN ADOLESCENT AUSTRALIANS

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On behalf of the ACCESS collaboration

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Introduction: Most Australian guidelines for clinical screening of chlamydia infection advise testing sexually active individuals aged 16-24 years. Recent research shows that age at first sex in Australia is decreasing; a recent Victorian survey showed 29% of respondents reported being sexually active before age 16 years. There is also evidence that younger age at first sex is associated with risk behavior such as unprotected sex and having multiple sex partners.

Methods: We examined three years of laboratory testing data (2008-2010) collected via the Australian Collaboration for Coordinated Enhanced Sentinel Surveillance (ACCESS). Data from 15 laboratories were used; five from Victoria, four each from New South Wales and Queensland, two from South Australia and one from Tasmania. Chlamydia test numbers and proportion positive were compared by age group.

Results: In three years 286,020 tests were conducted in individuals aged 12-24 years, the majority occurring in females (3:1 ratio). Of total tests, 3.6% were in 12-15 year olds (n=10,296) compared to 32% in 16-19 year olds. The proportion chlamydia positive was highest in adolescent girls aged 12-15 years (13%) compared to 12% in those aged 16-19 years, 8% in those aged 20-24 years (p=.001) and 9% in boys aged 12-15 years (p<.001).

Conclusion: Chlamydia testing in 12-15 year olds was much lower than in other adolescents but this group had the highest chlamydia prevalence. This is possibly due to less routine chlamydia testing in 12-15 year olds or only testing those presenting with sexual risk. Testing young adolescents is complicated by legal policies relating to age of consent, and privacy is a potential barrier to testing. Also of concern is the sexual behaviour of younger adolescents potentially increasing their risk of infection. Research into sexual behaviours of this group is needed.

Disclosure of Interest Statement: Nothing to disclose.

Paper Ref	554
Theme	HIV/AIDS Theme C: Epidemiology Of HIV
Presentation Type	HIV/AIDS Oral Presentation

HIV DIAGNOSED IN VICTORIA AMONG NEW MIGRANTS

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Introduction: As a proportion of the Victorian migrant population, Asian men and Sub-Saharan African women are disproportionately represented among notifications of newly diagnosed HIV in Victoria. This presents a variety of considerations for service provision including cultural barriers to health promotion, testing and treatment, especially for recent arrivals.

Methods: We described new Victorian HIV diagnoses made between 2007 and 2012 by region of birth, time since arrival and exposure to HIV. New HIV diagnoses refers to cases whose first ever HIV diagnosis was in Victoria. Country of birth was missing for three per cent of records. Recently arrived migrants were defined as those born overseas and arrived in Victoria <5 years prior to HIV diagnosis.

Results: Of the 1507 HIV notifications with country of birth recorded, 32% were born overseas (n=490). For 19% (n=92), year of arrival was missing; the median number of years between arrival and HIV diagnosis was four years and 54% were classified as recently arrived migrants (n=213).

Of the 213 recently arrived migrants, 100 (47%) reported male-to-male sex as their exposure to HIV (MSM), of which 53% were aged 20-29 years and 35% aged 30-39 years. More than half (53%) of recently arrived MSM were from SE Asia, China and India and two-thirds (65%) acquired their infection in Victoria. Sixty-one (29%) recently arrived migrants were from high HIV prevalent countries, 92% were from Africa (n=56); 90% acquired their infection overseas (n=55) and 66% were women (n=40).

Conclusion: These results highlight the potential vulnerability of young Asian men to HIV infection on arrival to study or work in Victoria. In addition to maintaining a focus on the health and wellbeing of migrant African women, these data suggest a need to also focus on HIV prevention and care among young MSM Asian migrants.

Disclosure of Interests Statement: The Centre for Population Health receives funds from the Victorian Department of Health to conduct several surveillance projects.

Paper Ref	88
Theme	HIV/AIDS Theme C: Behavioural Research & Interventions
Presentation Type	HIV/AIDS Poster

RAPID HIV TESTING HAS AN INCREASED RATE OF HIV DETECTION IN MEN WHO HAVE SEX WITH MEN – (USING RAPID HIV TESTING IN A PRIMARY CARE CLINIC – OPERATIONAL PERFORMANCE OF THE TEST, PATIENT ATTITUDES, TYPES OF PATIENTS PRESENTING AND BARRIERS TO USING THE TEST)

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Introduction: The Alere Determine TM HIV -1/2 Ag/Ab Combo Rapid Test for point of care testing was approved for use in Australia by the Therapeutic Goods Administration in December 2012. To date, the Australian experience with use of rapid point of care (POCT) HIV tests has been in sexual health clinics in trial settings. Prahran Market Clinic began using this test in clinical practice in March 2013 and we report on our experience.

Method: We report the performance of the test compared to reference testing in the first 302 tests performed. . Patients tested were administered questionnaires regarding attitudes towards and satisfaction with rapid HIV testing. We also surveyed doctors administering the test to collect reasons why the test was not always used and to identify barriers to using the test.

Results: Of 302 tests performed, 9 were HIV antibody positive and confirmed on standard serological testing. 4 tests were negative on the rapid test and indeterminate on standard testing. 3 of these were confirmed to be negative on further testing. The fourth test was an early seroconversion. There was one false positive test result. All other tests were negative both on the rapid test and serum testing. There were no false negative results. Specificity and sensitivity were 100% and 99.7% respectively. Positive predictive value and negative predictive values were 90% and 100% respectively.

MSM patients having the Rapid test were twice as likely to be HIV positive.

Patients satisfaction was high and there were no significant negative behavioural changes associated with using the test.

Conclusion: The Alere HIV rapid test can be used effectively in a primary care setting with less false positive rates than previously reported⁹. Patients reported no negative behavioural changes. Men who have sex with men using this test were more likely to be HIV positive or seroconverting. The availability of this test in general practice encourages increased HIV testing in MSM.

Disclosure of Interest Statement: This study has not received any funding or grants from any organisations or pharmaceutical companies.

Paper Ref	356
Theme	HIV/AIDS Theme B: Delivery Of Care
Presentation Type	HIV/AIDS Poster

MUSCULOSKELETAL COMPLICATIONS IN PEOPLE LIVING WITH HIV: A PLACE FOR PHYSIOTHERAPY ADVANCED SCOPE PRACTICE

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Background: Musculoskeletal complications are common in patients with HIV and can be difficult to diagnose. Advanced scope practice (ASP) for physiotherapists has emerged to deal with the growing burden of chronic diseases and to improve and expedite patient access to health services. This study aimed to a. document the complexities of assessing a HIV-infected patient (with multiple co-morbidities), presenting with a musculoskeletal problem and b. highlight the potential role of the ASP physiotherapist in chronic HIV-infection.

Methods: A single- case study design.

Results: A 22 year old HIV and Hep C co-infected man was referred from his local GP to a tertiary hospital Orthopaedic Clinic. The patient was then first seen in a physiotherapy-led screening clinic that allows selected patients to be seen earlier than would otherwise occur. The patient presented with central lumbar spine (Lx) pain, complicated by widespread pain in hands, feet, neck and unintentional weight loss. Past history included anxiety, depression, recreational drug/alcohol use, learning disability. The patient was naive to antiretrovirals, CD4 =760 and VL <20. All serologic testing and inflammatory markers were normal. X-rays (pelvis and Lx), MRI and bone scan were also normal. Non- HIV and HIV- associated musculoskeletal conditions were excluded including epidural/paraspinal collections, osteomyelitis, opportunistic infections, HIV- associated arthropathies. Despite extensive testing, physiotherapy found no mechanical cause of pain and a subsequent rheumatology review felt fibromyalgia most likely.

Conclusion: This case study demonstrates the complex task of making a differential diagnosis of the musculoskeletal system in chronic HIV-infection. Physiotherapy was able to see this case much sooner than the specialist medical system, excluded pathology and enabled a timely diagnosis. This study confirms that ASP physiotherapy can expedite access to health care for patients with chronic illness.

Disclosure of Interest Statement: No disclosure of interest.

Paper Ref	521
Theme	Sexual Health: Reproductive Health
Presentation Type	Sexual Health: Oral Presentation

SIK BILONG WANEM? LANGUAGE AND THE CHALLENGES OF RESEARCHING CULTURAL AETIOLOGY OF CERVICAL CANCER AND THE ACCEPTABILITY OF HPV VACCINE IN AUSTRALIA'S NEAREST NEIGHBOUR

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Introduction: Papua New Guinea (PNG) has one of the highest rates of cervical cancer in the world. Recent studies suggest that vaccine preventable high-risk HPV-types 16 and 18 are common in PNG women. In order to inform national cervical cancer prevention and treatment programs this study examined the cultural aetiology of cervical cancer and the acceptability of the HPV vaccine in PNG for the first time.

Methods: As of June 2013 148 interviews (women n = 98). 32 semi-structured interviews (women n=20) and 19 focus group discussions which employed body mapping (women n=78) have been conducted in in two field sites (Western Highlands & Eastern Highlands).

Results: The majority of participants had never heard the term 'cervical cancer' and did not know what or where the cervix was. Phrases commonly used by participants in Tok Pisin (a PNG lingua franca) to describe cervical cancer do not directly and unanimously refer to cervical cancer. When people described what they believed was cervical cancer they were more likely to be referring to chronic untreated sexually transmitted infections (STIs) or pelvic inflammatory diseases (PID). Most participants' knew about STI, albeit not specific aetiological agents. Only a few well-educated young women knew where the cervix was and knew that HPV, an STI, caused cervical cancer. Despite the difficulties of language participants' were unanimously in favour of a vaccine that prevented cancer in PNG women.

Conclusion: The metaphoric nature of *Tok Pisin* is an obstacle to discussing the biology of cervical cancer; although it can be done. Despite this, there was high acceptability for a vaccine. If a HPV vaccine is introduced, care must be taken to build health literacy using appropriate and accurate Tok Pisin to ensure the differentiation of different illnesses, their aetiology and importantly their treatment and prevention.

Disclosure of Interest Statement: This is an AusAID PNG funded study. No pharmaceutical grants were received in the development of this study.

Paper Ref	181
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

DIG-GAPS: MIND THE GAP!

ONLINE TECHNOLOGY AND SEXUAL HEALTH PRACTICE IN POLICY VOID ARENAS

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Introduction: Implementing a digital strategy is essential to combating the growing rates of STIs within priority populations of Northern Sydney Local Health District (NSLHD).

Digi-Gaps, a collaborative project, is an innovative response to addressing the rise in STIs and embracing digital technologies to enhance client experience and clinician practice.

Methods: We implemented a behavioural therapy model to this social marketing / public health project. The project conducted a literature review, designed a digital program response, implemented core clinical competencies in the use of online technologies and designed a strategy to meet client demands in a sector lacking policy directives.

Results:

- Online presence with the development of an independent website
- Interactive web based tools for online enquires
- Virtual tour of the local sexual health service hosted via social media site Vimeo
- Implementation of service policy and procedures
- Staff training and development sessions
- Improved client engagement with sexual health

Conclusion: As populations progress into digital worlds, publicly funded sexual health services need to have an active presence in these spaces. The lack of Health Policies around usage of social media, virtual communities and digital technologies limit the clinical and prevention responses crucial to addressing rises in STIs. Traversing new environments in a sector lacking clear policy directions continues to limit clinician and client interactions, placing greater burdens on priority populations.

Disclosure of Interest Statement: This project is part of core funding provided by HIV and Related Program, Primary and Community Health, Population Health of Northern Sydney Local Health District.

Paper Ref	110
Theme	Sexual Health: Biomedical
Presentation Type	Sexual Health: Oral Presentation

IS THE STAGE OF THE MENSTRUAL CYCLE RELATED TO CHLAMYDIA DETECTION?

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Introduction: We investigated the association between chlamydia detection and stage in the menstrual cycle to investigate whether chlamydia detection was higher at different stages of the cycle.

Methods: Electronic medical records for women attending Melbourne Sexual Health Centre March 2011 - 31st December 2012, who were tested for chlamydia by nucleic acid amplification of high vaginal, cervical, or urinary samples, and who recorded a date of last normal menstrual period (LNMP) between 0-28 days were included in the analysis. Logistic regression was used to calculate OR (95%CI) for the association of chlamydia with menstrual cycle adjusted by demographics and behavioural variables.

Results: Of the 10,017 consultations during the study period in which a woman a tested for chlamydia and had a valid LNMP, there were 417 in which chlamydia was detected. Detection rates were 3.4% (233/6816) in the follicular and 4.8% (184/3831) in the luteal phase of the menstrual cycle (OR 1.29 95%CI 1.1 – 1.6, p=0.01). Detection was significantly associated with the luteal phase (adjusted odds ratio (aOR) 1.4, 95%CI 1.1 - 1.8, p=0.004) when adjusted for age, number of male partners, symptoms, inconsistent use of condoms, site of sample and sexual partners overseas/ from overseas. Among women using hormonal contraception, there was no association with the latter half of the menstrual cycle (aOR 1.3, 95%CI 0.9, 1.8, p=0.18); among women not using hormonal contraception, association with the luteal phase was significant (aOR 1.6, (95% CI 1.1 - 2.3, p=0.007). The positive stored samples will undergo analysis to quantify bacterial load and determine if mean load differs across the cycle.

Conclusion: Chlamydia detection rates are substantially and significantly higher in the luteal phase of the menstrual cycle. This finding was only significant in women not using hormonal contraception, suggesting that hormonal variation across the menstrual cycle may influence chlamydia infection.

Disclosure of Interest: None Disclosed.

Paper Ref	528
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Poster

HEALTH KNOWLEDGE AND BEHAVIOUR IN AN ABORIGINAL COMMUNITY CONTROLLED HEALTH SERVICE IN QLD

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Background: Recent national surveys have increased our understanding of sexual health knowledge and risk behaviours of young Aboriginal and Torres Strait Islander people. This study examined STI knowledge and behaviour in young people accessing an Aboriginal Community Controlled Health Service (ACCHS) in QLD.

Methods: All clinic attendees aged 16 – 29 attending an ACCHS in rural/remote Queensland were invited by clinic staff to complete a survey administered on a tablet computer (target N=115). Participants provided informed consent. The survey is ongoing and an interim analysis was performed.

Results: Forty-two participants completed the survey (mean age 21.6, 74% female, 88% Aboriginal or Torres Strait Islander). Half the participants identified as “single” and 90% as “straight”. Virtually all respondents (95%) were sexually experienced with 64% having one partner in the previous 3 months. 20% of participants reported “always” using condoms with casual partners. Of those who were sexually experienced and were single or in an open relationship (N=21), 38% used condoms “the last time they had sex”. Around three quarters correctly answered chlamydia and general STI knowledge questions. A quarter of women (40% <21 years; 13% 21-29ys) were vaccinated against Human Papilloma Virus (HPV). Only 50% of participants (50% men; 52% women; 88% of vaccinated women) correctly identified the purpose of the HPV vaccine.

Conclusions: These findings are preliminary, but provide an insight into STI knowledge and behaviours of young people attending this ACCHS. In spite of high STI knowledge, condom usage was low, particularly among those who are single or in an open relationship. While women aged <21 years were eligible for school-based HPV vaccination, the majority reported they were not vaccinated. Further investigation into the uptake of HPV vaccination and how to promote safer sex in local young people may be warranted.

Disclosure of Interest Statement: REACCH is funded by the National Health and Medical Research Council.

Paper Ref	270
Theme	HIV/AIDS Theme D: Women & HIV
Presentation Type	HIV/AIDS Oral Presentation

THE CONTRIBUTION OF PARTNER TESTING TO PPTCT EFFORTS AND GETTING TO ZERO NEW PEDIATRIC HIV INFECTIONS IN PAPUA NEW GUINEA

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Introduction: As part of the adult HIV and PPTCT services, Clinton Health Access Initiative, in collaboration with the Papua New Guinea Department of Health and Eastern Highlands Provincial Health Authority, implemented an HIV partner testing program in a public sector health center in Eastern Highlands Province in 2007. The program aimed to facilitate partner testing and disclosure in a safe environment, remove obstacles to care, involve partners in the promotion of infant HIV-free survival, increase early case detection and treatment among individuals at high-risk of HIV, and promote adherence antiretroviral treatment among PPTCT mothers.

Methods: We retrospectively reviewed the charts of HIV-infected pregnant women who were referred to the PPTCT clinic between 2007 and 2011.

Results: 264 women enrolled in PPTCT services during the study period, of which 86% reported having a partner. 62% of partners were tested or had been previously tested for HIV, with 86% testing HIV-positive. Having a partner who lived or worked away and a woman's desire not to disclose her HIV status were commonly reported reasons for no partner testing. Of known HIV-infected partners, 75% had documented linkages to HIV care. While late presentation to the clinic prevented more than half of women (54%) from receiving a PPTCT regimen for >90 days prior to delivery, women with a tested partner were more likely to initiate ART >90 days prior to delivery ($p=0.05$) and their infants were less likely to die, be HIV-infected, or become lost-to-follow-up during the study period ($p=0.0002$).

Conclusion: Partner support is a key element to successful prevention of parent to child transmission of HIV infection. Interventions to facilitate safe disclosure, partner testing, and partner involvement in PPTCT activities may contribute to the achievement of zero new pediatric HIV infections.

Disclosure of Interest Statement: The Clinton Health Access Initiative in Papua New Guinea, including the PPTCT program referenced above, is funded by AusAID, Canberra, Australia. No pharmaceutical or other commercial grants were received in the development of this study.

Paper Ref	645
Theme	HIV/AIDS Theme A
Presentation Type	HIV/AIDS Oral Presentation

LABORATORY DIAGNOSIS OF HUMAN T-LYMPHOTROPIC VIRUS I/II (HTLV-I/II)

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The Northern Territory Government Pathology Services at Royal Darwin Hospital uses the Abbott Architect System for the detection of antibodies to HTLV-I/II in serum samples. Testing using this assay was introduced in December of 2008.

The Architect rHTLV-I/II assay uses synthetic peptides (gp46) and recombinant antigens (gp21) for detecting antibodies to HTLV-I and HTLV-II simultaneously. These are based on immunodominant region of gp21 and gp46 in the genome of HTLV-I and HTLV-II. This assay does not differentiate between HTLV-I and HTLV-II.

Differentiation and confirmation is performed by Western Blot testing, this is performed by NRL in Melbourne. Nucleic Acid Amplification tests can also aid in the diagnosis/confirmation of HTLV-I/II. Proviral DNA tests aid in detecting the virus and Proviral DNA Loads will be of use for monitoring HTLV if a treatment regime is determined.

Over the period of December 2008 to December 2012 NTGPS has performed 6200 tests for HTLV-I/II, of these 760 tests were positive by the Architect rHTLV-I/II assay. The actual number of individual positive patients was 498. On further testing the majority were confirmed as HTLV-I, a significant number were classed as Indeterminate for HTLV and a small number were not confirmed.

With globalization and mass movement of populations from all areas of the world HTLV is possibly a silent infection that has been overlooked and underestimated as a future health problem.

Paper Ref	274
Theme	HIV/AIDS Theme A: Immunology & pathogenesis
Presentation Type	HIV/AIDS Oral Presentation

HIV INFECTION IS ASSOCIATED WITH THE ABERRANT EXPRESSION OF B CELL RECEPTORS FOR CYTOKINES THAT REGULATE B CELL ACTIVATION AND DIFFERENTIATION

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Background: HIV infection causes B cell activation and dysfunction that deplete memory B cells and impair isotype diversification of IgG antibodies. Cytokines are critical for B cell activation (e.g. interleukin (IL)-6, interferon (IFN)- γ , IFN- α) and immunoglobulin isotype diversification (e.g. IL-21). As aberrant expression of cytokine receptors, such as the IL-7 receptor, is a characteristic abnormality of CD4+ T cells in HIV patients, we have examined cytokine receptor expression on B cells to gain further insights into B cell dysfunction.

Methods: Expression of receptors for IL-6, IFN- γ (IFNGR1 and IFNGR2), IFN- α (IFNAR1 and IFNAR2) and IL-21 was examined on B cell subpopulations (naïve, switched memory and marginal-zone-like (MZL)), defined by expression of IgD and CD27, in cryopreserved peripheral blood mononuclear cells from HIV patients who were ART naïve (n=10) or ART-treated (n=10) and non-HIV controls (n=10).

Results: IFNAR1 was increased on naïve (IgD+, CD27-), switched memory (IgD-, CD27+) and marginal zone-like (IgD+, CD27+) B cells ($p < 0.008$) and did not decline on ART. IFNAR2 was also increased on switched memory B cells ($p = 0.04$) but was lower on MZL B cells ($p = 0.01$), returning to normal on ART. IFNGR1 and IFNGR2 were lower on MZL B cells alone ($p = 0.02$ and $p = 0.005$, respectively) and normalised with ART, whereas IFNGR2 was increased on switched memory B cells. IL-21R was increased on all B cell subpopulations ($p < 0.03$) while IL-6R was increased only on switched memory B cells ($p = 0.04$).

Conclusions: B cells of HIV patients exhibit aberrant expression of IFN- α receptors to a greater extent than the IL-6R, suggesting that IFN- α may be more significant than IL-6 in B cell activation. Impaired isotype diversification of IgG antibodies is not associated with decreased IL-21R expression on B cells. Aberrant expression of some receptors persists on ART and might be used as a marker of ongoing B cell dysfunction.

Disclosure of Interest Statement: This research is funded by an NHMRC Program Grant. No pharmaceutical grants were received in the development of this study.

Paper Ref	485 and 592
Theme	HIV/AIDS Theme A: Immunology & pathogenesis
Presentation Type	HIV/AIDS Oral Presentation and Poster

NATURAL CONTROL OF HIV INFECTION IS ASSOCIATED WITH ISOTYPE DIVERSIFICATION OF IGG ANTIBODIES TO HIV P24

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Background: Understanding immune control of HIV infection in controllers should facilitate the development of therapeutic HIV vaccines. While CD8+ T cell responses to Gag proteins restricted by 'protective' HLA alleles exert a dominant effect, other immune responses also contribute to immune control. We have shown that IgG antibodies to HIV Gag proteins that have undergone isotype diversification, to include IgG2 as well as IgG1, may contribute to immune control and, furthermore, could be enhanced by vaccination (French MA et al. AIDS 2010 and 2013). We have investigated this further by optimising methods for demonstrating diversification of IgG antibodies to HIV p24.

Methods: Plasma samples from HIV controllers (n=14) and non-controllers (n=20) were examined for antibodies by ELISA using two forms of recombinant HIV p24 (cloned in E. coli or baculovirus) and native p24 protein as antigens. Assay conditions were optimised to minimise detection of low affinity antibodies detected in serum from non-HIV donors. Calibration was undertaken using sera containing high amounts of antibody and results expressed in arbitrary units.

Results: There were strong correlations between plasma levels of IgG1 and IgG2 antibodies to HIV p24 using E. coli-p24, baculovirus-p24 and native-p24 as antigens in HIV controllers (p<0.0001, 0.02, <0.0001, respectively) but not in non-controllers. Plasma levels of IgG1 antibodies to HIV p24 were higher in controllers than non-controllers using all 3 antigens (p=0.05, 0.04, 0.03, respectively) and the differences were even more pronounced for IgG2 antibodies to HIV p24 (p=0.005, 0.02, 0.003, respectively).

Analyses in a single controller without 'protective' HLA-B alleles who progressed from an elite to a viraemic controller over 5 years demonstrated an inverse correlation between plasma HIV RNA levels and the ratio of IgG2/IgG1 antibody to HIV p24 (p=0.016).

Conclusions: Isotype diversification of IgG antibodies to HIV p24 is associated with natural control of HIV infection.

Disclosure of Interest: There is nothing to disclose.

Paper Ref	594
Theme	HIV/AIDS Theme A: Immunology & pathogenesis
Presentation Type	HIV/AIDS Poster

HIV INFECTION IS ASSOCIATED WITH THE ABERRANT EXPRESSION OF B CELL RECEPTORS FOR CYTOKINES THAT REGULATE B CELL ACTIVATION AND DIFFERENTIATION

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¹ School of Pathology and Laboratory Medicine, University of Western Australia, Perth, Australia

² Department of Clinical Immunology, Royal Perth Hospital and PathWest Laboratory Medicine, Perth, Australia

Background: HIV infection causes B cell activation and dysfunction that deplete memory B cells and impair isotype diversification of IgG antibodies. Cytokines are critical for B cell activation (e.g. interleukin (IL)-6, interferon (IFN)- γ , IFN- α) and immunoglobulin isotype diversification (e.g. IL-21). As aberrant expression of cytokine receptors, such as the IL-7 receptor, is a characteristic abnormality of CD4+ T cells in HIV patients, we have examined cytokine receptor expression on B cells to gain further insights into B cell dysfunction.

Methods: Expression of receptors for IL-6, IFN- γ (IFNGR1 and IFNGR2), IFN- α (IFNAR1 and IFNAR2) and IL-21 was examined on B cell subpopulations (naïve, switched memory and marginal-zone-like (MZL)), defined by expression of IgD and CD27, in cryopreserved peripheral blood mononuclear cells from HIV patients who were ART naïve (n=10) or ART-treated (n=10) and non-HIV controls (n=10).

Results: IFNAR1 was increased on naïve (IgD+, CD27-), switched memory (IgD-, CD27+) and marginal zone-like (IgD+, CD27+) B cells ($p < 0.008$) and did not decline on ART. IFNAR2 was also increased on switched memory B cells ($p = 0.04$) but was lower on MZL B cells ($p = 0.01$), returning to normal on ART. IFNGR1 and IFNGR2 were lower on MZL B cells alone ($p = 0.02$ and $p = 0.005$, respectively) and normalised with ART, whereas IFNGR2 was increased on switched memory B cells. IL-21R was increased on all B cell subpopulations ($p < 0.03$) while IL-6R was increased only on switched memory B cells ($p = 0.04$).

Conclusions: B cells of HIV patients exhibit aberrant expression of IFN- α receptors to a greater extent than the IL-6R, suggesting that IFN- α may be more significant than IL-6 in B cell activation. Impaired isotype diversification of IgG antibodies is not associated with decreased IL-21R expression on B cells. Aberrant expression of some receptors persists on ART and might be used as a marker of ongoing B cell dysfunction.

Disclosure of Interest Statement: This research is funded by an NHMRC Program Grant. No pharmaceutical grants were received in the development of this study.

Paper Ref	251
Theme	HIV/AIDS Theme B: Antiviral Therapy
Presentation Type	HIV/AIDS Poster

HIV-1 DRUG RESISTANCE IN PAPUA NEW GUINEA

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Introduction: Antiretroviral therapy (ART) was introduced in Papua New Guinea (PNG) in 2004 and by the end of 2011, 78 health facilities were administering ART to 61.2 % (n=9435) of the registered HIV patients. As ART programs expand, the emergence of drug resistance becomes an increasing issue, including both acquired drug resistance (ADR) and transmitted drug resistance (TDR). This study examined the levels of TDR among treatment-naïve and ADR among treatment-experienced people living with HIV (PLHIV) in PNG.

Methods: Consenting PLHIV were recruited from ART prescribing sexual health clinics in two towns of high HIV burden provinces in PNG, Mt Hagen and Goroka, using convenient sampling. A questionnaire was administered to capture demographic information including time since diagnosis, ART history and self-reported ART adherence. Clinical histories were obtained from patient notes and blood was collected for HIV DR testing, viral load testing, and HIV subtyping.

Results: 209 PLHIV were recruited (61% female) with a median age of 38.5 years (range 15-62 years) and 51% (n=106) were ART naïve. 86% (n=89) of samples from ART naïve PLHIV were successfully genotyped of which 1.1% (n=1) had evidence of TDR. 17% (n=18) of ART experienced PLHIV had detectable VL (>220 RNA copies/ml) and were successfully genotyped. 6 of these 18 (33%) had ADR and reported non-adherence to ART. Their median time on ART was 29 months (range 2-84 months). Based on pol sequencing, 93% (n=100) of the successfully genotyped samples from both naïve and experienced PLHIV were subtype C.

Conclusion: There is evidence of HIV DR in PNG. A significant number of patients were failing therapy with evidence of ADR, likely resulting from non-compliance to treatment. Continued education focusing on positive behavioral change relating to treatment adherence together with continual monitoring of DR is therefore necessary to minimize HIV DR in PNG.

Disclosure of Interest Statement: This study is funded by the PNG National AIDS Council Secretariat.

Paper Ref	679
Theme	Sexual Health: Other
Presentation Type	Sexual Health: Oral Presentation

INCREASES IN STI TESTING FOLLOWING THE INTRODUCTION OF A SEXUAL HEALTH QUALITY IMPROVEMENT PROGRAM: FINDINGS FROM THE STRIVE TRIAL

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⁷Baker IDI, Alice Springs, Northern Territory

Background: STRIVE is a stepped wedge cluster randomised trial which aims to determine whether a sexual health quality improvement program (SHQIP) can reduce the prevalence of sexually transmissible infections (STI) by increasing STI screening and management. The trial is being undertaken in 65 primary care services in remote Aboriginal communities across three states. We assessed if there have been improvements in STI testing in participating services allocated to the SHQIP since mid 2011.

Methods: We examined trends in STI tests among 16-34 year olds in 6-monthly periods from July 2009 to December 2012, stratified by age group and sex. STI testing included chlamydia, gonorrhoea or trichomonas tests done on the same specimen.

Results: Between July-December 2009 there were 1535 STI tests conducted in 16-34 year olds; 68% were in females. Of these, 21% were in 16-19 year olds, 33% in 20-24 year olds, 25% in 25-29 year olds and 21% in 30-34 year olds, with similar breakdowns by gender. Over the 3.5 years there was a significant increasing trend in 6-monthly STI tests in both males and females, and all age groups ($p < 0.01$ for all). Between the first and last 6 months of the time period there was a 71% increase in STI tests in males, and a 58% increase in females. However, in the last 6 months, the majority of tests ($n=2488$) were still undertaken in females (66%).

Conclusion: Across participating health services, substantial and significant increases in STI testing in both males and females have been observed during the SHQIP. Full interpretation will need comparison to control groups at the conclusion of the trial. Although there have been some improvements in testing among males, further strategies are needed to increase testing in this group.

Paper Ref	681
Theme	Sexual Health: Other
Presentation Type	Sexual Health: Oral Presentation

STRIVE: BARRIERS AND FACILITATORS TO HEALTH WORKER INSTIGATED STI TESTING IN REMOTE ABORIGINAL COMMUNITIES

Garton L², Hengel B¹, Guy R³, Ward J⁴, Rumbold A⁵, Taylor-Thomson D⁶, Silver B⁶, McGregor S³, Dyda A³, Knox J³, Maher L³, Kaldor J³, on behalf of the STRIVE Investigators.

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³ Kirby Institute, University of New South Wales

⁴ Baker IDI, Central Australia

⁵ Adelaide University

⁶ Menzies School of Health Research

Background: Despite high rates of sexually transmissible infections (STIs), testing remains low in many remote Aboriginal primary health care centres. The current study aimed to explore barriers and facilitators to health worker initiated testing in this setting.

Methods: This qualitative study was undertaken as part of the STRIVE trial, a large cluster randomised controlled trial of a sexual health quality improvement program. We conducted 36 in-depth interviews in 22 participating health centres across four regions in Northern Australia.

Results: Participants included registered nurses (71%) and Aboriginal health workers (AHWs) (29%); most (80%) had worked in remote Aboriginal health service delivery for >1 year. Concerns for client confidentiality (lack of private consulting space), competing demands for staff time and high levels of staff turnover were common barriers reported by participants. There was a perception that staff turnover resulted in poor understanding of clinic systems, and a culture of acute health care at the expense of preventative health. Other reported barriers were the lack of male staff and kinship systems which prevented members of the community being together in the same clinic space. Many participants also expressed concerns about managing positive test results, predominately in terms of mandatory reporting requirements and the implications on personal relationships. There was very little difference in the reported barriers between nurses and AHWs. Participants described a number of ways to overcome these barriers, including the presence of AHWs, electronic reminder systems, greater use of adult health checks to normalise testing and additional staff training. However, gender of staff was perceived as more difficult to overcome.

Conclusions: Health service staff in remote Aboriginal communities identified a range of cultural, structural, and staffing issues as barriers to offering STI testing. These findings are being used to inform and enhance the STRIVE quality improvement program.

Paper Ref	292
Theme	HIV/AIDS Theme B: Living With HIV & Community Programs
Presentation Type	HIV/AIDS Poster

THE IMPACT OF HIV CO-CASE MANAGEMENT ON CLIENT'S WHO ARE COGNITIVELY IMPAIRED AND HAVE COMPLEX NEEDS: A CASE STUDY OF ONE CLIENT'S JOURNEY

Giewald H, Thompson J, Cole G, Carvallo C, Spengeler J, Holmes M

Adahps – A service for people with HIV and complex needs

Background: Adahps, established in 1996, is a case management service for people living with HIV and complex needs and/or cognitive impairment. The management of this client group is often perceived as a task-orientated process that requires little planning. The Adahps case management model emphasises each client's individual needs with a strategy to maintain adherence to antiretroviral (ARV) medication.

Disclosure of Interest: The work of Adahps is highlighted by a case study of a 40 year old heterosexual male with severe HIV-associated neurocognitive impairment, schizophrenia and homelessness. The client's progress was reviewed holistically comparing his health and psychosocial situation from referral in 2006 to now.

Results: Through the specialised skills of the Adahps team, this client's quality of life has improved substantially from living in a laneway with a CD4 count of zero, to independent accommodation with good health and a CD4 count of 1200 copies. The client's mental health is stable and he has reconnected with his family.

Conclusion: This case study demonstrates how the unique model of case management used by Adahps maximises client health and independence. It demonstrates the importance of continually assessing, planning, monitoring and reviewing the client's progress and treatment adherence. As the case manager progressively engages with the client a trusting relationship develops. The case manager is then able to detect when the client's presentation is changing and thus intervene in a timely and appropriate way. Frequently this results in being able to guide the client from a situation of chaos to one of stability and independence. The Adahps approach to case management, with its strong focus on ARV adherence, can be adapted to support others in the community in line with the 'treatment revolution'.

Disclosure of Interest: "Nothing to Disclose"

Paper Ref	383
Theme	Sexual Health: Reproductive Health
Presentation Type	Sexual Health: Oral Presentation

DECLINING HOSPITALISATION RATES OF PELVIC INFLAMMATORY DISEASE, ECTOPIC PREGNANCY AND EPIDIDYMITIS IN NEW SOUTH WALES

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Introduction: Pelvic inflammatory disease (PID) and ectopic pregnancy among women and epididymitis among men are important sequelae of chlamydia. Hospitalisations for these conditions have decreased in recent years although chlamydia notifications have increased. We analysed NSW hospitalisation data to investigate whether PID, ectopic pregnancy and epididymitis hospitalisations have continued to decline.

Methods: Hospitalisation rates of PID, ectopic pregnancy or epididymitis among 15-44 year old NSW residents were calculated for the years 2009 to 2011 using NSW hospital emergency and admitted episodes data and population census data. Logistic regression was used to assess change in rates over time adjusted for age-group and residential location (metropolitan versus non-metropolitan).

Results: Between 2009 and 2011, overall hospitalisation rates per 100,000 among 15-44 year old NSW residents were 243 (95%CI:238, 248) for PID, 90 (95%CI:88, 93) for ectopic pregnancy and 43 (95%CI:41, 45) for epididymitis. Hospitalisations for PID increased with age from 133 per 100,000 in 15-24 year olds to 267 per 100,000 in 25-34 year olds and 317 per 100,000 in 35-44 year olds ($p<0.01$) and were similar among metropolitan and non-metropolitan women (244 versus 241 per 100,000; $p=0.52$). Ectopic pregnancy rates were lowest among 15-24 year olds and highest among 25-34 year olds (54 versus 149 per 100,000; $p<0.01$) and higher among non-metropolitan than metropolitan women (102 versus 87 per 100,000; $p<0.01$). Epididymitis rates did not differ by age, but were higher in males living in non-metropolitan than metropolitan areas (57 versus 39 per 100,000; $p<0.01$). Between 2009 and 2011, hospitalisations for each condition decreased each year by between 3 and 6% (PID:OR=0.97; 95%CI:0.95, 0.99; ectopic pregnancy: OR=0.96;95%CI: 0.92, 0.99; epididymitis: OR=0.94;95%CI:0.89, 0.99).

Conclusion: While chlamydia notification rates continue to increase annually, hospitalisations associated with chlamydia sequelae continue to decrease. PID is associated with more hospitalisations than other chlamydia related morbidity.

Disclosure of Interest Statement: These data are being analysed as part of the Australian Chlamydia Control Effectiveness Pilot (ACCEPt) study funded by the Department of Health and Ageing and the National Health and Medical Research Council.

Paper Ref	225 and 593
Theme	HIV/AIDS Theme A: HIV vaccines
Presentation Type	HIV/AIDS Oral Presentation and Poster

TO ESCAPE, OR NOT TO ESCAPE: PIG-TAILED MACAQUE MHC I HAPLOTYPES THAT DRIVE CTL ESCAPE IN SIV INFECTION

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Introduction: The influence of HLA I alleles and CTL immunity in HIV infection have been well characterized in humans. Similarly, MHC I alleles affect disease progression in the infected pig-tailed macaque model, but this has not been well characterized. We studied the evolution of SIV CTL epitopes in pig-tailed macaques with specific MHC I haplotypes.

Methods: The whole SIV genome was amplified from plasma from 57 pig-tailed macaques infected for 13-64 weeks (mean= 16wks) with SIVmac251, and sequenced using Illumina next-generation sequencing technology. Cellular RNA was extracted and MHC typing performed using Roche 454 pyrosequencing. MHC and viral sequencing data were analysed using specifically designed pipelines.

Results: To validate this approach, we first selected the 30 animals expressing members of the Mane-A1*084 lineage and studied their SIV sequences over known CTL epitopes. We found CTL escape mutations at Gag164-172, Tat114-123 and Tat87-96, validating our general approach for studying SIV polymorphisms linked to CTL escape motifs. We have now identified multiple new haplotypes from MHC typing data and have defined associations with CTL escape mutations. For instance, a mutation at amino acid position 276 of Gag (R276K) is linked to the Mane-B069 haplotype, as 4/6 Mane-B069+ macaques have this mutation, compared to 0/48 macaques without this haplotype ($p < 0.0001$, Fisher's exact test).

Conclusion: We are defining novel CTL epitopes in pig-tailed macaques using deep sequencing to link SIV sequence variation with MHC I haplotypes. Escape mutations at the well-known CTL epitopes presented by Mane-A1*084+ macaques validate the current deep-sequencing approach to link viral sequence variation with immune selection due to specific MHC I haplotypes. This detailed study of pig-tailed macaque genetics and CTL responses will enable optimization of future vaccine design and treatment strategies.

Disclosure of Interest Statement: The authors have declared that no competing interests exist.

Paper Ref	522
Theme	HIV/AIDS Theme D: Country Specific Research
Presentation Type	HIV/AIDS Oral Presentation

"I LEFT MY LIFELINE": UNDERSTANDING USE AND REFUSAL OF ALTERNATIVE THERAPIES AMONG PEOPLE LIVING WITH HIV IN THE PACIFIC ISLANDS

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Introduction: Antiretroviral therapy (ART) became available in the Pacific Islands in the early 2000s, yet many people living with HIV (PLHIV) continue to turn to alternative therapies. ART is used to treat HIV infection, whereas for many people alternative therapies offer the hope of a cure or less harmful side effects. Use of alternative therapies in some cases leads people to forgo ART. This paper explores the use of alternative therapies among Pacific PLHIV including the types used, reasons for using them and why some respondents refused them.

Methods: A qualitative and participatory methodology was employed for this study, where a team of eight PLHIV peer researchers worked in collaboration with the lead researcher to carry out the study. In-depth interviews were used to explore HIV-positive people's experiences of treatment, a total of 49 interviews were conducted with participants from five Pacific Island countries and territories including Fiji, Guam, Kiribati, Samoa and Solomon Islands.

Results: Alternative therapies were used in every country and more than half of the respondents had tried an alternative therapy at some point since being diagnosed HIV-positive. Approximately half of those who tried alternative therapies ceased ART at the same time. The alternative therapies used were often a combination of herbal medicines, faith healing and traditional medicines. People mainly used alternative therapies because they were seeking or offered a cure. Yet, many participants also described how they choose not to use alternative therapies when they were offered because they had been cautioned by health workers or they simply did not believe in them.

Conclusion: This presentation will elaborate on how health workers in the Pacific Islands have an important role to play in cautioning PLHIV from using alternative therapies instead of ART.

Disclosure of Interest Statement: This project has been funded by the Pacific Islands HIV and STI Response Fund. Nothing to declare.

Paper Ref	364
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Oral Presentation

A SEXUAL HEALTH INTERVENTION INCREASES CHLAMYDIA AND GONORRHOEA TESTING IN REGIONAL ABORIGINAL COMMUNITY CONTROLLED HEALTH SERVICES IN NEW SOUTH WALES.

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Background: For almost two decades, higher notification rates for chlamydia and gonorrhoea have been reported among Aboriginal than non-Aboriginal Australians. We evaluated a tailored sexual health quality improvement program (QIP), implemented in four regional Aboriginal Community Controlled Health Services (ACCHS), to determine whether it had an effect on chlamydia and gonorrhoea testing in 15-29 year olds.

Methods: The QIP involved extracting and analysing of STI clinic data from patient management systems; six-monthly service visits to discuss current testing rates and the development of action plans by ACCHS staff. Using a before-and-after design, we compared the proportion of 15-29 year olds tested for chlamydia and gonorrhoea in a 12-month baseline (March 2011-February 2012) to a 12-month QIP period (March 2012-February 2013), by age group and sex. We used a chi-squared test to assess if the percentage tested was different between the two periods.

Results: There were 2,422 15-29 year olds who attended the services in the baseline and 2,559 in the QIP period. Overall chlamydia testing was 14% and increased from the baseline compared to in the intervention period (8% to 21%, $p<0.01$). In females, the greatest increase in chlamydia testing was in 15-19 year olds (8% to 24%, $p<0.01$) and for males the greatest increase was seen in 20-24 year olds (4% to 21%, $p<0.01$). Similar increases were seen for gonorrhoea testing. Over the study period, chlamydia positivity was 12%, highest in 15-19 year olds (15%), followed by 20-24 (12%) and 25-29 years olds (6%). There were 70 chlamydia diagnoses in the QIP compared to 31 in the baseline period. Less than five cases of gonorrhoea were detected.

Conclusion: Implementation of QIP was followed by an increase in chlamydia and gonorrhoea testing among 15-29 year olds and resulted in the detection of more infections, particularly in 15-24 year olds.

Disclosure of Interest Statement: The SHIMMER project is funded by the NSW Ministry of Health.

Paper Ref	373
Theme	HIV/AIDS Theme B: Delivery Of Care
Presentation Type	HIV/AIDS Oral Presentation

EXPANDED DISPENSING OF ANTIRETROVIRAL MEDICATIONS CAN REMOVE PERCEIVED BARRIERS TO ACCESSING TREATMENT AND IS WELL RECEIVED BY PEOPLE LIVING WITH HIV.

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Introduction: In Australia, antiretroviral medications can only be dispensed from hospital pharmacies. In December 2011 pharmacy staff at The Albion Centre, a major Sydney metropolitan HIV clinic, developed the Enhanced Medication Access (EMA) scheme which allows patients to have medications mailed to their home or nominated community pharmacy. Six months post-implementation a patient satisfaction survey was conducted.

Methods: A 12 question survey was conducted for subjects enrolled between May and September 2012 and assessed: reasons for enrolling; satisfaction with the service; and problems encountered. Questionnaires and reply-paid envelopes were sent with medications to all enrolled patients (n=118). A link to an online version of the survey was also provided. Data were analysed using SPSS v20.

Results: 57 responses were received (48% response rate). The most common reasons for participation were: convenience (46/57, 81%), and reporting previously having difficulty attending a hospital pharmacy (81%, 46/57). Prior to enrolling, 85% of users in regional NSW (12/14) travelled to Sydney to fill their prescriptions. Qualitative data indicated that users believed the EMA removed barriers including: inconvenient hospital opening hours; limited transport options for regional clients; and poor patient mobility. Overall, respondents were highly satisfied. Over half (40/57, 70%) had or would recommend the scheme, and only one intended to withdraw. Qualitative data confirmed this satisfaction. Some users reported enrolling in the scheme was too complex.

Conclusion: Lack of access to medications is a known barrier to commencing and remaining on treatment. The EMA was perceived to be a more convenient way of receiving medications and therefore may be a means to encourage HIV positive persons to maintain antiretroviral therapy. In addition, it was very well received by consumers. Given these findings, governments should investigate expanding the scheme. Research should be undertaken to assess the impact of the scheme on treatment adherence

Disclosure of Interest Statement: The Albion Centre is a facility of the Prince of Wales Hospital, Sydney. The EMA scheme was developed in consultation with the NSW Ministry of Health, the South Eastern Sydney Local Health District HIV and Related Programs Unit (SESLHD HARP), the AIDS Council of NSW (ACON), Positive Life NSW, and the Australasian Society for HIV Medicine (ASHM). The Scheme received funding from the NSW Ministry of Health. Neither the Ministry, SESLHD HARP, ACON, Positive Life NSW, nor ASHM had any input into study design, analysis, or decision to publish.

Paper Ref	175
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Poster

KOORI PRISON OUTREACH PROJECT; DAME PHYLLIS FROST CENTRE (MELBOURNE WOMEN'S PRISON)

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Introduction: Aboriginal and Torres Strait Islander Women are over represented in all female prisons in Australia. The majority of them are imprisoned for drug and alcohol related activities. Whilst health care is available within the Victorian Prison there was a reported reluctance to use this institutional health service for sexual and reproductive health issues.

Three Melbourne Health Services (The Victorian Aboriginal Health service, Melbourne Sexual Health Centre and Hepatitis Victoria) collaborated with the Dame Phyllis Frost Centre Koori Liaison Officer and the Prisoners to develop and deliver a seven week Health Information program. The emphasis was on Sexually Transmitted Infections and Blood Borne Virus'. The primary aims of the project were to impart knowledge and skills related to health as well as to develop relationships with the women for ongoing care post release.

Methods: There was a six week structured program and a graduation for the final week.

All sessions were informal and interactive and attempted to be responsive to the women's individual cultural needs, learning styles and literacy skills. Videos, games, demonstrations and other activities were included in the program.

Attending these sessions was voluntary but was recognized as work time within the prison system.

Results: Between 4 and 17 women attended each week. All reported to enjoy the "learning aspect of the program. Many attended regularly and when they did not attend it was due to unrelated issues.

The women demonstrated good knowledge on Hepatitis C but found Hepatitis B more confusing.

The women became more aware of the programs of Melbourne Sexual Health Centre and Hepatitis Victoria.

Conclusion: The prison supported the program and has asked that it may be repeated in the future. The fact that it was more than a one off program where relationships and trust could develop was considered to be a highlight of the program. A continued education program with the support of the prison may encourage women to seek STI/BBV screening upon release. Also consideration is being given to a holistic program covering a variety of relevant health issues for the future.

Disclosure of Interest Statement: NA

Paper Ref	276
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Oral Presentation

HEPATITIS B MANAGEMENT AND CLINICAL QUALITY IMPROVEMENT AT VICTORIAN ABORIGINAL HEALTH SERVICE

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Background: Aboriginal and Torres Strait Islander people are a priority population for hepatitis B with current estimates of the rate of active infection between 2-4% in urban settings. The Victorian Aboriginal Health Service (VAHS) has been a leader in providing universal infant and child vaccination from the early 1990s but has previously lacked an agreed protocol ensuring that testing and referrals were carried out in accordance with guidelines. The aim of this project was to evaluate HBV within VAHS through an examination of clinical data including testing, positivity and follow up and implement quality improvement activities.

Disclosure of Interest: This project was undertaken as a component of the REACCH collaboration. A review of HBV treatment and follow up was undertaken to examine testing, follow up and treatment. Service-wide testing data was extracted via GRHANITE software. Testing as measured against current guidelines and positivity were examined. A clinical audit was undertaken to examine HBV testing and follow up and a systems were put in place to increase guideline adherence.

Results: A total of 815 individuals who attended the service were tested for HBV across this study.

Testing in accordance with current guidelines increased from under 10% of people tested in 2009 to over 70% of people tested in 2012

279 clinic files were manually audited demonstrating - 53% Immune Vaccinated, 22% resolved infection, 20% non-immune, 3% chronic infection.

Systematic follow up in individuals with chronic infection improved as a result of the audit.

Conclusion: The introduction of reflective practice around HBV has resulted in improved patient management and screening at VAHS. Future directions at the service could include new approaches to immunisation of all clinic attendees who are at-risk for HBV infection.

Disclosure of Interest Statement: No conflict of interest by authors

Paper Ref	211
Theme	HIV/AIDS Theme B: HIV Associated Diseases
Presentation Type	HIV/AIDS Poster

INVESTIGATING THE UTILITY OF TUBERCULIN SKIN TEST, QUANTIFERON-TB GOLD AND EPIDEMIOLOGICAL RISK QUESTIONNAIRE FOR LATENT TUBERCULOSIS SCREENING IN HIV-INFECTED PATIENTS IN BRISBANE, AUSTRALIA

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Introduction: This study aimed to compare the utility of Tuberculin Skin Test (TST) and QuantiFERON-TB Gold (QFTB), in the setting of an HIV-infected patient cohort in Brisbane. We aimed to elucidate the concordance between tests, the applicability to our patients and to correlate epidemiological risk factors for latent tuberculosis infection (LTBI) with positive test results. This will aid with the development of screening strategies in low-prevalence settings and help to identify patients who may benefit from isoniazid prophylaxis.

Methods: HIV-infected patients with CD4 counts ≥ 200 cells/ μ L were eligible, while those with a history of active tuberculosis were excluded. Baseline demographics and QFTB were collected prospectively, and LTBI risk was assessed by epidemiological risk questionnaire (ERQ). TST results were obtained either from patient records if previously performed when CD4 > 200 or collected prospectively in patients without prior TST.

Results: Of 167 patients studied, more patients completed QFTB testing than TST (88% vs. 64.1%, $p < 0.0005$) and tested positive with TST than QFTB (38.3% vs. 16.3%, $p < 0.0005$). Test concordance was poor ($n = 96$, kappa 0.06). Risk factors for positive TST included higher CD4 count ($p < 0.05$), TB-endemic country of birth ($p = 0.02$, OR 2.70), TB exposure ($p = 0.01$, OR 5.91) and the presence of at least 3 risk factors (OR 3.68). QFTB positivity was associated with birth in ($p = 0.01$, OR 4.01) or travel to ($p = 0.04$, OR 2.64) a TB-endemic country, and the presence of more than 2 risk factors (OR 4.38).

Conclusion: Screening for LTBI in HIV-infected patients in a low TB-prevalence setting is complicated by poor concordance between screening tests. Both tests correlated comparably with epidemiological risk factors, though, the ERQ correlated better with QFTB than with TST. These findings support QFTB use in this population and may reduce morbidity associated with unnecessary isoniazid prophylaxis.

Disclosure of Interest Statement: No competing interests.

Paper Ref	472
Theme	Sexual Health: Biomedical
Presentation Type	Sexual Health: Oral Presentation

HIGH RESOLUTION ANOSCOPY – PRACTICE MAKES PERFECT

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Background: Liquid based anal Papanicolaou smears, followed by High Resolution Anoscopy (HRA) guided biopsies are increasingly being advocated to identify areas of High Grade Anal Intraepithelial Neoplasia (HGAIN). We hypothesized that the ability to identify HGAIN would increase with experience of the anoscopist, and that comparison with contemporary Papanicolaou smears might yield insights into technical abilities.

Methods: Specimens obtained by a single anoscopist in a tertiary referral clinic in Sydney, Australia, over the periods 2004-6, 2007-8 and 2009-10 were analysed. The proportion of individuals who had anal HGAIN detected in biopsies was linked to the most recent Papanicolaou result. Data were then grouped by the most serious Papanicolaou result.

Results: A total of 283 patients with at least one paired anal histological biopsy and cytological smear were included. The majority (99.3%) were men and the median age was 44 years. More than half (62.5%) were HIV infected. For patients with a Papanicolaou smear of Atypical Squamous Cells of Undetermined Significance (ASCUS) or higher grade, the proportion in whom HGAIN was found at anoscopy increased over the study period from 38.6% to 66.0% ($p < 0.001$). Likewise, for patients with a Papanicolaou smear of Low-grade Squamous Intraepithelial Lesions (LSIL) or higher grade, HGAIN detection increased from 38.8% to 68.3% ($p < 0.001$).

Conclusion: The proportion of cases with histologically proven HGAIN increased over time, suggesting that the anoscopist became better at identifying precancerous lesions. The alternative explanation, that the cytological assessment became less accurate is unlikely, as they were all performed by a team of experienced cytologists in a large, accredited laboratory. This observation has important implications for quality assurance procedures in clinical facilities. Furthermore, such changes over time could potentially impact on long term observational studies, where increasing diagnoses of HGAIN could be expected, regardless of the intervention.

Disclosure of Interest: All authors declare that they have no conflicts of interest.

Paper Ref	461
Theme	Sexual Health: Biomedical
Presentation Type	Sexual Health: Poster

MYCOPLASMA GENITALIUM: TEST OF CURE POSITIVITY RATES WITH STANDARD FIRST-LINE TREATMENT

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Background: Mycoplasma Genitalium(MG) is a well-established pathogen implicated in Non Gonococcal Urethritis(NGU) and cervicitis. Current European and American guidelines advocate oral Azithromycin 1g as standard NGU treatment. All acknowledge treatment failure rates where MG is the causative pathogen. This study describes antibiotic use and positivity rates at test of cure(TOC) in all patients at Sydney Sexual Health Centre(SSHC). SSHC policy is for TOC one month post treatment.

Methods: All patients diagnosed with MG were identified. Data was manually extracted from patient files.

Results: 218 MG cases were identified between 2009-2013. 144(66%) were male, 196(90%) were symptomatic and 8(4%) were MG contacts.

161 cases had Azithromycin 1g as first-line therapy. 88 (55%) cases had TOC; 65(74%) were negative and 23(26%) were positive.

29 cases had an extended Azithromycin course as first-line therapy. 15 cases had TOC; 10(67%) were negative and 5(33%) were positive.

13 cases had a Doxycycline course as first-line therapy. 6 cases had TOC; 3(50%) were negative and 3(50%) were positive.

15 cases had a Moxifloxacin course as first-line therapy. 6 cases had TOC; 5(83%) were negative and 1(17%) was positive at one month.

Overall 115 cases(53%) had TOCs. Assuming cases lost to follow-up(LTFUs) had negative TOCs, the positive TOC rate for azithromycin-containing regimens was 28/190(15%). Assuming LTFUs had positive TOCs, the positive TOC rate was 115/190(61%).

Conclusion: Excluding LTFUs, we have demonstrated high rates of MG positivity at TOC of 26-33% following a first-line azithromycin-containing treatment. We cannot exclude reinfection in these cases however it is unlikely to explain all positive results. We also found one moxifloxacin possible treatment failure although again, reinfection cannot be excluded. These findings add to the small amount of published data in this area and show that azithromycin may no longer be acceptable first-line MG treatment.

Disclosure of Interest Statement: none

Paper Ref	354
Theme	Sexual Health: Other
Presentation Type	Sexual Health: Oral Presentation

THE CONSCIENCE CLAUSE IN RELATION TO TERMINATION OF PREGNANCY SERVICE

Hamilton R A

Background: Medical termination of pregnancy (MTO) has been available and successfully used as an option for women internationally since 1988. The regimen for MTO of 200mg Mifepristone followed by 800mcg Misoprostol 24 – 48 hours later, results in abortion in 99% of cases. Since Mifepristone's recent availability in Australia, Marie Stopes International has performed more than 10,000 MTO procedures in Australia since 2009. In Victoria, the Law Reform Commission removed pregnancy termination ("abortion") from the criminal statutes in August 2008, which provided women and health care professionals with protection from criminal prosecution for their legal involvement in termination of pregnancy (TO).

Approach Taken: Such favorable developments (change of legislation and the availability of Mifepristone) have prompted the Barwon Health TO service providers to engage in discussion with the Sexual Health Clinic to review their service and in particular the feasibility of introduction of MTO to the current TO service.

Results: Such discussions have not been hindered by budget – but by staffing complications. Such complications arise from the "conscience clause". Areas of set-back to progress this option for women have included the difficulty to enlist doctors to participate in prescribing the Mifepristone and also in gaining doctors to undertake the gestational ultrasound to confirm the ability to participate in a MTO.

Conclusion: Although we are able to administer safely the combination of Mifepristone and Misoprostal, why are there such hurdles to provide the choice? So, where are we up to with providing options for local women to have the right to choose between MTO or Surgical Termination of Pregnancy (STO)? Here I would like to review perceived and real reasons other services may have encountered and reflect on such barriers to determine the practicality of what is surmountable and what is not.

Paper Ref	284
Theme	HIV/AIDS Theme D: Social concomitants of living with HIV
Presentation Type	HIV/AIDS Oral Presentation

BREAKING OUT: HIV TREATMENT AND CARE WHEN PLWHIV TRANSITION FROM CUSTODIAL SETTINGS INTO THE COMMUNITY

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Background: People Living with HIV (PLHIV) who are transitioning from custodial settings are at risk of experiencing treatment interruptions and loss to follow up for vital HIV care. The NSW Persons In Custody HIV Community Referral Project (PICHCRP) aims to ensure PLHIV who are transitioning from custodial settings back into the community receive seamless HIV service, care and support.

Methods: PICHCRP working group members collated demographic and clinical data on PLHIV who were referred to the project using information from referral forms, feedback from clinicians and information from JH&FMHN & LHD medical records. Data were then collated to examine common characteristics and themes associated with the population group.

Results: These data identifies demographic details of the 51 PLHIV who were referred to the project over a 23 month period. 16% (N=7) clients had multiple referrals. 25% (n=11) of clients referred identified as Aboriginal. 84% (21 of the eligible 25) clients were still linked in with HIV health supports six months after release from custody. 18% (n=9) refused access to PICHCRP services or were lost to follow up after release. 18% (8 of 44) of clients referred were re-incarcerated. Housing remains an important issue for PLHIV with only 39% (14 of 36) having secure housing on release. Further evaluation of the project by staff and clients identified a number of areas to develop engagement, care and support.

Conclusion: The PICHCRP systematises referral pathways for PLHIV transitioning back into the community from NSW custodial settings. The project also evaluates levels of engagement and contact with medical and psychosocial supports for this marginalised client group. Data illustrates the successful partnership between NSW Health LHD and JH&FMHN staff enabling streamlined service provision and improved client health and psychosocial outcomes. Finally, this presentation identifies practice methods which assist to challenge institutional barriers for this client group.

Disclosure of Interest Statement: The authors have no conflict of interests to declare.

Paper Ref	117
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Oral Presentation

ONLINE BANNER ADVERTISING: NOT THE PREFERRED MEDIUM FOR PROMOTING A PUBLICLY FUNDED SEXUAL HEALTH CLINIC TARGETING MEN WHO HAVE SEX WITH MEN

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Background: Based on evidence of the success of utilising online campaigns to access MSM, RPA Sexual Health, a publically funded sexual health service (PFSHS) in the inner-west of Sydney, trialled two clinic advertising campaigns over a three year period. Both campaigns were developed with community consultation, targeting MSM and were predominantly online. They were evaluated and compared to measure their success and the effectiveness of advertising a PFSHS online.

Methods: Campaign 1 utilised five gay-cruising websites and Facebook. Campaign 2 utilised print media, adult-shops, sex on premises venues (SOPV) and three online MSM community publications. Both campaigns considered, client feedback, number of new clients and walk-ins as indicators of success. Campaign 2 was conducted following a clinic relocation, therefore, number of failed-to-attend (FTA) was also considered.

Results: An upward trend in overall and walk-in attendance was noticed after campaign 2, including a 17% decrease in FTA. Following each campaign period, of those attending the service (n=265), only 14% (n=36) reported seeing the advertisements. Of those who reported seeing campaign 2, only 16% reported seeing it online compared to 84% who had seen it in print media, at adult shops and SOPV. Following both campaigns, a small number of men (n=15) reported attending the clinic as a result of seeing the advertisement. Neither campaign resulted in an increase in new clients (101, Jan-Mar 2012: 100, Jan-Mar 2013). Evaluation respondents recommended strengthening future campaigns by sending text messages, promoting services through general practice, purchasing a higher Google search result position and promoting a service website.

Conclusion: Despite the success of online MSM health promotion campaigns, online advertising has not proven a successful medium for promoting a publicly funded sexual health clinic. Further evidence is required to assess the effectiveness of off-line mediums such as print media, adult shops and SOPV.

Disclosure of Interest Statement: None

Paper Ref	130 and 596
Theme	HIV/AIDS Theme A: Basic Retrovirology
Presentation Type	HIV/AIDS Oral Presentation and Poster

ENFORCEMENT OF HIV-1 POSTINTEGRATION LATENCY BY A TAT MUTANT

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After HIV is integrated into the host genome, expression of provirus can be reversibly silenced. Further virus transmission is limited by the life span of the infected cell, its progeny and ability of these cells to make infectious virus. HIV latency mostly operates at the transcriptional level meaning that key regulators of latency include cellular transcription factors and HIV Tat.

In the absence of Tat, transcription from the HIV LTR promoter by RNA polymerase II is terminated during the early elongation phase. Tat overcomes transcriptional repression by associating with the cellular complex pTEFb which interacts with the cis-acting RNA element TAR present at the 5' end of viral transcripts.

Viral spread from latent cells also requires HIV Rev. Rev is a viral RNA binding protein that specifically interacted with the cis-acting RNA element RRE. Rev is required for transport of HIV singly-spliced and unspliced HIV mRNA from the nucleus to the cytoplasm. Hence, Rev is also a major factor required to make infectious virus particles and contributes to viral spread from latently infected cells.

Recently, a newly engineered Tat protein, named Nullbasic, was shown to have a very strong ability to inhibit HIV growth and infection in human CD4 T cells. Whereas all other protein-based inhibitors appear to inhibit a single step of the HIV life cycle, Nullbasic has been shown to simultaneously stop three separate steps of the life cycle by itself. Human immune cells protected by Nullbasic demonstrate remarkable resistance to HIV. Here we investigate the ability of Nullbasic to oppose activation of HIV from three human cell lines; J Lat 6.3, ACH2 and U1. Further research aimed at determining that Nullbasic can block virus activation, particle production and viral spread from latently infected human cell lines will be presented.

Disclosure of Interest Statement: Funding provided by the National Health and Medical Research Council and Australian Research Council to David Harrich and Dongsheng Li.

Paper Ref	450
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

QUALITY IN SEXUAL AND REPRODUCTIVE HEALTH SERVICES: VIEWS OF YOUNG PEOPLE AND SERVICE PROVIDERS IN REGIONAL AND RURAL QUEENSLAND

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Introduction: Young people have poor access to primary health services. This project studies the acceptability and accessibility of sexual and reproductive health (SRH) services for young people in regional and rural Queensland, and markers of quality in SRH service delivery as defined by young people and service providers

Methods: Multiple case studies approach using mixed methods. Cases selected purposively and described using service mapping and usage data, electronic survey and focus group discussions with young people, and interviews with service providers. Elements of action research are used through working with young people and service providers to identify problems and develop solutions.

Results: Findings from 343 young people surveys from rural and regional Queensland and 30 service provider interviews are presented. Service providers indicate that awareness of their services is strongly facilitated by peer communication. However, although the majority of young people are satisfied with the care that they receive, a significant number may not share their experience with others. Young people highly value the personal characteristics of the service provider, such as a friendly and non-judgemental attitude when rating services. In contrast, service providers perceive structural issues to be more important for young people.

Conclusions: SRH service provision could be improved by ensuring that services are highly supportive and respectful of the unique challenges that young people face in caring for their sexual health. Increased peer communication and a model of service provision where general health services coexist with sexual health services may increase acceptability and accessibility of sexual health services amongst youth.

Paper Ref	451
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

CONNECTIONS: IMPROVING THE CONFIDENCE OF GENERAL PRACTITIONERS (GPS) IN SEXUAL HEALTH CONSULTATIONS WITH YOUNG PEOPLE

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Introduction: General practice is the key setting for delivery of STI testing and treatment for young people, particularly in rural and regional areas of Australia where there are few specialised services. There may be uncertainties, particularly amongst international medical graduates about medicolegal, prescribing and child protection issues. These may act as barriers for effective consultations.

In 2011, Family Planning Qld developed a training resource ("Connections") and, with Health Workforce Qld, conducted workshops throughout Qld. The program was formally evaluated.

Disclosure of Interest: A non experimental pre- post design was used to evaluate the impact of the educational activity in changed levels of confidence of GPs on 30 questions, completed as an online survey prior to and 3 months after attending a "Connections" workshop.

Post workshops evaluations by participants against the stated learning objectives and teaching methods were analysed.

Results: Of the 68 attendees attending 6 workshops, 51 completed the pre and post survey. In all domains, at least 60% of participants had positive change in reported confidence levels at 3 months. The greatest positive change in confidence were in :

- making management decision without parents knowledge
- discussing confidentiality
- introducing sexual health screening opportunistically
- negotiating time to spend with young person alone

The learning objectives were partially or entirely met for 96% of participants. Using the HEADSS assessment tool (93%), discussing confidentiality (88%) and identifying impact of their own values in areas of practice (88%) were entirely met for the greatest number of participants.

Watching the filmed scenarios was rated highly as an effective training method and large group discussion was preferred by more participants than small group discussions.

Conclusions: The Connections training program increases confidence of GPs across domains including raising STI screening opportunistically and discussing confidentiality with young people. This increased confidence may improve the effectiveness of clinical consultations in addressing SRH concerns in general practice.

Paper Ref	491
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

CONTRACEPTION SEARCH FILTERS: CONNECTING THE SEXUAL AND REPRODUCTIVE HEALTH COMMUNITY TO THE EVIDENCE WITH ONE CLICK

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Section 1.01 Background: While the literature and evidence base developed by and relevant to sexual and reproductive health (SRH) is growing, not all of this literature is immediately and easily accessible for those working in the field. Indeed, this literature is published and stored in different repositories and is described and indexed in different ways. Sexual Health and Family Planning Australia (SH&FPA) partnered with Flinders University to trial experimentally developed one-click 'search filters' for quick, reliable retrieval of PubMed's contraception, emergency contraception (EC) and Long Acting Reversible Contraception (LARC) literature.

Section 1.02 Method: Included studies within Cochrane Fertility Regulation Group systematic reviews were used to create test sets of representative citations for each of the three contraception topics. Contraception and LARC sets were divided into three subsets – Term Identification Set (TIS) (20%), Filter Development Set (FDS) (40%) and Filter Validation Set (FVS) (40%).

Frequency analysis of each TIS revealed the most common subject headings (MeSH) and textwords. Terms retrieving 5% or more of TIS citations were considered for search strategies. Candidate terms were tested, singly and in combination, for their ability to retrieve FDS citations. The search with the best FDS retrieval for each topic became that topic's search filter. Retrieval consistency was then validated by testing each filter's level of performance in its FVS.

Results: In their respective FV sets, the contraception filter retrieved 96.4% (322/334) citations and the LARC filter 94.9% (167/176). The EC search retrieved 100% of its full test set.

Conclusion: For the benefit of the SRH clinicians, policy makers, and researchers, these high performance contraception search filters are now available via one-click PubMed searches on the Flinders Filters website (<http://www.flinders.edu.au/clinical-change/research/flinders-filters/search-filters/contraception/contraception.cfm>). Each filter can be combined with a user's own specific topic for more targeted retrieval.

Disclosure of Interest Statement: Sexual Health and Family Planning Australia are funded by the Department of Health and Ageing. No grant was received for the development of the contraception filters.

Paper Ref	208
Theme	Sexual Health: Biomedical
Presentation Type	Sexual Health: Oral Presentation

THE LET THEM KNOW WEBSITE; A POPULAR PARTNER NOTIFICATION METHOD AMONG FAMILY PLANNING CLINICIANS ACROSS AUSTRALIA

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Background: This study assessed the uptake by clinicians of the Let Them Know (LTK) website, an online partner notification website offering text message and e-mail notification services to individuals diagnosed with sexually transmissible infections (STIs).

Methods: A mixed methods exploratory sequential design was employed. A cross-sectional online survey of nurses and doctors working at family planning clinics was conducted in May-June 2012. Logistic regression was used to assess factors associated with LTK website use. Eleven focus groups were conducted to explore the context of LTK use.

Results: Of 212 clinicians working at family planning clinics in Australia, 168 participated in the survey (response rate=79%), 98% were females, 56% were nurses and 44% doctors. Of the participants, 23% reported they always recommended the LTK website, 26% usually, 38% sometimes, and 13% never. Use of the LTK website varied by state and territory. Among the 13% of clinicians who never recommended the LTK website, 90% said they would like access to this resource. Managing more clients with chlamydia, encouraging the clients to notify their partner and following up the client to confirm partner notification, were independently associated with recommending the LTK website. The focus groups found that clinicians had integrated the LTK website into routine practice; however there was variation in knowledge and use of the LTK website within individual clinics. Clinicians reported the website was particularly useful for clients who were ambivalent about contacting sexual contacts.

Conclusion: The LTK website has become an important partner notification tool for family planning clinicians. The variation in use across states and within clinics and the desire to have access to it suggests further awareness of the website is warranted. Further research is needed to determine the efficacy of the tool in regards to treatment of the partner, and re-infection of the index case.

Disclosure of Interest Statement: No potential conflicts are declared.

Paper Ref	94
Theme	HIV/AIDS Theme B: Social & Behavioural Research
Presentation Type	HIV/AIDS Oral Presentation

EFFICACY AND ACCEPTABILITY OF A COMBINATION INTERVENTION FOR SMOKING CESSATION IN HIV POSITIVE INDIVIDUALS: A PILOT STUDY

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Background: HIV positive gay men have high rates of cigarette smoking. The risks of smoking in addition to the elevated risk of cardiovascular disease and some malignancies in people with HIV means smoking cessation interventions should be prioritised.

Methods: HIV positive individuals were referred by clinicians in the local area to a smoking cessation clinic established at RPA Sexual Health and offered a combination of nicotine replacement therapy (NRT) and counselling. Demographic and behavioural data were collected, including an objective measurement of smoking (Smokalyzer) and a measurement of nicotine dependence (Fagerström score).

Results: 41 men aged 29-69 (median 46 years) were enrolled. More than half (51%) had been diagnosed with depression and less than one-third (30%) were currently employed. Participants had smoked for a median of 27 years (range 14-54 years), and mean number of cigarettes per day (CPD) smoked was 23 (range 4-50). Only 21 of 41 participants (51%) returned for at least one follow-up visit and 5 had successfully quit smoking. Successful quitting was associated with more years of smoking ($p=0.031$) and older age ($p=0.060$), but not baseline Fagerström score ($p=0.582$). Of participants who attended 6-month ($n=18$) and 12-month ($n=16$) follow-up, there was a significant decline in mean CPD from baseline (6-month: 14 vs 27, $p=0.003$; 12-month: 15 vs 26, $p<0.001$). Self-reported reduction in CPD was supported by Smokalyzer results at 6 months. 20/21 (95%) participants rated the intervention as helpful/very helpful. Participants identified the most helpful interventions as NRT (76%) and psychological support (71%).

Conclusion: Follow-up was poor in this disadvantaged population of HIV-positive men. Only 12% of participants were known to have quit smoking. Nonetheless, participants who attended follow-up significantly reduced their CPD and rated the intervention highly. Offering this service after-hours may improve attendance of a more diverse group of HIV positive individuals.

Disclosure of Interest Statement: No conflicts of interest.

Paper Ref	321
Theme	Sexual Health: Other
Presentation Type	Sexual Health: Oral Presentation

DEFINITIONS OF EARLY FIRST SEXUAL INTERCOURSE

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Background: Early first sexual intercourse has been proposed as an important marker of later sexual and reproductive health. Discussions of what constitutes early sexual debut in this context, however, have been limited.

Methods: This paper presents findings from a systematic review of the literature before further exploring common definitions of early first sexual intercourse using data from a population-based study of Australian men and women.

Results: The systematic review of the literature found definitions of early first sexual intercourse have been conceptualised in a number of different ways. Some have used age at first sexual intercourse as a continuous variable while others have taken the ages given by respondents and categorised them. Overall, those who elected to categorise early first sexual intercourse tended to follow one of two methods; choose an age to separate those who had sex early first those who did not (for example, <16 years), or secondly allocate a proportion of the sample as early, this was done separately for different subgroups (for example, the earliest 25% of each generation). Next, these definitions will be further explored using data from the Australian Longitudinal Study of Health and Relationships.

Conclusions: The lack of standardisation in what constitutes early first sexual intercourse makes it very difficult to compare the findings of one study with another. To the best of our knowledge, our investigations will be the first to critically examine definitions of early first sexual intercourse in the context of later sexual and reproductive outcomes.

Disclosure of Interest Statement:

The Australian Study of Health and Relationships was funded by the NHMRC (grants 234409 and 487304).

Paper Ref	549
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Oral Presentation

HIV AND SYPHILIS CO-INFECTIONS AND RE-INFECTIONS: TRENDS FROM VICTORIA

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Introduction: Since 2009, the Victorian syphilis enhanced surveillance system has been collecting HIV status and syphilis re-infection status for infectious syphilis cases. Baseline data from 2009 showed that 31% of the infectious syphilis cases were HIV positive and 18% reported were re-infections. This suggested that syphilis transmission among a pool of HIV positive MSM was making a considerable contribution to the syphilis epidemic in Victoria. We analysed the data from 2009 to 2012 to determine whether this pattern of transmission is continuing.

Methods: Notification data for infectious syphilis between 2009 and 2012 were reviewed by HIV infection status, syphilis re-infection status and risk factor exposures.

Results: A total of 1,472 cases of infectious syphilis were notified in the reporting period, 93% were in males (n=1,362) and 79% were in MSM. Thirty per cent (n=435) were HIV positive (94% in MSM). Fifteen per cent (n=217) reported having a syphilis re-infection (93% in MSM; 62% HIV positive). Ninety-nine per cent of the HIV positive MSM had a previous episode of syphilis infection compared to 81% of the HIV negative MSM. Among HIV positive MSM, 45% of the syphilis re-infections were diagnosed following doctor suggested screening compared to eight per cent in HIV negative people. For HIV negative MSM, 44% of the re-infections were diagnosed as a result of patient presenting with clinical signs and symptoms compared to 28% in HIV positive MSM.

Conclusion: Surveillance data suggests that the re-infection especially among HIV positive MSM is contributing to the ongoing syphilis epidemic in Victoria. This highlights the importance of continued monitoring of this trend over time. Further research is warranted to better understand this epidemiological trend and to inform the development of public health interventions specifically targeting syphilis among HIV positive MSM.

Disclosure of Interest Statement: Nil.

Paper Ref	670
Theme	HIV&AIDS: Theme B
Presentation Type	HIV/AIDS Poster

CHARACTERISTICS OF AUSTRALIAN HIV CLINICS: RESULTS OF THE ASHM NATIONAL CLINIC RESOURCES SURVEY.

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Background: The ASHM Clinic Resources Practice Survey aimed to obtain insight into the practice support and technical capabilities of general practice (GP), community and hospital-based clinics providing HIV treatment and care. The survey was conducted from December 2012 to August 2013. Resulting data will inform the HealthMap project and other HIV-related programs.

Methods: An online survey was distributed to 128 service providers involved in HIV clinical management. Seventy-four completed the 21 questions investigating the range of services and clinical support provided; type of desktop software used; patient communication strategies employed; and Care Plans/Team Care Arrangements initiated.

Results: The majority of HIV service providers (46%, n=34) were in private group general practice with 42% (n=31) in a sexual health service or sexual health clinic. The three most commonly used desktop practice management software were Best Practice (23%, n=17), SHIP (22.2%, n=16) and Medical Director (18%, n=13).

Only 8% (n=6) had no nurse working in their service, whilst 13% (n=9) had a part-time nurse. Over half (56%, n= 39) reported having more than one full-time nurse.

Nurses provided a range of services, including triage (76%, n=49), patient call backs (82%, n= 53), delivering results (75%, n= 48), vaccinations (98%, n= 63), patient education (81%, n= 52), develop/update care plans (41%, n= 26), develop (42%, n= 27) and update (41%, n=26) team care arrangements.

Only 15% (n= 10) of services had an aboriginal health worker in their clinic. Finally, the majority of services (89%, n=57) prepared annual management/care plans for patients with HIV.

Conclusion: The survey findings demonstrate the diversity of HIV clinic resources in Australia. Over two-thirds of clinics had at least one full-time primary care nurse fulfilling diverse roles including chronic disease management. Software systems reflected the mix of products in the Australian general practice market and the high penetration of SHIP in sexual health clinics. These are important factors to consider when developing models of care, quality improvement programs and health service research.

Disclosure of Interest Statement: No pharmaceutical grants were received in the development of this study.

Paper Ref	119
Theme	Sexual Health: Biomedical
Presentation Type	Sexual Health: Poster

POST-TREATMENT DETECTION OF AZITHROMYCIN IN SELF-COLLECTED HIGH-VAGINAL SWABS USING LIQUID CHROMATOGRAPHY AND TANDEM MASS SPECTROMETRY (LC-MS/MS)

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Introduction: Questions have been raised over the efficacy of 1g azithromycin for the treatment of chlamydia infection. In order to measure effective absorption, we developed and tested a protocol to quantify the concentration of azithromycin using liquid chromatography and tandem mass spectrometry (LC-MS/MS) in self-collected high-vaginal swabs.

Methods: Ten healthy women self-collected a high-vaginal swab (baseline) prior to taking a 1g dose of azithromycin. A blood sample was collected four hours after taking the full dose to determine plasma concentrations of azithromycin. Participants then self-collected a high-vaginal swab each day for a further 9 days. All swabs were immediately preserved in 1ml of 100% Methanol and stored at -80C prior to analysis. Samples were extracted with chloroform, which contained 10mg/ml of leucine enkephalin as an internal standard. An azithromycin standard curve was prepared in high-vaginal samples from a separate individual and normalised to membrane lipid concentrations. Azithromycin concentrations in the high-vaginal and plasma samples obtained from the 10 volunteers were normalised to membrane lipid concentrations and then calculated using the standard curve.

Results: Azithromycin was detected at varying concentrations in all 10 women in all post-treatment samples. The highest average normalised azithromycin concentration of 916ng/ml (range= 213-2722ng/ml) was detected on day 2 post-treatment. The lowest average azithromycin concentration was 119ng/ml (range= 51-396ng/ml), 9 days post-treatment. The average concentration of azithromycin detected in blood samples was 533ng/ml (range= 104-1019ng/ml). In 7/10 women azithromycin concentrations remained above 64ng/ml, the hypothesised mean inhibitory concentration (MIC) of azithromycin for chlamydia, for the entire 9 days.

Conclusion: We have tested a validated method for detecting the azithromycin concentration in self-collected high-vaginal samples using LC-MS/MS. Azithromycin concentrations remained above the reported MIC of 64ng/ml for up to 8 days post-treatment in high-vaginal swabs from 10 healthy women.

Disclosure of Interest Statement: The authors have no conflicts of interest to declare.

Paper Ref	616
Theme	HIV/AIDS Theme C
Presentation Type	HIV/AIDS Oral Presentation

WILLINGNESS TO USE HIV PRE-EXPOSURE PROPHYLAXIS AMONG AUSTRALIAN GAY AND BISEXUAL MEN: FINDINGS FROM THE PREPARE PROJECT 2011-2013

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Introduction:

HIV pre-exposure prophylaxis (PrEP) with antiretroviral drugs has been shown to reduce the risk of HIV infection among homosexually active men. It is available in the USA but not in Australia. We assessed whether willingness to use PrEP among Australian gay and bisexual men changed between 2011 and 2013, and the factors associated with interest in PrEP.

Methods:

National, online, cross-sectional surveys of Australian gay and bisexual men were conducted in April-May 2011 and June-July 2013. The questionnaires assessed attitudes to PrEP, HIV treatments and condoms, demographics and behaviour. Willingness to use PrEP was measured with a 7-item scale that assessed need for PrEP, willingness to regularly take pills and pay for PrEP ($\alpha=0.78$). Multivariate logistic regression was used to assess i) whether willingness to use PrEP had changed between 2011 and 2013, and ii) which factors were independently associated with willingness to use PrEP.

Results:

Data were analysed from 1161 HIV-negative and untested men in 2011 and 1223 in 2013. The samples were similar in terms of age, sexual identity and sexual practices, but there were differences (such as attitudes to condoms). Controlling for these differences, willingness to use PrEP was significantly lower in 2013 than in 2011 (23.3% vs. 28.2%; AOR=0.83, 95%CI 0.68-1.00, $p=0.05$). In 2013, willingness to use PrEP was independently associated with: concern about taking PrEP (AOR=0.42), having a regular male partner who was untested (AOR=1.74) or HIV-positive (AOR=2.84), ever having taken post-exposure prophylaxis (AOR=1.99) and the perceived likelihood of becoming HIV-positive (AOR=3.96).

Conclusion:

Willingness to use PrEP has declined slightly among HIV-negative and untested men between 2011 and 2013, although over a fifth remain motivated to use it. The factors associated with willingness to use PrEP suggest that there continues to be a small group of gay and bisexual men who are at risk of HIV who would benefit from PrEP.

Disclosure of Interest Statement:

The Centre for Social Research in Health, Australian Federation of AIDS Organisations, Australian Research Centre in Sex, Health and Society and The Kirby Institute are supported by the Australian Government Department of Health and Ageing. The PREPARE Project was funded by a Research Promotion Grant from the University of New South Wales.

Paper Ref	157
Theme	HIV/AIDS Theme C: Social & Behavioural Research
Presentation Type	HIV/AIDS Oral Presentation

BEHAVIOURAL TRENDS AMONG AUSTRALIAN GAY MEN POSE INCREASING CHALLENGES FOR HIV PREVENTION: FINDINGS FROM THE GAY COMMUNITY PERIODIC SURVEYS, 2003-12

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Introduction: Gay men remain the primary population affected by HIV in Australia. While recent attention has been focused on increasing HIV testing and the use of antiretroviral-based prevention to reduce infections, it is equally important to sustain safe sex and other risk reduction practices. Increases in unprotected anal intercourse (UAI), for example, may counteract any beneficial changes in testing and treatment.

Methods: The Gay Community Periodic Surveys (GCPS) are repeated, cross-sectional surveys of men at gay events, venues and clinics in six Australian states and territories. National trends in key indicators for the period 2013-12 were analysed using logistic regression. The data were age standardized and weighted for recruitment venue prior to analysis.

Results: Results from 70,214 participants were included. The majority were recruited from Sydney (34.5%), Melbourne (29.1%) and Queensland (20.6%) and from gay events (53.5%) and social venues (28.4%). Mean age in 2012 was 36.5 years (SD=12.4). Among the whole sample, the majority (>50%) continue to avoid UAI with any partner (this trend is stable over time) and the proportion of men reporting >10 partners in the last six months has declined significantly (from 29.5% in 2003 to 24.0% in 2012). Among men with regular partners, UAI has become significantly more common over time (45.9% to 49.9%). UAI has also become significantly more commonly reported by men with casual partners (31.6% to 38.3%). Among non-HIV-positive men, the proportion tested for HIV in the last year has remained stable (60.5% in 2012). The proportion of HIV-positive men on treatment has increased from 63.5% in 2003 to 77.9% in 2012.

Conclusion: While some behavioural trends among Australian gay men may be beneficial, significant rises in UAI by men with regular and casual partners (in the context of stable rates of HIV testing) pose a significant challenge to HIV prevention efforts.

Disclosure of Interest Statement: The National Centre in HIV Social Research and The Kirby Institute are supported by the Australian Government Department of Health and Ageing. The Gay Community Periodic Surveys are funded by state and territory health departments.

Paper Ref	193
Theme	HIV/AIDS Theme C: Social & Behavioural Research
Presentation Type	HIV/AIDS Oral Presentation

CONSISTENT AND INCONSISTENT USE OF NON-CONDOM-BASED RISK REDUCTION STRATEGIES AMONG MEN IN THE GAY COMMUNITY PERIODIC SURVEYS

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Introduction: Throughout the HIV epidemic, gay men have generated strategies to reduce the risk of HIV transmission during anal sex, including condom use and non-condom-based strategies such as matching HIV status ('serosorting'), strategic positioning and withdrawal prior to ejaculation. It is, however, far from clear how consistently these strategies are practiced during unprotected anal intercourse with casual partners (UAIC).

Methods: We analysed data from the 2012 Gay Community Periodic Surveys (GCPS). The GCPS are cross-sectional, repeated surveys of men who attend gay events, venues and clinics in six Australian states and territories. We analysed the frequency of risk reduction strategies (RRS) practised during UAIC and identified the characteristics of men who never/occasionally practised RRS versus those who often/always practised RRS using logistic regression.

Results: Results from 1,467 participants who had UAIC were analysed. The mean age was 38 years (SD=11.7) and 90% identified as gay. Forty percent reported never/occasionally practising any RRS; 60% often/always practised at least one RRS. The most common RRS was serosorting, often/always practised by 59% of HIV-positive men and 45% of HIV-negative men. Twenty-five percent of HIV-negative men often/always practised strategic positioning. Withdrawal was less commonly practised; 16% of all participants reported often/always using withdrawal. Among HIV-positive men, those who often/always practised at least one RRS were more likely to report party drug use for sex than men who never/occasionally practised RRS. Among HIV-negative men, those who often/always practised at least one RRS were more likely to identify as Anglo-Australian than men who never/occasionally practised RRS.

Conclusion: Serosorting appears to be the most commonly practised RRS by Australian gay men. However, a substantial proportion of men who engage in UAIC rarely practise risk reduction, increasing the likelihood of HIV transmission. These men should be priority targets for education and prevention efforts.

Disclosure of Interest Statement: The National Centre in HIV Social Research and The Kirby Institute are supported by the Australian Government Department of Health and Ageing. The Gay Community Periodic Surveys are funded by state and territory health departments.

Paper Ref	206
Theme	HIV/AIDS Theme B: Diagnosis & monitoring
Presentation Type	HIV/AIDS Poster

LOW LEVEL VIRAEMIA FOLLOWING VIROLOGIC SUPPRESSION: OUTCOMES, PREDICTORS AND CURRENT MANAGEMENT – THE ALFRED EXPERIENCE

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Introduction: Increasingly sensitive HIV RNA assays have led to more patients reported with Low Level Viremia(LLV), defined as viral load (VL) 20 - 200 copies/mL. The optimal management strategy for this group is currently unknown. The aim of this study was to determine VL outcomes, predictors and clinician response to LLV.

Methods: A retrospective study was conducted using the Victorian HIV Service Database and review of patient records. Patients on antiretroviral therapy(ART) with virological suppression (<20 c/ml) followed by VL 20-200 c/mL and at least one subsequent VL measurement over a 2 year period were included. Primary outcome measures were virological failure (VF defined as >200 c/ml), blips (isolated VL of 20-200 c/ml) and LLV (2 or more consecutive VL of 20-200 c/ml).

Results: Of 919 patients managed by the Victorian HIV Service during the two-year period, 212(23.1%) met the inclusion criteria. Median age was 48.8 years, 91.5% were male, with mean follow-up of 15 months after initial detection of LLV. 117/212(55.2%) had an isolated "blip", 80/212(37.7%) had persistent LLV or recurrent "blips" and 15/212(7.1%) developed VF. Those with VF were more likely to have pre-existing genotypic resistance (p=0.011), Hepatitis C (p=0.0002), shorter duration of virological suppression (p=0.006), lower nadir CD4 count (p=0.02) and greater number of concomitant medications (p=0.002). On multivariate analysis, baseline predictors of LLV versus isolated blip included diabetes (p=0.006), shorter duration of virological suppression (p=0.019) and lower nadir CD4 count (p=0.035). Clinician response to ART: <1% changed ART, 3.3% attempted a genotype, 28.3% had LLV acknowledged in the notes and 27.4% had an earlier repeat VL. Adherence reinforcement was documented in 7.5%, while no mention of LLV occurred in 32.5%.

Conclusion: Despite a 23% prevalence of LLV, VF occurred in only 7.1%. Clinician response was to confirm the LLV with earlier repeat VL. This study suggests greater attention to adherence by clinicians is warranted due to poor documentation of adherence.

Disclosure of Interest Statement: The authors have no conflicts of interest, financial or otherwise.

Paper Ref	79
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Oral Presentation

AN INDIGENOUS CULTURAL APPROPRIATENESS AUDIT PILOTED IN A SEXUAL HEALTH CLINIC IN NSW: MAKING ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLES A PRIORITY

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Introduction: Indigenous Australians experience a greater burden of sexually transmitted infections, however are less likely than the general population to access sexual health services. We examined the effectiveness of an Indigenous cultural appropriateness audit in assessing a sexual health clinic with low rates of Indigenous clients.

Methods: The audit was developed to identify cultural barriers within a health service and offer recommendations to address these. The data collection process involved an interview with the director of the clinic (conducted by Indigenous health workers independent of the clinic) and an online survey of all staff. The objectives were to examine the cultural appropriateness of the clinic's policies and procedures, consultation processes, physical environment, promotional materials, community engagement and staff training. The Indigenous workers analysed the data and provided recommendations.

Results: Recommendations included completing an Aboriginal Health Impact Statement, ensuring Indigenous status is correctly recorded in all client files, including Indigenous service providers in service planning, requiring all staff attend cultural respect training, increasing Indigenous employment opportunities, circulating a monthly Indigenous performance report and implementing an Indigenous client feedback process. Support was provided to assist the clinic in implementing these recommendations. The quarterly percentages of Aboriginal and Torres Strait Islander clients increased from 1.7% of all clinic clients six months prior to 6.2% six months post commencing implementation of audit recommendations. These changes have been sustained at one year post project and occasions of service for indigenous clients continue to increase.

Conclusion: Performing a cultural audit of a clinical service can lead to increased engagement and awareness of Aboriginal and Torres Strait Islander peoples and their needs. The project outcomes demonstrate the efficacy of such an audit in initiating sustainable cultural improvements.

Disclosure of Interest Statement: Nil interests to disclose.

Paper Ref	81
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

HEALTHPATHWAYS: DEVELOPING SEXUAL HEALTH PARTNERSHIPS WITH GENERAL PRACTICE. TOWARDS IMPROVING PATIENT CARE AND REFERRAL PROCESSES

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Background: *HealthPathways* is the online portal enabling General Practitioners (GPs) quick access to up-to-date evidence based management on health conditions and local referral processes within the Hunter New England Local Health District (HNELHD). The pathways are utilised at point of care in General Practices served by the Hunter Medicare Local and are currently being accessed by over 100 people each week day. The need for pathways for contact tracing for sexually transmitted infections (STI's), assessment for STI screening, appropriate referral processes to public sexual health resources, and management of Chlamydia was identified.

Disclosure of Interest: A pathway development team was established consisting of Pathways Coordinators, GPs, and medical and nursing staff from the Newcastle Sexual Health Service. The New South Wales Sexually Transmissible Infections Programs Unit granted permission for use of their online clinical resources and patient information fact sheets for the pathways. Culturally specific recommendations and resources for Aboriginal and Torres Strait Islander peoples were highlighted. Stakeholder feedback and an annual review by the development team were included in the process.

Results: The specific *HealthPathways* went live in July 2012 with a large number of hits within the first 24-48 hours. Average per month access by General Practices for the contact tracing pathway was 5; 7 for the STI testing tool; 22 for referral pathways and 20 for Chlamydia management.

Conclusion: The formation of this collaborative partnership has enabled quick, accurate management and referral information on sexual health for GPs.

Disclosure of Interest Statement: The HNE *HealthPathways* Program is funded and supported by the Hunter Medicare Local and Innovation Support, Hunter New England Local Health District.

Paper Ref	85
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Poster

CHOICE AND ENGAGEMENT: SUSTAINED INCREASE IN STI AND HIV SCREENING IN GAY MEN AFTER A SUCCESSFUL MOBILE SCREENING INITIATIVE

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Introduction: We used an opportunity to enhance sexually transmitted infection (STI) and HIV screening in gay men in Newcastle by enhancing links with ACON and the Queer community through a mobile screening initiative at the annual Rainbow Visions Fair Day.

Methods: A tent, with “showbag” STI kits promoting onsite quick testing was set up at Rainbow Visions Fair Day 2012. It was staffed by a clinician performing the screens; an administration officer registering clients; and a front of house staff member greeting attendees to the stall. Attendees to the stall were offered a wide choice of options including: Onsite full screening, home based screening, screening at our regional ACON or primary clinic, coded serology and specimen testing (including HIV testing) at a number of pathology centres with results sent to our clinic, or any combination of these.

Results: Most attendees chose onsite screening. Nineteen gay men were screened in a 4-hour period. Of these, five (26.3%) tested positive for an STI. Eleven (58%) were new clients to the service. One was previously diagnosed HIV positive, but had not engaged with our service, and one identified as being of Aboriginal and Torres Strait Islander origin. New infection diagnoses included chlamydia, syphilis, and gonorrhoea. The impact of the engagement with the community more importantly resulted in subsequent large, sustained increases in screening for HIV and STIs at our weekly satellite clinic at ACON premises (a 100% increase) and at our primary clinic with quarterly increases from 252 to currently 593 occasions of service (OOS) for gay men, which now accounts for 42.5% of all OOS.

Conclusion: Engagement with the local gay community is important for successful STI screening in regional Australia. Offering choices around quicker and easier screening strategies results in sustained increased uptake.

Disclosure of Interest Statement: Nil

Paper Ref	250
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation	TypeSexual Health: Poster

MODELLING THE POTENTIAL IMPACT OF POINT-OF-CARE TESTS ON SEXUALLY TRANSMITTED INFECTIONS IN HIGH-PREVALENCE SETTINGS

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Introduction: Gonorrhoea, chlamydia and trichomoniasis persist at hyper endemic levels in many remote Indigenous communities in Australia despite readily available and effective tests and treatments. New generation molecular point-of-care (POC) tests that have comparable sensitivity and specificity to conventional diagnostic tests can decrease the interval time to treatment, increase the proportion of patients with a positive diagnosis that receive treatment, and have the potential to reduce STI prevalence.

Methods: We used mathematical models of gonorrhoea, chlamydia and trichomoniasis transmission in remote communities in Australia to evaluate the effects of screening and treatment strategies employing conventional and POC diagnostic tests.

Results: Under existing screening coverage of 44% per year, a switch from conventional testing to a POC test of 95% sensitivity could reduce gonorrhoea, chlamydia and trichomoniasis prevalence from the current levels of 7.1% 11.9% and 11.6%, to 5.3%, 8.9% and 6.9%, respectively, after 10 years. If screening coverage is increased to 60% per year, the prevalence of gonorrhoea, chlamydia and trichomoniasis could be reduced to 3.6%, 6.7% and 3.7%, respectively, under conventional testing, and further reduced to 1.8%, 3.1% and 0.9% with the introduction of POC testing.

Conclusion: Our modelling suggests that increasing screening coverage is an important public health strategy for controlling chlamydia, gonorrhoea and trichomoniasis in remote Indigenous communities. Molecular POC tests of high sensitivity have the potential to further reduce the prevalence of chlamydia, gonorrhoea and trichomoniasis.

Disclosure of Interest Statement: This study was funded and BH is supported by a National Health and Medical Research Council Project Grant (566848). The Kirby Institute is funded by the Australian Government Department of Health and Ageing and is affiliated with the Faculty of Medicine, University of New South Wales. The views expressed in this publication do not necessarily represent the position of the Australian Government.

Paper Ref	358
Theme	HIV/AIDS Theme D: Social & Behavioural Research
Presentation Type	HIV/AIDS Oral Presentation

A DRAMATIC INCREASE IN THE USE OF MOBILE APPS TO MEET PARTNERS AMONG GAY MEN IN MELBOURNE AND SYDNEY IS NOT ASSOCIATED WITH INCREASED RISK-TAKING: FINDINGS FROM THE GAY COMMUNITY PERIODIC SURVEYS, 2010-13

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Background: In recent years there has been a widespread uptake of smartphones with internet access and location services and the development of mobile ‘apps’ for gay men to meet each other. We reviewed data collected in the Sydney and Melbourne Gay Community Periodic Surveys (GCPS) to identify which men were relying on mobile and internet methods to meet each other and whether these methods were associated with different risk practices.

Methods: We analysed which participants met their male sex partners through mobile apps, the internet and other methods. Data from 2010 to 2013 were included. We report linear tests for trends and used logistic regression to assess associations with meeting partners via mobiles/online.

Results: Data from 20,064 participants were included. 14,540 (72.5%) men reported using at least one place or method to meet sex partners. From 2010 to 2013, the proportion of participants who met partners via the internet was stable. The proportion that used mobile apps to meet sex partners increased significantly from 29.7% in 2011 to 45.6% in 2013. During the same period there were significant falls in the proportions of men who found sex partners at social venues (39.9% to 31.2%, p <.001) and sex venues (43.1% to 34.5%, p <.001). In a logistic regression model, using mobile/online methods exclusively was associated with being younger and using serosorting for sex without condoms. However, reliance on mobile/online methods was not significantly associated with HIV status, being diagnosed with an STI or unprotected anal intercourse with casual partners.

Conclusions: There has been a dramatic increase in use of mobile apps to meet male partners by gay men in Sydney and Melbourne. However, men who exclusively use websites or mobile phone to meet partners do not appear to be at increased risk of STIs or HIV.

Disclosure of Interest Statement:The National Centre in HIV Social Research and The Kirby Institute are supported by the Australian Government Department of Health and Ageing. The Gay Community Periodic Surveys are funded by state and territory health departments.

Paper Ref	400
Theme	HIV/AIDS Theme D: Women & HIV
Presentation Type	HIV/AIDS Poster

DOES EDUCATION INCREASE OR REDUCE WOMEN'S VULNERABILITY TO HIV INFECTION? EVIDENCE FROM POPULATION-LEVEL SURVEYS IN UGANDA

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Introduction: Women in Africa are disproportionately affected by HIV & AIDS, where nearly 70 percent of all people aged 15-59 years living with HIV are women (UNAIDS, 2011). This has been attributed to the low levels of education in Africa. However, research on the relationship between education and vulnerability to HIV has been inconsistent. Earlier evidence shows that education has a positive relationship with HIV. However, later evidence has shown that there is a negative relationship between education and HIV infection. This research examined the influence of education on women's higher vulnerability to HIV in Uganda.

Methods: We compare incidence data of 22 979 women ages 15-59 from Uganda HIV/AIDS Indicators Survey conducted in 2005 and 2011; educational attainment is categorized into no education, incomplete primary, complete primary, incomplete secondary, and complete secondary and higher educational attainment. Vulnerability is measured by a proxy of rate of HIV prevalence. Multilevel binary logistic regression analysis is used to model the relationship between education (predictor variable) and HIV positive status (outcome variable). Other socio-demographic variables are controls.

Results: After controlling for the effect of wealth and other socio-economic and socio-demographic factors, findings based on the 2005 data indicate that vulnerability to HIV among women with complete secondary and higher education is -35 percent compared to women with no education. In the 2011 data, evidence shows that vulnerability of women with complete secondary and higher education is -47 percent. In the five-years, the preventive effect of education on women's vulnerability to HIV increased by 12 percent.

Conclusion: Women age 15-59 years who have complete secondary and higher education, have a lower rate of vulnerability to HIV infection compared to women with no education. To reduce women's higher vulnerability to HIV infection, education policies need to support girls to acquire good quality higher education.

Conflict of interest: None.

Paper Ref	586
Theme	HIV/AIDS Theme C: Epidemiology of HIV
Presentation Type	HIV/AIDS Poster

CHARACTERISTIC OF HIV INFECTION IN TELUK BINTUNI, WEST PAPUA: A DESCRIPTIVE STUDY

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Background: UNAIDS reports that incidence rate of HIV infection in Indonesia had been increased from 2001 to 2011. In 2011, Papua and West Papua accounted for more than 15% of new HIV cases detected in Indonesia. Teluk Bintuni, West Papua, is assumed to have high HIV incidence due to existence of local custom permitting free sex and polygamous marriage, however report on baseline demographic and clinical characteristic of HIV infection in Teluk Bintuni is not available yet.

Objective: To describe demographic and clinical characteristic of HIV infection in Bintuni General Hospital.

Methods: A quantitative descriptive study was conducted on HIV infection cases in Bintuni General Hospital, Teluk Bintuni, West Papua, Indonesia from January 2012 to May 2013. The demographic and clinical characteristic obtained by retrospective auditing of patients' medical record were evaluated.

Results: Of 52 HIV infection cases, 30 (57.7%) were ages 25 to 49 years at HIV diagnosis and 37 (71.2%) were female. The average age was 29 (± 11.4 years). Females were most likely to be diagnosed at earlier age than males (mean age 26 and 37 years, respectively). Majority were Papuan (82.7%), married (57.7%), and heterosexual (94.2%). Fever (75%), productive cough (65.4%), pallor (63.5%), weight loss (61.5%) and diarrhea (42.3%) were the main presenting features. The most frequent co-infection was pulmonary Tuberculosis (53.8%). According to WHO clinical staging system, 4 (7.7%) were staged I, 2 (3.8%) were staged II, 29 (55.8%) were staged III and 17 (32.7%) were stage IV. Of 49 eligible for treatment cases, only 23 (46.9%) cases were treated with Antiretroviral regimen. Nineteen (36.5%) cases had died, 68.4% had died before ARV administration.

Conclusions: Native Papuan, reproductive-aged, and female was the predominant characteristic of HIV cases diagnosed in Bintuni General Hospital. Late diagnosis and low percentage of ART coverage become a notable problem. Further research on effective HIV prevention programme, establishment of PITC and ART coverage scale-up are urgently required.

Disclosure of Interest Statement: Noting to declare

Paper Ref	164
Theme	HIV/AIDS Theme A: Immunology & pathogenesis
Presentation Type	HIV/AIDS Poster

HIGHCD45RO⁺EXPRESSION ON CD4 T CELLS IN LATE STAGE OF HIV INFECTION IN INDONESIAN POPULATION: A HOSPITAL-BASED STUDY

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Background: Human Immunodeficiency virus (HIV) infection incidence is increasing in Indonesia. HIV tends to infect RO⁺ memory subset of CD4 T cells and CD4⁺CD45RO⁺ T cells are major latent virus reservoir in HIV infection. However, up to now, there is no report of this reservoir cells in Indonesian HIV patients at various disease stages.

The aim of this study is to know the relationship between the CD4⁺CD45RO⁺ T cells with clinical HIV stage in a hospital-based study.

Disclosure of Interest: This observational cross-sectional study was conducted in 48 HIV patients (35 males; 13 females) with various stages of diseases in HIV clinics of Sardjito Hospital, Yogyakarta, Indonesia. The clinical HIV stages of infections were determined while the CD4 counts and CD45RO expressions were detected from peripheral blood cells using flow cytometer. The differences of CD4⁺CD45RO⁺ T cells percentages among patient clinical stages and its correlations with CD4 counts were analyzed statistically.

Result: Clinically the most dominant stage was stage 3 (n= 15; 31.3%). The Late stage HIV infection (stage 3 and 4) has significantly higher CD4⁺CD45RO⁺ T cells percentages than stage 1 and 2 (p=0.006). The CD4⁺CD45RO⁺ cells percentages positively correlated with clinical HIV stage (r= 0.46; p<0.05) but negatively correlated with CD4 cells absolute count (r= -0.55; p= 0.001)

Conclusion: T cells expressing CD4⁺RO⁺ were higher in late stage of HIV infection and negatively correlated with CD4 T cells absolute count.

Disclosure of Interest Statement: No pharmaceutical grants were received in this study.

Paper Ref	403
Theme	HIV/AIDS Theme B: HIV Associated Diseases
Presentation Type	HIV/AIDS Poster

CD8+ ENCEPHALITIS: A RARE CAUSE OF RAPID NEUROLOGICAL DETERIORATION AND DEATH ASSOCIATED WITH HIV INFECTION

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Introduction: Despite major advancement in the health maintenance of HIV-infected persons, severe and unexpected neurological complications continue to be reported.

Case Study: A 37-year-old Eritrean-born lady presented with a two week history of somnolence, headache and vomiting. She had been diagnosed 18 months earlier with HIV-1 and commenced on emtricitabine, tenofovir and atazanavir/ritonavir. Her CD4 nadir was 20/μl with a viral load of 92000 copies/ml. Within hours of presentation she had a rapid deterioration in conscious state necessitating intubation. Her CD4 count was found to be 130/μl with a viral load of 1711 copies/ml. An MRI revealed widespread increased T2 and FLAIR signal throughout the central nervous system (CNS) white matter without focal lesions. Despite high-dose dexamethasone in conjunction with broad-spectrum empiric antimicrobial coverage, she was declared brain dead four days later. Autopsy demonstrated extensive perivascular CD8+ lymphocyte infiltration limited to the neuroaxis. There was a paucity of CD4+ lymphocytes, demyelination was not a feature, and multinucleated giant cells were absent. Immunohistochemistry for p24 antigen and extensive viral testing by PCR were negative. In view of compatible clinical, laboratory, radiological and histological features, a diagnosis of CD8+ encephalitis was made.

Discussion: CD8+ encephalitis is a recently described syndrome characterised by rapid CNS deterioration, predominantly affecting HIV-1-infected patients of African ethnicity. Patients are often stable on anti-retroviral therapy with low viral loads and CD4 cell counts >200/μl. Histological examination reveals widespread perivascular CD8+ lymphocyte inflammation, without evidence of opportunistic infection or HIV encephalitis. While the trigger remains unclear, pathogenesis is thought to reflect dysregulated immune activation. Corticosteroids are indicated, but overall prognosis remains poor.

Conclusion: This case highlights CD8+ encephalitis as a cause of rapid neurological deterioration in HIV-infected persons. Further research is required to define pathogenesis, elucidate potential triggers and provide treatment strategies for this rare but catastrophic clinical entity.

Disclosure of Interest Statement: We the authors have received no funding for this work and have no conflicts of interest to disclose.

Paper Ref	249
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Poster

CHLAMYDIA SCREENING STRATEGIES AND OUTCOMES IN EDUCATIONAL SETTINGS: A SYSTEMATIC REVIEW

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Background: Low *Chlamydia trachomatis* (CT) testing rates in primary-care (5-20%) in many countries have encouraged screening programs in non-clinical settings. We describe the strategies and outcomes of CT screening programs in educational settings.

Methods: We systematically reviewed English-language studies reporting on CT screening programs in educational settings (school/college/university) published between 2005 and 2011. We grouped programs by screening strategies used and report the median testing rate (number screened/invited), CT positivity and treatment rate from studies where data were available.

Results: We identified 27 studies describing 30 CT screening programs in the United States/ Canada (n=10), Europe (n=8), Australia/New Zealand (n=5) and Asia (n=4). Most targeted both male and female students (74%). Across all programs, 53935 tests were conducted. The highest testing rates were in programs screening students in class-rooms (four programs), opportunistically screening students visiting school-based health centres for other reasons (five programs) and opportunistically screening students undergoing routine health or sports physical examinations (five programs), with median testing rates of 66%, 60% and 53% respectively. Lower testing rates were found in programs involving screening students in other school locations e.g. canteen/study stall (four programs) with a median testing rate of 30%. The median CT positivity was 4.7% (range:1.3-18.1%); 3.2% in males, 5.9% in females. Five programs reported the treatment rate with a median of 100%.

Conclusion: The review demonstrated that education facilities can be used for CT screening. Screening programs were established in a range of educational facilities, in a variety of countries, and accessed large number of male and female students. The CT positivity supports educational institutions as a setting to conduct screening. Targeting students in classrooms and opportunistic screening at school clinics and routine health examinations appears to achieve high testing rates in educational settings.

Disclosure of Interest Statement: No disclosure of potential conflicts are declared.

Paper Ref	569
Theme	Sexual Health: Biomedical
Presentation Type	Sexual Health: Poster

POTENTIAL FOR ENVIRONMENTAL CONTAMINATION OF URINE SAMPLES USED FOR DIAGNOSIS OF SEXUALLY TRANSMITTED INFECTIONS

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Background: The detection of a sexually transmitted infection (STI) agent in a urine specimen from a young child is often regarded as an indicator of sexual contact. However, the key parameter is the positive predictive value (PPV) for sexual contact of a positive STI test. The PPV can be extremely sensitive to the frequency of positive STI tests in the absence of sexual contact. False positives may conceivably arise from the transfer of environmental contaminants in clinic toilet/bathroom facilities into urine specimens.

Methods: This was tested empirically in ten Northern Territory Clinic toilet-bathrooms, on seven occasions each. The environmental contamination with *Chlamydia trachomatis*, *Neisseria gonorrhoea* and *Trichomonas vaginalis* nucleic acid was determined. In addition, urine collection was simulated using a synthetic urine surrogate. This encompassed contact between the gloved hands and the environment and gloved hands and the inside of the urine collection jar lid.

Results: The most contaminated toilet-bathrooms were in remote Indigenous communities. No contamination was found in the Northern Territory Government Sexual Assault Referral Centre clinics, and intermediate levels of contamination were found in sexual health clinics, and clinics in regional urban centres. In general, *T. vaginalis* was the most abundant contaminant, and *C. trachomatis* the least abundant. The frequency of surrogate urine sample contamination was low but non-zero. For example, of the 4/558 (0.7%) of the urine surrogate specimens from remote clinics were STI positive.

Conclusions: Positive STI tests arising from environmental contamination or urine specimens cannot be ruled out. A very conservative (i.e. high) estimate for the upper boundary for the frequency is 0.7%. To our knowledge, this is the first meaningful numerical estimate of this parameter. This suggests that urine specimens from young children taken for STI testing should be obtained by trained staff in clean environments.

Disclosure of Interest Statement: This work was supported by project grant 1004123 of the National Health and Medical Research Council, and the Northern Territory Research and Innovation Board.

Paper Ref	61
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

“10 PACK PLEASE, AND CAN YOU HAVE A LOOK AT MY...?”: IMPROVING ACCESS TO SEXUAL HEALTH SERVICES FOR PEOPLE WHO INJECT DRUGS

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Introduction: Despite having a range of sexual health needs, local service data indicates people who inject drugs are under-represented in sexual health clinics. This ‘at-risk’ population have been identified as a priority for targeted activity and service provision in the NSW STI Strategy 2009-2012. Creative approaches to service provision to overcome barriers in access to health services are required to meet the sexual health needs of this population.

Methods: A research project was commissioned by the HIV and Related Programs (HARP) Unit in South Eastern Sydney Local Health District (SESLHD) to identify those factors that acted as barriers for people with a history of injecting drug use (IDU) when accessing HIV/AIDS and sexual health services, and subsequently developed recommendations for service improvements.

Results: The recommendations from the analysis covered the following areas:

- To increase peer involvement in service design and delivery;
- To establish innovative models of service delivery;
- To reorient current service delivery;
- To promote sexual health services within IDU networks;
- To foster cross agency workforce development.

A number of key sexual health, HIV treatment and drug and alcohol services and non-government agencies within the southern sector of SESLHD developed a partnership project to oversee the implementation of the research recommendations. The aim of the working group was to develop a local action plan that addressed the key action areas above and to establish cross agency coordination and service links.

Conclusion: The project has led to improved service provision by HIV/STI services for people who inject drugs through the strengthening of partnerships across the SESLHD southern sector; the initiation of outreach sexual health clinics in Needle and Syringe Programs (NSPs); cross agency links, referral pathways and workforce development; and social marketing strategies. The partnership project is an example of agency collaboration in improving health service design to improve access for important ‘at risk’ populations.

Disclosure of Interest Statement: All services involved are State or Commonwealth funded health services and/or NGOs. No pharmaceutical grants were received in this project.

Paper Ref	610
Theme	HIV/AIDS Theme A
Presentation Type	HIV/AIDS Oral Presentation

THE IMPACT OF IMMUNE ACTIVATION ON NATURAL KILLER CELLS IN THE SETTING OF HIV INFECTION

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HIV disease is associated with chronic inflammation and activation of the innate immune system. This state, as measured using plasma markers of inflammation, persists following suppression of HIV viremia using antiretroviral therapy, and may increase risk of non-AIDS co-morbidities. The causes of innate immune activation in the setting of virological suppression are unclear.

Natural killer (NK) cells are innate immune cells that kill virus-infected and transformed cells without prior sensitization. We have shown that NK cells are activated both phenotypically (elevated expression of HLA-DR) and functionally (increased spontaneous degranulation measured by CD107a surface expression) in virologically suppressed (VS) HIV+ individuals. NK cells also lose expression of CD16, the receptor which mediates antibody-dependent cellular cytotoxicity. In multivariable analysis, activation of NK cells was not associated with HIV viremia or with CD4 counts but was associated with markers of inflammation (soluble CD14, neopterin and plasma LPS)¹.

We have identified a novel NK cell population ($\Delta\gamma$ NK) in HIV+ patients. $\Delta\gamma$ NKs switch off expression of the CD16 signaling adaptor molecule FcR γ , but have normal expression of the alternate signaling molecule TCR ζ . $\Delta\gamma$ NKs are retained in VS HIV+ individuals, where they account for up to 90% of total NK cells, but are not present in CMV seronegative HIV+ patients. $\Delta\gamma$ NKs have recently been described as being generated specifically in response to CMV infection or reactivation². In HIV-/CMV+ individuals $\Delta\gamma$ NK cells have increased antibody-dependent killing activity and cytokine production but decreased natural cytotoxicity, and are thought to be specialized for antibody-dependent activation². How HIV co-infection impacts $\Delta\gamma$ NK function is unclear. We are currently studying the properties of $\Delta\gamma$ NK cells in HIV+ individuals to understand the significance of such a dramatic skewing of the NK cell population to anti HIV NK cell activity.

1. Lichtfuss et al (2012) "Virologically Suppressed HIV Patients Show Activation of NK Cells and Persistent Innate Immune Activation" *The Journal of Immunology* 189, 1491–1499

2. Zhang et al (2013) "Cutting Edge: Antibody-Dependent Memory-like NK Cells Distinguished by FcR γ Deficiency" *The Journal of Immunology* 190, 1402–1406

Paper Ref	142
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

INCLUDING A CLIENT STI & BBV PATHWAY IN A NATIONAL YOUTH MENTAL HEALTH EARLY INTERVENTION SERVICE

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Young people have higher rates of sexually transmissible infections (STIs) than the general population. Research has shown that there is a clear link between emotional distress, depression and risk taking behaviours such as unprotected casual sex and substance abuse in young people. headspace is a youth mental health early intervention service operating in over 55 locations around Australia. This setting is ideal for accessing troubled young people who are at risk of STIs and blood borne viruses (BBVs), and are less likely to attend mainstream general practice services. In 2013, a partnership was formed between headspace National Office and Hunter New England Local Health District to develop, implement and evaluate a multi-strategic intervention designed to:

1. Incorporate sexual health into the headspace domains of care at a national policy level
2. Improve the knowledge, skills and capacity of headspace GPs, nurses and allied health professionals to identify young people at risk of STIs and BBVs and provide testing, treatment, education and referral where necessary
3. Support the design of culturally appropriate environments to encourage service utilisation by Aboriginal and Torres Strait Islander peoples and gay, lesbian, bisexual, transgender and intersex (GLBTI) people
4. Support physical environments that encourage good sexual health

This presentation will cover the development and introduction of a clear STI & BBV clinical pathway at four headspace sites, to ensure that at-risk clients are provided with testing and treatment as indicated. Information will also be provided regarding the control trial currently underway to measure the efficacy of the pathway compared with previous treatment as usual. Future work will include providing sustainable sexual health training for headspace GPs, nurses and allied health professionals, and adapting headspace environments to encourage positive sexual health and increase service utilisation by Aboriginal and Torres Strait Islander and GLBTI young people.

Disclosure of Interest Statement: Project partially funded by NSW Health Hepatitis C Education and Prevention (HCEP) Initiative.

Paper Ref	281
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

GENDER STRONGLY ASSOCIATED WITH SEXUAL HEALTH: A SURVEY OF FIRST YEAR STUDENTS AT A UNIVERSITY IN RURAL NSW

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Introduction: Young people experience a higher rate of sexually transmissible infections (STIs) than other age groups in Australia. Chlamydia is the most commonly reported STI, and over 70% of notifications in the Hunter New England (HNE) area are in the 15-24 year age bracket. Chlamydia is of particular concern as the majority of infections are asymptomatic, and if left untreated it can cause infertility. A cross-sectional online survey was conducted with first year students attending a university in rural NSW in order to inform the development and implementation of a multifaceted sexual health promotion program.

Methods: The online questionnaire was emailed to all eligible students. The answers of a subset of 258 students who studied on campus were analysed. Chi-square tests were used to determine whether gender, relationship status, sexual orientation, language spoken, living on/off campus or sexual activity status were associated with sexual health knowledge, attitudes and behaviours.

Results: Of all the variables, gender was the most frequently associated with sexual health. There were 167 females and 89 males in the subset. There was a significant difference between males and females in knowledge of the effects of STIs on fertility ($p < 0.05$), self-rated STI knowledge ($p < 0.05$), pooled attitudinal scores ($p < 0.001$) and pooled condom-specific attitudinal scores ($p < 0.001$). There were also significant differences between males and females in likelihood of visiting a GP or health clinic ($p < 0.01$), discussing sexual health issues with a medical practitioner ($p < 0.001$) and being tested for STIs in the past 12 months ($p < 0.05$). There was no significant difference between males and females in condom use at last intercourse and number of sexual partners over the past 12 months. Further inferential statistics will be presented at the conference.

Conclusion: Gender differences need to be taken into account when designing sexual health programs for university students. Survey results will contribute to designing peer-led sexual health education sessions and on-campus sexual health promotion strategies.

Disclosure of Interest Statement: None to report.

Paper Ref	93
Theme	HIV/AIDS Theme B: Antiviral Therapy
Presentation Type	HIV/AIDS Oral Presentation

CLINICAL FACTORS ASSOCIATED WITH SUBOPTIMAL ADHERENCE TO ANTIRETROVIRAL THERAPY IN ASIA.

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Background: Adherence to combination antiretroviral therapy (cART) plays an important role on treatment outcomes. The TREAT Asia Studies to Evaluate Resistance – Monitoring Cohort Study (TASER-M) collects patients' adherence based on a Visual Analogue Scale. The aim of this analysis was to assess the rates of, and factors associated with, suboptimal adherence in the first 24 months of initial cART in Asian patients.

Methods: Suboptimal adherence was defined as reported adherence <100%. Follow-up time started from cART initiation and censored at 24 months, lost to follow up, death, treatment switch due to any reason, or treatment cessation of more than 14 days. Follow-up time was divided into 6 monthly intervals: 0-6, 6-12, 12-18 and 18-24 months. Factors associated with suboptimal adherence was analysed using generalised estimating equations.

Results: 1316 patients across 5 countries in Asia were included. The rates of suboptimal adherence for time intervals 0-6, 6-12, 12-18 and 18-24 months were 26%, 17%, 12% and 10%, respectively. In multivariate analyses, sites with average adherence assessment of >2 times/year were associated with decreased odds of suboptimal adherence (OR=0.7, 95%CI(0.55-0.90), p=0.006). Compared to patients with heterosexual exposure, injecting drug users were almost twice as likely to report <100% adherence (OR=1.92, 95%CI(1.23-3.00), p=0.004), while the odds in homosexual individuals was halved (OR=0.52, 95%CI(0.38-0.71), p<0.001). Patients taking NRTI+PI as their initial regimen had a 64% reduction in suboptimal adherence (OR=0.36, 95%CI(0.20-0.67), p=0.001) compared to those on NRTI+NNRTI. Increasing time interval was associated with decreasing odds (ORs=0.59, 0.40 and 0.35, respectively, all p<0.001).

Conclusions: Suboptimal adherence was higher with injecting drug users, and lower with homosexual exposure. Increased adherence assessments was associated with reduction in suboptimal adherence, possibly reflecting site resourcing for patient counselling. PI based initial regimen and longer time intervals were associated with improved adherence.

Disclosure of Interest Statement: The TREAT Asia Studies to Evaluate Resistance (TASER) is an initiative of TREAT Asia, a program of amfAR, The Foundation for AIDS Research, with major support provided by the Dutch Ministry of Foreign Affairs through a partnership with Stichting Aids Fonds, and with additional support from amfAR and the National Institute of Allergy and Infectious Diseases (NIAID) of the U.S. National Institutes of Health (NIH) and the National Cancer Institute (NCI) as part of the International Epidemiologic Databases to Evaluate AIDS (IeDEA) (grant no. U01AI069907). Queen Elizabeth Hospital and the Integrated Treatment Centre are supported by the Hong Kong Council for AIDS Trust Fund. The Kirby Institute is funded by the Australian Government Department of Health and Ageing, and is affiliated with the Faculty of Medicine, The University of New South Wales. The content of this publication is solely the responsibility of the authors and does not necessarily represent the official views of any of the institutions mentioned above.

Paper Ref	9
Theme	HIV/AIDS Theme B: Clinical Trials
Presentation Type	HIV/AIDS Poster

LONG-TERM EFFICACY AND SAFETY OF ATAZANAVIR/RITONAVIR TREATMENT IN A COHORT OF TREATMENT-NAÏVE HIV PATIENTS: AN INTERIM ANALYSIS OF THE REMAIN STUDY

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Background: Long-term strategies are needed to achieve durable virologic suppression in HIV-infected individuals; however, long-term data are limited. In clinical trials, boosted atazanavir (ATV/r) has shown good efficacy and tolerability in antiretroviral (ARV)-naïve patients up to 4 years. The REMAIN study evaluates long-term outcomes of ATV/r in ARV-naïve patients in a real-life setting.

Methods: Non-comparative, observational study conducted in Germany, Portugal and Spain. Historical and longitudinal follow-up data were extracted six-monthly from the medical records of HIV-infected, treatment-naïve patients who initiated an ATV/r-regimen between 2008 and 2010. The primary endpoint was patients remaining on ATV treatment over time. Secondary endpoints included virologic response, reasons for discontinuation and long-term safety. Duration of treatment and time to virologic failure (VF) were analyzed using the Kaplan-Meier method. The interim analysis reports data from patients with at least one year of follow-up.

Results: A total of 411 patients had a median follow-up of 23.42 months: 77% male; median age 40 years [min, max: 19, 78]; 16% IDUs; 18% CDC C; 18% Hepatitis C. TDF/FTC was the most common backbone (85%). At baseline, median (Q1, Q3) HIV-RNA and CD4 cell count were 4.91 (4.34, 5.34) log₁₀ c/mL and 256 (139, 353) cells/mm³, respectively. The probability of remaining on treatment was 0.84 (95% CI: 0.80, 0.87) and 0.72 (95% CI: 0.67, 0.76) for the first and second year, respectively. After 2 years' follow-up, 84% (95% CI: 0.79, 0.88) of patients were virologically suppressed (<50 c/mL). Overall, 125 patients (30%) discontinued ATV therapy [median (Q1, Q3) time to discontinuation: 11.14 (6.24, 19.35) months], primarily due to adverse events (AEs; n=47, 11%). Hyperbilirubinaemia was the most common AE leading to discontinuation (n=14). No unexpected AEs were reported.

Conclusion: In a real-life clinical setting, ATV/r regimens showed durable virologic efficacy with good tolerability in an ARV-naïve population.

Disclosure of Interest Statement: This research was supported by Bristol-Myers Squibb (BMS). Editorial support was provided by inScience Communications and BMS Australia and funded by BMS.

Paper Ref	151
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Oral Presentation

HIGH PREVALENCE, INCIDENCE AND CLEARANCE OF ANAL HIGH-GRADE SQUAMOUS INTRAEPITHELIAL LESIONS (HSIL) IN HOMOSEXUAL MEN:

EARLY EVIDENCE FROM THE STUDY OF THE PREVENTION OF ANAL CANCER (SPANC)

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Background: Homosexual men are at increased risk of anal cancer. Screening and treatment of the precursor, HSIL, has been advocated by some, but screening is not recommended in widely-accepted guidelines. We aimed to describe the prevalence, incidence, and clearance rates of anal HSIL, and association with human papillomavirus (HPV) status, in a community-recruited cohort of homosexual men.

Methods: The SPANC study is a three-year prospective study of the natural history of anal HPV infection and cancer precursors in HIV-negative and -positive homosexual men aged ≥ 35 years. At each visit all men undergo an anal swab for cytology and HPV genotyping (Roche Linear Array), followed by high resolution anoscopy-aided biopsy. Anal HSIL was defined as having either anal intraepithelial neoplasia grade 2/3 on histology and/or HSIL/possible HSIL on cytology.

Results: A total of 342 men were recruited by March 2013. Median age was 49 years (range: 35-79) and 28.7% were HIV-positive. At baseline, the prevalence of anal HSIL was 50.0% and 43.9% in the HIV-positive and HIV-negative respectively ($p=0.303$). Among those free of HSIL at baseline, HSIL incidence was 27.8 and 27.6 cases per 100 person-years in the HIV-positive and HIV-negative ($p=0.920$). Among those with HSIL at baseline, the clearance rate was 41.0 and 42.7 cases per 100 person-years in the HIV-positive and HIV-negative ($p=0.851$). Men who tested HPV16 positive on their anal swabs at baseline were significantly more likely to develop incident HSIL (57.1 vs 23.0 per 100 person-years, $p=0.010$), and less likely to clear prevalent HSIL (17.6 vs. 61.3 per 100 person-years, $p=0.001$).

Conclusion: Anal HSIL was highly prevalent in homosexual men. Both incidence and clearance of HSIL were common, and were closely associated with HPV16 status. The high rates of clearance are consistent with the observation that anal HSIL progresses to cancer less commonly than high-grade cervical lesions.

Disclosure of Interest Statement: AEG has received honoraria and research funding from CSL Biotherapies, honoraria and travel funding from Merck, and sits on the Australian advisory board for the Gardasil HPV vaccine. CKF has received honoraria, travel funding and research funding from CSL and Merck, sits on the Australian advisory board for the Gardasil HPV vaccine, and owns shares in CSL Biotherapies. SMG have received advisory board fees and grant support from CSL and GlaxoSmithKline, and lecture fees from Merck, GlaxoSmithKline and Sanofi Pasteur; in addition, has received funding through her institution to conduct HPV vaccine studies for MSD and GlaxoSmithKline and is a member of the Merck Global Advisory Board as well as the Merck Scientific Advisory Committee for HPV. RJH has received support from CSL Biotherapies and MSD. All other authors declare that they have no conflicts of interest.

Paper Ref	302
Theme	HIV/AIDS Theme C: Prevention Programs
Presentation Type	HIV/AIDS Oral Presentation

REINVIGORATING EVIDENCE FOR ACTION AND CAPACITY IN COMMUNITY HIV PROGRAMS (REACH PROJECT)

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Background: REACH was a collaborative research and practice initiative to develop evidence building frameworks, capacity, tools and resources with the Victorian HIV community partnership.

Methods: REACH consisted of three areas:

- The development of a broad policy logic framework - which aims to simultaneously look at the project, program and prevention system to understand the role of and relationship between the various programs and projects in HIV prevention.
- Participatory action research to develop and trial program logic models and evidence building approaches with staff from five projects across three community organisations
- Capacity building of sector staff through a series of capacity building workshops and mentoring activities.

To monitor the impact of these initiatives, the REACH project conducted, among other strategies, a sector survey of in November 2011 and November 2012.

Results: The sector survey indicated some small shifts in organisational culture towards supporting and conducting evaluation. Evaluation was valued more as was staff involvement in evaluation activities, incorporating evaluation into project planning and support for staff to develop evaluation skills. There was increased desire to share skills and learn from other staff across the sector. Although the project achieved some of its aims, there were aspects that were less successful in achieving sustained organisational change and much has been learned from these challenges.

Conclusion: Once the momentum for monitoring, evaluation and learning (MEL) and quality Improvement (QI) has been created at a project level, it needs to be followed by strategies that will embed the organisational practice changes. There should be a shift towards working at a program, agency and sector level. This includes establishing networks of practice to develop, implement and support MEL and QI guidelines for priority areas such as organisational evaluation leadership, sustainable evaluation approaches, and inter-agency evidence sharing to maximise the role of combined HIV prevention strategies.

Disclosure of Interest Statement: The REACH Project was funded by the Victorian Department of Health with in kind support from participating agencies. The Australian Research Centre in Sex, Health and Society (ARCSHS) receives funding from the State, Territory and Commonwealth Government Departments. ARCSHS is affiliated with La Trobe University. No pharmaceutical grants were received in the development of this study.

Paper Ref	348
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

OUT AND ABOUT WITH SEXUALITY AND GENDER DIVERSE YOUTH

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Holden Street Sexual Health Clinic, Gosford, NSW, Australia.

Background: Sexuality and Gender Diverse (SGD) youth have difficulty in accessing appropriate sexual health information. Evidence strongly supports the potential health benefits of sex education and targeted health promotion for young people. Regional Youth Support Services and San Remo Neighborhood Centre run monthly “GenQ” drop-in groups for SGD youth, and Holden Street Sexual Health Clinic has partnered with these organisations to provide outreach clinics to these groups under the GenQ Clinic Project.

The project aims to increase access to acceptable sexual health information, screening and counselling services for SGD young people aged 14-24yrs on the Central Coast.

Methods: At the GenQ Clinic every attendee has the opportunity for an individual consultation with the sexual health nurse for information and sexual health screening, and with the sexual health counsellor for any psychosocial issues. Targeted education is provided in a group environment by playing games utilising appropriate resources, and through practical information sessions. Referral is often made where necessary to other youth services, and information is given on where to access SGD friendly services beyond the GenQ Clinic.

Results: There were 40 visits to the GenQ Clinic between February and December 2012, and 15 sexual health screens were conducted. A survey about the GenQ Clinic and a multiple-choice quiz on sexual health is currently being distributed to participants and staff of both clinics to get more formal feedback and assess sexual health knowledge and attitudes. Responses from the returned surveys to date show overwhelming support for the GenQ Clinic.

Conclusion: As there was no existing healthcare services targeted to SGD youth on the Central Coast prior to the GenQ Clinic, these figures are indicative of improved access for this population and therefore a positive outcome.

Disclosure of Interest Statement:

Holden Street Clinic is funded by NSW Health. No pharmaceutical grants were received towards this project.

Paper Ref	49
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

TOWARDS INTERCULTURAL HYBRIDITY – CONNECTING CARE FOR COMMERCIALSEX WORKERS IN NORTHERN SYDNEY, NEW SOUTH WALES AUSTRALIA

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Introduction: Improving program accessibility for priority CALD commercial sex workers within Northern Sydney has been identified as a primary objective of local, state and national STI strategic plans.

Our program has introduced a model of care based within the principles of intercultural hybridity that focuses on relationships between cultures (sex industry culture / health service culture / cultural identity) and providing interventions that celebrate commonalities rather than focusing on differences.

The program objective is to encourage an inclusive practice and reduce the 'othering' effect often expressed within multidisciplinary teams, to deliver services that meet actual client need.

Methods: In June 2011, staff employed in the HIV and Related Programs Unit of Northern Sydney Local Health District formed an advisory group to address access issues to the local publicly funded sexual health service.

Via community consultations, client service analysis and a literature review, a service development program was initiated that included the recruitment of a specialist CALD Health Promotion Consultant (05.fte) and the reorientation of clinical services to meet local needs.

Results:

- Programmatic changes have occurred with improved relationships between health promotion and clinical services teams.
- A dedicated funded weekly CALD CSW 'walk in' clinic
- An 83% increase in service access of priority CSW
- Intercultural hybridity approach to health promotion practice
- Improved staff satisfaction in regards to workplace culture

Conclusion: Intercultural hybridity is a model of practice that works within a strengths based, evidence informed approach to the delivery of health promotion / clinical care. In order to deliver programs that meet client's expectations, strategic objectives and local service capacity, this theoretical approach to service delivery is an innovative way of highlighting 'commonalities' whilst also recognising diversity.

Our program highlights better practice examples of integrated health responses that combine the strengths of health promotion and clinical service staff, whilst working within a framework that supports client's actual needs.

Disclosure of Interest Statement: This project is part of core funding provided by HIV and Related Program, Primary and Community Health, Population Health of Northern Sydney Local Health District.

Paper Ref	298
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

THE BEACHSIDE CLINIC: A RESPONSE TO RISING CHLAMYDIA RATES IN YOUNG PEOPLE ON THE NORTHERN BEACHES, SYDNEY, AUSTRALIA

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Introduction: Addressing rising rates of chlamydia in young people involves a multidisciplinary approach to service provision. Implementing a targeted nurse led sexual health outreach clinic, supported by health promotion initiatives ensures local responses to meet local demands.

Methods: Using a service development framework, a review of current clinical and health promotion responses to meet the sexual health needs of young people living in the Northern Beaches of Sydney Australia was conducted. The process included x 5 community consultations, a client service analysis and a literature review. From here a service development program was initiated, resulting in the reorientation of clinical services.

Results:

- 309 unique clients with 733 occasions of service
- Positive chlamydia rate of 12.6% = 39 clients (x2 repeat infections) 13 Female 24 Male
- 5% of clients (16) referred for ongoing sexual health services to the primary clinic
- 67% of clients (206) belong to the priority young people populations of Aboriginal, MSM, Sex Worker, Injecting Drug and CALD populations
- Increase in outreach clinic operating hours - commenced as a 3hr Nurse outreach clinic in September 2011, now operating every Thursday from 11am to 6pm
- Local GP referral pathway and local service support (private business and NGOs)
- All local schools aware of program and client referrals have been made (education / info tours conducted)

Conclusion: The Beachside Clinic (TBC) model highlights better practice examples of integrated health responses that combine the strengths of health promotion and clinical service staff, whilst working within a framework that supports client's actual needs.

Stage 3 of this project is currently pursuing funding options to purchase an Outreach Van. This would allow mobile nurse services to cater for isolated young people of the district.

Disclosure of Interest Statement: This project is part of core funding provided by HIV and Related Program, Primary and Community Health, Population Health of Northern Sydney Local Health District.

Paper Ref	684
Theme	Sexual Health: Sexuality
Presentation Type	Sexual Health: Poster

BISEXUALITY IN HEALTH RESEARCH

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Introduction:

Sexual minorities experience major health disparities and bisexuals may have special health concerns.

Methods: To describe current strengths, deficiencies, and trends over time in the medical literature on bisexual health, we conducted a content analysis of full articles with census sampling to select all references listed in the PubMed database containing the term “bisexual” or “bisexuality” published over a period of 3 years (N= 348 articles).

Results: Methodological approaches favored cross-sectional surveys. Random sampling was uncommon. Frequently, articles simply merged data on bisexual subjects with other sexually minorities. Fewer than 20% of the articles that discussed bisexuality actually analyzed data for bisexuals as a separate group. Articles that analyzed data from bisexual subjects separately usually used self-reported identity in their operationalizations and rarely measured multiple dimensions of orientation. Study samples were demographically homogeneous, with poor representation of women, socioeconomic status, and minorities. The outcomes focused on a few common issues, including sexual risk behaviors, sexual health, illicit drug use, tobacco and alcohol use, and mental health problems. One fifth of the articles framed bisexuals as an infection-bridge between populations while about one sixth framed bisexuality as a legitimate identity. Over 90% of the bisexuality medical research was atheoretical.

Conclusion: Overall, we found that the medical literature does not outline a clear agenda specific to bisexual health, which has serious implications for clinical practices and health research aimed at minimizing disparities. Physicians and medical researchers can address the lack of representation in the medical literature by challenging assumptions and focusing more research on the needs of forgotten minority groups.

Disclosure of Interest Statement: There is no conflict of interest regarding this work.

Paper Ref	565
Theme	HIV/AIDS Theme B: Antiviral Therapy
Presentation Type	HIV/AIDS Poster

PATIENT ADHERENCE TO ANTIRETROVIRAL THERAPY AND ITS IMPACT ON VIRAL LOAD

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Introduction: Patient adherence to combination antiretroviral therapy (cART) is critical in attaining treatment benefits. Monitoring patient adherence facilitates detection of suboptimal adherence and allows timely intervention.

Methods: The study was an exploratory retrospective analysis of the adherence rates of patients with HIV infection who were taking antiretroviral therapy, attending Gold Coast Sexual Health Service. Prescription pick-up (PPU) data was used as the pharmacy adherence measure and a proportion of days covered (PDC) was used as the surrogate marker of adherence.

Results: The mean period of observation was 767 days, and the index date was the first date a prescription was filled in 2011. About 60.6% of the patients were deemed to being adherent (PDC ≥ 95). The proportion of patients with recent undetectable viral loads was 90.3%. There was no correlation found between recent viral loads and adherence [$2(1, n=161) = 2.97, p=0.09, \phi = -0.16$].

Conclusion: These results demonstrate that suboptimal adherence to cART remain an ongoing concern. Questions also arise as to the ability of newer agents in achieving viral suppression at levels lower than 95%; however the recommendations for high adherence rates remain in light of insufficient evidence for their adherence requirements. When considered from an adherence monitoring perspective, forgiveness of newer agents has the potential to delay detection of non-adherence by the viral load count warning systems. Further exploration of PPU measures to facilitate their increased role in early detection of suboptimal adherence is warranted. Development of adherence software incorporating PPU measures would provide several opportunities for cART adherence.

Disclosure of Interest Statement: No pharmaceutical grants were received in the development of this study.

Paper Ref	242
Theme	HIV/AIDS Theme B: Clinical Programs
Presentation Type	HIV/AIDS Poster

WEIGHT AND HEIGHT AS PREDICTORS OF CLINICAL PROGRESSION AND IMMUNOLOGICAL FAILURE FOLLOWING INITIATION OF HAART IN A COHORT OF HIV-INFECTED CHILDREN IN ASIA

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Background: Monitoring the impact of highly active antiretroviral treatment (HAART) in HIV-infected children in developing countries is frequently based on clinical parameters when laboratory services are not available. We studied the value of time-dependent weight and height in predicting clinical progression and immunological failure in children receiving HAART.

Methods: All children enrolled into the TREAT Asia Pediatric HIV Observational Database, younger than 15 years at HAART initiation and who had at least one weight and height measurement were included in this analysis. Data from 18 clinics in five countries up to March 2012 were analyzed. Outcomes were assessed after at least three months on HAART. We defined immunologic failure as a persistent decline of ≥ 5 percentage points from the peak CD4%, or a failure to increase CD4% by 5 percentage points from baseline in children with previous severe immune suppression (CD4% <15%). Clinical progression was defined as experiencing a WHO stage 4 event or death. We used Cox regression with weight for age Z score (WAZ) and height for age Z score (HAZ) as time-dependent variables to predict the endpoints.

Results: Of 2608 children, 51% were male; at HAART initiation the median age was 5.7 years, median CD4% was 9, 19% were WHO stage 4, and 95% received non-nucleoside reverse transcriptase inhibitor-based HAART. The median WAZ was -2.5 and median HAZ -2.4; having both HAZ <-2 and WAZ <-2 was seen in 39%. Overall 107 died (0.97/100 child-years), 52 progressed to stage 4 (0.62/100 child-years), and 164 experienced immunological failure (2.5 per 100 child-years). In Cox regression, WAZ <-3 was strongly associated with mortality ($p < 0.0001$) independent of CD4%; WAZ <-2 was associated with immunological failure ($p < 0.03$) independent of age at HAART initiation.

Conclusions: Weight monitoring can provide useful data to inform clinical management of children on HAART in resource-limited settings.

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), and the AIDS Life Association. The Kirby Institute is funded by the Australian Government Department of Health and Ageing, and is affiliated with the Faculty of Medicine, The University of New South Wales. 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.

Paper Ref	353
Theme	HIV/AIDS Theme C: Social & Behavioural Research
Presentation Type	HIV/AIDS Oral Presentation

MEN WHO TAKE MORE RISKS AVOID HIV TESTING DUE TO STRUCTURAL BARRIERS

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2. Australian Research Centre in Sex Health and Society, La Trobe University.
3. National Centre in HIV Social Research, University of New South Wales
4. ACON, Sydney.

Background: Regular HIV testing is recommended in men who take sexual risks. We assessed the relationship between perceived barriers to HIV testing, and frequency of testing among men who engaged in unprotected anal intercourse with casual partners (UAIC), to inform HIV testing strategies.

Methods: TAXI-KAB was a national online survey of Australian gay men recruited during late 2012. Men were asked about sexual behavior, last HIV test and barriers to testing in the past 12 months. We focused on men who reported UAIC, and used chi-squared tests to see if barriers varied according to whether men had tested more than or less than 2 years ago ("distant testers" and "recent testers" respectively).

Results: Of 771 men recruited, 269 (34.9%) reported UAIC in the past 6 months. Among men reporting UAIC testing barriers were often higher among distant testers: 'the process of getting tested is too much hassle' (50% in distant testers vs 23% in recent testers, $p=0.012$), 'I haven't had any symptoms or illness that made me worry' (48% vs 17%, $p=0.003$) and 'I don't want to have to discuss my sex life' (41% vs 11%, $p<0.001$). Distant testers indicated they did not appreciate 'having to return for a result' (47% in distant testers vs 27% in recent testers, $p=0.08$). Length of time since being tested was not associated with: 'I haven't done anything risky' (22% vs 15%, $p=0.393$) nor 'I don't want to know the result' (25% vs 22%, $p=0.816$).

Conclusion: Structural and other barriers to HIV testing are important for men who engage in UAIC and appear more influential in distant testers. These results highlight the importance of convenient ways to access testing. Empowering men to assess their own risks and need for testing without detailed pre-test discussions may encourage testing for some men.

Disclosure of Interest Statement: The Kirby Institute, The Australian Research Centre in Sex, Health and Society (ARCSHS) and the National Centre in HIV Social Research (NCHSR) receive 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. ARCSHS is affiliated with La Trobe University. NCHSR is affiliated with the Faculty of Arts, University of New South Wales. No pharmaceutical grants were received in the development of this study.

Paper Ref	587
Theme	HIV/AIDS Theme B: Clinical Programs
Presentation Type	HIV/AIDS Oral Presentation

DELAYED HIV DIAGNOSES AMONG GAY AND BISEXUAL MEN IN AUSTRALIA

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1. Kirby Institute, University of NSW.
2. Australian Research Centre in Sex Health and Society, La Trobe University.

Background: The majority of HIV diagnoses including delayed diagnoses in Australia occur among men who report homosexual contact – hereafter called gay and bisexual men (GBM). Delayed diagnosis is strongly associated with increased HIV-related mortality and morbidity. People who are unaware of their HIV-positive status may also be unwittingly transmitting HIV. We assessed trends in delayed HIV diagnoses among GBM in Australia.

Method: National surveillance data on new HIV diagnoses among GBM in the years 2002-11 were analysed. The number and proportion of diagnoses defined as late (a CD4+ cell count of 200 to 349 cells/µl at diagnosis), and advanced (<200 CD4+ cells/µl at diagnosis) is reported. A Chi-square test was used to assess trends in these two categories.

Results: A total of 6,725 HIV diagnoses in GBM were notified in the 10-years 2002-11. The number of diagnoses in GBM increased over time, from 592 in 2002 to 675 in 2006 and 801 in 2011. Of all diagnoses in GBM, 11.9% were defined as advanced, remaining steady over-time at 11.7% in 2002, to 12.7% in 2006 and 11.1% in 2011, with no significant trend (ptrend=0.593). A lower proportion of diagnoses in GBM were defined as late (9.8%), but diagnoses in this category increased steadily from 8.4% in 2002 to 11.3% in 2006 and 13.1% in 2010, with a decline in 2011 to 6.9%. There was a significant increasing trend in the proportion of HIV diagnoses defined as late over the period 2002-11 (ptrend=0.038).

Conclusion: An increasing proportion of HIV diagnoses among GBM were late diagnoses. The pattern of late diagnosis may be affected by patterns of antibody testing. A CD4+ count of 200-350 generally reflects an average time of around 4-7 years since initial infection. Services that offer more convenient and acceptable options for HIV testing may be needed to reduce delayed diagnoses among GBM.

Disclosure of Interest Statement: The Kirby Institute, and The Australian Research Centre in Sex, Health and Society (ARCSHS) receive 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. ARCSHS is affiliated with La Trobe University.

Paper Ref	56
Theme	HIV/AIDS Theme D: Vulnerability & risk
Presentation Type	HIV/AIDS Oral Presentation

IS THERE HIV ON THE INSIDE? AN ASSESSMENT OF HIV RISK AND PREVENTION IN PRISON'S AND POLICE HOLDING CELLS IN PAPUA NEW GUINEA

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Introduction: HIV prevention in closed settings was included for the first time in the PNG HIV/AIDS strategy for 2011-2015. Baseline data on the extent of HIV, risk and current prevention measures in prisons and police holding cells are lacking, but an essential starting point for guiding the response.

Methods: A desk review and qualitative semi-structured interviews were undertaken with prisoners and detainees (n=56) and 60 key informants including Correctional Officers, Police, health care workers, and personnel from NGOs and faith based organisations and people involved in HIV policy and programmatic responses in PNG

Results: To date, no surveillance data have been collected on HIV among prisoners or those held in police detention in PNG. Closed settings pose different HIV risks for men and women. Despite denial from Senior Correction Services staff, prisoners and lower level correctional staff reported unprotected coercive and consensual sex among male prisoners. Women appeared to be at greatest risk of HIV while detained in police holding cells where all wardens are male, and male police officers have access to female detainees; female detainees are particularly vulnerable at night. For women, risk may be less inside prisons where female facilities are staffed by female wardens. Condoms are not available in prisons or police detention. Corrections staff refuse to distribute condoms in the understanding that sodomy is illegal.

Conclusion: HIV risk in closed settings in PNG occurs in the context of both consensual and violent sexual behaviours. Risks for women and men vary depending on the setting. To address sexual violence and HIV in closed settings in PNG legal reform, police and prisons practices, and the introduction of HIV prevention activities including the distribution of condoms, needs to occur.

Disclosure of Interest Statement: This study was funded by UNAIDS/UNODC. No pharmaceutical grants were received in the development of this study.

Paper Ref	476
Theme	HIV/AIDS Theme B: Delivery Of Care
Presentation Type	HIV/AIDS Poster

THE DEVELOPMENT OF A CONTEMPORARY MODEL OF CHRONIC DISEASE CARE FOR PATIENTS WITH HIV

Kelly M

Background: Patients with HIV have dynamic clinical needs that impact upon resource allocation. A model of care was developed at a large inner city HIV service to reflect these dynamic needs.

Patients were classified as ‘stable’ requiring only medical input or as ‘unstable’ requiring more intensive multidisciplinary input. Unstable patients included all new patients (NU); previously stable patients with new problems (temporarily unstable TU) and patients with multiple co-morbidities or complex psychosocial needs (chronically unstable CU). Patients were reviewed for re-classification every six months.

Methods: Patients were classified by their attending clinicians. A subset (n=127) of the total cohort was reviewed over six weeks and changes in classification were recorded.

Results: Of the 740 patients attending the service at the commencement of the review 361 (49%) were classified as stable and 379 (51%) classified as unstable. Of those classified as unstable, 40 NU; 59 were CU and 280 were TU. Patients classified as TU represented 38% of the total clinic cohort. In the subset of 127 patients seen by one clinician, 34 (27%) were reclassified. Eleven stable patients were reclassified as TU, 10 TU patients were reclassified as stable, 6 TU patients reclassified as CU and 7 CU patients reclassified as TU.

Discussion and Conclusions: Approximately equal proportions of patients were classified as either unstable or stable using the model of care. The dynamic nature of patient clinical need was demonstrated by the observation that 27% of patients presenting over a six week period were reclassified. This model permits efficient resource allocation within the clinic by accounting for the dynamic nature of clinical needs of patients with HIV. The study highlights the need for all PLWH to be reviewed regularly and routinely by experienced HIV clinicians.

Disclosure of Interest: None.

Paper Ref	191
Theme	HIV/AIDS Theme B: Associated Diseases
Presentation Type	HIV/AIDS Oral Presentation

COMPLEX CASE REPORT THAT ILLUSTRATES THE PAUCITY OF DATA FOR LONG TERM MANAGEMENT OF VISCERAL LEISHMANIA-HIV CO-INFECTION

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Introduction: HIV-associated leishmaniasis, endemic in the Mediterranean basin is a growing problem in India, Brazil and East Africa. Despite surviving for than 20 years, the clinical course of our visceral-leishmania (VL)-HIV co-infected patient illustrates several management challenges including diagnosis, speciation and drug resistance; monitoring burden of disease; access to and use of VL-treatments; end-organ toxicity and the combined immunosuppressive effects of HIV-VL.

Methods: Descriptive case report.

Results: A 58-year-old man, diagnosed with HIV-1 in 1985 was subsequently diagnosed with VL in 1996 on gut biopsy; the latter was unmasked through HIV-associated immunodeficiency as leishmania was likely acquired during childhood years in Greece. Challenge 1: presumed *L.infantum* infection, as formal speciation was only possible in 2003 using an in-house PCR. Challenge 2: although the WHO "gold standard" for monitoring disease burden is splenic aspiration and culture, no unit would perform this due to understandable safety concerns - instead repeated bone marrow biopsies were used to "quantify" disease burden. Challenge 3: between 1996-2012 in accordance with various "guidelines" – based largely on HIV-negative experience, the patient received, in addition to combination antiretroviral therapy (cART), successive "induction-maintenance" with pentavalent antimonials; miltefosine (imported from Germany); liposomal amphotericin and monthly pentamidine with azoles (posaconazole on compassionate access, later fluconazole). There was rapid clinical failure and ultimately clinical evidence of pan-resistance to all anti-parasitics. Progressive renal impairment, liver cirrhosis (Challenge 4) and increasing frailty meant that parenteral paromomycin was not a viable treatment option. Challenge 5 – immune failure ultimately leading to death from recurrent gram negative sepsis arising from ulcerated skin lesions infiltrated with leishmania.

Conclusion: Further data on induction-maintenance strategies using combination VL-therapeutics coupled with improved microbiological techniques for diagnosis and monitoring in the HIV setting are urgently needed. Moreover, these VL-therapeutics and cART need to be affordable and accessible in countries with endemic HIV-VL co-infection.

Disclosure of Interest Statement:

No disclosures in regards to the above abstract from any listed Authors.

Paper Ref	337
Theme	HIV/AIDS Theme C: Health Promotion
Presentation Type	HIV/AIDS Poster

A NEW SKIN, SEO AND SOCIAL MEDIA: INNOVATIVE WAYS TO PROMOTE HEALTH EDUCATION WEBSITES

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Introduction: In 2009, the Department of Health WA launched *Get the Facts* (www.getthefacts.healthwa.gov.au) to provide sexual health and relationships information to youth aged 14 to 17 years. The website features a range of interactive features, including online chlamydia self-risk assessment and free testing, an email question and answer service, and a search function for sexual health services.

Methods: Browsing behaviours on the site reflected general online behaviour trends among youth: Many youth browse via smartphones and tablets and frequent social networking sites. Additionally, search engines are the primary portal of information for most youth.

Results: In response to an independent evaluation conducted in 2010, the website was given a new 'skin' in April 2012 featuring updated artwork and photographs of youth from the target population. This was followed by a sustained 20% increase in website traffic for 11 months. In November 2012, a mobile version of the website optimised for smart phone devices was launched. Advertising on Facebook increased website referral traffic by 4000%. Search Engine Optimisation [SEO], implemented in January 2013 to improve rankings on various search engines, was followed by a 20% increase in website traffic and positive responses from the public.

Conclusion: Websites must be developed and promoted according to the browsing behaviour of end-users and technology trends to ensure maximum exposure and high traffic. For this reason, Get the Facts is being further-developed to include map and navigation functionality and to provide a tailored browsing experience based upon individual visit purposes. Continued online promotion and increased SEO is also planned.

Disclosure of Interest Statement: The authors have no conflicts of interest.

Paper Ref	207
Theme	HIV/AIDS Theme B: HIV Associated Diseases
Presentation Type	HIV/AIDS Oral Presentation

HIV AND HODGKIN'S LYMPHOMA - A MEDICAL DILEMMA

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The case is of a 30 year-old HIV positive Zimbabwean woman (UK resident) who arrived in Australia in January 2011 on a one-year working visa. She was diagnosed with HIV in 2003 in the UK and commenced on Atripla® in 2005.

She was first seen in Adelaide in May 2011, requesting a script for Atripla®. Viral load was undetectable and CD4 count was 276 (24%).

In August 2011, she presented with an unplanned pregnancy at 6 weeks gestation. Unfortunately, a month later, she miscarried at 10 weeks gestation. Early October 2011, she developed fevers, nausea and vomiting and was admitted to a country hospital. She was thought to have a lower respiratory tract infection but did not respond to IV antibiotics. She was transferred to the Royal Adelaide Hospital and was unwell on admission. A CT scan of her neck, chest and abdomen revealed extensive lymphadenopathy. There were bilateral alveolar infiltrates noted in the CT scan of her chest. A lymph node excision biopsy revealed Hodgkin's Lymphoma of the nodular sclerosis type.

The patient decided to return to the UK for treatment of her lymphoma as her family supports are there. She was referred to the Chelsea and Westminster Hospital. Staging performed revealed a Stage 3b Hodgkin's Lymphoma. She was managed with full opportunistic infection prophylaxis using cotrimoxazole, fluconazole, acyclovir and azithromycin. She obtained full remission after six cycles of ABVD (doxorubicin, bleomycin, vinblastine, dacarbazine) combination chemotherapy but developed painful peripheral neuropathy requiring pergabalin. Toxicity and fertility issues were discussed.

The patient is now pregnant again at 28 weeks gestation.

An overview of HIV associated Hodgkin's Lymphoma in the era of cART will be presented.

Disclosure of Interest Statement: No conflicts of interest declared. No pharmaceutical grants were received

Paper Ref	205
Theme	HIV/AIDS Theme B: Clinical Programs
Presentation Type	HIV/AIDS Poster

HIV AND HAART IN EARLY PREGNANCY - MANAGEMENT ISSUES WITH THE USE OF EFAVIRENZ DURING EARLY PREGNANCY

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The first case is a 30 year-old HIV positive woman who was diagnosed with HIV in the UK in 2003 and commenced on Atripla® in 2005. She was first seen in Adelaide in May 2011, requesting a script for Atripla®. Her viral load was undetectable (<10 copies/ml) and CD4 count was 276(24%) cells/mm³.

In August 2011, she presented with an unplanned pregnancy at 6 weeks gestation. There were concerns regarding the continuation of Atripla®. However after a lengthy discussion it was agreed she should continue with the Atripla®. Unfortunately, a month later, she miscarried at 10 weeks gestation in September 2011, shortly after she was diagnosed and treated for Hodgkin's lymphoma and is in remission. Currently she is 28 weeks gestation with her second pregnancy & is taking Atripla®.

The second case is a 29 year old woman who was diagnosed with HIV antenatally and commenced on Combivir® & Kaletra® in her second trimester. She was switched to Atripla® after the birth of her baby. She tolerated Atripla® very well and had excellent adherence. By 12 weeks post partum she was pregnant again. At 8 weeks gestation because of concerns about efavirenz & teratogenicity she was switched back to Combivir® & Kaletra® resulting in severe vomiting and 10 days of less than 50% adherence. Atripla® was restarted & tolerated very well for the rest of her pregnancy, by 28 weeks she re-suppressed to <10 copies/ml. Subsequently, her baby tested negative for HIV.

Concerns about efavirenz induced fetal effects arise from animal studies, the predictive value of animal data in humans is unknown. There are 1200 animal teratogens only 20 of which are known to be teratogenic in humans. Metanalysis data and the antiretroviral pregnancy register show no increased risk of teratogenicity during first trimester exposure.

Disclosure of Interest Statement: No conflicts of interest declared. No pharmaceutical grants were received.

Paper Ref	213
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Oral Presentation

PREVALENCE OF SEXUALLY TRANSMITTED INFECTIONS (STIS) AND PATIENT CHARACTERISTICS OF OLDER MEN OVER 60 YEARS OF AGE ATTENDING A PUBLIC STD CLINIC IN SOUTH AUSTRALIA

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Background: STI prevalence is changing. With society aging, life expectancy increasing and changes in sexual practices, STIs in senior citizens are of interest from economic, health related and social burden perspectives.

Few studies on STIs in older men greater than 60 years of age exist, hence, a need to obtain further information about this subpopulation.

Method: A retrospective study of data over 13 years was performed looking at various characteristics of men over 60 years visiting Clinic 275. STI diagnoses of Gonorrhoea, Chlamydia, Syphilis, Non-Specific Urethritis (NSU) and Warts were evaluated.

A comparison was made between the prevalence of STIs between older heterosexual and Men who have sex with Men (MSM) Further comparison was made between these men and their younger cohort (aged 18-59)

Data analysis was performed using STATA (version 11)

Results: During the study period, 752 men, 60 years and older, visited the clinic. At first presentation visit, there were significant differences in gonorrhoea and chlamydia prevalence between heterosexuals and MSM ($p < 0.05$). Differences in prevalence for syphilis, NSU and warts were insignificant.

Compared with younger heterosexuals, heterosexual older men were less likely to have chlamydia and warts and more likely to have positive syphilis serology. There were insignificant differences in STI rates between younger and older MSM.

Older MSM were less likely to have previous HIV testing and were from less disadvantaged areas compared to younger MSM.

Older heterosexual men were less likely to have more than one partner in previous 3 months compared to younger heterosexuals.

Conclusion: We believe this is the only study in South Australia addressing the epidemiology of STIs and characteristics of older men visiting a public STD clinic. STI rates in older MSM are similar to younger MSM but older MSM are less likely to be tested for HIV. There is need to improve HIV testing amongst older MSM.

Disclosure of Interest Statement: No conflicts of interest are declared. No pharmaceutical grants were received in the development of this study.

Paper Ref	231
Theme	HIV/AIDS Theme B: HIV Associated Diseases
Presentation Type	HIV/AIDS Poster

VITAMIN D DEFICIENCY IS COMMON IN HIV-INFECTED ADULTS IN MELBOURNE

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Background: Vitamin D deficiency is associated with disease progression and poor immune recovery in people living with HIV infection. Lower serum 25-hydroxyvitamin D [25(OH)D] levels in HIV-infected persons are more common in those with darker skin, those using efavirenz, and when measured during the winter/early spring. The prevalence of vitamin D deficiency in Australian HIV-infected patients is yet unknown. The aim of this study was to measure the prevalence of vitamin D deficiency and to identify its determinants in HIV-infected adults in Melbourne, Victoria.

Methods: A cross-sectional study of patients who had 25(OH)D levels measured between 2008 and 2012. Potential determinants of vitamin D deficiency (defined as <50 nmol/L) included demographics, pathology, ambient UV index prior to 25(OH)D measurement and HIV-related factors, including antiretroviral therapy.

Results: 997 patients had 25(OH)D measurements between 2008 and 2012. Their mean age was 41 years and 882 (89%) were male. The median CD4 count was 536 cells/mm³ (IQR 39, 711). The age- and sex-adjusted prevalence of deficiency was 51.8% (95% confidence interval (CI) 48.8%, 55.0%). In multivariable analyses adjusted for age, sex and method of assay, compared with those who were not vitamin D deficient, vitamin D deficiency was associated with UV index (OR 0.80, 95%CI 0.75, 0.85, p<0.001), country of birth (OR 4.93, 95%CI 2.10, 11.61, for those born in African compared with Caucasian countries, p<0.001; OR 2.95, 95%CI 1.80, 4.83, p<0.001 for those born in Asian or other, compared with Caucasian countries), current efavirenz use (OR 1.87, 95%CI 1.27, 2.75, p=0.002), and serum triglycerides (OR 1.23, 95%CI 1.08, 1.41, p=0.003).

Conclusion: The age- and sex-adjusted prevalence of vitamin D deficiency was higher in HIV-infected adults (52%) compared with the Victorian population (42%). The strongest determinants of vitamin D deficiency in Australian HIV-infected adults were country of birth, UV index, efavirenz use and serum triglycerides.

Disclosure of Interest Statement: The authors have no conflict of interests.

Paper Ref	499
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Oral Presentation

CONDUCTING CLINICAL AUDITS TO IMPROVE SEXUAL HEALTH SERVICE DELIVERY IN PRIMARY HEALTH CARE SERVICES: SUCCESSES, CHALLENGES AND LESSONS LEARNT.

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Background: Conducting clinical audits in the context of continuous quality improvement (CQI) programs in Aboriginal Community Controlled Health Services (ACCHS) has provided valuable information regarding what factors facilitate or create challenges to improving outcomes in sexual health service delivery.

Methods: Clinical audits were conducted in sixteen ACCHS in urban, regional and remote locations across Australia, between 2008 and 2013 as part of various sexual health CQI programs. Technical assistance was provided to ACCHS to extract and collate health service data regarding STI testing and management. Results and recommendations were fed back to health services in the form of written reports and facilitated discussion with staff.

Results: Despite the differences between the participating ACCHS and their locations, the gaps identified and factors that enhanced or created barriers to improving outcomes were similar across services. Increases in STI testing occurred more easily among female than among male clinic attendees due to the integration of STI testing into routine health screening and reproductive health visits among women. Factors within services which facilitated improved outcomes included: the presence of key management and clinical staff to drive changes in response to recommendations; systematic approaches to any health screening already in place; the integration of STI testing into existing health screening among 15 to 29 year olds; effective communication and team work amongst staff; engagement with medical staff; and regular review and feedback. The lack of those factors provided challenges to increasing STI testing among clinic attendees, particularly among men.

Conclusion: Clinical audits in the context of CQI programs can assist services to improve outcomes in STI testing and management. The factors that facilitate or create challenges to addressing gaps identified are fairly consistent across a range of services and should be taken into account when developing and implementing sexual health CQI programs.

Disclosure of Interest Statement: No disclosure of interest.

Paper Ref	267
Theme	HIV/AIDS Theme B: Workforce Issues & Professional Practice
Presentation Type	HIV/AIDS Poster

BALANCING CHURCH BELIEFS, CULTURE AND SEXUAL HEALTH CURRICULUM; HOW TEACHERS RESPOND TO HIV IN PNG

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Background: A comprehensive response across all sectors of government and civil society is required for an effective response to HIV in Papua New Guinea. Christian Churches are key social institutions that deliver many health and education services. This study explored how the Seventh-day Adventist (SDA) Church education system is responding to HIV/AIDS. It specifically investigated how Church beliefs are interpreted and how this influences the education system's responses to HIV/AIDS in Papua New Guinea.

Methods: A total of 18 teachers, 3 lecturers and 5 administrators participated in 15 interviews and 4 focus group discussions. Participants were purposively sampled from 3 SDA primary schools, 3 SDA secondary schools, an SDA college and 4 SDA regional offices in 4 provinces. Interviews and focus groups discussions were digitally recorded and transcribed. The transcripts were coded and major themes were identified.

Results: Teachers who work within the SDA Church education system teach the national education system's Sexual Health Curriculum. Apart from teaching the curriculum, few HIV and AIDS education programs are conducted within the system. Many teachers are not comfortable teaching sexual health topics because of cultural taboos. Some parents think it is inappropriate to teach sexual health education, such as human anatomy at lower primary school. Many teachers and administrators have an opposition to condoms for HIV prevention method because of a perceived contradiction to Church belief. However, most teachers and administrators had not viewed any official Church policy or statements on HIV/AIDS and base their responses on personal perceptions of Church belief.

Conclusion: The response of the SDA education system to HIV/AIDS is influenced by a combination of socio-cultural factors, church beliefs and national educational curriculum. It is important to understand how teachers and administrators balance these factors given the prominence of church based education services in PNG.

Disclosure of Interest Statement: This study was funded by Papua New Guinea National AIDS Council Grant RES 10.005. No pharmaceutical grants were received in the development of this study.

Paper Ref	306
Theme	Sexual Health: Biomedical
Presentation Type	Sexual Health: Oral Presentation

AZITHROMYCIN VERSUS DOXYCYCLINE FOR THE TREATMENT OF GENITAL CHLAMYDIA INFECTION – A META-ANALYSIS OF RANDOMISED CONTROLLED TRIALS.

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Introduction: There has been considerable debate questioning the efficacy of azithromycin for the treatment of genital chlamydia. We conducted a meta-analysis to compare the efficacy of 1 gram azithromycin with 100mg doxycycline twice daily for seven days for the treatment of genital chlamydia infection.

Methods: Medline, PubMed, Embase and the Cochrane Controlled Trials Register were searched till end 2012. Inclusion criteria included 1) randomised controlled trial of azithromycin versus doxycycline for the treatment of urethral or cervical chlamydia, and; 2) evaluation of microbial cure within 3 months of treatment. Type of diagnostic test, duration of follow up, gender, patient status (symptomatic versus other) and microbial cure were extracted. The primary outcome was efficacy difference (ED=doxycycline efficacy minus azithromycin efficacy) at final follow up. Meta-analysis calculated a pooled efficacy for each treatment and the difference in efficacy between treatments.

Results: Of 692 references identified, 23 trials met the inclusion criteria. 1099 individuals were treated with azithromycin and 876 with doxycycline; all studies reported efficacy within 6 weeks follow-up. Pooled cure rates were 94.4% (95%CI:91.9%, 96.9%) for azithromycin and 97.5% (95%CI:96.3%,98.8%) for doxycycline. The pooled efficacy difference was 2.7% (95%CI:0.7%,4.8%) showing a significant difference in favour of doxycycline; there was negligible heterogeneity between studies ($I^2 = 0.0\%$, $p=0.46$). There was no significant efficacy difference in men (ED=4.3%;95%CI:- 0.2%, 8.9%) or women (ED=1.0%;95%CI: -4.4%, 6.5%). When stratified by type of test, efficacy was significantly higher for doxycycline in NAAT-based studies (ED=5.4%;95%CI: 0.6%, 10.2%), but not in culture-based studies (ED=1.9%;95%CI: -0.4%, 4.1%). Efficacy was higher for doxycycline in symptomatic individuals (ED=5.8%;95%CI: 1.0%, 10.5%)

Conclusion: These results suggest that doxycycline may be more effective than azithromycin for the treatment of urethral or cervical chlamydia infection, especially for symptomatic individuals. Efficacy however needs to be balanced against compliance, with a 7-day course of doxycycline.

Disclosure of Interest Statement: The authors have no conflicts of interest to declare.

Paper Ref	299
Theme	HIV/AIDS Theme B: Diagnosis & monitoring
Presentation Type	HIV/AIDS Oral Presentation

FEASIBILITY, ACCEPTABILITY AND POINT PREVALENCE OF HIV TESTING IN ADULTS ADMITTED UNDER THE DIVISION OF MEDICINE AT ROYAL DARWIN HOSPITAL

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Introduction: Early HIV diagnosis is important both to reduce transmission rates and the adverse impacts on patient mortality and morbidity. In the Northern Territory (NT) heterosexual people account for most new HIV diagnosis, are more likely to be diagnosed late, and may not be reached by traditional approaches to increase HIV testing. In order to increase testing rates the USA and UK have implemented broad HIV testing guidelines for people presenting to acute and primary care settings. Both countries have found routine HIV screening to be acceptable, feasible and cost effective.

In August 2012, Royal Darwin Hospital (RDH) issued a new guideline recommending HIV testing be considered as part of routine assessment of all adults admitted under the Division of Medicine (DoM). We performed a retrospective audit of testing uptake following six months implementation.

Methods: Data will be retrospectively extracted from hospital electronic and laboratory databases to determine number of HIV tests performed and number of patients admitted under the DoM over six months prior to and post implementation of the guidelines. Additionally we will examine demographic and medical data of those whom tested positive including age, gender, country of origin, CD4 count and presenting diagnosis.

Results: Since implementing the new HIV testing guideline approximately 1,500 people have been tested and 5 (0.3%) tested positive to HIV. Detailed results including analysis of changes in testing rate before and after implementation and characteristics of those testing positive will be presented.

Conclusion: RDH has successfully implemented an HIV testing policy tailored to the local epidemiology of HIV. It appears the overall positivity rate is 0.3% which is within the range at which testing is recommended in some global guidelines. Further data will enable comment on uptake rate and feature of those testing positive, including the number who meet standard Australian testing criteria.

Disclosure of Interest Statement: Royal Darwin Hospital is funded by the Northern Territory Government. There are no conflicts of interest, financial or intellectual that may influenced this study.

Paper Ref	533
Theme	HIV/AIDS Theme D: Culturally & linguistically diverse populs
Presentation Type	HIV/AIDS Oral Presentation

HIV NOTIFICATIONS IN MIGRANT POPULATIONS IN NSW, 2003-2012

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Introduction: People from culturally and linguistically diverse (CALD) backgrounds have been identified in NSW as a population at greater risk of HIV infection. This study aims to describe the epidemiology of newly diagnosed HIV infection in New South Wales residents born overseas, to inform health promotion and clinical service delivery efforts.

Methods: HIV notification data were used to compare Australian-born and overseas-born NSW residents who were newly diagnosed with HIV infection between 2003 and 2012. Notifications of people born overseas were further grouped into one of eight regions of birth. Risk factors for HIV infection and characteristics of testing history and diagnosis were examined.

Results: There were 3667 notifications of newly diagnosed HIV infections in NSW residents between 2003 and 2012. Of these, 2001 (54.6%) were Australian-born, 1349 (36.8%) were born overseas and 317 (8.6%) had an unreported country of birth. The overseas-born group were younger, with a median age of 34.1 years compared to 37.0 years in the Australian-born group. The regions of birth with the highest number of notifications were: Europe (359, 9.8%) and South-East Asia (320, 8.7%). Homosexual contact was the most commonly reported risk exposure for those born in Australia (82.4%) and those born overseas (64.6%). The median CD4+ count at diagnosis was 480 cells/ μ L in the Australian-born group, higher than that in the overseas-born group (391 cells/ μ L).

Conclusion: Overseas-born NSW residents who are newly diagnosed with HIV infection are generally younger and more likely to present at a later stage of HIV infection than their Australian-born counterparts.

Disclosure of Interest Statement: No grants were received in the development of this study.

Paper Ref	536
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Quick Fire Presentation

IMPACT OF RE-INFECTIONS ON NOTIFICATIONS OF STIS IN NSW

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Introduction: Two common sexually transmitted infections in New South Wales (NSW) are chlamydia and gonorrhoea. To date the main methods for control and prevention of these two STIs in NSW are opportunistic screening and prevention through education campaigns. This study aims to determine the number of notified cases who are reported with re-infection in NSW to assess whether current policies and practices are targeting the appropriate population.

Methods: Notifications to NSW Health of chlamydia and gonorrhoea between 2000 and 2012 were deterministically matched by given name, surname and date of birth, to create a de-identified person based record. 107,553 persons were grouped by number of infections recorded. Re-infections were defined as new notifications, 30 days to 13 months after the initial notification. Logistic regression was used to determine demographic differences between individuals with single notifications compared to those with re-infections within 13 months by area of residence, age group, sex and year of first notification.

Results: 94,930 individuals had an initial chlamydia notification of which 4,730 (5.0%) individuals had a re-infection. 11,263 individuals had an initial gonorrhoea notification of which 717 (6.4%) individuals had a re-infection. 1,367 individuals had an initial co-infection of chlamydia and gonorrhoea of which 150 (11.0%) had a re-infection. Young people, particularly residents outside metropolitan Sydney, were more likely to have a re-infection following an initial chlamydia infection. Females were more likely to be re-infected within 13 months of a chlamydia infection than males. Notifications for both STIs increased over time, however re-infections only increased for chlamydia. The proportion of re-infections following a gonorrhoea infection were stable over time.

Conclusion: This study found that young people particularly residents outside metropolitan Sydney were more likely to have a re-infection following an initial chlamydia infection. The high number of notifications and re-infections for young people indicates ongoing risk behaviours.

Disclosure of Interest Statement: Nil.

Paper Ref	496
Theme	HIV/AIDS Theme B: Delivery Of Care
Presentation Type	HIV/AIDS Poster

CLIENT SATISFACTION OF HIV OUTPATIENT NUTRITION CLINICS WITHIN INNER WEST SYDNEY, NSW

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Introduction: Client satisfaction has been identified as an outcome measure of health care and is influenced by a patient's knowledge, experiences and perceived needs for the service. Client satisfaction is currently unknown among HIV nutrition clinics in Sydney. The aim of this study is to determine patient satisfaction with HIV nutrition clinics in Inner West Sydney.

Methods: A self administered questionnaire was distributed to a convenience sample of PLHIV attending two HIV services in the inner west of Sydney. The questionnaire contained 60 questions including 7 factors: accessibility, availability, clinic environment interpersonal skills, technical skills, perceived outcomes, and overall satisfaction. Participants were asked if they had seen a dietitian or not in the last 12 months. Ethics approval was granted from St Vincent's Hospital and Sydney Local Health District (SLHD) Human Ethics Committees.

Results: Thirty-seven clients completed the questionnaire, 62% (n=23) clients had seen a dietitian within the last 12 months and of those 83% were seen at the hospital nutrition HIV clinic and 17% were seen at the community HIV nutrition clinic. The mean age was 49 years and mean duration of HIV infection of 14 years. The mean number of dietitian visits was three. Forty-eight percent strongly agreed that they felt comfortable talking about all aspects of health and nutrition, 57% agreed they felt emotionally better as a result of the nutrition care provided and 72% were overall satisfied with the nutrition clinics. The main reasons for not seeing a dietitian were that they didn't think they had any nutrition related problems (40%) and that it was not a priority for them (20%).

Conclusion: Most clients were satisfied with the nutrition care they received at the service they attended. Feedback from the questionnaires could be used to improve nutrition service delivery and future patient satisfaction tools.

Disclosure of Interest Statement: No contributions to disclose.

Paper Ref	432
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Oral Presentation

'I COULDN'T TALK TO A GIRL ABOUT THAT...': HOW YOUNG MALE VICTORIAN TAFE STUDENTS WOULD LIKE GENERAL PRACTITIONERS TO TALK TO THEM ABOUT SEXUAL HEALTH

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Introduction: Young men need sexual health information yet attend General Practice relatively infrequently, and uncommonly seek sexual health advice. Little is known about the attitudes of young men to opportunistic health screening or education by a General Practitioner (GP).

Methods: One-on-one semi-structured interviews were conducted with 16 male TAFE students aged 16-17 years old. All interviews were audio-recorded, transcribed and thematic analysis applied to the data.

Results: Interviews took 10-35 minutes. Most young men attended the GP on their own but described parental involvement in booking appointments, transport and dealing with reception staff. Most young men were sexually active but needed terms such as 'STI' and 'contraception' explained by the interviewer. The young men were unwilling to display their lack of knowledge regarding sexual health. Apathy was the dominant attitude of young men to sexual health that came through the interviews. Most young men were not initially supportive of a GP bring up sexual health in an unrelated consult, but when offered a segue such as 'The government is doing a big push to offer a Chlamydia test to all young men your age...' they said they would be happy to engage in discussion/education. Most of the young men preferred a young to middle aged male doctor to discuss sexual health.

Conclusion: Young men are not fully functioning as independent beings but are fully functioning as sexual beings. They are willing to engage with sexual health material/education in an appropriate setting. GPs should not seek to assess knowledge but rather should offer education and screening tests in a gentle, non-confrontational manner. Male GPs should ensure they do this at every opportunity. Female GPs should raise the subject and offer discussion with herself or a male colleague.

Paper Ref	219 and 597
Theme	HIV/AIDS Theme A: Gene therapy
Presentation Type	HIV/AIDS Oral Presentation and Poster

SHORT-HAIRPIN RNA GENE THERAPY TO CCR5 AND MEMBRANE ANCHORED C PEPTIDE AND THEIR EFFECT ON HIV SUSCEPTIBLE CULTURES

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Introduction: The report of a functional cure for an individual with AIDS/leukemia by transplanting hematopoietic stem cells with a CCR5delta32 mutation into an individual points to the capacity of gene modified cells to impact on HIV. We examined the impact of varying levels of gene therapy *in vitro* using a short-hairpin RNA to CCR5 (sh5), and separately, a gene expressing a membrane-anchored C peptide (C46).

Methods: Molt4 T cells modified to express CCR5 were transduced with lentiviral vector constructs containing GFP and the therapeutic gene (sh5 or C46) and were then challenged with R5-tropic Bal HIV. Gene marking, at a range of initial levels was examined over the course of a three week challenge. Culture dynamics determined by GFP expression (via flow cytometry), total cell concentrations and p24 levels were measured at regular intervals.

Results: Both the C46 and sh5 therapeutic constructs were shown to have beneficial effects on cell cultures in the presence of HIV. For each construct, greater levels of gene-marking were associated with greater maintenance of total cell concentrations and lower p24 levels. p24 peaks were 1 and 2 logs lower for C46 and sh5, respectively resulting in efficacies of 90% and 99%. The percentage of gene-marked cells increased over the duration of the experiment in each case. In the presence of HIV, initial concentrations of 12.5% gene-containing cells expanded to more than 40% and 50% for sh5 and C46 respectively.

Conclusions: These results indicate cells containing CCR5 and C46 gene therapeutics will expand over time due to the selective pressure of HIV, limiting the extent of CD4+ T cell depletion, and reducing HIV viral load. They point to the promise of gene therapeutics for clinically relevant outcomes for HIV/AIDS.

Disclosure of Interest Statement: Geoff Symonds is Chief Scientific Officer of Calimmune and the industry partner on an ARC Linkage Grant. John Murray is the Chief Investigator on the ARC Linkage grant, which provides funding for the other authors.

Paper Ref	415
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Poster

TAKING ACTION TO CLOSE THE GAP: YARNING ABOUT SEXUAL AND REPRODUCTIVE HEALTH WITH ABORIGINAL YOUTH

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Background: Adolescence and young adulthood represents a critical time to focus on health. We describe the impact of the health promotion initiatives conducted by a Sexual and Reproductive health Worker based at Coonamble Aboriginal Health Service on health service access and testing for sexually transmissible infections (STIs) in Aboriginal youth.

Methods: A range of health promotion activities were conducted with Aboriginal youth including health checks in the community (Men's Pit Stop, Women's Health Event), raising awareness ('Condom Day' and health education in schools) and providing support to pregnant women to attend antenatal visits ('Buddy system'). To evaluate the impact of these initiatives, de-identified routine clinical data were extracted from the Patient Information Management System. We compared the number of Aboriginal youth aged 15-25 years attending for medical consultation, total consultations and the proportion tested for chlamydia and gonorrhoea in the year before the initiatives commenced (April 2010- March 2011) and the second year of the program (April 2012-March 2013).

Results: Before the initiative commenced, there were 252 15-25 year olds who attended the service, a total of 828 times (ratio of 3.3 consultations per person; 3.9 in females, and 2.3 in males) In year 2, a similar number of individuals attended (261), but attendances were more frequent with a total of 1200 consultations in the year (ratio of 4.6 consultations per person; 5.5 in females, and 3.0 in males). There were also increases in the proportion of young Aboriginal people tested for chlamydia; with 18% of 15-25 year old females tested before the Worker started, nearly doubling to 32% in year 2, and 5% of 15-25 year olds males were tested before the initiatives commenced, increasing more than three-fold to 16% in year 2. Similar increases were seen for gonorrhoea testing.

Conclusions: Health promotion initiatives at Coonamble Aboriginal Health Service have improved health service access for Aboriginal youth and increased STI testing. These results may guide future health promotion campaigns and initiatives. Promoting healthy practices during adolescence will ensure longer, more productive lives.

Disclosure of Interest Statement: The Sexual and Reproductive Worker employed at Coonamble Aboriginal Health Service was funded by the NSW Ministry of Health under the National Partnership Agreement on Indigenous Early Childhood Development. No pharmaceutical grants were received in the development of this study.

Paper Ref	180
Theme	Sexual Health: Other
Presentation Type	Sexual Health: Oral Presentation

SEXT ME UR (.)(.) – PREVALENCE AND CORRELATES OF SEXTING IN A SAMPLE OF AUSTRALIAN YOUNG PEOPLE

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Introduction: ‘Sexting’ is the sharing of sexually explicit material via mobile phones or the internet. Sexting can have serious social and legal implications. Despite receiving significant media attention, sexting is a relatively new and unexplored phenomenon in sexual health research, particularly in Australia. This study investigates the prevalence of sexting among young people, and explores correlates of reporting sexting.

Methods: A convenience sample of youth aged 16-29 recruited at a Melbourne music festival in 2013 completed a survey on sexual and other behaviours. The primary outcome of interest was whether participants had ever sexted, defined as having ‘sent or received sexually explicit photographs or messages online or via mobile phone’. Correlates of sexting were determined using invariable logistic regression.

Results: 1403 people completed a questionnaire; 66% were female and the median age was 19 years. Overall, 552 (40%) had ever engaged in sexting; 223 (48%) males and 329 (36%) females. Sexting was most commonly reported with regular partners (441, 80%), but people also reported sexting casual partners (238, 43%), friends (199, 36%), and strangers (103, 19%). Factors associated with sexting included being male (OR 1.58, 95%CI 1.26-1.98), older age (OR 1.32, 95%CI 1.06-1.66), reporting six or more lifetime sexual partners (OR 3.25, 95%CI 2.50-4.23), inconsistent condom use with regular partner(s) (OR 1.52, 95%CI 1.16-2.00), inconsistent condom use with casual partner(s) (OR 1.78, 95%CI 1.26-2.50), multiple partners in the last year (OR 1.58, 95%CI 1.23-2.02), drinking six or more alcoholic drinks in a single episode at least weekly (OR 2.17, 95%CI 1.63-2.90), and having ever used illicit drugs (OR 2.02, 95%CI 1.62-2.52).

Conclusion: Sexting is a common practice among young Australians and is associated with various risk behaviours. Further research is underway to examine young peoples’ motivations for sexting, as well as their perceptions of positive and negative consequences of sexting.

Disclosure of Interest Statement: The authors have no conflicts of interest to declare

Paper Ref	291
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Oral Presentation

“I THINK IT IS BETTER FOR PRACTICE NURSES TO DO THAT” FINDINGS FROM THE AUSTRALIAN CHLAMYDIA CONTROL PILOT (ACCEPT).

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Introduction: Chlamydia infection is an important public health issue for young people, yet testing rates in Australian general practice are low. ACCEPt, a large cluster randomised control trial of annual testing for 16 to 29 year olds in general practice, is the first to investigate the role of practice nurses (PN) in maximising testing rates. We aimed to determine the current role of PNs, their opinions in relation to taking a role in chlamydia testing and the perceived facilitators and barriers to testing.

Methods: Structured in-depth telephone interviews were conducted with a purposive sample of 25 PNs participating in ACCEPt.

Results: PNs described a wide and varied role, with other clinic staff viewing them positively as a “link” between the doctors and other clinic staff. PNs identified a number of patient benefits to them becoming involved in chlamydia testing, such as an improved service with greater access to testing and feeling more comfortable engaging with a PN rather than a doctor. An alleviation of doctors’ workloads and expansion of the PN role were also identified as benefits at a clinic level. Time and workload constraints were commonly considered as barriers to chlamydia testing, both generally and for PNs, along with concerns around privacy in the “small town” rural settings of many of the clinics. Some PNs felt a lack of support from doctors as well as issues with funding for PN work could also be barriers. The provision of training and education and changes to pathology ordering processes would facilitate PN involvement in chlamydia testing, whilst some identified the development of a “formal” system of chlamydia testing, both on a clinic and national level, as facilitators.

Conclusion: PNs want to be involved in chlamydia testing and identify benefits in doing so. Strategies to facilitate their involvement and overcome identified barriers must be explored.

Disclosure of Interest Statement: The authors declare that they have no conflicting interests.

Paper Ref	412
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

BLOOD BORNE VIRUS CLINIC AT THE CANBERRA OPIOID TREATMENT SERVICE – A COMMUNITY HEALTH PROJECT

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Introduction: Viral hepatitis is a public health issue, although there are various ways that viral hepatitis can be contracted, intravenous drug use allows transmission to occur more efficiently.

The Opioid Treatment Service (OTS) at Canberra Hospital Health Services provides opioid replacement therapy for approximately 200 clients each day. Client intake onto the program includes an appointment with a treating specialist and referral to ACT Pathology for baseline blood borne virus (BBV) screening. An internal review conducted by the OTS found that a majority of clients on the program did not have baseline screens attended and therefore their BBV status was unknown.

In April 2012, an interagency health agreement was made between Clinical Forensic Medical Service and the Canberra Sexual Health Centre (CSHC) to provide a BBV and sexual transmitted infection (STI) screening to the OTS.

Methods: The clinic is at weekly intervals, every Tuesday. Clients of the OTS and the Detox unit are able to access a qualified sexual health nurse for BBV and STI screening. The project is supported by the staff specialist at CSHC for specialist management and referral to the Liver Clinic nurse.

Results: Over a 12 month period the BBV clinic has screened 76 clients. Identifying previously unknown infections:

- 2 positive hepatitis B
- 7 positive hepatitis C of which 4 cases had a positive PCR detected
- 1 positive Chlamydia

5 clients have been referred to the Liver Clinic for specialised viral hepatitis care.

17 clients commenced an accelerated hepatitis B vaccination schedule, 4 clients have completed the schedule.

Conclusion: Convenient onsite access to a BBV clinic at the OTS has resulted in identification of several undiagnosed cases of hepatitis B and C and improved uptake of BBV screening among this high risk population. An ongoing hepatitis B vaccination program has been initiated.

Paper Ref	523
Theme	HIV/AIDS Theme B: Delivery Of Care
Presentation Type	HIV/AIDS Poster

THE NEW FACE OF HIV SERVICE MODELS

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Background: With changes to patient needs over the last decade and finite specialist resources, in 2012 NSW Health conducted a HIV and STI clinical services planning project. Findings of the planning process have been taken up in the newly released *NSW HIV Strategy 2012-2015: A New Era*.

Results: The project identified the role of the specialist HIV and Sexual Health services as being at the lower and upper ends of disease management ie, with those newly diagnosed with HIV including support for GPs and enhanced patient care, and with those with complex medical/behavioural management needs.

As HIV is recognised as a chronic condition, there are benefits in a person with HIV being community managed but with access to tertiary services, particularly with an ageing population. A shift to shared care models and strengthening the continuum of care has become a recognised priority if NSW is to achieve the targets set in its *HIV Strategy*. The targets aim to reduce the time between HIV infection and diagnosis from 4 years to 1 years and increase to 90% the number of people living with HIV on antiretroviral treatment.

Steps Forward: The STI Programs Unit (STIPU) and ASHM have a key role in supporting the continuum of care. While STIPU is working with the public sector services and with ASHM in resource development, ASHM has facilitated links between public specialist services and primary care providers at the local community level. A number of projects are underway which aim to build-up shared care initiatives between specialists and GPs in locations where primary care has previously had a low profile. Work initiated has included development of resources needed at the primary care/specialist referral interface as well as development of criteria for people with HIV being referred to the specialist services.

Paper Ref	20
Theme	HIV/AIDS Theme C: Social & Behavioural Research
Presentation Type	HIV/AIDS Poster

CONCURRENT SEXUAL PARTNERSHIPS IN A NATIONAL SAMPLE OF AUSTRALIAN GAY MEN

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Background: Concurrent sexual partnerships, where individuals have two or more sexual partners at the same time, are thought to be major contributors to the transmission of sexually transmitted infections (STIs). Yet, little is known about the prevalence and predictors of sexual concurrency in populations of men who have sex with men (MSM).

Methods: A national cross-sectional community-based online survey was completed by 1,034 Australian gay men aged 18-39 years, who provided detailed information about their sexual partners over a 12-month period. The survey was conducted from July to September 2012.

Results: Of those who reported having sex in the past 12 months (N=901), 27% reported at least one period in which they had concurrent sexual partners. Of this group, 56% had sex concurrently with two partners, 25% with three partners, and 19% with four or more partners. Worryingly, 66% reported having unprotected sex with one or more of their concurrent partners. A multivariate logistic regression found sexual concurrency was just as likely among men of all ages. However, sexual concurrency was significantly more prevalent among those on higher incomes ($P=0.02$), who reported their age at first anal sex as younger than 16 years ($P=0.03$), and who reported having large numbers of sexual partners in the past 12 months ($P<0.001$). Of men who were tested for an STI in the past 12 months, STIs were more prevalent among those who reported sexual concurrency (21% vs. 12%, $P=0.04$).

Conclusions: Concurrent sexual partnerships appear to be common among 18-39 year old gay men in Australia, many of whom are not always using condoms. Factors and other patterns related to concurrency, as identified in this study, provide new information for understanding and controlling STI epidemics in populations of gay men and other MSM.

Disclosure of Interest Statement: There were no conflicts of interest with regard to any aspect of this study.

Paper Ref	39
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Oral Presentation

NURSE INITIATED STI SCREENING IN A RURAL EMERGENCY DEPARTMENT IN WESTERN AUSTRALIA

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Introduction: Sexually transmitted infections are higher in Western Australia than the average in Australia, and the rates in the north-west regions of the Kimberley and Pilbara have the highest rates in the state. STI are often asymptomatic. Emergency departments have been used previously as a site where opportunistic screening can be offered to patients who often do not present elsewhere for regular medical care or screening.

Results: From March 2012 to May 2013 the nursing staff of the Emergency Department of Hedland Health Campus offered STI urine PCR testing to 233 asymptomatic individuals from 14 to 40 years. In this time 174 (75%) individuals requested the screening and 59 (25%) declined it. Overall there were 23 infections diagnosed in 22 individuals, giving an overall rate of 13% positive. There were considerable differences between gender and ethnicity, with the female indigenous having the highest rates of 33% positive. Public health staff followed up in the delivery of positive or negative results, treatment, and contact tracing.

Conclusion: Emergency departments are a useful site for opportunistic screening in a high prevalence population, and a useful site for collaboration with public health.

Disclosure of Interest Statement: There were no conflicts of interest in the development of this screening service, and no funding was received to carry out this screening.

Paper Ref	322
Theme	HIV/AIDS Theme B: HIV Associated Diseases
Presentation Type	HIV/AIDS Oral Presentation

PREVALENCE AND RISK FACTORS FOR HIGH-GRADE SQUAMOUS INTRAEPITHELIAL LESIONS (HSIL) IN A COMMUNITY BASED COHORT OF HOMOSEXUAL MEN

Machalek DA¹, Jin F¹, Poynten IM¹, Hillman RJ², Templeton DJ^{1,3}, Tong WWY⁴, Roberts J⁵, Farnsworth A⁵, Cornall AM^{6,7}, Tabrizi SN^{6,7,8}, Garland SM^{6,7,8}, Fairley CK⁷, Grulich AE¹ on behalf of the SPANC Study Team.

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Introduction: The incidence of human papillomavirus (HPV)-associated anal cancer is high in homosexual men, especially in the HIV-positive, but an understanding of the epidemiology of HSIL, the presumed precursor is lacking. We aimed to determine the prevalence and risk factors for HSIL in a community-recruited cohort of homosexual men.

Methods: The Study for the Prevention of Anal Cancer (SPANC) is a three-year study investigating the natural history of anal HPV infection and associated lesions in homosexual men aged ≥ 35 years. At each visit all men receive an anal swab for cytology and HPV genotyping (Roche Linear Array), and high resolution anoscopy with biopsy of suspected lesions. Using composite diagnosis, anal HSIL was defined as having either intraepithelial neoplasia grade 2/3 on histology and/or possible HSIL/HSIL on cytology.

Results: 342 men were recruited by the end of March 2013. Median age was 49 and 28.7% were HIV-positive. Overall 68.7% of men had HPV-related anal abnormalities. Just under half (45.6%) of the men (50.0% of the HIV-positive and 43.9% of the HIV-negative, $p=0.053$) had HSIL. HSIL-AIN2 and HSIL-AIN3 were diagnosed in 17.0% and 28.7% of men respectively. HIV-positive men were more likely to have HSIL-AIN3 ($p=0.053$) than HIV-negative men. The prevalence of HSIL was significantly higher in men with detectable HPV16 or HPV18 DNA compared to those without (71.8% versus 30.9%, $p<0.001$). In multivariate analysis, HSIL was associated with HPV16 ($p<0.001$), HPV18 ($p=0.017$), history of anal warts ($p=0.006$), higher level of education ($p=0.041$), and current cigarette smoking ($p=0.035$).

Conclusion: The prevalence of HSIL was very high in this population. The strong associations with HPV16 and HPV18 suggest that universal vaccination of adolescent boys has enormous potential to prevent HPV-related morbidity among men in the future. Research is needed to help identify, and effectively treat those at highest risk of progressing to cancer.

Disclosure of Interest Statement: AEG has received honoraria and research funding from CSL Biotherapies, honoraria and travel funding from Merck, and sits on the Australian advisory board for the Gardasil HPV vaccine. CKF has received honoraria, travel funding and research funding from CSL and Merck, sits on the Australian advisory board for the Gardasil HPV vaccine, and owns shares in CSL Biotherapies. SMG have received advisory board fees and grant support from CSL and GlaxoSmithKline, and lecture fees from Merck, GlaxoSmithKline and Sanofi Pasteur; in addition, has received funding through her institution to conduct HPV vaccine studies for MSD and GlaxoSmithKline and is a member of the Merck Global Advisory Board as well as the Merck Scientific Advisory Committee for HPV. RJH has received support from CSL Biotherapies and MSD. All other authors declare that they have no conflicts of interest.

Paper Ref	669
Theme	HIV&AIDS: Theme B
Presentation Type	HIV/AIDS Poster

PREVALENCE AND RISK FACTORS FOR HIGH-GRADE SQUAMOUS INTRAEPITHELIAL LESIONS (HSIL) IN A COMMUNITY BASED COHORT OF HOMOSEXUAL MEN

Machalek DA¹, Jin F1, Poynten IM¹, Hillman RJ², Templeton DJ^{1,3}, Tong WWY⁴, Roberts J⁵, Farnsworth A⁵, Cornall AM^{5,7}, Tabrizi SN^{6,7,8}, Garland SM^{6,7,8}, Fairley CK⁷, Grulich AE¹ on behalf of the SPANC Study Team.

¹The Kirby Institute, University of New South Wales ²Western Sydney Sexual Health Centre, University of Sydney ³RPA Sexual Health, Royal Prince Alfred Hospital, Sydney ⁴Centre for Applied Medical Research, St Vincent's Hospital, Sydney ⁵Douglass Hanly Moir Pathology, Sydney ⁶Murdoch Children's Research Institute, Melbourne ⁷Department of Microbiology and Infectious Diseases, Royal Women's Hospital, Melbourne ⁸Department of Obstetrics and Gynaecology, University of Melbourne ⁹Melbourne Sexual Health Centre, Melbourne

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Conclusion: The prevalence of HSIL was very high in this population. The strong associations with HPV16 and HPV18 suggest that universal vaccination of adolescent boys has enormous potential to prevent HPV-related morbidity among men in the future. Research is needed to help identify, and effectively treat those at highest risk of progressing to cancer.

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Paper Ref	36
Theme	HIV/AIDS Theme C: Social & Behavioural Research
Presentation Type	HIV/AIDS Poster

NO DATA, NO PROBLEM NO ACTION: EVIDENCE FOR ACTION ON YOUTHS IN KIRIBATI WITH LOW CONDOM USE

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Pacific Sexual Reproductive Health Research Centre¹, FSMed²

Introduction: Youths aged 15-24 years comprise a large fragment of the total population in Kiribati, and unsafe sexual behaviours like low condom use is one of the major concerns for Kiribati in attempt to reduce incidence of STI/HIV. This abstract explores the characteristics of youths who never or sometimes use condom, so that more targeted approach could be taken.

Method: A cross-sectional behavioural survey employing convenience sampling was used to collect data from youths in South Tarawa, Kiribati. The data used for this abstract is part of Kiribati Second Generation Surveillance 2008 behavioural survey. Data was collected from 176 youths aged between 15-24 years through an interviewer-administered questionnaire.

Results: The demographic characteristics of youths who never used condom in the last 12 months were of older age group 20-24years (21) most of whom were males (16) with most acquiring secondary education (22) and of Micronesian descent (28). The majority were single (18) and living with immediate family (14).

The sexual practices of youths who never used condom revealed a condom was not used at their sexual debut (27). Two youths reported receiving money or goods/ favours and two reported giving money goods/ favours in exchange for sex. 10 of the youths had two or more sexual partners. 7 had reported having overlapping relationship while 3 had been involved in group sex. 6 had reported having sex while off island in the last 12 months.

Conclusion: Low condom use and high risk taking behaviours such as multiple partners, concurrent relationship and transactional sex shows the vulnerability to rapid STI/HIV spread. This indicates immediate need for condom awareness amongst this group of youths in Kiribati.

Disclosure of Interest Statement: "Nothing to Disclose"

Paper Ref	492
Theme	HIV/AIDS Theme B: Delivery Of Care
Presentation Type	HIV/AIDS Poster

THE IMPOSSIBLE DREAM...PARTNERSHIP AND COLLABORATION, METRO SYDNEY WORKS WITH COUNTRY NSW TO PROVIDE CASE MANAGEMENT SUPPORT FOR PEOPLE WITH COMPLEX CARE NEEDS

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Introduction: The NSW HIV Strategy 2012-2015 highlights the importance of case management in supporting people with HIV to live well and maintain treatment adherence. However, rural people living with HIV have limited access to specialist HIV case management. Rural Sexual Health staff and GP's were encouraged to dream a little, with a trial of the first statewide collaborative model of co-case management that would increase the clinical capacity and support of rural services to provide complex HIV client case management across NSW.

Methods: Three Specialist Sydney case management services were each allocated one region of NSW:

- AIDS Dementia and HIV Psychiatry Service northern NSW, including Central Coast and Hunter regions;
- HIV Outreach Team southern NSW; and
- Positive Central western NSW, with a focus on Dubbo.

In January 2012, the year-long pilot project commenced. Initial goals *identification of appropriate models of case management and referral pathways and, *provision of systems and infrastructure to support appropriate models of care to become a reality.

Results: Twenty nine PLWH were referred into the project for assessment, counseling, and case management; 14 metropolitan specialist clinicians worked with rural clinicians to support clients; project funding was utilized for rural health staff education around case management models; specialist teams travelled to rural areas to build relationships with service providers and work with clients; and home care services were provided for clients. Did the dream become a reality?

Conclusion: This innovative initiative has required high level coordination, collaboration and resource sharing between the metropolitan teams and numerous rural and regional agencies. The Evaluation found that it is not possible to deliver case management to PLWH in many rural areas without additional funding for local services. The Evaluation recommends that the project continue but with a focus on advice and training to rural clinicians, and provision of Skype-based counseling to rural clients.

Disclosure of Interest Statement: Community HIV Services, Sydney Local Health District, HIV Outreach Team and AIDS Dementia and HIV Psychiatry Service, South Eastern Sydney Local Health District are funded by the NSW Ministry of Health. No pharmaceutical grants were received in the development of this study.

Paper Ref	103
Theme	HIV/AIDS Theme D: Women & HIV
Presentation Type	HIV/AIDS Poster

HIV IN AUSTRALIAN WOMEN

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Introduction: The aim of this study is to describe the demographic and clinical characteristics of women participating in the Australian HIV Observational Database (AHOD) and to compare gender differences in treatment response and disease outcomes including all-cause mortality and progression to AIDS.

Methods: The study population includes all patients enrolled in AHOD. Characteristics including, age, mode of HIV exposure, country of birth, hepatitis coinfection, history of antiretroviral therapy (ART) including first and subsequent combinations, pre and post ART CD4 T cell count and plasma HIV RNA viral load (pVL) were analysed. Cox proportional methods were used to evaluate differences in disease progression outcomes between male and female participants.

Results: Of the 3495 patients enrolled in AHOD, 3285 (94%) are men and 210 (6%) are women. The median age at enrolment was 34.1 years (IQR 30.0 to 42.8) for women and 39.5 years (33.3 to 46.9) for men. The majority of participants were born in Australia, 174 (83%) of women and 2994 (91%) of men.

The prevalence of hepatitis coinfection is similar in both groups, with 4% of women and 5% of men coinfecting with hepatitis B and 11% and 16% coinfecting with hepatitis C. The initial antiretroviral regimen was similar between genders with protease inhibitor anchored regimen the most common. The CD4 T cell count at time of ART initiation was 285 (IQR 190-420) cells/ μ L in women and 310 (IQR 170-475) cells/ μ L in men. The all-cause mortality hazard ratio was 0.98 (95% CI 0.51- 1.55, $p=0.67$), and AIDS illness 0.70 (95% CI 0.38-1.48, $p=0.41$) with no significant difference according to gender.

Conclusion: HIV positive women in AHOD have similar HIV related outcomes to men whilst under clinical care. This result compares favourably with other countries, where it has been reported that HIV-positive females have the same or better outcomes.

Disclosure of Interest Statement: The Australian HIV Observational Database is funded as part of the Asia Pacific HIV Observational Database, a program of The Foundation for AIDS Research, amfAR, and is supported in part by a grant from the U.S. National Institutes of Health's National Institute of Allergy and Infectious Diseases (NIAID) (Grant No. U01-AI069907) and by unconditional grants from Merck Sharp & Dohme; Gilead; Bristol-Myers Squibb; Boehringer Ingelheim; Roche; Pfizer; GlaxoSmithKline; Janssen-Cilag. The Kirby Institute is funded by The Australian Government Department of Health and Ageing, and is affiliated with the Faculty of Medicine, The University of New South Wales. The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

Paper Ref	128
Theme	Sexual Health: Biomedical
Presentation Type	Sexual Health: Poster

ANAL CYTOLOGY – THE FREMANTLE EXPERIENCE

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Introduction: Human Papilloma Virus (HPV) infection has been associated with an increased risk of anal carcinoma in those HIV positive. There is much debate about the utility of anal screening for HPV and its associated precancerous changes detectable with cytology. Even more contentious is what management should ensue if the cytology is abnormal, given the natural history of anal HPV infection is largely unknown.

Methods: HIV positive patients were offered screening for HPV and cytology by a practitioner collected blind anal swab. The Dacron® swab was then agitated into Thin Prep® solution and the swab snapped and left in the solution for transportation to enhance cell recovery. HPV DNA was detected by PCR and cytology performed.

Results: 83 of 168 (49%) patients accepted screening. (51 men who have sex with men (MSM), 15 heterosexual men and 21 women). Overall 89% had oncogenic HPV and 37 (45%) had abnormal anal cytology of whom 12 (32%) had high grade changes. MSM were the most likely to have HPV infection (96%) and 56% had abnormal cytology, of whom 18% had high grade disease. Heterosexual men were less likely to be infected (40%) but those infected had high levels of abnormal cytology (83%, 40 % high grade). Women also had high levels of infection (85%) with 27% of those having abnormal cytology (20% high grade). Those with high grade abnormalities had high resolution anoscopy and biopsy. There were no carcinomas detected. Unsatisfactory rate for cytology was 2%.

Conclusion: In this diverse clinical sample, oncogenic HPV infection is common with abnormal cytology being found frequently. The screening is relatively simple and able to be included in standard practice. It is intended to continue to monitor those with HPV infection with cytology and digital anorectal examination (DARE) for early detection of disease.

Disclosure of Interest Statement: The authors have no competing interests

Paper Ref	311
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Poster

CHALLENGES ASSOCIATED WITH THE COLLECTION OF SEXUALLY TRANSMITTED INFECTION DATA IN ABORIGINAL COMMUNITY CONTROLLED HEALTH SERVICES IN SOUTH AUSTRALIA

Marshall K¹, Betts S¹, Scrimgeour D¹

¹ Aboriginal Health Council of South Australia Inc.

Introduction: The Aboriginal Health Council of South Australia (AHCSA) is the peak body representing Aboriginal Community Controlled Health Services (ACCHS) in South Australia and supports member services in their efforts to deliver sexually transmitted infection (STI) prevention, control and management activities within a comprehensive primary health care framework.

Aboriginal people continue to be overrepresented in notifications of sexually transmitted infections in South Australia. Rates of chlamydia, gonorrhoea and trichomoniasis are disproportionately higher in Aboriginal populations than non-Aboriginal Australians.

Screening for STIs is a public health strategy that aims to detect and treat cases in the target population in order to reduce transmission of infections and prevent significant morbidity to the reproductive tract.

All ACCHS in South Australia conduct an annual STI screening program over a six week period commencing in April each year. However, it has been recognized that opportunities exist to improve current STI data collection methods and systems within the sector, particularly with regard to opportunistic STI screening and diagnostic testing occurring within the health services throughout the year.

We will present the sector's experience developing improved methods for collecting and analysing data related to chlamydia, gonorrhoea and trichomoniasis, particularly during the non-screening period and discuss the challenges associated with adapting and improving existing STI data collection methods within the ACCHS sector.

Improved systems for collecting STI data will provide more accurate information on prevalence rates of these STIs in the communities concerned particularly during non-screening periods, provide information on rates of testing, treatment and follow-up and will ultimately lead to better surveillance of STI trends within Aboriginal communities served by the ACCHS.

Importantly, an enhanced understanding of local STI epidemiology will better inform continuous quality improvement activities at the local health service level, leading to ongoing improvements in the quality of STI service delivery within the sector.

Disclosure of Interest Statement: The AHCSA Sexual Health Program receives funding from the Australian Government Department of Health and Ageing and also from the South Australian Government Department of Health and Ageing.

Paper Ref	286
Theme	HIV/AIDS Theme B: Clinical Programs
Presentation Type	HIV/AIDS Poster

THE BURDEN OF CERVICAL DISEASE IN WOMEN WITH HIV ATTENDING CANBERRA SEXUAL HEALTH CENTRE

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4. Canberra Sexual Health Centre, Canberra Hospital, Canberra, ACT, Australia.

Introduction: Based on overseas evidence demonstrating a high burden of cervical disease in HIV infection, women living with HIV are advised to have annual Pap smears.

Methods: To determine the cervical disease burden in women attending Canberra Sexual Health Centre (CSHC) the files of all female patients (n=32) attending CSHC between April 1993 and December 2011 were reviewed. Data extracted included demographic characteristics, year of HIV diagnosis, date of first and most recent consultation, HIV treatment history, human papilloma virus vaccination status, Pap smear results and CD4 count and HIV viral load within 3 months of each Pap smear. Burden of disease is reported on final Pap smear result in 2011.

Results: Twenty of 31 patients had a Pap smear in 2011; 75% had negative results, and 25% had abnormal findings. Of the 27 patients who had had a Pap smear at any time in the review period, 14 (52%) had received at least one abnormal result. Pap smear frequency was 0.71 person-years. On regression analysis, for every unit increase in CD4 count, the odds of a negative Pap smear result increase by a factor of 1.0059 (p<0.001). For every unit increase in log viral load, odds of negative Pap smear decreased by a factor of 0.39 (p<0.001). No relationship was found between HIV treatment and Pap smear (Pearson chi-squared p=0.1).

Conclusion: These are the first Australian data to demonstrate the burden of cervical disease in a sample of HIV positive women. Lower CD4 lymphocyte counts and higher HIV viral load were significantly associated with cervical disease. Burden of disease is similar to overseas studies indicating the importance of clinicians encouraging annual Pap smears for women with HIV.

Disclosure of Interest Statement: Nothing to disclose.

Paper Ref	144
Theme	Sexual Health: Biomedical
Presentation Type	Sexual Health: Oral Presentation

SEXUALLY ACQUIRED REACTIVE ARTHRITIS AT SYDNEY SEXUAL HEALTH CENTRE 1992-2012

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Introduction: In the face of rising chlamydia notifications, rates of chlamydia-related complications such as PID, ectopic pregnancy, infertility and epididymitis have been stable or decreasing. Reactive arthritis (ReA) is another and an under-studied complication of chlamydia. We determined trends in ReA in Sydney Sexual Health Centre (SSHC) over a 20-year period.

Methods: Patients diagnosed with ReA were identified from the SSHC's database. Data was manually extracted from patient files.

Results: Between 1992 and 2012 85 cases were identified, at a decreasing frequency over time. Between 1992 and 1996, 32 patients were diagnosed with ReA at SSHC or elsewhere. This decreased to 20 diagnoses from 1997 to 2001, 12 diagnoses from 2002 to 2006 and 5 diagnoses from 2007 to 2012. Of the ReA patients 78 (92%) were men, 70 (82%) were heterosexual, 16 (19%) had experienced recent enteric infection, and 52 (61%) had a prior or concurrent chlamydia or urethritis diagnosis. HLA-B27 status was recorded in 24 cases of which 12 (50%) were positive. HIV status was recorded in 64 cases, of which 3 (5%) were positive.

Conclusion: We found a declining trend in ReA diagnoses in a sexual health care setting in Australia. Patient characteristics were comparable to those reported in the literature.

Disclosure of Interest Statement: None

Paper Ref	52
Theme	HIV/AIDS Theme D: Culturally & linguistically diverse populs
Presentation Type	HIV/AIDS Poster

IN THE SYSTEM (TONGAN SYSTEM) BUT OUT OF PLACE

Mataele JJSWCA

Tonga Leitis' Association/Pacific Sexual Diversity Network

Introduction: Since HIV/AIDS was discovered in the early 80s, and the first AIDS Victim came to Tonga from the United States, 19 people have lost their lives to the virus leaving many children and MSM/TG with more discriminations for our Communities. Since then there has been a lot of Stigma and Discriminations on our young MSM/TGs. These children have been forced out of school, engaged in hard labor, prostitution or high risk behaviors that make them vulnerable to contracting HIV. With support from international donors and local resource efforts.

Methods: Tonga Leiti's Association (TLA) has a long and complex history. It's a history of survival. Its history has been governed with diverse and contesting ways of understanding, filled with contradictions, categorization, labelling and marginalization. Hence, these ways of knowing problematizes TLA and its pupils in a normative ways. It situates them outside the 'normal' 'Anga FakaTonga' (Tongan ways) mainly because their distinctive behaviours are perceived as falling outside the 'Anga FakaTonga' awareness of acceptable behaviour and attitude. It is, therefore, position Leitis as 'children of the devil'. The TLA and its pupils are variously described as being at-risk, vulnerable, stigmatized and lacking agency.

Results: Moreover, their lives are equated with having a 'lack of hope and mobility' so they are seen as being on a pathway that leads to 'poverty' and isolation from normative model and space in Tongan society. We recognized that through positioning outside the 'normal Anga FakaTonga', there is a tendency to perceive TLA and its pupils in a simplistic way and thus treat them as a marginal community.

Conclusion: However, it must be acknowledged that this tendency to stereotype TLA and its pupils displays a lack of awareness for their:

- active agency and the fact they have some control over their life journey,
- contributions to Tongan civil society,
- distinctive cultural, gifts and artistic talents,
- support to the business communities,
- capacity to support the younger Leiti's pupils,
- capacity to educate the general public regarding the sexually transmitted diseases – HIV/AIDS & STI's, and
- marketing of Tonga to the international communities.

Disclosure of Interest Statement: The Tonga Leiti's Association (TLA) is a Registered Association in the Kingdom of Tonga. The TLA works as an advocacy organisation focused on the promotion of the rights and creating a dialogue about issues facing the transgendered community in Tonga. The TLA aims to oversee any opportunities addressing human rights and also to carry out awareness to its members.

As a Registered Association of Tonga the TLA is required to have board members which include representatives from the government and non-government organisations. The TLA is a voluntary organisation and all of the staff are volunteers. I am the current Executive Director of the TLA and the current Chairperson of the Pacific Sexual Diversity Network. The Hon. Lupepau'u Tuita from the Tongan Royal Family is the Patron of the TLA. At the Annual General Meeting there are appointed positions that are tasked with the administration and operating of the Association.

Paper Ref	343
Theme	HIV/AIDS Theme D: Social & Behavioural Research
Presentation Type	HIV/AIDS Quick Fire Oral

REPRESENTATIONS OF THE HOMOSEXUALITY IN THE NORTH PROVINCE AND ON THE ISLANDS OF NEW CALEDONIA

Mbodj FL

Background: In New Caledonia, numerous young people have social and psychological suffering because of their sexual orientation. A study carried out by the INSERM reveals that sexual orientations and suicidal ideas are very close in this population. The study of the representations of the homosexuality in the population would participate to understand better the reasons of this suffering.

Methods: The population as well as religious leaders, leaders and political decision-makers, traditional village chiefs, were questioned. Semi-directive conversations and focuses-groups were organized. 200 persons answered questionnaires deposited in public places (health center, media library etc.)

Results: The study reveals that the explanation of the individuals on the origin of the homosexuality influences the way they see homosexual persons. The non-acceptance of homosexuality is explained by various reasons among which the unnatural way they see the homosexuality and the sexuality of the homosexual persons considered like an 'insult' to the religion and the culture. Seen as an imported practice, as the demonstration of the individualism, the homosexuality is described as striking a blow at the system of links and current exchange in the tribe (based on a clear distinction of both sexes), and in the reproduction.

Conclusion: No study had been led on the representations of the homosexuality in the North Province and the islands mainly populated by the population Kanak. The homosexuality would thus threaten the social order. His(her,its) condemnation is argued by the custom and the religion. However in certain particular circumstances, certain persons tolerate and accept the homosexuality of others.

Disclosure of Interest Statement: IRIS Institut de recherche interdisciplinaire sur les enjeux sociaux leads several researches analysing the links between health and political and moral issues

Paper Ref	243
Theme	HIV/AIDS Theme C: Epidemiology Of HIV
Presentation Type	HIV/AIDS Oral Presentation

TRENDS IN CD4+ CELL COUNT AT HIV DIAGNOSIS IN AUSTRALIA, 2001 – 2012

McDonald A, Lucky T and Wilson D for the National Bloodborne Viruses and Sexually Transmissible Infections Surveillance Committee

Introduction: CD4+ cell count at HIV diagnosis may be used to indicate time since HIV acquisition and eligibility for antiretroviral therapy. Distributions of CD4+ cell counts may also be indicative of changes in testing rates in the population at risk of HIV. Trends in the mean CD4+ cell count at HIV diagnosis in Australia are described.

Methods: Cases of newly diagnosed HIV infection are notifiable in each state/territory in Australia and then forwarded to the National HIV Registry for national collation and analysis. Information is routinely collected on date of HIV diagnosis, CD4+ cell count and newly acquired HIV status. Cases previously diagnosed overseas were excluded from analyses.

Results: Mean CD4+ cell count was 453 cells/ μ l in 2001–2006 and 450 in 2007–2012. Among 3,466 (30%) cases of newly acquired infection, 60% and 56% diagnosed in 2001–2006 and 2007–2012, respectively, had a CD4+ cell count of 500 or higher, and less than 5% had a CD4+ cell count of less than 200 in 2001–2012. Among cases without evidence of newly acquired infection, mean CD4+ cell count was 396 in 2001–2006 and 398 in 2007–2012. The proportion of non-newly acquired cases with a CD4+ cell count of less than 200 declined from 32% in 2001 to 24% in 2007–2008 and increased to 27% in 2012. The proportion of non-newly acquired cases among men who have sex with men whose CD4+ cell count was less than 200 remained stable at around 20% in 2001 – 2012. Among cases attributed to injecting drug use or heterosexual contact, 24% and 30%, respectively, were diagnosed with a CD4+ cell count of less than 200.

Conclusion: The distribution of CD4+ cell count at HIV diagnosis has remained relatively stable over the last 12 years. HIV diagnosis at advanced HIV infection continues to occur in Australia at moderate levels.

Disclosure of Interest Statement: The Surveillance and Evaluation Program for Public Health at the Kirby Institute is funded by the Australian Government Department of Health and Ageing.

Paper Ref	420
Theme	HIV/AIDS Theme D: Social concomitants of living with HIV
Presentation Type	HIV/AIDS Oral Presentation

AGEING WITH HIV AND THE LIVED REALITIES: RESULTS FROM A QUALITATIVE STUDY.

McDonald K^{1,2}, Saugeres, L¹ and Elliott JH^{1,3,4} on behalf of the Positive Ageing Project Steering Committee

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Introduction: In Australia, the average age of a person living with HIV (PLHIV) is 45 and it is estimated that by 2020, nearly half of all PLHIV will be aged 55 years or older. Yet little is known about the current lived experiences of PLHIV and how they negotiate an identity that, for many, was unexpected.

Methods: This paper presents the findings from a qualitative study conducted in Victoria. Semi-structured interviews were conducted with 30 PLHIV over the age of 45. Participants comprised 25 men (18 identified as homosexual/gay, one as bisexual and six as heterosexual) and five women (four of whom identified as heterosexual, one as bisexual). The participants were aged between 46 and 82 years.

Results: Participants generally felt they lacked information about ageing with HIV. Many expressed confusion about what was normal ageing and what was attributable to HIV. Social connectedness and loneliness was extensive with many participants reporting lost friends and networks for diverse reasons. Participants were concerned about the future, particularly in relation to loss of independence and fear of mainstream residential care. Participants worried they may be doubly discriminated against for their sexuality and HIV status and, as a result, would not receive adequate treatment. This was especially prominent for those without family members or partners. However, participants also demonstrated resilience, with multiple strategies for coping.

Conclusion: With improved survival rates and continually improving treatments, PLHIV are told they can expect a 'normal' lifespan. However, the findings from this study indicate that many people ageing with HIV felt they lacked control over their imagined future and with this came a sense of anxiety. This paper will explore what is currently "known" about ageing with HIV and how the lived realities often contradict this knowledge.

Disclosure of Interest Statement: No disclosures of interest

Paper Ref	425
Theme	HIV/AIDS Theme D: Social & Behavioural Research
Presentation Type	HIV/AIDS Poster

THE ROLE OF TECHNOLOGY AND GENERAL PRACTICE MANAGEMENT PLANS IN CHRONIC DISEASE MANAGEMENT OF PEOPLE LIVING WITH HIV.

McDonald K^{1,4} and Elliott JH^{1,2,3} for the HealthMap Project Team

¹Department of Infectious Diseases, Monash University; ²Australian Centre for Sex, Health and Society, Latrobe University; ³Infectious Diseases Unit, Alfred Hospital; ⁴Centre for Population Health, Burnet Institute.

Introduction: The aim of this study was to contribute to the design of a self-management program for PLHIV, which will be assessed using a cluster randomised control trial in 2014-16. The use of technology to convey health information and streamline General Practice Management Plans (GPMP) is proposed in the design.

Methods: Semi-structured telephone interviews were used to explore how clinicians incorporate self-management, technology and GPMPs into routine HIV care. We recruited medium and high HIV caseload practitioners in Victoria, NSW and South Australia. To date, interviews have been conducted with ten S100 prescribers and two practice nurses with a total of 20 participants planned to be interviewed by August 2013.

Results: Clinicians reported on the increasing requirements of routine HIV care consultations, including chronic disease management and addressing health behaviours such as smoking. They discussed the perceived usefulness of different strategies used to convey health information, such as cardiovascular disease (CVD) risk calculators and their attitudes to using graphics to convey other health information such as cholesterol, blood pressure and clinical markers of HIV. Clinicians were divided in their views of GPMPs. Some found the plans beneficial, to ensure good quality care as well as providing access to other providers and a record for patients. For a subset, the financial benefits were identified as essential for financial viability. However, others viewed GPMPs as another demand of their time, with little or no benefit for themselves or their patients and were sceptical of the financial incentives.

Conclusion: This paper will report on clinicians' experiences of HIV as chronic disease and the ways in which they believe they can best support their patients in self-management. The findings from this study are informing the design of an intervention to prevent chronic disease outcomes in people living with HIV with an emphasis on CVD.

Disclosure of Interest Statement: No disclosures of interest

Paper Ref	490
Theme	HIV/AIDS Theme C: Prevention Programs
Presentation Type	HIV/AIDS Poster

MAKING THE PREVENTION REVOLUTION WORK.

A COORDINATED RESPONSE TO THE NSW HIV STRATEGY 2012 -2015 FROM SOUTH EAST SYDNEY LOCAL HEALTH DISTRICT, (SESLHD) NSW

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1. South Eastern Sydney Local Health District HIV and Related Programs Unit
2. Sydney Sexual Health Centre

Introduction: SESLHD has the highest notifications of people living with HIV in Australia. The release of the NSW HIV Strategy set out clear targets and responsibilities for key stakeholders in the field. SESLHD responded with a coordinated whole of LHD approach that was supported by the Chief Executive (CE) thus further enabling the HIV and Related Programs Unit and services to work together to implement the strategies

Methods: SESLHD has a unique model whereby all HIV clinical services meet quarterly to share knowledge, develop policies and ensure consistent and best practice. This Clinical Services Meeting was used as a forum to gain an LHD response to the 2012 -2015 NSW HIV Strategy. A plan was developed to support all services to reach maximum potential of the key themes of increased testing, initiation into treatment, and enhanced prevention programs. The LHD CE endorsed the whole-of-service Action Plan for implementation across SESLHD

Results: SESLHD has re-oriented clinical services resulting in:

- rapid HIV testing offered across all HARP services
- Increased access to testing and results through information and technology changes
- Regular audits of people on treatment in all services
- An HIV testing project being implemented across mainstream hospital sites
- Data improvements to monitor the number of HIV tests performed in the LHD
- A new evening clinic targeting gay men in Darlinghurst
- A partnership with an NGO delivering community based testing (a first in NSW)

Conclusion: A coordinated approach across the LHD with high level support from the CE ensured that the key stakeholders provided a response to these new initiatives. Thus far the LHD has delivered substantial gains showing an increase in testing, improved access and raised awareness across the LHD with key stakeholders and mainstream services.

Paper Ref	471
Theme	HIV/AIDS Theme D: Culturally & linguistically diverse populs
Presentation Type	HIV/AIDS Oral Presentation

HIV TESTING PATTERNS AND BARRIERS TO TESTING AMONG PEOPLE FROM CULTURALLY AND LINGUISTICALLY DIVERSE (CALD) BACKGROUNDS IN NSW AUSTRALIA: RESULTS FROM A NSW COMMUNITY-BASED SURVEY.

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⁵Multicultural HIV and Hepatitis Services

⁶ACON

⁷Community HIV Services (Positive Central & Heterosexual HIV Service)

⁸Australian Federation of AIDS Organisations

Background: Recently Australia has experienced a rise in new HIV diagnoses due to heterosexual transmission in people from CALD backgrounds, with a concerning proportion diagnosed late. HIV testing is a key prevention strategy. We describe health service usage and testing among people from CALD communities in NSW.

Methods: A cross-sectional survey was conducted at 12 community events in 2012. We targeted events that occurred annually, and were attended by Zimbabwean, Thai, Ethiopian, South African, Cambodian and Sudanese communities. These communities were selected as they contribute to a higher number of notifications in NSW, relative to their population. We aimed to recruit 300 people aged 16 and older from each community, with similar numbers of males and females. Respondents self-completed translated paper-based surveys.

Results: There were a total of 1419 respondents; 46% were males and median age was 30 years. Just over half of all respondents (54%) indicated that they had ever had an HIV test. Of those, 21% reported it was in the last 12 months, 56% in the last 1-5 years, and 23% more than 5 years ago. Over half of the participants had their last HIV test when applying for permanent residency (54%), less commonly because they 'wanted to know' (18%), as part of a 'regular health check' (15%), their 'doctor suggested it' (13%), they had a 'new sexual partner' (7%), perceived 'risk of HIV' (7%) and 'antenatal screening' (6%). Most participants (69%) reported they attended the doctor at least yearly.

Conclusions: The results demonstrate a considerable proportion of people from communities participating in the survey had a HIV test due to permanent residency checks, rather than health seeking behaviour, despite opportunities to be tested at the doctor. Strategies are needed to raise awareness about the importance of regular testing in the community and among health care providers.

Disclosure of Interest Statement: The Kirby Institute receives funding from the Australian Government Department of Health and Ageing.

Paper Ref	131
Theme	HIV/AIDS Theme B: HIV Associated Diseases
Presentation Type	HIV/AIDS Oral Presentation

PROTRACTED CRYPTOCOCCAL DISEASE: IMMUNE RECONSTITUTION INFLAMMATORY SYNDROME (IRIS) OR NOT?

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Case presentation: A 27 year-old Vietnamese man was diagnosed with HIV in April 2012 when he presented with cerebrospinal fluid (CSF)-culture positive *Cryptococcus neoformans* meningitis. CD4 count was 4 cells/ μ L and HIV viral load 228827 copies/mL. He was treated with two weeks of amphotericin B (0.7mg/kg/day) and 5-fluorocytosine (25mg/kg/QID), followed by consolidation and secondary prophylaxis with fluconazole. CSF cultures were negative at two weeks. A ventriculo-peritoneal shunt was inserted to manage persistently raised intracranial pressure and had to be replaced two weeks later due to bacterial shunt infection. Antiretroviral therapy (ART) was commenced after four weeks of treatment, and by September 2012, CD4 count was 107 cells/ μ L and viral load <150 copies/mL.

In October 2012 he presented with visual changes and auditory hallucinations. Electroencephalogram demonstrated epileptiform discharges, and symptoms resolved following commencement of levetiracetam. In December 2012 he presented with headache and confusion. Magnetic resonance imaging showed progressive leptomeningeal enhancement with extensive, deep white matter changes, especially along the shunt tract. CSF showed mild pleocytosis; cultures were negative. He was treated presumptively for bacterial shunt infection with no significant improvement. Dexamethasone was commenced empirically with partial improvement. CD4 count fell to 30 cells/ μ L, but viral load remained suppressed at <150 copies/mL. Brain biopsy in February 2013 showed cryptococcal organisms with relatively little surrounding inflammation; immunohistochemistry and PCR were negative for polyomavirus and mycobacterial and fungal cultures were negative. A presumptive diagnosis of cryptococcal IRIS was made and steroids were continued with progressive improvement in symptoms.

Discussion: The timing of symptoms, lack of evidence of mycological failure, exclusion of alternative diagnoses and response to corticosteroids in this case are best explained by a diagnosis of cryptococcal IRIS. However, the unusually protracted course, extensive white matter changes and development of seizures are not typical manifestations. The demonstration of numerous (non-viable) cryptococcal organisms in brain parenchyma suggests that these features resulted from an inflammatory reaction involving the brain and not just confined to the meninges. This case illustrates that the extent of central nervous system (CNS) involvement can affect the clinical and radiological expression of cryptococcal IRIS, resulting in a range of features that can mimic other HIV-related CNS processes, and it highlights the complexities in diagnosis and management of this condition.

Disclosure of Interest Statement: No disclosure of interest

Paper Ref	511
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Poster

LOW HEPATITIS B VACCINATION RATES INDICATE THAT NEW STRATEGIES ARE NEEDED

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Background: Guidelines recommend targeted hepatitis B vaccination for susceptible adults, yet completion of the three-dose vaccine series is low. At Sydney Sexual Health Centre (SSHC), hepatitis B vaccine is available at no charge to the following priority populations: men who have sex with men, sex workers, injecting drug users, transgendered individuals and people who identify as Aboriginal or Torres Strait Islander. We assessed the association between short messaging service (SMS) reminders and hepatitis B vaccine completion rates.

Methods: We compared the number of people who completed a three-dose series within 18 months before and after the implementation of an SMS vaccine reminder system. The SMS group included all individuals who started a hepatitis B series and received SMS vaccine reminders over a 12 month period (January 2009 to December 2009). The comparison group included all individuals who started a vaccine series over a 12 month period (January 2007 to December 2007) but did not receive SMS reminders. We compared completion rates in the pre and post-intervention groups with a chi-squared test and multivariate logistic regression.

Results: Overall, 58% (95% CI, 53.7 - 62.8) of 463 individuals in the comparison group and 56% (95% CI, 49.9 - 62.8) of 241 in the SMS group completed two vaccine doses ($p=0.63$). Three doses were completed by 33% (95% CI, 28.8 - 37.5) of the comparison group and 26% (95% CI, 20.7 - 32.2) of the SMS group ($p=0.06$). There were no significant differences in course completion rates according to priority population and no significant association between the SMS reminders and vaccine course completion overall.

Conclusions: SMS reminders did not improve hepatitis B vaccination completion rates. In both groups, approximately half of individuals received the two doses required to boost immunity and approximately one third received the final dose, which is needed to provide long-term protection. Alternative strategies to improve vaccine completion rates should be investigated.

Disclosure of Interest Statement: None declared.

Paper Ref	177
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Quick Fire Presentation

“FUNNY SHIT ABOUT SEX”: USING VULGAR COMEDY ON YOUTUBE TO REACH YOUNG MEN WITH INFORMATION ABOUT HEALTHY SEXUAL DEVELOPMENT

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Introduction: This presentation reports on a project researching the best way to reach young men with information about healthy sexual development.

Methods: Five focus groups with eighteen 14-16 year old young men from state and private schools. They were asked what they knew about sex (across eight topic cards covering a range of aspects of healthy sexual development) and where they found out that information (school, family, friends, media or other)

Results: While young women have everyday access to media that explore issues of healthy sexual development and promote discussion about it – such as Girlfriend and Dolly magazines – young men’s media consumption does not currently offer such a space. They are interested in sport, but explicitly deny any knowledge of, or interest in the behavior of sportspeople off the pitch. They enjoy first-person-shooter games which often feature little explicitly gendered representation. One possible area for raising issues about healthy sexual development was vulgar comedy such as South Park, Family Guy and Entourage, which the young men did enjoy.

Conclusion: Young men like vulgar comedy – the kinds of material that might shock responsible adults. The challenge for health educators is to produce material that promotes discussion about key skills and areas of knowledge that is vulgar and hilarious enough to engage young men. We have partnered with Family Planning Queensland to support the production of “Funny Shit about Sex” – a series of vulgar short YouTube videos featuring male stand-up comedians making jokes about sex. The topics for the jokes were chosen by an expert panel to cover key skills and areas of knowledge for healthy sexual development. But it is vital to avoid “worthiness” – audiences know when they are being told what to think and this does not work as entertainment.

Disclosure of Interest Statement: This project was funded by the Queensland Government through the National and International Research Alliances Program: Improved surveillance, treatment and control of chlamydial infections, Research Program 5: Education – Developing improved sexual health education strategies.

Paper Ref	317
Theme	HIV/AIDS Theme B: Delivery Of Care
Presentation Type	HIV/AIDS Oral Presentation

INFLUENCE OF ART CO-PAYMENT ON PHARMACY PICK-UP SITE AND PHARMACY ASSESSMENTS OF ART ADHERENCE

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Introduction: Antiretroviral therapy (ART) cost is a barrier to ART adherence. In Melbourne, 2 pharmacies provide ART for the large majority of people living with HIV (PLHIV). The Melbourne Sexual Health Centre (MSHC) has no co-pay associated with ART pick-up, whereas the standard co-pay of \$34.20 (\$5.60 for Concession Card holders) applies at The Alfred hospital. For patients receiving HIV care close to the Alfred we determined the pharmacy of ART pick-up and ART adherence using pharmacy data.

Methods: The study population comprised patients picking up fixed dose combinations of: tenofovir-emtricitabine, abacavir-lamivudine or tenofovir-emtricitabine-efavirenz on ≥ 2 occasions from 2010-12. ART were prescribed by one of 8 general practitioners working at 1 high and 1 low caseload clinic near the Alfred. ART adherence was estimated using the medication possession ratio (MPR) calculated by dividing the days ART dispensed by the number of days from first to last pick-up. Median MPR at the 2 sites were compared by Wilcoxon Rank-Sum test and the relative risk for low adherence by site was established.

Results: 472 patients met inclusion criteria with 455/472 (96.4%) attended the high caseload clinic that is <1 kilometre from the Alfred and 5 kilometres from MSHC. 397/472 (84.1%) picked up from MSHC and 75/472 (15.9%) from the Alfred. Median (Q1-Q3) MPR was 99.2% (93.1%-102.6%) at MSHC and 97.9% (86.1%-102.5%) at the Alfred ($p=0.12$). There were increased risks for low adherence when picking up at the Alfred when defined as <95% adherence by MPR (RR 1.38; 95% CI 1.01-1.88, $p=.05$).

Conclusion: The overwhelming majority of individuals pick-up ART at MSHC where there are no co-pays despite regular HIV care close to the Alfred. ART co-payment is associated with worse adherence as measured by the MPR. More detailed studies exploring associations between ART cost and adherence outcomes are warranted.

Disclosure of Interest Statement: No pharmaceutical grants were received in the development of this study.

Paper Ref	470
Theme	HIV/AIDS Theme B: Clinical Trials
Presentation Type	HIV/AIDS Poster

EXPERIENCES AND PERSPECTIVES OF PARTICIPANTS COMPLETING A CLINICAL TRIAL FOCUSED ON HIV CURE

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Background: The expectations of the eventual outcomes of HIV cure research potentially differ between investigators and people living with HIV (PLHIV). Understanding expectations and experiences of PLHIV participating in clinical trials in this field will assist the design of future studies.

Methods: Survey of subjects completing an intensive clinical trial examining the effects of Vorinostat on HIV latency. Survey items focused on three aspects: experiences and satisfaction with trial participation, desirability of two potential HIV cure scenarios ('sterilising cure' [completely cured / stop ART / no doctor visits] and 'functional cure' [HIV still present / stop ART / doctor visits required]) and ranking the importance of 5 potential benefits of HIV cure (stopping ART, stopping doctor visits, cannot transmit HIV, cannot be re-infected with HIV and being considered someone not infected with HIV). Scenarios were compared by Fisher's exact test

Results: All 20 participants expressed high levels of satisfaction with the study conduct and >80% would consider enrolling in a similar study if approached. 30% acknowledged concerns about Vorinostat impacting their health at study entry. 90% rated a 'sterilising cure' very desirable compared to 55% for a 'functional cure' ($p=0.03$). When ranking 5 potential benefits of cure greatest importance was placed on stopping HIV transmission (47% 'most important') and least importance on stopping doctor visits to monitor HIV (0% 'most important') ($p=0.08$ when comparing all 5 scenarios)

Conclusion: High levels of participant satisfaction were achieved during an intensive clinical trial focusing on HIV cure. A sterilising HIV cure was viewed as more desirable than functional cure and the potential benefit of not transmitting HIV was considered most important. Awareness of the expectations for HIV cure of PLHIV suitable for these trials will allow researchers to properly inform participants about the benefits and risks of future studies and also clearly discuss potential cure scenarios.

Disclosure of Interest Statement: The clinical trial to which subjects were recruited was supported in part by a research grant from the Investigator Initiated Studies Program of Merck Sharp & Dohme Corp.

Paper Ref	275
Theme	HIV/AIDS Theme D: Vulnerability & risk
Presentation Type	HIV/AIDS Oral Presentation

DETERMINANTS OF SUICIDE AND ACCIDENTAL/VIOLENT DEATH IN THE AUSTRALIAN HIV OBSERVATIONAL DATABASE

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Background: Suicide and accidental or violent death continues to occur in HIV-positive populations despite significantly improved prognosis since the introduction of cART. The combined effects of psychosocial factors and HIV-infection on risk are poorly understood. In this study we analysed predictors of confirmed cases of suicide as well as of accidental or violent death to develop adjusted models of risk associated with both psychosocial and HIV-related factors.

Methods: We conducted a retrospective nested case-control study of suicide and accidental or violent death in the Australian HIV Observational Database between January 1999 and March 2012. For each case, 2 controls were matched by clinic, age, sex, mode of exposure and HIV-positive diagnosis date. Psychosocial risk factors and HIV infection parameters were collected. Risk of suicide and accidental or violent death was estimated using conditional logistic regression.

Results: We included 27 cases (17 suicide and 10 accidental/violent death) and 54 controls. Increased risk was associated with unemployment (Odds Ratio (OR) 5.86, 95% CI:1.69-20.37), living alone (OR 3.26, 95% CI:1.06-10.07), suicidal ideation (OR 6.55, 95% CI:1.70-25.21), and >2 psychiatric/cognitive risk factors (OR 4.99, 95% CI:1.17-30.65). CD4 cell count of >500 cells/ μ L (OR 0.25, 95% CI:0.07-0.87) and later HIV-positive diagnosis date ($p=0.04$) were associated with decreased risk. Depression was not a significant predictor of risk (OR 1.87, 95% CI:0.67-5.25). CD4 cell count >500 cells/ μ L remained a significant predictor of reduced risk (OR 0.15, 95% CI:0.03-0.70) in a multivariate model adjusted for employment status, accommodation status and HIV-positive diagnosis date.

Conclusions: After adjustment for psychosocial factors, immunological status of HIV-positive patients contributed to the risk of suicide and accidental or violent death. The number of psychiatric/cognitive diagnoses contributed to the level of risk but many psychosocial factors were not individually significant. These findings indicate a complex interplay of factors associated with risk of suicide and accidental or violent death.

Disclosure of Interest: The Australian HIV Observational Database is funded as part of the Asia Pacific HIV Observational Database, a program of The Foundation for AIDS Research, amfAR, and is supported in part by a grant from the U.S. National Institutes of Health's National Institute of Allergy and Infectious Diseases (NIAID) (Grant No. U01-AI069907) and by unconditional grants from Merck Sharp & Dohme; Gilead; Bristol-Myers Squibb; Boehringer Ingelheim; Roche; Pfizer; GlaxoSmithKline; Janssen-Cilag. The Kirby Institute is funded by The Australian Government Department of Health and Ageing, and is affiliated with the Faculty of Medicine, The University of New South Wales.

Paper Ref	500
Theme	HIV/AIDS Theme D: Social & Behavioural Research
Presentation Type	HIV/AIDS Oral Presentation

***'MI AIGRIS LONG KOINS BILONG EM' ('I WAS ATTRACTED TO HIM BECAUSE OF HIS MONEY'):
POLYGAMY, SEXUAL AGENCY AND WOMEN IN CONTEMPORARY PAPUA NEW GUINEA***

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Background: Papua New Guinea (PNG) is undergoing enormous economic transition giving rise to increased wealth, rapid social change and transforming cultural practices. In recent years the practice of polygamy in PNG has come under increasing domestic attention, especially as it pertains to reinforcing patriarchy and exacerbating gender inequality. In this paper we examine contemporary polygamy practices and what role sexual agency plays in women and girls quest for older married men.

Methods: A mixed method qualitative study on masculinity was undertaken in two Highlands Provinces of PNG. A total of 33 in-depth interviews and 10 focus group discussions were conducted with women and girls of all ages using convenient sampling. All interviews were digitally recorded, transcribed and translated into English before being analyzed using NVivo 9.

Findings: The majority of women and girls in the study discussed polygamy both as it has been historically practiced and more recent transformations to it. Historically polygamy served to reinforce the status of men and only available to a select few men. With increased access to cash economies and increased female sexual agency, women and girls now actively seek out men with disposable income and other assets. There has been an inverse of social status as women and girls come to possess wealth as co-wives. Despite the evidence of female sexual agency, participants were of the opinion that transformation and expansion of polygamy resulted in increased HIV risk.

Conclusion: Before being forced into polygamous marriage, contemporary PNG women and girls actively seek out married men to marry, hoping to benefit economically. What sexual health risks this poses for HIV remains unknown but understanding these socio-cultural features in PNG today are important to informing the future of women's sexual health.

Disclosure of Interest Statement: This study was funded by National AIDS Council Secretariat of PNG

Paper Ref	266
Theme	Sexual Health: Reproductive Health
Presentation Type	Sexual Health: Quick Fire Presentation

IMPROVING ACCESS TO INTRAUTERINE DEVICE INSERTION IN A SINGLE CLINIC VISIT – A PILOT STUDY

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Introduction: Family Planning NSW Hunter clinic is trialing a process aimed to improve service delivery of long-acting contraceptive methods. Traditionally, clients interested in an intra-uterine device (IUD) were required to attend an initial assessment visit prior to a second consultation for insertion of the device. Family Planning NSW Hunter is trialing a new process for providing IUD insertion in a single clinic visit, following completion of an on-line questionnaire.

Methods: Since October 3, 2012, clients enquiring about IUDs were given the option of the usual two visit process, or completing an on-line questionnaire followed by IUD insertion in one visit, if suitable. Clients opting for a single visit process were e-mailed information and a link to an on-line questionnaire. Completed questionnaires were reviewed by a clinic nurse who then phoned clients. Women were advised to attend an assessment visit if potential issues were identified requiring further discussion or assessment, or were booked for IUD insertion at an appropriate time. Outcomes were monitored for all clients who opted for the single visit process.

Results: Of 71 women sent e-mails between 3rd October 2012 and 21st January 2013, 52 (73.2%) submitted questionnaires. Twenty-four of 52 respondents (46.2%) were assessed as suitable for a single visit process, and same-day insertion was successful for 19 women (79.2%). No complications were experienced on the day of insertion.

Slightly over half (53.8%) of respondents were advised to attend for an assessment visit. Only three of these women indicated an absolute contra-indication to IUD insertion.

Conclusion: A same-day IUD insertion process following completion of an on-line questionnaire is feasible and safe. This pilot study is ongoing, with criteria for determining suitability for a single visit process under review.

Disclosure of Interest Statement: None<?>

Paper Ref	439
Theme	Sexual Health: Reproductive Health
Presentation Type	Sexual Health: Oral Presentation

THE LEGAL STATUS OF PDPT STRONGLY IMPEDES UPTAKE AMONG FAMILY PLANNING CLINICIANS IN AUSTRALIA

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Background: Patient delivered partner therapy (PDPT) is an important strategy for the control of chlamydia, yet only one jurisdiction in Australia has legalised the practice. We assessed the uptake of PDPT among clinicians working at Family Planning clinics (FPCs) and predictors of its use.

Methods: A cross sectional online survey of doctors and nurses working in Australian FPCs was conducted in May-June 2012. Logistic regression was used to assess factors associated with PDPT use.

Results: A total of 168 clinicians working at Australian FPCs participated in the survey (79% response rate). Over 80% saw PDPT as clinically beneficial in various ways. Sixty five per cent (n=100) of clinicians reported never using PDPT. There were 54 (35%) clinicians who reported ever using PDPT, 25% used it 'sometimes', and 10% used it 'half the time'/'usually'/'always'. In multivariate analysis, the following factors were independently associated with ever using PDPT: doctors compared to nurses (adjusted odds ratio(AOR):15.1,95%CI:4.9-46.2); over 5 years experience in reproductive and sexual health (AOR:5.25,95%CI:1.2-22.2); lower likelihood of encouraging clients to tell their partner to see a doctor (AOR:5.3;95%CI:1.5-18.4) and higher likelihood of following up with clients to check partner notification had been undertaken (AOR:9.8,95%CI:2.8-34.8). PDPT use was lower among clinicians who had concerns about PDPT's legal status (AOR:0.16,95%CI:0.06-0.48). Other common concerns which were not statistically associated with PDPT use were: potential for allergic reaction; partner not receiving testing/treatment; partner may have another sexually transmitted infection not treated by antibiotic, missed opportunities for partner counselling.

Conclusion: PDPT was used by clinicians at FPCs, but not systematically. Uptake was greater among doctors and those with extensive experience in sexual and reproductive health. Although the vast majority of clinicians acknowledged the benefits of PDPT, concern about its legal status was a major impediment to the uptake of the strategy.

Disclosure of Interest Statement: No potential conflicts are declared.

Paper Ref	532
Theme	HIV/AIDS Theme C: HIV/AIDS Surveillance
Presentation Type	HIV/AIDS Poster

PERINATAL EXPOSURE AMONG AUSTRALIAN BORN CHILDREN, 2001 – 2012

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Background: The use of appropriate interventions during the antenatal and postnatal periods has been shown to significantly decrease the risk of perinatal HIV transmission.

Methods: In Australia, information on perinatal exposure to HIV is reported by paediatricians through the Australian Paediatric Surveillance Unit to the national registry. We examined these data for trends in perinatal exposure to HIV for children born in Australia from 2001 to 2012.

Results: Four hundred and fifteen children were born in Australia to 286 HIV-infected mothers from 2001-2012. The number of infants exposed to HIV increased over time from 147 in 2001-2006 to 268 in 2007-2012 with the rate of exposure increasing from 9.6 per 100,000 births to 15.4. The most common route of maternal exposure was heterosexual contact (81.1%). Of the 232 women reporting heterosexual contact, 147 (63.4%) reported that they acquired HIV infection in a high prevalence country or had had sexual contact with a man from a high prevalence country. Sixty-nine percent of infants were the first or only child perinatally exposed to HIV infection in that family and women were diagnosed antenatally in 95.7%. Where the mother was diagnosed antenatally, at least one intervention was used in 95.9% of births and two or more in 90.3%. Eight cases of mother-to-child transmission occurred in 391 births where mothers were diagnosed antenatally (2.0%), including four born to the 38 women using fewer than two interventions. Of the 14 children born to women with a postnatal diagnosis, seven (50%) acquired infection.

Conclusion: Despite perinatal exposure to HIV becoming more common, the number of cases of perinatal HIV transmission in Australia is low. This is due to the low prevalence of HIV in Australian women and the high proportion of women receiving appropriate antenatal care and antiretroviral treatment during pregnancy. Omission of antenatal testing probably contributed to seven preventable transmissions.

Disclosure of Interest Statement: The Kirby Institute is funded by the Australian Government Department of Health and Ageing and is affiliated with the Faculty of Medicine, The University of New South Wales. Its work is overseen by the Ministerial Advisory Committee on Blood Borne Viruses and Sexually Transmissible Infections. The Surveillance and Evaluation Program for Public Health at the Kirby Institute is a research associate of the Australian Institute of Health and Welfare.

Paper Ref	338
Theme	HIV/AIDS Theme C: Prevention Programs
Presentation Type	HIV/AIDS Poster

TEACHER TRAINING & MENTORSHIP PROGRAM FOR LEADING THE PERSONAL DEVELOPMENT CURRICULUM IN PAPUA NEW GUINEA

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Background: As part of the Round 10 Global Fund HIV program, Oil Search Health Foundation developed a new HIV prevention program in partnership with the Papua New Guinea Department of Education (DoE) to improve the competence and confidence of teachers in delivering quality Personal Development (PD) teaching in secondary schools with specific reference to sexual and reproductive health, HIV and gender-based violence. The main focus is on lesson planning, interactive, learner-centred teaching methods and ongoing mentorship in the classroom in preference to traditional approaches that have tended to focus content and knowledge with little follow-up.

Methods: A five-day workshop educated teachers on the content of DoE curricula, the technical aspects of HIV, sexual and reproductive health and rights, and a model of interactive, outcome-based teaching. Follow-up 'in-class' mentorship was provided at the teachers home school where the learners are present. Video recording of live PD lessons allowed the teachers to reflect on their own performance along with technical input from the mentor. Workshop evaluation involved pre and post course questionnaires to determine teacher confidence in teaching specific aspects of PD.

Results: To date, 40 secondary school teachers from seven different schools have participated in four workshops. Post-workshop mentorship and in-service training at these schools are ongoing. Pre and post-workshop questionnaire scores averaged 70.3% and 75.7% respectively.

Conclusion: Preliminary quantitative data show a marginal increase in confidence but video observation and qualitative feedback indicate much greater improvements. More rigorous evaluation is required to fully evaluate the outcomes and potential impact of this model of teacher training. The program will continue to evolve over the next 4 years with possible expansion into other provinces.

Disclosure of Interest Statement: Funding for this program was provided by the Global Fund to Fight AIDS, TB & Malaria.

Paper Ref	416
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Oral Presentation

A FUNDED SEXUAL AND REPRODUCTIVE HEALTH WORKER POSITION AT AN ABORIGINAL COMMUNITY CONTROLLED HEALTH SERVICE IMPROVES HEALTH SERVICE ACCESS AND SEXUALLY TRANSMISSIBLE TESTING IN ABORIGINAL YOUTH

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Background: The NSW Aboriginal Sexual and Reproductive Health Program provided funding to six NSW Aboriginal Community Controlled Health Services from 2010 onwards to support a Sexual and Reproductive Health worker (SRHW) Position. We describe the activities conducted by the worker based at Bulgarr Ngaru Medical Aboriginal Corporation (BNMAC) and the impact of the activities on service access and chlamydia testing in young people.

Methods: The SRHW started in November 2010 and conducted a number of health promotion initiatives with the community. To evaluate their impact, de-identified routine clinical data, from January 2010-December 2012, were extracted from the Patient Information Management System. We compared the number of young people aged 15-25 years who attended the service, total consultations, and the number of individuals who had a chlamydia test in the 10 month period before the worker started Jan-Oct 2010, to Jan-Oct 2011 (period 1), and Jan-Oct 2012 (period 2).

Results: In the 10 months before the SRHW started, 339 individuals aged 15-25 years attended the service, increasing by 20% to 407 in period 1 after the Worker started, and by 24% to 421 in period 2. These young people accounted for 1830 consultations in the 10 months before the Worker started and increased by 22% after the Worker started, to 2238 from January-October 2011, and by 57% to 2871 from January-October 2012. There was also an increase in the number of young people tested for chlamydia. Compared to the ten months before the Worker started, there were 20% more tests after the Worker started in period 1, and 36% more tests done in period 2. For all outcomes increases were seen in both genders.

Conclusions: A funded SRHW position in conjunction with integrated health promotion initiatives at BNMAC has improved health service access and chlamydia testing, with improvements increasing over time.

Disclosure of Interest Statement: The Sexual and Reproductive Worker employed at BNMAC was funded by the NSW Ministry of Health under the National Partnership Agreement on Indigenous Early Childhood Development. No pharmaceutical grants were received in the development of this study.

Paper Ref	462
Theme	HIV/AIDS Theme D: Culturally & linguistically diverse populs
Presentation Type	HIV/AIDS Oral Presentation

HIV KNOWLEDGE AND SEXUAL BEHAVIOUR AMONG PEOPLE FROM CULTURALLY AND LINGUISTICALLY DIVERSE (CALD) BACKGROUNDS IN NSW AUSTRALIA: RESULTS FROM A NSW COMMUNITY-BASED SURVEY 2012

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Background: Over the last decade, Australia has experienced a rise in new HIV diagnoses due to heterosexual transmission in people from CALD backgrounds. Yet there are no systems for assessing HIV knowledge and sexual risk behaviour in this population. We report the findings of a HIV community-based survey among people from CALD communities in NSW in 2012.

Methods: A cross-sectional survey was undertaken at 12 community events in partnership with community organisations. We focused on events occurring at least annually (repeatable) and targeting Zimbabwe, Thailand, Ethiopia, South Africa, Cambodia and Sudan communities. These countries were selected as they contribute to high numbers of HIV notifications relative to their population size in NSW. We aimed to include 300 people aged 16 years and older from each community and similar numbers of males and females. Paper-based surveys were translated into 4 different community languages and were self-completed.

Results: A total of 1419 people participated; 46% were males, the median age was 30 years, and 18% spoke English as their first language. About three-quarters of participants correctly indicated HIV could be transmitted through sexual intercourse (76%), injecting (70%), and blood transfusion (67%), and less than half through birth (37%) or breast feeding (49%). There were some misconceptions about the modes of transmission, with 14% reporting HIV could be transmitted by sharing food and 15% by kissing. 39% of participants reported a non-steady sexual partner, of which only 27% reported condom use in the last 12 months. The main reasons for not using condoms with non-steady partners were: 'difficult to bring up topic' (39%), 'condoms are unnatural' (26%), 'condoms make sex less enjoyable' (24%), and 'condoms were not available' (22%). Differences in knowledge and sexual behaviour were observed across communities, and according to gender and age group.

Conclusions: The survey provides important information to inform health promotion initiatives and a baseline to evaluate the impact of such strategies.

Disclosure of Interest: Nothing to declare

Paper Ref	203
Theme	HIV/AIDS Theme B: Clinical Trials
Presentation Type	HIV/AIDS Poster

ANTIRETROVIRAL THERAPY PATIENTS LOST TO FOLLOW UP AMONG PATIENTS MORE THAN 14 YEARS OLD FROM 2005 TO 2011 AT SOCIAL HEALTH CLINIC, PHNOM PENH, CAMBODIA.

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Introduction: As the number of HIV-infected patient increase over the year, maintaining long-term regular follow up is an important component of HIV care. Lost to follow up (LTFU) has been known as a major risk factors of mortality. Assessing the factors associated with LTFU is vital to improve the mortality among HIV-infected patients.

Methods: Adult HIV infected patients aged >14yr ever enrolled in Social Health Clinic (SHC) received service from 2005 to 2011 for Antiretroviral Therapy were analyzed. The proportion of LTFU was assessed. Factors associated with LTFU were identified using logistic regression. LTFU has been defined as patients who had missed clinic appointment for more than 3 months.

Results: A total of 1810 HIV infected adult patients registered at the SHC between 2005 and 2011 were included in the analysis. Overall 52.9% are female. Clinically, 50.2% were in WHO stage 3 at baseline and 62.2% had CD4 cell count less than 200 (cells/ μ l) when enrolling into the clinic. About 78% had hemoglobin at baseline more than or equal to 10. The median age between those in follow up and those lost to follow up was similar (median age 34(29-40)). Those who were lost to follow up were more likely to be single or divorce (OR:1.9, 95%CI:1.1-3.1); have hemoglobin less than 10 (OR:3, 95%CI:2-.5) and have a BMI less than 18 (OR:5, 95%CI:3-.7).

Conclusion: The major factors associated with LTFU were not being in relationship and having poor health status at the date of enrollment. The BMI and hemoglobin results would suggest that those most unwell are more likely to be lost. This study suggested providing strong support from family members at household level might help reducing the risk of LTFU.

Disclosure of Interest Statement: None

Paper Ref	334
Theme	HIV/AIDS Theme B: Clinical Trials
Presentation Type	HIV/AIDS Poster

FACTORS ASSOCIATED WITH LOST TO FOLLOW UP AMONG HIV POSITIVE PATIENTS MORE THAN 14 YEARS OF AGE ATTENDING THE SOCIAL HEALTH CLINIC, PHNOM PENH, CAMBODIA BETWEEN 2005 AND 2011

Roeun Moeung³, Saphonn Vonthanak^{3,5}, Chhea Chhorvann^{3,4}, John Kaldor^{2,3}, Cui Haixia^{1,3,4}, Bradley Mathers^{2,3}, Mam Sovatha^{1,3}, Kathy Petoumenos^{2,3}, Janaki Amin^{2,3}, Mean Chivun^{1,3}, National Center for HIV/AIDS, Dermatology and STD, Cambodia¹, Kirby Institute, Australia², FRTIP³, National Institute of Public Health, Cambodia⁴, University of Health Science, Cambodia⁵

Introduction: As the number of HIV-infected patients continues to increase, maintaining long-term regular follow up visits is an important component of HIV care. Lost to follow up (LTFU) has been known as a major risk factor of mortality and assessing factors associated with LTFU is vital to improve the mortality among HIV-infected patients.

Methods: Adult HIV-infected patients aged >14 years enrolled in Social Health Clinic (SHC), who received antiretroviral treatment from 2005 to 2011 were analyzed. LTFU was defined as patients who had missed clinic appointment for more than 3 months and factors associated with LTFU were reassessed using logistic regression.

Results: A total of 1810 HIV-infected adult patients registered at the SHC between 2005 and 2011 were included in the analysis. Overall 52.9% are female. Clinically, 50.2% were in WHO stage 3 at the baseline and 62.2% had CD4 cell count less than 200 (cells/μl) when enrolling into the clinic. About 78% had hemoglobin at the baseline more than or equal to 1g/dl. During this period, 190 (10%) patients were LTFU. The median age between those in follow up and those lost to follow up was similar (median age=34, IQR(29-40)). Those who were lost to follow up were more likely to be single (OR:1.5, 95%CI:1.0-2.2) or divorced (OR: 1.8; 1.0-3.1). Patients with higher hemoglobin - > 10 g/L (OR: 0.5, 95%CI: 0.3-0.7) and greater BMI (> 18) (OR:0.7, 95%CI:0.5-1.0) are less likely to be lost to follow-up.

Conclusion: The proportion of LTFU at the SHC clinic was 10%. Lack of spousal support (being single or living alone) is a major factor associated with LTFU among ART patients. In addition, having low BMI and hemoglobin level at the baseline might also link to LTFU. Therefore, providing strong support, especially from family members, may result in reducing the risk of LTFU among ART patients.

Disclosure of Interest Statement: None

Paper Ref	171
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Poster

USING LOCAL EVIDENCE TO INFORM PUBLIC HEALTH PRIORITIES FOR LESBIAN AND BISEXUAL WOMEN'S SEXUAL HEALTH

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Introduction: Sexual health was a health priority area for the 2010 National Women's Health Policy. Yet a persistent lack of systematic research on the health of lesbian and bisexual women is a significant barrier to identifying and addressing this population's sexual health needs.

Methods: A repeated cross-sectional survey of women was delivered at gay and lesbian community events in Sydney in February 2010 and 2012 and in Perth in October 2010 and 2012. The survey captured information on sexual identity, sexual behaviour with men and women, and screening for sexually transmissible infections (STIs).

Results: Of the 1561 non-heterosexual women completing surveys in 2012, the majority identified as lesbian (68% Sydney; 64% Perth) and reported recent sex with a woman (77% Sydney; 71% Perth). A sexual history with men was the majority experience (63% Sydney and 56% Perth). Three-year participation rates for Pap smears were equivalent to the general population (72% Sydney; 64% Perth). However, women who had never had sex with a man were twice as likely to have never been screened (25% Sydney; 32% Perth). Half had ever had an STI test (54% Sydney; 46% Perth); rates were not much higher among the 25% reporting recent partner change/multiple partners: 58% Sydney and 52% Perth. One in five women tested reported receiving an STI diagnosis (18% Sydney; 20% Perth). HIV testing was low (41% Sydney; 31% Perth); rates were not much higher among women reporting sex with a man: 48% Sydney; 36% Perth.

Conclusion: Findings from two Australian community samples provide a local evidence base to inform the sexual health priorities for lesbian and bisexual women. Public health efforts need to be directed to increase Pap smear screening in women who have never had sex with a man and STI screening, particularly in women with multiple partners/recent partner change.

Disclosure of Interest Statement: No potential conflicts are declared.

Paper Ref	467
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Poster

PATIENT DELIVERED PARTNER THERAPY FOR CHLAMYDIA: SUPPORT AND CONCERN AMONG DOCTORS AND NURSES WORKING IN AUSTRALIAN FAMILY PLANNING CLINICS

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Introduction: Advocacy for patient delivered partner therapy (PDPT) is increasing in Australia (RACP Australasian Chapter of Sexual Health Medicine called for PDPT for chlamydia in 2011). International studies have shown PDPT increases partner treatment and reduces reinfection rates. Yet, the Northern Territory remains the only jurisdiction to have enacted legislation. With Australian studies reporting PDPT is practiced in other jurisdictions, this study sought to understand the practices and perceptions of doctors and nurses working in Australian Family Planning clinics (FPCs).

Methods: In June–October 2012 focus groups were conducted with doctors and nurses working in FPCs. Discussions explored chlamydia testing and management practices, and opportunities for improvement.

Results: Thematic Analysis of 11 focus groups with 70 doctors and nurses revealed that despite a lack of FPC policy supporting it, many doctors had provided a patient with a repeat script or medication intended for a sexual partner, often in response to a patient request. There was no consensus about whether FPCs should support PDPT; nurses were less supportive than doctors. Support fell into several domains: increased treatment efficacy for the patient; an additional clinical option in complex social situations (e.g. domestic violence); provides a low-risk, well-established treatment; and addresses partner access to treatment. Areas of concern were: providing medication to a patient the clinician had not spoken to; possibility of partners being treated without consent; and lost opportunities for partner education and tracing of partner's sexual contacts. Doctors expressed concern about the lack of legislative support in most jurisdictions and policy support in FPCs.

Conclusion: Many FPC clinicians saw PDPT as a viable and useful clinical option for delivering the best care for patients and effective chlamydia management for the community. Further work is needed to clarify and address concerns, and articulate clear clinical guidelines and a legislative framework for PDPT.

Disclosure of Interest Statement: No potential conflicts are declared.

Paper Ref	480
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Poster

INCREASING REPEAT CHLAMYDIA TESTING IN FAMILY PLANNING CLINICS DEPENDS ON PERCEPTION OF VALUE AND AVAILABILITY OF LOW-BURDEN FLEXIBLE REMINDER SYSTEMS

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Introduction: Re-infection after a chlamydia infection is common: 22% of young Australian women are re-infected within 4-5 months. Re-infections increase the risk of PID by 4-6 fold. Retesting is an important strategy to detect re-infection. While recommendations and time frames vary, clinical guidelines note repeat testing at least 3 months after a positive diagnosis should be considered. This study sought to understand clinician practices and perceptions in relation to repeat testing.

Methods: Focus groups were conducted with doctors and nurses working in Australian Family Planning clinics (FPCs) in June-October 2012. Discussions explored chlamydia testing and management practices.

Results: Thematic analysis of 11 focus groups with 70 doctors and nurses revealed two distinct approaches. All FPCs had a policy, and clinicians reported recommending, retesting in three months. Six FPCs (in 3 jurisdictions) reported no system to support retesting; there was partial support for their adoption. These clinicians suspected few clients returned for 'retesting', but that opportunistic testing incidentally caught re-infection. There were reservations about the medical and economic value of formal retesting, concern that reminder systems (and demand for retesting) could overwhelm FPCs, and uneasiness that reminder systems undermined client responsibility. Five FPCs (in 3 jurisdictions) had passive and/or active reminder systems. Stickers on charts alerted clinicians to a recent positive diagnosis to facilitate opportunistic retesting. Active systems involved one-off SMS, telephone, or letter contact at three months. Systems were developed recently and locally in response to audits and conferences. These clinicians described opportunistic testing as missing those at risk of re-infection, and noted reminder systems had not been a significant burden to FPCs.

Conclusion: Active reminder systems supporting retesting in FPCs can be implemented with low impact on workload. However, awareness of the value of retesting and the consequences of re-infection needs to be increased.

Disclosure of Interest Statement: No potential conflicts are declared.

Paper Ref	35
Theme	HIV/AIDS Theme B: HIV Associated Diseases
Presentation Type	HIV/AIDS Oral Presentation

HIV LIPODYSTROPHY IN PARTICIPANTS RANDOMISED TO LOPINAVIR/RITONAVIR (LPV/R) + 2-3 NUCLEOSIDE/NUCLEOTIDE REVERSE TRANSCRIPTASE INHIBITORS (N(T)RTIS) OR LPV/R + RALTEGRAVIR (RAL) AS SECOND-LINE ANTIRETROVIRAL THERAPY: A SUB-STUDY OF THE SECONDLINE TRIAL

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Background: The Second-Line study provided a unique opportunity to examine the lipodystrophy syndrome and cardiovascular disease (CVD) risk in participants randomised to r/LPV+RAL as an alternate N(t)RTI-sparing treatment option in adults (>16 years) failing first-line NNRTI+2N(t)RTI therapy.

Methods: This sub-study of 108 LPV/+RAL and 102 LPV/r+2-3N(t)RTIs SECONDLINE participants was conducted at 8 sites across South Africa, India, Thailand, Malaysia and Argentina. Whole body dual energy x-ray absorptiometry was performed at baseline and week 48. Data were obtained to calculate the Metabolic Syndrome and Framingham CVD risk score. Changes in body fat, lipids, Metabolic Syndrome and CVD risk were compared between arms using linear and binomial logistic regression. Associations between percent change in limb fat and risk factors measured at baseline were assessed by backwards stepwise multivariate linear regression. Analyses were adjusted for gender, body mass index and smoking status.

Results: The mean (95%CI) percent increase in limb fat mass over 48 weeks was 15.7% (5.4, 25.9) in the r/LPV+N(t)RTI arm and 21.1% (11.1, 31.1) in the r/LPV+RAL arm, with no significant difference between treatment arms (-5.42% (-13.7, 2.9), p=0.20). Increases in total body fat mass and trunk fat mass were also similar between groups. Total:HDL cholesterol ratio was significantly higher in the RAL arm (mean difference: 0.4 (1.4); p=0.0288), no other differences in lipid parameters were observed. There were no statistically significant differences in CVD risk or Metabolic Syndrome between the two regimens. The baseline predictors of increased limb fat were high viral load, high insulin and participant's not taking lipid lowering treatment.

Conclusion: In patients switching to second line therapy, r/LPV combined with RAL demonstrated similar improvements to limb fat as an N(t)RTI + r/LPV regimen, but a worse total:HDL cholesterol ratio over 48 weeks.

Disclosure of Interest Statement: This work was supported by The Kirby Institute, which is funded by the Australian Government Department of Health and Ageing. The Kirby Institute is affiliated with the Faculty of Medicine, University of New South Wales. Funding for the SECONDLINE study was provided by The Kirby Institute, Merck & Co. Inc, AbbVie, NHMRC and amfAR.

Paper Ref	43
Theme	HIV/AIDS Theme C: Health Promotion
Presentation Type	HIV/AIDS Poster

RESOURCE BOOKLET: MANAGEMENT OF SEXUALLY TRANSMITTED INFECTIONS FOR PAPUA NEW GUINEAN HEALTH WORKERS

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Background: The resource booklet *"A Guide for Health Workers on treatment and management of the four syndromes for Sexually Transmitted Infections (STIs)"* was developed to complement the Papua New Guinea (PNG) National Department of Health (NDoH) Standard Management of STI and Genital Conditions manual.

It was produced by the AusAID funded PNG Australia Sexual Health Improvement Program (PASHIP) Clinical Outreach, Men's Programs, Advocacy and Sexual Health Services Strengthening (COMPASS) Project with approval and editing by the PNG NDoH.

Method The booklet was developed in response to health workers requesting the inclusion of photographic images and partner management to assist with diagnosis and treatment of STIs. Booklets have been printed in colour; clear concise English and size 14 font for legibility. The booklet includes the following information:

- flow charts for management of syndromic presentations
- common presentations of STIs with photographic images
- common causes of conditions including -treatment and management
- follow up advice including partner management and treatment
- interpretation of syphilis serology including rapid testing in antenatal settings
- syphilis in pregnancy including management of the neonate
- reference to treatment of genital discharge in children

Results: The booklet was printed at the conclusion of the COMPASS project in 2012 and shared with PASHIP partner organisations. It is currently being distributed and feedback has indicated that it will be a valuable reference for health workers managing STI clients.

Conclusion: This resource offers comprehensive management of the four syndromes used in STI management in PNG and supplements the current PNG NDoH guidelines. It has been developed to assist health workers improve their STI diagnostic skills and interpretation of syphilis serology and treatment.

Disclosure of Interest Statement: COMPASS has funding support from Australian Agency for International Development (AusAID)

COMPASS training materials were developed in consultation with the PNG NDoH and are based on national guidelines

Paper Ref	45
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

SEXUALLY TRANSMITTED INFECTIONS IN CHILDREN: A GROWING CONCERN IN PAPUA NEW GUINEA

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Background: Sexually transmitted infections (STIs) and sexual abuse among children presented as emerging issues during the implementation of the Papua New Guinea (PNG) Australia Sexual Health Improvement Program (PASHIP) (2007-2012). This had not been anticipated in the original project design and was found to be a challenge for all five partner organisations working towards HIV prevention and treatment of STIs in PNG.

As a result, a Child Protection Working Group was formed that aimed to:

- increase effective STI service delivery for children
- raise awareness of policies related to Child Protection

Method: The Clinical Outreach, Men's Programs, Advocacy and Sexual Health Services Strengthening (COMPASS) Project developed education materials and training for nurses which included:

- the distribution of resources on STI management in children and current Child Protection policy

In September 2012 COMPASS held:

- a master class on management of STIs in children
- a Child Protection training day

evaluation which involved quantitative and qualitative feedback

Results: A total of 43 nurses and project staff in Lae attended Child Protection training and 18 nurses attended the master class.

It was found that nurses and staff had no prior knowledge of:

- child genital discharge guidelines in the PNG National Department of Health (NDoH) Standard Treatment for the Common Illnesses of Children in PNG
- the Child Protection Act, responsibilities and pathways of reporting

Conclusion: STIs in children and child sexual abuse in PNG has been identified by the PASHIP partners as an area of growing concern and training need. Child Protection training for health professionals has been recognised as an area of priority for further support. Training for nurses on treatment and management of STIs in children is an area that needs to be addressed.

Disclosure of Interest Statement: PASHIP has funding support from Australian Agency for International Development (AusAID).

COMPASS resource materials were developed in consultation with the PNG NDoH and are based on national guidelines.

Paper Ref	562
Theme	HIV/AIDS Theme D: Gay & MSM
Presentation Type	HIV/AIDS Quick Fire Oral

‘TIME TO TEST’: A CAMPAIGN TO PROMOTE HIV TESTING AMONG GAY MEN

Murphy DA

Australian Federation of AIDS Organisations

Introduction: Recent research has identified a range of issues related to HIV testing among gay men. Between 19% and 31% of HIV infections among gay men are undiagnosed. The mean time between infection and diagnosis is estimated to be greater than four years. And between one-third and one-half of new infections are attributed to people who do not know they are HIV positive. This demonstrates that undiagnosed HIV infections are a significant driver of new infections. Recent research has also suggested that only half of men routinely test for HIV and only one-third have a regular testing routine that meets the national HIV testing guidelines. One-fifth of men have never had a sexual health check. A range of structural and convenience factors related to HIV testing has been identified.

Methods: AFAO commissioned additional market research using a range of innovative methods to explore some of the emotional and attitudinal aspects of HIV testing. This research identified three priority target groups based on testing patterns and disposition:

1) new testers; 2) non-testers; and 3) non-routine testers.

Results: Campaign materials were developed to target each of these three groups. For non-testers we focused on reducing anxiety related to testing, emphasising the non-judgmental provision of services, and increasing knowledge about HIV and testing. For men who reported HIV risk behaviours but did not present for HIV testing we emphasised the benefits of regular testing, reducing negative attitudes towards testing, and recent changes in testing technologies and the delivery of results. For non-routine testers we promoted adoption of a regular testing routine by emphasising regular testing norms, and speed and convenience.

Conclusion: The campaign, called Time to Test, demonstrates the importance of developing specific messages for gay men based on their experience of—and attitude towards—HIV testing.

Disclosure statement: Nothing to disclose.

Paper Ref	101
Theme	Sexual Health: Biomedical
Presentation Type	Sexual Health: Poster

IS IT OUR JOB? DRUG USE IN A SEXUAL HEALTH CLINIC

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Introduction: While an association is evident between drug use and risk-taking sexual behavior, few data describe prevalent drug use in general sexual health clinic populations. Most published data is limited to HIV positive or MSM populations, or single drug use. There are also very limited data describing brief interventions (BI) for drug and alcohol (D&A) use, or client acceptability of screening in this setting.

Methods: Consecutive asymptomatic clients aged 18 years or more attending a sexual health clinic were screened using the WHO ASSIST D&A survey and those determined to be at moderate to high risk of adverse events were offered the linked BI. Clients provided feedback using a 5-question 5-point Likert scale. Simple descriptive statistics were used to analyse data.

Results: Interim results indicate the mean age of respondents was 27.4 years (range 18-55, standard deviation (SD) 9.29) of whom 57.7% were male (n=15).

In the last 3 months 57.7% (n=15) of clients reported using tobacco, 96.1% (n=25) alcohol, 34.6% (n=11) cannabis, 11.5% (n=3) amphetamines, 11.54% (n=3) sedatives, 7.7% (n=2) cocaine and 3.85% (n=1) hallucinogens. Moderate to high-risk use was identified in 38.5% of tobacco users (n=10), alcohol 26.9% (n=7), cannabis 19.2% (n=5), amphetamines 11.5% (n=3), sedatives 11.5% (n=3) and cocaine 3.8% (n=1).

Nearly one quarter (23.08%, 6/26) of clients received a BI. Six eligible clients refused. The average time taken to complete the survey and intervention (if offered) was 6.36 minutes (range 2-14, SD 2.58, n=25).

Client feedback (n=22) showed that 86.4% respondents were comfortable doing the D&A survey and 81.8% thought it should be part of the clinic's routine service.

Conclusion: Early results indicate a trend towards significant current drug use in a general sexual health clinic population. The ASSIST survey and BI is quick to administer and acceptable to clients. Clients value drug use assessment in this setting.

Paper Ref	685
Theme	Sexual Health: Other
Presentation Type	Sexual Health: Pen Lowe Trainee Presentation

MYCOPLASMA GENITALIUM: TROUBLE BEFORE WE BEGIN?

Murray S

Trainee : Dr Sally Murray

Supervisor : A/Prof Lewis Marshall

Clinic/Organisation: Fremantle Hospital Sexual Health Clinic

Description of the case: JH was a 26 year old male presenting with a clear urethral discharge and dysuria after recent azithromycin treatment (1 gm stat po) for a urethral Chlamydia trachomatis (CT) infection (First void urine (FVU) PCR positive). His proof of cure (POC) FVU at four weeks was CT negative.

Two weeks later he presented to B2 Clinic visit with persistent non-specific urethritis (NSU) (discharge and dysuria) and was treated empirically with doxycycline 100mg bd for ten days, advised to abstain from sex and booked for follow-up in two weeks. Subsequent laboratory results showed Mycoplasma genitalium (FVU-PCR) (Neisseria gonorrhoea/CT PCR negative) with a negative urethral smear (no white cells/organisms, culture negative). At two weeks his symptoms had improved and he was booked for POC.

His subsequent POC FVU PCR was positive for M. genitalium. He was seen one week later and the treating clinician discussed the persisting M.genitalium infection and treatment options, viz Moxifloxacin versus an extended azithromycin regime. As a keen sportsman, the patient was very cautious about using Moxifloxacin and the risk of archilles tendinitis. Despite concerns of selective macrolide resistance given his azithromycin pre-treatment, the patient preferred to trial the extended Azithromycin regime.

Four weeks after ceasing treatment he completed a proof of cure (FVU-PCR) for M. genitalium; it was positive. One week later he was commenced on moxifloxacin 400mg od for 7 days. We are currently awaiting his proof of cure.

Questions for discussion:

- 1) How common is M. genitalium macrolide resistance and what are its drivers?
- 2) Is moxifloxacin appropriate for widespread use as a second line treatment?
- 3) What impact will M. genitalium macrolide resistance have on current empiric non-specific urethritis (NSU) treatment protocols?

Literature review: The literature review will focus on current treatment data for M. genitalium urethral infections including azithromycin 1g stat, extended azithromycin (500gm stat then four days of 250mg od) and moxifloxacin and the impact of pre-treatment on drug resistance development. Fluoroquinolone resistance and cost will also be reviewed, as well as moxifloxacin side effects. Literature deficits will also be discussed in the context of changing empiric NSU protocols.

Disclosure of Interest Statement: The authors have no competing interests.

Paper Ref	106
Theme	HIV/AIDS Theme B: Living With HIV & Community Programs
Presentation Type	HIV/AIDS Poster

SMILE WITH PRIDE: IMPLEMENTING DENTAL CARE CLINICS FOR PEOPLE LIVING WITH HIV

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² AIDS Council of NSW, Newcastle, NSW, Australia

³ Karumah, Newcastle, NSW, Australia

Background: People living with HIV (PLHIV) experience a high incidence of common oral health problems. Compromised immune systems, treatment side effects and limited access to dental care contribute to this adverse outcome. Oral healthcare screening has shown to be effective in reducing poor oral health. Hunter New England Oral Health Service (HNEOHS) introduced 'Smile with Pride' clinics for dental assessment of PLHIV at three locations, to enhance quality of life through the provision of oral health assessments, preventative education and referrals for ongoing care.

Methods: Working in partnership with the HNE HIV Shared Care Group a model was developed to enrol clients, ensure optimal attendance and provide support for follow-up treatment within public or private services. The development phase included the delivery and evaluation of education sessions for dental staff and PLHIV. The clinics identified PLHIV who had been missed via usual channels, and placed them on a high priority waiting list. Referrals were made by agencies in the shared care group – Immunology Clinic at John Hunter Hospital, Newcastle Sexual Health Clinic, AIDS Council of NSW (ACON) and Karumah. Clients were given dental assessments, information and oral health products. An annual review of the program was undertaken to improve operational planning the following year.

Results: During the past three years, 16 clinics were held across HNE. In total, 103 PLHIV attended from various sites – Newcastle (76), Taree (11) and Tamworth (16). In this period approximately 26% of HNE PLHIV made appointments with HNEOHS for a dental assessment. Attendance and satisfaction of PLHIV was high, with low 'failure to attend' rates. The staff education sessions were attended by a total of 85 dentists, dental therapists, dental assistants and administration assistants. Clinicians indicated high satisfaction with the education sessions. The partnership approach was the key to successful implementation of this program.

Disclosure of Interest: HNELHD, ACON and Karumah are funded by NSW Health.

Paper Ref	87
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Poster

CONTRIBUTION OF SEXUAL PRACTICES OTHER THAN ANAL SEX TO THE TRANSMISSION OF BACTERIAL SEXUALLY TRANSMITTED INFECTIONS IN MEN WHO HAVE SEX WITH MEN.

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Background: Syphilis, chlamydia and gonorrhoea are increasingly common amongst Australian men who have sex with men (MSM). Our objective was to quantify the proportion of cases and risk of primary syphilis (PS), urethral chlamydia (UCT) and urethral gonorrhoea (UGC) attributable to sexual practices other than anal sex.

Methods: Electronic medical records for MSM who attended Melbourne Sexual Health Centre between July 2002 (for PS) or January 2006 (for UCT and UGC) and October 2012 inclusive were examined.

Results: There were 37 533 eligible consultations; 2374 (6%) of these reported no anal sex. There were 204 PS diagnoses, 673 UCT diagnoses, and 618 UGC diagnoses; 12 (6%), 16 (2%) and 44 (7%) cases respectively occurred in consultations where no anal sex was reported in the previous three months (PS, UGC) or twelve months (UCT). Amongst MSM who reported no anal sex, PS was diagnosed in 0.5 cases/100 consultations, UCT was diagnosed in 1.5 cases/100 tests for UCT and UGC was diagnosed in 14 cases/100 tests for UGC. UCT was significantly more common in MSM who reported anal sex (OR 2.18, 95% CI 1.32 - 3.59, $p = 0.002$), but PS ($p = 0.82$) and UGC ($p = 0.14$) were not. For MSM who reported anal sex, condom use was protective for all three infections (all $p \leq 0.03$).

Conclusions: UCT rarely occurs in MSM due to sexual practices other than anal sex; however these practices appear to contribute significantly to the acquisition of PS and UGC. Our figures probably underestimate the risk involved, as men who have anal sex also engage in other sexual practices. The implication is that successful programs to control sexually transmitted infections, particularly PS and UGC, will need to utilise additional strategies, such as frequent testing, as well as promoting condom use.

Disclosure of Interest Statement: There are no conflicts of interest.

Paper Ref	503
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Oral Presentation

TTANGO, THE FIRST RANDOMISED TRIAL OF A MOLECULAR CHLAMYDIA AND GONORRHOEA POINT-OF-CARE ASSAY

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Background: Point-of-care (POC) tests for sexually transmitted infections may increase timely diagnosis, treatment and partner notification, and thereby reduce community infection rates. With new, portable and highly accurate molecular diagnostic technology available through the GeneXpert®, we designed TTANGO (Test, Treat AND GO), to measure the effectiveness, cost-effectiveness, cultural and operational acceptability of POC testing for chlamydia (CT) and gonorrhoea (NG) in remote Australian Aboriginal communities, where these infections occur at high levels. The trial employs a crossover, randomised controlled design at 12 health services in remote Australia. We describe the preparatory phase of the trial.

Methods: We undertook a field evaluation in two remote health services to determine the field acceptability and accuracy of the GeneXpert. We also engaged with health services to assess interest in participating in TTANGO. Finally, we established procedures for recording and transmitting POC results in patient information systems, training POC operators, and conducting quality assurance.

Results: The field evaluations based on 198 specimens, showed that the POC assay has high sensitivity (NG 100% and CT 100%) and specificity compared to standard laboratory tests, was easy to use with minimum hands on time, and provided results in 90 minutes. 12 health services across three jurisdictions have agreed to participate, with all services randomised to the POC or standard care for the first year of the trial. Clinical staff at participating sites have been trained in POC testing. The first system of internal quality control and external quality assurance for CT/NG POC has been established. Operators have commenced using the GeneXpert routinely at randomised sites with on-site and real time remote login learning and support systems established.

Conclusion: The TTANGO trial has been initiated after two years of intensive preparation. The results of this RCT will provide information to guide sexual health clinical practice in remote Aboriginal communities and other settings.

Paper Ref	543
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Poster

ART AND STORY; INDIGENOUS LED VIRAL HEPATITIS EDUCATION

Newley-Guivarra N

Hepatitis Queensland

Estimates indicate that 16,000 Indigenous people have chronic hepatitis C; 26,000 have chronic hepatitis B. Looking back on Indigenous health issues in relation to viral hepatitis the situation is a growing epidemic. In seeking to move forward, Hepatitis Queensland identified the critical aspects of story and art for Indigenous people in facilitating communication and acceptance of the sometimes difficult subject of blood borne viruses and the liver.

Art and story is being used by Hepatitis Queensland to engage with Indigenous communities from Cape York to the Gold Coast, and west to Cherbourg. Recently a specific hepatitis B art and story program was also facilitated on the Torres Strait Islands. Art workshops and personal story have been used to introduce health promotion on viral hepatitis, reaching men and women, elders and children, community members and healthcare workers – who have taken this experience into their communities. A key reason for the program's success is the role of the Indigenous project officer.

Art workshops have been delivered by Nicky Newley-Guivarra, a trained, experienced and acknowledged Indigenous artist from a well-known Queensland family. This project, the first of its kind to work at grass-roots level with people most at risk of viral hepatitis, connected with the young, the homeless and others at risk. The innovative combination of hep C and art in delivering this unique program has been made possible by the courage of Nicky in being willing and able to utilise her personal experience of successful treatment for hep C, with her skills in art. The program won a Queensland 'Innovation in Practice' health promotion award in 2010.

The next decade needs to see a focus on grass-roots story and art to continue this meaningful cultural communication in Indigenous communities, raising awareness, and facilitating access to treatment and management of viral hepatitis in this vulnerable part of the Australian population.

Paper Ref	48
Theme	HIV/AIDS Theme C: Social & Behavioural Research
Presentation Type	HIV/AIDS Oral Presentation

'HEALTH SEEMS TO COME SECOND': VIEWS ON TREATMENT AS PREVENTION AMONG PEOPLE WITH HIV NOT CURRENTLY TAKING TREATMENT

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¹ National Centre in HIV Social Research

Introduction: The use of antiretroviral therapy (ART) to prevent HIV transmission (TasP) is supported by many peak Australian government and non-government organisations. Little is known, however, about views on the use of treatment as prevention among those people who represent the target population of this strategy: people with HIV who are not taking treatment.

Methods: In-depth interviews were conducted with people with HIV across Australia who were not currently taking ART. De-identified transcripts were coded for broad themes regarding living with HIV, engaging with health and health care, and perspectives on treatment. This was followed by a focused thematic analysis of the interviewees' views regarding treatment as prevention.

Results: Between August 2012 and June 2013 interviews were conducted with 19 men and 2 women aged 20-68 years; 14 participants identified as gay men and 6 were born overseas. Patients had been diagnosed with HIV at different points in the epidemic, varying from 1986 to 2012. Half (n=10) of participants had no prior experience of ART, while the other participants had only briefly used ART. Four participants had never heard of TasP, and those who had were either 'very concerned' (n=6) about this strategy or were 'supportive, but...' (n=9). The latter participants were keen to support novel strategies to reduce transmission, but were concerned TasP could distract from promoting safe sex. Those who were very concerned questioned the effectiveness of TasP, economic benefits to pharmaceutical companies, treating people for public rather than individual reasons, and the potential stigmatisation of those not on treatment.

Conclusion: While there generally is a good understanding of treatment as prevention among people with HIV not currently on treatment, engaging this important population with new treatment priorities will require an appreciation of the many concerns people hold regarding the relationship between pharmaceutical treatment and the 'public good'.

Disclosure of Interest Statement: The National Centre in HIV Social Research receives project funding from the Australian Government Department of Health and Ageing. Additional research funding for this study was provided by a National Health and Medical Research Council research project grant.

Paper Ref	76
Theme	HIV/AIDS Theme D: Children & Young People
Presentation Type	HIV/AIDS Oral Presentation

BRIDGING TWO WORLDS: CLINICIAN PERSPECTIVES ON THE CHALLENGES OF TRANSITIONING YOUNG PEOPLE WITH HIV INTO ADULT CARE

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¹ National Centre in HIV Social Research

Background: The first generation of young people with perinatally acquired HIV is moving into adulthood. Accompanying this personal shift is a transition in their engagement with HIV care services from a paediatric to an adult care setting. Although the international literature has identified several key challenges related to this transition, there has been no research conducted in Australia to date.

Methods: As part of the first qualitative study on children with HIV transitioning to adolescence and adulthood in Australia, interviews were conducted with twelve clinicians who work with the (relatively) small number of perinatally infected children and young people engaged with paediatric and adult HIV care. Representing a large proportion of the clinical workforce who care for this population in Australia, participants included HIV and ID specialists, paediatricians, general practitioners, clinical nurse consultants, and social workers. A thematic analysis identified key themes related to the transition to adult care.

Results: Clinicians described this population as unique and featuring complex health and social care needs. Paediatric and adult services were viewed as distinctive 'worlds', with young people expected to transform their understanding of HIV health services from protected, team-based care to a more self-directed adult care model. Clinicians worked beyond the parameters of their roles to accommodate the needs of young people and their families, with adult care clinicians in particular viewing this 'different style of medicine' as necessary for ensuring long-term engagement.

Conclusion: Preparing and supporting young people in transitioning to adult HIV care creates particular challenges for both paediatric and adult clinicians, which could be supported by lengthening the period of transition, strengthening communication between the teams, expanding nursing and allied health roles in coordinating the transition process, and seeking input from families, GPs and young people themselves about the most useful approach at each stage of the process.

Disclosure of Interest Statement: The National Centre in HIV Social Research receives project funding from the Australian Government Department of Health and Ageing. Additional research funding for this study was provided by a Gilead Australia Fellowship Research Grant.

Paper Ref	123
Theme	HIV/AIDS Theme D: Vulnerability & risk
Presentation Type	HIV/AIDS Quick Fire Oral

THE REALITY OF TREATMENT ADHERENCE FOR NSW'S MOST MARGINALIZED PEOPLE LIVING WITH HIV (PLWH): AN ANALYSIS OF FACTORS AFFECTING ADHERENCE AND THE IMPACT OF THE BOBBY GOLDSMITH FOUNDATION'S (BGF) FINANCIAL ASSISTANCE ON ADHERENCE

Ninnes E¹, Frew J¹, Hawkins J¹, Roy K¹

¹ Bobby Goldsmith Foundation

Introduction: A number of sociodemographic and psychosocial factors have been associated with non-adherence to Antiretroviral Therapy (ART). This study aimed to assess whether, by paying for medication, BGF improves the adherence levels of clients at risk of non-adherence due to these factors.

Methods: BGF conducted face to face and phone interviews with 300 PLWH in NSW who were current clients assessed as more at risk of non-adherence due to their psychosocial and sociodemographic factors. The survey consisted of two sections. Firstly, participants were asked to provide demographic and lifestyle information. Participants were then asked a number of questions to investigate their adherence to ART over the past month, reasons for non-adherence and whether BGF's assistance with the copayment of ART improved adherence levels.

Results: 88% of the respondents were male, 11% female and 1% transgender. 30% were born overseas and 4% were indigenous. 5% were homeless and 47% had a diagnosed mental illness. Participant's self-reporting on adherence varied, with a number of participants reporting 100% adherence when they had 'only' missed taking their medication a few times during the month. Age, gender, ethnicity and AOD use were associated with adherence levels and participants ability to follow their doctor's instructions. The most common reasons participants gave for missing their ARTs were forgetting, being too busy and changing their routine. Participants who were indigenous, were homeless, had frequent AOD use and / or had low literacy rates were most reliant on BGF's copayment of ARTs to maintain adherence.

Conclusion: Rates of adherence amongst NSW's most vulnerable PLWH are considerably lower than average adherence rates. BGF's assistance with the copayment of ARTs is vital for maintaining some level of adherence amongst marginalised PLWH however organisations working with PLWH need to address the other barriers to adherence amongst these populations for treatment as prevention to be fully effective.

Disclosure of Interest Statement: No interest to disclose.

Paper Ref	588
Theme	HIV/AIDS Theme C:Prevention Education & Workforce Issues
Presentation Type	HIV/AIDS Poster

TOWARDS UNIVERSAL ACCESS: THE PAPUA NEW GUINEA (PNG) COMPANION PRODUCT CONDOM DISTRIBUTION TRIAL (ORAL PRESENTATION)

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Background: Public administration challenges frustrate the distribution of condoms in PNG. Addressing bottlenecks has included using the military to deliver condoms to provinces, but distribution to end-users in villages also presents great difficulties. Whereas HIV/AIDS-awareness and condom-use programs can be undertaken as resources permit, realising universal access means distributing condoms in ways more resilient to the vulnerabilities experienced by state agencies.

Methods: The PNG Companion Product Condom Distribution Project seeks to evaluate the viability of distributing condoms by piggybacking on existing supply-chains. It is funded by the PNG National AIDS Council Secretariat (NACS) and advanced in cooperation with a national distributor of household supplies.

An initial study evaluated the receptiveness of trade-store proprietors to receiving condoms via companion packaging. The study comprised interviews with 100 storeowners randomly selected from four administrative areas. Cooperating storeowners were provided with 200 free condoms during the first interview, and informed they could either sell or give these away. After 10 days, enumerators returned to conduct follow-up interviews.

Results: Of the 100 storeowners surveyed, only 2 indicated they had regularly stocked condoms in the past. Ninety-five agreed to distribute the free condoms and 88 later provided valid data indicating that of the 17,600 condoms distributed to these storeowners, 216 had been sold and 6,915 given away by the time enumerators returned. Interest in receiving further free supplies via companion packaging was indicated by 88 storeowners, most referring to the ease of this approach as a means of providing their communities with access to condoms.

Conclusions: The results suggest that the market for condoms in villages remains immature but that the approach has potential both as a means of distributing condoms and as a means of introducing them to the village-store level. A trial distribution in two provinces is planned for the second half of 2013.

Disclosure of Interest Statement: The PNG Companion Product Condom Distribution Project is being conducted by Social Science Dimensions in collaboration with PNG NACS and other government and non-government partners. The project is funded entirely by NACS.

Paper Ref	389
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Quick Fire Presentation

‘SUFFERING IN SILENCE’: HOW CAN WE HELP WOMEN TO BETTER MANAGE THE SEXUAL DIFFICULTIES ASSOCIATED WITH ANTIDEPRESSANT MEDICATION?

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Introduction: Selective Serotonin Reuptake Inhibitors (SSRIs) are common antidepressants prescribed for depression, anxiety and obsessive compulsive disorders in Australia and worldwide. Whilst this medication has many benefits, SSRIs can negatively impact on sexual functioning, yet disclosure of this issue is rare. Given that women are at increased risk of mental disorders and that SSRI use is more prevalent in this target group, this project used a qualitative research approach known as Interpretative Phenomenological Analysis (IPA) to explore the lived experience of coping with sexual difficulties amongst women who have been taking SSRI medication. This paper is aimed at health practitioners and will provide recommendations on how to improve the management of SSRI related sexual difficulties for women.

Methods: To gain meaningful insight into this phenomenon, a qualitative research design using a phenomenological approach was used. A purposively selected sample of 10 Australian women under 45 years old were interviewed twice using semi structured interviews to gather a detailed account of individual experiences. The interviews were transcribed verbatim and analysed through an iterative and inductive process.

Results: Whilst a number of coping strategies have been identified from this research, the theme ‘searching’ for information and for validation of sexual difficulties was commonly identified by the women in this study. Their stories highlighted how the lack of information about potential sexual side effects of SSRIs, the role of stigma and finally, their experiences in seeking help have shaped the coping strategies that they employed.

Conclusion: A number of factors influenced how women cope with the sexual side effects of SSRI medication. The importance of open discussion surrounding SSRI side effects, and the need to recognise sexuality as an important part of a woman’s care is essential to helping women more effectively cope with the side effects of antidepressant medication.

Disclosure of Interest: Nil.

Paper Ref	283
Theme	HIV/AIDS Theme B: Delivery Of Care
Presentation Type	HIV/AIDS Poster

TRANSITION TO AGED CARE: A CARE MODEL FOR PEOPLE LIVING WITH HIV ENTERING RESIDENTIAL AGED CARE

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Introduction: Community HIV teams provide clinical case management for people living with HIV (PLWH) who may need respite or permanent placement in residential aged care facilities (RACF). Current practices of supporting clients and RACF staff through this transition process is inconsistent leading to variable outcomes for clients and services. This poster will present the development of an aged care transition model that builds on existing practices and guides clinical practice leading to better health outcomes for clients.

Methods: A brief needs analysis was conducted with community teams and aged care staff in the inner city of Sydney. A working group was established to review current practice and consider developing a new model of care. A new tool (Aged Care Transition Plan) was developed to guide clinical practice and was piloted in collaboration with community HIV teams, clients and local RACF.

Results: The working party recommended a new model of care for PLWH entering residential aged care. The areas of care to be included in the model were: to provide education and specialised support to RACF about issues relating to HIV disease (e.g. transmission, illness progression, treatment, stigma and privacy); to develop individual transition plans with clients including social and cultural concerns, linkage with HIV medical and social support services and streamlined access to antiretroviral medication.

Conclusion: Implementation of the new model provides a standard of care that will improve partnership between PLWH entering aged care, community HIV teams and RACF leading to better health outcomes.

Disclosure of Interest Statement: There is nothing to disclose.

Paper Ref	258
Theme	Sexual Health: Biomedical
Presentation Type	Sexual Health: Poster

AN EARLY CANCER DETECTION MODEL FOR ANAL CANCER SCREENING – A PROPOSED PROTOCOL FOR A COST-EFFECTIVENESS STUDY

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Background: Anal cancer is a common cancer in HIV positive men who have sex with men (MSM) with incidence of up to 1 in 1000 per year. An annual anal examination (AAE) has been proposed by experts but there has not been a cost-effectiveness study performed.

This poster aims to present a protocol to examine the lifetime incremental direct costs and outcomes from a societal perspective of an AAE by HIV clinicians in detecting early anal cancer in HIV-positive MSM compared with status quo (no AAE) in the community setting in Australia.

Method: Costs and outcomes from a societal perspective for AAE will be analysed. Decision tree modelling for short term analysis will derive data from the Anal Cancer Examination (ACE) study. Analysis of the decision tree will incorporate folding back and averaging to enable expected probability associated with each outcome. For long term analysis, Markov modelling will be utilized to extrapolate results of the short term analysis to estimate lifetime costs and outcomes.

Results: Costs expected to arise from implementing AAE includes health sector costs (training of doctors, extra equipment and referral to specialists, management of side effects), other sectors costs (use of extra services like Centrelink), patient costs (travel, waiting time) and productivity losses (lost work time). Benefits include earlier detection of anal cancer and thus decreasing costs of treating late stage anal cancer, decreased costs associated with caring for someone with anal cancer and improved quality of life. This study will provide an incremental cost-effectiveness ratio that decision makers may use to compare AAE with other health initiatives for the HIV population.

Conclusion: Cost-effectiveness evaluation is essential before we can implement AAE as a screening method for anal cancer in HIV-positive MSM in Australia.

Disclosure of Interest Statement: None.

Paper Ref	671
Theme	HIV&AIDS: Theme B and Sexual Health: Biomedical
Presentation Type	HIV/AIDS Oral Presentation and Sexual Health: Quick Fire Presentation

PRELIMINARY FINDINGS FROM THE ANAL CANCER EXAMINATION (ACE) STUDY – ACCEPTABILITY OF AN ANNUAL ANAL EXAMINATION AMONGST PATIENTS AND DOCTORS.

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Background: Anal cancer is a common cancer in HIV-positive men who have sex with men (MSM) (incidence ~1 in 1000 per year). No national guidelines exist on the best method to screen for this cancer. The ACE study aims to determine if an annual anal examination (AAE) is cost-effective and acceptable amongst patients and doctors.

Disclosure of Interest: 5 years follow up of 1000 HIV-positive MSM, aged 35 years or older in Victoria. Each participant will undergo an AAE and complete questionnaires at recruitment and after each examination. Questions include quality of life measures, and morbidity associated with the AAE. Participants are recruited from a metropolitan sexual health centre, two high caseload general practices and one HIV outpatients of a major tertiary hospital. Recruitment started in February 2013. A baseline questionnaire for doctors to assess views of anal cancer screening and barriers to implementing an AAE was given to doctors involved in this study.

Results: 211 participants has been recruited with an average age of 52 years and a mean duration of HIV of 13 years. 100% (95% CI 98-100%) of participants stated they would be willing to undergo another anal examination, 5% (95% CI 3-9%) found the examination painful and 0% (95% CI 0-2%) had bleeding. Patients reported being worried they were not clean (67%, 95% CI 61-73%), felt 'embarrassed' (30%, 95% CI 24-36%) and worried that they may lose control of their bowels (14%, 95% CI 10-19%). Level of confidence in performing AAE and barriers of implementing AAE in the three clinical settings will be discussed.

Conclusion: The implementation of AAE may be feasible as a screening method for anal cancer in HIV positive MSM with high acceptability amongst patients and doctors in Victoria.

Disclosure of Interest Statement: None.

Paper Ref	641
Theme	HIV/AIDS Theme A
Presentation Type	HIV/AIDS Oral Presentation

LONGITUDINAL ANALYSIS OF INFECTION FREQUENCIES AND GENETIC MAKEUP OF INTRACELLULAR HIV-1 FROM TISSUE COMPARTMENTS DURING LONG-TRM SUPPRESSIVE THERAPY

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Background: Efforts to eradicate HIV-1 require a comprehensive examination of the quantity and genetic makeup of HIV-1 populations within infected cells located in tissues throughout the body. Therefore, we conducted a longitudinal analysis of the infection frequencies and genetic makeup of HIV-1 in specific CD4+ T cell subsets in different tissue compartments from patients on long-term suppressive therapy.

Methods: Using single-genome and single-proviral sequencing techniques, we isolated intracellular HIV-1 genomes derived from defined subsets of T cells (naïve, central-, transitional-, and effector-memory) from peripheral blood, GALT, and lymph node tissue. Samples were collected at 2 time points (separated by 6 months) from 8 subjects on suppressive therapy (4-12 years): 5 who initiated therapy during acute infection and 3 who initiated therapy during chronic infection. Maximum likelihood phylogenetic trees were constructed using the general time reversible model.

Results: Comparison of the infection frequencies between the 2 time points showed similar (<6-fold difference) infection rates of memory T cell subsets from different tissue compartments for most subjects. In agreement with findings for time point 1, infection frequencies of all T cell subsets were higher in subjects treated during chronic infection than acute infection; time point 2 included transitional-memory T cells which were not examined at time point 1 (6-fold higher infection rate in chronic vs acute; $p=0.036$). Approximately 30% of the intracellular HIV sequences appeared to encode replication-incompetent virus. Longitudinal phylogenetic analysis revealed the expansion of some HIV genetic populations and the contraction of others with little evidence of viral evolution. In one subject, a clonal species containing a 380bp deletion was dominant, and increased from 71% to 92% over 6 months in peripheral blood effector memory T cells.

Conclusions: Our findings suggest the pool of HIV-infected resting memory CD4+ T cells typically does not change dramatically over 6 months in different tissue compartments, reflecting a relatively stable HIV-infection frequency during suppressive therapy with the early initiation of effective therapy resulting in a lower reservoir size. The increase of clonal HIV-1 sequences, especially a large deletion mutant, indicates an expansion of cells with integrated proviral DNA rather than active viral replication.

Disclosure of Interest Statement: These studies were funded by the US NIH and amfAR. No pharmaceutical grants were received in the development of this study.

Paper Ref	502
Theme	HIV/AIDS Theme A: Transmission & Co-Infection
Presentation Type	HIV/AIDS Poster

SEROPREVALENCE OF HIV, HBV AND HCV INFECTIONS AMONG BLOOD DONORS IN NEPALESE POPULATION

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Background: Mandatory screening tests are performed for human HIV1/2 and Hepatitis B and C by blood transfusion centers in Nepal because blood transfusion is the most efficient mode of transmission of these diseases. The study is aimed to determine the sero-prevalence of these four Transfusion transmissible infections (TTIs).

Methodology: A cross-sectional retrospective study was conducted at Tribhuvan University teaching Hospital, Maharajgunj during the period from July 1st 2007 to June 30th 2011. Total of 11160 samples from Volunteer and replacement donors were screened for Anti-HIV, Anti-HCV and HBsAg by ELISA methods. The Reactive cases were confirmed by confirmatory method as per the national algorithm.

Results: The prevalence of HIV, HBV and HCV were determined to be 0.17%, 0.44% and 0.71% respectively. HBV and HCV sero-prevalence was found to be higher among male blood donors but, HIV prevalence was higher in female donors in comparison to male donors. TTIs prevalence was highest among blood donors in the age group 21 to 30 years ($P < 0.05$). HIV was reported to be more prevalent among replacement donors (0.33%) than volunteer donors (0.12%). Other TTIs were insignificantly more prevalent among volunteer donor than replacement donors.

Conclusion: Screening of donated blood should be done with highly sensitive and specific tests so as not to transfuse infected blood. It is also important to strengthen donor counseling before donation.

Disclosure of Interest Statement: Nepalese Army Institute of Health Sciences is funded by government of Nepal. No any research grants are received to conduct this study from this institute.

Paper Ref	289
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Poster

CAIRNS INDIGENOUS SEXUAL HEALTH NETWORK: OUR STRATEGIES OF BUILDING AND SHARING BASED ON SEXUAL HEALTH PROMOTION THROUGH CULTURALLY APPROPRIATE PRACTICES.

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Background: The Cairns and Indigenous Sexual Health Network (CISHWN) brings together sexual health workers within the Cairns and Hinterland region to improve the sexual health of Aboriginal and Torres Strait Islander communities.

We encourage and support participation of other Indigenous sexual health services to deliver culturally appropriate sexual health education, prevention, care and health promotion.

Using all the expertise and knowledge within CISHWN, allows us to maximise our impact on delivering, implementing and evaluating our services.

Methods: The presentation will outline how CISHWN builds local capacity to deliver very successful health promotion activities including: Young Persons Health checks, Yarnin' Up Hep B education workshop for World Hepatitis Day and Condoman and Lubelicious safe sex promotion.

CISHWN has been a vehicle for community consultation and developing strategies that contribute to effective and positive outcomes.

The presentation will analyse how CISHWN has established relationships which initiate trust, confidence and rapport and improve program sustainability.

Outcomes: The presentation will outline results from CISHWN initiatives through sharing knowledge and community engagement:

- Referrals and support services
- Health Promotion
- Social & emotional wellbeing
- Clinical
- Cultural appropriateness
- Education & training
- Support
- Counselling
- Debriefing
- Establishing rapport

Conclusion: Capacity Building is a key component of effective health promotion. CISHWN is an example of capacity building within the sexual health field. CISHWN plan to strengthen and broaden in the future by further developing education and promotion initiatives.

Disclosure of Interest Statement: None.

Paper Ref	570
Theme	HIV/AIDS Theme C: Community Prevention Strategies
Presentation Type	HIV/AIDS Poster

PEER-LED COMMUNITY BASED RAPID HIV TESTING: WHAT THE COMMUNITY WANTS!

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3. The Victorian AIDS Council, Melbourne, Australia

Introduction: Recent changes to Australia's HIV Testing Policy and support from training and regulatory bodies has facilitated opportunities for community-based rapid point-of-care (RPOC) HIV testing. In 2013, the Victorian Department of Health committed funding to the Burnet Institute and the Victorian AIDS Council for a 24-month trial of a peer-led community-based RPOC HIV testing service for gay men in Melbourne. The service, 'Robert', will open August 2013.

Methods: We conducted formative focus groups with gay community members (N=18) to inform Robert's service model. Discussion included perceived advantages and barriers of the proposed Robert service model, alongside general service delivery preferences.

Results: While men supported RPOC testing, there was confusion that the term 'rapid' meant a shorter window period. Resistance to RPOC HIV testing without comprehensive STI screening forewarned a RPOC HIV testing culture resulting in missed opportunities and diminished concern for regular STI testing. Some believed this outcome could be offset if Robert acted as a bridge between the community and gay-friendly clinical services. A community-based peer-led model was well received, despite anxiety regarding perceptions of 'trust' and 'professionalism' of peer test facilitators. While some men would remain oriented towards testing through clinical services, participants generally supported the proposed Robert service as a '*less formal space and more connected to the community*', delivering new testing options for gay men and helping facilitate a more 'normalised' culture around HIV/STI testing.

Conclusion: Robert will open at a shop-front location in a busy inner-north Melbourne suburb. Staffed by a nurse/practice manager, peer counselors and administration assistants, Robert will initially offer only RPOC HIV testing. Balancing appropriate clinical care with community service needs and resource limitations has been challenging, but the service is well positioned to meet community needs and the model will be iteratively refined during the trial.

Disclosure of Interest Statement: Nothing to disclose

Paper Ref	572
Theme	HIV/AIDS Theme C: Prevention Campaign Evaluation
Presentation Type	HIV/AIDS Poster

THE GMALE SURVEY: ASSESSING THE IMPACT OF SOCIAL MARKETING CAMPAIGNS IN INCREASING HEALTH-SEEKING BEHAVIOUR AMONG GAY MEN IN AUSTRALIA.

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Introduction: Recent local behavioural data (Melbourne Gay Periodic Survey) has reported that the proportion of men who have ever been tested for HIV has significantly decreased over time (88% in 2009 to 84.1% in 2013). In 2008 the Burnet Institute established a prospective online cohort of gay men to help monitor and evaluate the impact of the various HIV and other STI prevention campaign. We present evaluation data over 18 month period (Jan 2011- Aug 2012).

Methods: Using a rolling recruitment method, we surveyed an online cohort of MSM at three time points over 18 months assessing trends in campaign recognition, sexual health knowledge, health seeking and risk behaviours, and community dialogue outcomes using proportion tests and generalised estimating equations.

Results: Across the three survey points, MSM completed 1,479 surveys (n=390 at S1; n=745 at S2; n=344 at S3). Participants awareness of prevention campaigns varied considerably, yet 'Drama Downunder' (DDU) continued to be the most recognised campaign with significantly increasing trend in the proportion of participants reporting awareness of DDU (34%, 34%, 70%, p<0.01). There were sustained or diminishing effects in health seeking behaviours and community dialogue, including ever having a HIV test (86%, 87%, 89% p=0.09).

Conclusion: Over an 18-month follow-up period, the VAC/GMHC social marketing campaigns continue to appear to be reaching their target audience and delivering a clear prevention message. Although across the board they appear to be having diminishing returns in relation to driving behaviour change and community dialogue, they are likely to be playing a key role in maintaining levels of awareness and health seeking behaviour while helping to prevent risk behaviours. The use mainstream media along with the humorous style and imagery used for the DDU campaign was identified as an important driver behind the success of this campaign.

Disclosure of Interest Statement: Nothing to disclose

Paper Ref	178
Theme	HIV/AIDS Theme A
Presentation Type	HIV/AIDS Oral Presentation

INCREASED RISK OF CARDIOVASCULAR DISEASE (CVD) WITH AGE IN MEN: A COMPARISON OF THE D:A:D CVD RISK EQUATION AND GENERAL POPULATION CVD RISK EQUATIONS

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Background: It is unclear whether the risk of cardiovascular disease (CVD) is increasing more rapidly with age in HIV positive (HIV+) patients. We hypothesize that accelerated ageing in HIV+ patients would mean an accelerating risk of CVD with older age, and that the increased risk per year older would be higher in D:A:D relative to the general population. In this analysis we model the risk of CVD by age in D:A:D, and compare with the aging effects seen in conventional CVD risk equations.

Methods: We included all male D:A:D participants without prior CVD and with all conventional CVD risk factors available. We analysed three endpoints: myocardial infarction (MI), coronary heart disease (CHD: MI+invasive coronary procedure), and CVD (CVD: CHD+ stroke). We fitted a number of parametric age effects, adjusting for known risk factors and ART use. The best fitting age effect was determined using the Akaike Information Criteria. We compared the relative risk increase of CVD per year older from 40 years old in the D:A:D data to the general population risk equations - the Framingham Heart Study, CUORE and ASSIGN.

Results: 24,323 men were included in analyses, with median age 41 years at baseline. Crude MI, CHD and CVD event rates increased from 2.29, 3.11 and 3.65 in those aged 40-45 years to 6.53, 11.91 and 15.89 in those aged 60-65 years. In D:A:D there was a slowly accelerating risk of CHD and CVD per year older, which was somewhat raised compared to the general population based equations for CHD and CVD. The relative risk of MI with age was not different between D:A:D and the general population.

Conclusion: We found limited evidence of accelerating risk of CVD with age in D:A:D. The absolute risk of CVD associated with HIV infection remains unknown.

Disclosure of Interest: This work was supported by the Highly Active Antiretroviral Therapy Oversight Committee (HAART-OC), a collaborative committee with representation from academic institutions, the European Agency for the Evaluation of Medicinal Products, the United States Food and Drug Administration, the patient community, and all pharmaceutical companies with licensed anti-HIV drugs in the European Union: AbbVie, Boehringer Ingelheim, Bristol-Myers Squibb, Gilead Sciences, ViiV Healthcare, Merck, Pfizer, F. Hoffman-LaRoche and Janssen Pharmaceuticals.

Paper Ref	192
Theme	HIV/AIDS Theme D: Gay & MSM
Presentation Type	HIV/AIDS Oral Presentation

MEN WHO HAVE SEX WITH MEN IN SOUTHERN VIETNAM REPORT HIGH LEVELS OF SEXUAL RISK BEHAVIOURS AND SUBSTANCE USE BUT UNDERUTILISE HIV TESTING SERVICES

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Background: Insights into the correlates of alcohol or drug use, unprotected anal intercourse (UAI) and access to health service are imperative to tailor public health programs against the spread of HIV among men who have sex with men (MSM). No such data are available in Vietnam.

Methods: A community-based survey was conducted among 381 MSM in An Giang province in southern Vietnam in 2009 and its data were used to determine factors associated with injection drug use, daily alcohol use, UAI, and having a HIV test in multivariate regression models.

Results: In the past month, 6.3%, 13.6%, 25.2% and 33.9% of MSM participants used non-injection drugs, injected drugs, consumed alcohol daily, and practised UAI with two or more partners, respectively. However, only 19.2% of them were tested for HIV in the past 12 months. Injecting drug use by MSM was associated with having sexual partners of injecting drug users and non-commercial female sexual partners. Correlates of daily alcohol consumption included being married at least once or cohabiting with a female, being transgender, and having at least three male partners in the past three months. Buying or selling sex, regular alcohol use, sexual debut at younger than 17 years, and high-risk perception were found to be associated with greater levels of UAI with more than two partners. Drug use increased the likelihood of having a HIV test in the past 12 months, whereas being heterosexual and a perception of being at low-risk were inversely associated with being tested for HIV.

Conclusions: Substance use and UAI are prevalent among Vietnamese MSM, but the use of HIV testing service remains relatively low. In the absence of HIV prevention programs targeting MSM, drug use and sexual risks continue to be practised frequently and substantially contribute to the spread of HIV among MSM in Vietnam.

Disclosure of Interest Statement: *This work is supported by the Vietnam HIV/AIDS Preventive Project in An Giang, Vietnam under the 2009 grant 04/HDTN/BQL-AG.*

Paper Ref	224
Theme	HIV/AIDS Theme C: Behavioural Research & Interventions
Presentation Type	HIV/AIDS Poster

USING THE MEDIA PARTNERSHIP FOR REDUCING STIGMA AND DISCRIMINATION AMONG YOUNG MSM AND TG AT HIGHER RISK OF HIV EXPOSURE IN CAMBODIA

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Background: The major issues of stigma and discrimination continue to hinder access services for young MSM and TG in Cambodia. Even wherein services have been scaled up, access for them as young people is restricted by age of consent policies.

Methods: Early this 2013, National AIDS Authority with financial and technical support from UNESCO in Cambodia initiated the Media Partnership for Reducing Stigma and Discrimination among Young MSM and TG at High Risk of HIV Exposure. In this regards, we have engaged media agents, writers and publishers in the national HIV response mechanism with the hope that future society is more sensitized to the specific behavior and needs of Young MSM and TG, which will contributes to Zero discrimination pillar of the Three Zeros Strategy. An intensive Training Workshop on HIV/Young MSM and TG was provided to Media agents, writers and publishers. A Media and Advocacy Material such as IEC materials, posters and brochures were designed to support the courses and other related advocacy events in order they have been well understood.

Results: The lead media professionals started increasing their understanding about situation of young MSM and TG, national responses to reduce stigma and discrimination, addressing HIV infection issues among them by starting to write articles and case studies. There are at least three articles and case studies which are posted in the newspapers and magazines. There is a story of Young MSM and TG lives regarding HIV/AIDS, Stigma and Discrimination is broadcasted on televisions every quarterly.

Conclusion: The building partnership with media agents is quite significance because media really play main role in gathering different information to public. In addition, the understanding of media agents about nature of young MSM and TG and their HIV vulnerability is crucial in order for them to disseminate the right information to audiences.

Disclosure of Interest Statement: National AIDS Authority and KHANA are funded by UNESCO Office in Cambodia. No pharmaceutical grants were received in the development of this study.

Paper Ref	560
Theme	HIV/AIDS Theme C: Epidemiology Of HIV
Presentation Type	HIV/AIDS Poster

RATES OF HIV SEROCONVERSION IN PATIENTS WHO HAVE PREVIOUSLY USED NPEP: DATA LINKAGE OF THE VICTORIAN NPEP SERVICE DATABASE WITH THE VICTORIAN HIV SURVEILLANCE REGISTRY

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Introduction: Controversy remains about the recommendations for the prescription of HIV non-occupational post-exposure prophylaxis (NPEP), particularly the use of two vs three drugs. In Victoria, two drugs are recommended for receptive anal intercourse (RAI) with an unknown source. To determine rates of HIV seroconversions among NPEP users and describe seroconversions following two or three-drug regimens, we matched Victorian NPEP Service (VNPEPS) records with the Victorian HIV surveillance registry.

Methods: We matched all records from NPEP presenters who identified male-to-male sex (MSM) as their recent HIV risk exposure in the VNPEPS database between August 2005 and December 2012, with all entries in the Victorian HIV surveillance registry up to December 2012, to determine the numbers and rates of HIV seroconversion among MSM NPEP users in Victoria. In particular, we looked at number of seroconversions from RAI with an unknown source.

Results: 132 of NPEP presenters (4.8% of 2758 MSM NPEP presenters) were identified as HIV positive. Of these, 29 (1.1%) were HIV positive at baseline and 34 were considered potential NPEP failures. Among those HIV negative at first NPEP presentation, HIV incidence was 1.07 (95%CI=0.88-1.30) per 100PY, and highest in those who presented on one occasion only. There were 2039 presentations for RAI with an unknown source. Two drugs were prescribed on 1785 occasions, three drugs on 233; 13 potential NPEP failures occurred in those prescribed two drugs (0.7%) and seven in those prescribed three drugs (3.0%).

Conclusion: HIV incidence in MSM presenting to the VNPEPS was similar to incidence in MSM presenting to primary care clinics in Victoria. Seroconversions following RAI with an unknown source in men who were given two drugs for this exposure were rare, supporting continued use of two drugs for this exposure to avoid increased costs and potential toxicity of a three-drug regimen.

Disclosure of Interest Statement: The VNPEPS and The Victorian HIV surveillance registry and funded by the Victorian Department of Health. No pharmaceutical grants were received in the development of this study.

Paper Ref	349
Theme	HIV/AIDS Theme A: Transmission & Co-Infection
Presentation Type	HIV/AIDS Poster

SERO-PREVALENCE OF HUMAN IMMUNODEFICIENCY VIRUS AND HEPATITIS B VIRUS AMONG INTRAVENOUS DRUG USERS: A COMMUNITY BASED STUDY FROM EASTERN NEPAL

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Introduction: Human Immunodeficiency Virus(HIV) and Hepatitis B Virus(HBV) prevalence is high amongst injecting drug users(IDUs). Being blood transmitted disease; IDUs are by nature, a risk population for these diseases. This study was carried out to assess the prevalence of HIV and HBV infections and co-infections among IDUs in Eastern Nepal.

Methods: A community based cross-sectional study using snowball sampling technique to enroll IDUs, and written consent was obtained. The participants were interviewed with structured questionnaires and tested for anti-HIV antibody and hepatitis B surface antigen(HBsAg). A rapid immunochromatography test kit was used to detect these serological markers. A reactive HIV test was retested using a second rapid test to confirm the result.

Results: A total of 300 individuals were enrolled with mean age of 23.88(SD±5.47) out of which 242(80.66%) belonging to the age group 18-30 yrs. Majority, 278(92.66%) were male. Around two third 191(63.66%) were unmarried, 10(3.3%) were divorced whereas remaining were married and living with their spouse. Average education in years was 8.97(SD±2.9) and majority were either unemployed 173(57.66%) or skilled worker 70(23.33%). HIV seropositivity was 66(22%) and 30(10%) were reactive for HbsAg, with 15(22.72%) having HIV/HBV coinfection. Majority(92%) had abused more than one drug, with 42% abusing more than 4 drugs. Diazepam and Norphine was the most commonly abused drug. About 55% gave history of needle share, behavior of syringe exchange was found to be statistically significant ($p < 0.05$) and attributable risk factors (OR=5.037; 95%CI: 1.08-23.65) of seropositivity.

Conclusion: The results indicate that these infections continue to circulate among drug users. Needle exchange behavior and low education level were significantly correlated with the infections. The overall results highlight the need for monitoring of this group as they can be a source of spread to the community.

Disclosure of Interest Statement: And there is no conflict of interest.

Paper Ref	368
Theme	Sexual Health: Biomedical
Presentation Type	Sexual Health: Oral Presentation

HIGH-RISK ANAL HUMAN PAPILLOMAVIRUS (HPV) TYPES IN AUSTRALIAN HOMOSEXUAL MEN – PREDICTORS, PREVALENCE AND PATTERNS OF INFECTION

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Introduction: HPV causes around 90% of anal cancer, and HPV16, causes 90% of HPV-positive cases. Morbidity and mortality from HPV-related diseases are markedly higher among homosexual men. We describe the prevalence of anal HPV, the potential predictors of anal high-risk (HR) HPV and HPV16, and incidence and clearance of HPV16, in a cohort of Australian homosexual men.

Methods: The Study for the Prevention of Anal Cancer is a three-year prospective study of HIV-negative and positive homosexual men aged ≥ 35 years. Participants complete behavioural questionnaires and undergo anal canal examination. An anal swab is analysed using liquid-based anal cytology (ThinPrep®). Thinprep® medium is used for HPV genotyping by Roche Linear Array.

Results: By March 2013, 342 participants (median age 49 years; 28.7% HIV positive) had attended a baseline visit. Almost two thirds had at least one HR genotype (64.4%) and almost a third had HPV16 (30.3%) detected. HR-HPV detection was significantly associated with positive HIV status ($p=0.010$), younger age ($p=0.007$), more lifetime ($p=0.013$) and recent ($p=0.005$) male sexual partners, more receptive anal behaviours in the last 6 months, including unprotected ($p=0.001$) and protected ($p=0.019$) intercourse, rimming ($p<0.001$) and fingering ($p=0.004$). HPV16 detection was only associated with a recent history of receptive fisting ($p=0.049$). The incidence of anal HPV16 infection was 5.6 per 100PY (HIV negative 3.66 vs HIV positive 10.00 per 100PY, HR 2.74, 95% CI 0.73-10.27). Clearance of HPV16 (30.67 per 100 PY) was similar among HIV positive and negative participants (27.69 vs 32.54 per 100 PY, HR 0.91, 95% CI 0.32-2.57).

Conclusion: HR anal HPV was extremely common in this cohort of homosexual men. Incident HPV16 infection was more frequent among HIV positive participants, however clearance was similar among all men. Receptive anal sexual practices and recent sexual activity were important predictors of HR-HPV detection.

Disclosure of Interest Statement: AEG has received honoraria and research funding from CSL Biotherapies, honoraria and travel funding from Merck, and sits on the Australian advisory board for the Gardasil HPV vaccine. CKF has received honoraria, travel funding and research funding from CSL and Merck, sits on the Australian advisory board for the Gardasil HPV vaccine, and owns shares in CSL Biotherapies. SMG have received advisory board fees and grant support from CSL and GlaxoSmithKline, and lecture fees from Merck, GlaxoSmithKline and Sanofi Pasteur; in addition, has received funding through her institution to conduct HPV vaccine studies for MSD and GlaxoSmithKline and is a member of the Merck Global Advisory Board as well as the Merck Scientific Advisory Committee for HPV. RJH has received support from CSL Biotherapies and MSD. All other authors declare that they have no conflicts of interest.

Paper Ref	282
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Oral Presentation

PATTERNS OF ADOLESCENT SEXUAL INITIATION: A CROSS-NATIONAL COMPARISON

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Background: This study used matched samples from schools in Victoria, Australia and Washington, USA to undertake a cross national comparison of sexual behaviours in early adolescence. It is hypothesised that the contrasting policy contexts of harm minimisation in Australia and abstinence in the United States will result in significant state differences for markers of sexual risk.

Methods: A two stage cluster sampling approach was taken to recruit students from Washington, USA and Victoria, Australia. Data were examined from 1,888 students who traversed from Grade 7 in 2002 to Grade 9 in 2004. Students were asked if they had previously had sex; in Grade 9 they were also asked about frequency of sex, contraception use, number of sexual partners and pregnancy. Prevalence estimates were derived for each measure of sexual behaviour, and comparisons were made between gender groups in each state.

Results: State differences were found for girls’ sexual debut with significantly more girls in Washington than Victoria having had sex by Grade 7. By Grade 8, no difference was evident, and in Grade 9, a significantly higher number of Victorian girls had had sex compared to Washington girls. Further state differences were found in measures of Grade 9 sexual behaviour. Most notably, number of sexual partners for girls was significantly higher in Victoria compared to Washington, but there were no cross national differences in contraceptive use for either gender.

Conclusions: The findings demonstrate that differences in sexual engagement and behaviour are evident that inform the different policy contexts of Victoria, Australia and Washington, USA. Contradicting the abstinence policy objective, early sexual debut was more common in Washington than Victoria. Whilst sexual behaviour was more prevalent in Grade 9 in Victoria than Washington, there were no clear differences in markers of risk such as contraception use and pregnancy outcomes, despite the contrasting policy objectives.

Disclosure of Interest Statement: There are no conflicts

Paper Ref	210
Theme	HIV/AIDS Theme C: Social & Behavioural Research
Presentation Type	HIV/AIDS Oral Presentation

GAY MEN'S SEXUAL IDENTITIES AND PERSONAL NETWORKS

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Background: Sexually adventurous gay men are more likely to engage in sexual risk behavior. Is this an individual characteristic or does it reflect participation in sexually adventurous networks?

Methods: CONNECT was an online survey of gay men recruited during 2010-2012 in Sydney, Melbourne and Perth. 937 men were asked questions about their own sexual identity and that of men in their personal networks. 912 men responded to these questions, including 452 who were referred into the study by another participant. L Factor analysis and logistic regression was used to calculate statistical associations.

Results: Most men were gay (78.1%) or homosexual (16.1%). Mean age was 35.6 years. 89.6% had been tested for HIV and 12.1% were HIV-positive. Most men identified at least somewhat with several sexual identities, such as: Bear/cub (25.2%); Sexpig (20.4%); Partyboy (21.7%); Leatherman (18.1%); Twink (12.3%); Alternative (25.4%). Most men also indicated that men in their personal networks identified at least partially with several of these same identities, such as: Bear/cub (28.7%); Sexpig (23.1%); Partyboy (33.9%); Leatherman (21.3%); Twink (20.5%); Alternative (26.2%). Usually, but not always, men's personal identities closely corresponded to those of their networks. Factor analysis identified six types of personal network: Sexually adventurous (accounting for 64.2% of men); Bears, cubs and chubbies (40.6%); Alternative/queer (47.4%); Gay scene (43.7%); Conservative (57.7%); and Asexual (9.2%). In multivariate analysis, after controlling for age and HIV status, only being engaged in sexually adventurous networks was associated with unprotected anal intercourse with casual partners (aOR=1.17; CI 1.10-1.24; p<0.001).

Conclusion: Men's various sexual identities tend to also be reflected in the kinds of men with whom they engage. Sexual risk behavior is more likely to occur within sexually adventurous networks, and to reflect their normative values. Targeted harm reduction programs need to address men through such networks, not just as individuals.

Disclosure of Interest Statement: The Kirby Institute, The Australian Research Centre in Sex, Health and Society (ARCSHS) and the National Centre in HIV Social Research (NCHSR) receive 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. ARCSHS is affiliated with La Trobe University. NCHSR is affiliated with the Faculty of Arts, University of New South Wales. No pharmaceutical grants were received in the development of this study.

Paper Ref	212
Theme	HIV/AIDS Theme C: Behavioural Research & Interventions
Presentation Type	HIV/AIDS Oral Presentation

INTEREST IN AND INFORMAL USE OF HOME HIV TESTS AMONG AUSTRALIAN GAY MEN

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4. ACON.

Background: Recent Australian regulatory approval of rapid HIV tests (RHT) was specific to clinical use. While individuals may import RHT for personal use there is no regulatory provision for self-testing. Home testing kits are licensed for use in some countries and are increasingly available online. Australian gay men may access these test kits during travel overseas or through online purchasing.

Methods: TAXI-KAB was a national online survey of Australian gay men recruited during late 2012, mostly prior to Australian approval of any rapid HIV test. 567 non HIV-positive men responded to questions about rapid HIV home test kits.

Results: Most men were gay (86.9%). Mean age was 38 years. 88.4% had been tested for HIV. The majority (53%) were aware of RHT and 33.1% knew they were available for home use overseas. Most (84.1%) indicated they would likely use RHT (in any setting) and 12% had already done so, mainly (7%) while overseas. Most (70.8%) men indicated they would likely use a rapid home test kit if it was available. Nine men had already tested themselves at home, seven of whom had purchased the test kit online. Most men believed that the customer should pay at least some (48.1%) or all (31.3%) of the cost of home test kits.

Conclusion: Many gay men are keen to have access to rapid HIV home testing, and a small number have already done so. Prior to RHT becoming available in Australia, some gay men had already used this technology overseas. Gay men are increasingly likely to access home testing, regardless of official policy. Without appropriate guidelines for reliable methods of sourcing and using this technology, and interpreting results, gay men may use poor quality, unapproved test kits, thereby risking inaccurate test results and uninformed responses to test results.

Disclosure of Interest Statement: The Kirby Institute, The Australian Research Centre in Sex, Health and Society (ARCSHS) and the National Centre in HIV Social Research (NCHSR) receive 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. ARCSHS is affiliated with La Trobe University. NCHSR is affiliated with the Faculty of Arts, University of New South Wales. No pharmaceutical grants were received in the development of this study.

Paper Ref	216
Theme	HIV/AIDS Theme C: Social & Behavioural Research
Presentation Type	HIV/AIDS Poster

SOME GAY MEN LACK BASIC KNOWLEDGE ABOUT HIV TESTING AND VIRAL LOAD

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Background: It has been assumed that virtually all Australian gay men understand how to interpret tests associated with HIV, including those for HIV antibodies and viral load. However, this has not been measured previously.

Methods: TAXI-KAB was a national online survey of Australian gay men recruited during late 2012. 567 non HIV-positive men responded to questions about HIV antibody testing and HIV viral load tests. Logistic regression was used to calculate statistical associations.

Results: Most men were gay (86.9%) or bisexual (10.4%). Mean age was 38 years. 88.4% had been tested for HIV. Only a few men (about 1%) did not know what it meant to test HIV-positive, but while most men (89.4%) understood the concept of a window period, there was little agreement on its length: 17.7% believed it was less than six weeks, while 46.8% believed it was at least three months. Although most (88%) men realised there are guidelines for how often gay men should test, there was considerable confusion as to how often this should be. A minority of men were unable to say what the terms 'viral load' (15.3%) and 'undetectable viral load' (31.6%) mean. Younger men, untested men and men who were less socially engaged with other gay men were less well-informed about HIV testing and viral load in general. Sexual risk behavior was not associated with knowledge about HIV testing or viral load.

Conclusion: While the majority of gay men appear to be well-informed about HIV testing and risk in general, a minority of men, particularly younger men, lack some basic understanding of certain key issues related to HIV testing. Given recent changes in HIV testing technology and guidelines, it may be timely to provide new information for gay men about the meaning and purpose of HIV testing, including different forms of testing.

Disclosure of Interest Statement: The Kirby Institute, The Australian Research Centre in Sex, Health and Society (ARCSHS) and the National Centre in HIV Social Research (NCHSR) receive 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. ARCSHS is affiliated with La Trobe University. NCHSR is affiliated with the Faculty of Arts, University of New South Wales. No pharmaceutical grants were received in the development of this study.

Paper Ref	418
Theme	HIV/AIDS Theme B: Clinical Programs
Presentation Type	HIV/AIDS Poster

CHANGING MODEL OF CARE TO INCREASE ACCESS TO HIV TESTING: A CLINICAL EXPERIENCE

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Background: The NSW HIV Strategy 2012-2015 identified a priority area for action and service delivery as “promoting HIV testing and making it easier to have an HIV test”. In March 2013, Albion initiated a “fast track clinic” for HIV and STI testing with the aim of improving access to testing and to provide faster and more convenient provision of results.

Methods: A multidisciplinary working group reviewed the existing model, including redesigning assessment tools and resources, streamlining appointments, initiating self-collection of sexual health swabs and receiving results via SMS.

Clients requesting HIV antibody testing and sexual health screening were given self completed risk assessment form and written HIV testing information. All MSM and other high risk groups were offered point of care HIV rapid testing. Clients identified with significant risks were seen by a triage nurse.

Methods of receiving confirmatory HIV blood and any sexual health results were assessed on an individual case and according to level of risk.

Results: Nursing screening appointment availability has increased from 82 to 160 (95%) per month and an increase from 55 to 103 (87%) per month of clients being tested. This change lead to an increase in STI diagnosis from 36 to 55 (53%) per month.

Conclusions: Implementing change to existing models of care can enable a significant increase in access to services, but requires additional resources.

Future model of care will include touch screen technology.

Disclosure of Interest Statement: The Albion Centre is funded by the HIV/AIDS Related Programme. No external grants were received in the development of this activity.

Paper Ref	608
Theme	HIV/AIDS Theme A
Presentation Type	HIV/AIDS Oral Presentation

THE EFFECTS OF ART ON IMMUNOLOGICAL MARKERS OF HCV DISEASE IN AN INDONESIAN COHORT

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Patients co-infected with HIV and HCV have increased risk of severe liver damage and ART exacerbates HCV disease in a sub-set of patients creating an immune restoration disease (HCV IRD). Immunological responses and histopathological changes in the liver associated with these events are poorly understood. A prospective cohort study of HCV-seropositive HIV patients was carried out at Cipto Mangunkusumo Hospital (Jakarta) with follow-up over 48 weeks. HCV IRD (defined as an increase in serum ALT) affected 9 patients within 2 months on ART. Immunological and histochemical studies will be presented.

Liver biopsies were collected at baseline and 48 weeks, Ishak scores were determined and intrahepatic CD4+ and CD8+ cells were counted. Levels of portal inflammation declined on ART, while fibrosis remained. Portal infiltration of CD4+ cells increased on ART, whilst CD8+ cellular infiltration subsided in portal and lobular regions. Numbers of infiltrating CD4+ cells at baseline correlate with circulating CD4+ T-cell counts, so intrahepatic CD4+ infiltration may be limited by global CD4 T-cell depletion. Baseline intrahepatic T-cell infiltration did not predict HCV IRD.

Blood leukocytes were stimulated with antigens from HCV (core or NS3 proteins) and cells producing interferon- γ were enumerated by ELISpot. Responses to all antigens increased on ART, approaching levels seen in healthy controls. Responses to HCV antigens (notably NS3) were higher over several months in patients who experienced an IRD. This is consistent with Australian and Indonesian patients experiencing HCV IRD displaying elevated plasma CD26, marking T-cell activation.

HCV IRD patients displayed low levels of HCV antibody assessed with the Roche Elecsys Anti-HCV Assay, before and on ART. In the same samples, levels of antibody to HCV core rose equivalently in IRD and non-IRD patients (marginally increased by IRD), whilst antibody to NS3, NS4 and NS5 declined irrespective of IRD. We examined the reactivity of antibodies and titres of neutralising antibodies (nAbs) using the HCV genotype 2a virus (JFH-1). Titres of nAb and reactivity to JFH-1 increased after 1 year of ART where HCV IRD patients had increased reactivity to JFH-1 antigen at baseline. Hence antibody or T-cell responses may identify patients at risk of developing HCV IRD, but the selection of antigens is critical.

Disclosure of Interest: The project was funded by the University of western Australia and the University of Indonesia. No pharmaceutical grants were received in the development of this study.

Paper Ref	190
Theme	HIV/AIDS Theme C: Health Promotion
Presentation Type	HIV/AIDS Poster

ORAL HEALTH KNOWLEDGE, ATTITUDE AND PRACTICES OF PEOPLE LIVING WITH HIV (PLHIV) IN NSW, AUSTRALIA.

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Introduction: Oral health issues remain a concern for PLHIV despite the reduction in the incidence of some oral symptoms with current antiretroviral therapy.

The purpose of this study was to establish current oral health knowledge, attitude and practice (KAP) of PLHIV to guide the development of oral health tools for PLHIV.

Methods: A convenience sample of PLHIV were invited to complete a self administered, anonymous, 28 item KAP survey either online via statewide advertised weblinks or in printed format whilst attending HIV services in Sydney. The survey included questions on oral health practices; knowledge of oral health related lifestyle habits and desire for more information.

Results: Two-hundred and three participants attempted the survey (174 completed all questions). Mean age was 46; 167 (82.3%) were male and 25% were diagnosed with HIV in the last 5 years (median year of diagnosis 2000). Over two-thirds had a bachelors degree or higher and 44.3% (n=90) were unemployed at the time of the survey. Approximately 25% of participants resided in the inner Sydney area.

Sixty-percent of participants brushed their teeth at least twice per day, 30% seldom cleaned between their teeth and less than 40% cleaned between their teeth daily. A knowledge gap around cariogenic drinks and uncertainty about the use of sugar free gum was evident. For additional information, participants over 45 were more likely to want printed material, whilst referrals and dental kits were the most popular options for people under 45 age. Most participants (66%, n=135) regardless of age preferred accessing oral health information from dentists. The majority of participants (79%, n= 161) indicated that good oral health was important to them.

Conclusion: The survey findings suggest there is a need to improve both oral health knowledge and practices amongst PLHIV and that a referral pathway to dentists is important.

Disclosure of Interest: Nothing to disclose

Paper Ref	355
Theme	HIV/AIDS Theme B: Living With HIV & Community Programs
Presentation Type	HIV/AIDS Poster

OPEN YOUR MOUTH: CONSULTING THE AFFECTED COMMUNITY IN THE DEVELOPMENT OF THE ORAL HEALTH INFORMATION BOOKLET FOR PEOPLE WITH HIV.

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Introduction: Poor oral health can impact on quality of life of people living with HIV (PLHIV). Although improved oral health is a priority area for PLHIV, few suitable resources are available.

A knowledge, attitude and practice (KAP) survey was conducted with PLHIV (n=203) in NSW to identify oral health information needs.

An oral health information booklet was drafted based on the survey's findings. Content included common oral health problems for PLHIV, healthy lifestyle and symptom management tips, a self assessment tool and referral pathways.

This paper describes the community consultation in the development of the oral health booklet.

Methods: A focus group discussion was conducted with PLHIV to gain feedback on the design and content of the booklet. Discussion was led by an external facilitator using a group discussion guide. Demographic information and written comments from participants were collected.

Results: Nine PLHIV attended the focus group (8 male and 1 female). Three were currently unemployed, three were employed full time. Three were diagnosed in the last four years. Eight participants are currently on treatment for periods ranging from one to 17 years.

Overall participants indicated that the booklet was informative, containing relevant, comprehensive, and important information for maintaining oral health. Participants were able to recall the key messages stating that quitting smoking, regular dental check-ups, using a straw to drink acidic drinks, chewing gum to help saliva production, and drinking more tap water were the key messages.

Reconfiguring the content, removing repetitive information, and using dot points in some sections were participant suggestions to improve the quality of the booklet.

Conclusion: The community consultation processes demonstrated that:

- The information in the booklet was well developed and targeted for PLHIV.
- The KAP survey was effective in identifying the oral health information needs of PLHIV.

Disclosure of Interest: Nothing to disclose.

Paper Ref	550
Theme	HIV/AIDS Theme B: Living With HIV & Community Programs
Presentation Type	HIV/AIDS Poster

OPEN YOUR MOUTH: HEALTH CARE PROFESSIONAL CONSULTATIONS IN THE DEVELOPMENT OF THE ORAL HEALTH ASSESSMENT AND REFERRAL TOOL.

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Introduction: Poor oral health can impact on quality of life of people living with HIV (PLHIV). Oral health screening and education by non-dental health care professionals (HCPs) can increase dental visits and improve oral health care.

A knowledge, attitude and practice (KAP) survey was conducted with HCPs (n=55) in NSW to identify their needs in participating in oral health care for PLHIV.

An oral health factsheet was drafted based on the survey's findings. Content included dental care assessment tool, referral pathways, advice for clients, and common oral health problems.

This paper describes the consultation activities with HCPs in the development of the factsheet.

Methods: Two focus group discussions and three interviews were conducted with HCPs to gain feedback on design and content of the factsheet. A discussion guide was used to conduct the focus groups and interviews. Demographic information and written comments from participants were collected.

Results: In total 12 HCPs were consulted (11 female and 1 male). Professional backgrounds of HCPs included allied health, nursing, and medical: work experience in the HIV sector ranged from six months to 25 years.

HCPs indicated the factsheet was informative, easily understood, and applicable. The importance of dental care, performing a dental care assessment and referral pathways for dental treatment were recalled as key messages. The clear design and 'boxed' layout were commended, enabling users to read and select information to suit clients' needs.

Modifications were suggested to improve the flow of information and clarity of the referral pathways.

Conclusion: The consultation processes clarified some small modifications to enhance flow, while demonstrating that the factsheet was well developed and designed, containing a usable brief dental care assessment tool, essential information and advice to give to clients.

Disclosure of Interest: No disclosure of interest.

Paper Ref	16
Theme	HIV/AIDS Theme D: Gay & MSM
Presentation Type	HIV/AIDS Poster

ACCESS TO TREATMENT AND CARE OF MSM INFECTED IN NEPAL

Parsu Ram Rai , Blue Diamond Society , Kathmandu Nepal

Presenter: Parsu Ram Rai , Blue Diamond Society , Kathmandu Nepal

Background: Lack of understanding and negative attitude towards MSM/TG amongst health care providers and government health officers prevents MSM/TG from accessing basic health care including HIV/STI prevention, treatment and care. The government either does not introduce supportive policies and programs or do not implement them. Many health care providers and government health officers still believe homo/trans-sexuality is unnatural so whenever they see MSM/TG they advise not to become MSM/TG leading MSM/TG into further confusion.

Methods: Care & Support and Hospice Center is the only centre which has been providing services to MSM, Transgender people, and MSWs, where they can meet, get confidential tests, information about health care and conditions, counseling, find peer support, receive check-ups, health referral services and meet other PLWHA. It also provides basic clinical services and referrals for more serious surgical and medical cases if necessary. The Centers also promote safer sex option, peer support system, conduct orientation training, self care treatment, counseling includes family and pre and post test counseling.

Result: Our services have cured infections, helped people live longer and healthier lives as well as taught people to be healthier. Many have used the services and it has showed positive response so far. Establishment of 4 additional centers in five development region has further enhanced the facilities. PLWHA are living healthy life to date. There is provision of facilities to some extent.

Conclusion: At the beginning it was difficult to set the care and treatment centre. Double stigmatized because of gender identity in different centers of private and public facilities. After long intervention the government has started taking initiation to meet the needs of PLWHA in Nepal for the community with the development of guidelines.

Disclosure of Interest Statement: The work of the study is based on organization experiences and No grants were received in the development of this study.

Paper Ref	22
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

ACCESS TO TREATMENT AND CARE OF MSM INFECTED IN NEPAL

Parsu Ram Rai , Blue Diamond Society , Kathmandu Nepal

Background: Lack of understanding and negative attitude towards MSM/TG amongst health care providers and government health officers prevents MSM/TG from accessing basic health care including HIV/STI prevention, treatment and care. The government either does not introduce supportive policies and programs or do not implement them. Many health care providers and government health officers still believe homo/trans-sexuality is unnatural so whenever they see MSM/TG they advise not to become MSM/TG leading MSM/TG into further confusion.

Methods: Care & Support and Hospice Center is the only centre which has been providing services to MSM, Transgender people, and MSWs, where they can meet, get confidential tests, information about health care and conditions, counseling, find peer support, receive check-ups, health referral services and meet other PLWHA. It also provides basic clinical services and referrals for more serious surgical and medical cases if necessary. The Centers also promote safer sex option, peer support system, conduct orientation training, self care treatment, counseling includes family and pre and post test counseling.

Result: Our services have cured infections, helped people live longer and healthier lives as well as taught people to be healthier. Many have used the services and it has showed positive response so far. Establishment of 4 additional centers in five development region has further enhanced the facilities. PLWHA are living healthy life to date. There is provision of facilities to some extent.

Conclusion: At the beginning it was difficult to set the care and treatment centre. Double stigmatized because of gender identity in different centers of private and public facilities. After long intervention the government has started taking initiation to meet the needs of PLWHA in Nepal for the community with the development of guidelines.

Disclosure of Interest Statement: The work of the study is based on organization experiences and No grants were received in the development of this study.

Paper Ref	237
Theme	Sexual Health: Biomedical
Presentation Type	Sexual Health: Quick Fire Presentation

SEXUAL PREFERENCE AS A PREDICTOR OF PATHOGEN DETECTION IN 4326 CASES OF ACUTE NGU

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Introduction: Non-gonococcal urethritis (NGU) is a common but poorly understood clinical syndrome. Little has been published on aetiological agents with respect to sexual preference. This large series examines epidemiological and laboratory characteristics in acute NGU.

Methods: Retrospective review using the electronic medical-record database of Melbourne Sexual Health Centre, Australia, from January 2006 to December 2011. Cases were men with first presentation of symptomatic acute NGU. First-stream urine was routinely tested for *C.trachomatis* and *M.genitalium* by PCR, and selectively tested, for trichomoniasis by culture, HSV-1/2 and adenoviruses by PCR. To explore characteristics associated with pathogens, analyses were conducted stratifying by pathogen, pathogen-clusters and sexual preference.

Results: Of 5452 acute NGU cases, 4326(79%) first presentations were included; 799(19%) had *C.trachomatis* and 264(6%) *M.genitalium* detected. Viruses and trichomoniasis were tested selectively. Compared to heterosexual cases (MSW), MSM (men who have sex with men) were less likely to have *C.trachomatis*(OR=0.5; 0.4-0.6) or *M.genitalium*(0.6; 0.5-0.9), more likely to report consistent condom use for anal/vaginal sex (AOR=3.9; 3.3-4.7) or only unprotected oral sex (UPOS) (14.5, 8.7-24.3). Pathogen-negative-NGU, when compared to bacterial-NGU, was significantly associated with exclusive UPOS (AOR=1.9, 1.2-3.0) and consistent condom use for anal/vaginal sex (AOR=2.1, 1.7-2.6); viral-NGU had similar characteristics to pathogen-negative NGU. Only 63% cases with bacterial-NGU and 32% with viral-NGU had ≥ 5 PMNL/HPF on urethral Gram-stain.

Conclusion: *C.trachomatis* or *M.genitalium* are less common in MSM with acute NGU compared to MSW. Pathogen-negative and viral-NGU have similar epidemiological characteristics; associated with recent sexual activity with males and report of low-risk practices such as oral sex and protected anal sex. These data indicate that the aetiologic spectrum of pathogens differs between MSM and MSW in acute NGU and behavioural associations implicate the oropharynx as a likely source of infection. Further identification of pathogens responsible for currently pathogen-negative NGU is required including possible oral pathogens.

Disclosure of Interest Statement: None.

Paper Ref	672
Theme	Sexual Health: Other
Presentation Type	Sexual Health: Pen Lowe Trainee Presentation

WHODUNIT: FRAMED, GUILTY OR AN ACCESSORY AFTER THE FACT?

Rane V

Trainee: Dr Vinita Rane

Supervisor: Dr Tim Read

Clinic/Organisation: Melbourne Sexual Health Centre

Description of the case: A 46 year-old man with long-standing HIV (human immunodeficiency virus), who was immunosuppressed with a CD4 count of 23/ μ L and a viral load of 81,000copies/mL, recently re-commenced on anti-retroviral therapy, presented with a single ulcer on the glans penis.

The ulcer was initially painless but became painful as it progressed and was associated with inguinal lymphadenopathy. He was previously known to have Herpes Simplex Virus Type 2(HSV2) affecting the perianal region, with frequent recurrences and associated superimposed bacterial infections that had previously required hospitalisation.

Nucleic acid amplification technique (NAAT) testing at the site was positive for HSV2 and *T.pallidum*. *H.parainfluenzae*, with reduced susceptibility to cefotaxime, was also isolated at the site. Serological testing was negative for *T.pallidum*. Testing did reveal vitamin B12 deficiency.

Initial treatment with benzathine penicillin, valaciclovir and ciprofloxacin did not improve the ulcer after three weeks. He was referred to a tertiary centre with presumed acyclovir-resistant HSV2 for consideration of treatment with foscarnet.

Questions for Discussion: This case addresses the challenging problem of recurrent genital ulceration in an immunosuppressed individual, with multiple potential etiologies. It also raises the issue of the development of resistance to commonly used antimicrobials in those with a long history of immunosuppression and the management of resistant organisms.

Literature review: The literature review will examine common causes of genital ulceration in HIV, the sensitivity and specificity of NAAT-based testing and the management of acyclovir-resistant HSV.

Paper Ref	329
Theme	HIV/AIDS Theme D
Presentation Type	HIV/AIDS Quick Fire Oral

UNDERSTANDING THE CONSTRAINTS AND FACILITATORS IN THE FIJIAN HEALTH SYSTEM TO THE PREVENTION OF MOTHER-TO-CHILD TRANSMISSION OF HIV (PMTCT) SERVICES IN SUVA, FIJI.

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Introduction: Prevention of mother-to-child transmission of HIV (PMTCT) remains a challenge for developing countries. Research indicates that health-system related barriers have a negative impact on PMTCT programs. This study explores barriers and facilitators in the implementation of PMTCT program in Suva, Fiji.

Methods: The study utilised a qualitative approach. Data were collected via individual, in-depth, interviews held in a single hospital in May 2013. A total of seventeen healthcare providers were interviewed. The selection of respondents was based on their involvement with provision PMTCT services. The data were analysed using thematic analysis.

Results: Preliminary results indicate facilitators for the PMTCT program include improvements in the availability of resources. The supply of anti-retroviral medications is currently adequate for both mothers and babies, with the exception of protease inhibitor for babies. The availability of HIV testing kits has improved in recent years due to improvements in forecasting demand for materials.

Resource barriers include: shortages of personal protective equipment; lack of hospital laboratory facility to perform confirmatory HIV tests; and delays in receiving tests results due to shortage of reagents in the reference laboratory. Workforce barriers include: shortages of healthcare workers in the antenatal clinic to cater for pregnant women; limited access to PMTCT training for nurses and midwives; and tensions between the hospital PMTCT staff (who perceive a lack of PMTCT knowledge in counsellors) and external providers of patient counseling services (who identified a lack of referrals to their service by PMTCT staff).

Conclusion: The results indicate that hospital has made significant progress in provision of PMTCT services since the program commenced in 2005. Resource and workforce barriers, though improving, remain a concern. Cultural tensions between public and private providers require a more detailed examination, and will be considered once the full results are analysed.

Disclosure of Interest Statement: One-year study scholarship has been provided by the Human Resources for Health Knowledge Hub, University of New South Wales, No other grant was received in the development of this study.

Paper Ref	531
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Oral Presentation

SEXUALLY TRANSMISSIBLE INFECTIONS (STI) AMONG MALE SEX WORKERS IN SYDNEY, NSW

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2 The Kirby Institute, University of New South Wales, Sydney, Australia

Introduction: Female sex workers in Sydney have been documented to have low rates of STIs approaching that of the general population.

However, there is little contemporary evidence on the burden of HIV and STIs among male sex workers or their specific health needs.

Methods: The Kirketon Road Centre (KRC) is based in Kings Cross, Sydney. Sex workers are a priority population for this service. Demographic, behavioural and STI diagnostic data on male sex workers presenting to the service were collected from 1-5-2007 to 30-4-2013.

The crude positivity rate of chlamydia and gonorrhoea (any site), syphilis, and HIV were calculated by dividing the number of individuals testing positive by the number of individuals tested during the time period.

Results: Over the timeframe 305 male sex workers were seen at KRC. Median age was 28 (range 16-60). 15 (4.9%) identified as Aboriginal or Torres Strait Islander. 71 (23.2%) reported street sex work, and 119 (39.0%) gave a history of injecting drug use.

Only 18 (5.9%) reported unprotected sex with clients, but 141 (46.2%) and 103 (33.7%) reported unprotected sex with regular and casual partners respectively.

54 (17.7%) only had sex with women in their personal and private lives; the remainder having male partners.

Chlamydia was diagnosed in 42/237 (17.7%), gonorrhoea in 38/233 (16.3%) and syphilis in 16/246 (6.5%). 26/241 (10.7%) were newly diagnosed with HIV infection, and a further 9 (3.0%) were already known to be HIV positive.

Conclusion: High rates of STIs and HIV in this population indicate a higher burden of disease than in female sex workers, and in non-sex working gay men. However consistent condom use at work suggests STI acquisition through regular or casual partners rather than clients. Further multivariate analysis will focus on risk factors for STI diagnosis in order to inform a health promotion response.

Disclosure of Interest Statement: No conflicts of interest.

Paper Ref	236
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Poster

EXPLORING HPV VACCINATION IN ADOLESCENT MALES

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Introduction: Australia has implemented a nation-wide program providing HPV vaccination to boys at school. To date, there are no published studies that explore and examine knowledge about HPV and HPV vaccine post-implementation of the national school- based HPV vaccination program in adolescent boys.

Methods: A purposive sample of schools across metropolitan Sydney were selected. Semi-structured focus groups and one-on-one interviews were undertaken with boys and their parents respectively, until saturation of data was reached. Transcripts were analysed, letting themes emerge inductively from the data.

Results: This talk summarises boys' knowledge, attitudes, and decision-making about HPV and HPV vaccination. Themes relate to gaps in understanding about HPV, HPV related diseases, and their prevention through vaccination; and potential concerns and anxieties related to HPV vaccination.

Conclusion: In our previous research with adolescent girls, we found strikingly low levels of knowledge and understanding about HPV vaccination among adolescents and their parents who had been involved in the national HPV vaccination program. This data is the first comparative data with boys and has implications for future educational interventions.

Disclosure of Interest Statement: This research was funded by an unrestricted research grant from CSL.

Paper Ref	516
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Poster

ENHANCED SURVEILLANCE OF GONORRHOEA IN SYDNEY FOLLOWING A SURGE IN NOTIFICATIONS

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Introduction: From 2000 to 2009, NSW gonorrhoea notification rates were reasonably stable, but since 2010 have shown a marked rise. In south eastern Sydney (SES) cases have increased by 65%, from 832 in 2010 to 1374 in 2012. Most are male residents of the inner city and surrounds, an area with a high population of men who have sex with men (MSM). As routine notification data from laboratories has limited information, we undertook enhanced surveillance.

Methods: For all gonorrhoea notifications in SES residents with a specimen date after 1 January 2013, a letter and short questionnaire were sent to the requesting physician seeking additional information: indigenous status, sexual exposure, likely source of infection, onset date of symptoms and initiation of treatment.

Results: Of 118 questionnaires sent out, 93 were returned (response rate, 79%), 81 (87%) were male. No cases identified as Aboriginal or Torres Strait Islander; 77 (83%) were non-indigenous and 16 (17%) reported unknown indigenous status. Sex work was reported for 6 (55%) of 11 females and 3 (4%) of 81 males. For men, a male sex partner was reported for 62 (77%). A casual sex partner was the likely source of infection for 50 (54%). Presence of symptoms was reported by 60 (65%) and 90 (97%) had initiated treatment. Just over half (49, 52%) were diagnosed at a sexual health centre.

Conclusion: This is the first data which directly reports MSM status among gonorrhoea cases at population level in Sydney. Enhanced surveillance has also allowed us to report the indigenous status of people notified with gonorrhoea and to describe risk factors for infection. This information is essential to accurately inform public health and health promotion activities that aim to interrupt the transmission of STIs or promote early detection and treatment.

Disclosure of Interest Statement: None to declare.

Paper Ref	648
Theme	HIV/AIDS Theme B: Clinical Programs
Presentation Type	HIV/AIDS Poster

HIV POINT OF CARE TESTING IN QUEENSLAND

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Introduction: Achieving the UN goals of reducing HIV transmission by 50% by the end of 2015 will need alternative approaches to current testing to ensure early HIV diagnosis and subsequent treatment.

Methods: On 3 June 2013, the Queensland Department of Health (DoH) implemented free HIV point of care testing (POCT) as routine clinical care in twelve Sexual Health Services using the Alere Determine™ HIV-1/2 Ag/Ab Combo Test which was approved by the Therapeutic Goods Administration (TGA) in December 2012.

All services operate the HIV POCT Program using the *Guideline for conducting HIV rapid point of care testing in Sexual Health Services* developed to assist in implementation and monitoring of the program. Services are participating in the Royal College of Pathologists of Australasia (RCPA) HIV point of care testing quality assurance program.

Data is collected and submitted on every test performed using the HIV POCT-Evaluation and Surveillance Form which includes demographic information, risk characteristics and performance of the test.

Results: Between 3 June and 19 August 2013, 158 tests were performed.

Of these 158 preliminary screening tests, five (5) have been reactive. Further specimens from these clients have been sent for confirmatory HIV testing as required following a reactive HIV POCT.

Conclusion: HIV POCT as routine clinical care has been successfully implemented in Queensland Sexual Health Services. Future implementation plans for HIV POCT include: general practice; contact tracing nurses; outreach to community clinics in collaboration with HIV peer educators; and, a pilot testing clinic through a public hospital Emergency Department.

Disclosure of Interest Statement: No grants were received in the implementation of this program.

Paper Ref	97
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Poster

ABORIGINAL PARENTING SEXUAL AND REPRODUCTIVE HEALTH PROGRAM (PASH)

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Background: Aboriginal and Torres Strait Islander adolescents experience sexually transmitted infections and blood borne viruses at a greater rate than non-Aboriginal and Torres Strait Islander adolescents. Research indicates that parenting programs are a valuable tool to increase adolescent's sexual and reproductive health and, in building parents/carers knowledge and communication skills. Hunter New England Local Health District in partnership with Armajun Aboriginal Medical Service piloted a Parenting Aboriginal Sexual Health (PASH) program which aimed to increase parents' sexual health knowledge and confidence to enable them to support their young people in making positive decisions regarding sexual behaviours.

Methods: Four Communities in (HNELHD) are included in the pilot. In total 100 parents/carers and their adolescents (aged between 12 and 16) will participate. A series of three workshops will be conducted in each town. Workshops will cover information regarding sexual and reproductive health, negotiation skills, facilitated tasks, communication and engagement skills, support and role-plays.

Results: A pre-post research design will be used to measure changes in:

- Parents and carers confidence and communication skills in talking to their children about sexual and reproductive health.
- Parents and carers factual knowledge around sexual and reproductive health.
- Number of parents and carers with a positive and open attitude to discussing sexual and reproductive health with their children
- Children's confidence in talking to their parents/carers about sexual and reproductive health

Conclusion: The pilot PASH program is to be implemented in July 2013, preliminary results of the study will be presented at the conference.

Disclosure of Interest Statement: The Hunter New England Local Health District recognises the considerable contribution that partners make to professional and research activities. We also recognise the need for transparency of disclosure of potential conflicts of interest by acknowledging these relationships in publications and presentations.

Paper Ref	481
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

EVALUATING THE USE OF INTERACTIVE THEATRE AND DRAMA BASED STRATEGIES FOR SEXUAL HEALTH PROMOTION AMONG YOUNG PEOPLE FROM REFUGEE AND ASYLUM SEEKER BACKGROUNDS

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Background: Sharing Stories is an innovative education program that uses theatre to increase sexual health awareness among young people from refugee and asylum seeker backgrounds. Through interactive workshops, Sharing Stories aims to create positive changes in young people's sexual health knowledge, confidence and attitudes; peer educator roles for young people are also available. The Sharing Stories program was evaluated to assess the effectiveness of using creative engagement strategies for sexual health education and empowerment among culturally and linguistically diverse (CaLD) youth. The use of drama to collect data was also evaluated. There are currently no Australian studies which explore the use of drama for sexual health education in CaLD groups.

Methods: The MMRC partnered with the SiREN project at Curtin University to conduct this study. Drama activities used in the Sharing Stories program were evaluated and drama was also used as an innovative data collection method that was consistent with the program context. The diversity of experiences shared during the program was captured using field notes and video footage obtained through consistent observation and participation by the researcher over six months. This was important for gaining participants' trust. Pre/post questionnaires were also distributed and six semi-structured interviews were undertaken with participants who had been involved in the program for at least 12 months.

Results: Although sexual health is a sensitive topic for people from refugee and asylum seeker backgrounds, participation rates in the Sharing Stories program remained high (70%). Preliminary data analysis indicated positive changes in participants' sexual health knowledge, confidence and attitudes. A short video will be shown to capture the enthusiasm of the participants and display the results.

Conclusion: Using interactive theatre and drama-based strategies is a culturally appropriate method to successfully engage young people from refugee and asylum seeker backgrounds in sexual health education and evaluation.

Disclosure of Interest Statement: The Sharing Stories youth drama program is funded by the Department of Health. The Metropolitan Migrant Resource Centre has received funding from a Healthway funded scholarship through the Australian Health Promotion Association.

Paper Ref	24
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Oral Presentation

INNOVATIVE, INTEGRATED, SECTOR DRIVEN APPROACHES TO CAPACITY BUILDING FOR YOUTH SEXUAL HEALTH PROMOTION IN WESTERN AUSTRALIA

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Background: YACWA's Youth Educating Peers (YEP) Project aims to increase the capacity of the WA youth sector to support and educate young people on sexual health and blood-borne virus (SHBBV) issues. The YEP Project has conducted ongoing evaluation and research with the WA youth sector since its inception in 2009. The research demonstrates clearly the significant and unique role the youth sector can play in supporting young people's wellbeing in relation to sexuality and relationships issues. However, the research also shows the WA youth sector faces significant challenges in being able to address SHBBV issues with young people. Challenges centre on youth workers lacking the training, knowledge, skills, confidence, resources, leadership, organisational support and broader community support to be able to effect change.

Methods: The YEP Project conducted a series of 11 focus groups with over 110 youth sector staff and convened two cross-sector reference groups, and as a result, developed three integrated capacity building strategies: an online engagement strategy including regular newsletters with SHBBV information and resources; a youth sector-specific blog for information and resources sharing; youth sector guidelines for sexual health promotion; and a suite of easy access training opportunities.

Results: Preliminary evaluation of the YEP Project indicates significant gains. Youth workers report gaining new professional networks, increased information sharing, increased access to training and resources, improved sexual health knowledge and increased confidence to work with young people in the area of sexual health.

Conclusion: Investing in a strong community development approach, including actively and consistently engaging the target group throughout the project development, has enabled the YEP Project to develop capacity building strategies that are innovative, sector-owned and relevant.

Disclosure of Interest: The Youth Educating Peers (YEP) Project is funded by the Department of Health, Western Australia, Sexual Health and Blood Borne Virus Program.

Paper Ref	174
Theme	HIV/AIDS Theme B: Antiviral Therapy
Presentation Type	HIV/AIDS Poster

DEPRESSION ON *EVIPLERA*: THE CASE (OR 2) FOR SWITCHING

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Background: Depressed mood can be a significant issue for people living with HIV. Mood change is a commonly reported side effect of antiretroviral therapy. Patients often have confounding medical, social and emotional factors which contribute to depression. This multifaceted causation can make it challenging for clinicians to know when to switch antiretroviral regimen in the setting of depression.

Methods: We present two cases of patients living with HIV who became depressed shortly after commencing treatment with *Eviplera* (tenofovir/emtricitabine/rilpivirine) and whose symptoms resolved rapidly on withdrawal of rilpivirine.

Results: Patient A, a 27 year old HIV positive man commenced Eviplera having experienced significant side effects on two previous antiretroviral regimens. Patient B, a 25 year old HIV positive woman commenced Eviplera following drug-drug interactions with her previous regimen. Both patients experienced severely depressed mood within one month. They had other stressors including relationship difficulties, work stress and adjusting to a relatively recent HIV diagnosis. Both patients were reluctant to switch from a single tablet regimen. Substitution of the rilpivirine component resulted in complete resolution of depressive symptoms within one month in both cases.

Conclusion: *Atripla* and *Eviplera* are the two single tablet regimens available in the Australian market. Clinicians are aware that efavirenz is associated with higher rates of CNS side effects than rilpivirine, mostly due to dizziness and vivid dreams. They may not be aware that depression and mood changes are more common with rilpivirine than with efavirenz. Both of our patients suffered more significant depression on rilpivirine than efavirenz.

Attribution of mood changes to medication can be confounded by concomitant medical and psychosocial factors. Patients and clinicians may be reluctant to abandon a single tablet regimen. These two cases contribute to our experience with *Eviplera* and increase confidence to switch in similar cases.

Disclosure of Interest Statement: Nothing to disclose.

Paper Ref	437
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Oral Presentation

SEX EDUCATION EXPERIENCES OF SEXUALITY DIVERSE AND GENDER VARIANT YOUNG PEOPLE IN AUSTRALIA: IMPLICATIONS FOR EDUCATORS AND HEALTH PROFESSIONALS

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Introduction: This presentation is based on a Young and Well Cooperative Research Centre project conducted in 2012, focusing on the issues facing young people in Australia who identify as queer, gender variant, and / or sexuality diverse. The experiences of these young people were mapped across a broad range of issues including identity, health and wellbeing, education, technology and access to services. Of particular significance was the ineffectual or lack of sex education in families and schooling encountered by these young people.

Methods: A national wide online survey was completed by 1417 young people 16-27 years of age, who identifies as queer, gender variant and / or sexuality diverse. Focus groups and interactive workshops were also conducted with a group of young people attending a community not-for-profit drop in service in Sydney-Twenty10 - supporting those who identify as gender variant, sexuality diverse, or questioning their gender and/or sexuality. Additionally, a focus group and interviews were held with workers in this service about their perceptions of the major issues facing the young people they work with.

Results: Most of the participants in this research considered sex education in schools to be ineffectual and irrelevant. Approximately 90% of the survey participants said sex education was restricted to bodily changes at puberty, human reproduction, pregnancy and STI's. Less than 15% encountered discussions of gender variance, same-sex relationships, bisexuality, sexual pleasure, or homophobia. Less than 4% had discussions about transgender identities or transphobia. The vast majority used the Internet for information about safe sex, transgender issues, same-sex relationships, sexuality and discrimination. Pornography was the default sex education source for young gay men in particular.

Conclusion: There is a need for comprehensive and inclusive sex education in schools to enhance the health and well being opportunities of gender variant and sexuality diverse young people and to help counteract discrimination.

Paper Ref	413
Theme	HIV/AIDS Theme B: Living With HIV & Community Programs
Presentation Type	HIV/AIDS Poster

'TOK BAKSAIT': EXPERIENCES OF STIGMA REPORTED IN THE IMPLEMENTATION OF THE STIGMA INDEX IN WESTERN HIGHLANDS AND CHIMBU, PAPUA NEW GUINEA.

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Introduction: The implementation of the Stigma Index is important in Papua New Guinea (PNG) where anecdotal reports of discrimination against PLHIV are high. The Index is implemented by Igat Hope with support from National Aids Council and UNAIDS. Gathering information directly from PLHIV provides an evidence base for program planning and interventions to respond to HIV-related stigma. We report on survey results from Phase 1 of the project. The project will eventually gather and aggregate data from 3 other regions in PNG.

Methods: The internationally designed index was translated for use in PNG. PLHIV interviewees were trained to administer the questionnaire. Questions covered: work and health; understanding of rights and laws; and experiences around diagnosis and testing. Seven sites were identified and 80 PLHIV were recruited through convenience sampling. Questionnaire was interviewer-administered.

Results: Experiences are self reported but are useful to help to begin to understand the dimensions of stigma and discrimination in the PNG context. Being gossiped about because of HIV status was a significant problem identified by 10% of those interviewed. 50% had feelings of being ashamed, guilty or blamed themselves because of their HIV status. 21% had been excluded from social gatherings. 10% had been excluded from religious activities or places of worship because of their HIV status.

Conclusion: Stigma and discrimination were found in the following settings: family and clan; community and peer networks; workplaces and health care settings The aim is to conduct further interviews, throughout PNG, and to seek national responses that can engage all partners in responding to what is a major problem in the HIV response.

Disclosure of Interest Statement: The implementation of the Stigma Index is managed through Igat Hope Incorporated, representing people living with HIV in Papua New Guinea. Significant funding has been received from the PNG National Aids Council for implementation Phase 1 of the project. Technical support and funding for training of interviewers has been received from UNAIDS PNG. Some technical support and advice through an AusAID capacity building grant by NAPWHA.

Paper Ref	538
Theme	HIV/AIDS Theme B: Diagnosis & monitoring
Presentation Type	HIV/AIDS Poster

HIV POINT OF CARE TESTING (POCT) – WORKING TOWARDS A NATIONALLY ENDORSED TRAINING CURRICULUM AND ACCREDITATION STANDARDS

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¹ Australasian Society for HIV Medicine (ASHM)

² St Vincent's Centre for Applied Medical Research, St Vincent's Hospital

Background: In December 2012 the Therapeutic Goods Administration (TGA) approved the first point of care test (PoCT) for Human Immunodeficiency Virus (HIV) for use in Australia; the Alere Determine HIV Combo test.

The TGA has placed a number of strict conditions around the use of the device. It is licensed for use in laboratories accredited by the National Association for Testing Authorities (NATA) or by trained health professionals working for certain organisations under specific conditions.

Training and administration must be in accordance with the requirements of the *National HIV Testing Policy*.

ASHM believes PoCT has an important role to play in Australia's Sixth National HIV Strategy. As a signatory to the *Melbourne Declaration*, ASHM has been working to support the implementation of PoCT, as per the conditions set out both by the TGA and the *National HIV Testing Policy*.

Methods: In early 2012, in anticipation of the TGA approval, ASHM began drafting a training curriculum and operating standards for HIV PoCT accreditation in Australia which will be completed this year and endorsed nationally. ASHM has consulted widely with stakeholders across the sector and has been working to address implementation issues such as:

- Establishment of relationships between PoCT services and HIV testing laboratories
- Implications for laboratories and their role in confirmatory testing
- Test site accreditation and endorsement
- Clarification of TGA conditions

Results: Royal Australia College of General Practice (RACGP) accreditation of the ASHM four module training package (application pending) for HIV PoCT

Conclusion: ASHM has been the leader in the sector to facilitate the roll out of HIV PoCT. ASHM has collaborated with testing sites in NSW and Victoria, and will be working with additional sites in other jurisdictions this year. Participants will be given an overview of the training package and accreditation standards and will understand what is necessary to undertake HIV PoCT.

Disclosure of Interest Statement: Nothing to disclose.

Paper Ref	673
Theme	Sexual Health: Other
Presentation Type	Sexual Health: Pen Lowe Trainee Presentation

YOUNG, GAY, ITCHY AND ISOLATED: TREATMENT FAILURE OF SECONDARY SYPHILIS IN A YOUNG MAN WITH NEWLY DIAGNOSED HIV

Rutherford A

Trainee: Alison Rutherford

Supervisor: Christopher Carmody

Clinic: South Western Sydney Sexual Health Services (Liverpool and Rosemeadow)

Description of case: Tom is a 21-year-old gay man diagnosed with HIV and secondary syphilis in March 2012 after presenting to a dermatologist with a generalized, itchy maculopapular rash. His initial RPR titre was 1:64, CD4 count 600 cells/mm³ and viral load 125,000 copies/mL. He had no history of a chancre and no neurological signs.

His only significant past history was childhood eczema and asthma. He had 30 lifetime male sexual partners and no reported unprotected anal sex. He had a probable seroconversion illness 6 months prior to presentation.

Tom was treated for secondary syphilis with one dose of benzathine penicillin 1.8g. Three months later his RPR titre was 1:32. Six months later Tom's rash returned and the RPR increased to 1:128. He had no significant risk of re-infection. He declined a lumbar puncture and was treated for presumptive neurosyphilis with 15 days of IV benzylpenicillin. His RPR titre reduced to 1:16 three months post treatment.

Tom's CD4 count decreased 3 months post diagnosis to a nadir of 440 and 3 months later was 490. His viral load was essentially unchanged.

Tom was initially quite closeted as an outer urban young gay man. He has engaged with care sporadically and is very reluctant to commence antiretroviral therapy.

Questions for discussion:

1. Some guidelines recommend lumbar puncture in asymptomatic HIV/syphilis co-infected patients with a CD4 <350 or RPR titre >32. What is the evidence for this and what is current practice in Australia?
2. What is the balance of benefits and harms in commencing antiretroviral therapy in young people with a CD4 count 350-500 cells/mm³?
3. How can sexual health clinics engage with young, isolated, HIV positive gay men?

Literature review: The literature review will cover the pathophysiology of asymptomatic neurosyphilis, syphilis treatment guidelines, when to start antiretroviral treatment and psychological aspects of new HIV diagnoses in young isolated gay men.

Paper Ref	479
Theme	HIV/AIDS Theme B: Diagnosis & monitoring
Presentation Type	HIV/AIDS Poster

PEER-LED COMMUNITY BASED RAPID HIV TESTING IN MELBOURNE: CHALLENGES AND PROGRESS

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Introduction: Rapid point of care (RPOC) HIV tests are utilised extensively for diagnosis in the developing world and play an increasingly important role in HIV screening programs in developed countries. In 2012, the Victorian Department of Health (DoH) committed funding to the Burnet Institute and the Victorian AIDS Council (VAC) to undertake a 24-month trial of a peer led community based rapid HIV testing service for men who have sex with men (MSM) in Melbourne.

Methods: A project implementation team was established in January 2013 with the aim of opening the service in mid-2013. Key stakeholders, including the Australasian Society for HIV Medicine, National Serology Reference Laboratory (NRL), DoH, Australian Research Centre for Sexual Health and Society, and high caseload HIV clinic practitioners constituted a governance structure to support implementation.

Results: Considerations regarding service location were informed by geographic gaps in HIV testing services for MSM, logistics, and input from the gay community. Staffing (nurse/practice manager, peer counselors, administration assistant) and service models aimed to balance appropriate clinical care with community service needs, resource parameters, and clinical and prevention considerations regarding the scope of sexual health services. Challenges for staff training in a "peer-led" service included adapting draft ASHM curriculum modules for non-clinical/laboratory trained staff and delays in training accreditation for compliance with TGA HIV RPOC test regulations. The choice of testing device was problematic, with the first-choice test restricted by regulatory issues. Preliminary data outlining testing, including specificity and operational characteristics, will be presented.

Conclusion: Despite supportive national HIV testing policies and broad sector backing implementing a community based RPOC HIV testing service model for MSM has been challenging. Learning from these experiences and refinements to training and regulatory processes will enhance the feasibility of providing community based RPOC HIV testing in Australia.

Disclosure of Interest Statement: Nothing to disclose

Paper Ref	221
Theme	HIV/AIDS Theme C: Health Promotion
Presentation Type	HIV/AIDS Oral Presentation

QUEENSLAND'S FIRST COMMUNITY BASED HIV TESTING

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Health Communities & Metro North & Sunshine Coast Hospital & Health Services

Introduction: A brief snapshot will be provided of "Testing Point", a new Healthy Communities' community based clinical service that aims to provide a Medicare bulk billing after hours HIV/STI testing to the LGBT community on a weekly basis.

Method: Testing Point is operated by volunteer nurses and volunteer private GPs drawn from the community who work collaboratively with health educators and promoters to create a unique peer based service. The service provides comprehensive STI testing using private pathology services and Medicare. There is also the option for people to take part in a trial of the Alere Determine Rapid HIV Test, and results are made available to persons within 20 minutes. This trial has allowed for Point of Care (POC) HIV testing to be available within a community non-clinical setting supported by peer based health workers. The clinic operates as both an appointment or walk-in service operating every Tuesday evening.

Results: Over the 7 months the clinic has been operating, over 50 individuals have been seen. During that period, 1 cases of HIV, 2 cases of syphilis, 1 cases of gonorrhoea have been detected. 49 POC HIV tests have been administered, returning 1 new diagnosis. Of the people tested through this clinic over 12% have never had a previous HIV test.

Conclusion: The Testing Point Clinic operated by Healthy Communities is demonstrating a significant role for community controlled sexual health services and the viability of community/private partnerships. The ease with which POC HIV testing has been administered within this non clinical setting provides a foundation for future community and peer based testing programs.

Disclosure of Interest: Nothing to disclose

Paper Ref	229
Theme	HIV/AIDS Theme B: Clinical Trials
Presentation Type	HIV/AIDS Poster

AN APPROACH TO SAFEGUARD THE RIGHTS OF MARPS INVOLVED IN CLINICAL TRIALS

Indhu S

Introduction: Clinical trials are also done on MARPs to identify whether the treatment regimen identified is better and beneficial to the HIV infected community. MARPs, who are negative are mostly used for these trials to study different ways to use the standard treatments so they will be more effective, easier to use, and/or decrease side effects. Studies are done to learn how to best use the treatment in a different population, in whom the treatment was not previously tested. After the period of clinical trial is over, the follow up of the MARPs cease, due to stoppage of funds or various other reasons.

Methods: Mostly the clinical trial is done on a particular medicine prior to being administered, and these drugs are usually tracked by the doctors administering them. But in some of the situations the side effects take a toll on the patients after a period of six months to one year, when there is no follow up done. The patients have to handle the issues on their own funds. MARPs who live in a state of penury don't have the level of managing these infections arising due to the side effects and they succumb at times. Hence they need to be followed for a period of minimum three years and they need to be treated for all the infections arising out of the side effects of the trials. They need also to be provided with nutritional and medical supplements that would be enabling them to lead a healthier life post trials.

Results: The lives of the MARPs shall be protected against all the side effects arising due to the clinical trials.

Conclusion: Right to life of MARPs is safeguarded when they risk their life for such clinical trials.

Disclosure of Interest Statement: Nothing to disclose

Paper Ref	332
Theme	Sexual Health: Reproductive Health
Presentation Type	Sexual Health: Poster

AN APPROACH TO REACH OUT TO THE CULTURALLY DIVERSE POPULATIONS ON SEXUAL HEALTH

Indhu S

Introduction: Information on sexual health is quite potentially needed for the budding adolescents and the timing of the information is most vital. The period of transformation to adulthood from childhood is the most vital age for this information. For the traditional- culture-woven communities, this is the age when no information need to be provided, since they feel that such information could trigger the onset of sexual urges. But when the child is being brought up in a different environment away from their own cultural background, the child is interlaced between the traditional- culture- woven thoughts and the real-in-life scenario.

Methods: Schools need to be the focal point of these information for the traditional- culture-woven budding adolescents, wherein they are given information about sexual health and well-being and also given information about their traditions and culture. This needs to be done by a person of the same nationality. The messages and strategies for prevention and health promotion need to consider cultural understanding and beliefs, education levels, language barriers, as well as other social determinants that influence people's thought process.

In a developed nation, information is provided through mass-media and other communication channels, but seldom we realize that the channels are "skipped off" because it contains explicit material on sexual information. Many of them live in myths and there are multiple misunderstandings about STI and HIV, which doesn't surface till the person is infected, because of a common myth that "HIV people are healthy to look at". Such misconceptions need to be broken by these one- to-one messages by the person with the same cultural background.

Results: Qualitative technical information being disseminated to the adolescents and thereby create a HIV free world

Conclusion: Lesser number of adolescents getting infected with HIV and STI.

Disclosure of Interest Statement: Nothing to disclose.

Paper Ref	53
Theme	Sexual Health: Sexuality
Presentation Type	Sexual Health: Poster

THE REASON OF INCREASING ADIS BETWEEN MEN IN COLLECTIVISTIC CULTURE AND ISLAMIC SOCIETIES

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Introduction: One of the intricate in Collectivistic cultures about real information of statistic reports for those who have caught ADIS disease is derelical and conceal the reality. Such as; some Asian and Middel East countries like Iran. As experiences show, there are many different ways for transferring HIV virus such as; clinical operation, sexual relationship and injecting druging users especially in developing countries.

Methods: In some countries because of modesty or pudency in families, people shy to show their reality. During a year 153 men was selected for this research. All men were bisexual and they were asked some questions in a questionnaire form.

Results: Almost 40.4% of men interest to have a sex with gay and 70% of them has the age between 20-30 years old, 20% are 31-40 and 10% are more than 41 years old. Studies have been shown that the age of 20-30 years old is the critical age that carelessness and lack of traning might be suffered from ADIS disease.

Conclusion:

- 1- Pudency and feeling ashamed between families to show unusual sexual relationship
- 2- Guys in Islamic countries prefer to have a short relationship and girls are not the same as men.
- 3- Finding gay for a one night sex is easier than to find a girl.
- 4- In Collectivistic cultures falilies can accept relationship between male and female difficulty. So, gay could be a good option for men.
- 5- In Collectivistic cultures females accept sexual relationship too difficult.
- 6- In Islamic countries two men can live together in a same place easier than man with a girl.

Disclosure of Interest Statement: This study in not related to any institute and is a self study and research.

Paper Ref	156
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Oral Presentation

HOW MEN LIKE IT: SUBURBAN MEN WHO HAVE SEX WITH MEN'S SEXUAL HEALTH BEHAVIOUR AND HEALTH PROMOTION NEEDS

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Introduction: In Australia, men who have sex with men (MSM) represent the highest number of HIV infections and continue to be at greatest risk. The majority of HIV and sexual health behavioural surveys focus on MSM in urban inner cities. However, it is unclear how representative this is of MSM who are sexually active in the suburbs. The aim of this study is to gather evidence on suburban MSM sexual health behaviour and health promotion needs in order to plan future health promotion and Sexual Health clinical services.

Methods: Following Ethics approval, a cross-sectional survey of 250 MSM over 18 years old attending a sex-on-premises-venue in western Sydney was conducted between June-July 2013. The survey instrument was developed from previously validated instruments and was reviewed by an expert panel of health promotion and HIV practitioners. The final instrument comprised 36-questions to measure demographics, sexual behaviour, HIV testing practices, knowledge of sexually transmitted infections (STIs), and sexual health promotion needs. Associations between these factors were investigated with analysis of variance.

Results: Data collection is currently actively under way. We will describe sexual activity and health services utilization, sexual health service requirements health promotion needs, and knowledge of STI among this cohort of MSM. We will also report on any associations between these factors that we find.

Conclusions: There is a dearth of literature on sexual risk behaviour of MSM who attend suburban SOPVs. This study will provide evidence to the local Sexual Health Services, Health Promotion teams, and non-government organisations to assist in the development of targeted health promotion initiatives. It may also be relevant to other healthcare services attempting to provide culturally relevant and appropriate services to the large number of MSM who do not access inner city resources such as HIV testing and treatment.

Disclosure of Interest Statement: No pharmaceutical grants were received in the development of this study.

Paper Ref	160
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Poster

THE MANAGEMENT OF SEXUALLY TRANSMITTED INFECTIONS BY AUSTRALIAN GENERAL PRACTITIONERS: A 12 YEAR ANALYSIS

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Introduction: In Australia, General Practitioners (GPs) are the gatekeepers to the health care system. This study aimed to determine how frequently six common Sexually Transmitted Infections (STIs) were managed by GPs, the characteristics of the GPs and patients at these encounters, and whether there were any changes over time.

Methods: Data from the Bettering the Evaluation and Care of Health (BEACH) program were analysed. BEACH is a continuous, paper-based, national study of GP activity in Australia. GP-patient encounters during which at least one STI was managed were identified. The management rates per 100,000 encounters were calculated for April 2000 to March 2012.

Results: 11,784 GPs took part in the study, collectively recording 1,178,400 patient encounters. There were 3,835 STI problems managed at an overall rate of 325 STIs per 100,000 encounters, comprising 115 genital herpes problems per 100,000 encounters, 92 genital warts, 67 HIV, 39 chlamydia, 6 gonorrhoea and 7 syphilis. Higher management rates occurred among patients who were: male; 15-24 years old; more socially advantaged; Aboriginal/Torres Strait Islander; resident in a major city; and/or of English-speaking background. GPs who were female or aged less than 60 years had higher STI management rates than their counterparts. Chlamydia and herpes management rates increased significantly from the first six year period to the second six year period.

Conclusions: Herpes and warts were commonest STIs managed by GPs. The lower rates for the other STIs may either reflect lower prevalence rates or lower testing due lack opportunity to test as they are frequently asymptomatic. It is important to determine whether existing approaches effectively target the most at risk communities. This is particularly important with the increased role envisaged for GPs in the diagnosis and management of STIs. This study provides a basis for priorities in GP workforce development, population-based health promotion, access, and health services planning strategies.

Disclosure of Interest Statement: No pharmaceutical grants were received in the development of this study.

Paper Ref	402
Theme	HIV/AIDS Theme B: Workforce Issues & Professional Practice
Presentation Type	HIV/AIDS Poster

TESTING THE WATERS: ARE AUSTRALIAN HEALTH PROMOTION PRACTITIONERS WILLING TO CONDUCT RAPID HIV TESTING?

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Background: The current National HIV Testing Strategy restricts Rapid HIV Testing (RHT) programs to Sexual Health clinics (SHC), community sites and high caseload General Practice settings. Many SHCs and community organisations employ Health Promotion Practitioners (HPPs) who have training in outreach and engaging with high-risk populations. We explored if HPPs with higher HIV knowledge would have more favourable attitudes and be more willing to provide RHT than those with lower HIV knowledge.

Methods: A national, anonymous, online survey of 175 HPPs (data collection ongoing) was conducted between April-July 2013. Participants were recruited from professional organizations and employers. They were surveyed about their HIV knowledge, attitudes towards persons with HIV/AIDS, and willingness to conduct RHT.

Results: Preliminary analyses indicate that one-third of participants answered all HIV knowledge questions correctly, while 24% of participants demonstrated lower knowledge (<80% of questions correct). Participants with lower knowledge were significantly more likely than those with higher knowledge to believe that persons with HIV should be quarantined to stop infection (9% vs. 0%, $p<0.001$), to want to refer their clients with HIV to other health educators (42% vs. 28%, $p<0.01$), to feel uncomfortable planning health promotion programs for persons with HIV (31% vs. 14%, $p<0.05$), and to feel uncomfortable educating clients about HIV prevention (34% vs. 8%, $p<0.01$). Participants with lower knowledge were less likely than those with higher knowledge to agree that health educators should offer RHT (36% vs. 69%, $p=0.001$), although 53% of them were willing to become trained to conduct RHT.

Conclusions: Enhancing and implementing HIV and sexual health education for all HPPs may increase the number of those willing to participate in RHT. HPPs, with the proper knowledge and training, may be suitable to conduct RHT. Policymakers should consider HPPs as a viable workforce option to engage and provide increased access to RHT for high-risk populations.

Disclosure of Interest Statement: This study was funded by Walden University's Faculty Research Initiative Grant.

Paper Ref	435
Theme	HIV/AIDS Theme C: Prevention Programs
Presentation Type	HIV/AIDS Oral Presentation

**COUPLES HIV COUNSELING AND TESTING (CHCT):
VIEWS FROM HIGH RISK POPULATIONS IN BALI, INDONESIA**

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Introduction: The number of HIV&AIDS cases is increasing, and heterosexual transmission serves as the main mode of HIV transmission in Bali. Most female cases are intimate partners of male cases; however, the current counseling is delivered for individuals rather than for couples. It has been documented that CHCT can reduce HIV transmission among discordant couples, thus it is important to explore the views from high risk populations regarding CHCT implementation in Bali.

Methods: A qualitative study was conducted in February 2013 to explore views from high risk populations regarding CHCT in Bali. Two focus group discussions were conducted with female sex workers (FSWs) and several injected drug users (IDUs) were interviewed. Data were analyzed thematically.

Results: In general, both FSWs and IDUs expressed their acceptance of CHCT; however, there are several conditions that may challenge the implementation. Some FSWs are still reluctant to open their HIV status to their partners because it could result in violence, abandonment or divorce. In contrast, some FSWs are willing to open their HIV status as they want to have children and to get support from their partners. However, most FSW's partners refuse to get tested because they are afraid of the positive result. Moreover, they have a low perceived risk of HIV. IDUs explained that CHCT will need experienced and skilled counselors as IDUs are generally difficult to let others know about their high risk behaviors.

Conclusion: CHCT is well accepted by FSWs and IDUs in Bali; however, it will need experienced and skilled counselors to motivate them opening their HIV status and high risk behaviors to their partners.

Disclosure of Interest Statement: This study is funded by National AIDS Commission of Indonesia and HIV Corporation Program for Indonesia (HCPI).

Paper Ref	436
Theme	HIV/AIDS Theme C: Behavioural Research & Interventions
Presentation Type	HIV/AIDS Poster

BARRIERS AND ENABLERS TO USE FEMALE CONDOM: EXPERIENCES OF FEMALE SEX WORKERS IN BALI, INDONESIA

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Introduction: Heterosexual transmission serves as the main mode of HIV transmission in Bali. The use of male condom (MC) is constantly low and female condom (FC) could be one of the alternatives with the same effectivity as MC. Although FC has been promoted to female sex workers (FSWs), the use is still very low. This study explored the barriers and enablers to use FC among FSWs in Bali.

Methods: A qualitative study was conducted from June to September 2012 in Bali. Four focus group discussions were conducted with FSWs and two FSWs who use FC routinely were interviewed. Data were analyzed thematically.

Results: FSWs generally accept the idea of FC use as they do not need to rely on their clients to get protected; however, difficulties in using FC and clients' refusal due to unfamiliarity with FC become the barriers. The inner ring of FC frequently causes pain and FSWs preferred to use FC with foam dots because it is more comfortable and easier to use. However, FC that available for free from the government is only the ring type. It indicates that the accessibility of FC with foam dots is an enabler to use FC. FSWs expressed their willingness to use any type of FC if their clients ask or help them to, because they have lower bargaining power than clients. This emphasizes that FC promotion to clients and personal training to use FC for FSWs are important.

Conclusion: Difficulties in using FC and clients' refusal become the barriers of FC use, thus promotion to clients and personal training for FSWs are important. Increasing the accessibility of FC with foam dots is recommended because it is preferred by FSWs than the one with inner ring.

Disclosure of Interest Statement: This study is funded by The Kirby Institute, UNSW, Australia.

Paper Ref	271
Theme	HIV/AIDS Theme B: Antiviral Therapy
Presentation Type	HIV/AIDS Oral Presentation

DETECTABLE HBV DNA IN PLASMA BUT NO HBV DRUG RESISTANCE IN HIV/HBV CO-INFECTED PATIENTS ON TENOFOVIR-CONTAINING ANTIRETROVIRAL THERAPY

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Introduction: Tenofovir (TDF) is effective in suppressing HIV and HBV replication in HIV-HBV co-infection. HBV DNA can persist in some individuals on TDF-containing combination antiretroviral therapy (ART) but HBV resistance to TDF has not been reported to date. We initiated this study to identify novel HBV mutations in HIV-HBV co-infected individuals receiving TDF, and determine risk factors associated with detectable HBV DNA on TDF.

Methods: We enrolled 93 HIV-HBV co-infected participants on, or about to commence, TDF-containing ART in a prospective longitudinal study. Subjects were followed every 6 months with clinical and laboratory assessments. HBV polymerase sequencing was performed on plasma samples with an HBV DNA >400 IU/ml.

Results: Study entry median age was 43 (IQR 38-50) years, the cohort was predominantly male (80%) and HBeAg positive (75.5%). At enrolment most patients were on TDF (92.4%) with median duration on TDF of 2.03 (IQR 1.0-4.4) years. Over 24 months of f/up, HBV DNA was persistently <15 IU/ml in 79.3% (n=73); >15 IU/ml once in 10.9% (n=10); and on >1 occasion in 7.6% (n=7; median number of occasions = 3 (IQR 2-5)). Eight patients with detectable HBV DNA once during f/up had HBV DNA <15 IU/ml at enrolment. Three patients (3.3%) were adherent to ART but had persistently detectable HBV DNA during f/up. Univariate analysis demonstrated that positive HBeAg (p<0.01), detectable HBV DNA at enrolment (p<0.01) and country of recruitment (Australia, p=0.01) were associated with detectable HBV DNA on-TDF. In all plasma samples that underwent HBV sequencing (n=19), no novel HBV pol mutations were identified.

Conclusion: Detection of HBV DNA on more than one occasion in HIV-HBV co-infected patients on TDF containing cART is not uncommon, however, drug resistance did not occur in this setting. Prolonged follow up will be needed to determine the clinical significance of detectable HBV DNA on HBV-active ART.

Disclosure of Interest Statement: We acknowledge funding from Gilead Sciences.

Paper Ref	82
Theme	HIV/AIDS Theme B: HIV Associated Diseases
Presentation Type	HIV/AIDS Oral Presentation

POSTERIOR REVERSIBLE ENCEPHALOPATHY SYNDROME IN A PATIENT WITH HIV AND DISSEMINATED VARICELLA ZOSTER VIRUS

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Background: The uncommon posterior reversible encephalopathy syndrome (PRES) is characterized by the acute onset of headache, vomiting, altered consciousness, seizures and focal neurological deficits. It was initially described in the setting of hypertension, uremia and immunosuppression. In the last decade there have been emerging reports of PRES in patients with advanced human immunodeficiency virus (HIV)-infection in the presence of hypertension, dialysis, hypercalcaemia and two opportunistic infections: blastomycosis and tuberculosis (TB).

Method: Here we present the case of a 54 year old male being treated for disseminated varicella zoster virus (VZV) in the setting of HIV infection who acutely deteriorated to the point of requiring intubation.

Results: The clinicoradiological diagnosis was of PRES with improvement within 72h with supportive management. Serial neuroimaging correlated with the clinical findings. The pathogenesis of PRES is poorly understood but is thought to stem from vasogenic odema either as a result of loss of endothelial integrity and transudate of fluid across the blood-brain barrier, or secondary to vasospasm resulting in tissue odema in the absence of infarction. How HIV infection impacts on this model is unclear. It is possible the HIV infection causes endothelial dysfunction and disruption of the blood-brain barrier which may be exacerbated by infections in the central nervous system.

Conclusion: This is the first report of PRES in an HIV-infected patient with disseminated VZV. Additionally it is the first case of HIV-associated PRES severe enough to warrant intubation. The phenomenon of PRES in advanced HIV is an important clinical entity for both physicians and critical care doctors to recognize firstly given its potential mortality but also because of its favourable prognosis and reversibility with supportive care and treatment of underlying causes.

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Paper Ref	527
Theme	HIV/AIDS Theme C: Epidemiology Of HIV
Presentation Type	HIV/AIDS Poster

CHARACTERISTICS OF ANTIRETROVIRAL TREATMENT-NAÏVE PATIENTS WITH HIV-1 B AND NON-B SUBTYPES IN WESTERN SYDNEY

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Background: Historically, subtype B has predominated in Australia where transmission is primarily through men having sex with men. However, the prevalence of Non-B subtypes is increasing. Western Sydney has relatively high number of migrants from regions with higher HIV prevalence. This study aimed to evaluate differences between treatment naïve HIV-1 infected patients with B and Non-B subtypes.

Methods: Antiretroviral naïve HIV-1 infected patients of Western Sydney Local Health District between January 2003 and July 2011, whose HIV-1 subtype data were available, were included in this retrospective study. Demographic details, risk factors, clinical stage, CD4 count and viral load at baseline were included in the analysis. Records were confirmed by conducting a case note review. Patients with B subtype infections and those with Non-B subtype infections were compared.

Results: We identified 186 antiretroviral naïve HIV-1 infected patients of whom 28.5% were females. 94 (50.3%) were subtype B. 86% of males were infected with subtype B whereas 75% of females were infected with Non-B subtype. 79 (84%) Subtype B patients acquired HIV within Australia, of whom 58 (73.4%) were born in Australia. Acquisition of Non-B Subtypes (78 known): 26 in Australia, 35 in Africa and 16 in Asia-pacific.

Patients carrying B subtype were mainly MSM (63.8%) compared with only 5.4% MSM in Non-B subtype. Heterosexual transmission was significantly more common in Non-B subtype (86%) compared with subtype B (20.2%). Injecting drug use and bisexual men were significantly associated with subtype B.

Mean and median CD4 counts, symptomatic status and clinical stage at baseline were similar in both groups.

Conclusion: There are a significant number of patients infected with HIV-1 Non-B subtypes in Western Sydney with female gender, heterosexual transmission being more common. Significant numbers of Non-B subtypes were acquired in Australia. The baseline immunological and clinical characteristics were similar in both groups.

Disclosure of Interest Statement: Nothing to declare.

Paper Ref	539
Theme	HIV/AIDS Theme B: Diagnosis & monitoring
Presentation Type	HIV/AIDS Poster

SUBTYPE DIVERSITY AND RESISTANCE CHARACTERISTICS OF ANTIRETROVIRAL TREATMENT-NAÏVE HIV-1 INFECTED PATIENTS IN WESTERN SYDNEY

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Background: Subtype differences have been linked to disease progression, transmission efficiency, accuracy of diagnostic assays, response to therapy, and development of drug resistance mutations. Western Sydney region has relatively high numbers of migrants from regions with high HIV prevalence. The presence of patients with Non-B HIV-1 subtypes in Australia may have implications for clinical care. This study aimed to evaluate molecular characteristics of HIV-1 subtypes and explore differences in resistance mutations between treatment naïve HIV-1 infected patients with B and Non-B subtypes.

Methods: Antiretroviral naïve HIV-1 infected patients of Western Sydney Sexual Health Centre and Westmead Hospital between January 2003 and July 2011, whose HIV-1 subtype data were available, were included in this retrospective study. Demographic details, subtype details and resistance mutations were included in the analysis. Baseline resistance mutations in patients with B subtype infections, and those with “non-B” subtype infections were described. Laboratory records were confirmed by conducting a case note review.

Results: We identified 186 antiretroviral naïve HIV-1 infected patients including 133 men (71.5%) and 53 women (28.5%). 94 were (50.5%) Subtype B (13 females, 81 males) and 92 (40 females, 52 males) were Non-B subtypes. In the non B subtype population studied, subtype C 39 (42.4%), CRF01_AE 25 (27.2%), CRF02_AG 13 (14.1%), A, D and G were all 2 (2.2%) each respectively. Other recombinant forms were 7 (7.7%). Baseline resistance data were available for 181 patients of which 22 (11.8%) had drug resistant mutations. This included 14 (14.9%) in subtype B and 8 (8.7%) in Non-B subtype.

Conclusion: There are some similarities with other published data from Australia however western Sydney cohort has significant and diverse HIV-1 Non-B subtypes. This diversity of HIV-1 may have important implications for the diagnosis, viral load quantification, resistance to antiretroviral drugs and ultimately clinical care to this group of patients.

Disclosure of Interest Statement: Nothing to declare

Paper Ref	542
Theme	HIV/AIDS Theme C: HIV/AIDS Surveillance
Presentation Type	HIV/AIDS Poster

PHYLOGENETIC ANALYSIS OF HIV-1 NON-B SUBTYPES IN WESTERN SYDNEY

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Background: HIV-1 subtype diversity within countries is an ever-changing landscape with more diverse subtypes being observed in previously relatively homogenous backgrounds due to various factors including immigration and tourism. Previous data has shown that a variety of HIV-1 subtypes are circulating in Australia, however HIV-1 subtype B remained the predominant subtype. This study aimed to identify non-B HIV-1 subtypes and circulating recombinant forms present in the Western Sydney community.

Methods: HIV-1 positive individuals presenting at Western Sydney health care facilities between January 2003 and July 2011 were included in the analysis. Demographic details such as risk factor for acquisition and country of HIV-1 acquisition were included if available. Protease genes were amplified and sequenced (1047nt) to determine HIV-1 subtype and drug resistance profiles. HIV-1 subtype was determined by sequence analysis. Samples with non-B subtype were selected for phylogenetic analysis to identify epidemiological linkages.

Results: Analysis of patient sequences identified subtype B as the predominant subtype in this population. Three non-B HIV-1 subtypes; A1, C and G and five CRF's; 01_AE, 02_AG, 06_cpx, 07_BC and 12_BF were also identified in cohort sequences (n=96). All patient sequences clustered with subtype reference standards with bootstrap support. Multiple samples from the same patient were identified in 7 cases. Six clusters, of two or more sequences with strong bootstrap support were identified. Two clusters represent potential cases of epidemiological linked transmission by IDU (subtype CRF 01_AE) and heterosexual contact (subtype CRF 02_AG).

Conclusion: Although subtype B remains the predominant subtype both in Australia and within the Western Sydney population a range of non-B subtypes and CRF also circulate within this population and are associated with a range of risk factors for transmission.

Disclosure of Interest Statement: Nothing to declare.

Paper Ref	34
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Poster

40,000 YEARS OF PASSION, SPIRITUALITY AND CUSTOMS : ANCESTRAL WAYS OF INCORPORATING CULTURE INTO CONTEMPORARY SERVICE DELIVERY

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Queensland Association for Healthy Communities

The 2 Spirits Program, winner of the “Collaboration for Change Award” at the 2012 Deadly Sex Awards, is the Aboriginal and Torres Strait Project of Healthy Communities (Queensland). The Program’s primary target groups are Aboriginal and Torres Strait Islander gay men and sisters and was established in 1996, then rebranded as “2 Spirits” in 2009. The term “2 Spirits” refers to a person that encompasses both a masculine and feminine spirit.

Examples of our culturally based work include:

Condoman - promoting sexual health and removal of shame. Created in 1987, and relaunched in 2009. Relaunched again in 2012 with the introduction of Lubelicious and other characters representing STI’s.

Conduct Elders forums in remote and regional Indigenous communities to inform Elders of the impacts of STI’s & BBV’s in their communities and how they can support community based awareness and education.

Indigenous social research of LGBT sexuality, drug use and mental health conducted in 2012, with significant implications on why culture must drive all Indigenous health messages.

Engagement with community through social groups gar ‘ban’ djee ‘lum and Youpla Mipla Aphla, Cum Kai Kai, – innovative and cultural ways of providing sexual health messages to community.

The Project uses a “whole of community approach” to provide sexual health to the Indigenous communities it works in. The cornerstone of the project is the incorporation of culture in every aspect of its work. The Project is never simply “culturally appropriate”, but instead incorporates a cultural way of working in every aspect of its work with LGBT Indigenous people.

Paper Ref	304
Theme	HIV/AIDS Theme C: Epidemiology Of HIV
Presentation Type	HIV/AIDS Poster

TYPES AND PREVALENCE OF HIV RISK BEHAVIOURS AMONG INMATES IN KEROBOKAN PRISON, BALI-INDONESIA 2010

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Introduction: Inmates in a prison are a population that very vulnerable with HIV transmission. Bali AIDS Commission estimated that 50 people infected with HIV in Bali's in 2006. Kerobokan Prison is the biggest prison in Bali. Zero surveys conducted in Kerobokan prison from 2000 to 2008 result in a fluctuated situation in the prevalence of HIV from 3.4% in 2006 to 18.7% in 2000. The other risk behaviours besides injecting drugs were remain unknown. This study aimed to explore the types and prevalence of HIV risk behaviours among inmates in Kerobokan Prison, Bali.

Methods: This was a cross sectional survey conducted from June 2009 to January 2010 in Kerobokan Prison, Bali. This survey were included 230 inmates which selected using systematic random sampling. Information retrieved from the questionnaires including demographic characteristics; criminal types; types of HIV risk behaviours. The data were analysed quantitatively. The KPF IRB approved this study. Before the interview, the respondent was given informed consent and they were free to choose to be or not to be the respondents of this research.

Results: Most of the respondents were males with the average age were 33 years old. Nearly half (47.0%) of them had graduated from high school and Javanese (40.4%). Most of the respondents were never been in jail before (83.0%) and more than half of them involved in illicit drugs cases (52.2%). Types and prevalence of HIV risk behaviours retrieved from this study were injecting drugs and sharing needles (7.4%); sexual intercourse (3%), piercing(7,4%); tattooing (17.8%) and razors sharing (11,5%).

Conclusion: Types of HIV risk behaviours found in this study were sharing needles, sexual intercourse without condom, piercing, tattooing and razors sharing. Tattooing was the most prevalent HIV risk behaviours. Sexual intercourse was the least.

Disclosure of Interest Statement: No disclosure of interest.

Paper Ref	139
Theme	HIV/AIDS Theme D: Culturally & linguistically diverse populs
Presentation Type	HIV/AIDS Oral Presentation

BREAKING CULTURE: HIV PREVENTION AND SUBJECTIVITIES OF CHANGE IN PAPUA NEW GUINEA

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Introduction: In Papua New Guinea (PNG), HIV prevention education largely takes on the model of “raising awareness”, based on psychosocial assumptions that the effective communication of health information would lead to healthy behaviours. The need to “talk about sex” is thus an important preoccupation for healthcare educators, yet regarded as a gravely difficult task, as “sex” is considered a customarily prohibited, secretive and shameful topic of discussion. I examine how healthcare educators have made sense of this tension by posing their own “culture” as a “barrier” to HIV prevention that ought to be “broken”.

Methods: Data is drawn from in-depth interviews and ethnographic observation with 48 healthcare professionals from two faith-based organisations in PNG.

Results: In standardising HIV prevention information across PNG, English and Tok Pisin biomedical terms describing disease, sex and genitalia were considered the most “accurate” and “perfect” explanations. The linguistic diversity in PNG and customary word taboos placed on sex are seen as “liabilities” to overcome, and healthcare educators believed it was necessary to “sensitise” themselves and the public in order to accept and indoctrinate this “new” form of knowledge. Apart from sociolinguistics, “problematizing culture” extended to challenging polygamy and gender-based violence, which were cast as “cultural practices” attributing to HIV spread.

Conclusion: An uncritical adoption of globally produced HIV prevention knowledges into a PNG social context has subjected Papua New Guineans to a process of self-questioning; this hierarchy of knowledge systems created a perception that it is “traditions” and “culture” which put people at risk to HIV, thus an imperative to change and forego who they are in order to attain ultimate wellbeing. The rhetoric of “breaking culture”, however, goes against another common consensus, which argues for cultural sensitivity in prevention education, and regard “culture” as an asset and resource for health, rather than the opposite.

Disclosure of Interest Statement: There are no conflicts of interest in the production of this research paper.

Paper Ref	498
Theme	Sexual Health: International
Presentation Type	Sexual Health: Poster

GENDER GAP IN PERCEIVING SEXUAL RIGHTS OF WOMEN IN INDIA

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¹International Institute for Population Sciences

Background: The perception and behavior are two conjoined aspect, where the understanding of one enhances the certainty of the other. An analysis of men's perception about sexual rights of women and women's views on control over their own sexuality will help us to reach to a conclusion of the prevalent scenario of India which may be linked to the current unpleasant mishaps occurring in the lives of Indian girls in the form of rape, molestation and sexual assaults.

Data and Methodology : Data from National Family and Health Survey-3 (2005-06) has been analysed for the four states of Andhra Pradesh, Karnataka, Bihar, Uttar Pradesh and as well as for whole India. Bivariate and Multivariate techniques have been used for the analysis.

Results: Women perceive less positively about their sexual rights and sexual autonomy as compared to the men in India. More women than men justified wife beating and use of force by husband when wife refuses sex.70 percent of women perceived that women can refuse sex when she is tired or not in mood as compared to 90 percent men, thus making a gender gap of about 20 percent. Only in Karnataka women perceived more positively than the men. The gender gap is found to be the highest in Andhra Pradesh.

Conclusion: Gender gap between perceptions of men and women shows that women believe that they have to play a submissive role in the family and do not have the right to say no to anyone and anything. This again shows a demeaning situation in India where women perceive less positively about their own bodily rights.

Paper Ref	547
Theme	Sexual Health: International
Presentation Type	Sexual Health: Poster

LINKAGES BETWEEN VIOLATION OF BODILY RIGHTS OF WOMEN WITH SEXUAL AND REPRODUCTIVE MORBIDITIES

Siddhanta, A¹, Singh, S.K¹

¹International Institute for Population Sciences

Background: Sexual violence in Bihar is as high as 20 percent which is 10 percent more than the National average. Only 4 percent of women of Karnataka had experienced sexual violence and the prevalence of sexual and reproductive morbidity is also found to be low in these states. This paper aims to study the linkage between violation of bodily rights of women with sexual and reproductive morbidities in India and the states of Bihar and Karnataka.

Methods: Bivariate and multivariate analyses have been on the data on National Family Health Survey-3.

Results: The occurrence of STD, genital sore, genital discharge in last twelve months was more prevalent in the group of women whose husbands has forced them for sex compared to the group of women who did not experience sexual violence in India and the selected states. About 21 percent of women in India experiencing sexual violence suffered abnormal genital discharge in the last twelve months against 9 percent women who did not experience sexual violence. About 5 percent women in India who experienced forced sex had genital sore or ulcer compared to only 2 percent women who did not face sexual violence. Women experiencing forced sex or any forced sexual act are two to three time more likely to have STD ($p < 0.01$) than the women who did not experience sexual violence. Women who have experienced forced sex in Karnataka are 8 times more likely to experience STD, 5 times more likely to get genital ulcer/sore in the last twelve months ($p < 0.01$). With more than one sexual partners women are two times more likely in India ($p < 0.01$) and five times more likely in Karnataka ($p < 0.10$) to have genital sore/ulcer. OBC and Non SC ST OBC are more likely to experience abnormal genital discharge in the last twelve months ($p < 0.01$) and genital sore or ulcer as compared to the Scheduled caste.

Paper Ref	548
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Poster

ENGRAVED TO CIRCUMCISED PAIN: COMPARATIVE STUDY OF VULNERABILITY AMONG WOMEN OF KENYA AND NIGERIA

Siddhanta, A¹ and Singh, S.K¹

¹ International Institute for Population Sciences

Background: Female circumcision is a phenomenon specific to Africa continent. The primary reason for selecting the two countries for analysis is that both are low economy country, yet the prevalence of circumcision has a telling difference even with its similar historical origination. Further, the study intends to explore the difference in perception of women in the selected countries with DHS Data with the help of various bivariate and multivariate analyses.

Results: Comparing the perception of the two countries, Kenyan women (90%) are of the view that this harmful practice should be discontinued while in Nigeria, the percentage is relatively lesser (74%). When two religious communities of the two countries is compared, it is found that high percentage (86.6%) of women from Christian community in Kenya as compared to only 66% in Nigeria believe that this tradition has no benefit. Controlling for the factors such as place of residence, education, wealth quintile, religion, ethnicity, women agency, mass media exposure and women who were circumcised, regression results of the two countries shows that in Kenya the Islam women are 2.7 times more likely ($P < 0.01$) than the Christians to say that this practice should be continued. More Muslim women in Kenya (35%) want her daughter to be circumcised compared to only 5.7% in Nigeria. The likelihood for the circumcised women wanting the practice to continue remains high for the both countries with circumcised women in Kenya 11 times more likely than the uncircumcised and in Nigeria, it is 21 times more likely than the uncircumcised women.

Conclusion: The prevalence of circumcision is much more in Nigeria than Kenya and the former lacks behind when it comes to positive perception. The findings reiterated the basic nature of human where we find that the women who went through the pain want other women also to be prisoners of circumcised pain.

Paper Ref	581
Theme	Sexual Health: Psycho-social
Presentation Type	Sexual Health: Poster

DO INDIAN WOMEN REALLY GET PRINCE CHARMING OF THEIR DREAM : GAP BETWEEN PERCEPTION AND BEHAVIOR OF INDIAN HUSBANDS TO THE SEXUAL RIGHTS OF THEIR WIVES

Siddhanta, A¹ and Singh,S.K¹

¹ International Institute for Population Sciences

Background: 80-90percent of men do not agree to wife beating and are of the opinion that wives can refuse sex when unwilling. But it is also true that 10percent of Indian women experience sexual violence within marriage.

Disclosure of Interest: The study aims to analyze gap between the perception and actual behavior of Indian husbands about the sexual rights of their wives, using NFHS (2005-06)data and various bivariate and multivariate methods have been adopted for the analysis.

Results: Nearly one in every ten men in India portrays gap in his perception and behaviour which further increases to 17-18percent in Bihar.Chi squared tests suggests that both husband and wives'age,place of residence,social status,religion,wealth quintile,education, mass media exposure,husband's alcoholism all are significantly associated with the gap between the perception and behavior of the Indian husbands. Gap between perception and behaviour is found more among the Muslim, SC, Poor, men with no education and no exposure to media.

It was found that in many cases in spite of having negative perception, they are not forcing their wives for sex. Thus comparisons have been done among the two groups, one where the husbands has perceived negatively and the wives have experienced forced sex (Negative Concordance) and the other group where husbands have perceived negatively, still their wives do not experience sexual violence (Negative Disconcordance). It was very interesting to find that non educated women were far less in the Negative Disconcordance group than the other group. Also, the percentage of women having higher education, and women with mass media exposure is found to be more in the Negative Disconcordance Group. These results implies that age at marriage, literacy status, exposure to mass media exposure and decision making power may have empowering role in the lives of the women in the Negative Disconcordance group.

Paper Ref	424
Theme	HIV/AIDS Theme B: Antiviral Therapy
Presentation Type	HIV/AIDS Poster

PREDICTORS OF ADHERENCE TO ANTIRETROVIRAL THERAPY IN HIV-INFECTED ADULTS (THE PAART PILOT STUDY)

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¹St Vincent's Hospital Sydney, ²The University of New South Wales, ³The National Association of People with HIV Australia

Introduction: Despite the proven effectiveness of antiretroviral therapy (ART) in preventing AIDS, death, morbidity and HIV transmission, many patients have difficulty maintaining adherence. Reasons for this are yet to be understood. Pharmacy copayments, which vary nationally, have been associated with reduced ART adherence. In this pilot study, we explored a range of factors including financial difficulties associated with self-reported ART non-adherence or interruption.

Methods: Twenty HIV-positive adults on ART, with an undetectable viral load participated in a pilot study to develop the tools for a national ART adherence study. Participants completed a brief cognitive screening, and a validated 90-question survey. A range of socio-demographic, financial, psychological, clinical and behavioral factors, and self-reported adherence and interruption were included.

Results: 20 participants (all men, 95% MSM, mean age 52 years, mean HIV duration 15 years) were recruited from 4 NSW sites. Mean time for survey completion was 43 minutes with >99% response rate for all 90 questions. Overall, 50% reported prior suboptimal ART adherence, 65% reported financial hardship. Although all had Medicare access, and 20% had reached the Medicare co-payment threshold in the last 12 months, 15% reported cost as a barrier to ART adherence. Requiring any financial assistance in the past year was associated with a non-significant 19% increase in ART non-adherence, and with a 33% increase in recent ART interruption.

Conclusion: There may be a relationship between need for financial assistance and ART non-adherence. A 2-year, prospective study will aim to identify the contribution of financial stress, and in particular of co-payment for antiretroviral prescriptions, to the risk of ART failure in HIV-infected adults.

Disclosure of Interest Statement: AC received funding to conduct this pilot study from the New South Wales Ministry of Health. AC has received research funding from Gilead Sciences and MSD; consultancy fees from Gilead Sciences, Viiv Healthcare, and MSD; lecture and travel sponsorships from Gilead Sciences, Viiv Healthcare, and MSD; and has served on advisory boards for Gilead Sciences, Viiv Healthcare, and MSD.

Paper Ref	426
Theme	Sexual Health: Reproductive Health
Presentation Type	Sexual Health: Poster

PERINATAL MORBIDITY ASSOCIATED WITH TRICHOMONAS VAGINALIS: A META ANALYSIS.

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Background: *Trichomonas vaginalis* is common worldwide, with high rates in women of reproductive age. Results of individual studies examining the impact of infection in pregnancy have been inconsistent. Therefore we conducted a meta-analysis of studies which examined the association between *T.vaginalis* infection and perinatal outcomes.

Methods: Following the PRISMA guidelines and MOOSE criteria, we searched the databases Medline, EMBASE and BioMedCentral for papers published to May 2013. Inclusion criteria were studies that assessed the statistical association between *T.vaginalis* in pregnancy and adverse outcomes. Primary outcomes of interest were preterm birth (<37 weeks), low birth weight (<2500g) and premature rupture of membranes. Pooled relative risk (RR) and 95% confidence intervals were calculated using either a fixed or random effects model.

Results: A total of 178 papers were identified and 51 full-text papers reviewed; 12 studies met the inclusion criteria. Study populations, outcomes and study quality varied. We found infection with *T.vaginalis* was associated with an increased risk of preterm birth (RR 1.4; 95%CI:1.1-1.7; 9 studies; n=81,001; I²=62.6%). A sub analysis of studies with no sexually transmissible co-infection found a slightly reduced RR of 1.3 (95%CI:1.2-1.5; p=0.0; 6 studies; n=20,646; I²=11.2%). In studies with no treatment, the RR was increased to 1.8 (95%CI:1.0-3.4; p=0.06; 3 studies; n=1795; I²=22.3%). Summary measures were not calculated for low birth weight and premature rupture of membranes due to significant heterogeneity.

Conclusion: The meta-analysis found an association between *T.vaginalis* in pregnancy and preterm birth, yet many studies had methodological limitations. There was insufficient evidence to assess the impact of *T.vaginalis* on other perinatal outcomes including low birth weight and premature rupture of membranes. The finding suggests that screening in women of reproductive age in high prevalence areas should be considered as preterm birth is an important cause of neonatal morbidity and mortality, however further studies are needed.

Disclosure of Interest Statement: No disclosure of interest

Paper Ref	303
Theme	Sexual Health: Other
Presentation Type	Sexual Health: Oral Presentation

SEXUAL IDENTITY AND SEXUAL VICTIMISATION OF MEN AND WOMEN IN AUSTRALIAN PRISONS

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Introduction: Sexual victimisation in prison has been associated with suicide, sexually transmissible infections and an inability to form lasting relationships. Different rates of sexual victimisation based on sexual identity have been reported in US prisons, with higher rates among non-heterosexual identified persons. This study examines the association between sexual identity and sexual victimisation in Australian prisons.

Methods: A random sample survey of men and women in NSW and Queensland prisons were screened using a computer-assisted telephone interview. We inquired about: sexual identity and sexual experiences in prison. Sexual identity was categorised as heterosexual or non-heterosexual (i.e. self-identified as "gay", "lesbian", "bisexual", "queer", "other"/"undecided"/"unsure"). Sexual victimisation included sexual coercion and threats of sexual coercion. Sexual coercion was defined as: "forced or frightened into doing something sexually that [they] did not want". Logistic regression was used to examine associations.

Results: A total of 2344 prisoner interviews were included in this study (2013 men, 331 women). Ninety nine (4.9%) men and 121 (36.6%) women identified as non-heterosexual. Sexual coercion in prison was higher in non-heterosexual men (19.8% vs 1.8%, $p < .0001$) and similarly among women (6.6% vs 2.4%, $p = 0.07$). Threats of sexual coercion was also higher in non-heterosexual men (22.2% vs 6.0%, $p < .0001$) and women (10.7% vs 4.3%, $p = 0.03$). After adjusting for demographics (including gender and age), prisoners identifying as non-heterosexual were more likely to experience both sexual coercion (Odds Ratio 7.9, 95% CI 4.36-14.41, $p < .0001$) and threats of sexual coercion (OR 2.7, 95% CI 1.67-4.40, $p < .0001$).

Conclusion: This study indicates that non-heterosexual identified prisoners are at a greater risk of experiencing sexual victimisation than heterosexual identified prisoners. Prison policies and support from relevant community-based organisations are required to address this risk.

Disclosure of Interest Statement: The authors report no conflicts of interest.

Paper Ref	305
Theme	Sexual Health: Other
Presentation Type	Sexual Health: Oral Presentation

“YOU’RE A WOMAN, A CONVENIENCE, A CAT, A POOF, A THING, AN IT”: TRANSGENDER WOMEN NEGOTIATING SEXUAL COERCION IN NSW MALE PRISONS.

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Introduction: Transgender persons in custody are reported in the US to be at high risk of physical and sexual assault, sexual coercion and self-harm. This paper examines the lived experiences of a sample of transgender women in NSW prisons. Concentrating specifically on their sexual safety and strategies enacted for survival, the authors discuss the findings in relation to formal transgender prison policy.

Methods: This qualitative study is based on interviews with seven transgender women (5 current prisoners and 2 ex-prisoners). Participants were recruited by purposive sampling as part of the Sexual Health and Attitudes of Australian Prisoners study. Five participants identified as Anglo-Australian and two as Aboriginal. Two prisoners were housed in female prisons and the remaining five had been or were housed in men’s prisons. Interviews were analysed to identify recurring and unique themes in relation to personal safety and sexual health-related issues in prison.

Results: Findings reveal a diversity of prison experiences. However, all transgender participants were aware of their ‘special’ sexual status which made them a visible, and potentially vulnerable, minority group in the prison setting. The everyday experience of sexual coercion and harassment was a reoccurring theme, associated with continual psychological distress. Three participants had experienced attempted sexual assault; one had experienced physical assault for refusing sexual advances; and two had been sexually assaulted. Participants described a variety of strategies used for keeping safe including: “shaming” and physically assaulting the perpetrator, standing one’s ground and earning ‘respect’, submitting to sexual demands to avoid physical harm and entering into sex and love-based relationships with other prisoners.

Conclusion: Although transgender prisoner policies represent a welcomed step for the ‘protection’ of transgender prisoners, this study reveals that, transgender women prisoners rely significantly more on informal mechanisms to address their own immediate sexual health and safety needs.

Disclosure of Interest Statement: The authors report no conflicts of interest.

Paper Ref	515
Theme	HIV/AIDS Theme D: Vulnerability & risk
Presentation Type	HIV/AIDS Poster

PERCEPTION OF HIGH SCHOOL STUDENTS ON RISK FOR ACQUIRING HIV AND UTILIZATION OF VOLUNTARY COUNSELING AND TESTING SERVICE IN DEBRE-BERHAN TOWN, ETHIOPIA: A QUANTITATIVE CROSS-SECTIONAL STUDY.

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Background: HIV epidemic among youth is largely ignored and remains invisible to both young people themselves and to the society as a whole, for which reason the young are more likely to carry the virus for years without knowing that they are infected. The study aimed to determine the extent of HIV risk perception and utilization of VCT service among high school students in Debre-berhan Town of Amhara Region, Ethiopia.

Methods: A descriptive cross-sectional study was conducted among public secondary schools in Debre-berhan Town from November 2010 to January 2011. A stratified random sampling technique was used to recruit study participants and semi-structured administered questionnaire was used to collect the necessary data. Data was entered and analyzed using SPSS version 17.0 packages.

Results: We attained a response rate of 96.3% and a total of 339 students were participated in the study. The result showed that 30(8.8%) of the students were sexually active with mean age of first sexual encounter being 16.4 +/- 2.05SD in years. About 12(3.5%) of sexually active students admitted having sex with different persons within the last 6 months. Among sexually active respondents, only 13(3.8%) had ever used condom and 15(4.4%) had VCT service. There was no statistical significant association between risk perception and ever use of VCT service (p-value > 0.05; AOR (95% CI) =1.0 (0.3, 4.02).

Conclusion: Students in the study area were engaged in risky sexual behavior despite high level of knowledge about HIV. The perception of risk for acquisition of HIV and rate of VCT utilization was low. Thus, education on HIV/AIDS by making a part of school curriculum and encouraging the existing health institutions to provide youth-friendly sexual counseling services including VCT are strongly recommended.

Disclosure of Interest Statement: The authors declare that they have no any competing interests. The research was fully funded by Aklilu Lemma Institute of Pathobiology, Addis Ababa University.

Paper Ref	60
Theme	HIV/AIDS Theme B: Antiviral Therapy
Presentation Type	HIV/AIDS Oral Presentation

RENAL SAFETY PROFILE OF COBICISTAT-BOOSTED ELVITEGRAVIR OR ATAZANAVIR PLUS EMTRICITABINE/TENOFOVIR DF IN HIV PATIENTS

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Introduction: Tenofovir DF (TDF) has infrequently been associated with renal toxicity. Cobicistat (COBI), like ritonavir, can increase creatinine (Cr) without affecting glomerular filtration by inhibiting renal tubular creatinine secretion. We examined the renal safety of recently approved single tablet regimen STRIBILD [STB] (elvitegravir [EVG]/COBI/emtricitabine [FTC]/TDF).

Methods: Pooled renal safety data through Week 48 were analysed from three STB studies (104, 102, and 103) and Two COBI studies (105 and 114).

Results: In the pooled STB studies, the median exposures to STB (n=749), ATR (n=375), and ATV/r+TVD (n=355) were 48, 59, and 48 weeks. The median (IQR) changes in Cr (mmol/L) at Week 48 in the three groups were 11.49 (5.30 to 19.44), 0.88 (-5.30 to 7.95), and 7.07 (0.88 to 15.02). The rates of renal AEs leading to study drug discontinuation (renal AE DC) were STB 1.1 % (8/749), ATR 0 %, and ATV/r+TVD 0.3 % (1/355). One patient in STB reported a serious renal AE not leading to study drug discontinuation. In the pooled COBI studies, the median exposures to ATV/co+TVD (n=394) and ATV/r+TVD (n=377) were 48 weeks. The median (IQR) changes in Cr (mmol/L) at Week 48 in the two groups were 11.49 (4.42 to 19.44) and 7.95 (0.88 to 15.02). The rates of renal AE DC were ATV/co+TVD 1.5 % (6/394), ATV/r+TVD 1.6 % (6/377); two and three renal AE DCs from each group were serious AEs.

Conclusion: As expected, small increases in Cr were seen with the use of STB or COBI. The rates of renal event leading to study drug discontinuation with TDF-containing COBI-boosted EVG or ATV regimen were low at 1.2% (14/1143).

Disclosure of Interest Statement: Prof Don Smith has received funding from, acted as an advisor for and/or participated in clinical research for: Gilead Sciences, , Janssen, Merck, Bristol Myers Squibb ViiV Healthcare, Abbvie.

Paper Ref	421
Theme	HIV/AIDS Theme B: Clinical Programs
Presentation Type	HIV/AIDS Poster

THE EFFECT OF EXERCISE ON BODY COMPOSITION IN PEOPLE LIVING WITH HIV

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Introduction: People living with HIV (PLHIV) have an elevated risk of chronic disease. Body mass index (BMI) and waist circumference (WC) are established indicators for chronic disease risk. This study aimed to assess the impact of an exercise physiology intervention (EP) on body composition.

Methods: PLHIV attending a multidisciplinary HIV ambulatory care in Sydney were invited to attend the exercise physiology clinic as part of routine care over a 12 month period. Participants received EP at baseline, week 6 (W6) and week 12 (W12) for assessment and exercise prescription to assist with the participant's own weight change goals.

Results: Sixty-nine PLHIV (67 male, 2 female) participated in an initial baseline EP, of whom 38 (37 male, 1 female) reported a goal of weight reduction. The weight loss group had mean BMI 28.87kg/m² ±4.13 kg/m² and mean WC 100.74cm ±11.55cm at baseline. Twenty completed W6 and 11 completed W12 follow-up.

In the weight loss group, there were significant reductions at W6 in mean weight (-1.26kg, $t_{19}=2.893$, $p=0.009$), BMI (-0.40kg/m², $t_{19}=2.786$, $p=0.012$), and WC (-1.78cm, $t_{19}=3.536$, $p=0.002$). There were further significant reductions between W6 and W12 in mean WC (-1.09cm, $t_{10}=2.390$, $p=0.038$) only. Overall reductions between baseline and W12 remained significant for mean weight (-1.81kg, $t_{10}=2.540$, $p=0.029$), BMI (-0.54kg/m², $t_{10}=2.494$, $p=0.032$), and WC (-2.41cm, $t_{10}=3.364$, $p=0.007$).

Conclusion: Weight status and WC improved significantly during this 12 week EP. This is consistent with research in the general population, which suggests larger improvements when exercise is combined with dietary changes. A larger and longer duration study including dietary intervention is recommended to assess the effectiveness of EP, and its interaction with diet, on larger body composition changes, maintenance of weight loss and chronic disease risk in PLHIV.

Disclosure of Interest Statement: The Albion Centre received funding from Abbott Australia to support the employment of a 0.2FTE exercise physiologist for 12 months.

Paper Ref	187
Theme	HIV/AIDS Theme B: Delivery Of Care
Presentation Type	HIV/AIDS Poster

COMMUNITY BASED EXERCISE PHYSIOLOGY INTERVENTION FOR PEOPLE LIVING WITH HIV (PLHIV)

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Introduction: Lifestyle interventions including diet and exercise have been shown to be effective in reducing cardiovascular risk in PLHIV.

This study aimed to evaluate the impact of an exercise physiology intervention in a community based setting, on physical activity levels, cardiovascular fitness and muscular strength.

Methods: PLHIV attending a multidisciplinary HIV ambulatory care in Sydney were invited to attend the exercise physiology clinic as part of routine care over a 12 month period (2012 -2013) The exercise intervention at baseline, week 6 and week 12 consisted of measurements and exercise prescription with practical demonstration.

Results: Sixty-nine PLHIV (67 male, 2 female) participated in an initial baseline consultation, 37 completed week 6 and 23 completed the week 12 follow-up.

Participants reported a significant increase ($p < 0.05$) in their total physical activity at both 6 and 12 weeks as measured by the International Physical Activity Questionnaire. Mean resting systolic and diastolic blood pressure and heart rate showed non-significant reductions at the 6 and 12 week follow-up. There was a significant improvement in patient's ability to perform the sit to stand test at both follow-up sessions. Patients who returned at 6 weeks saw an average mean increase of 3.5 repetitions in 30 seconds ($t_{36} = 3.384$, $p < 0.001$), and those who returned at 12 weeks showed an increase of 5.0 repetitions from their baseline measurements ($t_{22} = 2.848$, $p = 0.009$). Mean grip strength increased significantly between baseline and 6 week follow-up ($t_{36} = 3.384$, $p = 0.002$) however this significance was not maintained through to 12 weeks ($p = 0.197$).

Conclusion: Physical activity and ability to perform the sit to stand lower body muscular strength test improved significantly during this 12 week exercise intervention, with non significant reductions in blood pressure and heart rate noted. A longer study duration to assess the effectiveness of this community based exercise intervention on cardiovascular risk in PLHIV is recommended.

Disclosure of Interest Statement: The Exercise Physiology Clinic at the Albion Centre received funding from Abbott Australia to support the employment of a 0.2FTE exercise physiologist for 12 months.

Paper Ref	167
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Oral Presentation

HOME-BASED SAMPLE COLLECTION INCREASES CHLAMYDIA RETESTING AND DETECTS ADDITIONAL REPEAT POSITIVE TESTS: A RANDOMISED CONTROLLED TRIAL IN THREE RISK GROUPS.

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Introduction: Chlamydia retesting at three months after treatment is recommended to detect reinfections, but retesting rates are low. We assessed the impact of combining home-collection with SMS reminders on retesting rates in three risk groups.

Methods: A randomised controlled trial was undertaken, involving 600 participants diagnosed with chlamydia: 200 men who have sex with men (MSM), 200 women and 200 heterosexual men. Participants were recruited from Melbourne and Sydney Sexual Health Centres and randomised to the home group (SMS reminder at 3 months and home-collection) or the clinic group (SMS reminder). The mailed home-collection kit included a self-collected vaginal swab (women), UriSWAB (Copan) for urine collection (heterosexual men), and UriSWAB plus rectal swab (MSM). The primary outcome was the proportion retested at 1-4 months after chlamydia diagnosis, and the secondary outcome was the proportion with repeat positive results at the 1-4 month retest. Any testing outside of study sites was collected and included in the outcomes. An intention to treat analysis was conducted.

Results: Overall 61% (183/300) of home group participants retested within 1-4 months of chlamydia diagnosis compared with 39% (118/300) in the clinic group, ($p < 0.001$). According to risk group, the differences were: 62% vs 45% (MSM), 65% vs 38% (women) and 55% vs 34% (heterosexual men), all $p < 0.05$. Overall the proportion with a repeat positive result at the 1-4 month re-test was 16% (95%CI:11-23) (30/183) in the home group compared with 10% (95%CI:5-17) (12/118) in the clinic: 26% (95%CI:16-39) vs 11% (95%CI:4-24) (MSM), 12% (95%CI:5-22) vs 5% (95%CI:1-18) (women) and 11% (95%CI:4-22) vs 15% (95%CI:5-31) (heterosexual men).

Conclusion: SMS reminders combined with home-based collection was a very effective strategy to increase chlamydia retesting in all three risk groups, and also detected additional repeat infections in MSM. The acceptability to patients and health care provider costs are currently being evaluated.

Disclosure of Interest Statement: I declare no conflict of interest.

Paper Ref	345
Theme	Sexual Health: International
Presentation Type	Sexual Health: Poster

“BREAKING THE CULTURAL AND SOCIAL TABOOS ASSOCIATED WITH WOMEN SEXUALITY IN PAKISTAN”

Sana Sohail

Issue: In Pakistani society women sexuality and HIV/AIDS both considered as taboo and a big stigma which creates an environment of frustration and repression among women and girls to internalized the sex, sexual and their sexual rights as a big cultural, social and religious sin to talk about all these topics which is hindering them from accessing the available information and healthcare services regarding sexual and reproductive health information, Lack of information and services increase the vulnerability of community women, high risk sexual behaviors, unintended pregnancies, teenage pregnancies, unsafe abortions, family planning methods and HIV and AIDS including STIs, STDs.

Description: The project aims at empowering community women give them accurate information through interactive theatre and capacity building. The activities of the projects are

1. Conducting research in District Lahore to find out the knowledge, Attitude, and Perception of women about Gender, Sexuality and HIV/AIDS
2. Educating 1000 community women of District Lahore about Gender, Sexuality rights, family planning including STIs, STDs and HIV/AIDS, mode of Transmission and Prevention
3. Enabling community women to establish “Sexuality Education Clubs” in their areas for replicating the information among other women of their communities and to enable them to fight the stigma and discrimination related to sexuality and HIV/AIDS in Islamic society.

Lessons learned:

1. 5000 community women of “Lahore” got accurate education about gender, sexuality rights and HIV/AIDS
2. 25 Sexuality Education Clubs established and start functioning efficiently, 1700 young women volunteered to be part of these Clubs

Next Steps: Need to give Sexuality education to community women as they have no source to get accurate information about their gender, sexuality health and rights which creates their vulnerabilities to HIV/AIDS and creating space for them to internalized the sex, sexual and sexual rights as cultural, social and religious taboo to keep them away on getting information about such sensitive issues.

Paper Ref	308
Theme	HIV/AIDS Theme C: Prevention Programs
Presentation Type	HIV/AIDS Poster

“OUR CHURCH IS AGAINST CONDOM BUT YOU USE IT FOR PROTECTION” HOW CHRISTIAN HEALTHCARE WORKERS RESPOND TO HIV IN PAPUA NEW GUINEA

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Introduction: Papua New Guinea (PNG) has the highest prevalence of HIV in the Pacific. It is also the most socially, culturally and geographically diverse country in the Pacific. Most people in PNG affiliate with a Christian denomination and churches are often at the forefront of the HIV response through delivery of health, education and community services. This study explored how the Seventh-day Adventist church health system responds to HIV and AIDS.

Methods: 17 health care workers and 4 health system administrators participated in 21 semi-structured interviews and 18 health workers in 3 focus groups discussions. Participants were recruited using convenience and purposive sampling across 10 Seventh-day Adventist health centres in 4 provinces. Interviews were digitally recorded and transcribed and coded for common themes.

Results: HIV testing, treatment, care and support for people living with HIV and AIDS were considered to be supported by church teaching. Some prevention strategies, such as abstinence or faithfulness were considered to be supported by church teaching. Condoms were considered not to be supported by church teaching. Despite this most health workers started that abstinence and be faithful were insufficient for HIV prevention and made condoms available in church health centres. Some health workers create and enact their own perceived HIV prevention strategies such as replacing C for condom with C for Christ's way in the ABC method. None of the health workers had read or knew about official church policy on HIV and AIDS and condoms.

Conclusion: Health workers struggled how to balance social, cultural and religious beliefs with professional ethics and legal requirements as health workers resulting in variable HIV prevention, treatment and care across church run health centres. It is important to understand how health workers and administrators balance beliefs and professional practice in PNG given the prominence of church based health services in the country.

Disclosure of Interest Statement: This study was funded by Papua New Guinea National AIDS Council Grant: RES10.005. No pharmaceutical grants were received in the development of this study.

Paper Ref	464
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

SAFELANDING: A HEALTH PROMOTION MODEL THAT BUILDS THE CAPACITY OF SCHOOL COMMUNITIES TO DELIVER SEXUALITY EDUCATION

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Background: Sexual and reproductive health (S&RH) is a significant health issue for young people with concerns including unplanned pregnancies, rising rates of sexually transmitted infections, increasing incidence of unwanted sex and the impact of social media.

The efficacy of schools as sites for health promotion in S&RH is affirmed by international research. Evidence supports teachers being best placed to impact on the sexual health and wellbeing of young people when a comprehensive, whole-school approach is taken linking curriculum and learning within the school environment to the wider school community.

Barriers exist which impact on the success of this practice. These include lack of leadership within schools, inadequate pre service training, lack of access to professional development and peer support, limited frameworks to engage community input to sexuality education programs, fear of parental criticism and a lack of skills, confidence and tools to address the sensitive and complex nature of sexuality and relationships education.

Methods: Family Planning Victoria (FPV) has developed SafeLanding to provide an evidence based model addressing the barriers schools face in teaching sustainable sexuality education. The SafeLanding model and toolkit provide a framework for schools to deliver a whole-school learning approach to sexual health education utilising community partnerships. SafeLanding seeks to influence policy and curriculum frameworks, leadership support, teaching practices and community engagement practices within schools.

Results and Conclusion: The SafeLanding Model is based on internationally accepted health promotion principles and can be adapted for use within individual school communities. This paper will outline the SafeLanding Model and its evidence base, findings from the pilot studies, the proposed research framework and provide an overview of how SafeLanding provides a model to deliver sustainable sexuality education within a health promotion framework.

Paper Ref	92
Theme	HIV/AIDS Theme D: Women & HIV
Presentation Type	HIV/AIDS Oral Presentation

FACTORS ASSOCIATED WITH CLINICIAN-PATIENT DISCUSSIONS REGARDING SEXUAL ACTIVITY AND CONTRACEPTION IN REPRODUCTIVE-AGED WOMEN WITH HIV

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Background: Contraceptive use is important for women of reproductive age living with HIV both to plan and optimise safety of pregnancies. Clinicians play a vital role in counselling patients about contraceptive options and safe sexual activity. Discussion regarding relationship status, sexual activity and contraception should occur routinely and regularly. This study aims to determine the frequency and predictors of such discussions and contraceptive use.

Method: A retrospective clinical audit of all reproductive-aged women (n = 128) treated for HIV between 2010 and 2012 at two metropolitan hospitals in Melbourne, Australia. Medical records were reviewed for documentation of discussions regarding sexual activity, relationship status, and contraception. Poisson regression modelling was performed to determine predictors. Variables included were age of patient, gender of doctor, previous pregnancy, country of birth and antiretroviral regimen.

Results: Sexual activity status was documented for 53% (n=69) of women and contraception use was recorded for 28% (n=36) of women. 27% (n=34) of women used contraception, 10% (n=13) did not use contraception and contraceptive use was not recorded in 63% (n=81). When a discussion regarding sexual activity was documented, women were 3.63 times more likely to also have documented a discussion about contraception (p=0.01), with a trend towards this being less likely if the woman was on NNRTIs compared with protease inhibitors. Excluding women who were pregnant, women who used contraception were 2.0 times more likely to have had a discussion about contraception (p=0.03).

Conclusions: Discussion regarding sexual activity, relationship status and contraception between HIV positive women of reproductive age and their clinicians remains inconsistent and suboptimal. Women who had a documented discussion regarding contraception were more likely to actually use contraception, which may suggest benefit in clinician-led discussions. Mechanisms to facilitate regular discussion about sexual activity and contraception between clinicians and women with HIV, warrants further investigation.

Disclosure of Interest: The authors have no disclosures.

Paper Ref	365
Theme	Sexual Health: Reproductive Health
Presentation Type	Sexual Health: Oral Presentation

A THREE YEAR COMPARATIVE STUDY OF CONTINUATION RATES, BLEEDING PATTERNS AND SATISFACTION IN AUSTRALIAN WOMEN USING A PROGESTOGEN-ONLY IMPLANT OR HORMONAL INTRAUTERINE SYSTEM

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Background: In Australia the etonogestrel-implant and the levonorgestrel-intrauterine system (IUS) are subsidised under the Pharmaceutical Benefits Scheme (PBS) making them very affordable long term contraceptive methods. There are no comparative longitudinal studies, on women's experience of these methods in Australia. The 3 year study aimed to determine the user characteristics, factors which influenced women to choose either method and to compare continuation rates and experiences.

Methodology: Women presenting to FPNSW clinics for insertion of either an implant or an IUS completed the study-entry questionnaire after giving informed consent. Follow up occurred at 6 weeks then 6, 12, 24 and 36 months. Satisfaction, side-effects, bleeding patterns, method failure or discontinuation and reasons for discontinuation were assessed. The clinical records were accessed to obtain additional information from any contraceptive-related clinic visits during the three-year follow-up period.

Results: Women choosing an IUS (n=200) were older, more likely to be tertiary educated, be married or in de facto relationships and have children than women choosing an implant (n=149). Fifty-two percent of women using an implant had it removed within 3 years compared to 30% of women using an IUS (P=0.001). More women (55%) had their implant removed because of the bleeding pattern than women using an IUS (21%). Detailed analysis to two years of use revealed differing bleeding patterns. Satisfaction levels for the IUS were higher in the first 6 months of use (77% vs 65%) but by 12 months had increased to over 80% for both methods. There were no pregnancies.

Conclusion: Both the implant and IUS are highly effective and acceptable methods of contraception. Changes in bleeding patterns particularly in the first six months caused more discontinuations of the implant than the IUS. Satisfaction for both methods was high at 12 months of use. These Australian-based data will support practitioners in discussing LARC options during the contraceptive consultation.

Disclosure of Interest: Edith Weisberg has provided expert opinion for MSD and Bayer Healthcare, and has obtained research funding for investigator-initiated research from both companies. Deborah Bateson has provided expert opinion for MSD, Bayer Healthcare and Pfizer as part of her role as former Medical Director at Family Planning NSW, and has been supported to attend conferences by MSD and Bayer Healthcare.

Family Planning NSW provides Implanon NXT training for MSD and has received an educational grant from Bayer Healthcare to set up an IUD insertion training programme. The authors alone are responsible for the content and the writing of the paper.

Paper Ref	366
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Oral Presentation

COMPARISON OF BLEEDING PATTERNS BETWEEN CONTINUOUS TWELVE MONTH USE OF A CONTRACEPTIVE VAGINAL RING AND A LOW DOSE PILL IN A MENSTRUALLY-SIGNALLED REGIMEN

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Objectives: Extended pill cycles have varied from 42-168 days but there are no reports of a 12 months continuous menstrually-signalled regimen or a comparative study between a low dose pill and a vaginal ring. The primary aim of the study was to compare bleeding patterns of two contraceptive regimens. A secondary aim was to evaluate, if a continuous regimen affects risk parameters like weight, blood pressure or plasma lipids.

Design and Methods: 132 women were randomized to continuous use of a vaginal ring (CVR) or a low –dose combined pill (P) for 360 days. A menstrually-signalled regimen was used with 4 days cessation of treatment when breakthrough bleeding occurred. Bleeding and spotting and ring or pill use were recorded in a menstrual diary. The main endpoint was the total number of bleeding / spotting over four 90 day reference periods (RP). Detailed analysis of bleeding patterns according to WHO criteria was undertaken.

Results: There was a reduction in the mean number of bleeding/spotting days from RP1 (CVR 14.2±10; pill 16.6±10.9) to RP4 (CVR 8.8 ±9.6; Pill 8.8±9.1). The two methods did not differ with regard to the mean number of total bleeding/spotting days in any RP. The bleeding response was idiosyncratic with 8 CVR and 2 pill users, experiencing amenorrhoea or infrequent bleeding throughout the study.). Compliance with 4 day hormone withdrawal if bleeding persisted was poor. No significant changes in mean weight, blood pressure, or lipids were observed.

Conclusion: With this menstrually-signalled regimen of continuous use of a contraceptive pill or CVR the number of bleeding days dropped significantly from RFP1 to RFP4 and the number of women with amenorrhoea rose. However, the unpredictability of the bleeding pattern should be addressed during counselling. The continuous regimen does not induce changes in blood pressure or plasma lipid levels with either method.

Conflicts of interest: The CVRs used in the study were provided by MSD and the COC by Bayer Healthcare. Neither company was involved in any aspect of the design, execution or analysis of results.

Edith Weisberg has provided expert opinion for MSD and Bayer Healthcare, has been supported to attend conferences by Bayer Healthcare and has obtained research funding for investigator-initiated research from both companies

Ian Fraser has received occasional lecture and consultancy honoraria and expenses from MSD and Bayer Healthcare and has received occasional research grants for specific contraceptive studies from these companies.

Paper Ref	419
Theme	HIV/AIDS Theme D: Country Specific Research
Presentation Type	HIV/AIDS Poster

INITIATION OF HIV TESTING AND COUNSELING SERVICES IN SEXUAL AND REPRODUCTIVE HEALTH SERVICES IN TIMOR-LESTE

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Introduction: HIV prevalence rates in Timor-Leste (TL) are 0.2%. Although TL is a low prevalence country, it is experiencing higher rates of HIV transmission than epidemiological modelling projected in 2005. Sexually transmissible infection (STI) prevalence rates are increasing, and sentinel surveillance has reported HIV prevalence of 2.58% in the STI population group. Provision of HIV testing and counselling (TAC) through sexual and reproductive health (SRH) services has been identified as a critical mechanism for addressing HIV in TL.

Methods: The Timor-Leste Australia Collaboration for HIV Testing and Counselling (TAC-TAC) is designed to train and mentor local health workers to provide HIV TAC. The project began with a 42 item knowledge, attitude and practice (KAP) survey of clinicians. Surveys were coded to ensure confidentiality and support repeated assessment over time. Data were analysed using SPSS v20.

Results: The KAP survey was completed by all SRH clinicians prior to attending TAC training (n=18), representing nine district sites (100% response rate). Results revealed some misinformation related to HIV transmission risks. Situations incorrectly rated as high risk were: unprotected oral sex with an HIV positive person (n=16, 89%); giving an injection to an HIV positive person (n=16, 89%); and assisting in the delivery of a baby with an HIV positive mother (n=14, 78%). Only one respondent had performed an HIV test, and only five (28%) reported comfort taking blood from a possible HIV positive person. Nonetheless all respondents agreed it was important to provide TAC to clients.

Conclusion: This baseline survey provides significant information to guide the initiation of HIV TAC services. Despite a willingness to provide TAC, misinformation could result in stigma and discrimination and could ultimately hinder TAC scale-up. A repeat of the KAP survey will allow assessment of TAC-TAC training and mentoring effectiveness in terms of HIV transmission risk knowledge.

Disclosure of Interest Statement: TAC-TAC is funded by the Australian Agency for International Development (AusAID).

Paper Ref	559
Theme	HIV/AIDS Theme C: Community Prevention Strategies
Presentation Type	HIV/AIDS Oral Presentation

CONSUMER PREFERENCES FOR A COMMUNITY-BASED RAPID HIV POINT-OF CARE TESTING SERVICE FOR MEN WHO HAVE SEX WITH MEN IN MELBOURNE.

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Background: Policy and regulatory support for HIV point-of-care testing (POCT) in Australia has recently emerged. International HIV POCT services for men who have sex with men (MSM) have adopted predominantly community-based and non-physician led models.

Methods: To inform the implementation of a community-based HIV POCT service targeting MSM in Melbourne, HIV negative gay and other MSM completed an online survey in April 2013. We describe service preferences and, after presenting a vignette describing a proposed community-based POCT service model, factors associated self-reported likelihood to seek HIV POCT through the service.

Results: Most participants (N=274) identified as gay (91%) and residing in metropolitan Melbourne (93%). Sexual risk and HIV testing behaviours were broadly similar to other behavioural surveys of gay men; 28% reported recent UAIC and 71% reported their last HIV test within past 12 months. Most participants reported HIV testing at a gay-friendly general practice (35%) or a sexual health clinic (32%). Nearly half the participants (47%) reported they would be 'very likely' to attend the service for HIV POCT (a further 36% reported they would be 'likely' to attend). Those reporting being 'very likely' to attend for a HIV POCT expressed a preference for after-hours weekday testing (OR=2.81; 95%CI=1.63-4.83), perceived their HIV testing frequency as inadequate (OR=2.42; 95%CI=1.33-4.42) and reported their last HIV test at a sexual health clinic compared to a gay-friendly general practice (OR=1.26; 95%CI=1.02-1.55). They also reported insufficient time (OR=2.12; 95%CI=1.11-4.07), difficulty finding convenient appointment times (OR=3.49; 95%CI=1.32-9.17) and returning for test results (OR=2.36; 95%CI=1.37-4.07) as barriers to current HIV testing.

Conclusion: While international experiences offer useful insights, HIV POCT service models in Australia must account for local community preferences. A community-based service model was overwhelmingly supported by participants and was particularly appealing to those reporting previously identified structural service barriers to conventional HIV testing.

Paper Ref	259
Theme	HIV/AIDS Theme B: Delivery Of Care
Presentation Type	HIV/AIDS Poster

EFFECT OF SMS PROMOTIONAL BROADCASTING ON THE UPTAKE INFLUENZA VACCINE IN HIV POSITIVE PATIENTS.

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Background: RPA Sexual Health offers a free yearly influenza vaccination to HIV positive patients as advised by National Immunisation Guidelines. Notifying and mobilising these patients for immunisation is time and labour intensive but is considered to be important to the health of this group. Recent upgrades to the patient database have allowed the addition of an SMS service that can broadcast single messages to large groups of targeted patients.

Methods: In March 2013 consenting HIV positive patients were sent an SMS broadcast to inform them of the availability of the influenza vaccine and encourage them to attend the clinic for vaccination. To assess the reach and influence of this method of patient, the results of the SMS broadcast were compared to results from 2012 which used nurse initiated telephone communication to patients. Results compared included the number of patients contacted; staff time involved and the number of patients vaccinated.

Results: The method of communication in 2012 used nurse initiated phone calls to successfully contact 35% (54/154) of current HIV positive patients. By comparison in 2013 a SMS broadcast communication was sent to 81% (128/159) patients ($p < 0.001$). The staff time required in 2012 was estimated at 6.5hrs. In 2013 the SMS broadcast took less than 0.5hrs of staff time. In 2012, 26% (40/154) of current HIV patients received an influenza vaccine compared with 2013 when 47% (75/159) of HIV patients were vaccinated ($p = 0.001$).

Conclusion: The results in 2013 show a significant increase in the number of patients contacted and vaccinated, using less staff time. These results suggest that SMS broadcasting to targeted groups is an effective and time efficient method of communicating to and mobilising patients for health related initiatives.

Disclosure of Interest Statement: no conflicts of interest

Paper Ref	661
Theme	HIV/AIDS Theme A
Presentation Type	HIV/AIDS Oral Presentation

BREADTH AND MAGNITUDE OF ENVELOPE-SPECIFIC ADCC RESPONSES IN PEOPLE WHO NATURALLY CONTROL HIV

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Background: People who naturally control HIV infection (slow progressors and viremic controllers) provide important insights into the immune correlates of protection against HIV. Understanding such immune correlates is vital to designing a vaccine against HIV. Both magnitude and breadth of protective immune responses are considered important in producing an effective, globally relevant HIV vaccine. In trying to identify these immune responses, scientific endeavour has focused on antibody dependent cellular cytotoxicity (ADCC) as a novel HIV vaccine modality, after vaccine strategies based on neutralizing antibodies and T-cell immunity failed to demonstrate efficacy.

Methods: We studied ADCC immune responses to envelope glycoprotein subtypes A, B, BC, C, D, E and F using our previously described ADCC ICS assay in 15 people who naturally control their HIV infection (controllers) and compared this with 15 HIV subjects with progressive HIV infection (progressors). Controllers were subjects with CD4 >400 cells/ul, 7 or more years after diagnosis and/or with persistently low (<3000 copies/ml) or fully suppressed plasma viral loads. The magnitude was measured in terms of NK cell expression of CD107a+IFNγ+ (<2%=low; 2-8%=medium and >8%=strong responses).

Results: ADCC responses in controllers were higher than in progressors (medium to strong responses in 100% vs 53%; p <0.01). ADCC Ab responses were broader in HIV controllers (93% had cross reactivity to at least one subtype) than in HIV progressors (53%; p<0.01)). We also observed that the ADCC responses were higher to HIV-1 gp120 than gp140. Furthermore, we demonstrated that glycosylated envelope proteins elicit potent ADCC response and that responses to gp120 are higher than gp140.

Conclusion: The potency and breadth of ADCC responses that we have detected to envelope proteins in people who naturally control HIV infection may provide important insights into both prophylactic and therapeutic rational HIV vaccine design. Strong responses to gp120 may indicate hidden epitopes, not exposed in trimeric gp140. Strong responses to glycosylated envelope proteins suggest that glycosylation is not dampening these responses.

Paper Ref	558
Theme	HIV/AIDS Theme C: Prevention Programs
Presentation Type	HIV/AIDS Oral Presentation

TREATMENT AS PREVENTION IN AN AUSTRALIAN SETTING

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Background: Current Australian HIV treatment guidelines allow initiation of combination anti-retroviral therapy (cART) at CD4 counts <500 or symptomatic HIV. Based on the HPTN052 study, many advocate initiating cART at diagnosis; how this would translate into an Australian setting is unclear.

Methods: We studied a prospective cohort of cART-naïve HIV-infected individuals at Alfred Health enrolled 2004-2010 and analysed cART initiation, HIV-related illnesses and probable HIV transmissions.

Results: We studied 79 individuals (82% MSM); 67 eventually commenced cART (follow-up 517 patients-years pre-cART and 269 patient years post-cART). The median CD4 count for commencing cART was 309 (range 100-831), with 47 (70%) commencing cART with CD4 <350. Twelve subjects developed HIV-related illnesses; 2 of these occurred at a CD4 count >500. Thirteen developed a significant adverse reaction to cART, three were severe. We are aware of 6 probable transmissions of HIV from our cohort, all occurred prior to cART. Two transmissions occurred in subjects who had never had a CD4 count <500, whilst 3 transmissions occurred in medicare-ineligible subjects. The estimated additional drug cost of initiating cART in all subjects at HIV diagnosis was \$7.8 million.

Conclusions: cART is frequently initiated late and is associated with HIV-related illnesses and transmissions. Initiation of cART at diagnosis ("test and treat") in these 79 subjects may have prevented 2 subjects developing HIV-related illnesses and prevented a minimum of 2 HIV transmissions. If the entire cohort initiated cART at a CD4 count of 500 (current guidelines) this may have prevented 10 HIV-related illnesses and prevented a minimum of 4 HIV transmissions. The primary problem in managing HIV lies with slow initiation of cART in patients who are either already eligible for cART (CD4 <500) or who are medicare ineligible, both in terms of individual benefit and prevention of transmission.

Paper Ref	567
Theme	HIV/AIDS Theme B: Delivery Of Care
Presentation Type	HIV/AIDS Poster

A SERVQUAL ANALYSIS ON HIV PATIENTS SATISFACTION OF DIETARY SERVICE QUALITY IN REFERRAL HOSPITALS IN INDONESIA

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Introduction: Patients' satisfaction is considered to have an impact to adherence to treatment in HIV patients. Compliance to dietary recommendation is critical, as HIV patients are very vulnerable to malnutrition and co-infection. This study aimed to evaluate HIV patients' satisfaction with dietary services in referral hospitals in Indonesia.

Methods: A total of 33 HIV positive patients in four referral hospitals who were able to communicate and had been hospitalized for at least three days were recruited to the study. Data was collected between October 2012 and May 2013 by using a SERVQUAL (Service Quality) scale that had been adapted to nutrition care prior to study. This instrument was applied to evaluate perception on quality and patients' satisfaction by measuring gap between perception and expectation. The scale consists of five dimensions; tangibility, reliability, responsiveness, assurances and empathy. It has 25 questions and five grades of response, ranging from 1 (totally disagree) to 5 (totally agree).

Results: Patients' appraisal to all dimensions in quality of care; tangibility, reliability, responsiveness, assurances, and empathy was generally lower than their expectation. The reliability aspect had the lowest good appraisal from patients (24.24%), whereas, the tangibility aspect had the highest good rating (39.4%). In terms of satisfaction to treatment, 66.67% of respondents were satisfied to dietary services. The most satisfying dimension was tangibility (84.85%), while reliability, responsiveness, assurance, and empathy had considerably lower scores of satisfaction with 63.64%, 66.67%, 60.61%, and 63.64% respectively.

Conclusion: Patients perceived that the quality of dietary services was lower than their expectation. Yet, most of them were satisfied with the "physical" services (tangibility dimension) such as meal services provided by dietitians. Thus, hospitals need to introduce standard of professional behavior on treating HIV patients to improve satisfaction in all aspects.

Disclosure of Interest Statement: This study received grants from the Faculty of Medicine, Gadjah Mada University, Indonesia. No pharmaceutical grants were received in the development of this study.

Paper Ref	575
Theme	HIV/AIDS Theme B: Workforce Issues & Professional Practice
Presentation Type	HIV/AIDS Poster

EVALUATION OF DIETITIANS' KNOWLEDGE ON HIV DIETARY SERVICES IN REFERRAL HOSPITALS IN INDONESIA

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Introduction: Nutrition plays a significant role in ensuring the success of HIV medication and maintaining patients' quality of life. Proper nutrition care is determined by adequate knowledge and competency specifically in the principle of nutrition care for HIV patients. This study aimed at evaluating dietitians' knowledge on proper nutrition care for HIV cases.

Methods: A total of 35 dietitians work in five HIV referral hospitals in Indonesia and consented to participate, were involved in this study (response rate was 77.78%). Data was collected between July and December 2012 by using a questionnaire developed accordingly to the FANTA and WHO HIV-nutrition guideline. This instrument has been tested prior to study. This close-ended questionnaire consists of 20 questions, and the cut off is set to 80%.

Results: This study found that no dietitians involved in this study had adequate knowledge on nutrition care for HIV patients. Nutrition comprehension was extremely poor in two aspects of study; nutrition planning and food safety, with only 32.38% and 42.86% of dietitians had accurate responses. Whereas, the aspect of nutrition intervention, which evaluated understanding on dietary requirement, meal services, nutrition counseling, and supplementation had slightly better response with 58.16%.

Conclusion: Dietitians have poor knowledge on the principle of nutrition care for HIV patients. This may undermine efforts to provide optimal care for patients. Therefore, specific trainings in HIV and nutrition should be conducted to improve this situation.

Disclosure of Interest Statement: This study received grants from the Faculty of Medicine, Gadjah Mada University, Indonesia. No pharmaceutical grants were received in the development of this study.

Paper Ref	149
Theme	HIV/AIDS Theme B: Delivery Of Care
Presentation Type	HIV/AIDS Oral Presentation

BARRIERS TO INTEGRATING HIV AND AIDS SERVICES INTO COMMUNITY HEALTH CENTRES IN BALI PROVINCE, INDONESIA

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Introduction: HIV and AIDS control activities in Bali Province are vertically organised, lack integration at point of delivery and are heavily reliant on funding from donor agencies. Bali Province is currently developing an 'exit strategy' from donor funding, with strong emphasis on integration policy to maximise program efficiency and sustainability. This study explored barriers to implementing integration of HIV and AIDS services into community health centres (Puskesmas) and potential solutions.

Methods: A policy analysis was completed using a qualitative design. Policy documents were analysed to identify components of current overarching frameworks relevant to integration. In-depth interviews were conducted with 10 respondents to explore the perspectives of policy makers and other stakeholders. Data were analysed using a thematic method and presented using a narrative approach.

Results: Barriers to integration included lack of infrastructure and funding arrangements, lack of program linkages at *Puskesmas*, lack of inter-sectoral linkages, high turnover and rotation of staff, lack of skills and training, lack of incentives program for increased workload and lack of community awareness about HIV services availability at *Puskesmas*. Several steps need to be taken to enable implementation of integration. HIV-AIDS funding should be pooled at Bali Province Department of Health and distributed based on *Puskesmas* capacity and need. Training should be conducted with *Puskesmas* staff to promote HIV-AIDS services as core business and encourage program cross-linking. Partnerships should be formed between *Puskesmas* and lay counsellors to raise awareness of *Puskesmas* services.

Conclusion: The findings of this study can be used to inform implementation of a health system strengthening approach for HIV-AIDS control measures in Bali Province. *Puskesmas* integration should also be considered as a policy option by other provinces in Indonesia where HIV prevalence is high and the main route of transmission is heterosexual contact.

Disclosure of Interest Statement: No conflict of interest

Paper Ref	122
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Poster

SACRED SISTAS PROJECT: USING ART TO FACILITATE SEXUAL AND REPRODUCTIVE HEALTH EDUCATION

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Introduction: High rates of Chlamydia and early pregnancy in Victorian Aboriginal communities demonstrate the need for ongoing education of young people and the workforce that delivers sexual and reproductive healthcare services to them. Developed by an Aboriginal midwife, the Sacred Sistas Project uses arts activities to facilitate the delivery of sexual and reproductive health education to young Aboriginal women and girls aged 12-30. It also provides training for healthcare workers to continue the program in their communities.

Methods: The Sacred Sistas Project has been designed with two key components to positively influence sexual and reproductive health knowledge and behaviour, reduce STIs and BBVs, and prevent unplanned pregnancies:

1. The first involves the delivery of the Sacred Sistas arts workshop where young women create clay 'womb' bowls and beaded 'cycle' bracelets as a medium to increase knowledge and awareness in a non-threatening, fun, and safe environment that enables discussion and expression.
2. The second provides education, training and support for local health service providers and healthcare workers in how to promote sexual and reproductive health through craft and storytelling, facilitating the Sacred Sistas workshop on an ongoing basis.

Results: Evaluation of the program indicates it has generated a high level of interest from health workers, who say they have gained valuable knowledge in approaching sexual and reproductive health with clients that compliments their current practice. Young women participating in the workshops identified improvements in their knowledge that may influence positive changes for their sexual and reproductive health.

Conclusion: Using arts activities to facilitate the delivery of sexual and reproductive health education has been an effective way to engage with young Aboriginal women and girls. Providing health workers with the skills to use arts activities in the promotion of sexual and reproductive health with young women allows for long-term sustainability of the project.

Disclosure of Interest Statement: Nothing to declare.

Paper Ref	315 and 589
Theme	HIV/AIDS Theme A: Basic Retrovirology
Presentation Type	HIV/AIDS Oral Presentation and Poster

PROMOTER TARGETING SMALL RNA SUPPRESSES HIV-1 INFECTION *IN-VIVO* THROUGH TRANSCRIPTIONAL GENE SILENCING

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Introduction: Certain short interfering (si)RNAs targeting homologous sequences in promoter regions of genes induce transcriptional gene silencing (TGS). We have previously reported substantial inhibition of HIV-1 replication through TGS by a siRNA targeting the HIV-1 promoter region in a variety of in-vitro models. We investigated in-vivo inhibition of HIV-1 replication through siRNA mediated TGS using a humanised (hu-) SCID mouse model of acute HIV-1 infection.

Methods: We used a lentiviral delivery system to express short-hairpin-RNA homologous to a conserved sequence in the HIV promoter of HIV-1JRFL (shPromA-JRFL) and a 3-based mismatched variant (shPromA-M2) as specificity control. Human PBMCs were transduced with shPromA-JRFL and shPromA-M2. Seven days later the transduced-PBMCs were implanted by intraperitoneal injection into NOD/SCID mice (n=8/group). We evaluated anti-HIV activity in the humanized mice. On day 15 after HIV-1 inoculation, samples were collected from the mouse orbit, peritoneal cavity and spleen, and the ratio of CD4+/CD8+ cells and percentage of p24-expressing cells determined.

Results: VL in the serum (p=0.014) and percentage of p24-expressing cells in CD3+CD8- cells from the spleen (p=0.038) were significantly reduced in the shPromA-JRFL group. The ratio of CD4+/CD8+ T cells was significantly higher (p=0.014) in the shRNA shPromA-JRFL treated group. Further analysis of the presence of processed PromA-JRFL anti-sense strand RNA in T-cells purified from the spleen revealed that expression levels of the anti-sense RNA strand inversely correlated with level of circulating HIV RNA in serum (r=0.79, p=0.003). HIV-1 infection, silenced by shPromA-JRFL was reactivated by phorbol myristate acetate stimulation of ex-vivo cultures of splenocytes obtained from PromA-JRFL treated mice. HIV-1 suppression was not due to off-target effects of shPromA-JRFL. There was no evidence for induction of in type I interferons or interferon response genes.

Conclusion: These data provide proof of principle that shRNA targeting HIV-1 promoter is able to suppress HIV-1 replication via TGS in-vivo in this acute model of HIV-1 infection.

Disclosure of Interest Statement: No disclosure of interest.

Paper Ref	692
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Oral Presentation

IMPACT OF A COMPREHENSIVE STI PROGRAMME ON STI RATES ON THE NGAANYATJARRA LANDS.

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Introduction: Ngaanyatjarra Health Service (NHS) provides health care to 12 remote communities in the Central Desert of Western Australia. NHS has delivered a sexual health program modelled on the 8 ways strategy of STI & HIV care and prevention. A main component of the program is an annual STI community screen as well as opportunistic testing outside the annual screen. Further there was a recent focus on youth empowerment programs that aimed to reduce STI rates for young people. High rates of STI s have been reported in these communities for many years.

Methods: Gonorrhoea and Chlamydia test results for men and women aged 15-39 from each annual screening period from 2001 to 2012 were extracted from the Health Service Information Systems to ascertain testing and positivity. Clinical audit of current STI/BBV care was conducted in 2012-2013 to identify areas for improvement.

Results: Between 2001 to 2012 the number of tests for the NHS annual STI screen remained steady at average n= 431. Overall positivity rates for Gonorrhoea in 2001 were 14.1% and in 2012; 4.8% and for Chlamydia in 2001; 12.6% and in 2012; 7.4 %. Decrease in rates are most marked in 25-39s, and rates in the under 20s increasing: Gonorrhoea; 15.7% and Chlamydia 19.7% in 2011, for males the rate was 30% in 2011. Audit: 87% of women who had ever been tested had an STI, high rates of re-infection in women for the 15-24 yr age group with frequent adverse reproductive health outcomes.

Conclusion: There has been a reduction in the prevalence of Gonorrhoea and Chlamydia infections over a decade of annual STI screening by NHS. Despite these gains rates have increased in the 15-19 year age groups. We have demonstrated that the model of care currently being delivered through the NHS is impacting on STI community prevalence and positivity data. However much more work needs to be completed especially with the youngest age groups.

Paper Ref	680
Theme	Sexual Health: Other
Presentation Type	Sexual Health: Oral Presentation

IMPROVING SYSTEMS TO SUPPORT BEST PRACTICE IN SEXUAL HEALTH SERVICE DELIVERY: FINDINGS FROM THE STRIVE TRIAL

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Background: STRIVE is a cluster randomised controlled trial of a sexual health quality improvement program (SHQIP) underway in 65 remote Aboriginal communities in northern Australia. This includes an annual systems assessment (SAT), which engages health service staff to review and improve their systems to support sexual health service delivery. We assessed changes in system development following implementation of the SHQIP.

Methods: Data are presented for 21 services across 4 regions allocated to the SHQIP in mid-2011. The SAT covers 6 domains: health hardware, clinical services, information systems, health promotion, organisational commitment, and surveillance and evaluation. Staff rate items on a scale of 0-11 (11= fully developed support). SATs were undertaken at baseline and one year after SHQIP implementation. Linear regression analyses assessed the mean change in ratings for each domain over time, with adjustment for clustering within services.

Results: Over the first year of the SHQIP, participating health services experienced significant improvements in all system domains, except health hardware (Figure 1). The greatest improvements occurred in surveillance and evaluation (mean difference (MD) 4.1, confidence intervals (CI) 3.3-4.9, p<0.0001) and organisational commitment (MD 3.3, CI 2.6-4.0, p<0.0001), followed by information systems (MD 1.8, CI 0.9-2.7, p=0.0004), health promotion (MD 1.6, CI 1.0-2.3, p=0.0001) and clinical services (MD 0.6, CI 0.1-1.0, p=0.02). The change in ratings over time varied considerably across regions for all domains.

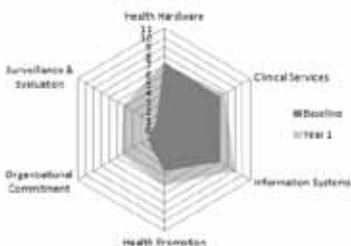


Figure 1: Mean ratings of each system domain at baseline and after SHQIP implementation.

Conclusion: During the first year of the SHQIP there was considerable improvement in staff ratings of health service systems, most notably in the availability of STI data and in management support for integrating sexual health care into routine practice. Ongoing monitoring is occurring to determine whether these developments are sustained and associated with improved service delivery.

Paper Ref	112
Theme	HIV/AIDS Theme B: Antiviral Therapy
Presentation Type	HIV/AIDS Poster

IMPACT OF DIFFERENT STARTING TIMES OF ANTIRETROVIRAL THERAPY ON SURVIVAL AND FOLLOW-UP AMONG HIV/TB CO-INFECTED PATIENTS AT SOCIAL HEALTH CLINIC, CAMBODIA.

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Introduction: The CAMELIA study showed improved survival in HIV/TB co-infected patients who commenced ART between 2 and 8 weeks after the start of TB treatment compared to those who started ART later (>8 weeks). In practice, nearly a quarter of HIV/TB co-infected patients at the Social Health Clinic started ART even earlier than 2 weeks. Physicians have questions about the benefit of this very early initiation.

Methods: A retrospective cohort study was conducted in the Social Health Clinic (SHC) Phnom Penh, Cambodia, using data between November 2004 and December 2011. Included in our analyses were adult (≥ 15 years) HIV patients with newly diagnosed TB infection, who were ART-naïve and who subsequently started ART within 36 weeks of initiating TB treatment. The primary outcome was death or lost to follow-up (LTFU). Kaplan-Meier methods were used to compare rates of death/LTFU between patients who commenced ART very early (≤ 2 weeks after TB treatment initiation) and those who commenced later (>2 weeks). Cox proportional hazard were used to assess factors associated with death/LTFU.

Results: Data from 222 patients were analyzed. The median of time to initiating ART after TB treatment was 42 days. At baseline, the median CD4+T-cell count was 90 cells/mm³, and the median hemoglobin level was 109g/L. Death/LTFU occurred more frequently among the 174 patients (36 deaths/LTFU) who initiated ART later than in the 48 patients (4 deaths/LTFU) who initiated ART early [incidence rate: 4.6 versus 2.02 per 100 person-years, respectively] with a hazard ratio of 0.44 (95% CI: 0.14-1.34; P=0.151) in the group initiated ART ≤ 2 weeks. Lower hemoglobin was the only independent predictor of death/LTFU (HR: 4.45; P=0.020).

Conclusion: The initiation of early antiretroviral therapy ≤ 2 weeks after the start of tuberculosis treatment might reduce the risk of death and loss to follow-up among HIV/TB co-infected adult patients.

Disclosure of Interest Statement: Nothing to declare.

Paper Ref	150
Theme	HIV/AIDS Theme B: Delivery Of Care
Presentation Type	HIV/AIDS Oral Presentation

CERVICAL SCREENING AND HIV: A REVIEW OF WOMEN ATTENDING THREE SEXUAL HEALTH CLINICS IN SYDNEY

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Introduction: Cervical cytology abnormalities are more common in women with HIV.

Australian guidelines recommend annual Papanicolaou (Pap) tests and colposcopy for all screen detected abnormalities for immunocompromised women.

Methods: Retrospective case note review of women with HIV who attended three publicly funded sexual health clinics in metropolitan Sydney January 2009 to December 2011.

Correlates of screen detected abnormalities were assessed using logistic regression.

Results: In the three-year study period 156 women, median age 40 (range 21-73 years), attended for HIV care. Nearly two-thirds, 112 (72.7%) were born overseas and one-third, 51 (33.8%) spoke a language other than English. Pap tests were performed on 108 (69.2%) women, of whom 13 (12.6%) were screened annually. Pap Test Register information was documented for 130 women, with 77 (59.2%) included on the register. Of the 48 (30.8%) women who did not have a Pap test at a sexual health centre over the study period, only 7 (14.6%) had documented attendance at another service. Cervical screening results were available for 103 women, 30 (29.1%) had an abnormality detected. Correlates with an abnormal result were younger age ($p=0.027$), being born in Sub-Saharan Africa ($p=0.004$), more recent arrival in Australia ($p=0.02$), CD4 count $<350\text{mm}^3$ ($p < 0.001$), having a detectable viral load ($p=0.049$), shorter duration on antiretroviral therapy ($p < 0.001$) and more recent diagnosis of HIV ($p=0.01$). There was no correlation with CD4 nadir or regular attendance for HIV care.

Conclusion: As far as we are aware this is the largest study to examine cervical screening uptake and outcomes of women with HIV in Australia. Our participants have low documented uptake of screening. Screen detected abnormalities were associated with a combination of social and HIV related factors. Targeted education to address barriers and innovative recruitment strategies may improve screening rates.

Disclosure of Interest Statement: Nil

Paper Ref	494
Theme	HIV/AIDS Theme B: HIV Associated Diseases
Presentation Type	HIV/AIDS Oral Presentation

DETECTION OF SYSTEMIC HUMAN PAPILLOMAVIRUS TYPE 16-SPECIFIC T-CELL RESPONSES IN HIV-UNINFECTED AND INFECTED MEN WHO HAVE SEX WITH MEN

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Introduction: About 85% of anal cancers are attributable to persistent infection with human papillomavirus type 16 (HPV16). Its precursor, high-grade anal intraepithelial neoplasia (HGAIN), is highly prevalent (>30%) in men who have sex with men (MSM). HGAIN frequently regresses spontaneously. Cellular immune responses are likely to be important in underlying mechanisms of disease clearance.

Methods: We measured systemic HPV16-specific T-cell responses directed against the viral oncogenic proteins E6 and E7 in a cross-sectional pilot substudy of the longitudinal Study of the Prevention of Anal Cancer (SPANAC). SPANAC is an ongoing natural history study of anal HPV and AIN in MSM aged ≥ 35 years. We used a novel assay for CD4+ antigen-specific T-cells based on CD25/CD134 co-expression, and an intracellular cytokine stain (ICS) assay for interferon- γ (IFN γ) and interleukin-2 (IL2) production from CD4+ and CD8+ antigen-specific T-cells.

Results: 118 men were studied: mean age 50.7 years, 30 (25.4%) were HIV-infected. Of 95 men with anal HPV DNA results available, 25 (26%) had anal HPV16 detected. Mean CD4+ T-cell count was 825 and 596 cells/ μ L for HIV-uninfected and infected men respectively. With the CD25/CD134 assay, positive HPV16-specific CD4+ T-cell responses were detected to E6 and E7 in 59 (50.0%) and 30 (25.4%) men respectively. The mean size of positive responses to E6 and E7 were 0.109% and 0.104% of CD3+CD4+ lymphocytes respectively. With the ICS assay, positive HPV16-specific CD4+ T-cell IFN γ or IL2 responses were detected to E6 and E7 in 23 (19.5%) and 14 (11.9%) men respectively. Positive HPV16-specific CD8+ T-cell IFN γ or IL2 responses were detected to E6 and E7 in 25 (21.2%) men for both proteins.

Conclusion: This is the first study describing detectable systemic HPV16-specific T-cell responses against viral oncogenic proteins in a substantial proportion of MSM. The clinical significance of these responses remains to be determined.

Disclosure of Interest Statement: Winnie Tong, Kelsee Shepherd, Jeff Jin and John Zaunders declare no conflicts of interest. Richard Hillman has received research funding from Merck. Andrew Grulich has received honoraria and research funding from CSL Biotherapies, honoraria and travel funding from Merck, and sits on the Australian advisory board for the Gardasil HPV vaccine. Anthony Kelleher has received research funding and travel assistance from Merck and has acted as a consultant to ViiV Health Care. Andrew Carr has received research funding from Baxter, Gilead Sciences, MSD and Pfizer; consultancy fees and lecture and travel sponsorships from Gilead Sciences, MSD, Serono, ViiV Healthcare and Roche; and has served on advisory boards for Gilead Sciences, MSD, and ViiV Healthcare.

Paper Ref	393
Theme	HIV/AIDS Theme B: Costing & Economics Studies
Presentation Type	HIV/AIDS Poster

COST-EFFECTIVENESS OF ANTIRETROVIRAL THERAPY EXPANSION STRATEGIES IN VIETNAM

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Objectives: The objective of this study is to determine the cost effectiveness of antiretroviral therapy (ART) expansion strategies in Vietnam and estimate the expected spending on ART for each expansion strategy in 2010-2019.

Design: ICERs were calculated using a Markov model, populated by data from a cohort of 3,449 patients who initiated ART between 1 January 2005 and 31 December 2009 in 13 outpatient clinics across six provinces in Vietnam. Probabilistic sensitivity analysis was conducted to examine the model's robustness.

Methods: Various ART initiation thresholds and treatment coverage level were compared by examining health outcomes relative to service costs. The cost per QALY gained for different treatment scenarios were compared to the current situation. The costs and outcomes of expansion strategies were estimated from the Vietnamese Government perspective. Cycle length is one year. A ten-year time horizon was estimated.

Results: Currently, 18% of treatment eligible PLHIV (i.e., CD4 cell counts \leq 350 cells/mm³) were on ART. At the current treatment commencement rate, upgrading the current treatment threshold to 500 cells/mm³ and 'treat all' were only cost-effective in 52.8%, and 54.6% of the times based on a cut-off of willingness-to-pay of three per-capita GDP per QALY gained. However, all scenarios were considered to be cost-effective when ART commencement rate is beyond 30%. The model was sensitive to utility, ART cost, and transition probability.

Conclusions: Increasing treatment commencement is more cost effective than upgrading treatment thresholds. Special efforts are required to increase treatment commencement rates through promoting early HIV diagnosis in high-risk population groups and timely access to ART services when patients are identified eligible for ART initiation (350 cells/mm³). Only if substantially greater amounts of fundings are available would it be worth shifting the threshold to 500 cells/mm³.

Disclosure of Interest Statement: None.

Paper Ref	394
Theme	HIV/AIDS Theme C: Social & Behavioural Research
Presentation Type	HIV/AIDS Poster

FACILITATORS AND CHALLENGES TO EXPANDING METHADONE MAINTENANCE TREATMENT IN VIETNAM: FINDINGS FROM PATIENTS AND SERVICE PROVIDERS PERSPECTIVES

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Background: Methadone maintenance treatment (MMT) has been successfully implemented in some provinces in Vietnam. The Government has just launched the national strategy to scale up MMT to all provinces in Vietnam. This study examines the facilitators, and challenges in MMT expansion under both patients' and service providers' perspectives

Methods: 40 drug users, 20 on MMT and 20 not in MMT at six outpatient clinics in two provinces were recruited for in-depth interview. Five focus group discussions with 25 service providers were conducted. Interviews and group discussions were recorded and transcribed.

Results: Drug users and service providers in the study showed positive feedbacks to the program. MMT facilitators included patient satisfaction, methadone accessibility, clinic location, clinic opening hour. However, lengthy registration process, restricted eligible criteria, limited capacity, and lack of financial support to clinic staff were operational barriers that impeded the successful expansion of MMT.

Conclusions: To improve access to MMT, the current MMT policies and practices must be revised. Eligible criteria for MMT program should be less stringent along with the shortened enrolment process. MMT clinic staff must be provided with sufficient trainings and financial supportive scheme.

Disclosure of Interest Statement: None

Paper Ref	285
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Oral Presentation

CONTRACEPTIVE USE IN AUSTRALIA

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Objectives: To describe contraceptive use in Australia and in different population subgroups.

Methods/strategies: Data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey 2011 were analysed. Data from 2,677 women aged 18-44 years who were not currently pregnant, did not have any physical difficulties in getting pregnant, had not had a hysterectomy were analysed.

Results: Two thirds (67%) of women used contraception and 83% had ever used contraception. Oral contraception use was most common (32%), followed by condom use (22%), vasectomy (8.5%) and tubal ligation (4.1%). Very few women used long acting reversible methods of injectable contraception (1.6%), the implant (3.6%) and intrauterine devices (3.2%).

Contraceptive use increased from 62% among women aged 18-24 years to 74% among women aged 25-29 years, decreased to 66% among women aged 30-34 years and increased again to 70% among women aged 40-44 years. Oral contraception and condoms were more common among younger women and sterilisations were more common among older women.

Only 61% of women with no children used contraception compared to 81% of women with three or more children. Women with fewer children were more likely to use oral contraception and condoms while women with more children were more likely to use sterilisations.

Women from non-English speaking backgrounds reported lower contraceptive use than women from English speaking backgrounds (50% compared to 71%). Oral contraception was less common (21% vs. 35%) as well as vasectomy (4.3% vs. 9.4%).

Indigenous women reported lower contraceptive use than non-Indigenous women (64% compared to 71%). Use of oral contraception was less common among Indigenous women (23% vs. 35%) but tubal ligation was more common (14% vs. 4.1%).

Conclusions: Effort to increase contraceptive use, especially long acting reversible methods, should be focused on identified high risk groups of women.

Disclosure of Interest Statement: The information presented here is from the Sexual and Reproductive Health in Australia Report, funded by the Australian Department of Health and Ageing.

Paper Ref	287
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Poster

SEXUAL AND REPRODUCTIVE HEALTH OF INDIGENOUS PEOPLE IN AUSTRALIA

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Background: To compare sexual and reproductive health outcomes between Indigenous population and non-Indigenous population.

Methods: Analyses of various existing data sources (the Household, Income and Labour Dynamics in Australia survey and the Australian Bureau of Statistics data) and review of existing literature

Results: Fertility: Compared to non-Indigenous population, Indigenous population have higher fertility rate (2.6 live births per woman vs.1.8), lower median maternal age (25 vs. 31 years) and higher teenage fertility rate (76 live births per 1,000 women vs. 16).

Infant mortality and morbidity: Babies of Indigenous population mothers have higher rates of perinatal mortality (13 deaths per 1,000 live births vs. 9.5), preterm births (13% vs. 8) and low birth weight (12% vs. 6%). Indigenous population mothers utilise antenatal care less than non-Indigenous population mothers (77% had five or more antenatal care visits vs. 94%) and are more likely to smoke during pregnancy (50% vs. 15%).

Contraception: Indigenous population women used contraception less than non-Indigenous population women (64% vs.71%), used much less oral contraception (23% vs.35%) but more tubal ligation (14% vs. 4.1%).

Cancer: Indigenous population women have higher cervical cancer rate (18 new cases per 100,000 females vs. 6.6), cervical cancer mortality rate (9.9 deaths per 100,000 females vs. 1.9) and mortality incidence ratio (0.54 vs. 0.28).

Sexual Transmissible Infections: Indigenous population people have higher infection rates of chlamydia (1,342 per 100,000 vs. 378), gonorrhoea (673 per 100,000 vs. 22), syphilis (32 per 100,000 vs. 5), newly acquired hepatitis B (3 per 100,000 vs.1) and genital herpes (18% vs.12%).

Conclusions: Indigenous people have much poorer sexual and reproductive health outcomes than non-Indigenous population. It is very important that service providers meet the needs, and challenges to address this significant concern involving reproductive and sexual health in Indigenous populations.

Disclosure of Interest Statement: The information presented here is from the Sexual and Reproductive Health in Australia Report, funded by the Australian Department of Health and Ageing.

Paper Ref	428
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Poster

CAPACITY BUILDING AMONG HEALTH CARE PROFESSIONALS AT AN ABORIGINAL MEDICAL SERVICE: A DIFFERENT APPROACH

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Background: Within Aboriginal and Torres Strait Islander communities, blood borne viruses (BBVs), and bacterial sexually transmissible infections (STIs), with the exception of HIV, have a higher prevalence than the NSW prevalence. Health care professionals working in Aboriginal Community Controlled Health Services (ACCHS) may lack opportunities for capacity development due to time constraints and relevance of training offered.

Methods: Through a partnership approach, a training model was developed to build the capacity of health care professionals at the Redfern AMS. RPA Sexual Health, Redfern AMS and ASHM NSW developed a six-part education series of BBV and STI education sessions focusing on local epidemiology. Following each session, feedback was collected through an evaluation covering topic relevance, delivery method and educational gaps. A qualitative analysis was undertaken to examine the effectiveness of the educational series

Results: Educational sessions were held at the Redfern AMS each Friday morning over a six-month period. With the support of the AMS management, the medical clinic was minimally staffed during this time ensuring health care professionals were able to attend the sessions. On average, 82% of the health care professionals engaged in the BBV and STI educational series. Of these, 100% indicated their learning needs were met, 80% indicated education was relevant to their workplace and many participants cited a positive change in their clinical practice as result of the training.

Conclusions: The overall qualitative feedback indicates the series was well accepted and effective in delivering education at the Redfern AMS. Whilst there was a high participation rate, sessions were not accessible to staff rostered on different days. This evaluation suggests a supported in-service approach developed in partnership yields a high engagement rate and self-reflected change in practice. This model could be adopted in to build the capacity of health care professionals who work in ACCHS settings.

Paper Ref	265
Theme	HIV/AIDS Theme B: Delivery Of Care
Presentation Type	HIV/AIDS Poster

IT'S NOT IN THE NOTES!

Trotter, G¹; Cummins, D², Batterham, M³, O'Connor, C.C.^{4,5,7}, Healey-, L⁴, Murray, K⁶.

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Background: Mild Neurocognitive Disorder(MND) may be difficult to identify as key symptoms may be due to other clinical conditions. Using a client self assessment booklet "HIV and associated MND" we recruited 123 participants from 3 sites : RPAH HIV clinics, RPAH Sexual health Service and Liverpool Hospital HIV clinics. A medical record audit was conducted to ascertain whether signs and symptoms (S&S) of MND identified by the patient or their nominated caregiver was discussed at their next medical consultation. We assumed if there was no documentation in the medical record that there had been no discussion with the patient regarding the symptoms reported. Thus, the medical record may not be reflecting the medical consultation.

Methods: Using the booklet patients and their nominated caregivers identified S&S of MND. A list was generated of their specific S&S and was placed in their medical record for a reminder for the doctor to aid discussion at their next medical consultation at each site.

An audit was the conducted of the clinical files focusing on next three medical appointments to ascertain whether there was any documentation regarding the discussion with clients about the results and whether follow up or investigation was mentioned.

Results: Of the 123 patients and 43 caregivers across three sites, of these 92 patients and 30 caregivers selected 4 or more S&S. Documentation of discussion regarding these results with the patient was as follows: at RPAH 29%, RPAH Sexual Health Service 36% and Liverpool Hospital HIV clinic 0%.

Conclusion: Although it is hard to know what is discussed as there was no documentation but there was anecdotal evidence from some clinic meetings that a discussion had taken place with the clients but this was not documented. Further research needs to be done to ascertain if there are any specific reasons for this.

Disclosure of Interest Statement: AbbVie supplied an unconditional educational grant.

Paper Ref	269
Theme	HIV/AIDS Theme B: Social & Behavioural Research
Presentation Type	HIV/AIDS Poster

DOES THE CAREGIVER NOTICE MILD COGNITIVE IMPAIRMENT?

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Background: Mild Neurocognitive Disorder(MND) may be difficult to identify as key signs and symptoms(S&S) may be due to other clinical conditions. Using a self assessment booklet “HIV and associated MND” we recruited 123 participants from 3 sites : RPAH HIV clinics, RPAH Sexual Health and Liverpool Hospital HIV clinics.

Each person was asked to nominate a caregiver who completed the booklet. Often patients may down play S&S or may assume what they are experiencing may be due to ageing and/or stress . On reflection caregivers are well placed to notice changes that the PLHIV may not. By asking caregivers we hoped to find another way of reporting S&S of MND.

Methods: Using the booklet, patients and their nominated caregivers identified S&S of MND.

Results: 65% (80) did not nominate a caregiver to be contacted. Liverpool recruits did not identify any caregivers. 43 PLHIV had identified caregivers across the two sites, of these 30 identified more than four S&S. Five symptoms gave agreement between caregivers and clients: less accurate with tasks $p>0.001$; more tired mentally and physically at the end of the day $p>0.001$; more frequently losing things $p>0.005$; have to concentrate more to get things done $p>0.011$ and don't go out socially as much $p>0.049$. The top symptom reported by both caregivers (47%) and clients (67%) was being mentally tired at end of day.

Conclusion: The number of patients not identifying a caregiver was of interest. Caregivers may be well placed to notice changes which a PLHIV may not. If available, the caregivers experience and personal knowledge of the patient could be very useful in reporting changes which may then be discussed with their doctor.

Disclosure of Interest Statement: AbbVie supplied an unconditional educational grant.

Paper Ref	134
Theme	HIV/AIDS Theme D
Presentation Type	HIV/AIDS Poster

BUILDING SOCIAL CURRENCY WITH FORESKIN CUTS: THE COPING MECHANISM OF PAPUA NEW GUINEA HEALTH WORKERS AND THE IMPLICATIONS FOR SEXUAL HEALTH PROGRAMS

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Background: Recent research as part of a multi-disciplinary investigation on the acceptability and impact of male circumcision for HIV prevention in Papua New Guinea (PNG) has shown that health workers (HWs) undertake unauthorised forms of penile cutting practices in public health facilities or, in community settings, at times within a traditional context.

Methods: 25 in-depth interviews (IDIs) were completed with a variety of HWs from 2009 until 2011 and were triangulated with findings from 45 focus group discussions (FGDs) and 82 IDIs completed with community members as part of a wider qualitative study on community perceptions about masculinity, penile foreskin cutting and penile modifications in PNG. Thematic analysis examined HW participation in unauthorised penile cutting services.

Results: Participation in these unauthorised penile cutting activities shares common features with coping mechanisms that have been described in other disrupted health systems. Although economic gains are not explicitly derived from the practices, evidence exists that they meet community obligations and other socio-cultural responsibilities, and form social currency within local traditional economies, providing social capital derived from community recognition and satisfaction of moral, professional and cultural obligations. While the involvement of health workers in these practices may reduce levels of infection, deformation and blood loss, their participation may implicitly endorse penile cutting procedures that have not been shown to reduce the risk of HIV acquisition.

Conclusions: Disrupted health systems create opportunities for unauthorised practices to become institutionalised, pre-empting appropriate policy development or regulation in the introduction of new programs.

Disclosure of Interest: The authors declare that they have no competing interests
Article I.

Paper Ref	195
Theme	HIV/AIDS Theme D: Country Specific Research
Presentation Type	HIV/AIDS Quick Fire Oral

LISTENING TO COMMUNITY VOICE: PERCEPTIONS OF MODELS OF SERVICE DELIVERY FOR MALE CIRCUMCISION AS AN HIV PREVENTION OPTION IN PAPUA NEW GUINEA

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Background: The World Health Organisation and the Joint United Nations Programme on AIDS recommend male circumcision (MC) as part of a comprehensive HIV prevention program in high prevalence settings. Penile foreskin cutting is common and accepted in some communities in Papua New Guinea (PNG) with a number of contemporary and traditional practices identified. There is increasing interest in understanding how an adult MC may be applied in PNG, a country with a moderate burden HIV epidemic. This study aimed to investigate the perceptions of community from a number of socio-culturally diverse backgrounds on the delivery of an effective MC program.

Methods: A multi-method qualitative research study was undertaken in four provinces in PNG: East Sepik Province (ESP), Eastern Highlands Province (EHP), National Capital District (NCD) and West New Britain Province (WNB) over 2 Stages from 2009 until 2011. 82 semi-structured interviews and 45 focus group discussions were completed during Stage 1. Stage 2 incorporated 7 participatory workshops that formed a part of the research dissemination process to communities in ESP and EHP. Qualitative analysis using grounded theory of all data was conducted with assistance from qualitative software program MAXQDA (VERBI software GmbH, Germany).

Results: A number of diverse considerations for the delivery of an MC program in communities around PNG were described. Integration with existing traditional practices and ensuring the roles of traditional practitioners is maintained was important in traditionally circumcising communities. Other communities identified the need to proceed cautiously with targeting young men due to issues of reluctance to access services directly due to concerns about confidentiality. The need to establish firm relationships between the community and the program was integral to its success

Conclusions: Difficulties exist in the implementation of new programs in a pluralistic society such as PNG, particularly when the program is in tension with both clinical and socio-cultural interests. In PNG, it is likely that a successful national MC program will need to be adjusted locally to the needs of each community.

Disclosure of Interest: The authors declare that they have no competing interests

Paper Ref	553
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Oral Presentation

“YEAH, WHY NOT?” EVALUATING THE ACCEPTABILITY OF CHLAMYDIA TESTING IN GENERAL PRACTICE TO YOUNG PEOPLE LIVING IN RURAL AUSTRALIA: A MIXED METHOD APPROACH

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Background: RACGP ‘Red Book’ guidelines recommend annual chlamydia testing for women and men aged 16–29 years, but there are a number of barriers to rural young people seeking testing in their local area. This mixed method analysis investigates the acceptability of chlamydia testing in general practice for young adults living in rural Australia.

Methods: Quantitative and qualitative data collected as part of the Australian Chlamydia Control Effectiveness Pilot (ACCEPt) were used. Patients aged 16–29 attending 150 mostly rural participating clinics were asked to complete a questionnaire and provide a specimen for chlamydia testing. The questionnaire asked about future chlamydia testing intent and attitudes towards chlamydia testing reminders. In addition, interviews were conducted with 20 patients attending participating clinics.

Results: 4284 men and women completed questionnaires (response rate = 70%). Over 80% of participants were attending a general practitioner (GP) in their local area and 76% were attending for a non–sexual health reason. Most respondents (86%; 80% males versus 88% females, $p < .01$) were willing to have another chlamydia test in 12 months and 91% (86% males versus 93% females, $p < .01$) found reminders to have another test in 12 months acceptable. Interview participants favoured being ‘offered’ the test as an opportunity rather than a mandate, and supported being offered the test in a non–sexual health consultation. Patients were also strongly in support of being reminded to have another test in 12 months. Cost of the test was seen as a potentially significant barrier, and female participants expressed a preference to consult with female GPs.

Conclusions: Young people in rural areas will agree to a chlamydia test if offered by their local GP, even if they are attending for a non–sexual health reason. Cost of the test and lack of female GPs were identified as deterrents to testing.

Disclosure of Interest Statement: ACCEPt was commissioned and funded by the Australian Government Department of Health and Ageing. Additional funding has been received from the National Health and Medical Research Council, the Victorian Department of Health and NSW Health.

Article I.

Paper Ref	67
Theme	HIV/AIDS Theme D: Women & HIV
Presentation Type	HIV/AIDS Oral Presentation

HUMAN PAPILLOMAVIRUS, HIV AND OTHER SEXUALLY TRANSMITTED INFECTIONS AMONG WOMEN ATTENDING ANTENATAL, WELL WOMAN AND SEXUAL HEALTH CLINICS IN PAPUA NEW GUINEA

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Background: Papua New Guinea (PNG) is estimated to have among the highest prevalences of HIV and STIs in the Asia-Pacific. The prevalence of maternal syphilis is among the highest in the world. Cervical cancer is the most common cancer among women in PNG and a leading cause of premature death. Despite this burden of disease, limited epidemiological data are available to inform evidence-based policy.

Methods: Cross-sectional bio-behavioural surveys are underway to investigate the epidemiology of human papillomavirus (HPV), HIV and other STIs among 2500 women attending antenatal (ANC), well woman (WWC) and sexual health clinics (SHC) in six provinces in PNG. DNA extracted from vaginal swabs is being tested for *C. trachomatis*, *N. gonorrhoeae* and *T. vaginalis* by real-time PCR, and HPV genotyping conducted using the Roche Linear Array kit. Participants are offered voluntary HIV counselling and testing and asked to provide venepuncture specimens for syphilis and *Herpes simplex* Type-2 (HSV-2) serology.

Results: At end-May 2013, 872 women had been enrolled at nine participating clinics (ANC:435; WWC:103; SHC:334). High HPV/STI prevalences have been observed at all sites. The prevalence of HPV infection was 56.1%, 27.5% and 50.6% among ANC, WWC and SHC attendees respectively. Vaccine preventable HPV types 16 and 18 were the most prevalent high-risk types in all settings. Among ANC attendees at five sites, HIV prevalence was 1.6%; *C. trachomatis*, 20.9%; *N. gonorrhoeae*, 7.1%; *T. vaginalis*, 19.6%; HSV-2, 38.6%; and active syphilis, 4.0%.

Conclusion: This research is providing the first geographical, age and type-specific prevalence data on HPV infection in PNG. Study findings will inform evidence-based public health policy on HPV and cervical cancer control in PNG, including the introduction of polyvalent HPV vaccines for primary cervical cancer prevention. This work will also inform national policy on the elimination of mother to child transmission of HIV and syphilis.

Disclosure of Interest Statement: Nothing to Disclose

Paper Ref	514
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Oral Presentation

AN INCREASE IN NATIONAL CHLAMYDIA TESTING RATES COINCIDING WITH A NATIONAL STI CAMPAIGN: USE OF DATA COLLECTED IN THE ACCESS LABORATORY NETWORK

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On behalf of the ACCESS Collaboration

Background: The Australian Collaboration for Coordinated Enhanced Sentinel Surveillance for STIs and BBVs (ACCESS) can help to evaluate the impact of public health interventions. The Laboratory Network, one of four ACCESS networks, collects testing and positivity data from laboratories across Australia. We explore chlamydia testing data to investigate if the National Sexually Transmissible Infections Prevention Program (NSTIPP) campaign, implemented nationally between May 2009 and November 2011, coincided with changes in population-level age-specific chlamydia testing rates in the target population (young people aged 15 to 29 years).

Methods: Testing data from laboratories participating in the ACCESS Laboratory Network (n=13) from five jurisdictions (NSW, VIC, SA, TAS and QLD) for 2008-2010 were extracted electronically using GRHANITE® software. Age-specific testing rates (tests per 100,000 population) were calculated using the ABS-projected population for each year in participating for individuals aged 15-75 years.

Results: The overall (15-75 years) testing rate (per 100,000 population) in 2008, 2009 and 2010 was 1046, 1322 and 1181, respectively. When stratified, the testing rate increased by 26% between 2008-2009; the largest increase in testing rate from 2008 to 2009 was observed in individuals aged 50-54 years (97% increase) rather than in the campaign target population (11% increase). The overall testing rate decreased by 12% for all age groups between 2009-2010, however the decrease was lower among individuals aged 15-29 years (7% decrease).

Conclusion: Data showed that there was an increase in testing rates that coincided with the year the NSTIPP campaign was launched, however the largest increase was in older age groups rather than the target ages and changes in testing behavior were not sustained in 2010. These findings demonstrate the utility of the ACCESS Laboratory Network to measure population level changes in behavior following a national campaign such as the NSTIPP.

Disclosure of Interest Statement: Nothing to disclose

Article I.

Paper Ref	407
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Poster

DO WE STILL NEED SEXUAL HEALTH RELATED PATIENT INFORMATION LEAFLETS (PILS) IN THE ERA OF SOCIAL MEDIA? CLIENTS WITHIN AN URBAN SEXUAL HEALTH CLINIC IN SYDNEY RATE THEM HIGHLY.

Varma R¹, Power M¹, Townsend A¹

Western Sydney Sexual Health Centre

Introduction: PILs are widely utilised throughout many aspects of health care. While it is believed that patients value PILs, there is a lack of research on their use within sexual health clinics despite their frequent use. Their ongoing relevance in the multimedia era is unclear.

Methods: Consecutive clients over 18 years of age, fluent in English were surveyed on their opinions on three new PILs, which were created along standard departmental guidelines (contact tracing a sexual partner; HIV information and testing; clinic information and services). Opinions on alternative forms of delivering the same health message were sought.

Results: 210 surveys offered to 315 consecutive patients were completed. 63% of respondents were male and 76.6% were Australian born or from an English speaking country. 25.2% identified as MSM, 30.4% as a young person (YP) (under 25 years) and 1.4% as an Aboriginal or Torres straight Islander. Highest educational statuses from 198 responses included: year 10 or less (16.7%), University or TAFE (62.1%). 84.9% of MSM and 78% of YP surveyed, agreed that PILs were a preferred method of communicating sexual health information; tailored websites and telephone lines were rated similarly highly by all groups. Only 33% of YP or MSM felt a facebook page would be a preferred form of delivery. 13% MSM and 14% YP felt that information conveyed through a monitor in the waiting room would not be an acceptable alternative. 52% MSM and 46.9% YP agreed that a mobile phone application would be acceptable. Following pre and post reading evaluations, 189/210 (94%) of all clients agreed or strongly agreed on improved knowledge on key messages within the PIL.

Conclusion: This survey suggests YP and MSM continue to value PILs and there is diversity on how they wish sexual health related information to be delivered.

Paper Ref	408
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Poster

HOW WELL DO YOU KNOW YOUR PATIENTS? A COMPARISON OF PATIENT AND PROVIDER OPINION ON SEXUAL HEALTH RELATED PATIENT INFORMATION LEAFLETS (PILS) AND OTHER MEDIA.

Varma R¹, Power M¹, Townsend J¹

Western Sydney Sexual Health Centre

Introduction: PILs are widely utilised within sexual health clinics to deliver health messages and are frequently created without client participation or feedback. Alternative means of communication require evaluation by staff and patients.

Methods: Consecutive patients over 18 years of age, fluent in English were surveyed anonymously on their opinions on new PILs (contact tracing a sexual partner; HIV testing; clinic information and services). Opinion regarding alternative forms of message delivery were sought and compared to those of staff at a sexual health clinic.

Results: 210 surveys and all 19 staff surveys were completed. Approximately 63% were male and 76.6% were Australian. 25.2% identified as MSM, 30.4% as a young person. Highest educational status included: year 10 or less (16.7%), University or TAFE (62.1%). Clarity of messages from each PIL was generally well received by both groups. Information on PEP, window period and encouragement to test was evaluated highly by staff, reflecting broad agreement with clients. However 28% of clients were unsure or disagreed that the PIL encouraged HIV testing. 75% of clients stated they would use PILs in the waiting room and only 26% would take them home – similar to staff expectations. There was strong agreement between staff and client opinion on the best means of delivering information through a tailored website (100% staff vs 86% clients); telephone line and PILs were rated similarly. In comparison, there was less certainty in both groups when asked on the use of mobile phone applications (53 % staff vs 43% clients), facebook page (42% staff vs 34% clients) and a monitor in the waiting room (53% staff vs 59% clients).

Conclusion: This survey suggests clients and staff value PILs and traditional forms of communication. Innovative practice may require both provider and patient engagement in development and delivery and to confirm clarity of health message delivery.

Paper Ref	409
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Poster

NEISSERIA GONORRHOEAE WITHIN A CULTURALLY DIVERSE AREA OF SYDNEY – HIGH RATES OF ASYMPTOMATIC ANAL INFECTIONS AMONG MEN WHO HAVE SEX WITH MEN.

Varma R, Best H, Gilbert P, Chung C, Mazur M

Introduction: Increased rates of *Neisseria Gonorrhoeae* (NG) reported within major cities, particularly among men who have sex with men (MSM). Appropriate screening and testing is therefore important to prevent ongoing transmission.

Methods: A retrospective case file review of all patients who tested positive with any test for NG by gram stain and microscopy, culture or Nucleic Acid Amplification Test (NAAT) between January 2009 and December 2011 was performed. Comparative data between testing methods, epidemiology and sexual risk were collected.

Results: There were 104 patients including 97 men (85.8%), 15 women (13.3%) and one transgendered with 113 different episodes of NG infection. 71% were born in Australia or an English speaking country; the remaining patients (culturally and linguistically diverse- CALD) were from 11 different countries. Mean age 30 years for all patients and 28.8 years for MSM. There were 29/97 (29.9%) men who have sex with women (MSW) of whom 18/29 (62%) were CALD. 68/97 (70.1%) were MSM, including 11/68 (16.2%) HIV positive individuals. Anal infection were mainly asymptomatic (91.4%).The most common site of infection in 45 MSM (66.2%) who were tested in all three anatomical sites (urethral/ urine 35.6% (95% CI 23.2%-50.2%), pharyngeal 42.2% (95%CI 29-56.7%), anal 71.1% (95%CI 56.6-82.3%). Anal NAAT was positive more frequently than anal culture (32/35 vs 3/35) P<0.05 when performed in the same subjects. 27/29 (93.1%) MSW had symptomatic urethral episodes. Chlamydia co-infection was identified in 15/113 (13.3%) episodes in all patients, 11/15 (73%) male. 42/113 (38%) patients did not return for a test of cure examination including 23/68 (33.8%) MSM and 13/29 (44.8%) MSW

Conclusion: NG is an asymptomatic anal infection among MSM and a symptomatic urethral infection among MSW within a cohort with a high proportion of patients with a CALD background. Anal NAAT testing was significantly more sensitive than culture within MSM.

Article I.

Paper Ref	18
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health Poster

PERCEIVED RISK OF ACQUIRING STIS AND PREDICTORS OF ACCURATE RISK PERCEPTION AMONG YOUNG PEOPLE

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Background: Many behavioural change models posit that an individual must perceive themselves at risk of a condition before they are able to change their behaviour. Risk taking among adolescents is high and can have a wide range of consequences relating to health and wellbeing. In terms of sexually transmitted infections (STIs), behavioural change models indicate that perceiving oneself at risk of infection may be important in determining both sexual behaviour and health seeking.

Methods: We assessed sexually transmitted infection (STI) risk and predictors of accurate risk perception among young people aged 16- 29 years recruited from a music festival in Melbourne, Australia in 2010 and 2013. Participants self-completed a short risk behaviour questionnaire, including a question about perceived personal likelihood of acquiring an STI (four point scale from 'very unlikely' to 'very likely'). Multivariable logistic regression examined predictors of accurate risk perception among those classified at risk (not always using condoms with multiple or casual partners in the past 12 months or with new sexual partner/s within the past three months).

Results: Overall, 542 (38%) respondents were classed as being at risk of acquiring an STI and 16% of these accurately perceived they were at risk; 17% in 2010 13% in 2013 (AOR 0.5, 95%CI 0.3-1.0). Predictors of accurate risk perception included not always using condoms with new sexual partner/s (AOR 2.2, 95%CI 1.1-4.4), using illicit drugs in the past month (AOR 3.0, 95%CI 1.6-5.5) and higher levels of STI knowledge (AOR 1.8, 95%CI 1.0-3.1).

Conclusion: Many young people are at risk of acquiring an STI, but most do not perceive themselves to be at risk. The finding that STI knowledge is associated with accurate risk perception suggests that interventions to increase sexual health knowledge may be a useful strategy in improving personal risk assessment.

Paper Ref	126
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Poster

ABORIGINAL HEALTH WORKERS OFFERING OPPORTUNISTIC STI TESTING

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Wansbrough R Family Planning Western Australia (FPWA)

Background: For the 12 month period to 30th June 2012, notifications of chlamydia in Aboriginal Western Australians were 5.2 times the non-Aboriginal rate and gonorrhoea notifications were 46.9 times the non-Aboriginal rate. These rates were highest in the Goldfields, Pilbara and Kimberley regions of WA.

Aboriginal Health Workers (AHWs) are the first point of care for patients who present to an Aboriginal Community Controlled Health Service (ACCHS). With increased knowledge and skills in sexual health, AHWs could make a difference in reducing these rates.

Method Between September and December 2012, AHWs working in three ACCHS within endemic areas participated in semi-structured interviews conducted by the author. The author asked questions about whether they were offering routine opportunistic testing to patients aged 15-40 years and if not, reasons why?

Results: All 24 AHWs interviewed were not routinely offering testing, most felt they lacked the confidence to offer their patients testing and did not feel they had enough training in sexual health.

Currently the sexual health electives of the Certificate IV in Aboriginal Primary Health Care are not being delivered in WA.

The interview results indicated there was a need to investigate greater training options and in response, AHCWA and FPWA have partnered to plan, deliver and evaluate sexual health training for AHWs.

AHWs who participate in the training will be interviewed in their workplace 3 months after delivery to assess the impact of the training on their practice.

Conclusion: Increasing sexual health knowledge and skills for AHWs could result in an increase in testing rates. The training will also develop the fundamental knowledge, attitude and skills required to support and provide information to patients about sexual health, assess risk and provide appropriate support and referral for patients with a sexual health concern.

Paper Ref	410
Theme	HIV/AIDS Theme B: Diagnosis & monitoring
Presentation Type	HIV/AIDS Poster

QUANTIFICATION OF HIV VIRAL LOAD PROVIDES INSIGHTS INTO CLINICAL OUTCOMES OF HIV IN PAPUA NEW GUINEA

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Background: Antiretroviral therapy (ART) has been available in Papua New Guinea (PNG) since 2004, and currently over 9000 people living with HIV (PLHIV) are receiving treatment. National treatment guidelines recommend viral load (VL) testing to confirm treatment failure where available. VL testing commenced in Port Moresby this year, however management of ART for most PLHIV relies on clinical indicators and CD4 test when available. With expanding access to ART, a greater understanding of the clinical profile of PLHIV in PNG is needed.

Methods: A low-cost low-tech test was used to determine VL in a cohort of consenting ART naïve (n=96) and experienced PLHIV (n=101) from two high HIV burden provinces in the highlands region.

Results: 95/96 ART naïve PLHIV had a detectable VL, of which 53 had VLs associated with a high risk of transmission. 79/101 ART experienced PLHIV had an undetectable VL. Eight met the WHO definition of treatment failure.

45 ART experienced PLHIV returned for a 12-month follow up. 36/45 had an undetectable VL, of which four had achieved viral suppression and 32 had maintained undetectable VL. The ART regimen remained the same for 20 of these PLHIV, had been changed for 12 and was unknown for four. Treatment failure was detected in four PLHIV at follow-up. All had been maintained on the same regimen.

Conclusion: Most ART experienced PLHIV in this cohort had an undetectable VL. However treatment failure was evident. Detectable VL in ART experienced and high VL in ART naïve PLHIV highlights the potential for transmission. While scale up of VL testing is of importance, this must be combined with the expansion of CD4 testing, a dependable ART supply, together with continued support of clinical management and adherence counseling.

Disclosure of Interest Statement: The authors declare they have nothing to disclose

Paper Ref	411
Theme	Sexual Health: Biomedical
Presentation Type	Sexual Health: Oral Presentation

ELIMINATION OF MOTHER TO CHILD TRANSMISSION OF SYPHILIS IN PAPUA NEW GUINEA – AN OPPORTUNITY TO ADDRESS THE HIGH PREVALENCE OF OTHER SEXUALLY TRANSMITTED INFECTIONS

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Introduction: The World Health Organisation (WHO) Initiative for the elimination of mother to child transmission of syphilis (eMTCT) has identified Papua New Guinea (PNG) as one of 12 priority countries. The most recent national sero-surveillance data indicates a syphilis prevalence of 4.8% in pregnant women. Syphilis diagnosis in antenatal clinics (ANC) relies on rapid point of care (RPOC) tests. These tests are based on detection of anti-*treponema pallidum* antibodies, and cannot differentiate active syphilis infection, past infection or yaws. Here we provide estimates of active syphilis and other STIs in ANC attendees in PNG.

Methods: Reactive RPOC tests were confirmed using the rapid plasma reagin (RPR) test. According to PNG guidelines, active syphilis was defined as a reactive RPOC test with RPR titre greater than 1/8. *Neisseria gonorrhoea*, *Chlamydia trachomatis* and *Trichomonas vaginalis* were detected using real-time PCR. Provider initiated HIV counselling and testing (PICT) was offered to all women.

Results: To date, 260 women have been recruited from two ANCs. Of 22 reactive RPOC tests (8.3%), 10 were confirmed, providing an active syphilis prevalence of 3.9%. Uptake of PICT was 77% and HIV prevalence 1.5% (n=3). The prevalence of *N. gonorrhoea*, *C. trachomatis* and *T. vaginalis* was 10.3%, 22.1% and 20.6% respectively.

Conclusion: These data confirm high rates of active syphilis in pregnant women in PNG. However the limitations of using a single RPOC test for syphilis diagnosis in this setting are also demonstrated. Over-diagnosis leading to over-treatment has implications for antibiotic resistance, and social consequences associated with partner notification. This emphasises the need for accurate RPOC diagnostics for active syphilis.

The high prevalence of other treatable STIs in this population suggest that broadening the scope of the eMTCT initiative to include interventions for the management of these STIs would also improve maternal and child health.

Disclosure of Interest Statement: Funding provided to PNGIMR from Exxon Mobil through the Partnerships in Health program contributed to this study.

Paper Ref	614
Theme	HIV/AIDS Theme: Aboriginal & Torres Strait Islander Health
Presentation Type	HIV/AIDS Oral Presentation

AUSTRALIA'S FIRST PEOPLES- WHERE ARE WE IN THE EPIDEMIC? SUCCESS, EMERGING ISSUES AND THE SAME PERSISTENT ISSUES

Ward J

Indigenous people globally remain resilient yet vulnerable to the threats of HIV. Although Australian Aboriginal and Torres Strait Islander peoples experience the worst health status of any identifiable group in Australia, with a standardised morbidity rate three times that of non-Indigenous Australians, the Australian response to HIV has resulted in relatively low and stable rates of HIV infection among Australia's Indigenous peoples. Efforts need to be maintained however to ensure an escalated epidemic does not occur, particularly among heterosexual people, especially women, and people who inject drugs. In addition new ideas are required as we enter a new era of HIV prevention within the context of "treatment as prevention", and "getting to zero new infections".

Given that there are many factors that heighten HIV risk for Indigenous Australians, such as reported higher rates of IDU and STIs, lower outcomes in many social determinants of health and the proximity of the Torres Strait Islands to PNG, it is important that prevention efforts are sustained outside of biomedical propositions such as treatment as prevention. Further work is required to understand risk and newer issues in HIV. For example, with regard to 'treatment as prevention' and 'getting to zero', very little is known about the treatment levels of Indigenous people living with HIV nor the amount of HIV testing occurring in Indigenous communities.

This presentation will highlight the prevention efforts in Indigenous communities that have contributed to success in maintaining a stable epidemic as well as highlight emerging issues that increase the vulnerability of Indigenous Australian communities and where gaps exist in moving forward in the next chapter of HIV in the Australian context.

Paper Ref	245
Theme	HIV/AIDS Theme B: Antiviral Therapy
Presentation Type	HIV/AIDS Poster

HIVQUAL: MEASURING AND IMPROVING THE QUALITY OF PAEDIATRIC HIV CARE IN GOROKA GENERAL HOSPITAL (GGH), EASTERN HIGHLANDS PROVINCE, PAPUA NEW GUINEA (PNG), 2010 -2011.

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Introduction: As antiretroviral treatment (ART) is scaled up in PNG, a systematic process is needed to measure and improve the quality of care and treatment services. There are 3 HIVQUAL Modules, covering all HIV infected clients – Adult (All clients > 15years), Paediatric (1 year to 15 years) and PMTCT (all antenatal clients followed through to delivery and child delivered to 1 year of age). This paper looks specifically at Paediatrics Care.

Methods: HIVQUAL, a model for performance measurement and quality improvement (QI), was adapted from the Thailand HIVQUAL. In 2010-2011, clinical data abstracted from randomly selected patients records were used to identify priority areas for QI. Improvement strategies were designed in our care system areas, and key indicators were remeasured 6 monthly, starting from the 1st January 2010 up to 31st December 2011. The HIVQUAL Data Software was used to analyse all results.

Results: A total of 69 HIV infected children received care in 2010 and 80 in 2011- of whom 40 and 60 respectively were selected for chart abstraction. Of those eligible; >90 % children received continuity of care (COC), growth monitoring, and ART; 60-90% received cotrimoxazole prophylaxis, tuberculosis (TB) screening and treatment, and Monitoring HIV status. An indicator with substantial improvement following QI activities was Isoniazide prophylaxis from 0% in 2010 to 75% in 2011.

Conclusion: Substantial improvements across many performance indicators were seen as QI strategies were implemented.

Disclosure of Interest Statement: The Goroka Base Hospital is owned and run by the national department of health of PNG and no grants including that of the developer of the HIVQUAL Data Software were received in the development of this study.

Paper Ref	505
Theme	Sexual Health: Other
Presentation Type	Sexual Health: Oral Presentation

DOES NEW MEDIA AFFECT ADOLESCENT SEXUAL ATTITUDES AND BEHAVIOURS? A SYSTEMATIC REVIEW

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Introduction: There is considerable public concern that new media (internet and mobile phones) could be exposing young people to high levels of sexual content and thus contributing to increases in risky behaviour and sexually transmissible infections.

Methods: The review was conducted in accordance with the PRISMA statement. Medline, EMBASE and PsychINFO were searched to the end of March 2013. Papers were included if they described the statistical association between exposure to sexual content in new media (viewing or engaging) and sexual attitudes and behaviours in young people (<25 years).

Results: There were 7281 articles identified, and 12 met the inclusion criteria; all were cross-sectional designs, seven were in the US, study sizes ranged from 85 to 6054. In six studies the exposure was sexually explicit websites (SEW), in five studies the exposure was sexting and one study the exposure was sexual references in social media. A range of sexual behavioral and attitudinal outcomes were assessed and definitions varied. Of the outcomes measured in two or more studies, there were mixed findings. Accessing SEW was significantly associated with the following outcomes in one or more study: early age of first sex, ever having a sexual partner, multiple sexual partners, unprotected sex, alcohol and other drug (AOD) use at last sex, acceptance of casual sexual relationships, having casual sexual relationships, notions of women as sex objects, and acceptance of extra-marital sex. Sexting was associated with ever having had intercourse (vaginal, anal and oral), STI history, unprotected sex, multiple sexual partners, AOD before sex, and lack of contraception use and ever being forced to have intercourse.

Conclusion: Methodological differences and inconsistencies in outcome measures limited our ability to draw conclusions regarding associations. Only one study assessed associations with positive aspects of sexual development (e.g. sexual communication, sexual assertiveness). Further research in this area is needed.

Disclosure of Interest Statement: No conflict of interest declared

Paper Ref	313
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Poster

SEXUAL HEALTH INCENTIVE PROGRAM

Watson C R

Objectives: To find new ways to engage aboriginal youth and promote sexual health screening among aboriginal youth in the Great Southern Region of Western Australia.

Background: Great Southern Aboriginal Health services (GSAHS) is part of Western Australian Country Health service (WACHS) in the southern region of Western Australia. We identified approximately 400 aboriginal youth from our data base in the target age range (16-29 years of age) for risk of sexually transmitted infections (STIs) and wanted to promote the simple testing for Chlamydia and gonorrhoea by either online testing or opportunistic screening. We had heard about other areas using incentives to encourage young people to get screened, so wanted to adapt a similar program.

Disclosure of Interest: We used the online chlamydia testing guidelines to develop a simple self-obtained history for assessment for STI screening. Then the Aboriginal Health workers were able to identify if the client needed screening or if they needed to see a doctor. We then provided the pathology form and asked them to give us a specimen, then gave them a \$10 voucher for the local supermarket chain. We would then send the specimen to the laboratory free of charge. We would inform them in the next few days of their results. If they required treatment for Chlamydia the registered nurse could facilitate treatment and conduct the contact tracing.

Results: We increased the number of clients screened by GSAHS from less than 10 in June 2011- June 2012 to 30 in 3months (June July, August 2012).

Conclusion: The incentive program appears to have worked and more clients were now being screened. We hope to continue and expand the program in a similar way each year.

Disclosure of Interest Statement: This program is solely funded by Great Southern Aboriginal Health Service as part of Western Australian Country Health Service.

Article I.

Paper Ref	386
Theme	Sexual Health: Health Promotion
Presentation Type	Sexual Health: Poster

GOOD SEX: WHY WE SHOULD BE TEACHING YOUNG PEOPLE ABOUT IT

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Introduction: Young people are overwhelmingly taught in formal schooling and from parents that sex is bad for them and only has negative consequences such as pregnancy and STIs. They know that sex can and should be good, but not what makes for good sex.

Methods: Twenty focus groups were conducted with eighty-nine young people between the ages of 14-16.

Results: Young people have very little idea about what constitutes good sex, but have good levels of knowledge about safe sex. However, they choose not to implement these safe sex messages. Parents and schools rarely or never speak about how and why sex can be good. Friends and the media are the only place where they are reassured that sex can be pleasurable, and that it is okay to want to have sex, and particularly to want sex that is good.

Conclusion: If young people are taught in school and by parents about pleasure and good sex alongside messages about safe sex, the mismatch between safe sex information and everyday practice may be bridged. Young people perceive the scientific knowledge they receive from school and parents as having little relevance to their own sexual experimentation, which is more focused on relationships and pleasure.

Disclosure of Interest Statement: This research was funded by a National and International Research Alliances Program grant from the Queensland Government.

Paper Ref	125
Theme	Aboriginal & Torres Strait Islander Population Health
Presentation Type	Sexual Health: Poster

ENHANCING THE SEXUAL AND REPRODUCTIVE HEALTH EDUCATION OF ABORIGINAL AND TORRES STRAIT ISLANDER STUDENTS IN VICTORIAN SECONDARY SCHOOLS

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Introduction: Young Aboriginal and Torres Strait Islander (ATSI) people aged 15-29 experience a higher burden of Chlamydia and Hepatitis C infection nationally. Pregnancy rates for women in this age group are also significantly higher than the non-ATSI population.

Victorian secondary schools are encouraged to engage ATSI, community and sexual health organisations as a resource to enhance the sexual and reproductive health needs of their students. As a result of this engagement, ATSI students meet health workers and become aware of how to access their local health services.

The Wulumperi Aboriginal and Torres Strait Islander Sexual Health Unit at Melbourne Sexual Health Centre (MSHC) offer Victorian secondary schools with ATSI students a program that compliments their sexual and reproductive health knowledge.

Methods: Wulumperi has developed a structured program in partnership with the school curriculum designed to enhance key messages that impact on the sexual and reproductive health of ATSI students.

The Program focuses on three main themes

Chlamydia and Hepatitis C transmission – health promotion and harm reduction

Safer sex messages – condom use to avoid Chlamydia and unplanned pregnancy

Information about accessing services provided by ATSI, community and sexual health services.

Results: Evaluation of the individual programs delivered to secondary school students measures their knowledge about the messages delivered. Students are able to reflect on the risks of acquiring Chlamydia and Hepatitis C, the benefits of using condoms as a safer sex message and where they can access health services.

Conclusion: The partnership of schools and health services (ATSI, community and sexual health) has led to a tailored sexual health program targeting ATSI students in Victorian secondary schools. We trust this will have future impact on the rates of Chlamydia and Hepatitis C transmission and also early or unplanned pregnancy within the secondary school community.

Disclosure of Interest Statement: n/a

Paper Ref	399
Theme	Sexual Health: Biomedical
Presentation Type	Sexual Health: Poster

DEVELOPING NATIONAL SEXUALLY TRANSMISSIBLE INFECTION (STI) GUIDELINES FOR PRIMARY CARE

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1 The Australasian Society for HIV Medicine (ASHM), 2 NSW STI Programs Unit, 3 Western Sydney Sexual Health Centre, 4 Australasian Sexual Health Alliance (ASHA)

Introduction: Reported rates of STIs are increasing in Australia, with diagnosis and management predominantly in primary care. However, current management relies on diverse guidelines not always developed specifically for Australian use.

Easily accessible, standardised, end-user orientated national guidelines could potentially provide an authoritative “one stop shop”, for evidence-based STI guidelines for primary care practitioners. ASHM received funding to support ASHA in developing Australia’s first unified National STI Guidelines.

Methods: A needs assessment questionnaire was completed by participants at the 2012 Australasian Sexual Health Conference and via stakeholder networks.

Key national and international guidelines were identified based on current usage. Existing guidelines and guideline writing tools were reviewed to instruct best-practice for guideline development.

Expert committees were established, with representation from stakeholder organisations to ensure relevance, standardisation, cohesion and professional body endorsement.

Results: Of 113 survey participants, 81 (72%) were medical and 28 (25%) were nursing professionals in sexual health and primary care. Of respondents, 54 (48%) requested national standardisation, 12 (11%) identified a need for guidelines in primary care and 9 (8%) wanted them incorporated into teaching standards development.

Three international guidelines, 15 state-based guidelines and 169 national/state/local STI resources were identified.

Regarding format, 96 (85%) survey respondents preferred online or an interactive web-based tool (n=51, 45%). Guidelines that are easily updated were requested by both stakeholders and respondents.

Conclusion: Wide stakeholder consultation and evaluation, needs assessment and market analysis have informed the development of best-practice primary care guidelines. These will be online, searchable, interactive, updateable and endorsed by key sector professional bodies. Draft guidelines will debut at the 2013 Australasian Sexual Health Conference. Guidelines will be disseminated via networks of stakeholder organisations and primary care.

Disclosure of Interest Statement: The Australasian Society for HIV Medicine (ASHM) receives funding from the Australian Government Department of Health and Ageing, as well as from pharmaceutical companies including Gilead, MSD and Bristol-Myers Squibb. One or more co-authors have received honoraria, consultancy fees or travel/accommodation support from the following companies: CSL, MSD, Hologic, Douglass Hanley Moir, Gilead, Janssen, Boehringer Ingelheim. No pharmaceutical grants were received in the development of this project.

Paper Ref	649
Theme	HIV/AIDS Theme A
Presentation Type	HIV/AIDS Oral Presentation

IMMUNOPATHOGENESIS OF THE HIV-TB ASSOCIATED IMMUNE RECONSTITUTION INFLAMMATORY SYNDROME

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HIV-1 patients co-infected with some pathogens are at risk of developing the immune reconstitution inflammatory syndrome (IRIS) when initiating antiretroviral therapy (ART). IRIS is characterized by inflammation leading to the clinical worsening of a treated infection or the unmasking of a previously undiagnosed condition or infection. It is commonly associated with tuberculosis (TB), 8-43% of HIV-TB co-infected patients prescribed antitubercular treatment and ART develop TB-IRIS. Although IRIS has been recognized for over 20 years, relatively little was known until recently about its pathogenesis. Despite these advances in understanding IRIS, there remains no immune biomarker for diagnostic or prognostic purposes. This talk will review the risk factors associated with TB-IRIS, the challenges in studying this syndrome, and how T lymphocytes, dysregulated cytokine responses, and innate immunity may contribute to the development of TB-IRIS.

Paper Ref	676
Theme	Sexual Health: Other
Presentation Type	Sexual Health: Oral Presentation

UNDERSTANDING SEXUAL RISK BEHAVIOURS OF YOUNG ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLE: FINDINGS OF THE GOANNA SURVEY.

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Introduction: Aboriginal and Torres Strait Islander young people are a population prioritised in all national and jurisdictional STI and BBV strategies, largely because of higher notification rates of STI and BBV reported among this population. However very little is known of levels of risk behaviours of this population.

Methods: A national cross sectional survey asking questions of knowledge, risk behaviour and health service utilisation was administered using hand held personal digital assistants at Aboriginal and Torres Strait Islander community events in every jurisdiction during 2011-2013. Aboriginal organisations and staff were engaged at every level of the project ensuring a self determination approach was applied to this research.

Results: Overall, mean age of sexual debut of was 15 years of age. 67% of participants aged 16-19 reported previous vaginal sex, compared with 87% and 93% of people aged 20-24 and 25-29 respectively. 46% of respondents reported only one sexual partner in the previous 12 months. The majority of respondents reported having sex with similar aged partners 74% of 16-19 year olds reported having had sex with people aged 16-19. Males aged 16-29 reported having sex with someone they had just met at double the rate reported by females (20% vs. 9%). Condom use was reported most by people aged 16-19 with 50% stating they always used a condom in the last year compared with 26% of people aged 25-29. Condom use at last sex did not vary between urban and remote communities. A third of all males reported being drunk or high at last sexual encounter compared to 22% of females aged 16-29.

Conclusion: This data provides compelling information of where targeted interventions should be made particularly efforts should be made to improve information and reducing risk practice among young males.

Paper Ref	534
Theme	HIV/AIDS Theme A
Presentation Type	HIV/AIDS Oral Presentation and Poster Presentation

DEVELOPMENT AND VALIDATION OF A HUMAN T-CELL LYMPHOTROPIC VIRUS TYPE-1 PROVIRAL LOAD ASSAY

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Introduction: Human T-cell lymphotropic virus type I (HTLV-I) infects approximately 20 million people world-wide. Transmission requires cell to cell contact and in endemic areas infection is generally acquired in early childhood through breast milk. Consequently, the maternal HTLV-I proviral load (PVL) is a strong predictor of the risk of transmission to infants and may also serve as an indicator of those most at risk of acquiring significant complications following infection.

The Australo-Melanesian variant (HTLV-I subtype c) is endemic amongst indigenous communities in Central Australia and demonstrates a highly divergent sequence from the other known HTLV-I subtypes. Currently, there are no commercially available HTLV PVL assays and published methods fail to reliably detect HTLV-1c.

Methods: We developed a quantitative, real time PCR (qPCR) assay, specific for the current circulating strains of HTLV-I. Primers and probes were designed by sequencing the *gag gene* from HTLV-1c samples. A highly conserved region of the *gag gene* which did not cross-react with HTLV-II was chosen.

A dilution series of SP cells which contain 1 copy of the HTLV-I genome, were used for quantification. The standards and specimens were run in parallel throughout the entire extraction and qPCR process, allowing us to eliminate variations due to extraction efficiency, PCR amplification and detection. The albumin gene, was used to determine the number of cells/sample and the PVL expressed as HTLV-I copies/cell.

Results: Approximately 350 clinical specimens consisting of buffy coats, whole blood specimens and dry blood spots were tested on the HTLV-I PVL assay. These specimens consisted of specimens anti-HTLV-I positive, indeterminate and negative by serological testing. The HTLV PVL assay demonstrated good concordance with the serology results.

Conclusion: We have developed an assay that can reliably quantify the HTLV PVL which may serve as a strong predictor of the risk of transmission and disease progression.

Disclosure of Interest Statement: The authors and their affiliated organizations have no conflicts of interests. This work has been funded through the NHMRC.

Paper Ref	241
Theme	Sexual Health: Biomedical
Presentation Type	Sexual Health: Oral Presentation

INCREASING CHLAMYDIA TESTING IN GENERAL PRACTICE IS ACHIEVABLE: AN UPDATE FROM THE AUSTRALIAN CHLAMYDIA CONTROL EFFECTIVENESS PILOT (ACCEPT)

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Background: ACCEPt is a cluster randomised controlled trial to evaluate annual chlamydia testing for 16-29 year olds in general practice (GP). Towns in which GP clinics are enrolled, are randomised to receive a multifaceted intervention (computer alerts, incentive payments, regular feedback, education) to increase chlamydia testing or continue usual practice. The primary outcome is change in chlamydia prevalence amongst GP patients. We report some early results on testing uptake, a secondary outcome.

Methods: From July 2010-December 2011, we enrolled 787 GPs in 150 clinics (response rate >90%) in 54 towns. Chlamydia testing rates (the proportion who consult a GP and have a test during 12 months) and re-testing rates (proportion who are re-tested within 12 (\pm 3) months following a negative or within 3 months following a positive test) were calculated.

Result: We analysed a total of 23,976 tests in intervention and 17,363 in control clinics.

Prior to commencing the trial in 2010, chlamydia testing rates were 10.2% in intervention clinics and 8.4% in control clinics. In 2012, testing rates were highest in clinics with 18+ months intervention time at 26.8% in women, 15.1% in men and 22.5% overall, compared with a testing rate of 10.3% in control clinics (relative risk=2.1; 95%CI: 2.0, 2.2). In 2012, chlamydia test positivity was 7.6% in intervention clinics and 8.7% in control clinics ($p < 0.01$).

Re-testing following a positive diagnosis was similar between intervention and control clinics (36.4% versus 33.9%; $p = 0.17$). Re-testing after a negative test was higher in intervention clinics, but only slightly (20.5% versus 19.1% ($p < 0.01$)).

Conclusions: Testing rates are increasing in intervention clinics while remaining relatively constant in control clinics showing that a multifaceted intervention in general practice can increase chlamydia testing rates over time. Further efforts are needed to increase re-testing after a positive and a negative test.

Disclosure of Interest Statement: The authors have no conflicts of interest to declare.

Article I.

Paper Ref	127
Theme	HIV/AIDS Theme B:Natural history, course of infection
Presentation Type	HIV/AIDS Oral Presentation

ASSESSMENT OF PREDICTORS OF VIRAEMIA COPY-YEARS IN PEOPLE WITH HIV/AIDS FOLLOWING INITIATION OF COMBINATION ANTIRETROVIRAL THERAPY

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Background: Recent studies have suggested that higher overall cumulative HIV viraemia exposure measured as viraemia copy years (VCY) is a better predictor of all-cause mortality compared with routine plasma HIV RNA viral load (pVL) and CD4 cell counts. The ability to identify those individuals at risk of higher VCY would be clinically relevant. We sought to assess predictors of VCY in Australian HIV Observational database (AHOD) participants following initiation of ART.

Methods: Analyses were based on patients recruited to AHOD who had received ≥ 24 weeks of ART. We established VCY, a measurement akin to smoking pack-years, after 1, 3, 5 and 10 years of ART by calculating the area under the pVL time series. We used multivariable generalised estimating equations to determine predictors of VCY. We evaluated model performance by comparing area under the sensitivity/specificity curve, and compared the performance of a baseline predictor model with a time updated predictor model to discriminate patients with high VCY. We defined high VCY as VCY > 100,000 copy-years.

Results: Of the 3495 AHOD patients recruited, 2073(60%), 1667(48%), 1267(36%) and 638(18%) were eligible for analysis at 1, 3, 5 and 10 years of ART respectively. Mean (95% confidence interval) VCY at 1, 3, 5, 10 years of ART was 204(182-229), 1862(1622-2138), 5129(4467-6026) and 19953(16596-24547) copy-years respectively. Several factors were associated (significant at $\alpha=0.05$) with higher VCY. These included: younger age, earlier periods of ART initiation, lower CD4 cell counts, mono/duo ART experience prior to ART initiation, protease inhibitor as initial ART anchor agent, high baseline pVL, increased number of ART modifications and increased total treatment interruption time. Models that included time updated information were better at discriminating persons with higher VCY compared to baseline predictor models.

Conclusion: Our results show one can reasonably identify patients at risk of higher VCY following ART initiation using typical clinical patient characteristics and factors.

Disclosure of Interest: The Australian HIV Observational Database is funded as part of the Asia Pacific HIV Observational Database, a program of The Foundation for AIDS Research, amFAR, and is supported in part by a grant from the U.S. National Institutes of Health's National Institute of Allergy and Infectious Diseases (NIAID) (Grant No. U01-AI069907) and by unconditional grants from Merck Sharp & Dohme; Gilead; Bristol-Myers Squibb; Boehringer Ingelheim; Roche; Pfizer; GlaxoSmithKline; Janssen-Cilag. The Kirby Institute is funded by The Australian Government Department of Health and Ageing, and is affiliated with the Faculty of Medicine, The University of New South Wales. The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript

Paper Ref	342
Theme	HIV/AIDS Theme D: Gay & MSM
Presentation Type	HIV/AIDS Oral Presentation

CONCURRENT PARTNERSHIP AND DENSITY OF THE SEXUAL NETWORK AMONG MEN HAVING SEX WITH MEN (MSM) IN KUTA, BALI, INDONESIA

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Introduction: It is estimated that MSM in Indonesia will make up the largest portion of new HIV infection in Indonesia. The result of Integrated Biological and Behavioral Surveillance in 2011 revealed that HIV prevalence among this group in Indonesia is between 2.5%-45.6%. The aim of the study was to identify the density and the concurrent sexual partnership among men having sex with men in Bali.

Methods: Cross sectional study was conducted with 350 MSM in Kuta, Bali. Questionnaire comprising questions on sexual partnership and sexual behavior was used in the survey. Respondents were asked to identify their five current sexual partners and if they know that those sexual partners knew each other and had sexual relationship to each other. Furthermore, they were also asked about the condom use behaviors with each partner that they have identified.

Results: Only data from 297 respondents can be included in the analysis, comprising of 623 dyad data. It was revealed that at least 156 (53%) respondents have at least two concurrent sexual partnerships with those sexual partners. In at least 184 (62%) of the respondents, at least two of their sexual partners knew each other. Additionally, in at least 106 (35.7%) of the respondents, at least two of their sexual partners had a sexual relationship to each other. It was also revealed that condom usage with different partner types varied, with 60.3% of consistent condom use with casual partners compared with 38.7% with regular partners.

Conclusion: There is a concerning high level of concurrent partnership with high density of the sexual network among MSM in Bali. Condom use consistency was lower with regular partners compared to that of casual partners. Interventions are urgently needed with regards to promote sexual partner reduction and consistent condom use, particularly with regular partners.

Disclosure of Interest Statement: This research was funded by AusAID through HCPI/ Indonesian National AIDS Commission

Paper Ref	314 and 591
Theme	HIV/AIDS Theme A: Immunology & pathogenesis
Presentation Type	HIV/AIDS Oral Presentation and Poster

CLONAL ANALYSIS OF HIV-1 ENVELOPE SEQUENCES FROM FOLLICULAR HELPERT CELLS ISOLATED FROM HUMAN SPLEEN CELLS

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Introduction: T follicular helper (T_{FH}) cells are specialized memory CD4+T cells, found within germinal centres (GC) of lymphoid tissue. They are important for antibody responses. Previous studies demonstrate that macaque/human T_{FH} cells are infected with SIV/HIV, at levels comparable to other memory CD4+T cell subsets. In the current study we quantified HIV-1 pol DNA by real-time PCR and clonal sequenced HIV-1 gp120 DNA from CD4+ T cell subsets sorted from patients' splenocytes.

Methods: Chronic HIV+ (CHI) subjects' splenocytes were FACS-sorted into GC T_{FH1}, T_{FH2} memory and naïve CD4+T cells based on differential expression of ICOS, PD-1, CXCR5 and CD45RA. HIV-1 gp120 DNA was amplified from sorted cells and cloned. At least 20 clones were sequenced for each subset. Sequences were aligned and neighbor-joining tree was built for cluster analysis. Genotypic prediction of co-receptor usage was also performed using Geno2Pheno web service.

Results: Real-time PCR results from 5 CHI patients showed that all subsets investigated contained HIV-1 DNA. Near full-length HIV-1 gp120 including the V1-V5 regions was successfully amplified from all four subsets from three patients. DNA sequences from each clone were highly variable. Up to 9.3% of the clones resulted in truncated products. Based on full-length products, there was no clustering among the memory T cell subsets within each patient. Using a false positive rate of 15% as cut-off, 57.1-100% of clones from each subset were predicted to be CCR5-using. Two and five CXCR4-using clones were detected in two subsets of one patient. There was no differential co-receptor usage among subsets.

Conclusion: Although human T_{FH} cells express CXCR5 and CXCR4 but little CCR5, and non-T_{FH} memory cells express CCR5, our results suggest that HIV-1 enters T_{FH} cells via a similar mechanism as other memory cells. This may take place at an earlier activated CCR5+ stage of T_{FH} cell differentiation.

Disclosure of Interest Statement: No disclosure of interest.

Paper Ref	188
Theme	HIV/AIDS Theme B: Social & Behavioural Research
Presentation Type	HIV/AIDS Poster

WHAT IS THE PREFERRED METHOD OF HIV TESTING AMONG AUSTRALIAN HIV NEGATIVE GAY MEN?

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Background: Australia maintains high levels of HIV testing conducted in healthcare settings. We explored the attitudes of gay men to the current standard-of-care and alternative approaches (rapid tests and testing outside healthcare settings).

Methods: We used 2011-2012 data from the CONNECT study which enrolled gay men using respondent-driven sampling. We explored self-reported preference for 1) standard-of-care, 2) rapid and 3) community-based or home-based testing, and factors associated with preferences for these methods.

Results: Among 827 respondents, 89% had been tested for HIV (72% in the last year). The most preferred testing method was home rapid testing (for 46% of participants), followed by standard-of-care (23%), rapid testing in clinics (20%) or in community organizations (7%) and standard testing in community settings (3%). The most popular second and third preferences were rapid testing in clinics (42%) and standard-of-care (27%). Neither preference was associated with previous history of testing. 73% of participants preferred rapid testing over standard-of-care (78% of men who identified themselves and their personal networks as non-scene). 56% preferred community/home-based testing over standard-of-care (60% among men who identified themselves and their networks as non-scene). Rapid testing was preferred for: older men between 30-90 years vs <30 (OR:1.92; 95%CI:1.18-3.12) and 40-49 vs <30 (OR-2.00; 95%CI:1.15-3.50); men in full-time employment vs unemployed (OR-2.13; 95%CI:1.42-3.20) and part-time vs unemployed (OR-2.01; 95%CI:1.06-3.82); in professional/managerial occupations vs unemployed/students (OR-2.32; 95%CI:1.46-3.67) and trades/sales/clerical vs unemployed/students (OR-1.86; 95%CI:1.05-3.29). Community-based testing was preferred for men fully employed and in managerial/professional occupations.

Conclusion: Our findings suggest that tests that provide rapid results and/or can be conducted outside the traditional health-care settings are preferred by gay men. Potentially, they can help further increase testing rates and frequency in Australia; however this could be limited to groups of gay men who are looking for a more convenient way of testing.

Disclosure of Interest Statement: The Kirby Institute, The Australian Research Centre in Sex, Health and Society (ARCSHS) and the National Centre in HIV Social Research (NCHSR) receive 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. ARCSHS is affiliated with La Trobe University. NCHSR is affiliated with the Faculty of Arts, University of New South Wales. The CONNECT study received NHMRC project grant funding (NHMRC 630547). No pharmaceutical grants were received in the development of this study.

Paper Ref	11
Theme	Sexual Health: International
Presentation Type	Sexual Health: Poster

NOT DESIRE FOR MORE CHILDREN: THE ONLY FACTORS THAT RELATED TO USE OR NOT TO USE MODERN CONTRACEPTIVE IN INDONESIAN WORKING WOMEN

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Introduction: The initial survey showed that working women take 47.59% of all the women in Semarang City. The objective of this study was to study about the factor related to use or not to use modern contraceptive in Indonesian working women.

Methods: A community based cross-sectional survey was conducted from April to May 2011. Samples consisted of 188 married women age 15-49 taken with simple random sampling method in Semarang City. Housewives were excluded from this study. Respondent were asked about age, education level, number of living children, household income, pregnancy spacing, desire to have more children and use modern contraceptive.

Results: The prevalence of modern contraceptive method was 59.57% among Indonesian working women. The only factor contributed for using modern contraceptive was desire for more children (OR: 0.642, 95% CI: 0.486 – 0.848). Age, education level, number of living children, household income, and pregnancy spacing was not contributed to women decision using modern contraceptive.

Conclusion: Not desire for more children was the only factors that related to use or not to use modern contraceptive in Indonesian working women. Working women have fewer children compared to housewives. It indicates that occupation status as the natural factor for delay to have more children.

Disclosure of Interest Statement: No pharmaceutical or other industry partners' grants were received in the development of this study.

Paper Ref	159
Theme	HIV/AIDS Theme B: Living With HIV & Community Programs
Presentation Type	HIV/AIDS Poster

THE COURSE OF HIV DISCLOSURE AND ARV AS PREVENTION (TasP) AMONG FSWs: PIMPS AND FSWs REGULAR PARTNER PERSPECTIVES

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Introduction: Several HIV/AIDS programs targeting FSWs in Bali are only achieved modest result. FSWs' pimps and regular partners play an important role to these programs. TasP is promising in better outcomes. HIV disclosure status of FSWs might have impact to the effectiveness program. Perspectives of pimps and FSWs regular partners need to be explored.

Methods: Qualitative research was conducted to explore the acceptability and the impact HIV disclosure status of FSWs. In-depth interviews were conducted with 10 pimps and 10 FSWs regular partners. Data obtained were analyzed using thematic method.

Results: The majority of respondents accept the implementation of TasP among FSWs. However, pimps expressed the importance of HIV status of FSWs. Pimps will request to FSWs to quit their job if pimps find their HIV status. FSWs' regular partners who do not know FSWs status and have not underwent HIV testing mentioned their intention to leave FSWs if they find them to be HIV positive. These findings indicate that the implementation of TasP in Bali needs to incorporate stigma reduction program particularly aiming at pimps and FSWs' regular partners. On the other hand, HIV positive of regular partners expressed their acceptance and willingness to continue their relationship even though they find FSWs to be HIV positive. This indicates that mutual supports among concordant couples are an enabling factor to implementation of TasP among FSWs.

Conclusion: HIV disclosure to pimps and FSWs regular partners are barriers to TasP implementation among FSWs in Bali. Concordant couples are more likely to accept FSWs HIV status and committed to mutual support relationship. These findings imply that stigma and discrimination program should be integrated into TasP to increase FSWs participation in the program.

Disclosure of Interest Statement: This study is funded by National AIDS Commission of Indonesia and HIV Corporation Program for Indonesia (HCPI).

Paper Ref	214
Theme	HIV/AIDS Theme C: Social & Behavioural Research
Presentation Type	HIV/AIDS Poster

CURRENT NORMS REGARDING HIV RISK REDUCTION PRACTICES IN AUSTRALIAN GAY COMMUNITIES.

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Background: Social environment, through social norms, is associated with sexual behaviour of individuals. While previous research has addressed the sexual practices of gay men, little is known about gay men's perceived social norms regarding unprotected anal intercourse (UAI) and their association with actual practices.

Methods: Data were derived from the cross-sectional CONNECT Study, conducted between 2010-2012, which recruited gay men in three Australian cities (Sydney, Melbourne and Perth) using respondent-driven sampling (RDS). Participants provided information about sexual risk and risk reduction practices with regular partners (e.g., boyfriends), familiar partners (e.g., well-known causal partners) and new casual partners in previous six months. Men also provided information on the characteristics of their social networks, including the acceptability of sexual risk and risk reduction behaviours to their social networks (i.e., perceived social norms). Data were analysed using standard and RDS-adjusted regression methods.

Results: Among 937 participants (mean age 37 years, average personal network size 17 members), 62% reported one or more regular partners and 71% had one or more casual partners (either familiar or new) in the previous six months. UAI was more common with regular and familiar partners than with new casual partners (70%, 57% & 40% respectively). Half of the participants (50%) reported that members of their personal networks found it acceptable to have UAI with casual partners (UAIC) in the context of serosorting if these partners were familiar, but only 4% thought it was acceptable with new casual partners. Respondent's self-report of having UAI C in the previous six months was significantly associated with his perceived acceptability of UAIC in his personal network (OR=1.62 95%CI: 1.42-1.83).

Conclusion: The results confirm the relationship between UAI and perceived social norms of gay men regarding UAI. Knowledge about social norms regarding sexual practices may help improve HIV prevention programs in gay communities.

Disclosure of Interest Statement: The Kirby Institute, The Australian Research Centre in Sex, Health and Society (ARCSHS) and the National Centre in HIV Social Research (NCHSR) receive 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. ARCSHS is affiliated with La Trobe University. NCHSR is affiliated with the Faculty of Arts, University of New South Wales. The CONNECT study received NHMRC project grant funding (NHMRC 630547). No pharmaceutical grants were received in the development of this study.

Paper Ref	217
Theme	HIV/AIDS Theme C: Biomedical Prevention
Presentation Type	HIV/AIDS Poster

CURRENT AWARENESS ABOUT PREP AND WILLINGNESS TO USE IT AMONG AUSTRALIAN GAY MEN

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Background: In Australia, use of antiretrovirals (ARVs) for HIV preexposure prophylaxis (PrEP) has not been approved, and there have been no awareness campaigns. We assessed current levels of PrEP awareness and willingness to use among gay men.

Methods: We conducted an online survey of Australian high-risk homosexual men and assessed their awareness about PrEP and willingness to use it.

Results: 685 participants provided information about PrEP awareness. They were on average 38 years old; 88% identified as gay and 10% as bisexual; 80% were sexually active and 33.7% had unprotected anal intercourse in preceding 6 months. Only 3.2% knew that ARVs, if taken before sex, were proven to be protective for HIV-negative homosexual men, and additional 16.5% knew about research evidence of ARV effectiveness in any situation, homosexual or heterosexual. 27 men (3.9%) had taken ARVs to reduce their chances of getting HIV in the past, but only 4 men reported using ARV both before and after having sex. If PrEP were available, 24.9% were willing to take it on daily basis, 50.1% for a few days before and after sex, 58.6% one day before and one day after having sex, and 71.8% before, during, and after a period of potentially risky sex. The likelihood to use PrEP daily was associated with engaging in unprotected anal intercourse and was highest in men with 11 or more partners in past 6 months.

Conclusion: Knowledge about PrEP effectiveness remains low among Australian gay men. If it were available now, most men would likely use PrEP around the time of specifically risky events or periods of potentially risky sex. Daily use would be most likely among men with high number of sex partners. There is need to inform gay men about the evidence on PrEP effectiveness and how it should be best used.

Disclosure of Interest Statement: The Kirby Institute, The Australian Research Centre in Sex, Health and Society (ARCSHS) and the National Centre in HIV Social Research (NCHSR) receive 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. ARCSHS is affiliated with La Trobe University. NCHSR is affiliated with the Faculty of Arts, University of New South Wales. No pharmaceutical grants were received in the development of this study.

Paper Ref	218
Theme	HIV/AIDS Theme C: Social & Behavioural Research
Presentation Type	HIV/AIDS Oral Presentation

COMPARISON OF RECRUITMENT STRATEGIES FOR BEHAVIOUR STUDIES AMONG GAY MEN.

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Background: In Australia, most behavioural research among gay and other men who have sex with men (GMSM) has been conducted using convenience (time-location) and internet-based sampling. Representativeness of the recruited samples remains unclear, because the nature of the GMSM population is difficult to estimate.

Methods: We compared the recruitment methods and samples from three Australian studies that recruited participants during 2011-2012: Gay Community Periodic Surveys (GCPS, time-location sampling), "Think About eXposure to Infection with HIV" (TAXI-KAB, Internet-based sampling) and "COntemporary Norms in NEtworks and CommunitiEs" (CONNECT, respondent-driven sampling, RDS). Statistical analyses were conducted using chi-squared test and regression methods with RDS weighting of the CONNECT sample.

Results: GCPS, TAXI-KAB and CONNECT recruited 10,842, 937 and 1,410 participants, respectively. GCPS was the most time-efficient of all three recruitment methodologies. The samples did not vary by age (median age: 34, 35 and 35 years) or ethnic composition (~60% Anglo-Australian). However, there were statistically significant differences with respect to the proportions of GMSM who had tertiary and higher education (74.6%, 69.4% and 76.6%, p<0.001), men ever tested for HIV (89.4%, 87.1%, and 90.6%, p<0.02), HIV-positive participants (10.9%, 17.4% and 13.3%, p=0.002), and men who reported all of their time spent with gay friends (40.4%, 25.3% and 46.6%, p<0.001).

Conclusion: The results indicate that the differences in the process of data collection resulted in some small differences in the composition of the samples of GMSM recruited by three methodologies (time-location, Internet-based and RDS sampling). Only with respect to social engagement with other gay men were there clear differences: Internet-based recruitment recruited less socially engaged men, whereas RDS (which relies on recruiting through existing social connections) recruited more socially engaged men. We discuss the implications of these differences for surveillance and research among GMSM.

Disclosure of Interest Statement: The Kirby Institute, The Australian Research Centre in Sex, Health and Society (ARCSHS) and the National Centre in HIV Social Research (NCHSR) receive 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. ARCSHS is affiliated with La Trobe University. NCHSR is affiliated with the Faculty of Arts, University of New South Wales. The CONNECT study received NHMRC project grant funding (NHMRC 630547). Gay Community Periodic Surveys were funded by state governments. No pharmaceutical grants were received in the development of this study.

Paper Ref	65
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Poster

HIGH RISK SEXUAL BEHAVIOURS AND SEXUALLY TRANSMITTED INFECTIONS AMONG TEENAGE MEN WHO HAVE SEX WITH MEN

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Background: Men who have sex with men (MSM) are an important risk group for sexually transmitted infections (STIs) including HIV. Data on sexual behaviours and STIs among MSM in their teens, when many MSM engage in their first sexual experiences, are scarce.

Methods: MSM aged 16 to 20 were recruited via community and other sources for a study on human papillomavirus. Men completed a questionnaire about sexual behaviours and were screened for gonorrhoea, chlamydia, syphilis and HIV.

Results: Two hundred men were included in the study. The median age was 19. Half of men reported sex with mainly older men. Such men were more likely to engage in receptive anal sex than other men (48% versus 25%, $p < 0.01$). The median age at first anal sex, whether insertive or receptive, was 17. Most men had engaged in insertive (87%) and receptive (85%) anal sex in the prior 12 months. Only 40% and 47% of men reporting consistent condom use with all insertive and receptive anal sex partners over the prior 12 months respectively. Forty six percent of men reported previous vaginal sex with a female. Fourteen percent of men tested positive for gonorrhoea, chlamydia or early syphilis.

Conclusion: High risk sexual behaviours from an early age and STIs may be common among teenage MSM. Preventative messages and STI screening interventions that are age and culturally appropriate need to be developed to reduce HIV and STI risk in this under-recognised group.

Conflict of interest: This study was supported by Merck. Merck had no input into the design, analysis or reporting of the study. CKF has received honoraria from CSL Biotherapies and Merck and research funding from CSL Biotherapies. CKF owns shares in CSL Biotherapies the manufacturer for Gardasil. JSH has received an honorarium from CSL Biotherapies and is an investigator on an Australian Research Council funded project (LP0883831) that includes CSL Biotherapies as a research partner. AEG has received honoraria and untied research funding from CSL biotherapies, and has received honoraria from Merck. SMG has received advisory board fees and grant support from CSL and GlaxoSmithKline, and lecture fees from Merck, GSK and Sanofi Pasteur; in addition, she has received funding through her institution to conduct HPV vaccine studies for MSD and GSK. SMG is a member of the Merck Global Advisory Board as well as the Merck Scientific Advisory Committee for HPV. None of this relates to this specific work. All other authors have no conflicts of interest.

Paper Ref	66
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Poster

HOW TEENAGE MEN WHO HAVE SEX WITH MEN VIEW VACCINATION AGAINST HUMAN PAPILLOMAVIRUS

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Background: HPV vaccination of men who have sex with men (MSM) prior to the onset of sexual activity would have the maximum impact on preventing HPV and anal cancer in this population. However, the knowledge and attitude towards HPV and HPV vaccination among teenage MSM is not well studied.

Methods: Two hundred MSM aged 16 to 20 were recruited via community and other sources. Men completed a questionnaire about their knowledge and attitude towards HPV and HPV vaccination.

Results: Most men (81%) were not willing to purchase the vaccine because the cost of the vaccine in Australia (approximately A\$450) was beyond their financial means. However, if the vaccine was offered free of charge to MSM, most men (86%) were willing to disclose their sexuality to a health care provider in order to obtain the vaccine. Over 90% of men reported that they would have done this under the age of 20. However, over half (54%) would have done this only at an age that was after their age at first experience of oral or anal sex with a male.

Conclusion: Teenage MSM expressed high acceptance of HPV vaccination and willingness to disclose their sexuality in order to obtain the vaccine. Opportunistic vaccination of teenage MSM may be feasible in settings where universal vaccination of school aged MSM does not currently exist, however, given HPV infections occurs early on, the effectiveness of this approach in terms of HPV prevention among MSM needs to be assessed.

Conflict of interest: This study was supported by Merck. Merck had no input into the design, analysis or reporting of the study. CKF has received honoraria from CSL Biotherapies and Merck and research funding from CSL Biotherapies. CKF owns shares in CSL Biotherapies the manufacturer for Gardasil. JSH has received an honorarium from CSL Biotherapies and is an investigator on an Australian Research Council funded project (LP0883831) that includes CSL Biotherapies as a research partner. AEG has received honoraria and untied research funding from CSL biotherapies, and has received honoraria from Merck. SMG has received advisory board fees and grant support from CSL and GlaxoSmithKline, and lecture fees from Merck, GSK and Sanofi Pasteur; in addition, she has received funding through her institution to conduct HPV vaccine studies for MSD and GSK. SMG is a member of the Merck Global Advisory Board as well as the Merck Scientific Advisory Committee for HPV. None of this relates to this specific work. All other authors have no conflicts of interest.

Paper Ref	98
Theme	Sexual Health: Public Health
Presentation Type	Sexual Health: Quick Fire Presentation

HUMAN PAPILLOMAVIRUS AMONG TEENAGE MEN WHO HAVE SEX WITH MEN

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Background: Human papillomavirus (HPV) infection among men who have sex with men (MSM) is common, leading to morbidity including anal cancer. This study sought to elucidate the determinants of initial anogenital HPV infection among teenage MSM.

Methods: Two hundred MSM aged 16 to 20 were recruited via community and other sources. Men were tested for HPV DNA from the anal canal and penis, and completed a questionnaire.

Findings: Median age was 19. Men reported a median duration of 1.9 years since first receptive anal sex and a median of 4 receptive anal sex partners. The proportion of men with anal HPV of any type increased from 10.0% in men reporting no prior receptive anal sex to 47.3% in men reporting ≥ 4 receptive anal sex partners (p -trend <0.001). The proportion with anal HPV type 16 also increased significantly with increasing receptive anal sex partners (p -trend=0.044). The proportion of men with penile HPV increased from 3.7% in men reporting no prior insertive anal sex to 14.8% in men reporting ≥ 4 insertive anal sex partners (p -trend=0.014). Overall, 39.0% (95% confidence interval (CI): 32.2-46.1%) of men had at least one HPV DNA type detected: 23.0% (95% CI: 17.4-29.5%) with a quadrivalent HPV vaccine preventable type (6, 11, 16 or 18).

Conclusion: These data suggest early and high per partner transmission of HPV among MSM soon after their first sexual experiences. HPV vaccination needs to commence early for maximal prevention of HPV among MSM.

Conflict of interest: This study was supported by Merck. Merck had no input into the design, analysis or reporting of the study. CKF has received honoraria from CSL Biotherapies and Merck and research funding from CSL Biotherapies. CKF owns shares in CSL Biotherapies the manufacturer for Gardasil. JSH has received an honorarium from CSL Biotherapies and is an investigator on an Australian Research Council funded project (LP0883831) that includes CSL Biotherapies as a research partner. AEG has received honoraria and untied research funding from CSL biotherapies, and has received honoraria from Merck. SMG has received advisory board fees and grant support from CSL and GlaxoSmithKline, and lecture fees from Merck, GSK and Sanofi Pasteur; in addition, she has received funding through her institution to conduct HPV vaccine studies for MSD and GSK. SMG is a member of the Merck Global Advisory Board as well as the Merck Scientific Advisory Committee for HPV. None of this relates to this specific work. All other authors have no conflicts of interest.

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