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issuing **forth**

Measurement of alcohol use disorders among young people

ed**space**

Celebrating 25 years of research at NDARC

This year NDARC celebrates a significant milestone – a quarter of a century of research, having officially opened its doors in November 1987. We will be celebrating that milestone and our growth from a core team of four academic researchers supported by a research officer, research assistants and admin support to our current staffing levels of around 140* later this year at the NDARC Annual Symposium on 28 August.

While much has been achieved over this period in terms of providing an evidence base to clinical practice and policy there is still much to be done as the goalposts move and new problems emerge. Three new projects which commenced this year supported by NHMRC funding and described in the project notes section of this issue of *CentreLines* underline our commitment to providing new evidence around emerging problems as well as revisiting persistent problems.

In response to continued concerns about the potential risks of pharmaceutical opioid prescribing Professor Louisa Degenhardt and colleagues will examine patterns of prescribing and related harms in a cohort of 2,000 chronic (non-cancer) pain patients. Professor Richard Mattick and colleagues will trial a novel intervention aimed at reducing smoking rates among lower socioeconomic groups experiencing financial stress, that have a much higher failure rate in quitting smoking than other population groups. While much has been achieved around reduction of harms associated with heroin dependence there remain unanswered questions. Professor Teesson and colleagues will conduct an 11 year follow up of the original participants in the landmark Australian Treatment Outcomes Study to address gaps in our knowledge around mortality, remission and long term health and social harms.

The exact number changes over the year as projects are completed and new ones commence.

Marion Downey, Manager Media and Communications

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A clear sense of what we measure, how we measure it and who will benefit from our information gathering is crucial if our research is to remain relevant to policy and practice as NDARC enters its 25th year of research into substance use disorders, writes Director Professor Michael Farrell

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Surveys of general population consistently show a much higher prevalence of alcohol use disorders in young adults. Yet questions remain as to whether this youthful epidemic is real or the result of differences in the way young adults interpret the survey questions, writes Dr Louise Mewton

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

headspace

Accurate measurement essential to deliver appropriate interventions

Professor Michael Farrell

This year is proving exciting and productive and of course challenging. As always we continue to horizon scan and ask ourselves whether we have our finger on the pulse and if we are looking at the world in the right way.

The range of things we are involved with makes it possible that a number of different projects can be relevant to current issues of policy concern.

The cover feature in this month's issue of *CentreLines* by Dr Louise Mewton explores how different population groups interpret diagnostic criteria for alcohol dependence. She demonstrates that how we measure is as important as what we measure.

There is no doubt that alcohol use disorders are a particular problem among people aged 18 – 24. However, the alcohol dependence among this group may in fact be overestimated because the questions were designed for an adult population. In particular it seems that very few young adults understand the criterion related to impaired control or compulsion. Almost two thirds of the sample drank more than they intended to for non-compulsion based reasons – because they were enjoying the moment or because they were in the company of friends.

As we await the release of DSM-5 it is apparent that we need to be clear about what we are measuring and how we are measuring it if we are to design appropriate interventions to reduce alcohol consumption among young people.

Similar issues apply to current discussion around recovery. It is welcome to see issues of recovery, well being and maximising overall quality of life re-emerging as important goals for the treatment and research field and identified as areas where we can strive to do better. The one thing I note with caution however is that there is a lot of vagueness around the term, with different people meaning and saying different things when they talk about recovery.

It is important, as with the classification system, that we stick with measurable yardsticks so that future planning around recovery can be clearly targeted and is measureable and specific. In that way if we set new targets we have confidence in the performance measures for any changes we seek.

Otherwise there is a real risk that we spin off on a tangent of inspirational "hocus pocus" that fails to provide a strong sense of purpose and direction for setting targets and measuring outcomes in treatment and prevention.

We need to have the same discussion about developing new measures for Treatment Outcomes. The context of such measures are critical; not only do we need some good measures but they also have to be organised and recorded in a manner that does not simply result in distortion and result in inflation in order to look as if you are doing well.

In conclusion we have to be able to measure things carefully, but also we need to know why we want to measure them and who will benefit from such information gathering. If the service users and other users do not feel that they are the focus of such change and do not feel that the changes are geared towards helping them, then we have failed. Time and again we must return to our targets and ask our key stakeholders whether they feel the changes are designed for them. We must listen to what they say and change accordingly. **cl**

issuing forth

Measurement of alcohol use disorders among young people

Dr Louise Mewton

Background

Surveys of the general population consistently show that the prevalence of alcohol dependence is highest amongst young adults, with evidence suggesting that after the age of 24 the prevalence of these disorders declines rapidly. Cross-national surveys indicate that up to one in five young adults aged 18-24 meet lifetime criteria for alcohol dependence (Degenhardt et al. 2008). Yet questions remain as to whether this "youthful epidemic" of alcohol dependence is real or the result of deficiencies in the way we diagnose these disorders (Caetano and Babor 2006).

The DSM-IV diagnostic criteria for alcohol dependence represent a cluster of cognitive, behavioural, and physiological symptoms indicating that an individual continues to use alcohol despite significant alcohol-related problems. These alcohol-related problems are represented by the seven diagnostic criteria in Table 1 (please note we have also included a short moniker for each of the criteria to facilitate discussion). An individual needs to report at least three of these criteria to be diagnosed with alcohol dependence.

While existing evidence suggests that alcohol use disorders may be a particular problem

Table 1: The DSM-IV criteria for alcohol dependence

Tolerance	An increased tolerance to the effects of alcohol
Withdrawal	The presence of a recognised withdrawal syndrome including physiological and psychological effects of excessive alcohol consumption
Larger/longer	A compulsion to consume alcohol as indicated by consumption of alcohol in larger amounts or over longer periods than intended
Cut down	A desire or unsuccessful efforts to cut down on alcohol
Time spent	A pattern of behaviour in which virtually all activities revolve around alcohol
Give up	A reduction in social, occupation or recreational activities to consume alcohol
Continue	Continued use of alcohol despite it causing harmful physical or psychological effects

amongst young adults, there are a number of reasons to believe the criteria used to diagnose alcohol use disorders may not be adequate for use with young adults. These diagnostic criteria were largely developed and standardised in adult clinical populations (Chung and Martin 2002) and have been subsequently applied to younger age groups with little empirical support. Differences between younger and older adults in cortical development, personality characteristics, as well as usual patterns and social contexts of alcohol use may produce differences in the applicability of the DSM-IV diagnostic criteria across age groups (Martin et al. 2006; Crews et al. 2007).

For example, young adults tend to have shorter drinking histories, and patterns of use tend to involve infrequent, high quantity "binges" in social contexts amongst peers (Deas et al. 2000; Harford et al. 2005). Thus, the reasons for alcohol use in young adults may be more related to social acceptance rather than the compulsive behaviours intended by criteria such as *larger/longer*.

Younger people also report very high rates of *tolerance* to alcohol, however, this may be due to normative developmental processes (such as an "ability to hold one's drink") rather than the clinically significant phenomena central to the alcohol dependence diagnosis. These important differences may result in an over-endorsement of some alcohol dependence criteria among young adults, which in turn leads to unrealistically high prevalence estimates. Statistical analyses specifically designed to investigate bias have supported this hypothesis, indicating age-based bias in several of the alcohol use disorder criteria (Kahler and Strong 2006; Saha et al. 2006; Saha et al. 2007; Mewton et al. 2011).

While age-related biases do appear to exist, very little research has investigated the reasons for this bias. What is it about the criteria that render them inappropriate for diagnosing alcohol dependence in young adults? Recent advancements in the field of survey methodology have led to the development of a set of novel investigative techniques, known collectively as cognitive interviewing, which involves administering questionnaire items to a participant while collecting additional information relevant to their responses (Beatty and Willis 2007). Results of cognitive interviews can identify problems in the content, structure and wording of survey items, as well as the types of errors made by respondents when interpreting and answering survey items. Cognitive interviews can determine whether a survey item has equivalent meaning among sub-groups, and can also be used to revise or develop new items to make them equally appropriate among all respondents (Napoles-Springer et al. 2006).

As such, the current study recruited a sample of young adult drinkers drawn from the general community and gathered data on their interpretations of the diagnostic criteria for alcohol dependence through cognitive interviews. The main aim of this study was to determine whether young adults understood the underlying intent of the alcohol dependence criteria.

Methods

Overview

Two separate methods were used to identify potential problems in the alcohol dependence criteria. The first method employed the Question Appraisal System (QAS; Willis & Lessler, 1999), a structured tool designed to provide a preliminary systematic appraisal of potential problems in the content, structure and wording of questionnaire items. The second method involved individual cognitive interviews of young adults aged 18-24.

Question Appraisal System (QAS)

The QAS is a tool used to identify problems with the content, wording or structure of a survey item (Willis and Lessler 1999). A sample of ten experts were recruited and asked to read and study each survey item and note down any problems in eight steps as listed in Table 2.

Table 2: Steps in performing the Questionnaire Appraisal System

Step1	Determine if it is difficult for the interviewers to read the question uniformly to all respondents.
Step 2	Look for problems with any introductions, instructions, or explanations from the *respondent's* point of view.
Step 3	Identify problems related to communicating the *intent or meaning* of the question to the respondent.
Step 4	Determine if there are problems with assumptions made or the underlying logic.
Step 5	Check whether respondents are likely to *not know* or have trouble *remembering* the information.
Step 6	Assess questions for sensitive nature or wording, and for bias.
Step 7	Assess the adequacy of the range of responses to be recorded.
Step 8	Look for problems not identified in Steps 1-7.

Cognitive Interviews

Data from the QAS were then synthesised and translated into testable hypotheses (as described in the Results). These hypotheses were tested with a series of predetermined, structured and standardised verbal probes, each of which was designed to address an assumption or source of misinterpretation identified in the QAS. These verbal probes formed the content of the cognitive interviews. Via cognitive interviewing, a sample of young adult drinkers aged 18-24 were interviewed in detail about their understanding of each of the chosen alcohol dependence criteria regardless of whether they endorsed the criterion or not. Due to the intensive nature of the cognitive interviewing procedure a total of four diagnostic criteria were chosen for investigation. The current analyses focus on two of these criteria – *tolerance* and *larger/longer*. The sample recruited for the individual cognitive interviews consisted of 100 community volunteers (50 per cent male, 73 per cent Australian born) recruited through media and advertisement campaigns.

Procedure

Each participant first completed the alcohol use disorder section of a standardised diagnostic interview in order to obtain information about DSM-IV diagnoses of alcohol dependence. Respondents were then oriented to the tasks involved in the cognitive interview. The respondent was told they would be asked questions about the kinds of things they thought about when answering the preceding survey items. It was emphasised the purpose of the study was to work out how the respondent interpreted the questions and that there was no right or wrong answer.

Results

QAS

The method by which DSM defines *tolerance* as a change in alcohol use over an unspecified time period was identified by the experts as the main problem with this criterion. With this change-based definition it becomes difficult to distinguish between physiological tolerance and the normative developmental trajectory of increased drinking experienced during young adulthood.

A true measure of physiological tolerance is difficult to obtain but would require repeated measurements of blood or breath alcohol concentrations in strictly controlled settings over a long period of time. In the absence of this we sought to investigate whether young adults engaged in the relatively complex cognitive processes involved in the self report of *tolerance*. To this end we developed probing questions to establish how many standard drinks participants needed to feel drunk both 12 months prior to the interview and around the time of the interview. We expected that if young adults understood this criterion correctly

then the difference between these estimates would be significantly larger amongst those who endorsed the *tolerance* criterion compared to those who did not endorse the *tolerance* criterion.

According to the theoretical basis of the DSM, the *larger/longer* criterion is intended to indicate a subjective awareness of a compulsion to use alcohol. However, the experts recognised that the compulsive nature of these behaviours is not explicitly mentioned in the DSM-IV criteria set. Respondents may therefore endorse these criteria largely due to social or other non-compulsion-based reasons. We therefore included questions in the cognitive interview designed to assess whether this criterion was endorsed due to compulsion-based reasons.

Cognitive interviews

Our interviewed sample had relatively heavy past year drinking histories. The majority (59 per cent) drank 1-2 days per week and on days when they drank they drank an average of 6.5 standard drinks (standard deviation = 3.5). Endorsement rates for the AUD criteria of interest were: *tolerance* – 45 per cent and *larger/longer* – 93 per cent. Unsurprisingly, almost half (47 per cent) of the sample had past year alcohol dependence.

With regard to the *tolerance* criterion, respondents gave a large range in the typical number of drinks needed to feel drunk 12 months prior to the interview (2-16 drinks, mean=6.4, standard deviation=2.6, median=6, mode=6) and at the time of the interview (1-25 drinks, mean=7.4, standard deviation=3.3, median=7, mode=7). Despite this variation there was consistency between the responses given and the understanding of the criterion. Those who endorsed the *tolerance* criterion reported a greater change in the number of drinks needed to feel drunk when compared to those who did not endorse the *tolerance* criterion (2.3 vs -0.1, $t=6.3$, $df=96$, $p<0.001$).

Very few young adults appeared to understand the *larger/longer* criterion as intended. When probed about the reasons for drinking despite placing restrictions on their alcohol use only one respondent reported an explicitly compulsion-based reason (i.e., “I needed to drink otherwise I would get withdrawal”). A further 31 respondents provided possible, but not strict, compulsion-based reasons. Almost two-thirds of respondents who drank despite placing limits on themselves did so for social or other non-compulsion-based reasons (i.e., “I was just enjoying the moment” or “I was in the company of friends who were drinking more”).

Discussion

The criteria tapping impaired control over alcohol use (i.e. *larger/longer*) may be problematic and may have a sizeable effect on estimates of the prevalence of alcohol dependence in young adults. The results of the current study demonstrate that a substantial proportion (36 per cent) of those diagnosed with alcohol dependence would no longer receive a diagnosis if their false positive assignments of the *larger/longer* criterion were taken into account. This would bring the prevalence of alcohol dependence down from 47 per cent to 32 per cent in the current sample. A similar finding has been reported previously in a sample of adults where drinking more than intended was predominantly explained by social factors (Caetano 1999).

If compulsive use of alcohol is indeed a necessary feature of alcohol dependence then the diagnostic criteria must be changed to require explicit mention of a compulsive motivation behind the consumption of alcohol. In fact, Harford et al. (2005) have demonstrated that wording the *larger/longer* criterion so as to more closely reflect impaired control over alcohol use results in drastically lower prevalence estimates for this criterion when compared to the more traditional definitions of this criterion.

Tolerance represents a core feature of alcohol dependence. The *tolerance* criterion appeared to perform as expected in the current sample of young people in that those who endorsed the criterion reported a significantly larger change in the number of standard drinks needed to feel drunk over a 12 month timeframe compared to those who did not endorse the *tolerance* criterion. However, the change-based definition of the *tolerance* criterion is not without its critics. It has been recommended that *tolerance* can be inferred without relying on a change in alcohol consumption. For example, Martin, Chung and Langenbucher (Martin et al. 2008) discuss the possibility of defining *tolerance* as the consumption of enough alcohol to reach a certain blood alcohol concentration in the absence of clear signs of intoxication. A complicating factor, however, is the individual variability observed in initial sensitivity to the effects of alcohol. That is, some young adults show clear signs of intoxication with few drinks while others (of equivalent weight and drinking histories) exhibit few signs of intoxication. Further research is clearly needed to develop and test alternate developmentally sensitive definitions of *tolerance*.

In conclusion, the present study used the novel investigative techniques of cognitive interviewing to investigate the reasons behind apparent bias in the interpretation of select diagnostic criteria for DSM-IV alcohol dependence. While some criteria such as the *tolerance* criterion appear to perform as intended others, other criteria such as *larger/longer* appear to be misinterpreted. Many young adults drink purely for social reasons and not due to a compulsive drive as intended by the *larger/longer* criterion. Explicit mention of the motivations behind alcohol use is suggested as a means of alleviating the problems brought about by this ambiguity in criterion definition. **cl**

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project **notes**

Pain and Opioids IN Treatment (POINT) study

Prof Louisa Degenhardt, Prof. Wayne Hall, A/Prof. Milton Cohen, A/Prof Nick Lintzeris, Dr. Suzi Nielsen, Dr. Raimondo Bruno, Dr Fiona Shand, Prof. Michael Farrell, Prof Richard Mattick, Briony Larance and Gabrielle Campbell

The POINT study will also be consulting with a range of people from different professions that have expertise and knowledge in this area. The Reference Group consists of; A/Professor Fiona Blyth, Lesley Brydon, Elizabeth Carrigan, Dr Malcolm Dobbin, Professor Julia Fleming, Professor Roger Goucke, Dr Simon Holliday, Denis Leahy, A/Professor Andrea Mant, Professor Jake Najman, Dr Milana Votrubec, Professor Jason White.

There has been a recent increase in the prescribing of pharmaceutical opioids in Australia which has lead to increasing professional and public concern about the use and harms that may be related to such use. Despite this, there is very little known about the magnitude of risk for adverse events. Previous Australian research has had limited duration (~ 12 weeks) and/or has not examined aberrant drug use behaviours. This current study will be the first Australian study to examine the patterns of prescribing for individual patients and the outcomes for these patients in the longer term.

The study will:

- examine the rates, patterns and duration of opioid analgesic prescribing across Australia,
- estimate the population-level risk of adverse events among those prescribed opioids, including incidence of hospital stays, transfer to opioid substitution treatment, and mortality,
- examine the natural history of opioid analgesic use in a cohort of patients prescribed opioids for chronic non-cancer pain (CNCP),
- examine the demographic and clinical predictors of adverse events among a cohort of CNCP patients, including opioid abuse or dependence, medication diversion, other drug use, and overdose,
- identify factors which predict poor self-reported pain relief and other indicators of clinical outcomes.

The POINT study is a national prospective cohort that aims to follow 2000 chronic pain patients newly prescribed pharmaceutical opioids over a 24 month period. Follow-ups will occur at three months, 12 months and 24 months. The interviews will cover topics such as; demographics, chronic pain, treatment, physical and mental health, physical functioning, social support and current and lifetime substance use.

Participants will be recruited through pharmacies throughout Australia. We will continue to follow patients that discontinue their pharmaceutical opioid in order to examine reasons and effects of discontinuance.

This will be the first large-scale Australian prospective cohort study to rigorously examine opioid analgesic prescribing patterns amongst chronic pain patients at a population level and their relationship to important health outcomes and to mortality. It will comprehensively examine the extent to which opioid therapy for chronic pain is associated with pain reduction, adverse events including side effects, quality of life, and mental and physical health outcomes.

The study will shed light on the extent to which patients experience problematic opioid use, some of the precursors and protective factors to problematic use, and the consequences of problematic opioid use resulting from chronic opioid therapy. It will lead to improved knowledge of dose escalation and the positive and negative outcomes for those who undergo rapid dose escalation and ultimately end up using high doses of opioid analgesics.

Australian Treatment Outcomes Study: 11 year follow-up

Maree Teesson, Katherine Mills, Shane Darke, Joanne Ross, Tim Slade, Lucy Burns, Michael Lynskey, Christina Marel, Sonja Memedovic, Philippa Ewer and Joanne White

Heroin dependence is remarkably persistent, and in many cases it is a lifelong condition with a high mortality rate. Yet, the natural history of heroin dependence has rarely been studied. *The Australian Treatment Outcome Study* (ATOS) is a landmark Australian cohort study examining outcomes from heroin dependence in over 40 research publications over three years (2001-2004). The 11 year prospective cohort study will recontact and reinterview the 615 individuals who participated in the initial three year cohort study.

NDARC has received funding from the NHMRC to follow up the original cohort with the aim of addressing significant gaps in our knowledge, in particular:

- Does Australia have lower mortality rates from heroin dependence?
- What are the long-term remission rates from heroin dependence in Australia?
- What are the long-term health and social consequences of heroin dependence and what factors influence the heroin use trajectory?

The study involves eleven-year follow-up interviews with original participants in the cohort to examine mortality, abstinence, criminality, psychopathology and suicidal behaviour.

This project will form the basis of Sonja Memedovic's PhD. It will allow a better understanding of the natural history of heroin users in terms of mortality, remission, criminality and psychiatric comorbidity. The long-term outcomes of the cohort will be examined using both sophisticated data linkage and detailed individual interviews.

Reducing smoking in socioeconomically disadvantaged groups: a trial of a financial counselling intervention with Nicotine Replacement Therapy

Richard Mattick, Kristy Martire, Billie Bonevski, Ron Borland, Chris Doran, Wayne Hall, Michael Farrell and Deborah Bradford

Tobacco smoking is the major cause of preventable disease and death in Australia costing approximately $31.5 billion a year. Encouraging long-term abstinence is an important preventive health priority, particularly among low socioeconomic groups where smoking prevalence is markedly higher and cessation rates are lower than in the general population.

Although in recent years there has been a national decline in smoking rates, this reduction is less evident among the most disadvantaged sector of the population. This is mainly attributable to lower levels of quit success among disadvantaged groups rather than differences in quit intentions or attempts. Recent research has shown financial stress is a major barrier to sustained smoking cessation among socioeconomically disadvantaged smokers, even after controlling for nicotine addiction, psychological stress, and use of cessation counselling and pharmacotherapies.

The aim of this project is to test an innovative approach to improving smoking cessation outcomes among low socioeconomic status (SES) smokers by providing financial counselling to reduce the financial stress experienced by disadvantaged smokers making quit attempts. This will be achieved by conducting a randomised controlled trial comparing cessation rates between low SES smokers who receive the standard intervention comprising subsidised nicotine replacement therapy (NRT) with a Quitline call-back, with those who receive subsidised NRT and Quitline call-back plus financial counselling.

Smoking outcomes will be assessed at two and six months post-intervention. The results from this project will provide valuable information on the efficacy of targeted interventions for socioeconomically disadvantaged smokers. **cl**

abstracts

Australian school-based prevention programs for alcohol and other drugs: A systematic review

Drug and Alcohol Review, Advance online publication, 1-6

Maree Teesson, Nicola Newton and Emma Barrett

Issues: To reduce the occurrence and costs related to substance use and associated harms it is important to intervene early. Although a number of international school-based prevention programs exist, the majority show minimal effects in reducing drug use and related harms. Given the emphasis on early intervention and prevention in Australia, it is timely to review the programs currently trialled in Australian schools. This paper reports the type and efficacy of Australian school-based prevention programs for alcohol and other drugs.

Approach: Cochrane, PsychInfo and PubMed databases were searched. Additional materials were obtained from authors, websites and reference lists. Studies were selected if they described programs developed and trialled in Australia that address prevention of alcohol and other drug use in schools.

Key Findings: Eight trials of seven intervention programs were identified. The programs targeted alcohol, cannabis and tobacco and most were based on social learning principles. All were universal. Five of the seven intervention programs achieved reductions in alcohol, cannabis and tobacco use at follow up.

Conclusion: Existing school-based prevention programs have shown to be efficacious in the Australian context. However, there are only a few programs available, and these require further evaluative research. This is critical, given that substance use is such a significant public health problem. The findings challenge the commonly held view that school-based prevention programs are not effective.

The diversion and misuse of pharmaceutical stimulants: what do we know and why should we care?

Addiction,107, 467 -477

Sharlene Kaye and Shane Darke

Aims: To examine the literature pertaining to the diversion and misuse of pharmaceutical stimulants.

Method: Relevant literature was identified through comprehensive MEDLINE, EMBASE and PubMed searches.

Results: The evidence to date suggests that the prevalence of diversion and misuse of pharmaceutical stimulants varies across adolescent and young adult student populations, but is higher than that among the general population, with the highest prevalence found among adults with attention deficit–hyperactive disorder (ADHD) and users of other illicit drugs. Concerns that these practices have become more prevalent as a result of increased prescribing are not supported by large-scale population surveys. Information on trends in misuse in countries where there have been recent increases in prescription and consumption rates, however, is limited. Little is known about the frequency and chronicity of misuse, or the extent of associated harms, particularly among those populations, i.e. adolescents, young adult student populations, those with ADHD and illicit drug users, where abuse may be more likely to occur.

Conclusions: Continued monitoring of the diversion and misuse of pharmaceutical stimulants is of major clinical importance. Despite recognition of the abuse liability of these medications, there is a paucity of data on the prevalence, patterns and harms of diversion and misuse among populations where problematic use and abuse may be most likely to occur (e.g. adolescents, young adults, illicit drug users). Comprehensive investigations of diversion and misuse among these populations should be a major research priority, as should the assessment of abuse and dependence criteria among those identified as regular users.

Prevalence and characteristics of patients with risky alcohol consumption presenting to emergency departments in rural Australia

Emergency Medicine Australasia, Advance online publication, 1-11

Alys Havard, Anthony Shakeshaft and Katherine Conigrave

Objective: This study measures the prevalence of problematic alcohol consumption in patients of EDs in rural areas of Australia, relative to the general population in the same rural communities.

It also identifies the characteristics associated with risky drinking in rural ED patients.

Methods: Surveys containing the Alcohol Use Disorders Identification Test (AUDIT) and questions corresponding to the 2001 Australian Alcohol Guidelines were completed by 1056 patients presenting to five EDs in rural areas of New South Wales, and 756 residents of the same five communities.

Results: Relative to the general community, ED patients were statistically significantly more likely to engage in risky alcohol consumption according to the AUDIT (39 per cent vs 20 per cent), alcohol consumption posing a high risk of short-term harm (26 per cent vs 18 per cent) and alcohol consumption posing a high risk of long-term harm (7 per cent vs 3 per cent). Although being aged under 40 years of age, being unmarried, not completing school and being assigned less urgent triage categories were associated with risky alcohol use among ED patients, rates of risky consumption were high across all patient subgroups.

Conclusions: Risky drinking, across a number of measures, is overrepresented in patients of rural Australian EDs relative to the general community, and this type of consumption is not limited to certain subgroups of patients. There is a need for interventions that address both heavy single occasion drinking and excessive regular consumption in patients of rural Australian EDs,with universal interventions recommended rather than targeted programs.

The cost-effectiveness of tailored, postal feedback on general practitioners' prescribing of pharmacotherapies for alcohol dependence

Drug and Alcohol Dependence, Advance online publication, 1-9

Héctor Navarro, Anthony Shakeshaft, Christopher Doran and Dennis Petrie

Aims: To conduct a randomised controlled trial to evaluate the cost-effectiveness of tailored, postal feedback on general practitioners' (GPs) prescribing of acamprosate and naltrexone for alcohol dependence relative to current practice and its impact on alcohol dependence morbidity.

Methods: Rural communities in New South Wales, Australia, were randomised into experimental (N = 10) and control (N = 10) communities. Tailored feedback on their prescribing of alcohol pharmacotherapies was mailed to GPs from the experimental

communities (N = 115). Segmented regression analysis was used to examine within and between group changes in prescribing and alcohol dependence hospitalisation rates compared to the control communities. Incremental cost-effectiveness ratios (ICERs) were estimated per additional prescription of pharmacotherapies and per alcohol dependence hospitalisation(s) averted.

Results: Post-intervention changes, relative to the control communities, in GPs' prescribing rate trends in the experimental communities significantly increased for acamprosate (˘ = 0.24, 95 per cent CI: 0.13–0.35, p < 0.001), and significantly decreased for naltrexone (˘ = –0.12, 95 per cent CI: –0.17 to –0.06) per quarter. Quar-terly hospitalisation trend rates for alcohol dependence, as principal diagnosis, significantly decreased (˘ = –0.07, 95 per cent CI: –0.13 to –0.01, p < 0.05), compared to control communities. The median ICER per quarterly hospitalisation(s) averted due to intervention was Dominant (Dominant – $12,750).

Conclusion: Postal, tailored feedback to GPs on their prescribing of acamprosate and naltrexone for alcohol dependence was a cost-effective intervention, in rural communities of NSW, to increase the overall prescribing of pharmacotherapies with a plausible effect on incidence reduction of hospitalisations for alcohol dependence as principal diagnosis.

How and when health-care practitioners in Aboriginal Community Controlled Health Services deliver alcohol screening and brief intervention, and why they don't: A qualitative study

Drug and Alcohol Review, 31, 13-19

Anton Clifford, Anthony Shakeshaft and Catherine Deans

Introduction: Indigenous Australians experience a disproportionately high burden of alcohol-related harm. Alcohol screening and brief intervention (SBI) offers the potential to reduce this harm if barriers to its delivery in Aboriginal Community Controlled Health Services (ACCHSs) can be optimally targeted.

Aims: Examine health-care practitioners' perceptions of, and practices in, alcohol SBI in ACCHSs.

Methods: Semi-structured group interviews with 37 purposively selected health staff across five ACCHSs.

Results: Alcohol screening independent of standard health assessments was generally selective. The provision of brief intervention was dependent upon factors related to the patient. Four key factors underlying health-care practitioners' perceptions of alcohol SBI were prominent: outcome expectancy; role congruence; utilisation of clinical systems and processes; and options for alcohol referral.

Discussion: The influence of outcome expectancy and role congruence on health-care practitioners' alcohol SBI practices has been identified previously, as has to a lesser extent their less than optimal use of clinical systems and processes. The influence of options for alcohol referral on health-care practitioners' willingness to deliver alcohol SBI primarily related to their misunderstanding of alcohol SBI and the lack of culturally appropriate alcohol referral options for their patients.

Conclusion: An intervention combining interactive, supportive and reinforcing evidence based dissemination strategies is most likely required to enhance health-care practitioners' knowledge and skills in alcohol SBI delivery, positively orientate them to their role in its delivery, and facilitate integration of evidence-based alcohol SBI into routine clinical processes and locally available systems.

Guidelines on the management of co-occurring mental health conditions in alcohol and other drug treatment settings: how useful are they?

Mental Health and Substance Use: Dual Diagnosis, Advance online publication, 1-13

Katherine Mills, Mark Deady, Maree Teesson, Claudia Sannibale, Heather Proudfoot, Lucy Burns and Richard Mattick

Background: There has been a growing literature documenting the high prevalence of co-occurring mental health disorders among clients of substance use treatment services and the challenges clinicians face when treating comorbid clients. To assist alcohol and other drug (AOD) workers in working with these clients, the Australian Government Department of Health and Ageing funded the development of 'Guidelines on the management of co-occurring alcohol and other drug and mental health conditions in alcohol and other drug treatment settings.' Too often guidelines are produced but not evaluated.

Method: The present study aimed to examine the extent to which this resource is perceived to be relevant and useful to clinical practice. Ninety-seven AOD workers from across Australia completed an online survey. A series of questions asked respondents to rate the relevance and usefulness of the Guidelines to their clinical practice.

Findings: Overall, the responses received were overwhelmingly positive. The vast majority of respondents perceived the Guidelines to be relevant and useful to their clinical practice. Almost all respondents (91 per cent) indicated they will use some of the things they learnt from the Guidelines in their work.

Conclusion: The findings indicate the Guidelines are an acceptable resource to the AOD field, and have broad applicability across AOD workers representing a range of occupations, from various service types in different geographic locations, who service a variety of client groups. The findings are encouraging and suggest that the Guidelines may have the potential to lead to improvements in a treatment provision.

Retention, early dropout and treatment completion among therapeutic community admissions

Drug and Alcohol Review, 31(1), 64-71

Shane Darke, Gabrielle Campbell and Garth Popple

Introduction and Aim: To ascertain the association between baseline client characteristics, drug use and psychopathology on length of stay, treatment completion and early separation in drug free therapeutic communities.

Design and Methods: Prospective longitudinal follow up of 191 treatment admissions to We Help Ourselves drug free treatment services.

Results: The median length of stay was 39 days. A total of 17% of treatment entrants dropped out in the first week, and 34% successfully completed the treatment program. Length of stay was independently associated with a previous history of treatment completion (b = 0.21, P < 0.001), higher Short Form-12 physical health scores (b = 0.16, P < 0.05) and lifetime prison history (b = -0.15, P < 0.05). Independent predictors of early separation were recent prison release [odds ratio (OR) 2.64, confidence interval (CI) 1.08–6.42] and a lower perception of the likeliness of completing treatment (OR 2.38, CI 1.01–5.46), with independent predictors of treatment completion being male gender (OR 2.56, CI 1.19–5.51) and fewer stressful life events (OR 0.84, CI 0.72–0.97). Drug use and psychopathology were not related to length of stay, early separation or treatment completion.

Discussion and Conclusions: Different parameters of treatment stay were predicted by different variables. The fact that neither psychopathology nor primary problem drug was related to treatment indicates that these should not be seen as poor prognostic indicators for treatment success in a drug free treatment setting.

Extent of illicit drug use and dependence and their contribution to the global burden of disease

The Lancet, 379, 55-70

Louise Degenhardt and Wayne Hall

Abstract: This paper summarises data for the prevalence, correlates, and probable adverse health consequences of problem use of amphetamines, cannabis, cocaine, and opioids. We discuss findings from systematic reviews of the prevalence of illicit drug use and dependence, remission from dependence, and mortality in illicit drug users, and evidence for acute and chronic effects of illicit drug use. We outline the regional and global distribution of use and estimated health burden from illicit drugs. These distributions are likely to be underestimates because they have not included all adverse outcomes of drug use and exclude those of cannabis—the mostly widely used illicit drug. In high-income countries, illicit drug use contributes less to the burden of disease than does tobacco but a substantial proportion of that due to alcohol. The major adverse health effects of cannabis use are dependence and probably psychotic disorders and other mental disorders. The health-related harms of cannabis use differ from those of amphetamine, cocaine, and opioid use, in that cannabis contributes little to mortality. Intelligent policy responses to drug problems need better data for the prevalence of different types of illicit drug use and the harms that their use causes globally. This need is especially urgent in high-income countries with substantial rates of illicit drug use and in low-income and middle-income countries close to illicit drug production areas.

This is the first in a series of three papers about addiction.

Effect of prison-based opioid substitution treatment and post-release retention in treatment on risk of re-incarceration

Addiction, 107(2), 372-380

Sarah Larney, Barbara Toson, Lucy Burns and Kate Dolan

Aims: People who use heroin are frequently incarcerated multiple times. Reducing re-incarceration of this group is important for reducing both health risks associated with incarceration and the costs of correctional administration. Opioid substitution treatment (OST) in prisons may help to reduce re-incarceration, but research findings on this topic have been mixed. In this study, we examined the effect of OST in prison and after release on re-incarceration.

Design: Longitudinal cohort study.

Methods: Data on OST and incarceration were linked for a cohort of 375 male heroin users recruited originally in prisons in New South Wales, Australia. Data were linked for the period 1 June 1997–31 December 2006. Re-incarceration was examined using recurrent-event survival analysis models. Model 1 examined the effect of OST status at release from prison (i.e. in treatment versus out of treatment on the day of release) on re-incarceration. Model 2 considered the effect of remaining in OST after release on risk of re-incarceration.

Findings: Ninety per cent of participants were re-incarcerated following their first observed release. Pre-incarceration cocaine use was associated with a 13 per cent increase in the average risk of re-incarceration. There was no significant association between simply being in OST at the time of release and risk of re-incarceration; however, in the model taking into account post-release retention in treatment, the average risk of re-incarceration was reduced by 20 per cent while participants were in treatment.

Conclusions: In New South Wales, Australia, opioid substitution treatment after release from prison has reduced the average risk of re-incarceration by one-fifth.

Barriers and facilitators to cannabis treatment

Drug and Alcohol Review, Advance online publication, 1-9

Peter Gates, Jan Copeland, Wendy Swift and Greg Martin

Introduction and Aims: Despite its continued widespread use, relatively few individuals with cannabis use disorders present to treatment services .There is a dearth of research examining the reasons for this observed underutilisation of treatment. The aim of this paper is to examine barriers and facilitators to entry into cannabis treatment.

Design and Methods: Three surveys of regular cannabis users in treatment (n = 100), in the community (n = 100) and from a widespread Internet sample (n = 294).

Results: Perceived barriers included: not being aware of treatment options; thinking treatment is unnecessary; not wanting to stop using cannabis; and wanting to avoid the stigma associated with accessing treatment. Perceived facilitators included: improving available information on treatment; keeping treatment specific to cannabis; offering additional services, such as telephone support; and simplifying treatment admission processes.

Discussion and Conclusions: Participants' perceptions differed significantly depending on their age, gender and treatment status. Participants in treatment typically reported barriers intrinsic to the individual while participants from the community reported barriers relating to the treatment available. Reported facilitators were more homogenous and most commonly related to availability of information.

A resounding success or a disastrous failure: Re-examining the interpretation of evidence on the Portuguese decriminalisation of illicit drugs

Drug and Alcohol Review, 31(1), 101-113

Caitlin Hughes and Alex Stevens

Abstract: In July 2001 as part of a comprehensive new policy Portugal decriminalised use, acquisition and possession of all illicit drugs when conducted for personal use. Sales of all illicit drugs remained as criminal offences. Ten years on, the reform has attracted considerable international attention. It has also been the subject of a number of divergent accounts on its impacts, with some commentators offering diametrically opposed policy conclusions from their evidence-informed analyses. Consequently, this is a policy choice that has been deemed both a 'disastrous failure' and a 'resounding success'. As two of the participants in this debate we know that drug law reform is invariably difficult to study, and involves sifting through multiple versions of evidence, but the divergences, contested debates and assertions of 'deceit', 'misinformation' and 'manipulation' have given rise to a clear example of 'duelling certitudes' which is both frustrating and instructive. In an era where evidence, defined here as the body of putatively valid and reliable knowledge about drug use and related harms, is often implied to be the tested, trustworthy tool for generating policies 'devoid of dogma', this case study provides a much needed opportunity to examine the way all sides of the drug policy debate can call upon and alternatively use or misuse evidence to feed into discussions of the worth, efficacy and desirability of different illicit drug policies. In this paper we aim:

- To outline the two most divergent accounts on the Portuguese reform: the 'disastrous failure' and the 'resounding success'.
- To compare and contrast how they have dealt with the three most contested claims surrounding the reform.
- To demonstrate (by re-contextualising the accounts against the available evidence) how evidence has been used and misused and correct misinformation.
- To discuss the implications of this case study for the generation of evidence-based drug policy.

Why the alcohol and other drug community should support gay marriage

Drug and Alcohol Review, 31(1), 1-3

Alison Ritter, Francis Matthew-Simmons and Natacha Carragher

Introduction: Problems associated with alcohol and other drug use, such as harmful consequences and dependence, are not evenly distributed across the population. Some groups, such as those with socioeconomic disadvantage, or racial/ethnic minorities, are at elevated risk of the development of problematic alcohol and drug use. Another of these groups is sexual minorities—including gay and lesbian people.

There is now an established body of literature which documents elevated rates of alcohol or drug use per se in these populations.That gay and lesbian communities consume more drugs than heterosexual groups is reasonably well known and readily explained with reference to the cultural norms associated with these sexual minorities. This in itself is not a cause for concern. However, what is important is the increased risk of developing dependence disorders and harms from heightened consumption.

A dual process account of adolescent and adult binge drinking

Addictive Behaviors, 36(2011), 341-346

Sally Rooke and Donald Hine

Abstract: This study adopted a dual process perspective to investigate the relative contributions of implicit and explicit cognitions to predicting binge drinking in adolescents and adults. Two hundred and seventy-two participants (136 teen–parent pairs) completed measures of alcohol memory associations (reflecting implicit cognition), expectancies about potential costs and benefits of alcohol use (reflecting explicit cognition), and self-reported binge drinking. Adolescents had stronger alcohol memory associations and perceived drinking benefits to be more probable than did adults. In turn, higher scores on the memory association and expected benefit measures were both associated with significantly higher levels of binge drinking. Moderation analyses revealed that alcohol memory associations and expected benefits of drinking were stronger predictors of binge drinking for adolescents than for adults. The findings suggest that both implicit and explicit cognitions may play important roles in alcohol use decisions, and these roles may differ for adolescents and adults. **cl**

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staff **list**

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Lucy Burns – Senior Lecturer

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Jenny Chalmers – Senior Research Fellow

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Ryan Courtney – Post Doctoral Research Fellow

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Sharlene Kaye – Research Fellow

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