

centre lines

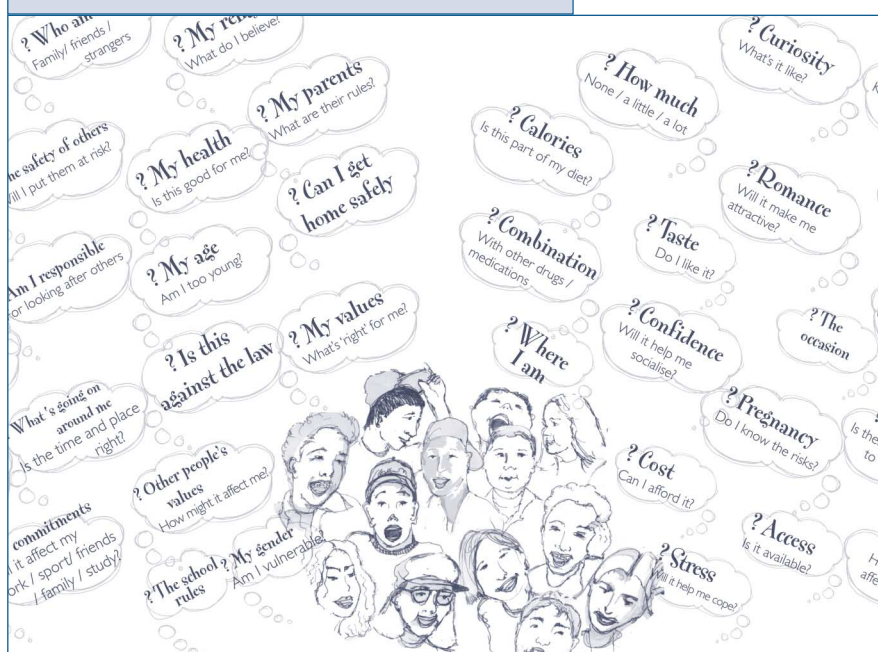
A bi-monthly newsletter from the National Centres for Drug and Alcohol Research
Published this issue by the National Drug Research Institute, Perth

issuing forth

School drug education -
What way forward?

Funded by the
National Drug Strategy

Registered by Australia Post -
Print Post Publication No
PP236697/00013
ISSN 1034-7259



edspace

The first months of 2003 have been very hectic ones for NDRI, with the Institute hosting a four-day international research symposium and a subsequent public one-day conference at the end of February.

The research symposium, *Preventing substance use, risky use and harm: What is evidence-based policy?*, brought together 125 highly-skilled participants from across Australia and around the globe, representing a variety of research and policy interests in the alcohol and other drugs field. In *Headspace*, Tim Stockwell selects some of the highlights from this event which, by all accounts, provided an excellent forum for high quality discussion and debate about what works in prevention, based on the best evidence currently available.

One topic which was widely discussed at the research symposium, and which elicited a range of views, was school drug education. In *Issuing Forth*, Nyanda McBride draws upon some of the research that was presented and proposes that, although it has limitations, if effective programs are well implemented then school drug education has an important role to play in positively influencing the drug related behaviours of some young people.

I hope that you enjoy this issue of CentreLines and that it continues to be of use to you and your work in the drugs field.

Rachael Lobo
Editor

contents

edspace	1
headspace	2
<p>Tim Stockwell selects some highlights from NDRI's recent international research symposium</p>	
issuing forth	3
<p>Nyanda McBride discusses some of the issues surrounding school drug education</p>	
project notes	5
<ul style="list-style-type: none"> A selected review of what works in the area of prevention of psychoactive substance use Alcohol-related codes: Mapping ICD-9 to ICD-10 	
abstracts	6
<p>Summaries of recently published articles</p>	
recent publications	7
staff list	8

CentreLines is a joint publication from the National Drug Research Institute, Perth and the National Drug and Alcohol Research Centre, Sydney. It is published bi-monthly and produced alternately by each centre.

Selected highlights from an international prevention research symposium

In February, NDRI was privileged to host a Thematic Meeting of the Kettil Bruun Society, "Preventing Substance Use, Risky Use and Harm: What is Evidence-Based Policy?". The meeting was sponsored by the World Health Organization, the Commonwealth Department of Health and Ageing and the WA Drug and Alcohol Office. It was also supported by five other research centres variously from New Zealand, Australia and the USA. The 125 delegates were drawn in equal thirds from Western Australia, the rest of Australia, and from 11 other countries and included a selection of leading academics, prevention specialists and policy makers. The fields of injury prevention, mental health, child development, crime prevention, community action, the law, policing, education, health economics as well as drug policy and prevention were all represented.

It was a lively and stimulating affair. Over 70 papers were presented and individually discussed over four days. Many participants were new to the Kettil Bruun Society process of papers being pre-circulated, briefly presented and then critiqued by an expert discussant before being thrown to the watching crowd. The response to this process was overwhelmingly positive as it enabled both the scientific merit and the policy relevance of papers to be publicly scrutinised. In so doing, I believe the principal objectives of the symposium were met, namely to raise the quality of debate around the evidence base for the prevention of drug-related harm and to improve dialogue between researchers, policymakers and practitioners.

The first day began with some context setting with the first Australian presentations of the new WHO estimates of the Global Burden of Disease for the year 2000¹ and the new economic cost estimates for drug "abuse" in Australia². Both of these major quantification studies indicate that the disabilities and associated health costs are overwhelmingly contributed by tobacco and alcohol rather than by illegal drugs. Globally, in terms of contributions to disability and years of life lost, alcohol and tobacco match each other closely, though with variations in different global regions. In this respect, the major harms to be prevented are caused principally by the acute effects of heavy sessional alcohol intake and the chronic effects of long-term tobacco dependence. The extent of contributions from both macro social determinants (eg economic and social deprivation) and developmental risk and protection factors to these risk behaviours were then considered.

The evidence basis underpinning a wide variety of intervention strategies was carefully considered over the next two days. Significant evaluations of specific strategies such as needle exchanges, school-based programs, community-based interventions, regulatory strategies and brief interventions in primary care settings were

presented. There were many examples given during the week of strategies and policies which had been shown to have significant positive outcomes on the basis of rigorous evaluation. Broad-based interventions intended to tackle underlying risk and protection factors for problematic drug use, mental health and criminal behaviour were also examined. The evidence base for such interventions is less well-developed at present though there is some clear promise.

A major feature of the meeting was the presentation of several recent systematic reviews which attempted to summarise and distil what can be learned from the thousands of published studies that have appeared in the past decade. Typically, comprehensive literature searches that identified several hundred relevant evaluation studies then narrowed these down to only a handful with a rigorous evaluation. There was much debate, however, as to how appropriate it was to apply the Randomised Controlled Trial design as a gold standard. There are many obstacles to the strict application of such designs to social, community and policy experiments. There were passionate and eloquent advocates for the application of ecological modelling, time series analysis and the use of alternative statistical methods to estimate the significance of effect sizes. A common problem experienced across many applied disciplines was the impossibility of gaining sufficient funding let alone adequate fidelity of implementation of interventions across multiple settings (eg schools, communities, jurisdictions) to achieve sufficient statistical power in the traditional sense. It appears that real-world, workable methodologies must be further developed to move the prevention field forward.

Despite these important methodological issues to be resolved at the cutting edge of the field, the systematic reviews revealed many examples of policies and strategies that have been shown to reduce the risky use of substances and related harms. A common position many reviewers adopted was that effective prevention was usually different to "popular" prevention. This debate was typified by discussion of the evidence base for school-based prevention programs. Some of the reviews come to an entirely negative conclusion about these. In *Issuing Forth*, Nyanda McBride presents an alternative, more positive, view that if you get some important processes right in the design of classroom based interventions then significant behavioural changes can be achieved. She was not alone in proposing this optimistic perspective.

Nyanda's work also picks up another major theme of the meeting - harm minimisation as a component of prevention. This important idea was discussed not only in relation to minimising the well-known harms associated with injecting drug use, but also

in relation to reducing the social harms associated with applying criminal sanctions to the use of some drugs and also to the regulation of alcohol and tobacco. A major highlight acknowledged by many delegates was a presentation from the VicHealth Centre for Tobacco Control regarding a radical proposal to place the production, marketing and sale of tobacco products under government control with the sole objective of minimising the massive health problems caused by smoking. In relation to alcohol regulation, there were also powerful examples provided of the largely untapped potential within liquor licensing laws to reduce alcohol-related harm, now the major objective of such laws in nearly all Australian states and territories.

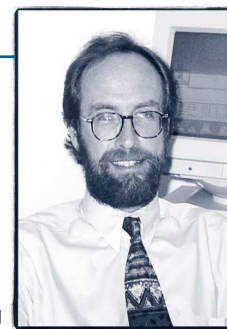
As many will be aware, NDRI and the Centre for Adolescent Health at the University of Melbourne have collaborated on a major review known as the "Prevention Monograph" to be launched by the Ministerial Council on Drug Strategy later this year³. This substantial piece of work will be informed by the proceedings of this meeting, particularly as some sections of the review were presented and critiqued there. NDRI also launched during the conference an earlier "selected" review of what works in prevention that was commissioned by the World Health Organization⁴. There are also plans to publish a book based upon selected presentations from this meeting.

I would like to end by conveying my sincere thanks to the sponsors of this valuable meeting, the many presenters and other participants and, once again, to NDRI's excellent administrative support team who helped to make it happen. An important dialogue has begun in Australia around a broad agenda for prevention that must now be moved forward into improved and coordinated action.

Tim Stockwell

References

1. **World Health Organization** (2002) *World Health Report 2002: Reducing risks, promoting healthy life*. World Health Organization, Geneva.
2. **Collins, D.J. and Lapsley, H.M.** (2002) *Counting the cost: estimates of the social costs of drug abuse in Australia in 1998-9*. National Drug Strategy Monograph Series No. 49. <http://www.health.gov.au/pubhlth/publicat/document/mon049.pdf>.
3. **Loxley, W., Toumbourou, J., Stockwell, T., Haines, B., Scott, K., Godfrey, C., Waters, E., Patton, G., Fordham, R., Gray, D., Marshall, J., Ryder, D., Siggers, S., Sanci, L. and Williams, J.** (In press) *The prevention of substance use, risk and harm in Australia: A review of the evidence*. Commonwealth Department of Health and Ageing, Canberra.
4. **Hawks, D., Scott, K., McBride, N., Jones, P. and Stockwell, T.** (2002) *Prevention of psychoactive substance use: A selected review of what works in the area of prevention*. World Health Organization, Geneva.



School drug education - What way forward?



Discussions about school drug education engender a range of views concerning its effectiveness and appropriateness. At one end of the continuum, school drug education is seen as a token undertaking that has little impact on young people's drug related behaviours. At the other end, school drug education is viewed as an effective response to young people's drug use problems, where failure to provide drug education is to fail young people. A recent international conference on drugs and evidence-based policy hosted by NDRI clearly demonstrated a range of views, with many experts in this and related fields making comment. However, the consensus among those experts with an extensive knowledge of the area was that, although it has limitations, if effective programs are well implemented, drug education can have a favourable impact on the drug related behaviours of some young people¹⁻⁶. There are, however, barriers to the implementation of effective drug education programs.

Part of the conundrum about school drug education results from the differing philosophies of health and education professionals. Generally, health professionals promote behaviour change as the ultimate goal of drug education programs. This is reflected in the drug education literature where effectiveness is assessed on drug related behaviour change. However, education professionals are less concerned with this outcome suggesting that the aim of schools is to focus on the systemic provision of education and to encourage students to become independent learners. When the individual drug education programs selected by teachers are considered, effectiveness may include a range of outcomes from knowledge and attitude to behaviour changes, including changes to school structure, policy etc^{7,8}. Often programs are selected without consideration of impact, but are based on what is considered conceptually sound and readily available. While the increasingly popular inclusion of evidence-based approaches may have some influence on this mode of selection, recent key informant interviews with education managers in various sectors and states around Australia suggest that it is still only a small minority that include behaviour change as an important consideration in program selection⁷. As an entrée to implementing specific programs for health gains among education professionals, there may be value in promoting the results of studies which demonstrate that reducing health problems and health-compromising behaviours in school-aged children can have an impact on the students' abilities to be involved with and to perform in other core educational tasks^{9,10}. There is certainly

a need to open up discussions between the parties concerned, to identify commonalities and differences in approach which will optimise outcomes for young people participating in school programs.

We also need to be practical in our considerations if we are to encourage education to embrace the concept of behaviour change in health programs. We need to know the nature of education departments, education managers, schools and school staff, and we need to work with them to ensure that effective programs are workable in the school setting. Our aim should be to create effective programs that can be easily implemented by many schools. Classroom drug education is essential in that it is the only component that directly interacts with young people, and it is also the only component which research has shown can have a meaningful impact on young people's drug use behaviours^{11,12}.

Comprehensive programs requiring extensive expertise and implementation are less practical in the school setting and require additional resources and staffing. A trend in the recent past is to encourage schools to adopt a health promoting schools approach or a comprehensive approach involving several components of an intervention. Although conceptually attractive, there is little evidence that such an approach impacts on the behaviour of young people. To progress forward we need to identify which components are going to provide the most value or benefit, as it is unlikely that schools can adequately provide all components simultaneously¹³. The parental education and policy components have shown some indication that they may be of value but need to be tested in isolation and in combination with other components to tease out the most effective combination.

Effective programs also need to be identified and readily accessible to users. Foxcroft and colleagues¹ suggest that an international register should be developed to identify effective programs and should include ratings on safety, efficacy and effectiveness. This is an important way forward to develop the field, particularly emphasising evidence and effectiveness. However, information on cost, difficulty of implementation (within the school setting) and accessibility should also be incorporated within the register. It goes without saying that the criteria for allowing programs to enter the register must be rigidly maintained to ensure the integrity of the information provided.

The nexus between health outcomes in an education setting contributes to school drug education's next problem; that of small numbers of programs being evaluated and, if programs are evaluated, using methodologies and measures that exclude them from providing valuable information to the field^{1,3}. A recent systematic review of school drug education noted that over 88% of programs were unacceptable because of their poor level and quality of evaluation³. When acceptable evaluation methodologies had been incorporated, very few papers provided information about the impact of the program on drug related behaviour. Tobler and Stratton¹⁴ identified that between the years 1978 and 1990 only 36% of programs included behavioural measures. A more recent study showed little improvement, with just over 41% of evaluation publications between 1990 and 2001 incorporating behavioural measures³. Although there is an extensive amount of drug education activity and evaluation occurring, only a small proportion of this work contributes to the wider body of knowledge about the impact of school drug education. Attention also needs to be given to assessing behavioural impact to increase the potential cost effectiveness of school drug education in this increasingly competitive financial world. Jonathan Caulkins and colleagues⁵ recently provided a summary of the cost of drug education from a social policy perspective and concluded that *'the social benefits per participant stemming from reduced drug use appear to exceed the economic cost of running the programs. . . . the majority of benefits . . . stem from reduction in use of tobacco and alcohol (and this) has implications for how school based programs are funded'*. These types of persuasive arguments, along with demonstrations of behavioural effect, can ultimately increase the funding and status of drug education programs in schools.

Another serious limitation to the field is the minimal research undertaken to extend our knowledge about the *types* of behavioural changes drug education can expect to achieve. Years of research and evaluation have been extended to prevention, measuring use and delayed use, but a generalised trend in many Western countries is the increase in prevalence of use and the lower age of use among new groups of young people¹⁵. To continue trying to prevent and delay, in isolation from other behavioural goals, is a recipe for failure. Having said this, there may be a proportion of young people who are open to non-use and delayed use messages,

and there may be others who find these messages meaningful at different times during their teenage years or beyond. However, there are a large proportion of students to whom this message is meaningless. We need to explore options that focus on programs which incorporate prevention strategies, but which also cater for other students who need assistance in reducing the impact of their own drug use or the use of people with whom they associate. A recent NDRI study had the goal of reducing the harm that young people experience from alcohol use^{16,17}. The study reported reductions in the harm experienced by young people involved in the three year study but more interestingly the program had an impact on reducing total consumption and risky patterns of drinking compared with programs that focused only on prevention. This is an important finding that needs to be further explored and replicated, and it is also an alternative and broader focus that may prove useful for future programs. Australia, the United Kingdom and Canada have all undertaken some work in the development of harm reduction programs for school drug education^{12,13,18,19}. This work has identified the acceptance of harm reduction in schools and has developed programs to be implemented in schools. However, in most cases evaluation has emphasised process rather than impact and so this work has not contributed to the evidence base of drug education.

It is imperative that we start broadening the way we view success in school drug education not only to improve the field but more importantly to embrace all young people who participate in such programs. An interesting suggestion discussed at the NDRI hosted international drug research conference was to measure a range of behavioural issues that are associated with problem behaviours or conduct disorder. This suggestion identifies the developmental pathways and associations between several problem behaviours (problematic drug use, delinquency, mental health problems, sexual risk taking etc) and it would be an interesting research and practical question to assess the impact that specific programs can have on a wide range of behaviours. The Gatehouse study conducted by the Centre for Adolescent Health demonstrated the potential of this paradigm with its specific program attempts to increase school connection with results that impacted on substance use, initiation of sexual activity and socially disruptive behaviours⁴. Other directions could include single curriculum programs utilising common prevention strategies and teaching methodologies that have some impact on harmful drug use and other health and development related problems²⁰. This is certainly an area that could be further discussed and explored. However, part of this exploration needs to include the conduct disorder and developmental pathways literature which suggests that programs need to be conducted early, need to intervene at several different levels

and need to include mainstream and individual interventions⁹. We need to keep in mind issues such as what it is practical for schools to achieve without external funding and assistance, what extras they can fit into their timetable and whether they consider health issues as core issues. However, even given these comments, there are certainly interesting possibilities for future programs and studies.

School drug education cannot be held up as a panacea for society's drug problems, but rather should be viewed as one strategy within a multi-strategy community approach to reducing drug related problems in young people. However, there are several factors, of which only a few are discussed in this article, that need to be considered and acted on to maximise the contribution that drug education programs in schools can make to the wellbeing of young people. To do this, we need to be coherent in our approach and we need to involve both health and education professionals, and of course, the young people who are likely to be involved in these programs.

Nyanda McBride

References

1. **Foxcroft, D., Ireland, D., Lister-Sharp, D., Lowe, G. and Breen, R.** (2003) Longer-term primary prevention for alcohol misuse in young people: A systematic review. *Preventing substance use, risky use and harm: What is evidence based policy. A thematic meeting of the Kettil Bruun Society for Social and Epidemiological Research on Alcohol*. Fremantle, 24-27 February.
2. **Elliott, L., Orr, L., Watson, L. and Jackson, A.** (2003) The effectiveness of drug interventions for young people – A systematic review of the evidence. *Preventing substance use, risky use and harm: What is evidence based policy. A thematic meeting of the Kettil Bruun Society for Social and Epidemiological Research on Alcohol*. Fremantle, 24-27 February.
3. **McBride, N.** (2003) A systematic literature review of school drug education. *Preventing substance use, risky use and harm: What is evidence based policy. A thematic meeting of the Kettil Bruun Society for Social and Epidemiological Research on Alcohol*. Fremantle, 24-27 February.
4. **Patton, G., Bond, L., Carlin, J., Thomas, L., Butler, H., Glover, S. and Bowes, G.** (2003) Promotion of school social context in reducing substance use and socially disruptive behaviours: a clustered randomised trial of the Gatehouse Project. *Preventing substance use, risky use and harm: What is evidence based policy. A thematic meeting of the Kettil Bruun Society for Social and Epidemiological Research on Alcohol*. Fremantle, 24-27 February.
5. **Caulkins, J., Pacula, R., Paddock, S. and Chiesa, J.** (2003) What can we – and can't we – expect from school based drug prevention. *Preventing substance use, risky use and harm: What is evidence based policy. A thematic meeting of the Kettil Bruun Society for Social and Epidemiological Research on Alcohol*. Fremantle, 24-27 February.
6. **Midford, R., Munro, G., McBride, N., Snow, P. and Ladzinski, U.** (2002) Principles that underpin effective school based drug education. *Journal of Drug Education*, 32, 4: 363-386.
7. **McBride, N. and Scott, K.** (2002) *Australian education system: Procedures and process for the adoption of new programs. Preliminary SHAHRPDissemination Study*. National Drug Research Institute, Perth, Western Australia.
8. **Crane, R., Dimitrijevic, S. and Flynn, B.** (2003) The WA School Drug Education Project: Building a statewide model from national research. *Preventing substance use, risky use and harm: What is evidence based policy. A thematic meeting of the Kettil Bruun Society for Social and Epidemiological Research on Alcohol*. Fremantle, 24-27 February.
9. **Webster-Stratton, C. and Taylor, T.** (2001) Nipping early risk factors in the bud: preventing substance abuse, delinquency, and violence in adolescence through interventions targeted at young children (0-8 years). *Prevention Science*; 2, (3): 165-192.
10. **Shonkoff, J. and Phillips, D. (Eds).** (2000) *From neurons to neighbourhoods. The science of early child development*. National Research Council Institute of Medicine. National Academy Press, Washington, DC, USA..
11. **Tobler, N., Lessard, T., Marshall, D., Ochshorn, P. and Roona, M.** (1999) Effectiveness of school-based drug prevention programs for marijuana use. *School Psychology International*; 20, 1: 105-137.
12. **White, D. and Pitts, M.** (1997) *Health promotion with young people for the prevention of substance misuse*. NHS Centre for Reviews and Dissemination, University of York, York, UK.
13. **Midford, R. and McBride, N.** (1997) *National Initiatives in Drug Education: Interim evaluation report*. National Centre for Research into the Prevention of Drug Abuse, Perth, Western Australia.
14. **Tobler, N. and Stratton, H.** (1997) Effectiveness of school based drug prevention programs: A meta-analysis of the research. *Journal of Primary Prevention*; 18, 1: 71-128.
15. **Single, E., Beaubrun, M., Mauffret, M., Minoletti, A., Moskalewicz, J., Moukolo, A., Plange, N., Saxena, S., Stockwell, T., Sulkunen, P., Suwaki, H., Hoshigoe, K. and Weiss, S.** (1997) Public drinking, problems and prevention measures in twelve countries: Results of the WHO project on public drinking. *Contemporary Drug Problems*; 24: 425-448.
16. **McBride, N., Midford, R., Farrington, F. and Phillips, M.** (2000) Early results from a school alcohol harm minimisation study. The School Health and Alcohol Harm Reduction Project. *Addiction*; 95, 7: 1021-1042.
17. **McBride, N.** (2002) *School Health and Alcohol Harm Reduction Project: Reducing Alcohol Related Harms in Young People*. Phd Thesis. National Drug Research Institute, Curtin University of Technology, Perth, Western Australia.
18. **Paglia, A. and Room, R.** (1998) *Preventing substance use problems among youth: Literature review and recommendations*. Addiction Research Foundation and Addiction and Mental Health Services Corporation, Ontario, Canada.
19. **McLeod, J.** (1997) *Rethinking drinking: You're in control. An alcohol education program for secondary students. Reflections on the development, implementation and strengths of the program*. Youth Research Centre, Faculty of Education, University of Melbourne, Victoria.
20. **Toumbourou, J.W.** (2003) What are the risk and protective factors predicting harmful youth substance use and what are the policy implications? *Preventing substance use, risky use and harm: What is evidence based policy. A thematic meeting of the Kettil Bruun Society for Social and Epidemiological Research on Alcohol*.

project notes

A selected review of what works in the area of prevention of psychoactive substance use

David Hawks, Katie Scott, Nyanda McBride, Paul Jones and Tim Stockwell

This research, accomplished as a collaborative effort between NDRI and the World Health Organisation, Geneva set out to determine what evidence exists for the efficacy of preventive interventions in five circumscribed areas; (i) regulation of physical and economic availability of alcohol (ii) regulation of physical and economic availability of illicit psychoactive substances (iii) use of the mass media (iv) community-based initiatives and (v) use of school based education.

Searches of the empirical literature were undertaken covering the period 1985-June 2001 employing a number of strategies and inclusion criteria with an attempt to cover all geographic regions, developing and developed countries.

A total 1265 studies were identified, and this number was then reduced by applying Cochrane's guidelines for assessing study quality to those studies emanating from industrial countries. As it was only possible to identify a very limited number of studies deriving from developing countries, and given the project's particular interest in such studies, all were included regardless of their quality although the material was then rigorously evaluated. The studies in each of the five study areas were reviewed, and some broad conclusions have been drawn with a view to highlighting what has been shown to work:

• **Regulation of the physical and economic availability of alcohol**

The regulated availability of alcohol in most countries has meant that it has been the most intensely studied of the psychoactive substances reviewed in this document. Changes in its availability whether effected by lowering the age of its legal availability, decreasing its cost in real terms, or increasing the number of outlets from which it can be legally sold have all been found to increase its consumption. Such increases in developing countries previously characterized by lower levels of consumption is of particular concern especially in view of the lack of infrastructure to treat the problems associated with such

consumption. A variety of measures including the introduction of random breath testing, the strict enforcement of liquor licensing laws and the adoption of responsible serving practices had been found to reduce alcohol related problems in countries having the means to impose such sanctions. Increasing the real cost of alcohol or at least not allowing its erosion by means of taxation has been found to be one of the most effective though least popular means of reducing problems associated with alcohol. The availability of localized data in some countries has allowed a particularly detailed study of the effects of certain policies and of the characteristics of premises associated with high levels of alcohol related problems.

• **Regulation of the physical and economic availability of illicit psychoactive substances**

The covert nature of both illicit psychoactive substance use and supply poses particular problems for the evaluation in measures intended to address these variables. Measures adopted across entire countries rarely lend themselves to evaluation or comparison. Of greater interest from a scientific point of view are initiatives taken by particular states or jurisdictions where the possibility exists of before and after comparisons or time series analysis. The legislative regulation of cannabis and its attendant police operations have been the most intensely studied at least in North America and Australia, the findings of which have led to various policy proposals. Other attempts to regulate the availability of illicit psychoactive substances employing a variety of policing policies have been found to affect the shape of the market, the purity of the substances available and their price, though without in any permanent way eradicating it.

• **Mass Media**

The use of the mass media on its own, particularly in the presence of other countervailing influences, has not been found to be an effective way of reducing different types of psychoactive substance use. It has however been found to raise information levels and to lend support to policy initiatives. Combined with reciprocal and complimentary community action, particularly environmental changes, media campaigns have proved more successful in influencing attitudes towards psychoactive substance use and use itself. Health warnings associated with licit psychoactive substance use have been an effective way of communicating the hazards of

such use particularly to heavy users if combined with other economic and environmental initiatives.

• **Community-based interventions**

The complexity of evaluating the many initiatives which make up any community based intervention has meant that very few such interventions have been rigorously evaluated. Those that have been tend to focus on a small number of discrete outcome variables such as drink driving convictions and to have employed matched communities or time series analysis. Changes have been more often observed in such areas as acceptance of health orientated policies and increased knowledge. For such changes to be sustained requires that they be institutionalized which itself provides that the initiatives be supported by the relevant community agencies.

• **School-based interventions**

School based educational programs have been among the most popular preventive measures, many of which occur, however without any formal assessment of impact on behaviour. To be effective they need to be provided at a developmentally appropriate time and particularly when interventions are most likely to have an impact on behaviour. Programs need to be relevant to young people's life experience by providing material during the period when most students are experiencing initial exposure to psychoactive substances, using local prevalence data. Complementary general health/life skills programs appear to produce greater change than skill-based education programs alone, suggesting that psychoactive substance use education is best integrated within a well-founded health curriculum. Pre-testing of a program with students and teachers to ensure its relevance is important in establishing its behavioural effectiveness. While the majority of studies reviewed, deriving mainly from the US, have abstinence as their goal, there is evidence that programs with this goal consistently fail to produce behavioural effects suggesting that there is a need to develop programs that aim for other outcomes.

While not exhaustive, this review is considered to be exemplary of studies in the five areas selected for examination. The full publication is available on the NDRI website at <http://www.ndri.curtin.edu.au/> (see *Recent Publications* in this issue for reference).

Alcohol-related codes: Mapping ICD-9 to ICD-10

Tanya Chikritzhs, Paul Catalano and Tim Stockwell with Liz Unwin and Jim Codde, WA Department of Health

Researchers investigating the epidemiological impact of drugs on health routinely use aetiologic fractions to estimate drug-caused morbidity and mortality. Australia-specific aetiologic fractions for this purpose were developed by Holman *et al* in 1990. They determined the conditions for which there was adequate evidence that drugs were a

contributing factor and the extent to which drugs contributed to the disease or injury by conducting meta-analyses of published scientific literature. The alcohol-related conditions and aetiologic fractions were revised by English *et al* in 1995, and again by Ridolfo and Stevenson in 2001.

Underpinning the aetiologic fraction methodology is the identification of deaths or admissions from drug-related conditions using standard codes, ie the International Classification of Diseases (ICD). The drug-related conditions identified in the three reports were all defined using well established ICD-9-CM2 codes. Since these publications, however, the coding of causes of death and

reasons for presentation to hospital have changed to ICD-10. Due to this major overhaul in the coding system, it has been necessary to establish a new set of ICD-10 codes for drug-related diseases and conditions.

A working group from the National Drug Research Institute and the Department of Health, Western Australia has been addressing the problems involved in mapping alcohol-related conditions from ICD-9 to ICD-10. A report documenting the issues identified and providing a summary of the consensus recommendations reached by the two centres has been published (see *Recent Publications* in this issue).

abstracts

A snapshot of licit and illicit drug use among fishing industry workers in WA

Susan Carruthers, Kevin Boots and Richard Midford

Drug and Alcohol Review, 2002, 21, (4), 357-362

This paper describes the perceptions of boat owners and regional health workers about the use of alcohol and illicit substances within the West Australian mid-west fishing industry. It also reports on a survey conducted amongst fishing industry workers concerning their consumption of alcohol and illicit drugs while at sea and in port. Boat owners and health workers perceived that cannabis and alcohol were the most commonly consumed substances, a perception borne out by the results of the survey. While levels of illicit drug use for this group were lower than those reported in the fishing industry in an Eastern Australian state (Queensland) they were nonetheless considerably higher than those recorded for the general population aged 35 years in a National Drug Survey. Alcohol use was particularly high and binge drinking frequently described. The results are compared with other industry findings and discussed in terms of occupational health and safety. Recommendations are suggested for future prevention programs.

The impact of later trading hours for Australian public houses (hotels) on levels of violence

Tanya Chikritzhs and Tim Stockwell

Journal of Studies on Alcohol, 2002, 63, (5), 591-599

Objectives. To examine the impact of later trading hours for licensed hotels in Perth, Western Australia on levels of violent assault on or near these premises. **Methods.** Data on assault offences reported to police between July 1 1991 and June 30 1997 were examined to identify those that occurred on or close to hotels. During this period 45 (24%) of the 188 hotels meeting study criteria were granted an Extended Trading Permit for 1am closing ("ETP hotels") while the rest continued to close at midnight ("non-ETP hotels"). A time series analysis employing linear regression was used to test whether there was a relationship between the introduction of extended trading and monthly rates of assaults associated with ETP hotels while controlling for the general trend in assault rates among normally trading hotels. Possible confounders and other variables of interest including levels of alcohol purchases were also examined. **Results.** After controlling for the general trend in assaults occurring throughout Perth hotels, there was a significant increase in monthly assault rates for hotels with late trading following the introduction of extended trading licenses. This relationship was largely accounted for by higher volumes of high alcohol content beer, wine and spirits purchased by late trading hotels. **Conclusions.** Late trading was associated with both increased violence in and around Perth hotels and levels of alcohol consumption during the study period. It was suggested that greater numbers of patrons and increased levels of intoxication contributed to the observed increase

in violence and that systematic planning and evaluation of late trading licenses was required.

Potential impacts on the incidence of fatal heroin-related overdose in Western Australia: A time-series analysis

Kim Hargreaves, Simon Lenton, Mike Phillips, Greg Swensen

Drug and Alcohol Review, 2002, 21, 321-327

In response to the rising concerns about the rate of heroin-related fatalities, overdose prevention campaigns, run by both users' organizations and government agencies, have been implemented in a number of states across Australia. In Western Australia (WA) in mid-1997, various overdose prevention initiatives were implemented. These included the implementation of a protocol limiting police presence at overdose events; the commencement of naloxone administration by ambulance staff; and the establishment of the Opiate Overdose Prevention Strategy (OOPS) which provided follow-up for individuals treated for overdose in emergency departments. This paper reports the results of a multiple linear regression analysis of 60 months of time-series data, both prior to and following the implementation of these interventions, to determine their impact on the number of fatal heroin overdoses in WA. The model employed in the analysis controlled for changes over time in proxy indicators of use and community concerns about heroin, as well as market indicators. The results suggest that, although the interventions implemented have managed to reduce the expected number of fatalities, they have become less successful in doing so as time passes. This has implications for both existing and potential interventions to reduce fatal heroin-related overdose.

The influence of extrinsic and intrinsic risk factors on the probability of sustaining an injury

Roberta McLeod, Tim Stockwell, Rosanna Rooney, Margaret Stevens, Mike Phillips and George Jelinek

Accident Analysis & Prevention, 2003, 35, (1), 71-80

This study was designed to quantify the contribution of both extrinsic and intrinsic risk factors on behaviour that results in injury using logistic regression analysis. A case-control design using data collected from injured patients at an emergency department (n=797) and a community sample matched on time of injury (n=797) was used in the analysis. Two hypothesis were suggested and supported by the results; 1) extrinsic factors such as location, activity, drug and alcohol use and the type of people present at the time of the injury were related to a greater risk of injury than intrinsic variables (health risk taking and preference for

risk taking) and, 2) there was a significant association between measures of extrinsic and intrinsic risk taking on injury risk. The result of this research suggests prevention strategies that target the situation and environment rather than the individual may result in the greatest reduction in injury. Therefore, further research needs to identify and specify the particular factors that increase and decrease injury risk in these situations.

Principles that underpin effective school-based drug education

Richard Midford, Geoffrey Munro, Nyanda McBride and Ursula Ladzinski

Journal of Drug Education, 2002, 32, (4), 363-386.

This study identifies the conceptual underpinnings of effective school-based drug education practice in light of contemporary research evidence and the practical experience of a broad range of drug education stakeholders.

The research involved a review of the literature, a national survey of 210 Australian teachers and others involved in drug education, and structured interviews with 22 key Australian drug education policy stakeholders. The findings from this research have been distilled and presented as a list of 16 principles that underpin effective drug education. In broad terms drug education should be evidence based, developmentally appropriate, sequential and contextual. Programs should be initiated before drug use commences. Strategies should be linked to goals and should incorporate harm minimisation. Teaching should be interactive and use peer leaders. The role of the classroom teacher is central. Certain program content is important, as is social and resistance skills training. Community values, the social context of use, and the nature of drug harm have to be addressed. Coverage needs to be adequate and supported by follow-up. It is envisaged that these principles will provide all those involved in the drug education field with a set of up to date, research based guidelines against which to reference decisions on program design, selection, implementation and evaluation.

recent publications

Monographs and Technical Reports

Chikritzhs, T., Unwin, L., Codde, J., Catalano, P. and Stockwell, T.R. (2002) *Alcohol-related codes: Mapping ICD-9 to ICD-10*. National Drug Research Institute, Curtin University of Technology, Perth, Western Australia. ISBN: 1 74067 1872

Cooper, M., Lennard, M. and Midford, R. (2002) *CHAMP Healthway Final Report. A report prepared for Healthway*. National Drug Research Institute, Curtin University of Technology, Perth, Western Australia.

Hawks, D., Scott, K., McBride, N., Jones, P. and Stockwell, T. (2002) *Prevention of psychoactive substance use: A selected review of what works in the area of prevention*. World Health Organization, Geneva.

Fetherston, J. and Lenton, S. (2002) *WA Drug Trends 2002 – Findings from the Illicit Drug Reporting System (IDRS)*. National Drug and Alcohol Research Centre, Sydney, NSW. NDARC Technical Report No. 149.

McBride, N. and Farrington, F. (2002) *SHAHRP 2000 Alcohol Education Program for Senior Secondary Students. Final report*. National Drug Research Institute, Curtin University of Technology, Perth, Western Australia.

McBride, N. and Scott, K. (2002) *Australian education system: Procedures and processes for the adoption of new programs. Preliminary SHAHRP dissemination study*. National Drug Research Institute, Curtin University of Technology, Perth, Western Australia.

Moriarty, M., Lindsay, F. and Midford, R. (2002) *Australian Drug Information Network Website Evaluation Report: A report prepared for the Commonwealth Department of Health and Ageing*. Australian Drug Foundation, Melbourne, Victoria.

Wayte, K. and Midford, R. (2002) *The legacy of COMPARI: An evaluation of what remained from a community mobilisation project to reduce alcohol related harm*. National Drug Research Institute, Curtin University of Technology, Perth, Western Australia.

Published Articles, Chapters and Books

Carruthers, S.J., Boots, K. and Midford, R. (2002) A snapshot of licit and illicit drug use among fishing industry workers in WA. *Drug and Alcohol Review*, 21, (4), 357-362.

Chikritzhs, T. and Stockwell, T.R. (2002) The impact of later trading hours for Australian public houses (hotels) on levels of violence. *Journal of Studies on Alcohol*, 63, (5), 591-599.

Gray, D. and Siggers, S. (2002) Indigenous health: The perpetuation of inequality. In Germov, J. *Second Opinion: An Introduction to Health Sociology*. Oxford University Press, Melbourne.

Gray, D., Siggers, S., Hulse, G.K. and Atkinson, D. (2002) An approach to substance misuse problems among Indigenous Australians. In Hulse, G.K., White, J. and Cape, G. *Management of Alcohol and Drug Problems*. Oxford University Press, Melbourne. pp. 310-327.

Hargreaves, K., Lenton, S., Phillips, M., and Swensen, G. (2002) Potential impacts on the incidence of fatal heroin-related overdose in Western Australia: A time series analysis. *Drug and Alcohol Review*, 21(4), 321-327.

McLeod, R., Stockwell, T.R., Rooney, R., Stevens, M., Phillips, M. and Jelinek, G. (2003) The influence of extrinsic and intrinsic risk factors on the probability of sustaining an injury. *Accident Analysis & Prevention*, 35, (1), 71-80.

Midford, R. (2003) What is community mobilisation and how does it work to prevent alcohol and drug harm? *DrugInfo*, 1, (4), 3.

Midford, R., Munro, G., McBride, N. and Ladzinski, U. (2002) Principles that underpin effective school-based drug education. *Journal of Drug Education*, 32, (4), 363-386.

staff list

National Drug Research Institute

Staff as at 1 April 2003

Tim Stockwell	Director, Professor
Dennis Gray	Deputy Director, Associate Professor
Wendy Loxley	Associate Professor
Simon Lenton	Senior Research Fellow
Richard Midford	Senior Research Fellow
David Moore	Visiting Senior Research Fellow
Susan Carruthers	Research Fellow
Tanya Chikritzhs	Research Fellow
Nyanda McBride	Research Fellow
Paul Catalano	Research Associate
Francoise Chanteloup	Research Associate
James Fetherston	Research Associate
Dennis Kicket	Research Associate
Brooke Sputore	Research Associate
Anna Stearne	Research Associate
Deidra Young	Research Associate
Fiona Farrington	Project Officer
Phillipa Stempel	Research Officer
Fran Davis	Business Manager
Rachael Lobo	Media Liaison Officer
Paul Jones	Computer Systems Officer
Matthew Webb	Librarian
Susan Wilson	Secretary
Linda Matthews	Administrative Assistant
Philippa Greaves	Clerical Officer
Penny Heale	PhD Student
Jane Ulrik	PhD Student

Emeritus Professor

Professor David Hawks

Adjunct Appointments

Professor Eric Single	Professor
Dr Sherry Siggers	Associate Professor
Dr Richard Fordham	Senior Research Fellow
Dr Toni Makkai	Senior Research Fellow
Dr Margaret Stevens	Research Fellow
Mr Kevin Boots	Research Fellow
Mr Neil Donnelly	Research Fellow

Honorary Staff

Prof Colin Binns	Professorial Fellow
Dr Peter d'Abbs	Senior Research Fellow
Dr Helen Jonas	Senior Research Fellow
Mr Mike Phillips	Senior Research Fellow
Ben Haines	Research Fellow

feedback & subscriptions

We welcome your feedback on all issues discussed in CentreLines. If you would like to write to us, please send all correspondence to the Editor at the address below.

If you currently subscribe to CentreLines and require future issues to be sent to a new address, please fill out the Change of Address form.

If you would like to be included on the CentreLines subscription list, please fill out the New Subscriber form. Please indicate on the form whether you wish to receive all issues, or only those focusing on treatment (NDARC issues) or prevention (NDRI issues).

Please return completed forms to:

CentreLines, National Drug Research Institute
Curtin University of Technology, GPO Box U1987, Perth WA 6845
Fax (08) 9486 9477

New Subscriber Details

Please add me to the mailing list for my free copies of *CentreLines*.

Name: Ms / Mr / Dr _____
Title: _____
Organisation: _____
Department: _____
Address: _____
Postcode: _____
Phone No: _____
Fax No: _____
Issues Required: NDARC NDRI Both

Change of Address

Please alter my details on the mailing list for my free copy of *CentreLines*.

Name: Ms / Mr / Dr _____
Title: _____
Organisation: _____
Department: _____
Address: _____
Postcode: _____
Phone No: _____
Fax No: _____
Issues Required: NDARC NDRI Both

National Drug Research Institute
Curtin University of Technology
GPO Box U1987 Perth WA 6845
www.ndri.curtin.edu.au

National Drug and Alcohol Research Centre
University of New South Wales
Sydney NSW 2052
www.med.unsw.edu.au/ndarc