

centre lines

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issuing forth

"Opening Doors" – increasing access to youth friendly harm reduction



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contents

headspace

2

Associate Professor Alison Ritter welcomes Professor Michael Farrell to NDARC as the Centre's new Director and reflects on her 12 months as Acting Director. She asks the thorny question should our research focus be creative and let "a thousand flowers bloom" or should it have a strict strategic focus and be limited to selected high priority areas?

issuing forth

2

Dr John Howard reports on the 'Opening Doors' project which has attempted to increase young people's access to drug treatment and harm reduction services in Asia by working in partnership with local service providers and young people

project notes

6

A new comprehensive model for school-based drug and alcohol prevention programs

An Australian-first study will investigate the prevalence of Attention Deficit Hyperactivity Disorder among dependent drug users

How do changes in the price of alcohol and illicit drugs affect young Australians' consumption habits?

A new study will for the first time collect data on the characteristics and potency of cannabis available in Australia

abstracts

7

recent publications

11

CentreLines is a joint publication from the National Drug and Alcohol Research Centre, Sydney and the National Drug Research Institute, Perth.

edspace

Applying the evidence through opening doors

The term 'youth friendly' is widely used in the alcohol and other drug sector but poorly understood.

The cover feature is this issue of *CentreLines* describes a two year project to improve young people's access to drug treatment and harm reduction services in Asian countries.

'Opening Doors' is a collaboration between NDARC and Access Quality International (formerly part of the Asian Harm Reduction Network), funded by AidsFond (Netherlands), and has focussed on identifying the barriers to treatment for young people in Asian countries and the problems they face. Three projects have been running in Thailand, China and Nepal. The focus, with partners in each country, had been to upskill the workforce and to encourage them to listen to young people and develop plans with them.

The results to date have been impressive. In Nepal for example Youth Vision, which provides a wide range of services, has reported a significant increase in use of treatment and harm reduction services among 16 to 25 year olds, particularly marginalised youth with complex needs.

The project is one of many in which NDARC is involved in the international arena, in countries including China, Thailand, Vietnam, Burma, Malaysia, Singapore, Mongolia and Iran. A critical aspect of these projects involves building capacity at a local level to invest in and deliver treatments and interventions that are effective in reducing harm.

Injecting drug use fuels the HIV epidemic in different parts of the world and in Asia more than a third of all HIV infected individuals are living with AIDS. NDARC researchers, through the Secretariat for the Reference Group to the United Nations on HIV and Injecting Drug Use, have played a crucial role in systematically documenting this evidence. Last year a landmark review for the Secretariat led by NDARC researchers found that the provision of HIV prevention services for injecting drug users, essential to contain the spread of HIV, is inadequate in most countries around the world and presents a critical public health problem.

The research outcomes from the 'Opening Doors' project will provide important information about what works and what doesn't in terms of increasing youth engagement in alcohol and other drug prevention and treatment services, particularly in those countries where there is still a strong reliance on compulsory residential treatment.

Marion Downey, Manager Media and Communications, NDARC

headspace

A/Professor Alison Ritter

This is my last column as Acting Director of NDARC. I don't think anyone anticipated that it would be 18 months between the departure of Professor Richard Mattick and the commencement of a new Director for NDARC, but we are delighted to be welcoming Professor Michael Farrell to Australia and to NDARC. The past 18 months has been an extremely challenging time but also a privilege to be in the role of Acting Director, along with Professor Maree Teesson who acted in the role for six months.

There are many challenges for a research centre in these times. Funding is uncertain and frequently highly competitive. The research workforce is a small one and attracting and retaining outstanding academics and researchers can be difficult in a competitive work environment. The world of alcohol and drugs is constantly changing. We have had substantial government policy initiatives over the last 18 months, including the Alcopops Tax and a new National Drug Strategy.

In possibly the most pivotal development of all, at the end of February this year, the Federal Government disbanded the Ministerial Council on Drug Strategy (MCDS).

There is now no national Ministerial forum on alcohol and other drugs in which health and law enforcement come together at the highest level of government. It is too early to know exactly what the ramifications of this will be but I predict they will be significant.

Universities have also been under substantial strain in relation to the global financial crisis and the associated reduction in income through fewer donations and through loss of value in

investments. In addition it has been harder to recruit international students to Australia given the strong Australian dollar. All of these challenges have meant that NDARC, as a Centre located within the Faculty of Medicine, at the University of New South Wales, has come under financial strain.

I am pleased to say that despite the constraints and challenges, I feel that NDARC has been through an enormously successful period in the last 18-months. This has included significant achievement in the NHMRC grant funding rounds where NDARC's success rate was much higher than the national average, several successful PhD completions at the end of 2010 and beginning of 2011, a continuing growing financial base and highly collaborative relationships both with the Commonwealth Department of Health and Ageing and with State Governments around Australia.

We have unfortunately said goodbye to some senior staff who have made significant contributions to NDARC, including Professor Louisa Degenhardt and Professor Chris Doran but have also welcomed several new staff to the NDARC team, including the return of Associate Professor Anthony Shakeshaft to a full time position.

Our media profile has also substantially improved in the last 18-months and our staff have commented on a wide variety of drug and alcohol related issues, reflecting the diversity of research and expertise at NDARC.

Leading a team of 130 academics, researchers and support staff is no easy task. Much time is spent on administrative matters but it is these administrative aspects that enable research to be conducted and our staff to get on with doing what it is that they are good at, and that is

expanding knowledge and finding solutions to better address alcohol and drug related harm in society. There are many talented researchers at NDARC all of whom shine in their research work, publications, awards and prizes and in the public sphere and media.

One of the challenges of leading a Centre such as NDARC is whether to confine the research scope to specific and carefully defined strategic areas or to "let a thousand flowers bloom". The former may approach produce focussed and specific research results of a high priority but may stifle innovation and flexibility. The latter certainly encourages creativity and a multiplicity of research domains but does not reflect a strategic focus. I think finding the balance will always be a challenge in Centres such as NDARC.

I owe a great deal of thanks to the outstanding Executive Team that have supported me and NDARC through this transition period. That includes Professor Maree Teesson (who, as noted, was also Acting Director for six months during this period), Professor Jan Copeland, Associate Professor Chris Doran, Associate Professor Anthony Shakeshaft, Professor Louisa Degenhardt who was on the NDARC Executive until September last year and Executive Officer Dr Shale Preston who ably leads the administration of the Centre. In addition, other senior staff, such as Professor Shane Darke, have provided substantial support.

The administrative team at NDARC is very strong and I have enjoyed the opportunity to work closely with all of them during this interim period. I know that Professor Farrell will be pleased to have such capable people assisting him as he takes on the Director's position. **cl**

issuing forth



Kathmandu

"Opening Doors" – increasing access to youth friendly harm reduction

Dr John Howard

"We don't need much – we only ask that people understand us a little and give us some space to talk – that's sufficient" (young focus group member, Bangkok).

Injecting drug use fuels the HIV epidemic in different parts of the world, especially in Asia where large numbers of people who inject drugs are living with HIV/AIDS. Injecting drug users living with HIV make up 30-35% of all HIV-infected individuals in Asia, compared with 0.6% for South Africa and 3% for Kenya.¹ While injecting of heroin remains the major concern in Asia, injecting of methamphetamine is emerging.²

The burden of morbidity associated with substance use among young people is not evenly distributed. Some groups of young people are at greater risk of substance use and associated problems, usually due to a greater

number of stressors in their lives and/or weakened resilience associated with the interplay of individual, familial, community, societal and broader risk and protective factors. Referred to as 'most at risk adolescents' (MARA) and 'most at risk young people' (MARYP), MARA and MARYP include very young adolescents, street children and youth, young sex workers, young workers, young parents, young same sex-attracted and minority populations, and those in juvenile justice/closed settings.

Ignoring the specific and developmental needs of these more vulnerable young people places them at increased risk for poor participation in education, training and employment, HIV, hepatitis C and other blood borne infections, STIs, mental health disorders, social marginalisation and economic exclusion.

Current legislation in Asia often prohibits access to drug treatment and harm reduction for young people who use drugs. For example, methadone maintenance treatment (MMT) is usually only available after age 20 and access to needle syringe programs is prohibited. In addition, the predominant response in the Asian region is the use of incarceration in large prison-like closed settings, generally known as "compulsory treatment centres".

Such 'treatment' is more punitive than rehabilitative, with enforced work and indoctrination sessions comprising the major activities and high relapse rates – up to 90%. There is little attention to rehabilitation and care generally, and few attend to the specific developmental needs of young people who use drugs. This approach worsens social exclusion and discrimination, making it even harder for rehabilitation, and exposes young people to violence and to older, more entrenched drug users.

An additional concern is that, where community options do exist, they are adult-oriented services and young people tend not to engage, showing poor attendance and participation rates. Some of the identified barriers to young people who use drugs accessing harm reduction services include^{3,4}:

- location – too far to travel, or a location that maximises chances for them to be seen accessing a service,
- hours and waiting times,
- age restrictions and laws,
- procedures, for example complex forms, appointment systems, no 'drop in'
- attitude of staff at all levels (e.g security at gate/door, reception, screening, treatment/service provision),
- staff not skilled in working with young people,
- adult oriented 'atmosphere' and issues in mixing adults and young people
- lack of privacy/ confidentiality,
- cost,

- family not with them, or opposed to them seeking assistance,
- lack of support,
- not feeling 'entitled' or welcome.

It is possible to provide young people with interventions that meet their needs and to do so in a way that keeps them connected with family, school and community but there is limited workforce available to do this. While such a workforce is being built, there is a need to engage with suitable existing services and organisations to assist them to reflect on current practices in relation to young people who use drugs, to identify what could change and what is needed to assist this. The current project addresses these issues with a view to increasing access to youth friendly harm reduction for young people who use drugs.

What are Youth Friendly Health Services?

The term 'youth friendly health service' is widely used, but poorly understood. WHO has attempted to identify a framework for youth-friendly services^{3,4}.

Youth friendly services are those with safe and supportive environments that provide:

- meaningful relationships with adults, peers and partners,
- structure and boundaries for behaviour,
- encouragement of self-expression,
- educational, economic and social opportunities,
- maximised opportunities for participation with contributions being valued,
- involvement of target adolescents in planning and, where appropriate, delivery of services,
- minimal risk of injury, exploitation, or disease,
- privacy and confidentiality,
- comprehensive, evidence informed services,
- good links for efficient referrals,
- outreach and peer led interventions,
- equity.

What comprises a comprehensive package of harm reduction interventions?

According to UNODC, WHO and UNAIDS, the implementation of a 'comprehensive package' of nine evidence-supported interventions for the prevention, treatment and care of HIV among people who inject drugs is essential⁵. The

package comprises: 1. Needle and syringe programmes, 2. Opioid substitution therapy, 3. HIV testing and counselling, 4. Antiretroviral therapy, 5. Prevention and treatment of sexually transmitted infections, 6. Condom distribution programmes for people who inject drugs and their sexual partners, 7. Targeted information, education and communication for people who inject drugs and their sexual partners, 8. Vaccination (as available), diagnosis and treatment of viral hepatitis, 9. Prevention, diagnosis and treatment of tuberculosis

These nine components could be seen as a 'minimum'. In addition, access to the following is equally important for young people who use drugs:

- safe accommodation,
- physical and mental health services,
- adequate nutrition,
- child care,
- education, training, and employment,
- legal assistance,
- assistance to reduce transitioning to IUD,
- appropriate community interventions to enhance diversion from closed settings,
- information, education and communication (IEC) on HIV, drug use and other blood-borne infections for people who inject drugs,
- community mobilisation and outreach to reach young people who inject drugs who do not, or cannot, access health services.

The '**Opening Doors**' project was funded by AidsFonds (Netherlands) and is a partnership between Access Quality International (formerly part of the Asian Harm Reduction Network) and NDARC.

The **primary target** is young people aged 10 to 25 who use or inject drugs, with special attention paid to the engagement of difficult-to-reach young people, such as:

- young female (injecting) drug users,
- young drug users who are orphaned, abandoned and/or out of home or school and who spend much of their time on the streets,
- young sex workers (male and female),
- young men who have sex with men,
- young drug users in compulsory residential treatment centres and closed settings,
- young workers in high risk occupations or forced labour,
- young people from minority or oppressed groups.

The **longer-term outcomes** which might be achieved include:

- Increased access to, participation in and coverage of a comprehensive range of harm reduction services essential for young drug users,

- Improved health and wellbeing of young vulnerable drug users (e.g. improvements in physical and mental health, safe sex, sense of well-being and social inclusion; reductions in relapse, drug use and sexual risk behaviours, transitioning to injecting, crime and placement in closed settings,
- Building the capacity of the harm reduction workforce in Asia and supporting the scaling up of high quality low-threshold services for young people who inject drug or who are at risk of doing so,
- Demonstration of the utility of providing comprehensive youth-friendly services to reduce the likelihood of placement of young drug users in closed settings (e.g. compulsory drug treatment centres, work camps, prisons and other places of detention) and return to such closed settings following release,
- Improved data collection, monitoring and evaluation of services.

The project has been implemented in three contrasting sites: Bangkok, Thailand, with the Thai AIDS Treatment Action Group (TTAG) as partner; Kunming, China, with the Yunnan Institute for Drug Abuse (YIDA) as partner; and Kathmandu, Nepal, with Youth Vision as the partner. In all settings the first activity was to encourage the implementing partners to listen to the voices of young people, and develop plans with them.

What has been achieved:

1) Bangkok: the main drug of concern for young people is methamphetamine in pill form (*yaba*), but there is emergent IDU of Ice. Thai Treatment Action Group (TTAG) has mainly provided interventions for older HIV+ IDUs, but it was concerned about the unmet needs of young people who were using drugs in their target communities.

Focus groups were conducted by TTAG to identify what may attract young people to harm reduction services. TTAG then identified four young people, all of whom use amphetamine type stimulants, and began a strategy to build their skills to become effective peer leaders. TTAG also reviewed and revised their intake/service monitoring forms, and aims to produce a DVD on 'Youth friendly introduction to harm reduction' and information and educational resources.



Youth Leaders in community, Bangkok

Thai AIDS Treatment Action Group (TTAG) Focus groups n=25

- most smoke methamphetamine, use cannabis, some Ice use and heroin smoking,
- most of the young people are in contact with IDU,
- they like the drug effects, but not the cost, impact on physical and mental health, involvement with police and (ineffective) compulsory treatment,
- they are aware of harms, but lack access to harm reduction,
- they want spaces to talk, discuss, get educated, have fun,
- they want job training, recreational activities (eg sport, music) and gym; and training in home-based crafts for sale in markets,
- they also want their communities sensitised to their needs.

Focus group with potential Youth Leaders

- Individual strengths and those of other 'leaders':
 - listen before talking,
 - good communication,
 - approachable,
 - can resolve conflict,
 - bravery,
 - compassion,
 - accepting and non-judgemental,
 - can assess and read people and what they need,
 - problem solving,
 - loyalty,
 - willingness to help,
 - love of family and friends.
- What they needed to develop:
 - depth communication – able to talk about deep problems,
 - basic counselling,
 - confidence,
 - be able to remember what has been taught (how to memorise),
 - how to speak clearly and communicate information.

The focus groups informed development of youth leader identification and development of activities.

2) Kunming: In Kunming, the main drug of concern remains heroin, but there is increasing use of methamphetamine, ketamine and combinations of pharmaceutical preparations, often opioid analgesics. There is extremely limited capacity for community-based services, other than methadone maintenance treatment

(MMT), and no MMT for under-20s. Many young MMT clients use other drugs, and put their placement on MMT at risk in addition to any risks connected with the use of any other drugs. A recent review of MMT in China⁶, has indicated a need to expand the role of MMT clinics and to offer clients ancillary services. The aim of the implementing partner was to increase participation in 'youth friendly' MMT among 20-25 year olds and to explore the potential for the MMT clinics to offer attractive activities, such as counselling groups, employment assistance, visits and recreation.

Twenty current MMT clients aged 21 to 24 participated in focus groups to identify their wants and needs. They identified concerns about MMT, held some incorrect beliefs regarding MMT, wanted to 'get off MMT' quickly, and wanted activities, vocational skills training and assistance in gaining employment. The focus groups informed: development of some activities – groups at three MMT clinics, links to employment opportunities, some with companies established by ex-drug users. As well, three resources were developed jointly with young people on MMT and clinic staff to address 'myths and realities about methadone' (e.g. bone and dental impacts, fertility and impotence, and dependency issues). These comprised a short video – *Questions and Answers in methadone maintenance treatment* – a flip chart for clinicians and a pamphlet. As well key MMT staff received training on a more 'youth friendly approach' and a module will be delivered in the YIDA training program for new MMT staff.

3) Kathmandu: In Nepal, Youth Vision, which provides a comprehensive range of services, was concerned that it was not engaging well with younger people who used drugs, especially marginalized youth with complex needs. The range of services offered by Youth Vision comprises: a Buprenorphine program (*Margins 2 Mainstream*); an Integrated Health Service which includes VCT for HIV, and rapid tests; an essential package of care, and links to ART for those with low CD4 counts; community home-based care for those who can/will not come to clinic; STI testing on-site and treatment; outreach and community motivators at various sites in Nepal; residential programs; drop in centres.

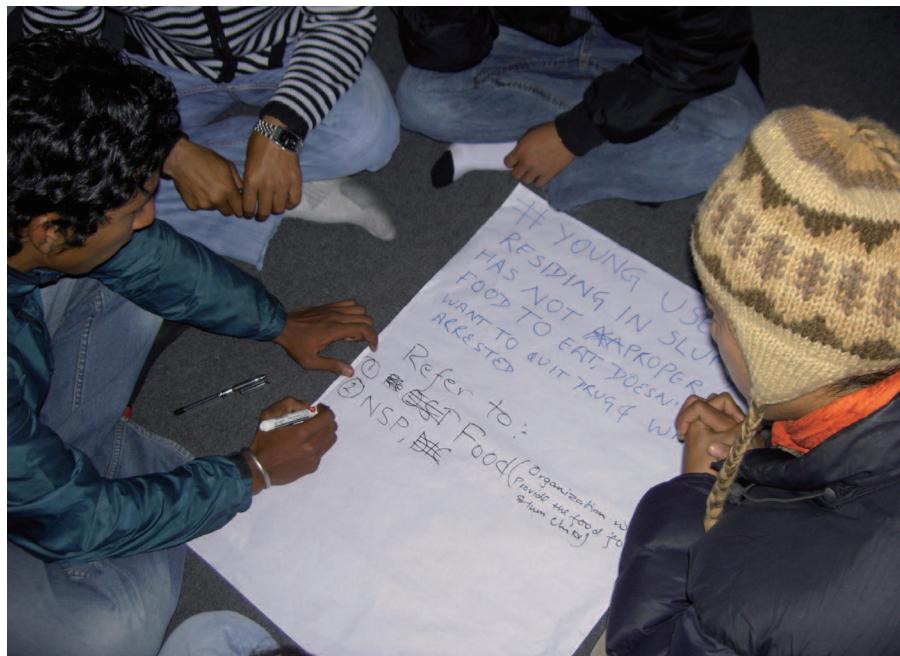
Youth Vision conducted eight focus groups in slum communities and one in a drop-in-centre, with a total of 78 participants; 69 male, median age 20 (range 17-23).



Compulsory drug centre, Kunming



IDU, Kathmandu



Training with ex-drug users, Kathmandu

Kathmandu Focus Group findings

Difficulties they faced:

- police mistreatment,
- incarceration,
- health problems,
- family conflict,
- unemployment,
- discrimination,
- 'mental torture'.

What they wanted:

- services near where they live/hang out, and at drop-in-centres,
- safety and respect,
- food and vitamins,
- shelter at night,
- good opening hours,
- outreach workers who were punctual, respectful, friendly, non-dominating,
- health needs met: for example, information and education about drugs, counselling, medical checks, medicines, HIV voluntary counselling and testing, NSP, OST, condoms, detoxification,
- activities to distract and to educate: for example, TV, movies, computers, sports, education, English classes, books, IT, vocational training (e.g motorbike repair, handicrafts), interactive discussion groups, training as peer outreach workers.

The focus groups informed: facility and program re-design, associated with a large increase in service access and participation in programs by young people who use drugs, staff workforce development activities, and development of a network of youth-serving agencies with an aim to provide activities, including vocational and recreational, and seamless services for young people who use drugs.

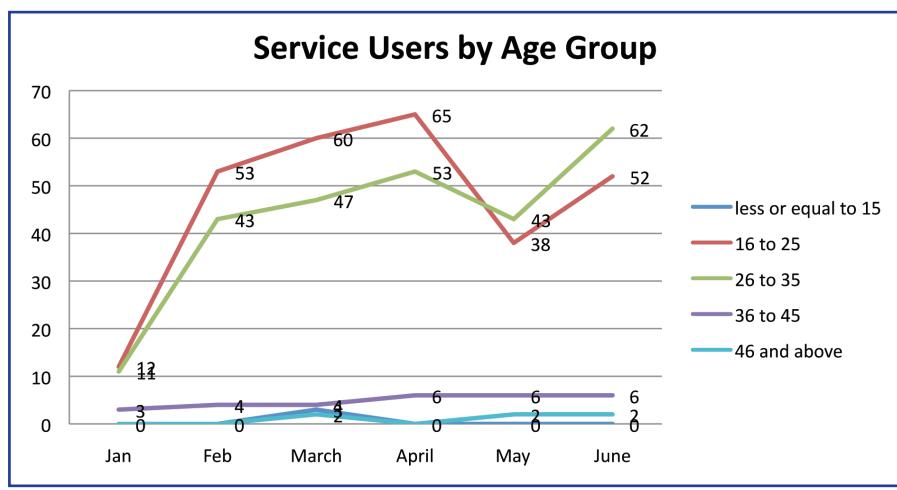
To date, there has been an increase in the participation of young people in programs (see figure below), improved mental health,

a decrease in crime, money spent on drugs, involvement with police, arrests and detention, problems associated with drug use, sharing of injection equipment, psychotic symptoms and suicidality;⁷ and increased use of condoms.

Overall Progress: The "Opening Doors" project has been associated with some potentially beneficial activities and outputs, particularly in identifying and responding to what the young people need/want. The 'voice' of young people who use drugs is 'louder' and youth participation in shaping and operating services is increasing. Resources have been produced, such as those related to MMT, networks and links to essential partners and education, vocational training and employment have been developed and strengthened, youth leaders are being developed. In addition, a capacity building training package on building capacity for youth friendly harm reduction has been developed, with a national pilot in Nepal, and a regional pilot in Bangkok. **cl**

References:

1. Mathers, B., Degenhardt, L., Phillips, B., et al. (2008). Global epidemiology of injecting drug use and HIV among people who inject drugs: A systematic review. *The Lancet*, 372, 1733-1745.
2. Degenhardt, L., Mathers, B., Guarinieri, M., et al., (2007). *The global epidemiology of methamphetamine injection*. Sydney: National Drug and Alcohol Research Centre.
3. WHO (2002a) Adolescent friendly health services: an agenda for change. Document: WHO/FCH/CAH/02.14. Geneva:WHO.
4. WHO (2002b) Global consultation on adolescent friendly health services: a consensus statement. Document: WHO/FCH/CAH/02.18. Geneva:WHO.
5. WHO (2009) HO, UNODC, UNAIDS Technical guide: for countries to set targets for universal access to HIV prevention, treatment and care for injecting drug users. Geneva: WHO.
6. Yin, W., Hao, Y., Sun, X., Gong, X., Li, F., Li, J., Rou, K., Sullivan, S., Wang, C., Cao, X., Luo, W., Wu, Z. (2010) Scaling up the national methadone maintenance treatment program inn China: achievements and challenges. *International J. Epidemiology*, 39, ii29-ii37
7. Youth Vision data January to June 2010.



project notes

The CAP intervention: A comprehensive model for drug prevention

Professor Maree Teesson, Dr Nicola Newton, Dr Timothy Slade, Dr Patricia Conrod and Professor Gavin Andrews

More than a quarter of Australian teenagers put themselves at risk of short-term alcohol-related harm at least once a month and 17% use an illicit drug at least once a year. Although an array of school-based prevention programs exist, most show minimal effects in reducing drug use and related harms, and some have even reported adverse effects.

School-based drug prevention is the primary means by which drug education is delivered, so it is essential to increase program efficacy. Ideally, preventive interventions should aim to delay onset in both low risk adolescents who may be influenced to take up substances, due to peer influence and social conformity, and high risk adolescents, whose underlying vulnerability to psychopathology can lead to substance misuse. There appears to be no models of well implemented programs that do this.

Our proposed model, the CAP (Climate and Preventure) intervention, addresses this gap by developing and evaluating a comprehensive approach to preventing substance use and related harms in adolescents by combining effective 'universal' and 'targeted' school-based prevention programs. It builds on our unique success in this area through developing and combining the effective Australian-based universal program Climate Schools and the targeted UK-based Preventure program, which targets specific personality vulnerabilities.

The CAP project, which is funded by a five year NHMRC grant, will be implemented in two stages.

The first stage will be to modify the Preventure program for Australia. We will conduct focus groups with students, and interviews with teachers and health professionals to ensure the content and scenarios of Preventure are relevant to Australia, they are age and context appropriate, and they fit within the Australian school curriculum.

Following modification, Preventure will be combined with Climate to make up the CAP intervention. We will seek to demonstrate the effectiveness of the intervention by running a cluster RCT in Australia schools. Schools will be randomly allocated to one of four groups; (1) the 'Control' condition (CO), (2) the 'Climate only' condition (CL), (3) the 'Preventure only'

condition (PR), or (4) the 'Climate and Preventure' condition (CAP). All students will be assessed via an online self-report questionnaire at baseline, immediately-post, and 6, 12, 18 and 24 months after the intervention on their levels of drug knowledge, drug use, related harms, intentions to use drugs and mental health.

If the program can reduce identified risk factors by levels equal or greater than that of the stand-alone programs, then it will be a significant contribution to health promotion in Australia and to reducing the burden of disease, social costs, and disability associated with substance abuse.

The characteristics of cannabis in Australia

Dr Wendy Swift, Professor Iain McGregor, Dr Jonathon Arnold, Professor Steve Allsop and Paul Dillon

There is concern in many countries that contemporary cannabis cultivation is biased towards plants with high THC and negligible CBD content. It is thought that consumption of such high potency cannabis may predispose users towards adverse psychiatric effects, compared with cannabis with lower THC and higher CBD content. While long term studies of UK, Dutch and USA cannabis potency have been published there are no equivalent data on Australian cannabis. The collection of accurate and current data on this issue is crucial in providing appropriate and evidence-based information to the Australian public, cannabis users and their families, and health, law-enforcement and other related practitioners.

The aim of this study is to analyse the characteristics of the locally available cannabis obtained from police cannabis seizures in urban and rural NSW, Australia. Under current legislation, NSW Police can caution users who are found with less than 15 grams of cannabis. The cannabis is confiscated from cautioned users and no conviction is recorded. The NSW Police Commissioner has approved the analysis of 200 such samples – to be seized over a 6 month period – for potency, genetic diversity and radioisotope content.

Analysis of cannabinoid content in the seized cannabis samples will be used to quantify a variety of cannabinoids, including: THCA, THC, CBD, CBDA, CBG, CBGA, CBN. An additional arm of our project is to use PCR-based genotyping approaches and GC radioisotope analysis to explore similarities and differences across the 200 seized samples in terms of key gene expression and radioisotope content. This information can point to the diversity or otherwise of current Australian cannabis supplies,

perhaps indicating whether the cannabis has been grown in Australia or imported from elsewhere, and whether it has been grown in outdoor plantations or hydroponically.

We hope to start analysis of seizures in February 2011.

Prevalence of Attention Deficit Hyperactivity Disorder (ADHD) among Dependent Drug and Alcohol Users

Professor Steve Allsop, Dr Sharlene Kaye, Professor David Hay, Dr Susan Carruthers, Dr Neilson Martin, Professor Louisa Degenhardt and Ms Joanne Cassar

Limited research suggests a strong association between adult Attention Deficit Hyperactivity Disorder (ADHD) and substance use disorders (SUD), with adult ADHD over-represented among people with substance use problems (20-40% prevalence).

ADHD complicates the course of SUD, such that substance dependence is likely to have an earlier onset and greater severity among those with ADHD, and be more difficult to treat, with higher rates of relapse. The harms associated with alcohol and other drug use may be increased when ADHD is present, due to the inattention, carelessness, and impulsive risk-taking associated with ADHD.

This study, which is funded by the National Drug Research Institute at Curtin University of Technology in Perth, is the first of its kind in Australia. It is part of an international multi-site study, known as the International ADHD in Substance Use Disorders Prevalence (IASP) Study, coordinated by the International Collaboration on ADHD and Substance Abuse (ICASA).

The study will use a cross-sectional survey design to screen 600 adult alcohol and/or illicit drug users for adult ADHD and examine SUD, psychiatric history, and drug-related, sexual and driving risk behaviours.

The aims of this project are to:

- Assess current ADHD symptomatology among adults entering treatment for drug or alcohol dependence;
- Test the performance of internationally used screening instruments for adult ADHD among this specific clinical population;
- Investigate the relationship between ADHD symptoms and the onset and course of

SUD, by comparing psychiatric comorbidity, onset of SUD, and health and social functioning of patients with and without symptoms of ADHD;

- Assess the nature and level of risk-taking behaviour associated with ADHD symptomatology.

Improved identification of adult ADHD among people with SUD will assist in the tailoring of substance dependence treatment to the specific needs of those with ADHD and in the management of ADHD treatment, where indicated, leading to a better treatment outcome for the patient. This research also has important implications for children and adolescents with ADHD, who are at greater risk of developing problematic substance use and comorbid psychiatric disorders and engaging in harmful risk-taking behaviours. Alcohol and other drug use prevention and intervention strategies specifically targeted toward young people with ADHD will be of critical importance in reducing the harm and public health burden associated with SUD complicated by ADHD.

Drunk, high or sober: How do alcohol and illicit drug prices affect young Australians' plans for Saturday night?

Dr Jennifer Chalmers, Dr David Bright, Dr Rebecca McKetin, Dr Don Weatherburn and Mr Craig Jones (NSW Bureau of Crime Statistics and Research)

Widespread concerns about the dangers of binge drinking by young Australians led to the National Binge Drinking Strategy in March 2008 and, a month later, to a 70 per cent increase in the excise accruing to RTDs (Ready-to-Drink alcoholic beverages).

There is pretty clear evidence that increasing the price of alcohol is one of the most effective ways of reducing the amount of harmful drinking in Australians aged 18 to 30 years.

However, what is missing from debates about the use of pricing policy to reduce binge

drinking is recognition of the possibility that young Australians will replace their alcohol consumption with other cheaper ways of getting high, including illicit drugs. There is also no clear evidence of an understanding of the implications of alcohol price for alcohol consumption in subgroups of the Australian population.

This project, funded by an Australian Research Council grant, aims to identify how young Australians will respond to price increases in particular types of alcohol (will they drink cheaper forms of alcohol, increase their use of illicit drugs or reduce their alcohol/drug consumption?) and to determine which alcohol pricing policies would minimise excessive consumption of alcohol and illicit drugs on a typical night out.

This project will use the internet to access a representative sample of 2,400 young Australians. It will use an experimental behavioural economics approach, to determine how people would adjust their alcohol and illicit drug use over a "night out" in response to hypothetical changes in the prices of alcohol, cannabis and ecstasy. **cl**

abstracts

A latent class analysis of DSM-IV criteria for pathological gambling: Results from the National Epidemiologic Survey on Alcohol and Related Conditions

Psychiatry Research (advance online publication 2011; doi:10.1016/j.psychres.2010.12.022)

Natacha Carragher and Lachlan A. McWilliams

With rapid increases in gambling opportunities over the past decade, gambling has emerged as an important social and public health concern. The pending revision of the Diagnostic and Statistical Manual of Mental Disorders (DSM) has prompted a flurry of empirical research evaluating the extant diagnostic classification scheme; however few studies have evaluated the pathological gambling criteria. This paper utilized latent class analysis (LCA) to empirically derive and validate a typology of gamblers. LCA was applied to the 10 DSMIV pathological gambling criteria utilizing data from the 2001–2002 National Epidemiologic Survey on Alcohol and Related Conditions (n=11,104). LCA identified three latent classes which largely differed according to severity. The majority of respondents were

assigned to the no gambling problems class (93.3%). Gamblers in the moderate gambling problems class (6.1%) primarily endorsed the preoccupation, tolerance, and chasing criteria. The pervasive gambling problems class (0.6%) endorsed the majority of the criteria. A number of significant differences between the classes emerged as a function of demographic, psychiatric and substance use disorders. The findings offer a heuristic and clinically useful typology of gamblers. Support for a continuum of gambling-related problems reiterates the need for assessment, prevention, and treatment strategies that reflect this more nuanced understanding of gambling.

Evidence-based alcohol screening and brief intervention in Aboriginal Community Controlled Health Services: Experiences of health-care providers

Drug and Alcohol Review, 30 (1), 55-62

Anton Clifford and Anthony Shakeshaft

Introduction and Aims: Alcohol screening and brief intervention (SBI) is a cost-effective treatment for reducing alcohol misuse in non-Indigenous populations. To increase the

likelihood of alcohol SBI proving cost-effective for Indigenous Australians in practice, strategies to increase its uptake in Aboriginal Community Controlled Health Services (ACCHSs) should be implemented. The aim of this study is to describe the experiences of health-care providers supported to implement evidence-based alcohol SBI in two ACCHSs.

Design and Methods: Pre- and post-surveys were administered to health staff (n = 32) participating in training workshops, followed by group interviews with health-care providers delivering alcohol SBI. Patient group interviews were also conducted. Survey results were summarised using descriptive statistics and interviews were analysed using a phenomenological approach.

Results: Thirty-two per cent (n = 10) of workshop participants were confident or very confident at baseline to deliver alcohol SBI, increasing significantly to 81% (n = 25) post-training (McNemarTest, P <0.05). Fifty-seven per cent (n = 16) of health-care providers attending workshops reported delivering alcohol SBI in the following 6 months. Group interviews with health-care providers elicited five themes relating to their experiences of alcohol SBI delivery. Patients in group interviews expressed a preference to be screened for alcohol as part of health assessments.

Discussion and Conclusions: Training workshops appear to be an acceptable initial

strategy for disseminating alcohol SBI to ACCHSs.

Outreach support is required to assist health-care providers to tailor guidelines and resources, and optimally integrate their clinical skills with evidence-based practice. Patients' needs should inform the tailoring process. Tailored collaborative and supportive strategies are probably required to optimally disseminate alcohol SBI in ACCHSs.

Mortality among regular or dependent users of heroin and other opioids: a systematic review and meta-analysis of cohort studies

Addiction, 106(1), 32–51

Louisa Degenhardt, Chiara Bucello, Bradley Mathers, Christina Briegleb, Hammad Ali, Matt Hickman and Jennifer McLaren

Aims: To review the literature on mortality among dependent or regular users of opioids across regions, according to specific causes, and related to a number of demographic and clinical variables.

Methods: Multiple search strategies included searches of Medline, EMBASE and PsycINFO, consistent with the methodology recommended by the Metaanalysis of Observational Studies in Epidemiology (MOOSE) group; grey literature searches; and contact of experts for any additional unpublished data from studies meeting inclusion criteria. Random-effects meta-analyses were conducted for crude mortality rates (CMRs) and standardized mortality ratios (SMRs), with stratified analyses where possible. Meta-regressions examined potentially important sources of heterogeneity across studies.

Results: Fifty eight prospective studies reported mortality rates from opioid-dependent samples. Very high heterogeneity across studies was observed; pooled all-cause CMR was 2.09 per 100 person-years (PY; 95% CI: 1.93, 2.26), and the pooled SMR was 14.66 (95% CI: 12.82, 16.50). Males had higher CMRs and lower SMRs than females. Out-of-treatment periods had higher mortality risk than in-treatment periods (pooled RR 2.38 (CI: 1.79, 3.17)). Causes of death varied across studies, but overdose was the most common cause. Multivariable regressions found the following predictors of mortality rates: country of origin; the proportion of sample injecting; the extent to which populations were recruited from an entire country (versus subnational); and year of publication.

Conclusions: Mortality among opioid dependent users varies across countries and populations. Treatment is clearly protective

against mortality even in non-randomized observational studies. Study characteristics predict mortality levels; these should be taken into account in future studies.

The epidemiology of anabolic-androgenic steroid use among Australian secondary school students

Journal of Science and Medicine in Sport 14 (2011) 10–14

Matthew Dunn and Victoria White

Abstract: There is evidence to suggest that the prevalence of anabolic-androgenic steroids (AAS) is higher among young people than the general population. The purpose of the current study was to examine the proportion of students who reported lifetime and past-year AAS use, explore other drug use among those who reported AAS use, and investigate demographic correlates of AAS use. Data was taken from a cross-sectional survey of a representative sample of Australian secondary students. A stratified two-stage probability sampling methodology was employed and schools were randomly sampled from each Australian State and Territory. A total of 376 schools participated in the survey. Lifetime AAS use was reported by 2.4% of 12–17-year-old students; use was more common among 12–15-year olds than 16–17-year olds. Regardless of age, being male, speaking a language other than English at home, not be at school on the previous school day, and rating own scholastic ability as below average were all associated with a greater likelihood of using AAS in their lifetime and in the past year. Those who reported AAS use also reported the use of a range of other substances, suggesting that AAS use may be part of a broader experimentation with substances. Interventions towards these groups regarding AAS may best be placed within a larger substance use intervention rather than being AAS-specific. In light of the low levels of AAS use among this group, more detailed research into AAS use among adolescent sporting groups may be warranted.

Prescribers' perceptions of the diversion and injection of medication by opioid substitution treatment patients

Drug and Alcohol Review 2011, (online)

Briony Larance, Louisa Degenhardt, Susannah O'Brien, Nick Lintzeris, Adam Winstock, Richard Mattick, James Bell and Robert Ali

Introduction and Aims: To examine Australian opioid substitution treatment (OST) prescribers'

perceptions of (i) diversion and/or injection of methadone, buprenorphine, buprenorphine-naloxone by patients; and (ii) effectiveness of current treatment policies in minimising the associated risks.

Design and Methods: 1278 authorised OST prescribers, identified by each jurisdiction's health department records, were sent a postal survey in 2007. Reminder letters and additional copies of the survey were sent to non-responders at weeks four and eight following the initial mail-out. Respondents went into a draw to win one of ten \$100 book vouchers.

Results: Although the response rate was 26% (N = 291), participating prescribers served half (49%) of all OST patients in Australia. Prescribers perceived more buprenorphine patients removed supervised doses (7%) and diverted unsupervised doses (20%), compared with methadone patients (1% and 4% respectively) and buprenorphine-naloxone patients (3% and 2% respectively). Prescribers reported significantly more buprenorphine and buprenorphine-naloxone patients injected doses (5% respectively), compared with methadone patients (2%). Non-adherence was identified through patient self-report (51%), and the reports of pharmacists (49%) and other staff (34%). More prescribers were confident in assessing the risk of injection (54%) than diversion (37%). Many prescribers responded 'don't know' to quantitative survey items. Qualitative responses highlighted uncertainties in assessing diversion/injection and whether current responses constituted 'best practice'.

Discussion and Conclusions: Australian prescribers perceive most patients adhere with OST, although they may underestimate the levels of diversion. Prescribers' beliefs about patients' behaviours are important and influence decisions to prescribe, medication choice and suitability for unsupervised dosing. The uncertainties in assessing and responding to diversion/injection may be a factor deterring prescribers' participation in OST.

Assessing the prevalence of trauma exposure in epidemiological surveys

Australian and New Zealand Journal of Psychiatry 2011; Early Online, 01–08

Katherine L. Mills, Alexander C. McFarlane, Tim Slade, Mark Creamer, Derrick Silove, Maree Teesson and Richard Bryant

Objective: Estimates of the prevalence of exposure to potentially traumatic events (PTEs) in population surveys have increased over time. There is limited empirical evidence on the impact of changes in measurement practices on these estimates. The present study examined the effect of increasing the number of events assessed on the prevalence of exposure longitudinally.

Methods: Data were utilised from the 1997 and 2007 Australian National Surveys of Mental Health and Wellbeing. The 1997 survey assessed exposure using 11 items from the Composite International Diagnostic Interview (CIDI), version 2.1. The 2007 survey utilized 29 items from the World Mental Health CIDI. Prevalence rates of exposure to matched events among age-matched samples from both surveys were compared to determine whether differences in the estimates obtained were due to respondents having been asked about an increased number of event types in the latter survey.

Results: The effect of increasing the number of event types in the CIDI from 11 to 29 was to increase the overall population prevalence of exposure to PTEs by 18%. The difference between estimates was more pronounced in women than in men. The cross-cohort analyses revealed that these differences were not indicative of an increase in trauma exposure over time; but rather the endorsement of new events that were not listed in the earlier survey.

Conclusions: The findings underscore the importance of using comprehensive assessments in the measurement of exposure to PTEs. Previous epidemiological surveys may have underestimated the prevalence of traumatic and other stressful life events, particularly among women.

The age of reason: An examination of psychosocial factors involved in delinquent behaviour

Legal and Criminal Psychology, early online version 2011, (Journal of the British Psychological Society)

Nicola C. Newton and Kay Bussey

Purpose: Delinquent behaviour among children and adolescents is escalating at a considerable rate. This has led to calls to lower the Age of Criminal Responsibility (ACR); however there is limited research on which to base such a decision. The present study addressed this omission by (1) assessing whether or not children can accurately distinguish right from wrong in relation to 'real-life' transgressions and (2) investigating psychosocial factors that may constrain children from acting in accordance with their knowledge of what is right and wrong.

Methods: A total of 452 students were recruited from five schools in Sydney, Australia. Forty percent of participants were younger children recruited from Year 5 classes in primary school (mean age of 10.49), and 60% were older children from Year 8 classes in high school (mean age of 14.29). All students completed a questionnaire measuring their understanding of right and wrong, their level of moral disengagement and delinquent behaviour, and their perceived self-efficacy relating to

academic achievement, empathy, and resistance to peer pressure.

Results: The majority of children in both age groups demonstrated knowing the difference between right and wrong in relation to 'real-life' transgressions. Further analyses using structural equation modelling (analysis of moment structures, AMOS) revealed that children who engaged in delinquent behaviour were unable to exercise this knowledge appropriately to regulate their behaviour. They were less able to resist peer pressure for transgressive conduct, had low levels of empathic and academic self efficacies, and disengaged from moral standards.

Conclusions: Implications for policy change and future research directions are proposed.

Opioid dependence latent structure: two classes with differing severity?

Addictive Behaviors, 36(1-2), 27-36

**Fiona L. Shand, Tim Slade,
Louisa Degenhardt, Andrew
Baillie and Elliot C. Nelson**

Aims: To examine the structure of illicit opioid abuse and dependence within an opioid dependent sample and its relationship to other clinical variables.

Design, setting and participants: A cross-sectional study of 1511 opioid dependent individuals recruited through opioid pharmacotherapy clinics in the Sydney area, Australia.

Measurements: A face-to-face structured interview covering substance use and dependence, psychiatric history, child maltreatment, family background, adult violence and criminal history. Dimensional, latent class and factor mixture models were fit to the opioid abuse and dependence data. Classes were then compared on a range of demographic and clinical covariates.

Findings: A two-class, one-factor model provided the best fit of all the models tested. The two classes differed with respect to endorsement probabilities on a range of abuse and dependence criteria, and also with respect to the odds of other drug dependence diagnoses, antisocial personality disorder and non-fatal opioid overdose. Within-class severity was associated with similar variables: other drug dependence, borderline personality disorder and opioid overdose.

Conclusion: In an in-treatment, opioid-dependent sample, there appears to be two classes of individuals exhibiting distinct patterns of abuse and dependence criteria endorsement and to differ on externalizing but not internalizing disorders. This study provides preliminary evidence that the proposed DSM-V opioid use disorder distinction between moderate and severely dependent people is

valid. Class one participants were not only more severely dependent, but had greater odds for opioid overdoses, other drug dependence and antisocial personality disorder.

Main reasons for hospital admissions by women with a history of methadone maintenance

Drug and Alcohol Review, 29, 669-675

**Lucy Burns, Elizabeth Conroy
and Richard Mattick**

Introduction and Aims: Although clinical studies have noted that women with opioid use disorders use have high levels of mental and physical health disorders and are exposed to high levels of violence, it is not known whether this occurs at a level of severity that warrants hospital admission.

Design and Methods: Administrative data from a jurisdictional methadone program were linked with hospital inpatient records from 1998 to 2002 to determine the main reasons for hospital admission for a cohort of women with a prior or ongoing history of methadone maintenance. Rates of hospital admissions by the cohort were compared with hospitalisations by all women without an opioid-related hospital diagnosis from 1998 to 2002.

Results: After controlling for age, country of birth and marital status, women with a history of methadone maintenance had more frequent hospital admissions for the mental and behavioural disorders [relative risk (RR) 3.9 (95% confidence intervals (CI): 3.7, 4.0)], diseases of the skin and subcutaneous tissue [RR 2.1 (95% CI: 1.9, 2.3)]; injuries and poisonings [RR 2.0 (95% CI: 1.9, 2.1)] and infectious and parasitic diseases [RR 1.4 (95% CI: 1.2, 1.6)]. At a more detailed level of diagnostic specificity, the methadone cohort was admitted more often for hepatitis C, septicaemia and head injuries.

Discussion and Conclusion: The elevated risk of hospital admission for a number of disorders suggests that women with a history of methadone maintenance experience these health events at a level of severity warranting hospital admission. Further contextual work is necessary to determine the effective preventive and management strategies.

HIV in Indian prisons: Risk behaviour, prevalence, prevention and treatment

Indian Journal of Medical Research, 132, 696-700.

Kate Dolan, Sarah Larney

Background & objectives: HIV is a major health challenge for prison authorities. HIV in

prisons has implications for HIV in the general community. The aim of this paper was to gather information on HIV risk, prevalence, prevention and treatment in prisons in India.

Methods: Relevant published and unpublished reports and information were sought in order to provide a coherent picture of the current situation relating to HIV prevention, treatment and care in prisons in India. Information covered prison management and population statistics, general conditions in prisons, provision of general medical care and the HIV situation in prison.

Results: No data on drug injection in prison were identified. Sex between men was reported to be common in some Indian prisons. A national study found that 1.7 per cent of inmates were HIV positive. Some prisons provided HIV education. Condom provision was considered illegal. A few prisoners received drug treatment for drug use, HIV infection or co-infection with sexually transmitted infections (STIs).

Interpretation & conclusions: HIV prevalence in prisons in India was higher than that in the general community. Regular monitoring of information on HIV risk behaviours and prevalence in Indian prisons is strongly recommended. Evidence based treatment for drug injectors and nation-wide provision of HIV prevention strategies are urgently required. Voluntary counselling, testing and treatment for HIV and STIs should be provided.

The Integration of Homelessness, Mental Health and Drug and Alcohol Services in Australia

Parity, 23, 8-9.

Elizabeth Conroy, Lucy Burns, Paul Flatau and Anne Clear

Abstract: The human services system faces a range of challenges in attempting to meet the needs of homeless persons with multiple and complex needs. The most obvious is that their needs extend across different domains, traversing the homelessness, housing, health, community and justice sectors. Homeless persons with severe and multiple mental disorder may also present with challenging behaviour that homelessness agencies may be ill-equipped to deal with. This can result in homeless persons being excluded from the very services designed to assist them. The problems with an autonomous service delivery system have been well documented. Autonomous service systems focus only on those client needs that fall within their specialisation and may not be cognisant of the broader needs of the clients nor the case management or treatment plans that the client is involved in by

way of other services. The overall effectiveness of support and treatment may therefore be undermined by a lack of coordination (and the sometimes antagonistic approaches) among different services. Furthermore, clients may be overwhelmed by the myriad of services and professionals they need to deal with, and may also face higher transaction and transportation costs as a result of dealing with a large number of services.

Findings regarding reduced prevalence with hepatitis C treatment are still valid: a reply to Vickerman et al

Drug and Alcohol Dependence 113 (2011) 86–87

John M. Murray and Alison Ritter

Abstract: Vickerman et al. (this issue) replicate our hepatitis C (HCV) treatment model, with variation to two parameters: the underlying prevalence of HCV and the percentage that fail HCV treatment. Given these changes to the parameters it is unsurprising that they find a greater treatment effect. Pleasingly, however, it is in the same direction as our result, adding confidence to our findings. Dialogue about underlying assumptions, alternate parameters and model construction is encouraging because we believe that this can enhance model veracity and provide more reliable estimates upon which health policy can be formulated.

Unfortunately Vickerman et al. do not model what we see as the central policy question of our two-group model: the impact on HCV prevalence of providing HCV treatment to injecting drug users in methadone maintenance versus those not in methadone maintenance treatment. Our original findings suggest that policy should preferentially direct treatment to current injectors.

Attempted suicide, self-harm and violent victimization among regular illicit drug users

Suicide and Life-Threatening Behavior, 40, 578–596.

Shane Darke, Michelle Torok, Sharlene Kaye and Joanne Ross

Abstract: Relationships among attempted suicide, non suicidal self-harm and physical assault were examined in 400 regular users of heroin and /or psychostimulants. Twenty eight per cent had episodes of non suicidal self harm, 32 % had attempted suicide and 95 % had been violently assaulted. The number of

suicide attempts and non suicidal self harm incidents were correlated ($p = 0.44$). There were also significant correlation between the number of assaults and non-suicidal self harm, incidents ($p = 0.17$) and suicide attempts ($p = 0.27$). The mean age onset for non-suicidal self-harm (18.9 yrs) was significantly younger than that of initial suicide. The age at initial physical assault (16.0yrs) was significantly younger than that of non-suicidal self-harm and initial suicide attempts. Screening for all forms of violence appears warranted when determining suicide risk for this population.

Cigarette tax and public health: what are the implications of financially stressed smokers for the effects of price increases on smoking prevalence?

Addiction 106 (3), 622-630

Kristy A. Martire, Richard P. Mattick, Christopher M. Doran and Wayne D. Hall

Aims: This paper models the predicted impact of tobacco price increases proposed in the United States and Australia during 2009 on smoking prevalence in 2010 while taking account of the effects of financial stress among smokers on cessation rates.

Methods: Two models of smoking prevalence were developed for each country. In model 1, prevalence rates were determined by price elasticity estimates. In model 2 price elasticity was moderated by financial stress. Each model was used to estimate smoking prevalence in 2010 in Australia and the United States.

Results: Proposed price increases resulted in a 1.89% and 7.84% decrease in smoking participation among low socio-economic status (SES) groups in the United States and Australia, respectively. Model 1 overestimated the number of individuals expected to quit in both the United States (0.13% of smokers) and Australia (0.36% of smokers) by failing to take account of the differential effects of the tax on financially stressed smokers. The proportion of low-income smokers under financial stress increased in both countries in 2010 (by 1.06% in the United States and 3.75% in Australia).

Conclusions: The inclusion of financial stress when modelling the impact of price on smoking prevalence suggests that the population health returns of increased cigarette price will diminish over time. As it is likely that the proportion of low-income smokers under financial stress will also increase in 2010, future population-based approaches to reducing smoking will need to address this factor. **cl**

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NDARC Technical Reports

311. Campbell, G., Darke, S., & Popple, G. (2010). *Characteristics of clients admitted to WHOS Therapeutic Community AOD treatment services, 2002-2009*. Sydney: National Drug and Alcohol Research Centre, The University of New South Wales.

314. Ali, H., Calabria, B., Sigmundsdottir, L., Phillips, B., Singleton, J., Mathers, B., & McLaren, J. (2010). Searching the grey literature to access information on drug, alcohol and HIV research: An update. Sydney: National Drug and Alcohol Research Centre, The University of New South Wales.

316. Campbell, G., Darke, S., & Popple, G. (2010). *Effects of client characteristics and mental health on treatment in a Therapeutic Community*. Sydney: National Drug and Alcohol Research Centre, The University of New South Wales.

Drug Policy Modelling Program Monograph Series

20. Ngui, R., Shanahan, M. (2010). *Cannabis use disorder treatment and associated health care costs in New South Wales, 2007*. Sydney, NSW: National Drug and Alcohol Research Centre, The University of New South Wales.

Published Articles, Chapters and Books

Ali, H., & Howard, J. (2011). Prevalence of injecting drug use among youth in the pacific island countries and territories: what is the evidence? [Letter to the Editor]. *Asia-Pacific Journal of Public Health*, 23(1), 112-114.

Baillie, A. J., Stapinski, L., Crome, E., Morley, K., Sannibale, C., Haber, P., et al. (2010). Some new directions for research on psychological interventions for comorbid anxiety and substance use disorders. *Drug and Alcohol Review*, 29, 518-524.

Baillie, A. J., & Teesson, M. (2010). Continuous, categorical and mixture models of DSM-IV alcohol and cannabis use disorders in the Australian community. *Addiction*, 105, 1246-1253.

Battisti, R. A., Roodenrys, S., Johnstone, S. J., Pesa, N., Hermens, D. F., & Solowij, N. (2010). Chronic cannabis users show altered neurophysiological functioning on Stroop task conflict resolution. *Psychopharmacology*, 212, 613-624.

Boughtwood, D., & Halse, C. (2010). Other than obedient: girls' constructions of doctors and treatment regimes for anorexia nervosa. *Journal of Community & Applied Social Psychology*, 20, 83-94.

Burns, L., Conroy, E., & Mattick, R. P. (2010). Main reasons for hospital admissions by women with a history of methadone maintenance. *Drug and Alcohol Review*, 29, 669-675.

Buykx, P., Dietze, P., Ritter, A., & Loxley, W. (2010). Characteristics of medication overdose presentations to the ED: how do they differ from illicit drug overdose and self-harm cases? *Emergency Medicine Journal*, 27, 499-503.

Buykx, P., Loxley, W., Dietze, P., & Ritter, A. (2010). Medications used in overdose and how they are acquired – an investigation of cases attending an inner Melbourne emergency department. *Australian and New Zealand Journal of Public Health*, 34, 401-404.

Byrnes, J. M., Cobiac, L. J., Doran, C. M., Vos, T., & Shakeshaft, A. P. (2010). Cost-effectiveness of volumetric alcohol taxation in Australia. *Medical Journal of Australia*, 192, 439-443.

Chambers, G. M., Sullivan, E. A., Shanahan, M., Ho, M. T., Priester, K., & Chapman, M. G. (2010). Is in vitro fertilisation more effective than stimulated intrauterine insemination as a first-line therapy for subfertility? A cohort analysis. *Australian and New Zealand Journal of Obstetrics and Gynaecology*, 50, 280-288.

Ciketic, S., Hayatbakhsh, M. R., & Doran, C. M. (2010). Drinking water fluoridation in South East Queensland: a cost-effectiveness evaluation. *Health Promotion Journal of Australia*, 21, 51-56.

Clifford, A., & Shakeshaft, A. (2011). Evidence-based alcohol screening and brief intervention in Aboriginal Community Controlled Health Services: Experiences of health-care providers. *Drug and Alcohol Review*, 30(1), 55-62.

Clinton-McHarg, T., Carey, M., Sanson-Fisher, R., Shakeshaft, A., & Rainbird, K. (2010). Measuring the psychosocial health of adolescent and young adult (AYA) cancer survivors: a critical review. *Health and Quality of Life Outcomes*, 8, 1-13.

Conroy, E., Burns, L., Flatau, P., & Clear, A. (2010). The integration of homelessness, mental health and drug and alcohol services in Australia. *Parity*, 23, 8-9.

Copeland, J. (2011). Application of technology in the prevention and treatment of substance use disorders and related problems: opportunities and challenges. *Substance Use & Misuse*, 46(1), 112-113.

Copeland, J. (2011). The glass ceiling on evidence of cannabis related harms – flawed or just false? *Addiction*, 106(2), 249-250.

Copeland, J., & Martin, G. (2010). The Adolescent Cannabis Check-up: a motivational intervention for young users. *Counselor*, 11, 32-38.

Crome, E., Baillie, A., Slade, T., & Ruscio, A. M. (2010). Social phobia: further evidence of dimensional structure. *Australian and New Zealand Journal of Psychiatry*, 44, 1012 – 1020.

Czech, S., Shakeshaft, A., Breen, C., & Sanson-Fisher, R. W. (2010). Whole-of-community approaches to reducing alcohol-related harm: What do communities think? *Journal of Public Health*, 18, 543-551.

Darke, S. (2011). Commentary on Kuhns et al. (2011): Drinks and death – alcohol and the homicide victim. *Addiction*, 106(1), 73-74.

Darke, S., Duflou, J., & Tork, M. (2010). A reduction in blood morphine concentrations amongst heroin overdose fatalities associated with a sustained reduction in street heroin purity. *Forensic Science International*, 198, 118-120.

Darke, S., Tork, M., Kaye, S., & Ross, J. (2010). Attempted suicide, self-harm and violent victimization among regular illicit drug users. *Suicide and Life-Threatening Behavior*, 40, 578-596.

Degenhardt, L. (2010). Chapter 1. Psychoactive substance use: epidemiology and burden of disease. In *ATLAS on substance use (2010): Resources for the prevention and treatment of substance use disorders* (pp.7-22). Geneva: World Health Organization.

Degenhardt, L., Bucello, C., Mathers, B., Briegleb, C., Ali, H., Hickman, M., et al. (2011). Mortality among regular or dependent users of heroin and other opioids: a systematic review and meta-analysis of cohort studies. *Addiction*, 106(1), 32-51.

Degenhardt, L., Mathers, B., Vickerman, P., Rhodes, T., Latkin, C., & Hickman, M. (2010). HIV in people who use drugs 2: Prevention of HIV infection for people who inject drugs: why individual, structural, and combination approaches are needed. *The Lancet*, 376, 285-301.

Degenhardt, L., Singleton, J., Calabria, B., McLaren, J., Kerr, T., Kirk, G., et al. (2011). Mortality among cocaine users: A systematic review of cohort studies. *Drug and Alcohol Dependence*, 113(2-3), 88-95.

Dolan, K., & Larney, S. (2010). HIV in Indian prisons: Risk behaviour, prevalence, prevention & treatment. *Indian Journal of Medical Research*, 132, 696-700.

Dolan, K., & The Global Network of People Living with, H.I.V. (2010). *Advancing the sexual and reproductive health and human rights of prisoners living with HIV: A policy briefing*. Amsterdam: GNP+.

- Doran, C. M.** (2010). Critique of an economic evaluation using the Drummond checklist: [Editorial]. *Applied Health Economics and Health Policy*, 8, 1-3.
- Doran, C. M., Byrnes, J. M., Higashi, H., & Truong, K.** (2010). Revenue implications to the Vietnamese government of using taxes to curb cigarette smoking. *Addictive Behaviors*, 35, 1089-1093.
- Doran, C. M., Hall, W. D., Shakeshaft, A., Vos, T., & Cobiac, L. J.** (2010). Alcohol policy reform in Australia: what can we learn from the evidence? *Medical Journal of Australia*, 192, 468-470.
- Dore, G. J., Hellard, M., Matthews, G. V., Grebely, J., Haber, P. S., Petoumenos, K., et al.** (2010). Effective treatment of injecting drug users with recently acquired hepatitis C virus infection. *Gastroenterology*, 138, 123-135.
- Dunn, M., Day, C., Bruno, R., Degenhardt, L., & Campbell, G.** (2010). Sexual and injecting risk behaviours among regular ecstasy users. *Addictive Behaviors*, 35, 157-160.
- Dunn, M., Thomas, J. O., Swift, W., & Burns, L.** (2011). Recreational substance use among elite Australian athletes. *Drug and Alcohol Review*, 30(1), 63-68.
- Dunn, M., & White, V.** (2011). The epidemiology of anabolic-androgenic steroid use among Australian secondary school students. *Journal of Science and Medicine in Sport*, 14, 10-14.
- Flatau, P., Conroy, E., Clear, A., & Burns, L.** (2010). *The integration of homelessness, mental health and drug and alcohol services in Australia*. Melbourne: Australian Housing and Urban Research Institute (AHURI).
- Flatau, P., Spencer, P., Eardley, T., Edwards, R., Conroy, E., Spooner, C., et al.** (2010). Intergenerational homelessness and lifetime experiences of homelessness in Australia: Evidence for the need for early interventions. *Parity*, 23, 47-48.
- Hampshire, A., Marchant, T., Di Nicola, K., Larsen, K., Flatau, P., Roberts, R., et al.** (2010). Experiences of Homelessness among Adult Men in Sydney: Findings from the Michael Project Research Study. *Parity*, 23, 11-13.
- Gilligan, C., Sanson-Fisher, R., & Shakeshaft, A.** (2010). Appropriate Research Designs for Evaluating Community-level Alcohol Interventions: What Next? *Alcohol and Alcoholism*, 45, 481-487.
- Grebely, J., Petoumenos, K., Matthews, G. V., Haber, P., Marks, P., Lloyd, A. R., et al.** (2010). Factors associated with uptake of treatment for recent hepatitis C virus infection in a predominantly injecting drug user cohort: The ATAHC Study. *Drug and Alcohol Dependence*, 107, 244-249.
- Grisham, J., & Norberg, M. M.** (2010). Compulsive hoarding: current controversies and new directions. *Dialogues in Clinical Neuroscience*, 12, 233-240.
- Hall, W. D., Wallace, A. L., Cobiac, L. J., Doran, C. M., & Vos, T.** (2010). How can we reduce alcohol-related road crash deaths among young Australians? *Medical Journal of Australia*, 192, 464-466.
- Haswell, M. R., Kavanagh, D., Tsey, K., Reilly, L., Cadet-James, Y., Laliberte, A., et al.** (2010). Psychometric validation of the Growth and Empowerment Measure (GEM) applied with Indigenous Australians. *Australian and New Zealand Journal of Psychiatry*, 44, 791-799.
- Howard, J., Ali, H., & Robins, L.** (2011). Alcohol, cannabis and amphetamine-type stimulants use among young Pacific Islanders. *Drug and Alcohol Review*, 30(1), 104-111.
- Hughes, C.** (2010). Coordinating the National Drug Strategy: Where to from here? *ADCA News*, 50, 9.
- Hughes, C.** (2010). Diversion: Australia's alternative to drug law reform. *Matters of Substance*, 20, 15-17.
- Hughes, C., Lancaster, K., Matthew-Simmons, F., & Dillon, P.** (2010). News values. *Druglink*, Sept-Oct, 16-17.
- Hughes, C. E., & Stevens, A.** (2010). What can we learn from the Portuguese decriminalization of illicit drugs? *British Journal of Criminology*, 50, 999-1022.
- Hutchinson, D. M., Rapee, R. M., & Taylor, A.** (2010). Body dissatisfaction and eating disturbances in early adolescence: a structural modeling investigation examining negative affect and peer factors. *The Journal of Early Adolescence*, 30, 489-517.
- Islam, M. M., Day, C. A., & Conigrave, K. M.** (2010). Harm reduction healthcare: From an alternative to the mainstream. *International Journal of Drug Policy*, 21, 131-133.
- Kay-Lambkin, F.** (2010). Mindfulness- & Acceptance-Based Behavioral Therapies in Practice [book review]. *Drug and Alcohol Review*, 29, 463-464.
- Larney, S., & Martire, K. A.** (2010). Factors affecting criminal recidivism among participants in the Magistrates Early Referral Into Treatment (MERIT) Program in New South Wales, Australia. *Drug and Alcohol Review*, 29, 684-688.
- Laslett, A. M., Catalano, P., Chikritzhs, T., Dale, C., Doran, C., Ferris, J., et al.** (2010). *The range and magnitude of alcohol's harm to others*. Fitzroy, Vic.: AER Centre for Alcohol Policy Research, Turning Point Alcohol and Drug Centre, Eastern Health.
- Lee, N., Jenner, L., Baker, A., Ritter, A., Hides, L., Norman, J., et al.** (2010). Screening and intervention for mental health problems in alcohol and other drug settings: Can training change practitioner behaviour? Drugs: education prevention and policy, Advance online publication, 1-4.
- Leung, L. S., Abdallah, A. B., Copeland, J., & Cottler, L. B.** (2010). Modifiable risk factors of ecstasy use: Risk perception, current dependence, perceived control, and depression. *Addictive Behaviors*, 35, 201-208.
- Leung, R., Kennedy, V., Kelly, A. B., Toumbourou, J. W., Hutchinson, D., & Australian Drug, Foundation.** (2010). *Preventing alcohol harms in young people: Family-based interventions: A resource for workers*. Sydney: NSW Health.
- Lynagh, M., Sanson-Fisher, R., & Shakeshaft, A.** (2010). Alcohol-related harm: perceptions of ambulance officers and health promotion actions they do and would do. *Health Promotion Journal of Australia*, 21, 19-25.
- Maloney, E., Hutchinson, D., Burns, L., & Mattick, R. P.** (2010). Prevalence of and characteristics associated with persistent smoking among Australian mothers and fathers: findings from the Longitudinal Study of Australian Children (LSAC). *Journal of Family Studies*, 16, 165-175.
- Martire, K. A., & Larney, S.** (2011). Health outcomes, program completion, and criminal recidivism among participants in the Rural Alcohol Diversion program, Australia. *Journal of Substance Use*, 16(1), 50-56.
- Martire, K. A., Mattick, R. P., Doran, C. M., & Hall, W. D.** (2011). Cigarette tax and public health: what are the implications of financially stressed smokers for the effects of price increases on smoking prevalence? *Addiction*, 106(3), 622-630.
- Matheson, A., Roxburgh, A., Degenhardt, L., Howard, J., & Down, I.** (2010). *Drug use, dependence and mental health among gay, lesbian and bisexual people reporting regular methamphetamine use*. Sydney, Australia. Sydney, NSW: National Drug and Alcohol Research Centre, University of New South Wales; ACON.
- Matthew-Simmons, F., Shanahan, M., & Ritter, A.** (2011). Reported value of cannabis seizures in Australian newspapers: Are they accurate? *Drug and Alcohol Review*, 30(1), 21-25.
- Medlow, S., Kelk, N., Cohen, A., & Hickie, I.** (2010). Facilitating early intervention: experiences of young people and implications for the shaping of headspace services. *Australasian Psychiatry*, 18, 335-339.
- Miller, P. G., Hall, W., West, R., Marsden, J., & Darke, S.** (2010). A renewed call for action on alcohol policy: Editorial. *Addiction*, 105, 767-768.
- Morley, K. C., Teesson, M., Sannibale, C., Baillie, A., & Haber, P. S.** (2010). Clinical predictors of outcome from an Australian pharmacological relapse prevention trial. *Alcohol and Alcoholism*, 45, 520-526.
- Murray, J. M., & Ritter, A.** (2011). Findings regarding reduced prevalence with hepatitis C treatment are still valid: A reply to Vickerman et al. *Drug and Alcohol Dependence*, 113(2-3), 86-87.

- Newton, N., Teesson, M., & Newton, K.** (2010). *Climate Schools: Ecstasy Module*. Sydney, NSW: National Drug and Alcohol Research Centre, The University of New South Wales.
- Newton, N., Teesson, M., Newton, K.** (2010). *Developing the Climate Schools: Ecstasy Module: A universal internet-based drug prevention program*. Report for the Australian Government Department of Health and Ageing.
- Norberg, M. M., Norton, A. R., Olivier, J., & Zvolensky, M. J.** (2010). Social anxiety, reasons for drinking, and college students. *Behavior Therapy*, 41, 555-566.
- Olivier, J., & Norberg, M. M.** (2010). Positively skewed data: Revisiting the Box-Cox power transformation. *International Journal of Psychological Research*, 3, [1-11].
- Pirkis, J., Burgess, P., Hardy, J., Harris, M., Slade, T., & Johnston, A.** (2010). Who cares? A profile of people who care for relatives with a mental disorder. *Australian and New Zealand Journal of Psychiatry*, 44, 929-937.
- Pluddemann, A., Fisher, A. J., McKetin, R., Parry, C. D., & Lombard, C. J.** (2010). A prospective study of methamphetamine use as a predictor of high school non-attendance in Cape Town, South Africa. *Substance Abuse Treatment, Prevention, and Policy*, 5, 1-7.
- Powers, J. R., Loxton, D. J., Burns, L. A., Shakeshaft, A., Elliott, E. J., & Dunlop, A. J.** (2010). Assessing pregnant women's compliance with different alcohol guidelines: an 11-year prospective study. *Medical Journal of Australia*, 192, 690-693.
- Reference Group to the United Nations on H.I.V. & Injecting Drug Use.** (2010). *Consensus statement of the Reference Group to the United Nations on HIV and Injecting Drug Use 2010*. Sydney: The Secretariat of the Reference Group to the United Nations on HIV and Injecting Drug Use. National Drug and Alcohol Research Centre, University of New South Wales.
- Ritter, A., & Chalmers, J.** (2011). The relationship between economic conditions and substance use and harm: Editorial. *x*(1), 1-3.
- Roberts, A., Mathers, B., Degenhardt, L., Reference Group to the United Nations on H.I.V. & Injecting Drug Use.** (2010). *Women who inject drugs: A review of their risks, experiences and needs*. Sydney, NSW: Secretariat of the Reference Group to the United Nations on HIV and Injecting Drug Use; National Drug and Alcohol Research Centre, The University of New South Wales.
- Shand, F. L., Degenhardt, L., Slade, T., & Nelson, E. C.** (2011). Sex differences amongst dependent heroin users: Histories, clinical characteristics and predictors of other substance dependence. *Addictive Behaviors*, 36(1-2), 27-36.
- Shand, F. L., Slade, T., Degenhardt, L., Baillie, A., & Nelson, E. C.** (2011). Opioid dependence latent structure: two classes with differing severity? *Addiction*, 106(3), 590-598.
- Silins, E., Bleeker, A. M., Copeland, J., Dillon, P., Devlin, K., van Bakkum, F., et al.** (2010). The importance of peer educator qualities: as perceived by ecstasy users. *SuchtMagazin*, 5, 17-20.
- Smith, J., McLaughlan, K., & Howard, J.** (2010). *The value of going beyond recognition in a generalist youth service setting to a formal process of screening for co-morbidity concerns*. Sydney: WAYS Youth Services.
- Teesson, M., Hall, W., Slade, T., Mills, K., Grove, R., Mewton, L., et al.** (2010). Prevalence and correlates of DSM-IV alcohol abuse and dependence in Australia: findings of the 2007 National Survey of Mental Health and Wellbeing. *Addiction*, 105, 2085-2094.
- Teutsch, S., Luciani, F., Scheuer, N., McCredie, L., Parastu, H., Rawlinson, W., et al.** (2010). Incidence of primary hepatitis C infection and risk factors for transmission in an Australian prisoner cohort. *BMC Public Health*, 10, 1-9.
- West, R., Miller, P. G., Babor, T., Marsden, J., Darke, S., Humphreys, K., et al.** (2011). Addiction's priorities when evaluating submissions: Editorial. *Addiction*, 106(3), 463-465.
- Winstock, A. R., & Lea, T.** (2010). Diversion and injection of methadone and buprenorphine among clients in public opioid treatment clinics in New South Wales, Australia. *Substance Use & Misuse*, 45, 240-252.
- Winstock, A. R., Lea, T., & Sheridan, J.** (2010). Problems experienced by community pharmacists delivering opioid substitution treatment in New South Wales and Victoria, Australia. *Addiction*, 105, 335-342.

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