

# ncpic e-zine

december 2008

## national cannabis prevention and information centre

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### what's new in cannabis?

NCPIC welcomes a new staff member, Dr Melissa Norberg this month, who will take on the position of National Clinical Services and Evaluation Manager. She will be driving our resource development, improving our dissemination of evidence-based cannabis use interventions, and developing innovative interventions to target comorbid anxiety and cannabis use disorders. Dr Norberg received her MS and PhD in Clinical Psychology from the University of Wisconsin-Milwaukee and completed a predoctoral internship specializing in the treatment of anxiety and substance abuse at the University of Mississippi Medical Center. She completed her postdoctoral fellowship at the Anxiety Disorders Center at the Institute of Living/Hartford Hospital. Dr Norberg is the principal investigator on two Hartford Hospital funded studies

### communications' report

Paul Dillon

(National Community Communications Manager, NCPIC)

It's hard to believe that it is only just over a year ago that we launched our first NCPIC E-Zine. In that time the Centre's Communications team has produced and disseminated a phenomenal amount of print resources, as well as launch and continue to develop the NCPIC website. The range of resources, both print and electronic, as well as the website and associated material, have proven extremely popular with a wide range of audiences and we are all extremely proud of our achievements.

When we developed the initial Communications Strategy for the Centre it was decided that rather than concentrate on specific NCPIC products or 'messages', the major aim would be to promote the Centre and to increase its profile amongst a range of specific target audiences. The objectives of the Communications Strategy in the first year were:

- to launch NCPIC effectively and to ensure that there is widespread community awareness of the Centre, its mission, goals, strategies and key activities
- to create and maintain a profile for NCPIC and its work amongst a range of target audiences
- to ensure the effective delivery of evidence-based information on cannabis to a range of target audiences
- to ensure that NCPIC develops a strong media profile and becomes a major voice in Australian cannabis-related media stories

In that period we have had a major presence at many key AOD conferences held across the country and have had articles about the Centre and its services printed in professional magazines and newsletters. We have had a number of extremely successful press releases attract media attention across the country and this, together with a number of other initiatives, has ensured that the Centre's profile continues to grow. The number of subscribers to our NCPIC mailing list also continues to build as more and more workers across a range of sectors become aware of the services the Centre provides. Rather than rest on our laurels, it is now time to become much more targeted in our approach and we have identified some specific groups that we hope to attract in the coming year.

Health professionals, particularly GPs and nurses, as well as other service providers including treatment clinicians/practitioners, police and education sector workers have all been targeted in paid advertisements due to 'roll-out' in professional magazines and journals through 2009. These will be used to promote the Cannabis Helpline and encourage those professionals who may have contact with cannabis users, their friends and families to contact and use this valuable service.

Another key group that we will be targeting in the coming months will be Indigenous communities. In our consultations thus far, we have found that this is the sector that appears to be experiencing the greatest problems with cannabis and have the fewest resources. As has already been stated, we have attended many conferences both in Australia and internationally, and we recently had a stall at the World

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Indigenous People's Conference on Education 2008, in Melbourne. Through our attendance at this event, we had the opportunity to meet people working with Indigenous communities from Australia, New Zealand and Canada, amongst other countries, and make them aware of our free resources as well as the Helpline and website. Many of these people were keen to start using NCPIC booklets and services with their clients and expressed the need and value of such resources in their communities.

We will hopefully be working closely with a number of communities

across the country to help develop the Indigenous component of the NCPIC website. We will then be using what is produced to develop a range of culturally-specific resources for Indigenous cannabis users and their friends and families, as well as the wide range of service providers who work with these communities. The title for the work we will be doing in this area is 'Cannabis: It's Not Our Culture'.

I would like to take this opportunity to thank Professor Jan Copeland for her leadership and support through the first year at NCPIC. We have all worked extremely hard, but none more so than

she. Another person who has worked tirelessly since she joined NCPIC is Clare Chenoweth. She came on board just over six months ago, completely new to the field, but has been invaluable in ensuring that deadlines are met and that the Centre keeps on producing quality material. Thank you Clare - your efforts are truly appreciated!

To everyone else, I thank you for your support of NCPIC and I hope we can continue to provide you with the resources and services you have come to expect from the Centre.

## research publications

Relevant publications examining issues to do with cannabis that have been published in the last month include the following:

**Agrawal, A., Morley, K.I., Hansell, N.K., Pergadia, M.L., Montgomery, G.W., Statham, D.J., Todd, R.D., Madden, P.A., Heath, A.C., Whitfield, J., Martin, N.G., & Lynskey, M.T.** (2008). Autosomal linkage analysis for cannabis use behaviors in Australian adults. *Drug and Alcohol Dependence* 98, 185-190.

**Angelucci, F., Ricci, V., Spalletta, G., Pomponi, M., Tonioni, F., Caltagirone, C., & Bria, P.** (2008). Reduced serum concentrations of nerve growth factor, but not brain-derived neurotrophic factor, in chronic cannabis abusers. *European Neuropsychopharmacology* 18, 882-887.

**Berthiller, J., Straif, K., Boniol, M., Voirin, N., Benhaim-Luzon, V., Ayoub, W.B., Dari, I., Laouamri, S., Hamdi-Cherif, M., Barta, M., Ayed, F.B., & Sasco, A.J.** (2008). Cannabis smoking and risk of lung cancer in men: A pooled analysis of three studies in Maghreb. *Journal of Thoracic Oncology* 3, 1398-1403.

**Budney, A.J., Vandrey, R.G., Hughes, J.R., Thostenson, J.D., & Bursac, Z.** (2008). Comparison of cannabis and tobacco withdrawal: Severity and contribution to relapse. *Journal of Substance Abuse Treatment* 35, 362-368.

**Callaghan, R.C., Taylor, L., Moore, B.A., Jungerman, F.S., Vilela, F.A., & Budney, A.J.** (2008). Recovery and URICA stage-of-change scores in three marijuana

treatment studies. *Journal of Substance Abuse Treatment* 35, 419-426.

**Corcoran, C.M., Kimhy, D., Stanford, A., Khan, S., Walsh, J., Thompson, J., Schobel, S., Harkavy-Friedman, J., Goetz, R., Colibazzi, T., Cressman, V., & Malaspina, D.** (2008). Temporal association of cannabis use with symptoms in individuals at clinical high risk for psychosis. *Schizophrenia Research* 106, 286-293.

**El Marroun, H., Tiemeier, H., Jaddoe, V.W., Hofman, A., Mackenbach, J.P., Steegers, E.A., Verhulst, F.C., van den Brink, W., & Huizink, A.C.** (2008). Demographic, emotional and social determinants of cannabis use in early pregnancy: The Generation R study. *Drug and Alcohol Dependence* 98, 218-226.

**Flores-Sanchez, I.J. & Verpoorte, R.** (2008). PKS activities and biosynthesis of cannabinoids and flavonoids in cannabis sativa L. plants. *Plant and Cell Physiology* 49, 1767-1782.

**Huas, C., Hassler, C. & Choquet, M.** (2008). Has occasional cannabis use among adolescents also to be considered as a risk marker? *European Journal of Public Health* 18, 626-629.

**Hunault, C.C., Mensinga, T.T., de Vries, I., Kelholt-Dijkman, H.H., Hoek, J., Kruidenier, M., Leenders, M.E., & Meulenbelt, J.** (2008). Delta-9-tetrahydrocannabinol (THC) serum concentrations and pharmacological effects in males after smoking a combination of tobacco and cannabis containing up to 69 mg THC. *Psychopharmacology (Berl)* 201, 171-181.

**Khiabani, H.Z., Mørland, J. & Bramness, J.G.** (2008). Frequency and irregularity of heart rate in drivers suspected of driving under the influence of cannabis. *European Journal of Internal Medicine* 19, 608-612.

**Maziak, W.** (2008). The waterpipe: Time for action. *Addiction* 103, 1763-1767.

**Murillo-Rodríguez, E., Millán-Aldaco, D., Palomero-Rivero, M., Mechoulam, R., & Drucker-Colín, R.** (2008). The nonpsychoactive cannabis constituent cannabidiol is a wake-inducing agent. *Behavioral Neuroscience* 122, 1378-1382.

**Piontek, D., Kraus, L. & Klempova, D.** (2008). Short scales to assess cannabis-related problems: A review of psychometric properties. *Substance Abuse Treatment, Prevention, and Policy* 3, 25.

**Schaub, M., Fanghaenel, K. & Stohler, R.** (2008). Reasons for cannabis use: Patients with schizophrenia versus matched healthy controls. *Australian and New Zealand Journal of Psychiatry* 42, 1060-1065.

**Smith, M.J., Barch, D.M., Wolf, T.J., Mamah, D., & Csernansky, J.G.** (2008). Elevated rates of substance use disorders in non-psychotic siblings of individuals with schizophrenia. *Schizophrenia Research* 106, 294-299.

**Valdez, A., Cepeda, A., Neaigus, A., & Russell, A.** (2008). Heroin transition risk among daily and non-daily cannabis users who are non-injectors of heroin. *International Journal on Drug Policy* 19, 442-449.

## commentary on research

### the developmental antecedents of illicit drug use – A comment on Fergusson, Boden & Horwood (2008)

Peter Gates

In order to identify the extent to which childhood factors and adjustment issues lead adolescents toward illicit drug use in later life, Fergusson et al. (2008) analysed data from the Christchurch Health and Development Study (CHDS). The CHDS was a 25-year prospective longitudinal cohort study of 1265 (900 at 25-year follow up) New Zealander children born in 1977.

In their introduction to the study, Fergusson et al. cite previous research regarding possible antecedents to later substance use. In their brief review they refer to many factors previously associated with later illicit drug use, including: adjustment problems; low parental monitoring and interest; genetic influences; gender (being male); novelty seeking; conduct and attention problems in childhood; social learning and affiliation with drug using peers; exposure to an unstable home environment; exposure to illicit drug abusing parents; and childhood abuse. However, as the authors illustrate, these factors were mostly identified in isolation without including a comprehensive range of factors that could combine to influence substance use over life course.

Fergusson et al. also reference the continued debate surrounding what is known as the 'gateway theory', i.e., the theory that cannabis use may precede and lead to later illicit drug use. Before referring to the results of their study, the authors admit that this theory is still in contention and is deserved of further research.

Based on their brief review, the authors included an extensive range of predictors in their analysis. The results showed that 42.9% had used cannabis at least once between 16 and 25 years, with 10.8% meeting DSM-IV criteria for dependence. Further, over 40% had used a non-cannabis illicit drug at least once, with over 10% meeting dependence criteria. These findings were shown to be consistent with Australasian norms.

The authors' final analysis showed that the predictors of later illicit drug use included: cannabis use; affiliation with substance-using peers; alcohol use; cigarette smoking; and novelty seeking. From these predictors cannabis use was shown to be the strongest, especially when the participant was younger (16-17 years) and using cannabis at least weekly.

As Fergusson et al. indicate, the findings of this study may not generalise beyond the specific cohort and social context of the participating New Zealander children. However, the robustness of the central finding that cannabis use is the strongest predictor of later illicit drug use is certainly fuel for proponents of the 'gateway theory' although the mechanisms of the association are as yet poorly understood.

**Fergusson, D.M., Boden, J.M. & Horwood, L.J.** (2008). The developmental antecedents of illicit drug use: Evidence from a 25-year longitudinal study. *Drug and Alcohol Dependence* 96, 165-177.

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### what's new in cannabis?

entitled '*D-cycloserine-augmented cognitive-behavioural therapy for prior treatment nonresponders with obsessive compulsive disorder*' and '*virtual reality exposure therapy for combat-related post traumatic stress disorder in Iraq veterans*' and on one of NSW Health's Drug and Alcohol Program funded studies entitled '*Stepped-care for patients with alcoholism and panic disorder*.' Dr Norberg's primary clinical and research interests are in the psychopathology and cognitive-behavioural treatment of comorbid anxiety and substance use disorders and in extending treatment outcome to include quality of life assessment.



Each issue we will examine some of the cannabis-related stories that have received media attention across the country. The headlines are listed below in bold, with a short summary and/or commentary regarding the content of the news story beneath.

If you are interested in obtaining a copy of a particular story, please contact Clare Chenoweth at [c.chenoweth@unsw.edu.au](mailto:c.chenoweth@unsw.edu.au).

### **weeding out the truth about pot**

*Daily Mercury: December 1, 2008*

A study by ORYGEN Research Centre and Melbourne Neuropsychiatry Centre at the University of Melbourne in collaboration with the University of Wollongong, has found that “long-term, heavy cannabis use causes significant brain abnormalities resulting in psychotic symptoms and memory loss equivalent to that of patients with a mild traumatic brain injury.” They are the first to find that “long term cannabis use can adversely affect all users, not just those in the high-risk categories such as the young, or those susceptible to mental illness, as previously thought.” Dr Solowij from the University of Wollongong states “It also demonstrates that these long-term users had progressed the loss of memory by around 15 years.” The researchers hope that the findings will help dispel the belief in the community that cannabis is “relatively harmless”.

### **swiss pass landmark legal heroin program**

*West Australian: December 2, 2008*

A national referendum in Switzerland has approved “a pioneering Swiss program to give addicts government-authorised heroin.” The program has “been credited with reducing crime and improving the health and daily lives of addicts since it began 14 years ago.”

However, voters did not support the decriminalisation of cannabis, with only 36.8 per cent supporting the move to “decriminalise the consumption of marijuana and growing the plant for personal use.”

### **teens have hallucinations**

*Daily Advertiser: December 6, 2008*

A study has found that “almost one in 10 Australian teens say they have hallucinations, and those from broken homes are among the hardest hit.” Teenagers who use cannabis also make up a large percentage of those experiencing hallucinations, however the Queensland-based researchers point out that this does not “mean the same teenagers will go on to suffer a mental illness in adulthood.”

### **health: breaking the cycle**

*Sun Herald: December 7, 2008*

This article takes data from a 2007 study conducted by the Australian Bureau of Statistics and states that “more than 5 per cent of Australians have a problem with drug use.” Cannabis use is obviously included in this figure along with use of opioids, amphetamines, alcohol and others. The importance of respect, family support, approaching the person experiencing these problems holistically, in terms of addressing issues such as grief, depression and relationship breakdown, are seen as important factors for treatment.

### **warning on effects of cannabis use**

*Merredin-Wheatbelt Mercury: December 10, 2008*

This article covers the effects of cannabis use, as described by WA Southern Cross police Sergeant Graeme Porteous. He comments that many people do not understand the effects and legal status of cannabis. Among the many effects he mentions, a decrease in co-ordination and balance make it “dangerous to drive vehicles or operate machinery.” He also seeks to clarify the confusion around the de-criminalisation of the drug several years ago, stating, “what that means is imprisonment was removed as a penalty in legislation. So those who get caught possessing or using cannabis get fined...Cannabis is still an illicit drug and no one can possess, grow, sell or supply it.”

### **drivers admit to drinking**

*Launceston Examiner: December 11, 2008*

Results from research commissioned by insurer AAMI has showed “an unacceptably high number of Tasmanian motorists remain ignorant of the dangers of driving under the influence of illicit drugs and alcohol.” Ignorance is pointed to as one of the reasons “ten per cent of Tasmanian drivers [drive]... after using recreational or illicit drugs like marijuana, speed or cocaine.”

### **ounce of prevention is better than a cure**

*Newcastle Herald: December 12, 2008*

Community liaison, engaging with young people and seeing alcohol and other drug use “in the context of the person rather than in isolation” are seen as vital steps in dealing with these issues, by Kate Holley, Clinical and Service Integration Manager at the Samaritans Foundation’s Hunter Headspace. She cites the “conflicting messages about the social acceptability of alcohol consumption... [and] other drug use, such as marijuana and amphetamines” as a problem faced in tackling young people’s use of these drugs.

### **bush claims win on teen drug use**

*The West Australian: December 13, 2008*

US President George Bush is described as accrediting the 25 per cent drop in “drug abuse among American teenagers...since he took office...to a combination of prevention, treatment and enforcement programs.” These findings come from the annual, federally funded survey, *Monitoring the Future*, which looks at students from Years 8, 10 and 12. However, Nora Volkow, director of the National Institute on Drug Abuse, said that “one in three 12th-graders, one if four 10th-graders and one in 10 eighth-graders had smoked marijuana in the past year.”

### **alcohol major cause of drug rehab admissions, again**

*Northern Star: December 16, 2008*

Odyssey House has found that “seventy percent of people admitted to [its centre]...in the past financial year listed alcohol as among their reasons for seeking treatment.” Its cannabis-related admissions have increased over that time, from fourteen per cent in 2006-07 to eighteen per cent in 2007-08.



## what do we know?

### cannabis in the workplace: what do we know?

Up to a quarter of all occupational injuries and 20% of fatal injuries in the workplace can be linked to alcohol and other drug use. This has prompted many organisations and companies to implement workplace drug and alcohol education and testing across Australia in a bid to create safer working environments. According to a 2008 NCETA report, based on a 2004 data set, 13.5% of the workforce had used cannabis. A greater proportion of tradespeople used cannabis than any other occupation. This survey also indicated that 2.5% of the Australian workforce reported going to work under the influence of illicit drugs.

If cannabis is used in the workplace, it can affect the health and safety of the person taking it as well as those around them. It may also have an adverse effect on productivity. Cannabis use is known to cause short-term memory problems, impaired thinking, loss of balance and coordination, decreased concentration, changes in sensory perception, impaired ability to perform complex tasks, decreased alertness and decreased reaction time.

The effects of cannabis can last from two to six hours and can make it dangerous to use cannabis at work, particularly if a person is operating

heavy machinery or driving a vehicle. There is also a greater risk of an accident occurring due to the poor performance of even simple manual tasks. Regular cannabis users may start to exhibit signs of loss of energy and interest in their tasks, causing their performance to suffer. They may also find it difficult to learn new work skills. Another point of caution is that if a disability is incurred as a result of cannabis use this may not be compensated under Workers' Compensation rules.

Drug testing is used in many Australian workplaces in an effort to ensure workplace safety and improve productivity. Cannabis can be detected in such tests, even days after exposure. Once taken, cannabis is stored in the fatty tissues until it is slowly released back into the bloodstream and excreted from the body. Traces of cannabis can be found in urine for 1-5 days after occasional use and up to six weeks (or more) in people who use cannabis regularly (more than three times a week over a number of years).

**Pidd, K., Shtangey, V. & Roche, A.M.** (2008). *Drug use in the Australian workforce: Prevalence, patterns and implications. Findings from a secondary analysis of 2004 NDSHS data.* NCETA.

### cannabis and prescribed medication: what do we know?

Sometimes people use cannabis in the belief that it will help them cope better with their problems and feelings. Using cannabis in this way, however, can cause those problems to become more severe and difficult to manage in the long-term. Cannabis use can have a range of mental health effects on people, such as anxiety and panic. In high doses, cannabis can cause confusion, thought disorder and hallucinations.

Doctors prescribe medication for depression, psychosis, bipolar affective disorder or schizophrenia to bring

relief from the unpleasant symptoms that a patient may be experiencing. If that person continues to use cannabis while taking prescribed medications, unknown reactions can occur, which may make their condition worse. It also makes it very difficult for their doctor to prescribe the right drug at the right dose to improve their symptoms, as well as increasing the risk of non-compliance with medication regimes.

People diagnosed with depression can be prescribed antidepressants. Very little research has been conducted on the effects of using cannabis while taking prescribed antidepressant medication. The side-effects of antidepressants can be similar to those produced by cannabis use however, and these can include abnormally fast heartbeat (tachycardia), dizziness, anxiety, panic, drowsiness, nausea and confusion. The danger of using cannabis while on antidepressants is that it can intensify any or all of these side effects and make a person feel worse.

Antipsychotic medication is prescribed for people who have had psychotic episodes and have been diagnosed with schizophrenia. Antipsychotic medications are most effective in treating the hallucinations and delusions associated with schizophrenia and other psychotic disorders, however they may not help with other symptoms such as motivation and emotional responsiveness. Because of this, people with schizophrenia can experience depression which may also need to be treated. All these symptoms are made worse if cannabis is being used.

Research suggests that counselling can greatly improve the chances of a person giving up or cutting down their cannabis use while taking medication. While there is very little research on the effects of the combination of cannabis and antipsychotic medications, there is evidence that suggests that those people prescribed Clozapine experience less craving for cannabis than those who are prescribed Risperidone or Quetiapine. Further research into this area is being conducted.

## ncpic contact details

NCPIC is a consortium led by the National Drug and Alcohol Research Centre and is an Australian Government Department of Health and Ageing initiative

For further information on NPIC, its work and activities please contact Clare Chenoweth on (02) 9385 0218

#### Street address:

National Cannabis Prevention and Information Centre (NPIC)  
UNSW Randwick Campus  
NDARC UNSW  
R1 Level 1  
22-32 King Street  
Randwick NSW 2031

#### Postal address:

National Cannabis Prevention and Information Centre (NPIC)  
PO Box 684  
Randwick NSW 2031