

centre lines

NDARC (9)

December 2002

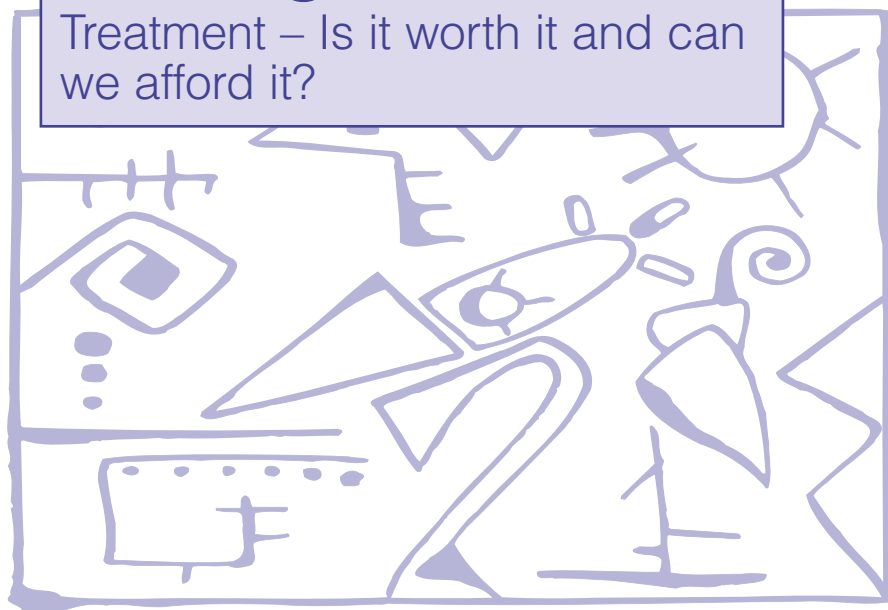
A bi-monthly newsletter from the National Centres for Drug and Alcohol Research
Published this issue by the National Drug and Alcohol Research Centre, Sydney

Funded by the
National Drug Strategy

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

issuing **forth**

Treatment – Is it worth it and can we afford it?



ed**space**

It is difficult to believe that we have now been in the new NDARC premises for well over a year. The number of staff continues to grow and our list of research projects is a credit to all who work here. This issue of *CentreLines* also sees us welcoming the newly appointed Deputy Director, Maree Teesson.

Maree has been with the Centre since 1997 when she was appointed to a Lectureship with responsibility for research on the evaluation of drug and alcohol treatment services. Prior to this she was the Director of the Mental Health Service Research Unit at St Vincent's Hospital, Sydney. She has a long standing interest in mental health and substance use research, including clinical outcome and epidemiological studies of the prevalence and treatment of these disorders and has published a range of peer reviewed papers, books, book chapters and many reports in the area.

To all of us who know Maree we are sure that she will do a great job in her new role. All at NDARC wish her the best in what will be a challenging yet fulfilling position.

One of her first responsibilities has been to write *Headspace* for this issue of *CentreLines*. She examines some of the important issues around treatment and leads into the question – "Is it worth it?" This is then answered by one of NDARC's Health Economists, Dr Chris Doran who explains to us why the whole question of cost effectiveness and health economics has become so important in recent times.

Paul Dillon

contents

ed**space** 1

Paul Dillon introduces *CentreLines*

head**space** 2

Newly appointed NDARC Deputy Director Maree Teesson writes about treatment – Does it work? Can it work? Is it worth it?

issuing **forth** 3

In this month's *Issuing Forth*, NDARC Health Economist Chris Doran continues with the theme on treatment – is it worth it and can we afford it?

project **notes** 5

- Adolescents' beliefs about psychostimulants and psychostimulant drug education
- Patterns of use and experiences of recreational pharmaceutical drug use amongst 'party drug' users
- Drug information needs, sources and credibility among 'party drug' users

abstracts 6

Summaries of recently published articles

recent **publications** 7

staff **list** 8

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

Does it work? Can it work? Is it worth it?

Maree Teesson

In the past 12 months, over a million adult Australians met criteria for a disorder associated with their alcohol or other drug use. Alcohol use disorders are common, drug use disorders are less common than alcohol use disorders but still affect a substantial minority of Australian adults. Yet, treatment seeking among persons with alcohol and other drug use disorders is low^{1,2} and most likely to be sought from general practitioners.

All clinicians are busy and it is unlikely that we will receive sufficient funds to treat all. If we agree that we cannot provide treatment to all then what should be done? One view is that we do not need to treat all and that we should prioritise on the basis of need. However, if we do this and focus on the most disabled we run the risk of running out of resources before we can consider prevention and effective treatment in the less severe, where we may have more impact on health outcomes. How we allocate our scarce treatment resources is an issue which needs to be faced more than ever before.

The answers to three questions about treatment effectiveness should guide our thinking: *Does it work? Can it work? Is it worth it?*

The answer to the question “*Does it work?*” is one of *efficacy* and is answered mostly by well designed randomised controlled trials. Efficacy is proven when clearly specified interventions have been shown to be beneficial in controlled research with a delineated population. A treatment manual or equivalent must be available and used, the results replicated and valid outcome measures and appropriate data analysis conducted. The recent NEPOD study, directed at NDARC, and evaluating the efficacy of alternative pharmacotherapies for heroin dependence addressed the question “*Does it work?*”

These studies are very important and all new treatments should undergo such rigorous evaluation. However, these studies on model programs or innovative treatments do not substitute for the analysis and evaluation of care systems as they are found in everyday practice. New treatments may work well in a model program but be a failure in practice. It is therefore important to gather information which will answer the second question.

“*Can it work?*” This question of *effectiveness* is proven when a specific intervention, when used under ordinary clinical circumstances, does what it is intended to do. Effectiveness studies answer the question “is the intervention used in applied clinical settings and if so, with what patients and under what circumstances?” The recent Australian Treatment Outcome Study: Heroin, being jointly conducted by

NDARC, Drug and Alcohol Services Council of South Australia and Turning Point is examining the treatment outcome for people with heroin dependence who are being treated in applied clinical settings.

What do we know in terms of does it work and can it work in drug and alcohol treatment? Firstly, specialist treatment is only one response that should form part of a general public health approach to reducing alcohol and other drug use disorders. Public health policies that reduce the availability and increase the price of alcohol may also reduce the prevalence of alcohol use disorders. Public education about the risks of alcohol use may help to prevent some alcohol use disorders, while advice on self-help strategies may obviate the need for professional assistance in a substantial proportion of younger milder cases³.

Screening and brief advice for excessive alcohol consumption in general practice and hospital settings has been shown to reduce consumption and the problems caused by alcohol^{4,5}. We accordingly need to improve the capacity of general practitioners to identify alcohol use disorders by routine screening for hazardous and harmful alcohol use and to give advice on cutting down or stopping alcohol use and, when appropriate, referring persons with more severe disorders to specialist services. Screening is of considerable importance for males who were unlikely to seek assistance.

Controlled evaluations have demonstrated that about a third of patients remain abstinent over a year, a third show reductions in their drinking, while the drinking in the remaining third is largely unchanged⁶. More recently new pharmacological treatments such as acamprosate and naltrexone have proven effective in preventing relapse in people with alcohol dependence⁷.

At present, specialist addiction services often involve periods of detoxification and inpatient treatment. There is evidence from well-controlled studies⁸ that in unselected patients with alcohol problems there is at most a small difference in outcome between inpatient treatment and assessment and advice to stop drinking. This indicates that residential or inpatient treatment is not routinely required for all persons with moderate to severe alcohol use disorders but remains as an option for those individuals without adequate resources for alternative treatment.

The treatment response to illicit drug use is complicated by their illegality. The major policies to reduce the availability of illicit drugs have been law enforcement efforts to interdict

drugs at the customs barrier, prevent their distribution, and reduce demand for drugs by prosecuting or diverting illicit drug users into treatment⁹.

The major health policies aimed at reducing drug use disorders have been mass media campaigns to discourage the use of illicit drugs. Among those who are not discouraged, efforts have been made to reduce some of the harmful consequences of drug use. Injecting drug users have been given clean needles and syringes, and educational programs designed by user groups have been used to communicate information about how to reduce drug-related harms.

Withdrawal symptoms were commonly reported by those dependent upon any illicit drugs (72%-96%) as against half (50%) of those who were alcohol dependent. Consistent with this finding, detoxification is one of the interventions most often sought by dependent heroin users. It is a palliative treatment for opioid withdrawal that provides heroin users with a respite from drug use and provides an opportunity for outreach and education¹⁰.

Drug substitution treatment substitutes a longer-acting, usually orally administered, opioid drug for the shorter-acting heroin typically used by injection. It aims to stabilise the dependent heroin user so that they become more accessible and amenable to rehabilitation. They are among the most popular forms of treatment with heroin users. There has been a major increase in the provision of treatment for drug use disorders in Australia. Methadone maintenance therapy is the most common form of drug substitution worldwide and until recently, it has been the only type of opioid substitution treatment that is routinely provided in Australia. It has been shown to be a good investment of community resources¹¹. Which brings us to the third question.

“*Is it worth it?*” This is the question of cost effectiveness and it determines the economic benefit of an intervention. Economic analyses of treatment outcome in the drug and alcohol field are relatively new and are still rare. Dr Chris Doran is a Health Economist who worked on the National Evaluation of Pharmacotherapies for Opioid Dependence project and is directing a program of research in health economics at NDARC. He discusses this work in *Issuing Forth*. Health economics is growing into a major research area and is a focus of research at the Centre.

This is my first *Headspace* as Deputy Director of NDARC and I look forward to working with you all. **cl**

References

- 1. Teesson, M., Hall, W., Lynskey, M., & Degenhardt, L.** (2000). Alcohol and drug use disorders in Australia: Implications of the National Survey of Mental Health and Well-being. *Australian and New Zealand Journal of Psychiatry* 34, 206-213.
- 2. Proudfoot, H. & Teesson, M.** (2002). Who gets treatment for alcohol use disorders in Australia? Findings from the Australian National Survey of Mental Health and Wellbeing. *Social Psychiatry and Psychiatric Epidemiology* 37, 451-456.
- 3. Hall, W. & Teesson, M.** (2000). Alcohol dependence: Who should be treated and how? in **Andrews, G. & Henderson, S.** *The unmet need for treatment*. Cambridge University Press, 290-301.
- 4. Wilk, A.I., Jensen, N.M., & Havighurst, T.C.** (1997). Meta-analysis of randomised control trials addressing brief interventions in heavy alcohol drinkers. *Journal of General Internal Medicine* 12, 274-283.
- 5. Nathan, P.E. & Gorman, J.M.** (1998). *Treatments that work*. Oxford University Press, New York.
- 6. Mattick, R.P. & Jarvis, T.** (eds.) (1993). *An Outline for the Management of Alcohol Dependence and Abuse*. Quality Assurance Project. National Drug Strategy Monograph, Canberra.
- 7. Whitworth, A.B.** (1996). Comparison of acamprosate and placebo in long-term treatment of alcohol dependence. *Lancet* 347, 1438-1442.
- 8. Finney, J.W., Hahn, A.C. & Moos, R.H.** (1996). The effectiveness of inpatient and outpatient treatment for alcohol abuse: The need to focus on mediators and moderators of setting effects. *Addiction* 91, 1773-1796.
- 9. Hall, W.** (1992). The Australian debate about the legalisation of heroin and other illicit drugs, 1988-1991. *Journal of Drug Issues* 22, 563-577.
- 10. Hall, W. & Mattick, R.P.** (1996). Are detoxification programmes effective? *Lancet* 347, 97-100.
- 11. Ward, J., Mattick, R.P. & Hall, W.** (eds) (1998). *Methadone Maintenance Treatment and Other Opioid Replacement Therapies*. Harwood Academic Press, Amsterdam.

issuing forth

Drug and alcohol treatment: Is it worth it and can we afford it?

Chris Doran

In this month's *HeadSpace*, Maree Teesson raised three important questions related to drug and alcohol treatment: does it work? Can it work? Is it worth it? The accumulation of evidence over the past few decades has demonstrated unequivocally that drug and alcohol treatment can work. Research in the drug and alcohol field has provided the impetus to bring about change in the provision of drug and alcohol treatment. This evidence-based research has led to the development, and in some instances the adoption, of best practice guidelines. It has provided the platform for the strategic direction of drug and alcohol treatment in Australia.

The rationale for identifying effective strategies to treat drug and alcohol users is based on the premise that treatment provides an opportunity to alleviate the burden of harm associated with drug and alcohol use, or more appropriately, misuse. To this end, treatment appears to be a good investment. However, the argument that the social benefit gained from providing treatment outweighs the cost, has been to a large extent implicit. Recently, there has been increased pressure to supplement research on the effectiveness of drug and alcohol treatment with evidence on cost-effectiveness.

Cost-effectiveness is a type of economic evaluation, often used synonymously with the term 'value for money'. The aim of a cost-effectiveness analysis is to compare alternative treatments in which the costs and consequences of the treatment vary¹. Such an evaluation can provide objective indicators as to where resources should be allocated, particularly at the margin. For example, given that resources are to be allocated to treating heroin users, would better value for money be achieved by using methadone or buprenorphine as the primary maintenance medication?

Another type of economic evaluation, namely cost-benefit, can also be used to identify the potential benefit of specific drug and alcohol interventions or treatment in general. In cost-benefit analysis, all costs incurred and the resulting benefits are expressed in monetary units, and a net monetary gain/loss or cost/benefit ratio is computed¹. An added advantage of using cost-benefit is that it can provide evidence on the appropriate allocation of funds across different health fields. For example, would more benefit be achieved for the same cost if resources were allocated to drug and alcohol treatment per se or the treatment of AIDS?

Although identification of cost-effective interventions can help answer questions regarding the relative worth (or efficiency) of competing interventions, questions about what can work, what does work, and what is cost-effective, are superseded (at least from a policy point of view) by the question of whether a particular treatment is affordable. Although, researchers and clinicians often argue the reverse, that is, how can we not afford to implement proven treatments, there is a real cost constraint that impacts directly on the range of health care services that can be provided. To address the issue of affordability it is worthwhile to consider the fiscal state of our health climate.

Over the period 1989-90 and 1999-00 expenditure on health services increased at an annual rate of 4% from \$28.8 billion (\$1,700 per person) to \$52.5 billion (\$2,817 per person)². Recurrent expenditure (i.e., expenditure on goods and services which are used up in the year) on health services in 1998-99 was \$47.5 billion. Hospitals accounted for 38% of this expenditure (\$18 billion), medical services \$9 billion (19%),

pharmaceuticals \$5.8 billion (12.3%), dental services \$2.57 billion (5.4%), and research \$0.725 billion (1.5%). In relative terms, our expenditure on health as a proportion of our productive capacity, as measured by gross domestic product (GDP), was 8.5%. This proportion is similar to that spent on health by our major trading nations: the UK spends the lowest at 6.9% of GDP while the USA spends the highest at 12.9% of GDP².

The increase in health expenditure over the period 1989-90 to 1999-00, in both absolute and relative terms, is influenced by a number of contributing factors, in particular inflation and changes in the level of services used, either from population growth or from more intensive per person use of services. Over this period, there has been a 2.3% increase in general inflation and a 0.7% increase in excess health inflation². The general rate of inflation is an indication of price pressures that apply throughout the economy while the rate of excess inflation indicates additional price rises specific to the health services sector. When there is an excess rate of health inflation, the cost of health service technology is increasing at a faster rate than the cost of living in general. Essentially, this means that for the same relative investment in health services, we are receiving less and less in return. Adding into the equation the aging population and higher utilisation of (more expensive) medications, it is of no surprise that there has been more attention paid to justifying the relative worth of treatment.

Within the context of a concerning growth in the health care bill, it is appropriate to ask the question of whether we can afford drug and alcohol treatment? If drug and alcohol use were not harmful to one's health, or did not impact adversely on society, then there would be no justification to devote resources to drug and alcohol treatment. However, this is not the case, and a clear argument can be made to justify expenditure.

Data from the 1998 National Drug Strategy Household Survey suggest that, in the last 12 months, around 26.4% of Australians aged 14 years and over had used tobacco, 22% had used an illicit drug, and 80.7% had consumed alcohol³. The epidemiological consequences associated with drug and alcohol use have been well researched with evidence now

confirming that the use, and in particular, the misuse, of drugs and alcohol do result in significant harm to the user's health. Ridolfo and Stevenson have used epidemiological principles to quantify the drug caused morbidity and mortality in Australia⁴. As reported in Table 1, an estimated 4% of all hospital separations and 17% of all deaths were attributable to drug and alcohol use in 1998. Those people losing their lives to drug and alcohol lost a total of 231,101 years of life, equivalent to 10.45 years per person. It is important to note that the majority of drug related morbidity and mortality arises from the use of tobacco smoking.

These epidemiological and economic data tend to support the general conclusion that we cannot afford not to invest in drug and alcohol research and treatment. It is generally accepted that with appropriate funds, well-designed research projects can be conducted, economic evaluations can ascertain value for money and clear policy direction can be provided to decision makers. To achieve these objectives, it is reasonable to assume that the level of funding provided would be commensurate with the revenue received from licit drug sales. However, the current allocation of funds devoted to licit drug research and treatment

in 17% of all deaths and the economic data indicating that the economic cost of drug and alcohol abuse is \$21.21 billion (of which 52% is avoidable), clearly suggests that the proportion of funds returned to drug and alcohol programs should be higher. Although there are likely to be many competing, political reasons why government do not allocate more funds to drug and alcohol treatment, it is difficult to ignore the corollary that any reduction in the consumption of tobacco or alcohol will impact negatively on the existing drug and alcohol revenue base.

In summary, to questions of can it work? does it work? and is it worth it?, I would add another – can we afford it? From the evidence to date, we know that drug and alcohol treatment can work. Through the wider adoption of health economics into drug and alcohol treatment evaluation, more reliable evidence on the relative worth of certain strategies should be forthcoming. What will always remain a contentious issue is the question of affordability. Health budgets have always been tight and resources to improve the health and wellbeing of the population have, and always will, compete with other government objectives. However, based on the available epidemiological and economic evidence, the current allocation of funds to drug and alcohol research and treatment appears inconsistent with the burden of harm arising from drug and alcohol use. It is important that governments look beyond short-term fiscal gain of taxation receipts and think more seriously about the long-term health and economic implications of drug and alcohol use. **cl**

Table 1: Estimates of drug related morbidity and mortality

	Number of hospital separations	Potential years of life lost	Number of deaths
Alcohol	43,032	21,147	2,065
Illicit	14,471	25,375	1,023
Tobacco	142,525	184,579	19,019
Sub-total D&A	200,028	231,101	22,107
Australia	5,563,074	1,350,000	127,194
% D&A / Aust	4%	17%	17%

Source: Ridolfo and Stevenson⁴ and Australia's Health 2002²

Table 2: Revenue received from excise and taxes on alcohol and tobacco 1997-98

Government	Total revenue (\$m)	Total funding (\$m)
NSW	1,037	Not provided
VIC	693	49.114
QLD	604	20.133
WA	351	24.154
SA	275	11.123
TAS	96	4.907
ACT	47	4.093
NT	57	15.466
Commonwealth	4,145	36
NATIONAL TOTAL	7,305	164.99

Source: Alcohol and other Drugs Council of Australia⁷

The epidemiological data reported in Table 1 substantiates the need for the allocation of resources towards drug and alcohol treatment. This view is further reinforced by the fact that the misuse of alcohol and drugs imposes considerable economic cost on the health care system and society in general. Collins and Lapsley attempted to quantify the economic costs associated with the misuse of drug and alcohol⁵. Adjusting their 1992 estimates to 1998 dollars (using the general rate of inflation⁶), suggests that the total economic cost of drug abuse was \$21.21 billion, of which tobacco accounts for 67% (\$14.28 billion), alcohol 24% (\$5.04 billion) and illicit drug abuse 9% (\$1.89 billion). The authors calculate that approximately 52% (or \$11.13 billion when adjusted for inflation) of total costs are potentially avoidable. As defined by Collins and Lapsley, avoidable costs are those which are amenable to public policy initiatives and behaviour changes⁵.

programs appears to be disproportionately low. Table 2 provides an overview of revenue received from alcohol and tobacco taxes and the level of funding for drug programs and services through Health Departments. These data have been compiled by the Alcohol and other Drugs Council of Australia and relate to the fiscal year 1997-98⁷.

Table 2 reports that the government collected \$7.3 billion in revenue from the taxation of alcohol and tobacco products in 1997-98. This revenue alone would have paid for 15.5% of the nations total health bill for that year (\$7,305 million / \$47,030 million)⁸. In the same year, a total of \$164.99 million, or 2.3% of this taxation revenue, was returned to drug and alcohol programs. Although these data suggest that an imbalance does exist, it is difficult to quantify the actual amount that should be allocated. However, the epidemiological evidence that drug and alcohol use results

References

- 1. Drummond, M.F., O'Brien, B., Stoddart, G.L., & Torrance, G.W.** (1987). *Methods for the economic evaluation of health care programmes*. Oxford: Oxford University Press.
- 2. Australian Institute of Health and Welfare** (2002). *Australia's health 2002: The eighth biennial health report of the Australian Institute of Health and Welfare*. Canberra: AIHW.
- 3. Australian Institute of Health and Welfare** (1999). *1998 National Drug Strategy Household Survey: First Results*. Canberra: AIHW (Drug Statistics Series).
- 4. Ridolfo, B. & Stevenson, C.** (2001). *The quantification of drug-caused mortality and morbidity in Australia, 1998*. AIHW (Drug Statistics Series No. 7): Canberra.
- 5. Collins, D.J. & Lapsley, H.** (1996). *The social costs of drug abuse in Australia in 1988 and 1992. National Drug Strategy Monograph Series No. 30*. Canberra: Commonwealth Department of Human Services and Health.
- 6. Australian Bureau of Statistics** (2001). *Consumer Price Index*. Canberra: ABS.
- 7. Alcohol and other Drugs Council of Australia** (1999). *Drugs, Money and Governments 1997-98*. Woden: Alcohol and other Drugs Council of Australia.
- 8. Australian Institute of Health and Welfare** (2000). *Australia's Health 2000: The seventh biennial health report of the Australian Institute of Health and Welfare*. Canberra: AIHW.

project notes

Adolescents' beliefs about psychostimulants and psychostimulant drug education

Jan Copeland, Paul Dillon and Michael Gascoigne

In 2000, NDARC was commissioned to conduct a survey by the New South Wales Department of Education and Training designed to determine young current cannabis users beliefs about the important issues regarding cannabis education in schools, their experience of drug education and their opinions of how it might be made more effective. The results of this survey have been disseminated to teachers across NSW and have proven useful in developing future drug programs in school settings.

In recent years, the psychostimulants (e.g. amphetamines, ecstasy and cocaine) appear to have become more popular and increasingly more available. Eight per cent of males aged between 12-17 years have tried amphetamines ('speed') according to the Second National Survey on the Use of Over-the-Counter and Illicit Substances by Secondary Students (1999), with a slightly lower figure for females (7%). The survey also indicated that ecstasy had been tried by 5% of males and 3% of females aged between 12-17 years.

The education departments of many states and territories have not designed specific curriculum materials on drugs such as speed or ecstasy and it is often left to the teacher's discretion as to whether and in what manner a particular drug will be addressed. Many teachers are requesting guidance on how and when to introduce drug education about this increasingly popular range of drugs and how to best handle the issue of party drugs, in general.

Therefore, the NSW Department of Education and Training has funded this survey to determine what young current psychostimulant (ecstasy or amphetamine-like drugs) users believe to be important issues regarding these drugs. It will also examine psychostimulant drug education in schools, the users' experience of this drug education and their opinions of how it might be made more effective.

A literature review on the patterns of use and effects of psychostimulants will also be written, with a particular focus on the 12-18 years age group. This will be supplemented by targeted research with young people aged 15-18 years that have used psychostimulant drugs in the last 12 months and are currently or have recently (in the last 12 months) attended NSW high schools, in order to inform the development of school-based prevention strategies.

The face-to-face structured interviews will include one hundred young psychostimulant users from Sydney and up to another one hundred in two rural areas of NSW. Recruitment for this study will commence in January and February and we hope to begin analysis by May 2003.

Patterns of use and experiences of recreational pharmaceutical drug use amongst 'party drug' users

Paul Dillon, Jan Copeland and Michael Gascoigne

Party drug users, many of whom have become disillusioned with, or tolerant to the effects of, ecstasy appear to be looking for ways to increase and/or lengthen their period of party drug intoxication. The use of pharmaceutical medications in conjunction with party drugs appears to be increasing. These drugs may be combined to increase the effect of the party drug or may also be an attempt to negate an undesirable side-effect of the party drug. Some party drug users for example ascribe to the myth that taking an anti-depressant with ecstasy can reduce the potential neurotoxic effects of MDMA.

Such drug combinations may bring about a variety of negative symptoms. For example, several authors note that combining ecstasy and SSRI anti-depressants (such as Prozac or Luvox) can easily bring about serotonin syndrome, which can prove to be a fatal side-effect. Also, the increasingly popular 'Sextasy', a combination of ecstasy with sildenafil citrate (Viagra) which has been reported recently in the mainstream press, has the potential to drop a user's blood pressure to dangerously low levels, which could result in either stroke or heart failure.

This survey is designed to examine the patterns of use and experiences of 'party drug' users who combine their drug of choice (ecstasy) with a range of pharmaceutical drugs. These findings will assist in the development of harm reduction strategies among current and potential young party drug users.

One hundred party drug users who have combined their drug of choice with one or more of a range of pharmaceutical products, either to increase or lengthen party drug intoxication and/or to reduce perceived negative effects of the party drug, will be interviewed using a structured face-to-face questionnaire.

Recruitment for this study will commence in January and February and we hope to begin analysis by May 2003.

Drug information needs, sources and credibility among 'party drug' users

Jan Copeland, Paul Dillon and Michael Gascoigne

A variety of sources meet the community's drug information needs. In a recent survey of Sydney high school students, it was found that friends were an almost universal source of drug information, but little credibility was attributed to the information they provided. Drug information provided by school teachers was deemed somewhat more credible, although they were not as popular a source for drug information.

The internet is also becoming an increasingly-popular resource for the acquisition of health information, despite the fact that research indicates that a large proportion of this information is not authored by health professionals. As a result, drug users may be receiving false information about the potential dangers surrounding the use of their drugs.

It is important for researchers to understand how information from commonly-used sources is perceived by drug users. In order to address this problem, users' perceptions of the credibility and accuracy of drug information from a variety of sources needs to be examined.

This survey is designed to examine 'party drug' users' drug information needs, their sources of information, their accessibility to them and the credibility attributed to them. This information will assist in informing a strategy for the dissemination of factual information on party drugs to current and potential users.

One hundred party drugs users in Sydney will be interviewed using a structured face-to-face questionnaire. Questions will cover what information they wish to have on their drug or drugs of choice, where they currently access information from and the credibility they attribute to each of these information sources. They will also be asked what type of information they do not believe to be credible and who or what organisations/departments they believe lack credibility.

Recruitment for this study will also be taking place in January and February and we hope to begin analysis by May 2003. **cl**

abstracts

Young people's drug use when heroin is less available

*Youth Studies Australia 21, 11-16***Louisa Degenhardt, Michael Gascoigne and John Howard**

A study of the effects of a heroin shortage on the demand for drug treatment services found that there were no significant changes in either demand for treatment or in the demographic characteristics of adolescents admitted to the program. However, the proportion reporting regular heroin use declined over the period, while the proportion reporting regular cannabis use and recent psychostimulant use increased. There was also a decrease in the proportion reporting recent injecting drug use. It is possible that increased use of these drugs poses a risk to young persons vulnerable to developing psychosis, and that increased psychostimulant use, particularly when combined with alcohol, is associated with greater aggressive behaviour. These possibilities need to be taken into account by persons working with this group of drug users.

Suicide among heroin users: rates, risk factors and methods

*Addiction 97, 1383-1394***Shane Darke and Joanne Ross**

The current paper examines critically the literature on suicide rates, suicide risk factors and methods employed for suicide among heroin users, and compares these to those of the general population. Heroin users have a death rate 13 times that of their peers, and deaths among heroin users attributed to suicide range from 3-35%. Overall, heroin users are 14 times more likely than peers to die from suicide. The prevalence of attempted suicide is also many orders of magnitude greater than that of community samples. The major general population risk factors for suicide also apply to heroin users (gender, psychopathology, family dysfunction and social isolation). Heroin users, however, have extremely wide exposure to these factors. They also carry additional risks specifically associated with heroin and other drug use. Drugs as a method of suicide play a larger role in suicide among heroin users than in the general population. Heroin, however, appears to play a relatively small role in suicide among this group. Overall, suicide is a major clinical issue among heroin users. It is concluded that suicide is a major problem that treatment agencies face, and which requires targeted intervention if the rates of suicide among this group are to decline.

Cannabis use and mental health in young people: cohort study

*British Medical Journal 325, 1195-1198***George C Patton, Carolyn Coffey, John B Carlin, Louisa Degenhardt, Michael Lynskey, and Wayne Hall**

Objective To determine whether cannabis use in adolescence predisposes to higher rates of depression and anxiety in young adulthood.

Design Seven wave cohort study over six years.

Setting 44 schools in the Australian state of Victoria.

Participants A statewide secondary school sample of 1601 students aged 14-15 followed for seven years.

Main outcome measure Interview measure of depression and anxiety (revised clinical interview schedule) at wave 7.

Results Some 60% of participants had used cannabis by the age of 20; 7% were daily users at that point. Daily use in young women was associated with an over fivefold increase in the odds of reporting a state of depression and anxiety after adjustment for intercurrent use of other substances (odds ratio 5.6, 95% confidence interval 2.6 to 12). Weekly or more frequent cannabis use in teenagers predicted an approximately twofold increase in risk for later depression and anxiety (1.9, 1.1 to 3.3) after adjustment for potential baseline confounders. In contrast depression and anxiety in teenagers predicted neither later weekly nor daily cannabis use.

Conclusions Frequent cannabis use in teenage girls predicts later depression and anxiety, with daily users carrying the highest risk. Given recent increasing levels of cannabis use, measures to reduce frequent and heavy recreational use seem warranted.

The structure of cannabis dependence in the community

*Drug and Alcohol Dependence 68, 255-262***Maree Teesson, Michael Lynskey, Barry Manor and Andrew Baillie**

Background: Cannabis is the most widely used illicit drug in developed countries, and has a significant impact on mental and physical health in the general population. However, the validity of common diagnostic schemes and their applicability to cannabis abuse and dependence is poorly understood. This paper describes a confirmatory factor analysis of the

DSM-IV cannabis abuse and dependence criteria, using general population data.

Method: Data from cannabis users (n=722) were obtained from a cross-sectional study of a large and representative sample of the Australian general population. The DSM-IV criteria for cannabis abuse and dependence were assessed using eh ICDI_AUTO.

Results: Approximately, one in 12 Australians (7.1%) had used cannabis more than five times in the past 12 months and 56.5% of these reported at least one DSM-IV cannabis abuse or dependence criteria. Within the adult population 2.2% met criteria for a cannabis use disorder (0.7% abuse and 1.5% dependence). Confirmatory factor analysis indicated that both a one-and two factor model for cannabis use disorder provided an adequate fit to the data. However, the estimated correlation between the abuse and dependence factors in the two-factor model was extremely high (0.99).

Conclusions: A one-factor model provided the most parsimonious model of the cannabis abuse and dependence criteria.

Alcohol use disorders comorbid with anxiety, depression and drug use disorders: Finding from the Australian National Survey of Mental Health and Well Being

*Drug and Alcohol Dependence 68, 299-307***Lucy Burns and Maree Teesson**

The aim of this paper is to report the prevalence of 12-month comorbidity between DSM-IV alcohol use disorders (abuse or dependence) and anxiety, affective and drug use disorders in the adult Australian general population and to examine the disability and health service utilisation associated with this comorbidity. The study uses data from the National Survey of Mental Health and Well Being (NSMH&WB). The NSMH&WB is a cross-sectional survey of 10,641 Australian adults conducted in 1997 that measured the prevalence of DSM-IV mental disorders in the previous 12 months and associated disability and health service utilisation. Results show approximately one-third of respondents with an alcohol use disorder (abuse or dependence) met criteria for at least one comorbid mental disorder in the previous 12 months. They were 10 times more likely to have a drug use disorder, four times more likely to have an affective disorder and three times more likely to have an anxiety disorder. Respondents with an alcohol use disorder and comorbid mental disorder were significantly more disabled and higher users of health services than respondents with an alcohol disorder and no comorbid mental disorder. These results reinforce the need for both mental health and drug and alcohol professionals to be provided with education

to assist with appropriate identification, management and referral of clients presenting with this complex range of disorders.

The impact of regular ecstasy use on memory function

Addiction 97, 1523-1530

Neil Simon and Richard Mattick

Aim To assess memory impairment in a group of regular users of ecstasy compared with a group of regular users of cannabis, after accounting for possible confounding factors such as other drug use, premorbid intelligence and psychopathology.

Method Comparative and regression analysis was used to determine the presence or absence of a difference in memory function between 40 regular ecstasy users and 37

regular users of cannabis, who were interviewed at the National Drug and Alcohol Research Centre in Sydney, Australia. Regression analysis was used to find associations between life-time exposure to ecstasy use and memory performance. Memory function was assessed using an age-standardized memory test. Other scales were used to assess premorbid intelligence, physical and psychological health, drug withdrawal and other drug use.

Results Initial comparative analysis showed a trend towards a significantly poorer performance by the regular ecstasy-using group on the 'auditory immediate memory' and 'auditory delayed memory' indices. When regression analysis was performed an estimate of verbal intelligence was found to be the most predictive of most memory indices including 'auditory immediate memory' and 'auditory delayed memory'. Life-time exposure to ecstasy was not predictive of the memory

indices. The current frequency of cannabis use was found to have some predictive effect for immediate and delayed visual memory.

Conclusion This study does not show memory impairment in a group of ecstasy users relative to cannabis using controls. The previously reported association of life-time exposure to ecstasy and memory was not found. The findings may indicate a confounding role of cannabis use, as has been recently reported. **cl**

recent publications

For more information on or copies of these publications, please contact the relevant researcher

Technical Reports and Monographs

Day, C., Ross, J., White, B. & Dolan, K. (2002). *Australian Prevalence and Estimation of Treatment Study: New South Wales Report*. Technical Report No 127, Sydney: National Drug and Alcohol Research Centre.

Day, C., Topp, L., Swift, W., Kaye, S., Breen, C., Kimber, J., Ross, J., & Dolan, K. (2002). *Interviewer safety in the drug and alcohol field: a safety protocol and training manual for staff of the National Drug and Alcohol Research Centre*. Technical Report No 138, Sydney: National Drug and Alcohol Research Centre.

Hall, W. & Carter, L. (2002). *Ethical issues in trialling and using a cocaine vaccine to treat and prevent cocaine dependence*. Technical Report No 140, Sydney: National Drug and Alcohol Research Centre.

Degenhardt, L., Adelstein, B.A., Darke, S., & Hodda, A. (2002). *Early indicators of trends in opioid overdose deaths*. Technical Report No 141, Sydney: National Drug and Alcohol Research Centre.

Ross, J., Teesson, M., Darke, S., Lynskey, M., Hetherington, K., Mills, K., Williamson, A., & Fairbairn, S. (2002). *Characteristics of heroin users entering three treatment modalities in NSW: baseline findings from the Australian Treatment Outcome Study (ATOS)*. Technical Report No 139, Sydney: National Drug and Alcohol Research Centre.

Published Articles, Chapters & Books

Burns, L. & Teesson, L. (2002). Alcohol use disorders comorbid with anxiety, depression and drug use disorders: Findings from the Australian National Survey of Mental Health and Well-Being. *Drug and Alcohol Dependence 68*, 299-308.

Copeland, J. (2002). Drug Misuse and Motherhood: H. Klee, M. Jackson & S. Lewis. *Addiction 97*(9), 1228.

Darke, S. & Ross, J. (2002). Suicide among heroin users: rates, risk factors and methods. *Addiction 97*, 1383-1394.

Degenhardt, L., Gascoigne, M., & Howard, J. (2002). Young people's drug use when heroin is less available. *Youth Studies Australia 21*, 11-16.

Dillon, P. (2002). Foreword. In **T. McGill** *Facing Drugs a guide for parents*. Sydney: Griffin Press.

Dolan, K., Day, C., Southgate, E., & Jenkins, C. Effectiveness of interventions for marginalized and particularly vulnerable IDUs including prisoners, indigenous, MSM, and sex workers. *2001 Global Research Network Meeting on HIV Prevention in Drug-Using Populations. Fourth Annual Meeting Report. October 11-12, 2001 Melbourne, Australia* (p 33-35). National Institutes of Health, US Department of Health and Human Services.

Lawrinson, P. & Copeland, J. (2002). Measuring treatment outcomes for clients of alcohol and other drug treatment services. In: **J. Sansoni & L. Tilley** (eds) *Health Outcomes 2002: Current Challenges and Future Frontiers. Proceedings of the 8th Annual National Health Outcomes Conference*. Canberra: Australian Health Outcomes Collaboration.

Patton, G., Coffey, C., Carlin, J.B., Degenhardt, L., Lynskey, M., & Hall, W. (2002). Cannabis use and mental health in young people: cohort study. *British Medical Journal 325*, 1195-1198.

Proudfoot, H. & Teesson, M. (2002). Who seeks treatment for alcohol dependence? Findings from the Australian National Survey of Mental Health and Wellbeing. *Social Psychiatry and Psychiatric Epidemiology 37*, 451-456.

Shakeshaft, A.P., Bowman, J.A., Burrows, S., Doran, C. & Sanson-Fisher, R.W. (2002). Community-based alcohol counselling: a randomized clinical trial. *Addiction 97*, 1449-1463.

Shand, F. & Mattick, R.P. (2002). *Clients of treatment service agencies: May 2001 census findings*. National Drug Strategy Monograph No. 47. Canberra: Australian Government Publishing Service.

Simon, N.G. & Mattick, R.P. (2002). The impact of regular ecstasy use on memory function. *Addiction 97*, 1523-1530.

Solowij, N. & Grenyer, B. (2002). Are the adverse consequences of cannabis use age-dependent? (Editorial). *Addiction 97*, 1083-1086.

Teesson, M., Dietrich, U., Degenhardt, L., Lynskey, M., & Beard, J. (2002). Substance use disorders in an Australian community survey. *Drug and Alcohol Review 21*, 275-280.

Teesson, M., Lynskey, M., Manor, B., & Baillie, A. (2002). The structure of cannabis dependence in the community. *Drug and Alcohol Dependence 68*, 255-262.

Topp, L., Degenhardt, L., Kaye, S., & Darke, S. (2002). The emergence of potent forms of methamphetamine in Sydney, Australia: a case study of the IDRS as a strategic early warning system. *Drug and Alcohol Review 21*, 341-348.

staff list

National Drug and Alcohol Research Centre

Staff as of 1 December, 2002

Richard Mattick	Director, Professor
Maree Teesson	Deputy Director, Associate Professor
Shane Darke	Associate Professor
Jan Copeland	Senior Lecturer
Kate Dolan	Senior Lecturer
Louisa Degenhardt	Lecturer
Wendy Swift	Lecturer
Joanne Ross	Lecturer
Anthony Shakeshaft	NHMRC Fellow
Paul Adamson	IT Officer
Eva Congreve	Archivist
Paul Dillon	Media Liaison/ Information Manager
Chris Doran	Health Economist
Stuart Gilmour	Statistical Officer
Marian Shanahan	Health Economist
Bridget Barker	Senior Research Officer
Courtney Breen	Senior Research Officer
Linette Collins	Senior Research Officer
Jenny Gates	Senior Research Officer
Sharlene Kaye	Senior Research Officer
Peter Lawrinson	Senior Research Officer
Greg Martin	Senior Research Officer
Susannah O'Brien	Senior Research Officer
Fiona Shand	Senior Research Officer
Libby Topp	Senior Research Officer
Heli Wolk	Professional Officer
Lucy Burns	Doctoral Candidate
Carolyn Day	Doctoral Candidate
Claire Thetford	Doctoral Candidate
Sandra Fairbairn	Research Officer
Julia Fawcett	Research Officer
Michael Gascigne	Research Officer
Saul Gerber	Research Officer
Nicky Henderson	Research Officer
Kate Hetherington	Research Officer
Erin Kelly	Research Officer
Jo Kimber	Research Officer
Etty Matalon	Research Psychologist
Katherine Mills	Research Officer
Heather Niven	Research Officer
Kate Pryce	Research Officer
Heather Proudfoot	Research Officer
Amanda Roxburgh	Research Officer
James Shearer	Research Officer
Anne Maree Weatherall	Research Officer
Bethany White	Research Officer
Evelyn Wilhelm	Research Officer
Anna Williamson	Research Officer
Julie Hodge	Centre Receptionist
Josephina Kim	Personal Assistant to Director

Conjoint Appointment

Wayne Hall	Visiting Professor
Andrea Mant	Associate Professor
Alex Wodak	Senior Lecturer
James Bell	Senior Lecturer
Catherine Spooner	Conjoint Senior Lecturer

Visiting Fellows

Robert Ali	Visiting Fellow
Ross Coomber	Visiting Fellow
Linda Gowing	Visiting Fellow
John Howard	Visiting Fellow
Nick Lintzeris	Visiting Fellow
Nadia Solowij	Visiting Fellow
Ingrid Van Beek	Visiting Fellow
Deborah Zador	Visiting Fellow

feedback & subscriptions

We welcome your feedback on all issues discussed in *CentreLines*. If you would like to write to us please address all correspondence to:

**The Editor, National Drug and Alcohol Research Centre,
University of New South Wales, Sydney NSW 2052**

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, fill out the New Subscriber form below. Please note that if you wish to receive NDRI's *CentreLines*, you will need to fill out the form below.

These forms should be returned to:

National Drug and Alcohol Research Centre
University of New South Wales, Sydney NSW 2052

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