

**NDARC 2018
Annual Research
Symposium**

**Monday
8 October 2018**

John Niland Scientia
Conference and
Events Centre, UNSW

**Clinical, community and policy
responses to emerging problems
in drug and alcohol use**

8.30 – 9.00am	Registration
9.00 – 9.10am	Acknowledgement of Country
9.10 – 9.15am	Welcome Professor Rodney Phillips Dean UNSW Medicine
Plenary One	Session Chair: Mr Chris Killick-Moran Alcohol, Tobacco and Other Drugs Branch, Australian Government Department of Health
9.15 – 10.00am	Keynote Address: Embedding evaluation into the delivery of routine services Professor Louis Fiore Professor of Medicine and Professor Epidemiology Boston University School of Public Health, VA Boston Healthcare System
10.00 – 10.20am	Harnessing clinical informatics to transform clinical research: An overview of the NSW AoD Clinical Outcomes and Quality Indicators system Conjoint Professor Nicholas Lintzeris Director Drug and Alcohol Services, South Eastern Sydney Local Health District
10.20 – 10.40am	The development and testing of a framework to increase the uptake of integrated care into routine service delivery by drug and alcohol and mental health clinical services Ms Catherine Foley Doctoral Candidate, NDARC Psychologist, Coffs Harbour Drug and Alcohol Service, MNCLHD
10.40 – 10.50am	Two minute poster presentations Chair: Dr Sarah Larney Poster Presenters: Sonja Memedovic, Richard Mellor, Natasa Gisev, Janni Leung, Samantha Colledge
10.50 – 11.10am	Morning Tea
Plenary Two	Drug Trends Session Chair: Mr Daniel Madeddu Centre for Population Health, NSW Health
11.10 – 11.30am	Emerging trends in drug use, harms, and markets: Findings from Drug Trends 2018 Dr Amy Peacock NHMRC Early Career Research Fellow, NDARC
11.30 – 11.50am	Availability and use of new and emerging psychoactive substances in Australia: Findings from Drug Trends 2018 Ms Rachel Sutherland Doctoral Candidate, Senior Research Officer Drug Trends Program, NDARC

11.50 – 12.10pm **Trends in fentanyl availability, use and harms Australia: Findings from Drug Trends 2018**
Associate Professor Raimondo Bruno
University of Tasmania

12.10 – 12.15pm **Two minute poster presentations**
Chair: **Dr Sarah Larney**
Poster Presenters: **Rebecca Bosworth, Michala Kowalksi**

12.15 – 1.15pm **Breakout Sessions**

Breakout One:

Challenges of translating research into policy

Session Chair: **Professor Louisa Degenhardt**

Translation of research into policy and practice: examples from smoking cessation

Professor Hayden McRobbie

Professor of Public Health Intervention
Queen Mary University of London

Discussion Panel

Dr Jo Mitchell

Executive Director, Centre for Population Health at NSW Health

Mr Chris Killick-Moran

Director, Research and International Policy, Alcohol Tobacco and Other Drugs Branch, Department of Health

Professor Michael Farrell

Director, National Drug and Alcohol Research Centre, NDARC

Breakout Two:

Responding to harms: Clinical treatment

Session Chair: **Dr Sarah Larney**

Cytisine versus varenicline for smoking cessation: A single-blind randomised controlled clinical trial

Dr Ryan Courtney

Early Career Research Fellow, Cancer Institute New South Wales

Monthly injections of long-acting buprenorphine for the treatment of opioid dependence

Dr Briony Larance

Senior Research Fellow, University of Wollongong

The effect of treatment and retention in opioid substitution therapy on reducing crime among opioid dependent people

Dr Natasa Gisev

NHMRC Early Career Research Fellow, NDARC

Screening for prescribed opioid dependence in primary care settings

Associate Professor Suzanne Nielsen

Monash University

Breakout Three:

Treatment within prison settings

Session Chair: **Associate Professor Timothy Dobbins**

Surveillance and Treatment of Prisoners with Hepatitis C

Professor Andrew Lloyd

Program Head Viral Immunology Systems Program
The Kirby Institute

Trial of depot buprenorphine in prisons

Professor Adrian Dunlop

Director Drug and Alcohol Services
Hunter New England Local Health District

The SNAP study – A randomised controlled trial of a brief intervention “SNAP” to prevent relapse to smoking after release from smoke-free prisons in the Northern Territory

Professor Kate Dolan

NDARC

Alcohol Treatment within a prison setting

Dr Michael Doyle

Research Fellow at the Centre for Research Excellence (CRE) in Indigenous Health and Alcohol, University of Sydney

Breakout Four:

Prevention: working with Aboriginal communities

Session Chair: **Professor Anthony Shakeshaft**

Exploring the role of Aboriginal women in their families and communities: it's impact on their health and implications for delivery of services

Dr Anne-Marie Eades

UNSW Scientia Fellow Faculty of Medicine, UNSW Sydney

Cultures within cultures investigating conflict in Aboriginal communities and its influence on alcohol and drug related harms

Ms Bonita Byrne

Masters by Research Candidate, NDARC

The impact of community-developed responses to alcohol-related harms: demonstrating the value of community/researcher partnerships

Dr Alice Munro and Dr Mieke Snijder

Research Capacity Building Manager
Western NSW LHD and Postdoctoral Researcher

The experience of Aboriginal communities engaging in research

Mr Jamie O'Neill

CEO

Murrin Bridge Aboriginal Lands Council

1.15 – 2.15pm

Lunch (and poster viewing)

2.15 – 3.20pm

Breakout Sessions

Breakout Five:

Young People, Alcohol and Other Drugs

Session Chair: **Dr Amy Peacock**

Adverse adult consequences of different alcohol use patterns in adolescence

Mr Philip Clare

Doctoral Candidate and Biostatistician, NDARC

What the APSALS and data tell us about taking a population level approach rather than targeting heavy/ binge drinkers

Professor Kypros Kypri

School of Medicine and Public Health University of Newcastle, Australia

The effectiveness and cost-benefit of an NGO delivered program for high-risk young people, and integrating research into multiple NGO services nationally

Ms Skye Bullen

Masters by Research Candidate, NDARC

Steroids and harm reduction: working with young adults who use performance and image enhancing drugs (PIEDs)

Dr Katinka Van de Ven and Mr William Wood

Research Fellow, NDARC and MSIC

Breakout Six:

Responding to harms: The co-creation of a research agenda with treatment services

Session Chair: **Professor Anthony Shakeshaft**

Co-creation of new knowledge is at the heart of embedding research into routine service delivery, but what is it and how often is it done?

Ms Tania Pearce

Doctoral Candidate, University of New England

The impact of research on Aboriginal residential rehabilitation services

Mr Joe Coyte

CEO of The Glen Central Coast Drug and Alcohol Rehabilitation Centre

The experience of consumers and clinicians involved in the co-design and implementation of a model of Integrated Care: A facilitated discussion

Matt Higgins

Clinical Nurse Consultant, North Coast Mental Health Rehabilitation Unit (NCMHRU), Mid North Coast Local Health District (MNCLHD)

Adam Baker

Registered Nurse, NCMHRU, MNCLHD

Cathy Young

Social Worker, Coffs Harbour Drug and Alcohol Service, MNCLHD

Catherine Foley

Psychologist, Coffs Harbour Drug and Alcohol Service, MNCLHD
Doctoral Candidate, NDARC

Breakout Seven:

Comorbidity

Session Chair: **Professor Louisa Degenhardt**

Review of psychiatric consequences of methamphetamine use

Dr Emily Stockings

NHMRC Early Career Research Fellow, NDARC

The impact of comorbid mental health disorders on receipt of substance use disorder treatment

Dr Chrianna Bharat

Research Fellow, NDARC

Psychostimulant use and fatal stroke in young adults: a national study

Professor Shane Darke

NDARC

Breakout Eight:

Criminal Justice Responses

Session Chair: **Dr Marian Shanahan**

Does imprisoning drink-drivers reduce the risk of drink-driving?

Dr Don Weatherburn

Director of the NSW Bureau of Crime Statistics and Research

Drug-related police encounters across the globe: How does Australia compare?

Dr Caitlin Hughes

Senior Research Fellow, NDARC

Understanding how a high-level drug trafficking network in Australia adapted to changes in its drug supply

Mr Matthew O'Reilly

Doctoral Candidate, NDARC

3.20 – 3.40pm

Afternoon Tea

Plenary Three	
Session Chair: Professor Michael Farrell	
3.40 – 4.25pm	<p>Enhancing quality health care for people who use drugs</p> <p>Professor Julie Bruneau Professor in the Department of Family Medicine, University of Montreal</p>
4.25 – 4.45pm	<p>National Centre for Clinical Research Excellence on Emerging Drugs (NCCRED)</p> <p>Associate Professor Nadine Ezard Director NCCRED and Clinical Director Drug and Alcohol Services, St Vincent's Hospital</p>
4.45 – 5.05pm	<p>HCV elimination among people who inject drugs: Feasibility and future requirements</p> <p>Associate Professor Jason Grebely Senior Research Fellow, The Kirby Institute</p>
5.05 – 5.15pm	<p>Discussion and Wrap (Will include announcement of People's Choice poster winner)</p> <p>Professor Michael Farrell Director, NDARC</p>
5.15 – 6.15pm	Symposium Drinks

NDARC Annual Research Symposium 2018 - Posters

Availability of condoms and conjugal visits in prisons: A global prison survey

Rebecca Bosworth, Ehab Salah, Riku Lehtovuori, Stuart A Kinner, Frederick Altice, Michael Farrell, Babak Moazen, Kate Dolan

A randomised controlled trial comparing vaporised nicotine products to standard behavioural treatment for low-socioeconomic status

smokers: a study protocol
Veronica C Boland, Ryan J Courtney, Alexandra Aiken, Emily Stockings, Rory Chen, Dennis Thomas Ron Borland, Coral Gartner, Hayden McRobbie, Dennis Petrie, Mohammad Siahpush, Robyn Richmond, Anthony Shakeshaft, Michael Farrell, Christopher Doran, Colin Mendelsohn, Nicholas Zwar, Wayne Hall, Richard P Mattick

A systematic review of predictors of quit attempts and abstinence among disadvantaged smokers: a study protocol

Rory Chen, Emily Stockings, Veronica C Boland, Hayden McRobbie, Mohammad Siahpush, Jamie Brown, Ryan J Courtney

Cannabis and cannabinoids for the treatment of people with chronic non-cancer pain conditions: A systematic review and meta-analysis of controlled and observational studies

Emily Stockings, Gabrielle Campbell, Wayne Hall, Suzanne Nielsen, Dino Zagic, Rakin Rahman, Bridin Murnion, Michael Farrell, Megan Weier, Louisa Degenhardt

Cannabis use in people living with chronic non-cancer pain: Findings from 4 years of the Pain and Opioids IN treatment cohort.

Gabrielle Campbell, Wanye Hall, Amy Peacock, Nicholas Lintzeris, Raimondo Bruno, Briony Larance, Suzanne Nielsen, Milton Cohen, Gary Chan, Richard Mattick, Fiona Blyth, Marian Shanahan, Timothy Dobbins, Micheal Farrell, Louisa Degenhardt

Climate Schools Plus (CSP): Implementing & evaluating an integrated online intervention for students and parents to prevent alcohol and cannabis harms among adolescents.

Chloe Conroy, Nicola C Newton, Tim Slade, Louise Thornton, Ina Koning, Katrina E Champion, Lexine Stapinski, Maree Teesson, Cath Chapman

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

Dennis Thomas, Michael Farrell, Natalie Walker, Hayden McRobbie, Coral Gartner, Mohammad Siahpush, Dennis Petrie, Christine Paul, Robyn Richmond, Stuart Ferguson, Christopher Doran, Wayne Hall, Richard P Mattick, Colin Mendelsohn, Anthony Shakeshaft, Piotr Tutka, Robert West, Nicholas Zwar, Ryan J Courtney

Factors associated with past use of treatment and verified prolonged abstinence among low-socioeconomic status smokers.

Veronica C Boland, Richard P Mattick, Mohammad Siahpush, Daniel Barker, Philip J Clare, Kristy Martire, Robert West,

Hayden McRobbie, Ron Borland, Christopher Doran, Michael Farrell, Wayne Hall, Billie Bonevski, Ryan J Courtney

Gender differences in HIV, anti-HCV and HBsAg prevalence among people who inject drugs – A multi-stage systematic review and meta-analysis of global evidence

Janni Leung, Amy Peacock, Samantha Colledge, Jason Grebely, Evan B Cunningham, Matthew Hickman, Peter Vickerman, Jack Stone, Adam Trickey, Kostyantyn Dumchev, Michael Lynskey, Lindsey Hines, Paul Griffiths, Richard P Mattick, Sarah Larney, Louisa Degenhardt

Global systematic review of ecological associations with HCV antibody prevalence in people who inject drugs

Sarah Larney, Janni Leung, Jason Grebely, Samantha Colledge, Evan B Cunningham, Matthew Hickman, Amy Peacock, Jack Stone, Adam Trickey, Peter Vickerman, Louisa Degenhardt

Has the legalisation of medical and recreational cannabis use in the USA affected the prevalence of cannabis use and cannabis use disorders?

Chui Ying Vivian Chiu, Janni Leung, Daniel Stjepanović, Wayne Hall

Healing Together: Identifying the value of partnerships between rural Australian Aboriginal communities, services and researchers to co-design, implement and evaluate programs to reduce substance-related harms
Alice Munro, Anthony Shakeshaft, Courtney Breen, Julaine Allan

"I can't do this, I'm failing": Barriers to treatment seeking and quit success among socioeconomically disadvantaged smokers.
Veronica C Boland, Ildiko Tombor, Richard P Mattick, Hayden McRobbie, Mohammad Siahpush, Ryan J Courtney

Importance of revising the principal diagnosis of mental illness in pregnancy. Lisa Hilder, Elizabeth Sullivan, Grant Sara, Lucinda Burns

Mapping pathways to treatment for pharmaceutical opioid dependence
Michala Kowalski, Alison Ritter, Suzanne Nielsen

Non - fatal overdose prevalence among people who inject drugs - a multistage systematic review and meta-analysis of recent evidence
Samantha Colledge, Amy Peacock, Janni Leung, Jason Grebely, Matthew Hickman, Michael Farrell, Sarah Larney, Louisa Degenhardt

Opioid Use and Harms Associated with a Sustained-Released Tapentadol Formulation: A Post-Marketing Study
Amy Peacock, Natasa Gisev, Sonja Memedovic, Briony Larance, Michael Farrell, Rose Cairns, Nicholas Buckley, Louisa Degenhardt

Positive Choices: Addressing the evidence-practice gap in alcohol and other drug prevention
Lucy Grummitt, Lexine Stapinski, Nicola C Newton, Siobhan Lawler, Cath Chapman, Frances Kay-Lambkin, Maree Teesson

Promoting Positive Choices for Aboriginal and Torres Strait Islander students
Danielle Bradd, Mieke Snijder, Lexine Stapinski, Brianna Lees, James Ward, Nicola C Newton, Katrina E Champion, Cath Chapman, Maree Teesson,

Strong & Deadly Futures: developing computerised school-based drug prevention for Aboriginal and Torres Strait Islander secondary students
Mieke Snijder, Danielle Bradd, Lexine Stapinski, Brianna Lees, James Ward, Nicola C Newton, Katrina E Champion, Cath Chapman, Maree Teesson

Suicidal behaviours in people living with chronic non-cancer pain: Findings from 4 years if the Pain and Opioids IN Treatment cohort.
Gabrielle Campbell, Gary Chan, Fiona Blyth, Suzanne Nielsen, Michael Farrell, Louise Degenhardt

Systematic Review of Untreated Remission from Alcohol Problems: Estimation Lies in the Eye of the Beholder
Richard Mellor, Kari Lancaster, Alison Ritter

The prevalence and risk factor for HIV, HCV and HBV infection among people who inject drugs in China, a systematic review and meta-analysis
Yanping Bao, Janni Leung, Amy Peacock, Samantha Colledge, Sarah Larney, Louisa Degenhardt

The Safety of Fentanyl Patch Initiation in Australian Clinical Practice: A Population-Based Study
Natasa Gisev, Sallie Pearson, Briony Larance, Sarah Larney, Bianca Blanch, Louisa Degenhardt

Treating traumatic stress and substance use in adolescents
Natalie Peach, Katherine Mills, Emma Barrett, Vanessa Cobham, Joanne Ross, Sean Perrin, Sarah Bendall, Sudie Back, Kathleen Brady, Maree Teesson

Understanding the impact of physical activity on chronic non-cancer pain
Maria Schaffer, Katherine Awford, Gabrielle Campbell, Briony Larance, Louisa Degenhardt

Use of Opioids and Stimulants by People Who Inject Drugs: A Multi-Stage Systematic Review and Meta-Analysis of Global Evidence
Amy Peacock, Adam Trickey, Sarah Larney, Samantha Colledge, Janni Leung, Jason Grebely, Evan B Cunningham, Matthew Hickman, Jack Stone, Peter Vickerman, Louisa Degenhardt

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Keynote Speaker Biographies

Dr Louis Fiore, MD MPH

Professor of Medicine, Boston University Medical School
Executive Director, Massachusetts Veterans Epidemiology Research

Dr Louis Fiore is a Physician-scientist-manager-innovator with board certifications in internal medicine, oncology and hematology. He is a Professor of Epidemiology at the Boston University School of Medicine. Additionally, he is currently the Executive Director of a research group within the Department of Veterans Affairs. The Center (MAVERIC) provides the Department nationally with expertise in large scale clinical trials and bioinformatics. Current research and trials are underway.

Dr Julie Bruneau, MD, M.Sc

Professor of Family and Emergency Medicine, Université de Montréal

Dr Julie Bruneau is a Professor in the Department of Family and Emergency Medicine at Université de Montréal and clinical researcher at the Centre Hospitalier de l'Université de Montréal (CHUM) research center. She is recognized as a leader in addiction medicine in Canada, and was central in the development of access to integrated care for people who inject drugs, including Opiate Agonist Treatment (OAT) and syringe Distribution Program networks in the province of Quebec.

Over the past 20 years, her research has contributed to a better understanding of factors impeding and facilitating harm reduction efforts to reduce HIV and HCV transmission among persons who inject drugs. Dr Bruneau is the scientific director of the Quebec-Atlantic node of Canadian Research Initiative on Drug Misuse (CRISM), a network conducting a number of trials and implementation science projects to address the opioid crisis and develop better care for people who use drugs in Canada.

Plenary Sessions

Plenary One

Harnessing clinical informatics to transform clinical research: An overview of the NSW AoD Clinical outcomes and quality Indicators system

Conjoint Professor Nicholas Lintzeris^{1,2,3}

¹ South Eastern Sydney local Health District; ² UNSW Sydney

The development of electronic clinical information systems has the potential to transform how we capture and use information associated with clinical interventions and treatment. The ability to link detailed information (beyond minimum data sets) regarding (1) patient details (e.g. demographics, substance use, health parameters at treatment entry), (2) details regarding the services we provide (e.g. type, duration, intensity of treatment interventions), and (3) patient outcome data (usually captured through patient reported outcome measures (PROMs) provides us with the opportunity to examine real world clinical experiences rather than relying on formal research oriented treatment studies that are slow and expensive to undertake.

NSW Health has developed an integrated clinical information system for all government sector AoD treatment services (CHOC), from which a Clinical Outcome and Quality Indicators (COQI) framework has been developed by the team at SESLHD and HNELHD, in collaboration with researchers from University of Sydney, NDARC, UTAS, NADA and NUAA. The presentation will provide a brief overview of COQI framework and its application in AoD treatment services in NSW.

The development and testing of a framework to increase the uptake of integrated care into routine service delivery by drug and alcohol and mental health clinical services

Catherine Foley¹, Anthony Shakeshaft¹, Julia Lappin, Ryan Courtney¹, Julaine Allan², Michael Farrell¹

¹ National Drug and Alcohol Research Centre, UNSW Sydney; ² Lives Lived Well

Introduction: Clinical guidelines in Australia, the UK, Canada and the US recommend Integrated Care (IC) as the preferred approach for clients with co-occurring mental health (MH) and alcohol and other drug (AOD) disorders. Despite this, the translation of IC into routine practice remains challenging and is rarely sustained over time. At least two preconditions are required for the sustained uptake of IC (or any clinical innovation) into routine clinical practice: i) the availability of a treatment model of IC that is standardised based on best-evidence principles, but also able to be tailored to different circumstances; and ii) the availability of a practical, evidence-based framework for services to guide their uptake of IC through the complex transition process and into routine service delivery. Our hypothesis is that IC is not widely provided as routine care because neither of those preconditions have been adequately met.

Aims: This presentation has three aims: i) to present a co-designed, evidence-based IC model; ii) to describe the development and implementation of a system-level process of change to introduce IC into routine practice; and iii) to present an implementation framework that could be used by any service to guide their uptake of IC.

Methods: This study was conducted in two government health services in regional NSW (one MH and one DA). Mixed methods were applied (qualitative, quantitative and observational techniques) using Participatory Action Research. Sixty-eight clinicians, five external researchers, and seventy-five clients participated in meetings, surveys or focus groups.

Results: An agreed, evidence-based model of IC was developed that was designed to be adaptable to different services. A pragmatic implementation framework was constructed for guiding services to tailor and implement the IC model. Applying this process increased levels of communication (MH by 29%; AOD by 42%) and collaboration (MH by 18%, AOD by 28%) between MH and AOD staff. The resulting IC model was rated high in staff acceptability (95% ≥ 3/4) and client satisfaction (90% ≥ 3/4).

Implications of the research: This research has identified a model of IC care that is evidence-based but able to be adapted to different services, and a framework to guide the uptake of IC into routine practice. Services and policy makers can utilise these tools to increase the use of IC nationally.

Plenary Two

Emerging trends in drug use, harms, and markets: Findings from Drug Trends 2018

Amy Peacock¹, Antonia Karlsson¹, Daisy Gibbs¹, Julia Uporova¹, Rachel Sutherland¹, Amanda Roxburgh¹, Anant Mathur¹, Raimondo Bruno^{1,2}, Paul Dietze^{3,4}, Simon Lenton⁵, Rosa Alati⁶, Timothy Dobbins¹, Louisa Degenhardt¹, Michael Farrell¹

¹ National Drug and Alcohol Research Centre, UNSW Sydney; ² School of Medicine, University of Tasmania; ³ Centre for Population Health, Burnet Institute; ⁴ School of Public Health and Preventive Medicine, Monash University; ⁵ National Drug Research Institute, Curtin University; ⁶ Institute for Social Science Research, University of Queensland

Abstract: Findings from the 2018 Illicit Drug Reporting System interviews (a sentinel sample of people who inject drugs) and the 2018 Ecstasy and Related Drug Reporting System interviews (a sentinel sample of people who use stimulants) will be presented for this first time. These two crucial drug trends monitoring systems have been running for approximately two decades across Australia. Historical trends, as well as highlights from 2018, 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.

Availability and use of new and emerging psychoactive substances in Australia: Findings from Drug Trends 2018

Rachel Sutherland¹, Antonia Karlsson¹, Daisy Gibbs¹, Julia Uporova¹, Amanda Roxburgh¹, Anant Mathur¹, Raimondo Bruno^{1,2}, Paul Dietze^{3,4}, Simon Lenton⁵, Rosa Alati⁶, Louisa Degenhardt¹, Michael Farrell¹, Amy Peacock¹

¹ National Drug and Alcohol Research Centre, UNSW Sydney; ² School of Medicine, University of Tasmania; ³ Centre for Population Health, Burnet Institute; ⁴ School of Public Health and Preventive Medicine, Monash University; ⁵ National Drug Research Institute, Curtin University; ⁶ Institute for Social Science Research, University of Queensland, Brisbane, Australia

Abstract: New psychoactive substances (NPS) are substances that have become recently available and/or used recreationally that may have effects similar to substances listed under international drug control legislation but are typically not controlled by this same legislation. The number of NPS identified globally has proliferated in the last few years, and early detection of NPS with potential to cause substantial harm is critical. Yet, this expanding production makes monitoring NPS challenging and there are substantial gaps in knowledge about their availability and use. The Drug Trends program draws on various data sources to identify and monitor availability and use of NPS, providing a snapshot of recent findings to describe new trends in availability and use of various NPS in Australia.

Trends in fentanyl availability, use and harms in Australia

Raimondo Bruno¹, Amy Peacock¹, Amanda Roxburgh¹, Anant Mathur¹, Paul Dietze^{3,4}, Simon Lenton⁵, Rosa Alati⁶, Natasa Gisev¹, Sonja Memedovic¹, Rose Crossin^{7,8}, Debbie Scott^{7,8}, Dan I. Lubman^{7,8}, Karen Smith^{9,10}, Jared Brown¹¹, Rose Cairns^{11,12}, Marianne Jauncey¹³, Daisy Gibbs¹, Julia Uporova¹, Antonia Karlsson¹, Louisa Degenhardt¹, Michael Farrell¹

¹ National Drug and Alcohol Research Centre, UNSW Sydney; ² School of Medicine, University of Tasmania; ³ Burnet Institute; ⁴ School of Public Health and Preventive Medicine, Monash University; ⁵ National Drug Research Institute, Curtin University; ⁶ Institute for Social Science Research, University of Queensland; ⁷ Eastern Health Clinical School, Monash University; ⁸ Turning Point, Eastern Health; ⁹ Ambulance Victoria, Melbourne; ¹⁰ Department of Community Emergency Health and Paramedic Practice, Monash University, Melbourne, Australia; ¹¹ New South Wales Poisons Information Centre, The Children's Hospital at Westmead; ¹² Clinical Pharmacology and Toxicology Research Group, Discipline of Pharmacology, School of Medical Sciences, Sydney Medical School, University of Sydney; ¹³ Clinical Pharmacology and Toxicology Research

Abstract: Fentanyl is a synthetic opioid available under the highest level of restriction (Schedule 8) in Australia. Fentanyl is highly potent, and thus only small doses are required to cause respiratory depression and death. Increasing rates of overdose involving fentanyl are causing considerable concern in North America and other countries. These concerns are amplified with increasing availability of illicitly manufactured fentanyl and fentanyl analogues. There has been no recent triangulation of data across various indicators to understand trends in fentanyl availability, use and harms in Australia. This presentation will draw on data collected from IDRS participants on fentanyl since 2013, as well as a variety of other data sources which capture availability, use and harms associated with fentanyl in Australia.

Plenary 3

National Centre for Clinical Research Excellence on Emerging Drugs (NCCRED)

Associate Professor Nadine Ezard^{1,2,3} Dr Krista Siefried^{2,3}

¹ St Vincent's Hospital Sydney; ² UNSW Sydney; ³NCCRED

Substance use disorders are among the most prevalent - and under treated - health conditions in our community. We work in a sector rich with ideas, enthusiasm and commitment. Yet compared to other health problems of similar magnitude the research effort and range of treatment responses is limited.

Clinicians at the forefront of care may observe and respond to emerging problems and come up with new responses and adapt existing interventions.

Methamphetamine use is one example - the recent wave of interest in methamphetamine lagged behind clinical response. Yet clinicians report being challenged to deliver effective interventions by a lack of information and evidence.

What we - the sector - need is greater capacity to promptly detect and respond to new problems, provide care informed by available evidence, and work together to find new ways of responding, rapidly translating new research into practice.

This is the rationale behind the new National Centre for Clinical Research on Emerging Drugs - to bring together partners to build the sector's capacity to innovate in response to emerging drug health problems.

Funded by the Commonwealth Department of Health, the Centre is made up of a consortium of The National Drug and Alcohol Research Centre (lead agency), St Vincent's Health Australia; The National Centre for Education and Training on Addiction; and The National Drug Research Institute.

Our vision is to embed research into clinical practice. To do this we propose building the clinical research capacity through multidisciplinary fellowships and supporting new ideas with seed funding grants and mentorships.

With a focus on methamphetamine and new and emerging drugs of concern we will explore sharing information and develop a prompt response network to detect and respond to emerging drug problems. We will work with our colleagues to share good practice, models of care, clinical guidelines and decision aids and develop new materials and training resources where needed. People who use drugs, their families and carers, and their communities, are at the core of the Centre's work.

The purpose of this presentation is to explain the origins and vision of the new national Centre, and to introduce participants to opportunities to get involved.

Hepatitis C elimination among people who inject drugs: Feasibility and future requirements

Associate Professor Jason Grebely¹

¹ The Kirby Institute, UNSW Sydney

Globally, there is a considerable burden of hepatitis C infection among people who inject drugs. Needle and syringe programme and opioid substitution therapy coverage remains low, despite evidence demonstrating their prevention benefit. Direct-acting antiviral therapies for hepatitis C infection with cure rates >95% provide an opportunity to reverse rising trends in HCV-related morbidity and mortality and reduce incidence. However, hepatitis C testing, linkage to care, and treatment remain low due to health system, provider, societal, and patient barriers. The World Health Organization has set a goal to eliminate hepatitis C as a major global public health threat by 2030. Between 2015 and 2030, the World Health Organization targets for hepatitis C elimination include reducing new hepatitis C infections by 80% and hepatitis C-related deaths by 65%, and increasing hepatitis C diagnoses from <5% to 90% and number of eligible persons receiving hepatitis C treatment from <1% to 80%. But, will these targets be achievable among people who inject drugs globally? This presentation will discuss the challenges and future requirements for hepatitis C elimination among people who inject drugs.

Breakout sessions

Breakout One: Challenges of translating research into policy

Facilitated discussion: Speaker biographies

Professor Hayden McRobbie MB ChB (Otago), PhD (London)

Professor of Public Health Intervention Queen Mary University of London (UK)

Professor McRobbie is Professor in Public Health Interventions at Barts and The London School of Medicine and Dentistry, Queen Mary University of London (UK), Clinical Director of the Dragon Institute for Innovation (NZ) and a Medical Smoking Cessation Specialist at Counties Manukau District Health Board.

After completing his medical degree, he went on to study in London and gained a PhD in medical psychology. He now has over 18 years' experience in the provision of behaviour change interventions in the fields of smoking cessation and weight management. Hayden has played a key role in Tobacco Control in New Zealand and is also the Clinical Champion for Child Wellbeing for the New Zealand Ministry of Health.

Dr Jo Mitchell

Executive Director, Centre for Population Health in the NSW Ministry of Health

Dr Mitchell is responsible for the leading the development, implementation and evaluation of state-level prevention policy and strategy. Her portfolio of responsibilities includes drug and alcohol, HIV and STIs, blood borne virus and harm reduction, tobacco control, and overweight and obesity prevention. She has over twenty five years' experience in population health at local and state levels and a doctorate in Public Health from Flinders University

Professor Michael Farrell FRCP FRCPsych

Director, National Drug and Alcohol Research Centre, UNSW Sydney

Professor Farrell is NDARC's Director and Theme Principal for the UNSW Sydney Faculty of Medicine Neuroscience, Mental Health and Addictions Theme and SPHERE Clinical Academic Group. Prior to joining NDARC he was Professor of Addiction Psychiatry at the Institute of Psychiatry at Kings College London. His extensive research interests include evidence-based practice and treatment evaluation, drug dependence and treatment efficacy in prisons, psychiatric comorbidity, translation of new evidence into practice. He is a member of the WHO Expert Committee on Drug and Alcohol Dependence and has published over 300 scientific papers.

Breakout Two: Responding to harms: Clinical treatment

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

Thomas D¹, Farrell M¹, Walker N², McRobbie H³, Gartner C⁴, Siahpush M⁵, Petrie D⁶, Paul C⁷, Richmond R¹, Ferguson S⁸, Doran C⁹, Hall W⁴, Mattick R¹, Mendelsohn C¹, Shakeshaft A¹, Tutka P¹⁰, West R¹¹, Zwar N¹², **Courtney R¹**.

¹UNSW Sydney; ² University of Auckland; ³ Queen Mary University London; ⁴University of Queensland; ⁵University of Nebraska Medical Centre; ⁶ Monash University; ⁷ University of Newcastle; ⁸ University of Tasmania; ⁹ Central Queensland University; ¹⁰ University of Rzeszow; ¹¹ University College London; ¹² University of Wollongong.

Background and Aims: 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. Modelling suggests cytisine may be more cost-effective than varenicline. This study will evaluate the cost-effectiveness of cytisine compared to varenicline for smoking cessation in Australian smokers wanting to quit smoking.

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 identified via Quitline services and advertisements. The eligibility screening and verbal consent process will be completed by staff at the Trial Coordinating Centre. All eligible and consented smokers will be referred to an independent contract research organisation to conduct baseline and follow-up interviews at 4- and 7-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. The primary outcome will be biochemically verified 6-month continuous abstinence at 7-months follow-up. 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.

Extended-release buprenorphine injections for the treatment of opioid dependence: An effectiveness-implementation trial in Australia

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Background: Early (Phase 3) studies of the newly developed (weekly or monthly) extended-release buprenorphine (BPN) injections indicate that they provide rapid onset and sustained release of BPN, opioid blockade, sustained reductions in illicit opioid use and good treatment retention. For clients who choose this option, eliminating the need for daily supervised dosing, improved medication adherence, fewer missed doses and improved treatment exposure may result in improved outcomes and fewer unintended consequences such as diversion, but more data are needed. These innovations have the potential to dramatically change the treatment settings and options for people who are opioid dependent.

Aims: This presentation has 2 main aims (1) to describe these newer BPN formulations, and (2) to outline an effectiveness-implementation trial being led by NDARC: 'Community studies of Long-Acting Buprenorphine' (CoLAB). The trial will examine outcomes in patients receiving monthly injections of BPN (RBP-6000) in a mix of community treatment settings (retention, opioid and other drug use and participants' experiences of the implementation); and will develop and document different models of delivery with an emphasis on feasibility and practical clinical, regulatory and supply issues.

Methods: CoLAB draws on a range of data sources and methods, including a cross-sectional survey of people who are opioid dependent examining early perceptions of this treatment, an open-label, single-arm trial of monthly BPN injections, and qualitative interviews with providers and clients.

Anticipated outcomes: It is important to understand early perceptions among clients, and whether similar patient outcomes can be achieved with less frequent contact with treatment services. In addition, making the shift to injectable treatment has important service- and system-level implications; implementation work is needed to examine different models of delivery and new procedures for drug storage and administration. Experiences gained through these studies will be used to inform models of care and the incorporation of extended-release BPN injections into national clinical guidelines and training programs for health providers.

The effect of treatment and retention in opioid substitution therapy on reducing crime among opioid dependent people

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Background: It is well established that rates of offending are higher among people with opioid dependence. Although the relationship between opioid substitution therapy (OST – methadone and buprenorphine) and offending have been extensively studied, findings are often inconsistent.

Objectives: To evaluate the effectiveness of OST in reducing overall rates of crime among opioid-dependent people, and to examine the relationship between retention in OST and crime.

Methods: Retrospective population-based study of 10,744 new OST entrants in New South Wales (2004-2010) linked to data on charges, custody episodes and death notifications, up to 31 December 2011. Time-dependent survival analyses were used to examine the association between OST exposure and overall rates of crime (identified through proven charges). In addition, zero-inflated negative binomial regression was used to examine the relationship between treatment retention and rates of crime. All models were adjusted for key demographic and treatment characteristics and previous crime and custody histories.

Results: Approximately half of the cohort-initiated OST on methadone (n=5,738, 53.4%) and were charged with a least one crime during the study period (n=5,751, 53.5%). When considering overall rates of crime, both buprenorphine and methadone showed benefit in reducing crime rates compared to being out of OST. Furthermore, less cycling in/out of OST and a higher proportion of time spent in OST were associated with reduced rates of crime.

Conclusions: OST is effective in reducing overall rates of crime among opioid dependent people, with less cycling and greater retention in OST being particularly important to achieving reduced crime rates.

Implications for policy and practice: These findings demonstrate the importance of firstly engaging individuals in OST, and secondly, promoting greater treatment retention in OST, in order to reduce crime among opioid dependent people.

Screening for prescribed opioid dependence in a primary care setting

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Abstract: Dramatic increases in prescribed opioid use, opioid-related harms and opioid-related mortality have been reported in many parts of the world. Despite this, no brief, structured and scalable interventions have been designed and tested with the aim of identifying those at risk in primary care settings. We developed a software enabled screening tool and a brief intervention to monitor outcomes with prescribed opioids. Through early consultation we identified the need for a fit-for-purpose brief dependence screening tool, appropriate for use with people with chronic pain who are prescribed opioids, which could be administered in primary care settings. Consultation also revealed that taking a broader approach to opioid outcome monitoring was important. The subsequent 'Routine Opioid Outcome Monitoring' tool and broader intervention was designed to address a range of known structural barriers to routine monitoring of opioid-related outcomes, focussing on community pharmacy settings. We are now pilot-testing this tool with community pharmacies in metropolitan and regional settings in Victoria and New South Wales. Data are being collected on feasibility, acceptability and other implementation outcomes. This presentation will describe the process of developing the screening tool and early findings from the implementation study.

Implications. Through early engagement with community partners we have designed an opioid outcome monitoring tool, and a brief intervention that includes screening and referral that responds to identified barriers to monitoring outcomes with prescribed opioids in pharmacy. The process could be adapted for other primary care settings.

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Breakout Three: Treatment within prison settings

The Surveillance and Treatment of Prisoners with hepatitis C (SToP-C)

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Background: There is a close nexus between injecting drug use, imprisonment and chronic hepatitis C infection (HCV) with approximately a quarter of the more than 50,000 prisoners in Australia being HCV infected. In the Hepatitis C Incidence and Transmission Study in prisons (HITS-p), an ongoing transmission rate of 11% amongst prisoners was documented, with no apparent protective effect of opioid substitution treatment (OST). There are now highly effective, direct acting antiviral (DAA) therapies for HCV infection.

Aims: The SToP-C study is assessing the feasibility and effectiveness of HCV treatment-as-prevention in four prisons, in New South Wales. SToP-C consists of: i) a Surveillance phase, in which HCV status and risk behaviour are evaluated at study entry and monitored longitudinally; and ii) a Treatment scale-up phase, in which participants with HCV RNA detected are offered DAA therapy.

Methods and Results I:

The Surveillance phase began in Oct 2014. Participants were screened for HCV antibody (Ab) and RNA at enrolment and then 6-monthly. Those HCV Ab negative and HCV Ab positive/RNA negative were considered at risk of HCV primary infection and reinfection, respectively. To date 2561 individuals have enrolled into SToP-C, of whom 1816 individuals have completed at least one Surveillance follow-up visit. In the initial analysis of the Surveillance phase dataset, among 1569 participants screened, 392 had HCV RNA detected (25%) and 1175 were at risk of HCV. In 388 person-years (py) of follow-up, HCV incidence was 7.9/100 py (95%CI: 5.6, 11.3). Incidence of primary infection and reinfection was 6.4/100 py (95%CI: 4.0, 10.1), and 12.3/100 py (95%CI: 7.2, 21.2), respectively. In a Cox proportional hazard model, adjusted for prison site, younger age (aHR per 10 years: 1.65, 95%CI: 1.35, 1.81), history of injecting, but not in the current imprisonment (vs. no injecting, aHR: 8.16, 95%CI: 1.64, 40.76), and injecting in the current imprisonment (vs. no injecting, aHR: 12.29, 95%CI: 2.82, 53.69) were associated with greater risk of HCV.

Methods and Results II:

The Treatment scale up phase began in July 2017 with 268 individuals identified with chronic HCV being initiated on treatment, representing 95% of all those enrolled, identified as being chronically infected and still incarcerated in the study prisons). The Treatment scale up phase as well as ongoing Surveillance will be continued until late 2019.

Conclusion: The SToP-C study has documented high rates of both primary infection and reinfection in the NSW prisons. HCV infection was associated with younger age and a history of injecting drugs, while those injecting in the prison were at greatest risk. These initial findings support the need for more effective HCV prevention strategies, potentially including treatment-as-prevention.

Assessing the Safety and Feasibility of Long-Acting depot buprenorphine

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Abstract: This clinical trial will compare long acting depot buprenorphine (Bupival weekly and monthly) to standard care (oral methadone) in adult men and women who are opiate dependent and in custody in eight urban and rural NSW jails to identify unexpected safety and tolerability concerns specific to adults in custody in NSW.

Data will be collected to measure: retention in treatment, self-reported drug use, attempts as non-medical use of medication among patients in prison receiving opiate agonist treatment and other related problems including violence and assaults in study participants. A cost-consequences analysis will be undertaken to compare clinical and dosing activity recorded for methadone and buprenorphine depot treatment including JH&FMHN clinical practice and CSNSW officer time. Focus groups with JH&FMHN and CSNSW staff will assess staff satisfaction and acceptability of opiate agonist treatment and related issues.

This presentation will present the development of the study design and update progress of the study and discuss policy implications regarding availability of opiate treatment in jails.

The SNAP study - A randomised controlled trial of a brief intervention “SNAP” to prevent relapse to smoking after release from smoke-free prisons in the Northern Territory.

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Introduction: Tobacco smoking is the major cause of preventable diseases and deaths. The Northern Territory (NT) prison population comprises 92% Indigenous Australians and 88% smokers. NT Correctional Services introduced the first smoke-free policy in prisons creating a population-wide abstinent setting. However, virtually all inmates resume smoking within days after release. Smoking often concurs with poor Nutrition, Alcohol abuse and Physical inactivity (known as 'SNAP' risk behaviours).

Aims: To determine if an enhanced version of the SNAP intervention prior to release from prison will increase continuous smoking abstinence for three months after release.

Methods: The *SNAP study* is a RCT to compare the SNAP intervention against usual care. Self-reported smoking abstinence was measured at 3 months post-release and verified by breath carbon monoxide test.

Results: From April 2017 to March 2018, 557 participants were recruited (266 SNAP vs 291 usual care) and 293 participants had been followed up, with another 120 to be followed up. Participants were similar to the prison population on age, sex and Indigenous status. The median prison stay was 4 months. The majority (71%) of participants had a low or medium level of nicotine dependence. Average age of first cigarette was 16.2 years and most (68%) had attempted to quit smoking. The majority (84%) agreed with the smoking ban and half (46.5%) expressed a high level of motivation to stay smoke-free post-release. Of those followed-up, 15.4% self-reported complete smoking abstinence after release. The study is ongoing with follow-up interview to be completed by August 2018.

Implications: The SNAP intervention has the potential to assist ex-smokers to maintain abstinence after leaving smoke-free prisons. If the intervention is found to be effective, it could be implemented as a pre-release treatment in NT and other prison systems. The results from this study will inform policy makers how to improve smoking abstinence in correctional facilities worldwide as there are 15 million smokers imprisoned annually. In addition, 38,000 smokers are estimated to pass through Australian prisons with very few receiving any treatment.

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Alcohol treatment within a prison setting

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Background: Three-quarters of people in prison have a history of hazardous use of alcohol and other drugs (AoD), yet there is a paucity of research into AoD use and prison-based treatment. This lack of prison-based AoD research exists despite the enormous body of research conducted over many decades into problematic AoD use generally in Australia. The lack of existing knowledge has a disproportionately great impact on Aboriginal people because they are vastly over-represented in Australian prisons. Theoretically, under the principle of equivalence of care, people in prison should receive health care to the same standard as they could access in the community. However, this is may not always be the case.

Aims. This presentation will: i) summarise the extent of AoD use and harms among prisoners in NSW; ii) briefly describe the key findings from my systematic review of published research into prison-based AoD treatment; and iii) present the histories and AoD treatment experiences of participants from a series of qualitative interviews

Implications of the research. This research could be used to inform better provision of AoD treatment services for people in prison in Australia. It is also likely to be useful for informing approaches to these issues for Indigenous/First Nations peoples in other countries. I will identify how this research is likely to inform my Post-Doctoral research.

Breakout Four: Prevention: working with Aboriginal Communities

Exploring the role of Indigenous women in their families and communities: its impact on their health and implications for delivery of services

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¹ UNSW Sydney

Background: Indigenous Australian women are often at the centre of their families and communities. This presentation explores issues of stress, psychosocial health and chronic disease (CD) affecting Indigenous Australian women, and the interrelationships with their roles and responsibilities.

Methods: A systematic review to identify existing evidence for programs aimed at addressing CD and mental health among Indigenous women. Two qualitative (in-depth interviews) research projects were also undertaken: i) 21 Indigenous men and women and their healthcare providers as part of the process evaluation accompanying the Kanyini-GAP clinical trial; and ii) 72 Indigenous women to explore their experiences of living with CD and the impacts on their health.

Results: The systematic review identified a number of determinants (historical, social and economic factors) that are associated with an increase in the incidence and prevalence of CD and premature death. Research on programs aimed at addressing CD and mental health for Indigenous women were generally of low quality, with poor delineation of key outcome measures and indicators of success, and a strong potential for bias in the reporting of results. The in-depth interviews identified the significant roles and responsibilities women have within their own and extended family networks and how these responsibilities affected their wellbeing and management of their CD. It also highlighted the impact of me as an Indigenous woman undertaking this research and the potential for Indigenous researchers to suffer vicarious trauma (VT) through conducting this type of research.

Conclusion: Improving Indigenous women's health requires better resources to support new mothers, culturally appropriate safe houses for women fleeing family and domestic violence, and flexible models of service delivery to better accommodate the competing demands placed upon Indigenous women.

Cultures within culture: investigating conflict in Aboriginal communities and its influence on alcohol and drug-related harms

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Introduction: Aboriginal Australians have the longest continuing culture in the world. Colonisation, dispossession and intergenerational trauma have contributed to a breakdown of traditional law and kinship structures. It is possible this breakdown has contributed to existing conflict within Aboriginal families and communities and to higher rates of alcohol and drug use and related harms (Atkinson, 2002). This study will investigate the reasons conflict exist in Aboriginal communities and how it influences drug and alcohol use.

Method: A narrative literature review is conducted. Peer-reviewed databases are searched, using relevant search terms. The review identified the number of studies relevant to conflict in Aboriginal communities over five decades and examined the reasons for conflict identified in these studies. It will include both Aboriginal and non-Aboriginal authors and explore any differences in their approaches and accounts of conflicts which exist in Aboriginal communities. According to Martin (2008) when research is conducted by Aboriginal people, rather than being researched themselves, the outcomes will be different because the questioning will be more appropriate. The description of their problems will be theirs and their response will be on their terms. This review will explore whether this is the case.

Results: The reasons for conflict in Aboriginal communities identified in included studies will be documented. The review will illustrate how alcohol and drugs contribute to or are a result of conflict in Aboriginal communities. Aboriginal history, colonisation and dispossession, the Stolen Generations, the structure and breakdown of Aboriginal families' clans and relationships will be discussed as influences on conflict.

Conclusion: This will be the first study to investigate the impact of conflict in Aboriginal communities on alcohol and drug-related harms experienced by Aboriginal communities. This research will improve knowledge and understanding of the influence of conflict in responding to drug and alcohol related harm in Aboriginal communities.

The impact of community-developed responses to alcohol-related harms: demonstrating the value of community/ researcher partnerships

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Background: Solutions designed and led by Aboriginal Australians are most effective and sustainable in improving the health of Aboriginal Australians. The challenge is to bring together the leadership, skills and knowledge of Aboriginal communities with the highly specialised, real-world evaluation skills of senior researchers. This presentation will showcase how researchers worked in partnership with Aboriginal communities to develop, implement and evaluate community-based programs aiming to reduce alcohol-related harms among Aboriginal people.

Method: We worked together with 7 communities using a multiple baseline design to quantify the impact on alcohol-related harms of multi-component community-based programs either developed by the community (n=4), or in partnership with researchers (n=3). The same components were implemented in each community, but specific activities were tailored to communities' priorities and resources. The communities implemented an average of 15 activities in the study period, reaching approximately 1,000-2,000 people in each community. The community-developed program had 9 core components, the partnership-developed program had 3 core components. Routinely-collected police and emergency department data for each community, supplemented by community surveys were used to evaluate the effectiveness of the program in reducing alcohol-related harms and improving empowerment and safety.

Results: In one of the communities we found a significant reduction in offenders of alcohol-related criminal incidents following the implementation of the community-developed program (a trend decrease in victims of crime of 17.8% per year; 95% CI: 6.2% to 27.9%, p-value = 0.003 and a trend decrease in offenders of 29.8% per year (95% CI of 23.1 to 36%, p-value < 0.001). In a second community there was a statistically significant reduced trend of 1.5 victims of alcohol-related criminal incidents per quarter compared to baseline after the partnership-developed program was implemented in the community. Following the implementation of the partnership-developed program there was a 12-14% reduction in people observing alcohol-related verbal abuse, a 10-21% reduction in observed alcohol-related injuries, 20-30% reduction in people feeling unsafe at night and 19-30% increase in people thinking their community was empowered to make positive changes.

Implications: These studies show community-developed responses have the potential to reduce alcohol harms, but the impact is uneven across communities. This presentation will detail how partnerships with researchers at the earliest stage of developing community-based programs can help ensure the strategies are informed by existing evidence and well aligned with outcome measures. Across a number of different projects NDARC has developed tools/frameworks that identify evidence but allow communities to design tailored strategies to operationalise that evidence into practice.

The experience of Aboriginal communities engaging in research

Jamie O'Neil¹

¹ Murrin Bridge Aboriginal Lands Council

Background: Aboriginal people are among the most researched peoples in history, but research has not always been of benefit to Aboriginal communities. From my perspective three key problems are:

1. Research has been too focused on describing problems with Aboriginal people (e.g. identifying how much worse their health is compared to non-Aboriginal Australians) and/or their communities (e.g. rife drug and alcohol problems).
2. Aboriginal people are not enough in control of the solutions or the research that gets done. Aboriginal people have unique ways of interacting and governance, and research has to take those into account. The best way to do that, is to ensure Aboriginal leadership of research.
3. Research is not designed well enough for long-term engagement, nor for any benefits/changes to be sustained over time.

Aims: In this presentation I'm going to describe one project that we did with NDARC – called "3are1." I'll show how it starts to address the 3 problems with research with Aboriginal people that I highlighted above:

1. The whole focus of "3are1" was on bringing the community together to find solutions to alcohol harms – not just to identify and talk about more problems. Some of the solutions were alternative activities to drinking (e.g. boxing/cross training and touch footy) and starting a program for really high-risk young people.
2. The Aboriginal community partnered with the researchers to design the project together. A key part of this was that we had control of the budget and the activities that we wanted to implement and evaluate. I'll talk about how this worked in practice.
3. One criticism I would make of this project is that it was too short. To achieve **more** positive outcomes, the length of **time** that programs like the 3are1 are funded for needs to be extended. But on the positive side, parts of 3are1 are still going and other ideas/work have followed.

Implications of the research: A lot of Aboriginal people I talk to mistrust the research process, because they can't see much benefit it has brought them. A lot of researchers I talk to think it is too hard to engage with Aboriginal communities and people on Aboriginal terms. 3are1 was not perfect but I think it's the right approach in bringing Aboriginal people and researchers together.

Breakout Five: Young People, Alcohol and Other Drugs

Adverse adult consequences of different alcohol use patterns in adolescence: an integrative analysis of data to age 30 years from four Australasian cohorts

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Background and Aims: Studies have linked adolescent alcohol use with adverse consequences in adulthood, yet it is unclear how strong the associations are and to what extent they may be due to confounding. Our aim was to estimate the strength of association between different patterns of adolescent drinking and longer-term psychosocial harms taking into account individual, family and peer factors.

Design: Participant-level data were integrated from four long-running longitudinal studies: Australian Temperament Project, Christchurch Health and Development Study, Mater Hospital and University of Queensland Study of Pregnancy and Victorian Adolescent Health Cohort Study. Participants were assessed on multiple occasions between ages 13 and 30 years (from 1991 to 2012).

Measurements: Three patterns of alcohol use (frequent, heavy episodic and problem drinking) were assessed prior to age 17. Thirty outcomes were assessed to age 30 spanning substance use and related problems, antisocial behaviour, sexual risk-taking, accidents, socioeconomic functioning, mental health and partner relationships.

Findings and Conclusion: After covariate adjustment, weekly drinking prior to age 17 was associated with a two- to threefold increase in the odds of binge drinking [odds ratio (OR) = 2.14; 95% confidence interval (CI) = 1.57–2.90], drink driving (OR = 2.78; 95% CI = 1.84–4.19), alcohol-related problems (OR = 3.04; 95% CI = 1.90–4.84) and alcohol dependence (OR = 3.30; 95% CI = 1.69–6.47) in adulthood. Frequency of drinking accounted for a greater proportion of the rate of most adverse outcomes than the other measures of alcohol use. Associations between frequent, heavy episodic and problem drinking in adolescence and most non-alcohol outcomes were largely explained by shared risk factors for adolescent alcohol use and poor psychosocial functioning. Frequency of adolescent drinking predicts substance use problems in adulthood as much as, and possibly more than, heavy episodic and problem drinking independent of individual, family and peer predictors of those outcomes.

Parental alcohol supply, other supply, and harm: A prospective cohort study

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Introduction: Parents 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 potential confounding. This study assessed the relationship between parental supply of sips and whole drinks with supply from other sources, and the association between quantity of supply from these sources and harm outcomes.

Method: Children (n=1927) were surveyed annually (2010-2016, mean age 12.9 and 17.8 years, respectively); exposure to parental and other sources of alcohol and alcohol-related harms were assessed at each wave. Random intercept mixed effect models were used to model the association between parental supply in the current wave and other supply in the subsequent wave, and between supply type and subsequent harm (binge drinking, alcohol use disorder symptoms, and other alcohol-related harms).

Results: Analyses showed that, while effect sizes were not as strong as for supply of whole drinks, parental supply of sips was associated with significant increases in subsequent binge drinking and alcohol-related harms and was not associated with significant decreases for any outcome. In addition, while generally supply from others showed larger effect sizes than parental supply, analyses showed that parental supply doubled the odds of receiving supply from others in the subsequent year, regardless of whether supply was limited to sips. Not only that, but sensitivity analyses of the total amount supplied indicated that increased parental supply was more strongly associated with negative outcomes than increased other supply.

Conclusions: Analyses showed that parental supply of sips is not protective for negative alcohol outcomes. On top of that, it does not decrease supply from other sources, but rather increases it. The findings support previous evidence suggesting that parental supply is not protective and should be avoided in order to minimize subsequent harm.

Implications for Practice or Policy: Supply of alcohol by parents to children is

associated with risk, both directly and indirectly through increased access to alcohol from other sources and experience of alcohol-related harm.

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The effectiveness and cost-benefit of an NGO delivered program for high-risk young people, and integrating research into multiple NGO services nationally

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Introduction: A sub-set of young people experience multiple risk behaviours (D&A misuse, mental health, poor school attendance, involvement in crime) that have a complex aetiology (i.e. they are typically a consequence of social determinants of poor health, such as childhood exposure to violence, abuse and low SES). Our 2015 systematic review of the literature identified that programs that are most successful in improving outcomes for these high-risk young people have four characteristics: i) multiple components; ii) case management; iii) behaviour change techniques; iv) skill development/training. Despite this, only 5% of studies were outcome evaluations of programs, and there was little consistency across program components.

Aims: This presentation will: i) describe a co-designed, evidence-based definition of programs for high-risk young people, that is both standardised across services and tailored to their own circumstances; ii) evaluate its effectiveness when implemented in multiple communities; iii) present the results of a full cost-benefit economic analysis; iv) and describe the next phase of this research that seeks to establish a national partnership between researchers and NGO service providers.

Methods: The evidence-based definition of programs for high-risk young people derives from a literature review and consultation with NGO service providers. The effectiveness and economic efficiency of one NGO program delivered in multiple communities was assessed using a stepped-wedge evaluation design a cost-benefit economic analysis.

Results: The evidence-based program comprises 5 core-components that are operationalised by different services to suit their own circumstances. The evaluation showed statistically significant self-reported reductions in suicide ideation and a near statistically significant reduction in monthly cannabis use. There was a statistically significant reduction in the number of crimes recorded by police involving males aged 15

to 18 years in the communities where the program was implemented (the third community had a strong trend for reduced crime rates). The cost-benefit ratio was 1:5, meaning this program returns an estimated \$5 for every \$1 invested.

Implications of the research: The evaluation shows the evidence-based program is effective and provides a good economic return when implemented by one NGO in five communities. We are now working to replicate this result in a larger number of communities by establishing a national NGO/researcher partnership for ongoing research which will continue to improve outcomes for high-risk young people.

Working with people who use performance and image enhancing drugs (PIEDs): a 'best practise' workshop targeted at healthcare professionals

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Background: People in Australia are increasingly seeking to use performance and image enhancing drugs (PIEDs), such as anabolic-androgenic steroids, to help them meet their 'body-image-related goals'. Alongside this increase in use, there has been an associated rise in the number of reported health complications associated with the use of PIEDs. Yet, healthcare professionals in Australia report difficulties engaging with PIED users coupled with a lack of knowledge about these substances. Effective education for healthcare professionals on PIEDs is therefore urgently needed. This pilot study evaluated the effectiveness of an e-learning program and developed a 'best practise' workshop to address this gap.

Methods: This pilot study is part of a larger EU project named DELTS (i.e. Doping E-learning tools). During this project we evaluated an e-learning tool, using a standardised evaluation methodology. Specifically, a mixed methods design has been used incorporating an online survey and individual structured interviews.

Findings: This presentation will report the findings of this evaluation and will incorporate materials of the 'best practise' workshop.

Conclusion: The findings of this study has the potential to drive clinical outcomes as the evaluation and workshop are focussed on improving the best practice of healthcare practitioners who engage with people who use PIEDs. By improving knowledge of evidence-driven strategies, healthcare professionals can use tailored interventions to provide better health education and counselling to meet their clients' needs. The presentation will therefore assist healthcare professionals to prevent and reduce harms of PIED use.

Breakout Six: Responding to harms: The co-creation of a research agenda with treatment services

What is the Co-Creation of New Knowledge?

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Background: Co-creation of new knowledge is a feasible approach to reducing the time between discovery of new knowledge and its application into practice. As a concept, however, co-creation remains under developed, evidenced by the use of inconsistent terminology across disciplines. This paper proposes a definition for the co-creation of new knowledge. It then tests this definition to identify how widely the co-creation process is used.

Methods: The authors' proposed definition for the co-creation of new knowledge comprises three core components: i) the application of rigorous research methods; ii) the embedding of evaluation into policy or program delivery; and iii) the co-creation of the idea, evaluation design, implementation strategy and evaluation. Co-created studies were sought using a strategic PRISMA compliant search of seven electronic databases and one web-based search engine. Ten of the most frequently used keywords appearing in the literature were used to identify co-creation related papers published from January 2015 to February 2017. To be eligible for inclusion, papers needed to mention co-creation terminology and describe co-creation related processes. The categorisation of papers was tested independently by two reviewers.

Results: Of the 6,354 papers initially retrieved, 73 papers met the inclusion criteria. 32 papers offered explicit terminology with the remaining 41 including implicit definitions. Examination of the current literature on co-creation against the proposed standardised definition demonstrated how a wide variability of co-creation related terms can be reduced to four collaborative processes: co-ideation, co-design, co-implementation and co-evaluation.

Conclusion: There is a clear need to resolve the conceptual ambiguity of the "co-creation of new knowledge". The proposed definition would help achieve this need and provide the foundation for building a body of co-created research evidence.

Breakout Seven: Comorbidity

Psychiatric consequences of methamphetamine use: a review of the evidence

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Abstract: Australia has one of the highest rates of methamphetamine use in the world.¹ In 2016, more than 6% (or 1.3 million) Australians aged over 14 years reported using meth/amphetamine in their lifetime, and close to 3% of people in their 20's reported use in the last 12 months. Use of methamphetamine has been associated with a number of adverse psychiatric outcomes, however to date there has been no comprehensive synthesis of these data.

This presentation will cover findings from a series of systematic reviews and meta-analyses that aim to estimate the relationship between methamphetamine use and mental health problems, including depression, anxiety, suicidality, psychosis and violence. Preliminary results will be presented. Limitations of, and gaps in the extant literature will be discussed with view to identify priorities for future research in this field.

Reference

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The impact of comorbid mental health disorders on receipt of substance use disorder treatment

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Background: Improving treatment for substance use disorders (SUDs) is a global health priority. However, cross-national data on the patterns and correlates of SUD treatment are scarce.

Objectives: Examine the prevalence of SUD-specific treatment among those with a past-year SUD, and impact of a comorbid mental disorder on receipt of treatment.

Methods: Data on 2,436 people with past-year DSM-IV diagnoses of SUD (alcohol or illicit drug abuse and dependence) were drawn from representative community surveys in 27 countries of the WHO World Mental Health Survey Initiative. SUD treatment was defined as having either received professional treatment or attended a self-help group for substance-related problems in the past 12 months. Among persons with 12-month SUD treatment, minimally adequate treatment (MAT) was defined as having 4+ SUD treatment visits to a healthcare provider, 6+ visits to a non-healthcare provider, or being in ongoing treatment at time of interview.

Results: One in nine respondents (11.0%) with past-year SUD received 12-month SUD treatment. SUD treatment was twice as common among cases with a comorbid mental disorder than pure SUD (17.8% vs 7.0%). Three-quarters (77.6%) of SUD treatment patients received MAT (79.0-69.1% in high vs. low/middle income countries) and MAT was more common among patients with a comorbid mental disorder than pure SUD (83.9% vs 68.3%). Once adjusting for socio-demographics, presence of a comorbid mental disorder was consistently associated with increased odds of receiving any, and minimally adequate, SUD treatment.

Conclusions: Adequate SUD treatment rates among persons with a past-year SUD were quite low, but consistently higher rates were observed among those with than those without a comorbid mental disorder.

Implications for policy and practice: These findings demonstrate the variation in receipt of SUD-specific treatment among persons with and without a comorbid mental disorder and informs the steps necessary to increase intervention for individuals with SUDs.

Psychostimulant use and fatal stroke in young adults: a national study

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Background: Psychostimulants are associated with increased stroke risk. The study aimed to determine the proportion of fatal stroke amongst a national sample of young Australian adults constituted by psychostimulant users and their clinical characteristics.

Methods: All cases aged 15-44 years where death was attributed to stroke were retrieved from the National Coronial Information System database (1/1/2009-31/12/2016).

Results: There were 280 cases where the cause of death was stroke: haemorrhagic (260), ischaemic (8), thrombotic (8), mycotic (4). Of these, 17.9% (50) were identified as psychostimulant users. Psychostimulants in blood were detected in 37/45 cases where toxicology was available: methamphetamine (32/45), cocaine (1/45), MDMA (1/45), dimethyl amylamine (2/45), phentermine (1/45). Haemorrhagic strokes were more likely in the psychostimulant group than other cases to occur in the parenchyma (56.3 v 34.9%, OR 2.36) and less likely to have been due to a ruptured aneurysm (33.3 v 47.2%, OR 0.51). Psychostimulant users were less likely to be obese (OR 0.31), but more likely to have a history of tobacco use (OR 2.65). There were no group differences in history of previous stroke ($p=0.2$), diabetes ($p=0.8$), alcoholism ($p=0.3$), pregnancy ($p=0.1$), vasculitis ($p=0.3$), cardiomyopathy ($p=0.9$), hypertension ($p=0.9$), severe atherosclerosis ($p=0.3$) or endocarditis ($p=0.3$). No psychostimulant user had a previous stroke history, was gravid/post-partum, diagnosed with vasculitis or with endocarditis.

Conclusions: Psychostimulant users constituted a substantial proportion of fatal strokes amongst young adults and differed in clinical presentation. In cases of haemorrhagic stroke amongst young adults, the possibility of both illicit and licit psychostimulant use should be considered.

Keywords: Psychostimulants, Stroke, Haemorrhagic, Ischaemic, Fatal

Breakout Eight: Criminal Justice Responses

Does imprisoning drink-drivers reduce the risk of drink-driving?

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Abstract: Between 2003 and 2017, the proportion of convicted high-range drink drivers sentenced to prison by a NSW court rose by a factor of three, from 1.7 per cent to 5.1 per cent. The average prison sentence is about six months. It costs just under \$200.00 a day (recurrent) to keep someone in prison. So the annual cost of sending 180 people to prison each year is around \$6.5 million. To date, no-one has examined the deterrent effect of prison on recidivism among drink drivers. In this study we exploit the disparities among judicial officers in their willingness to imprison drink drivers as a means of identifying the effect of prison on drink-drive recidivism. We find no evidence that prison reduces the risk of drink driving but some evidence that it reduces the risk of general re-offending.

Drug-related police encounters across the globe: How does Australia compare?

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Abstract: Drug law enforcement subsumes the lion's share of drug policy expenditure across the globe, but we know little about cross-national similarities and differences in the street-level policing of people who use drugs. Using a new drugs police module added to the 2017 Global Drug Survey this study examines the incidence, nature and intensity of illicit drug-related police encounters across 26 countries including Australia, Germany, Italy, the UK and the USA. Key variables assessed were the incidence of drug-related police encounters in the last 12 months that involved: a) been stopped and searched; b) encountered a drug detection dog; c) given a warning; and d) been charged and arrested. We show that drug-related police encounters were more common in some nations, including in Australia, and that specific modes of policing also differed. For example, stop and search was most reported in Greece and Colombia but encounters with drug detection dogs were most reported in Australia, Italy, Scotland and the UK. Multi-level logistic regressions will be used to determine whether country predicts the incidence of policing encounters, after controlling for national differences in drug use prevalence and non-drug specific policing (including the total number of police personnel in each country). Implications for future street-level drug law enforcement within and outside of Australia will be explored.

Understanding how a high-level drug trafficking network in Australia adapted to changes in its drug supply.

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Introduction: Illicit drug markets and associated supply disruptions have been studied for many years but with limited attention to how drug trafficking networks adapt to supply changes and the consequences thereof: the aim of this study.

Method: A mixed methods social network analysis was applied to a high-level drug trafficking network which supplied methamphetamine and other drugs in Melbourne, to examine how it adapted to quantity and purity/quality supply changes over 15 years (1997-2007). Data were extracted from judges' sentencing comments from Australian court cases, a biography and mainstream media. Adaptations and consequences to both law enforcement and non-law enforcement caused supply changes were examined.

Results: Thirty-four quantity and purity/quality changes were identified, including a 2.9 tonne seizure of cannabis, a decline in the purity/quality of methamphetamine and an increase in the purity/quality of pseudoephedrine. The network changed its structure and modus operandi after exposure to supply changes. Adaptations included changes in trafficking style (e.g. a shift from mostly international trafficking to mostly domestic manufacture), recruiting corrupted public officials, becoming more decentralised, as well as changes in network density, roles and size. Adaptations changed over time and varied by location (i.e. whether the supply change happened domestically or internationally). The network continued to sell large quantities of drugs over fifteen years despite the supply changes.

Conclusion: This research highlighted the complex adaptive nature of the illicit drug trade and its resilience to market change. Adaptations varied widely. Moreover, some had the potential to result in negative consequences to the public, such as the corruption of public officials or increased domestic manufacture of methamphetamine. This makes it difficult to predict the outcome of any policy change or law enforcement intervention that aims to disrupt the supply of illicit drugs.