Abstracts

Keynote

Professor Sir John Strang

Kings College London, London

Professor Sir John Strang is Director of the National Addiction Centre in London, UK, and Head of the Addictions Department at King's College London. He is also Leader of the Addictions CAG (Clinical Academic Group) of Kings Health Partners AHSC (Academic Health Science Centre). He also has extensive experience as a Lead Clinician in charge of a wide range of treatments in community and residential settings and has been a Consultant Psychiatrist in addictions treatment for over 30 years. Professor Sir John Strang also provides the overall leadership for the Addictions CAG (Clinical Academic Group) within King's Health Partners, one of the core areas of the Academic Health Science Centre (AHSC). This brings together university and NHS partners and is distinctive for crossing the divide between physical and mental health. Sir John has chaired and/or served on key committees or guidelines groups for the Department of Health, for NICE (the National Institute of Health and Clinical Excellence) within United Nations (UN) and for the World Health Organisation (WHO). This provides opportunity to bring relevant evidence from new scientific studies and systematic reviews to the policy-making work of these committees.

Professor Patricia Conrod

Universite de Montreal, Montreal

Professor Patricia Conrod is a clinical psychologist and Professor of Psychiatry at the Universite de Montreal, based at the CHU Sainte-Justine Mother and Child Hospital Centre in Montreal. She is an FRSQ Senior Research Fellow and holds a Senior Research Chair at UdM in Social and Community Pediatrics. Her research focuses on cognitive, personality and biological risk factors for the development and maintenance of drug abuse and the factors that mediate the co-occurrence of addictive behaviours with other mental disorders. She has significantly contributed to the IMAGEN longitudinal study, the ALICE-RAP Consortium and co-leads the ENIGMA-Addiction working group, a project pooling addiction neuroimaging and genetics studies around the world for meta- and mega-analysis. Her research findings have led to the development of new approaches to substance abuse treatment and prevention that target personality risk factors and the different underlying motivational determinants of drug use. She has also developed the Preventure Program, which was recently identified in the U.S. Surgeon General's report on Addiction and in the joint report by UNESCO, WHO and UNODC as an evidence-based solution for drug prevention.

Mr Paul Griffiths

European Monitoring Centre for Drugs and Drug Addiction, Lisbon

Paul Griffiths has worked in the drugs field for over 25 years. Prior to 1999, he worked as a researcher based at the National Addiction Centre in London. From 2000, his activities have focused on the international monitoring of drug use, working first for the United Nations Office on Drugs and Crime, in Vienna, (UNODC), and subsequently, for the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA). Paul joined the EMCDDA in 2003, as head of the epidemiology unit and was appointed Scientific Director in 2010. Recent activities include: serving as part of the UK government's expert panel on NPS (2014); chairing an international expert review of the Irish National Drug Strategy (2015); and acting as co-chair of the programme committee for the Lisbon Addictions Conference (ongoing). He currently holds an honorary position as a Visiting Senior Lecturer in the Department of Addictions, Institute of Psychiatry, Kings College London.

Professor Steve Allsop

Curtin University, Perth

Steve Allsop has been involved in policy, prevention and treatment, research and practice, and professional development for health, police, education, and community organisations for over 35 years. He has managed prevention, policy and treatment services. Until September 2016 he was Director of the National Drug Research Institute (NDRI) at Curtin University. He has previously worked as the A/Executive Director, Drug and Alcohol Office, Western Australia and the Director of the National Centre for Education and Training on Addiction, Flinders University of South Australia. His contribution to the field has been recognised with induction into the WA Alcohol and Other Drug Awards Honour Roll, the APSAD senior scientist award in 2015 and the National Alcohol and Other Drugs Honour Roll in 2017.

Professor Beau Kilmer

RAND Corporation, California

Beau Kilmer, PhD is a senior policy researcher at the RAND Corporation, where he codirects the RAND Drug Policy Research Center. He is also a professor at the Pardee RAND Graduate School and interim director of RAND's new office in the San Francisco Bay Area. His research lies at the intersection of public health and public safety, with a special emphasis on crime control, substance use, illicit markets, and public policy. Some of his current projects include assessing the consequences of alternative drug policies and measuring the effect of 24/7 Sobriety programs on drunk driving, domestic violence, and mortality. Kilmer's articles have appeared in leading journals such as Journal of the American Statistical Association, New England Journal of Medicine, Proceedings of the National Academy of Sciences, and his commentaries have been published by CNN, Los Angeles Times, New York Times, USA Today, Wall Street Journal, and other outlets. In 2016, the second edition of his co-authored book on marijuana legalization was published by Oxford University Press.

Presentations

National Opioid Medications Abuse Deterrence (NOMAD) study: The impacts of a potentially tamper-resistant oxycodone formulation on opioid use and harms in Australia

Briony Larance[1], Timothy Dobbins[1], Amy Peacock[1], Robert Ali[2], Raimondo Bruno[1,3], Nicholas Lintzeris[4,5], Michael Farrell[1], Louisa Degenhardt[1,6,7,8]

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Introduction and Aims: In April 2014, a potentially tamper-resistant formulation (TRF) of controlled-release oxycodone (CRO) was introduced in Australia, rapidly replacing the non-TRF formulation. The National Opioid Medications Abuse Deterrence (NOMAD) study was established prior to the introduction of TRF-CRO to undertake a systematic and comprehensive examination of its impacts upon on opioid use and harms.

Design and Methods: Multiple data sources were triangulated, including opioid sales, a prospective cohort of people who tamper with pharmaceutical opioids, annual surveys of people who inject drugs (PWID), and other routinely-collected health datasets. We examined impacts upon: i) population-level opioid utilisation and opioid-related harm (overdose, help-seeking, treatment-seeking), and ii) opioid use, tampering and attractiveness among sentinel populations of PWID. Routinely-collected data were analysed using interrupted time series analysis. Where possible, meta-analyses (weighted z-tests) were conducted to synthesise across multiple indicators.

Results: At population-level, we found reduced sales of higher strengths of CRO and increased sales of other oxycodone formulations. Fewer new treatment entrants reported oxycodone as problem opioid. No other impacts were observed among population-level indicators of opioid-overdose or help- or treatment-seeking. Meta-analyses across sentinel populations of PWID indicated reduced CRO use via tampering, with no evidence of switching to heroin or other drug use.

Conclusions and implications: The introduction of TRF-CRO had clear impacts among sentinel populations of people who inject drugs, with reductions in injection of the controlled-release formulation, no switch to other formulations of oxycodone, and no clear evidence of a shift to other opioids or drugs. We found little evidence of impacts at the population level upon opioid utilisation or harms. Abuse-deterrent formulations may make tampering with opioids more difficult, but this study suggests that it may have limited impact as a strategy to address population-level issues related to overprescribing, overuse and harms of opioid medicines taken via the intended route.

Treating over the counter codeine dependence

Suzanne Nielsen[1,2], Briony Larance[1], Nicholas Lintzeris[2,3], Simon Holliday[4], Adrian Dunlop[4,5], Paul Haber[3,6], Bridin Murnion[3,6], Catherine Silsbury[7], Jennifer Johnson[8], Apo Demirkol[2,9], Stephen Ling[4], Craig Sadler[4,5,9], Nghi Phung[7], Raimondo Bruno[12], Mark Hardy[13], Amanda Brown[4], Jennie Houseman[13], Louisa Degenhardt[1]

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Background: Responding to codeine dependence has become an area of increasing policy and clinical interest. Few studies have directly examined treatment approaches and outcomes, particularly for those that develop opioid dependence through using over-the-counter medicines.

Methods: We present findings from a systematic review on treating codeine dependence in addition to 2-year outcomes for a cohort of codeine dependent people (n = 23) as part of a larger cohort (n = 108) of pharmaceutical opioid dependent people.

Results: We identified 39 published papers that described codeine dependence and/or treatment approaches. Treatment approaches in the literature include self-management with internet support, psychological treatments, symptomatic medications for opioid withdrawal, and opioid agonists treatment, though larger studies and long-term outcomes were lacking. Consistent with findings in the systematic review, our cohort study identified that dependent on OTC codeine were mostly female (57%). Compared to those dependent on prescribed opioids, participants dependent on OTC codeine were significantly more likely to be employed (57% cf. 20%).One in five (18%) reported current chronic pain. Half (52%) had entered treatment for the first time at cohort entry. At cohort entry most (21 of the 23) were in buprenorphine treatment, with most remaining in treatment at 3 months (n=19, 85%), 12 months (n=18, 82%) and 2 years later (n=13, 65%). Ongoing (past month) OTC codeine use was reported was reported by one in three (35%) at cohort entry, a quarter at 3-months (26%), 18% at 12 months and 35% at 2 years.

Discussion: This is the first study to describe long-term treatment outcomes for those that have entered treatment for OTC-codeine dependence. Findings suggest high rates of retention in treatment, with some ongoing codeine use despite treatment involvement. Characteristics at cohort entry demonstrate clear differences between codeine dependent people and those dependent on prescribed opioids, which may impact on treatment provision and outcomes.

Methamphetamine-related death in Australia, 2009-2015

Shane Darke[1], Sharlene Kaye[1,2] & Johan Duflou[1,3]

[1]National Drug & Alcohol Research Centre, University of New South Wales
[2]Justice Health and Forensic Mental Health Network, NSW Health
[3]Sydney Medical School, University of Sydney, NSW, Australia

Aims: To determine mortality rates, characteristics, cause and manner of death, and toxicology of methamphetamine-related death in Australia, 2009-2015.

Design: Analysis of cases of methamphetamine-related death retrieved from the National Coronial Information System (NCIS).

Setting: Australia.

Cases: All cases in which methamphetamine was coded in the NCIS database as a mechanism contributing to death.

Measurements: Information was collected on cause and manner of death, demographics, location, circumstances of death and toxicology.

Findings: There were 1,649 cases of methamphetamine-related death over the study period. The crude mortality rate was 1.03 per 10^5 and was significantly higher amongst males than females (1.61 v 0.44 per 10^5). The mortality rate doubled between 2009 and 2014 (0.65 to 1.35 per 10^5). Deaths were due to accidental drug toxicity (43.2%), natural disease (22.0%), suicide (18.5%), other accident (14.8%) and homicide (1.5%). The median blood methamphetamine concentration was 0.17mg/L. Cases in which only methamphetamine was detected had higher blood methamphetamine concentrations than other cases (0.30 v 0.15 mg/L). The median blood methamphetamine concentration varied within a narrow range (0.15-0.20mg/L) across manner of death, and similar proportions had very high concentrations (≥1.00mg/L): accidental drug toxicity (11.8%), natural disease (11.9%), accident (12.2%), suicide (9.0%), homicide (16.7%). In the majority (82.8%) of cases substances other than methamphetamine were detected, most frequently opioids (43.1%) and hypnosedatives (38.0%).

Conclusions: Methamphetamine death rates doubled over the study period. While toxicity was the most frequent cause, natural disease, suicide and accident together contributed to more than half of deaths.

Implications: Methamphetamine is a major public health problem of increasing significance and harms, of which death represents the most severe end. In particular, more focused attention on the role of methamphetamine-related cardiovascular disease is warranted.

Target audience: Clinicians

Stroke and methamphetamine use in young adults: A review

Julia Lappin[1,2] Shane Darke[1] & Michael Farrell[1]

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Background: Methamphetamine use and stroke are significant public health problems. Strokes among people aged below 45 years are much less common than in older age groups, but have significant mortality and morbidity. Methamphetamine is a putative cause of strokes among younger people.

Methods: A review of methamphetamine-related strokes was conducted. Bibliographic databases were searched until February 2017 for articles related to methamphetamine and stroke. Both haemorrhagic and ischaemic strokes were considered.

Results: Of 370 articles screened, 77 were selected for inclusion. There were 81 haemorrhagic and 17 ischaemic strokes reported in case reports and series. Both types were approximately twice as common in males. Route of administration associated with haemorrhagic stroke was typically oral or injecting, but for ischaemic stroke inhalation was most common. Haemorrhagic stroke was associated with vascular abnormalities in a third of cases. One quarter of individuals completely recovered and a third died following haemorrhagic stroke. One fifth completely recovered and one fifth died following ischaemic stroke.

Conclusions: There is a preponderance of haemorrhagic strokes associated with methamphetamine use in young people, and methamphetamine-related stroke is associated with poor clinical outcomes. In a period of rising worldwide methamphetamine use, the incidence of methamphetamine-related stroke will increase, with a consequent increase in the burden of disease contributed by such events.

Implications of the research: Stroke among young methamphetamine users can be fatal or leave long-lasting disability. Health providers should be vigilant to methamphetamine use in young people presenting with stroke. Methamphetamine users and their communities should be aware that stroke can occur as a consequence of both short-term and long-term use.

Pathways to prevention: The effectiveness of universal and selective prevention for alcohol use and related harms

Nicola Newton1, Lexine Stapinski1, Tim Slade1, Patricia Conrod2, Emma Barrett1, Cath Chapman1, Katrina Champion1,3 , Siohban Lawler1, Anna Smout1, Marius Mather1, Natalie Castellanous-Ryan2 & Maree Teesson1

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Introduction: Alcohol and other drug use are among the leading causes of disease burden for young Australians. Effective and early prevention is therefore crucial. This study is an extension of the landmark CAP (Climate and Preventure) study, the first RCT of a comprehensive prevention approach combining both universal and selective interventions.

Aim: The current study will follow up of the CAP study cohort over a critical risk-period as students transition from school to early adulthood. Specifically, the study will 1) assess the long-term effectiveness of universal, selective and combined prevention, 2) assess whether these interventions are effective in reducing aggressive behaviour and violent offending, and 3) discern the mechanisms of change underlying the intervention effects.

Method: In 2012, 26 schools and 2,190 Year 8 participants (13 yrs) were recruited to the CAP trial and randomised to one of four conditions: (1) Control (health education as usual), (2) Climate (universal), (3) Preventure (selective), or (4) CAP (both universal and selective approaches). All students were followed up for 3 years post baseline. This study will extend the longitudinal follow-up of participants to 7-years post baseline assessing drinking and drug use habits, and other risk behaviours.

Results: Results from the original CAP study demonstrate the effectiveness of universal and selective and combined approaches in preventing harmful alcohol use and mental health symptoms among both low- and high-risk adolescents up to 3-years post baseline. A summary of results from the original study will be presented along with the study protocol of the long-term follow-up described.

Implications: As it stands, very little is currently known about the effectiveness of school-based prevention programs beyond age 17. This world-first study addresses this crucial knowledge gap, and we hope the findings will indicate which prevention approaches are most sustainable long-term. This knowledge is vital to inform policy nationally and internationally, as economic modelling suggests substantial societal benefit can be gained from even modest reductions in alcohol use.

The link between anxiety and alcohol use over the transition from adolescence to adulthood: Implications for early intervention

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Background: Anxiety and alcohol use disorders commonly co-occur and, if left untreated, can fuel each other in a feed-forward cycle. The transition from adolescence to adulthood is a key risk period for onset of both disorders, yet little is known about the developmental unfolding of these disorders over young adulthood, or how best to prevent their escalation.

Aims: This research aims to i) examine the relationship between anxiety, coping-motivated drinking and transition to hazardous alcohol use over this important developmental period; and ii) inform the development of an early intervention for young adults to prevent the escalation of anxiety and alcohol use problems.

Methods: At ages 17 and 21, participants (n = 2,148) from a UK birth cohort reported their alcohol use and related problems, anxiety symptoms, and use of alcohol to cope with emotional symptoms. Latent transition analysis was used to identify alcohol use subtypes at each timepoint, and examined the effect of anxiety and coping motives on transition from low- to high-risk use over this period.

Results: Three distinct profiles were identified. At age 17, the majority of participants were classified as low-risk drinkers, with 22% reporting binge-drinking at least monthly. By age 21, the binge-drinking group had grown to 36% and a third class (8%) emerged, showing markedly increased rates of alcohol-related harm. Anxiety disorder and drinking to cope were associated with higher risk alcohol use at both waves. Young people who reported coping-motivated drinking were at increased risk of moving from low-risk to high-risk alcohol use over the transition from adolescence to adulthood.

Implications: Anxiety, and in particular drinking to cope with anxiety, is associated with adverse drinking patterns in early adulthood. Results will be discussed with a focus on implications for development of a novel youth-focused intervention, the inroads program, to address harmful alcohol use occurring in the context of anxiety symptoms.

Target audience includes clinicians, youth workers, counsellors, researchers, policy-makers, and anyone with an interest in wellbeing among young people.

Partnerships in the community: Interventions to reduce alcohol and other drug-related use and harms

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Background: Given the broad contextual, structural and interpersonal influences of alcohol and other drug (AOD) use, community-level interventions that extend across multiple settings may be an efficacious method to reduce population-level harms arising from AOD use.

Aim: To examine the efficacy of multi-setting, community-based interventions in reducing population-level harms arising from AOD use.

Methods: A systematic review of electronic databases CENTRAL, Embase, Medline, Medline in Process, and PyscINFO from database inception to August, 2017.

Results: A total of 22 trials from 59 publications were included in the review (n = 247,360 participants). Most studies were conducted in the United States. Interventions lasted 30 months on average, and most targeted alcohol use, with implementation occurring in schools, home, community organisations, law enforcement agencies, on and off-premise alcohol outlets, healthcare settings and sporting clubs. The 22 identified trials found limited impact on prevalence of AOD use. There was no impact on past month alcohol use (Relative Risk [RR]=0.95, 95% Confidence interval [CI]: 0.89-1.02), binge drinking (RR=0.97, 95%CI: 0.89-1.06) or 12-month marijuana use (RR=0.98, 95%CI: 0.86-1.11). Some reductions in risky drinking were identified (RR=0.77, 95%CI: 0.60 to 1.00). There was some evidence of a reduction in AOD-related assault rates and arrests, however there was no effect on delinquency (RR=0.99, 95%CI: 0.88-1.11). Two studies reported a reduction in AOD-related traffic accidents in the short term, but longer term evaluations found no effect.

Implications and target audience: Multi-setting, community-based interventions had little impact on AOD use, however some evidence for reduction in AOD-related harms was identified. Future multi-setting community-based interventions should use evidence-based interventions, employ multiple intervention strategies, and ensure implementation fidelity and quality of outcome data collection is high. This presentation is relevant to researchers undertaking community-based interventions, in addition to government, non-government and not-for-profit organisations that run community-based initiatives for AOD.

Funding: The Australian Drug Foundation (ADF); The Australian National Health and Medical Research Council (NHMRC).

Drug trends 2017: looking back to think forward

Ms Amanda Roxburgh[1]

[1]Drug Trends, National Drug and Alcohol Research Centre

The new data from the 2017 Illicit Drug Reporting System (a sentinel sample of people who inject drugs) and the 2017 Ecstasy and Related Drug Reporting System (a sentinel sample of people who use stimulants) will be presented. These two crucial drug trend monitoring systems have been running for the last 17 years across Australia. Historical trends, as well as highlights from current findings from 2017 will be discussed in the context of shaping responses to drug related harms in Australia. Given the dynamic nature of drug use and drug markets, understanding and mapping the evolving trends is vital.

Changing patterns of new and emerging psychoactive substances in Australia

Ms Rachel Sutherland[1]

[1]Drug Trends, National Drug and Alcohol Research Centre

Aim: This paper examines rates of new and emerging psychoactive substance (NPS) use amongst a sample of people who regularly use psychostimulants in Australia, over the time period 2010 to 2017.

Method: Data were obtained from the Ecstasy and related Drugs Reporting System (EDRS), an annual national monitoring study aimed at detecting emerging trends in illicit drug markets, and examined over the years 2010 to 2017.

Results: Results from 2010-2017 (n=5,703) show that recent use of 'any' NPS has fluctuated over time, peaking at 52% in 2012 and declining steadily in recent years (to 33% in 2017). In 2010, synthetic cathinones were the most commonly used NPS (19%), but had declined significantly by 2017 (5%; $p<0.001$). Conversely, both phenethylamine and tryptamine NPS had been used by 8% of the sample in the six months preceding interview; this increased to 14% ($p<0.001$) and 18% ($p<0.001$) respectively in 2017, making them the two most commonly used groups of NPS. Rates of synthetic cannabinoid use have fluctuated over the years, with 2% of the sample reporting recent use in 2017. Recent use of plant-based NPS increased from 2% in 2010 to 5% in 2017 ($p=0.007$), whilst recent use of benzylpiperazine declined from 5% in 2010 to <1% in 2017 ($p<0.001$). Recent use of methoxetamine and aminoindanes (i.e. MDAI, 5-IAI) remained stable and uncommon across all years.

Conclusions: Despite 'blanket ban' regulations across Australia, intentional NPS use has been established as a significant and ongoing practice amongst our sample of people who regularly use psychostimulants. However, it remains a highly dynamic marketplace, with the popularity of NPS classes changing over time. Rates of 'unintentional' NPS use in Australia remain largely unknown, with further research required on this topic.

Trends in illicit tablets – an analytical perspective

Joanne Gerstner-Stevens[1]

[1]Victoria Police Forensic Services Department

The availability and complexity of illicit drugs in Victoria has significantly increased over the last three decades. Ecstasy has dominated the illicit tablet market for the majority of this time but worldwide shortages of safrole and subsequently MDP2P lead to a decrease in the availability of genuine “ecstasy” tablets between 2009 and 2012. During this period a range of other drugs including methorphan and a variety of new psychoactive substances (NPS) quickly emerged to fill the void. The belief that once ecstasy re-emerged NPS would disappear has been proven wrong over time, however, although a decline in NPS has been observed they continue to be detected either by themselves or in combination with other drugs.

The Chemical Drug Intelligence Unit maintains a drugs database containing the results of analysis of suspected drugs seized by Victoria Police since 1997. This invaluable intelligence tool, in this case, was used to conduct trend analysis on illicit tablets seized within Victoria during the last three decades. This presentation will discuss the results of analysis, the trends observed and the appearance of the illicit tablets in Victoria during the last 30 years focusing on the more recent years and then briefly discuss the prevalence of fentanyl and its analogues.

Parental supply of alcohol and adolescent drinking, harms, and alcohol use disorder symptoms: Prospective cohort study

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Background: Parents often supply alcohol to their children, reportedly to reduce harm, yet longitudinal research on risks associated with such supply is compromised by short periods of observation and poor control for covariates. This study investigated associations between parental supply, and supply from non-parental sources, and subsequent drinking outcomes over a six-year period of adolescence, adjusting for child, parent, family and peer variables.

Methods: A cohort of 1927 children was surveyed annually between 2010 and 2016. Measures included: binge drinking (>4 standard drinks on an occasion); alcohol-related harms; DSM-IV symptoms of abuse, dependence, and of DSM-5 alcohol use disorder; and exposure to parental and non-parental sources of alcohol, in the year.

Findings: Adolescents supplied alcohol by parents had higher odds of binge consumption (OR: 1·53; 95% CI: 1·24, 1·89), alcohol-related harm (OR: 1·88; 95% CI: 1·55, 2·29), and DSM symptoms of alcohol dependence (OR: 1·67; 95% CI: 1·08, 2·59) and of DSM alcohol use disorder (OR: 1·76; 95% CI: 1·29, 2·39), but parental supply was not associated with symptoms of DSM alcohol abuse (OR: 0·90; 95% CI: 0·64, 1·28), after control for covariates. Supply from non-parental sources was also associated with significant risks of all these adverse outcomes.

Interpretation: Providing alcohol to children increases risk of a range of harms. There is no evidence that parents reduce risk of adverse drinking outcomes by providing alcohol to their child in the years prior to the legal age of purchase. Parents should be advised that this practice is not associated with any benefit to the child's health, and that accessing alcohol from non-parental sources also increases risk of harms.

Cannabis legalisation in Canada: The challenges in a federated country

Marian Shanahan[1] & Phillipe Cyrenne[2]

[1]National Drug and Alcohol Research Centre, UNSW Sydney
[2]Faculty of Business and Economics, The University of Winnipeg, Manitoba

The upcoming legalisation of cannabis in Canada, a highly federated country, provides the opportunity to explore regulatory issues that may be pertinent for Australia. Some of the many issues related to the development of a regulatory system will be discussed including how other goods and services are treated from a legal and regulatory perspective, providing the context for cannabis. Then the special case here of the role of government intervention with industry is considered. History informs us about how the legislation of recreational cannabis may develop in the different Canadian provinces and hence provides lessons for Australia.

Drug policy and democracy: Achieving inclusive and thoughtful policy participation

Alison Ritter[1], Kari Lancaster[1] & Rosalyn Diprose[2]

[1]Drug Policy Modelling Program, NDARC, UNSW
[2]School of Humanities & Languages, UNSW

Now is a time of change in drug policy globally. Progressive policies are becoming more common (such as the legalisation of recreational cannabis in some US states and in Uruguay) at the same time as more prohibitionist and strict regimes are emerging (through for example the influence of China at the UN, and the extrajudicial killings in the Philippines). These developments have not been driven by linear, incremental processes, nor been concerned with implementing policies based on the 'evidence'. In practice, policy makers rarely operate in line with the 'evidence-based policy' (EBP) paradigm. Indeed, the EBP paradigm is now being questioned as the basis for policy reform. This raises some fundamental challenges for drug policy researchers. In the first instance, 'evidence' comes to be understood as encompassing knowledge(s) beyond the traditional notion of scientific research. Secondly, the need for real and meaningful engagement with people who use drugs (the community most directly affected by drug policy) is essential. Thirdly, researchers may need to cede their hitherto privileged position as 'experts' in policy processes and consider (and work with) a range of participants, reflecting a more democratic approach to policy deliberation. This paper will explore the ways in which the theory and practice of deliberative democracy may inform drug policy. To date, very little has been written about the application of deliberative democracy to drugs policy. We suspect that the EBP encourages the 'public understanding of science' model, where the problem is identified as a deficit of knowledge in the public. An alternative is to consider that the public/s have rich knowledge of a different kind. We need new tools to integrate diverse knowledges: research evidence, public opinion and lived experience. The effective engagement of the public/s in policy is essential for its acceptability and effectiveness. As noted by Jasanoff (p.258) the public is the "proving ground for competing knowledge claims" and the "theatre for establishing the credibility of state actions". We argue that deliberative democracy is an essential ingredient in transforming drug policy.

Breakout sessions

Breakout One: Issues in cannabis use and treatment

Understanding the relationship of cannabis use on pain in people prescribed opioids for chronic non-cancer pain

Gabrielle Campbell[1], Suzanne Nielsen[1], Nicholas Lintzeris[6,7,] Raimondo Bruno[1,5], Amy Peacock[1], Gary Chan[9], Briony Larance[1,] Milton Cohen[1,2], Michael Farrell[1], Wayne D. Hall[8,9] and Louisa Degenhardt[1,2,3,4]

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Background: We investigated the relationship between pain interference and cannabis use cannabis use in a large community sample of people who had been prescribed opioids for chronic non-cancer pain. This topic is of increasing interest given that given that the medicinal use of cannabis for chronic pain is commonly discussed.

Design and Methods: The POINT study included 1,500 people prescribed pharmaceutical opioids for chronic non-cancer pain. Prospective data from the baseline, one-year, two-year and three-year interviews are presented. Data on the use of cannabis, ICD-10 cannabis use disorder and the use of cannabis for pain were collected. The prospective relationship between cannabis use and pain interference will be examined.

Results: Approximately, one-in-eight participants reported using cannabis in any given year, with one-in-ten reporting past month use. The majority of people who used cannabis reported they used it for pain relief. We found that current cannabis use was associated with greater pain interference at the next wave of data collection and current pain interference was associated with future cannabis use.

Discussion and Conclusions: Cannabis use, for both recreational purposes and pain relief, appears common among people living with chronic non-cancer pain. In a sample of people prescribed opioids for chronic non-cancer pain, with significant physical and mental health problems, it does not appear as though cannabis reduces pain interference.

Male and female trends in recent cannabis use and attitudes towards cannabis legalisation 2001-2013

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Background: Cannabis continues to be widely used globally, and to account for significant morbidity. While use has historically been more prevalent in men than women, emerging evidence suggests that prevalence of cannabis use is converging among men and women from more recent cohorts. This paper provides the first attempt to unpack age, period and cohort trends in cannabis use and attitudes towards cannabis legalisation in Australia, which continues to have one of the highest rates of cannabis use in the world.

Methods: Data from a total of 122 948 Australians aged 14-79 years (68 747 women and 54 201 men) were analysed from five cross-sectional waves of the Australian National Drug Strategy Household Survey (2001-2013). Age, period and cohort effects on recent (12 month) cannabis use and attitudes towards legalisation were estimated separately for each sex using a variety of analytic techniques such as cross-classified random-effects models (CCREMS) and Intrinsic Estimator (IE) methods. Outcomes were adjusted for the effects of education level and tobacco smoking status.

Results: Initial descriptive analyses indicated trends among men and women towards progressively decreased prevalence of last year cannabis use among younger users, but a prolongation of use among older users, in the more recent surveys. In addition, for both sexes, there was a trend to an increasing decline in last year use among more recent birth cohorts, with this effect levelling off in the most recent cohort groups.

Conclusion: These data will assist in helping better understand recent population-level trends in Australian cannabis use, which should assist in targeting prevention and intervention efforts.

Medicinal cannabinoids

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Cannabis as a medicinal product has increasingly gained attention and traction in Australia, largely due to the effective campaigning of patients and patient advocates. On October 30, 2016, legislation allowing the legal cultivation, production and manufacturing of medicinal cannabinoid products came into effect. Greater confusion and debate has surrounded how patients are able to access medicinal cannabinoids legally. There are currently two pathways – receiving approval from an authorised prescriber who is a specialist in a particular condition, or via application to the special access scheme with the Therapeutic Goods Administration (TGA).

The evidence for medicinal cannabis and its effectiveness is mixed – there is some evidence of synthetic cannabinoid products being useful for controlling chemotherapy-induced nausea and vomiting, however these studies are several decades old, and require comparison to newer, more effective antiemetics. There is emerging evidence to suggest that the cannabinoid cannabidiol is effective at reducing seizures for children with a severe form of epilepsy known as Dravet Syndrome. While these findings are based on randomised controlled trials, there are a large number of anecdotal reports of patients who report cannabis has been helpful in controlling (among others) chronic pain, anxiety and depression, PTSD, arthritis pain and Multiple Sclerosis symptoms.

While the Australian legislation has been refined and put in place, there have been concerns raised by clinicians who worry they may be asked to prescribe cannabinoids without knowing whether there is sufficient evidence to support the product's effectiveness and safety. As a way of addressing these concerns, a team at NDARC, led by Professor Michael Farrell and Professor Louisa Degenhardt, were commissioned to run a series of high-quality systematic 'review of reviews' and updated systematic reviews on a range of conditions that are thought to benefit from medicinal cannabis. These conditions include epilepsy, chronic non-cancer pain, chemotherapy-induced nausea and vomiting, and multiple sclerosis. The systematic review included both randomised controlled trials and observational studies, and evaluated cannabinoid effectiveness based on outcomes specific to that condition.

Based on these reviews, the team have drafted a series of guidance documents for clinicians and their patients, with the aim of summarising the current available evidence for medicinal cannabis' therapeutic effectiveness, as well as highlighting its potential side effects. These guidance documents have been handed over to clinical expert groups for their revision, and are expected to become available by the end of 2017.

This talk will describe the process of conducting the reviews and presenting the guidance documents it will provide a brief overview of the work of the reviews and the guidance development.

Breakout Two: Drug Trends: contemporary issues and policy

Peer administered naloxone in Australia: Past, present and future

Professor Simon Lenton[1] and Professor Paul Dietze[2]

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[2] Head, Alcohol and other Drug Research, Burnet Institute

Since the early 1990s there have been calls to establish take-home naloxone (THN) programs through which naloxone is made available to opioid consumers, their peers and family members to prevent overdose deaths. In this country a THN program was established in the ACT in 2012 with similar programs established in NSW, WA, SA, Qld and Vic shortly thereafter. The evaluations of these programs showed that they have improved overdose knowledge and response amongst program participants and resulted in many successful overdose reversals. However, most programs have only reached a relatively small number of participants and scale-up remains an issue.

In November 2015 Australia rescheduled naloxone formally making it available over the counter, as well as on prescription. However, in February 2016 production of the prefilled min-i-jet product, the mainstay of THN provision, ceased meaning that a new product had to be brought into the Australian market under special approval by the TGA to complement supply through ampules.

Our presentation will describe current and future challenges and opportunities in Australia to help prevent opioid overdose through THN. It draws on data from a number of sources including the Illicit Drug Reporting System to demonstrate some of the issues. Topics covered include: drug use trends and opioid overdose, legislative considerations across jurisdictions, naloxone forms, and scaling-up to improve access and availability in community pharmacies, treatment facilities, and peer led services. If Australia follows other countries and recent local trends continue, we are likely to see an increase in opioid overdoses. Increasing availability of THN will be one important part of the response to this trend. Early development and rollout of THN programs across a number of Australian jurisdictions provide a good base, but more work is needed to maximize coverage and subsequent impact of THN in Australia.

Differences in methamphetamine use among people who inject drugs and people who regularly use stimulants: The need to include both groups in policy responses

Ms Amanda Roxburgh[1]

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Methamphetamine use has been associated with considerable public health burden globally, according to the latest Global Burden of Disease estimates. In Australia, there have been steady increases in the number and weight of crystal methamphetamine seizures detected at the border over the last four years, and high levels of domestic production recorded. High availability of methamphetamine in Australia, at relatively stable prices has resulted in increasing prevalence of use among sentinel groups who report drug use. While IDRS and EDRS participants are two very different sentinel groups of people who use drugs, findings from each provide important information with regard to methamphetamine use, patterns and related harms. 2017 results will be discussed within the broader context of increasing estimates of people engaging in dependent methamphetamine use in Australia, as well as policy relevant responses.

Drug driving: What the drug trends program is telling us?

Associate Professor Raimondo Bruno[1]

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Background: Driving while affected by alcohol and other drugs carries significant risks for road safety. Significant investment has been made in deterring drugged driving, through roadside testing and education campaigns. National Drug Strategy Household Survey prevalence data suggest rates of drugged driving are declining, falling from 21% of past year illicit drug consumers in 2007 to 16% in 2013.

Aims: To examine change in rates of self-reported drugged driving among national samples of people who frequency consume psychostimulants interviewed as part of the Ecstasy and Related Drug Reporting System (EDRS) studies and people who frequently inject drugs interviewed for the Illicit Drug Reporting System (IDRS) over the past decade. Changes in exposure to roadside testing for drugs and attitudes toward drugged driving are also examined as contributing factors.

Results: Recent engagement in drugged driving has declined among EDRS participants between 2007 and 2017, from 72% to 52% of drivers, with substantial declines in driving while affected by ecstasy and methamphetamine but limited change in relation to cannabis. Among IDRS participants, rates have been slower to decline (83% in 2007; 75% in 2017). Lifetime exposure to roadside drug testing increased significantly between 2007 and 2011 but has subsequently stabilised. Over time there have been significant increases in perceived crash risk from driving while affected by psychostimulants among EDRS participants but little change in relation to crash risk from cannabis.

Implications: Rates of drugged driving are greater than drink driving in both participant groups; with greater perception of crash risk for alcohol than for illicit drugs. Attitudes toward cannabis in particular appear resilient to change. While linking risks from cannabis and other illicit drugs to impairments following drink driving seems an intuitive educational approach, demonstration of comparability has been elusive in the experimental literature, and work on practical intervention strategies remains important.

Breakout Three: Smoking

Cytisine versus varenicline for smoking cessation: A study protocol for a single-blind randomised controlled non-inferiority clinical trial

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Background: Cytisine is a well-tolerated smoking cessation treatment that is superior to placebo and nicotine replacement therapy. Like varenicline, cytisine is a nicotinic acetylcholine receptor partial agonist, yet has never been formally compared against varenicline. Cytisine has the lowest cost per quality-adjusted-life-year of all smoking cessation medications, and modelling suggests cytisine may be more cost-effective than varenicline.

Method/Design: A total of 1266 adult smokers, willing to make a quit attempt, and able to provide verbal informed consent will be recruited. Exclusion criteria include current use of cessation medications, participation in other cessation programs, contraindication/hypersensitivity to study medications or women who are pregnant or breastfeeding. Participants will be recruited via Quitline services and advertisements. The eligibility screening and verbal consent process will be completed by the trial coordinating centre at NDARC. All eligible and consented smokers will be referred to an independent contract research organisation to conduct baseline and follow-up interviews at 3- and 6-months. Participants in the cytisine arm will receive 25-day supply of Desmoxan capsules (1.5 mg cytisine). Participants in the varenicline arm will receive 12-week supply of Champix tablet (0.5 mg/1.0 mg varenicline). A clinician will oversee the safe prescribing of medications. Both medications will be delivered via mail to participants' residential address from a central pharmacy. Three check-in calls will be conducted to check medication safety and adherence. The primary outcome will be biochemically verified 6-month continuous abstinence. A cost-effectiveness analysis will be conducted, if cytisine is found to be non-inferior to varenicline.

Implications of the research: The findings from this trial are vital for informing policy makers around the world, given the opportunity for significant health-care system savings, particularly for low- and middle-income countries where the majority of cessation medications are cost-prohibitive.

System change interventions for smoking cessation

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Background: System change interventions for smoking cessation are policies and practices designed by organisations to integrate the identification of smokers and the subsequent offering of evidence-based treatments into usual care. Such strategies have the potential to improve the provision of smoking cessation support in healthcare settings and cessation outcomes among the clients. This review evaluated the effectiveness of system change interventions at various healthcare settings on increasing the provision of cessation care and abstinence rate.

Method/Design: Five databases – CENTRAL, CINAHL, EMBASE, MEDLINE, and PsycINFO – were searched in February 2016. Randomised controlled trials (RCTs), cluster-RCTs, quasi-RCTs and interrupted time series studies that evaluated a system change intervention for smoking cessation were included in the review. The strictest available criterion to define abstinence was used to evaluate cessation outcome. Process outcomes included assessment and documentation of smoking status, provision of advice to quit or cessation counselling, referral and enrolment in quitline services, and prescribing of cessation medications. The quality of evidence was rated according to GRADE standards. A narrative synthesis was used to describe the effectiveness of the interventions on various outcomes due to significant heterogeneity among studies.

Results: Seven cluster RCTs were included in the review. The quality of evidence ranged between very low to low. There were significant improvements in documentation of smoking status, quitline referral and quitline enrolment. Asking about tobacco use, advising to quit, provision of smoking cessation counselling also indicated some positive effects. However, the evidence for cessation outcome was equivocal.

Conclusion: The evidence available suggests that system change interventions for smoking cessation may improve process outcomes such as documentation of smoking status, provision of cessation counselling and referral to smoking cessation services. However, their effect on cessation outcome is uncertain. The current evidence is limited and it is difficult to draw a strong conclusion. There is a need for additional high-quality research to explore the impact of system change interventions on both cessation and process outcomes.

Barriers to cessation among disadvantaged smokers and their experiences with accessing treatment and the role of technology-based quit support

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Background: This qualitative study explored low-socioeconomic status (SES) smokers' and ex-smokers quitting experiences following participation in a smoking cessation randomised controlled trial (RCT). The focus of this study was to examine factors that influence smoking behaviours, treatment engagement and whether differences emerged between smokers and ex-smokers. A further aim was to discuss alternative smoking cessation support to assist in the design of a future intervention.

Methods: Twenty-four low-SES smokers and ex-smokers previously enrolled in a smoking cessation RCT were invited to participate in either a focus groups or individual telephone interview. Data was obtained and analysed using thematic analysis from October 2015 to June 2016.

Results: Participants expressed feelings of guilt and shame around their smoking behaviour and experienced stigmatisation for their smoking. Guilt, shame, and stigmatisation negatively impacted treatment seeking behaviours with many avoiding current quit services. Current smokers expressed a positive smoker identity and a lack of control over their smoking behaviours while ex-smokers set strict non-smoking rules, felt that they had gained control and formed an overriding ex-smoker identity. Electronic-cigarettes were perceived to be unsafe due to uncertainty on their legal status and regulatory restrictions. Technology-based text-messaging quit support was endorsed as a more favourable alternative compared to current and existing treatments.

Conclusion: Stigmatisation was commonly endorsed and acted as an impediment to current treatment utilisation. Electronic-cigarettes may present a viable harm reduction alternative, but their likely uptake in disadvantaged groups in Australia is limited by smokers' uncertainty about their regulation and legality. Mobile phone based cessation support may provide an alternative to telephone counselling and overcome the stigmatisation low-SES smokers face while trying to quit. Targeted approaches aimed at modifying positive smoker identity through setting of non-smoking rules in an attempt to normalise ex-smoker identity may be a strategy beneficial to low-SES initiating a quit attempt.

A randomised controlled study of the Health Intervention "SNAP" in Northern Territory prisons- where smoking is banned- to prevent relapse to smoking after release from prison

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Background: Smoking is the major cause of preventable disease and death in Australia, costing about $31.5 billion a year. Smoking contributes to more deaths and hospitalisations than alcohol and illicit drug use combined. The Northern Territory prison population comprises 92% Indigenous Australians and 88% smokers. The introduction of a smoke-free policy in NT prisons creates a population-wide abstinent condition. However, virtually all inmates resume smoking within days of release.

Aims and methods: We aim to extend this period of abstinence in prison to the community after release. All eligible prisoners nearing release are invited into the study and those who consent receive the Baseline interview. Subjects are then randomised to receive either usual care or the SNAP treatment. SNAP (Smoking, Nutrition, Alcohol and Physical inactivity) is a motivational interview which comprises Ask, Assess, Advise, Assist and Arrange and takes 45-60 minutes to deliver. We aim to recruit 968 inmates and follow up 484 (50%; 34% at prison re-entry and 16% in the community). Cost data will be collected.

We will establish a cohort and conduct longitudinal research through prospective data linkage. The study has been approved by UNSW Ethics Committee, NT Department of Correctional Services and NT Department of Health Top End and Central Australia Ethics Committees.

Outcome measures: Released subjects will be followed up to assess relapse to smoking at Day 1, 7, 30 and 90 post-release. An additional outcome will be the comparison of the two groups on Nutrition, Alcohol and Physical inactivity risk factors 90-days post-release.
Progress to date: Five interviewers including two Indigenous interviewers were trained in the use of SNAP which was modified for Indigenous Australians in prison. Subject recruitment in Darwin and Alice Springs Correction Centres commenced in April 2017 and 64 subjects have been recruited (32 in usual care and 32 into SNAP) by May 2017. Two subjects have been released and follow up will commence in August.
Implications of the research: If the SNAP trial is found to be effective to prolong abstinence post-release, it will enable correctional authorities, in Australia and abroad, to assist ex-smokers to remain smoke free after release from custody. The SNAP intervention could be applicable in other settings where people are forced to abstain from smoking, such as hospitals.

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Breakout Four: Innovations in treatment and prevention

Study of Oral Lisdexamfetamine in Adults with Methamphetamine Dependence

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Introduction: Methamphetamine dependence is a growing global health problem with no approved pharmacotherapy. Agonist-type pharmacotherapies have been used successfully to treat opioid and nicotine dependence and are being studied for the treatment of methamphetamine dependence. One potential candidate is lisdexamfetamine (LDX), a pro-drug of dexamphetamine, with longer lasting therapeutic action and lower abuse potential. We aimed to determine the safety of LDX in this population at doses higher than those currently approved for attention deficit hyperactivity disorder and binge eating disorder. Materials and

Methods: A phase-2 open label, single-group trial across two outpatient sites in New South Wales, Australia. Sixteen adults (75% male) using MA dependently for > 2 years and for □14 of the previous 28 days received supervised daily dispensing of ascending doses of LDX from 100mg to 250mg over 4 weeks, a 4 week reducing dose regimen from 250mg to 100mg, and a follow-up visit 4 weeks after cessation. Participants and dispensers were blinded to dose change.

Results: Fourteen of the 16 participants commenced on the escalation regimen reached the primary endpoint of 250mg LDX at 4 weeks, and ten remained to regimen completion at week 8. No participants were withdrawn due to adverse events. One serious adverse event (suicidal ideation) occurred at the end of the reducing regimen. Patient-rated treatment tolerability using the Treatment Satisfaction Questionnaire for Medication was high. Days of use (of the previous 28) reduced from a median of 21 days (IQR:16-23) at regimen start to 13 (IQR:11-17) at maximum dose at 4 weeks. Craving scores using a 100mm VAS scale reduced from a median of 64 (IQR:23-82) to 31 (IQR:15-16) and Amphetamine Withdrawal Scale scores reduced from a median of 15(IQR: 9-17) to 11(IQR:7-15) over the same period.

Discussion: This study is the first to demonstrate the safety and tolerability of higher doses of LDX than used for attention deficit hyperactivity disorder or binge eating disorder among a methamphetamine dependent population. Findings suggest feasibility; further efficacy research is warranted. A multicentre randomised controlled trial is beginning in 2017.

The Efficacy of Behavioural Activation Treatment for Co-occurring Depression and Substance Use Disorder: The Activate Study

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Aim: To determine the efficacy and feasibility of a modified version of Behavioral Activation Treatment for Depression-Revised (Activate) in reducing symptoms of depression and substance use disorder among individuals in residential rehabilitation treatment or opioid replacement therapy.

Method: The study is a parallel, single blind, randomised controlled trial, conducted with depressed residential rehabilitation (RR) and opioid substitution therapy (OST) clients. Dynamic random allocation following a minimisation methodology was used to assign participants to either Activate in conjunction with standard care, or standard care alone. The Activate intervention comprised of 10 individual 60 minute therapy sessions with a clinical psychologist. The control group received treatment as usual, provided in accordance with standard practice at participating RR and OST services. Data was collected at baseline, 3 and 12 months. Primary outcome measures include depression (Beck Depression Inventory-BDI-II; Composite International diagnostic Interview - CIDI 3.0) and drug dependence (Composite International diagnostic Interview - CIDI 3.0).

Results: The baseline sample consisted of 132 participants, with 65 allocated to treatment and 67 to the control condition. The three and twelve month follow-up rates were 93% and 88%, respectively. This presentation will compare depression and drug use outcomes for the intervention and control groups using 3 and 12 month follow-up data.

Conclusion: The association between depression and substance dependence has been well documented, yet practical and effective treatments for the co-occurrence of these disorders are scarce. The present study findings will be discussed with regards to their implications for Alcohol and Other Drug treatment services.

Cracks in the Ice: An evidence-based initiative for the Australian community about crystal methamphetamine (ice)

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Background: The *Cracks in the Ice* online toolkit was developed in response to recommendations of the Australian Government's National Ice Taskforce report 2015, and was launched in April 2017. The online toolkit is the first centralised portal to provide the community with trusted, evidence-based and up-to-date information about ice. This presentation briefly describes the co-development process of *Cracks in the Ice,* explores the site functionality and presents recent data on engagement with and usage of this new resource.

Methods: *Cracks in the Ice* was developed with input from over 450 community members across Australia, in collaboration with experts and researchers. An online survey was conducted with end-users (including ice users, their families and friends; health professionals; parents and teachers) to understand information needs about ice. Research literature and relevant resources were systematically reviewed according to the NMHRC body of evidence matrix. Engagement and usage data will be analysed to examine the use and impact of *Cracks in the Ice* to ensure the resource is responsive to changing community needs.

Results: One month since launch the site has had >3,000 users, with the greatest number concentrated in Australian capital cities. Initial results also indicate that the most frequently accessed pages on the site include the 'community toolkit', 'health professionals – online resources', 'what is ice' and 'how many people use ice'. Further details will available for presentation in October.

Conclusions: Online information, intervention and treatment programs stand to overcome structural, geographical, and attitudinal barriers to treatment access. Since launching in April 2017, the *Cracks in the Ice* toolkit provides centralised access to trusted, evidence-based and up-to-date information about ice. Community education is central to harm prevention and reduction, and the current presentation will be informative to policy makers, service providers and the general community.

Preventing alcohol and cannabis harms in adolescence: An integrated online program for parents

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Early initiation of substance use significantly increases risk of subsequently developing substance dependence and mental disorder later in life. To interrupt this trajectory, effective prevention during the adolescent period is critical. Parents play a key role in preventing substance use and related harms among adolescents and parenting interventions have been identified as critical components of effective substance use prevention programs. Despite this, there is currently no Australian substance use prevention program targeting both students and parents, and no integrated model internationally,that adopts online delivery to overcome barriers to implementation and sustainability.

The Australian Government Department of Health recently the Centre of Research Excellence in Mental Health and Substance Use at NDARC to develop and test the first integrated, online substance use prevention program for students and parents, as part of the work of National Prevention Portal, Positive Choices (www.positivechoices.org.au). The program has the potential to provide a sustainable and scalable improvement to the wellbeing of young Australians, and to reduce the substantial costs associated with substance use.

This paper will describe the program and its development, including the results from a survey of over 240 Australian parents. This paper will also preview results from beta-testing of the parent program component, and will outline plans for the evaluation and implementation of the full program in a randomised control trial commencing early 2018.