

ncpic e-zine

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national cannabis
prevention and
information centre

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what's
new
in
cannabis?

National Cannabis Conference

NCPIC's first National Cannabis Conference is now open for registration. The conference features a selection of internationally recognised speakers and presenters who will each give their unique perspective on cannabis-related research and issues throughout the sessions. Go to <http://ncpic.org.au/workforce/cannabis-conference/> for more information and to register online. We hope to see many of our subscribers in Sydney at the Powerhouse Museum from 7-8 September for this exciting event.

clinical services and evaluation report

Dr Melissa Norberg
(National Clinical Services and Evaluation Manager, NCPIC)

Since I joined NCPIC in December, I have been busy learning about our diverse range of projects, reading the cannabis literature, and thinking about my team's future path. In order to assist these efforts, a weekly journal club has been formed. Journal club has been invaluable in keeping the team up-to-date on the cannabis literature. Through our discussions at these meetings, I have become keenly aware of the limitations of brief interventions for cannabis use disorders. Although brief interventions tend to be more effective for substance use disorders than other mental health issues, clinically significant outcomes only tend to occur when motivational interviewing is used to enhance treatment-as-usual and when intensively trained specialists (not on-site clinical staff) provide motivational interviewing (Dunn, Deroo & Rivara, 2001). In other words, motivational interviewing is likely to be a necessary component for a brief intervention, but if therapists do not engage in state-of-the-art motivational interviewing, the intervention may not lead to decreases in clients' cannabis use (McCambridge, Slym & Strang, 2008).

The finding that poor adherence to motivational interviewing principles is associated with poor outcomes suggests that motivational interviewing is a complex behavioural intervention that only highly trained therapists can carry out successfully. Although Miller (2001) advised that all new studies assess motivational interviewing fidelity through direct monitoring of the intervention, few studies have done so. Therefore, the Clinical Services team needs to begin monitoring the major treatment

targets of motivational interviewing in our brief interventions (e.g., readiness to change, drug refusal self-efficacy and therapist empathy), along with therapists' adherence to our treatment manuals. Only through this measurement will we be able to learn why treatment works. This information is necessary in order to maximise our dissemination efforts. If it is true that therapists must be highly trained to produce significant reductions in their clients' cannabis use, then NCPIC will need to develop strategies for choosing who gets trained, how they get trained, and how much training is needed.

In order to facilitate these goals, the newest member of our team, Rob Battisti, will spend his first year at NCPIC delivering a brief cannabis intervention to young adults with mental health issues. Rob's sessions will be rated for therapist adherence to motivational interviewing principles and we will examine if his skill at delivering the intervention is related to his clients' outcomes. If we find that patient outcomes are related to therapist fidelity, we will work closely with the Training team to show them how to use adherence measures so that they can continue to provide gold standard training to the community. This is just one way that NCPIC is bridging the gap between research and clinical practice.

Dunn, C., Deroo, L. & Rivara, F.P. (2001). The use of brief interventions adapted from motivational interviewing across behavioral domains: A systematic review. *Addiction* 96, 1725-1742.

McCambridge, J., Slym, R.L. & Strang, J. (2008). Randomized controlled trial of motivational interviewing compared with drug information and advice for early intervention among young cannabis users. *Addiction* 103, 1809-1818.

Miller, W.R. (2001). When is it motivational interviewing? *Addiction* 96, 1770-1771.

research publications

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

Agrawal, A. & Lynskey, M.T. (2009). Candidate genes for cannabis use disorders: Findings, challenges and directions. *Addiction* 104, 518-532.

Agrawal, A., Lynskey, M.T., Madden, P.A., Pergadia, M.L., Bucholz, K.K., & Heath, A.C. (2009). Simultaneous cannabis and tobacco use and cannabis-related outcomes in young women. *Drug and Alcohol Dependence* 101, 8-12.

Anand, P., Whiteside, G., Fowler, C.J., & Hohmann, A.G. (2009). Targeting CB(2) receptors and the endocannabinoid system for the treatment of pain. *Brain Research Reviews* 60, 255-266.

Bhattacharyya, S., Fusar-Poli, P., Borgwardt, S., Martin-Santos, R., Nosarti, C., O'Carroll, C., Allen, P., Seal, M.L., Fletcher, P.C., Crippa, J.A., Giampietro, V., Mechelli, A., Atakan, Z., & McGuire, P. (2009). Modulation of mediotemporal and ventrostriatal function in humans by delta9-tetrahydrocannabinol: A neural basis for the effects of cannabis sativa on learning and psychosis. *Archives of General Psychiatry* 66, 442-451.

Esterberg, M.L., Goulding, S.M., McClure-Tone, E.B., & Compton, M.T. (2009). Schizotypy and nicotine, alcohol, and cannabis use in a non-psychiatric sample. *Addictive Behaviors* 34, 374-379.

Frewen, A.R., Baillie, A.J. & Montebello, M.E. (2009). Are cannabis users who participate in a randomized clinical trial different from other treatment seekers? *Journal of Substance Abuse Treatment* 36, 339-344.

Levine, S.B. & Coupey, S.M. (2009). Nonmedical use of prescription medications: An emerging risk behavior among rural adolescents. *Journal of Adolescent Health* 44, 407-409.

Lile, J.A., Kelly, T.H., Pinsky, D.J., & Hays, L.R. (2009). Substitution profile of delta(9)-tetrahydrocannabinol, triazolam, hydromorphone, and methylphenidate in humans discriminating delta(9)-tetrahydrocannabinol. *Psychopharmacology (Berl)* 203, 241-250.

Merikangas, K.R., Conway, K.P., Swendsen, J., Febo, V., Dierker, L., Brunetto, W., Stolar, M., & Canino, G. (2009). Substance use and behaviour disorders in Puerto Rican youth: A migrant family study. *Journal of Epidemiology and Community Health* 63, 310-316.

Merikangas, K.R., Li, J.J., Stipelman, B., Yu, K., Fucito, L., Swendsen, J., & Zhang, H. (2009). The familial aggregation of cannabis use disorders. *Addiction* 104, 622-629.

Pape, H., Rossow, I. & Storrø, E.E. (2009). Under double influence: Assessment of simultaneous alcohol and cannabis use in general youth populations. *Drug and Alcohol Dependence* 101, 69-73.

Riou Franca, L., Dautzenberg, B., Falissard, B., & Reynaud, M. (2009). Are social norms associated with smoking in French university students? A survey report on smoking correlates. *Substance Abuse Treatment, Prevention, and Policy* 4, 4.

Santamarina-Rubio, E., Pérez, K., Ricart, I., Rodríguez-Sanz, M., Rodríguez-Martos, A., Brugal, M.T., Borrell, C., Ariza, C., Díez, E., Beneyto, V.M., Nebot, M., Ramos, P., & Suelves, J.M. (2009). Substance use among road traffic casualties admitted to emergency departments. *Injury Prevention* 15, 87-94.

Schacht, J.P., Selling, R.E. & Hutchison, K.E. (2009). Intermediate cannabis dependence phenotypes and the FAAH C385A variant: An exploratory analysis. *Psychopharmacology (Berl)* 203, 511-517.

commentary on research substance use among road traffic casualties admitted to emergency departments – a comment on Santamarina-Rubio et al (2009)

Peter Gates

The role of substance use in traffic accidents has recently received global attention. Both the short and long-term effects of substance use, particularly alcohol and cannabis, have implications regarding increased risk of road traffic injury and impairment of some driver-related tasks. However, the current evidence available is not strong and is subject to debate. Indeed, before the work of Santamarina-Rubio and colleagues (2009)¹, the prevalence of substance use other than alcohol among non-fatal traffic casualties in Spain was unknown.

To gauge the prevalence and nature of recent substance use among road traffic casualties, Santamarina-Rubio and

colleagues¹ interviewed 387 patients admitted to eight selected hospitals in Catalonia, Spain. The sample was obtained from admissions across four days duration in October 2005 and March and July 2006. Eligibility criteria included individuals 18 years of age or older, admitted for a traumatic road traffic injury (assessed using the International Classification of Diseases, 9th Ed.) with the interview being conducted within six hours of the incident. At the time of interview the participants gave an oral fluid or sweat specimen which was analysed to show the presence or absence of alcohol, cannabis, cocaine, ecstasy, opiates and benzodiazepines according to the Substance Abuse and Mental Health Services Administration cut-offs.

The sample collected was 70.3% drivers, of which over two-thirds (68.4%) were male with a median age of 30 years. Results showed that close to one third of non-fatally injured drivers (27.3%) and pedestrians (29%) in the sample were thought to be under the influence of a substance at the time of injury. Alcohol was shown to be common (prevalence of

18.5% in men and 9.2% in women), followed by cannabis (17% and 3.8% respectively) and cocaine (7.2% and 3.8% respectively). Alcohol was most prevalent for males in the 25 – 30 year age group, on weekends and at night. Cannabis was most prevalent for males in younger age groups (18 – 30 years).

Santamarina-Rubio and colleagues¹ concluded that road side testing should not restrict testing to male drivers at night on weekends, as there was also a significant prevalence of substance use at the time of injury for alternate groups. Further, given the significant percentage of substance use present among non-fatal traffic accidents, Santamarina-Rubio and colleagues¹ identified a need to establish drug testing within emergency departments.

1. **Santamarina-Rubio, E., Perez, K., Ricart, I., Rodriguez-Sanz, M., Rodriguez-Martos, M., Brugal, T., Borrell, C., Ariza, C., Díez, E., Beneyto, V.M., Nebot, M., Ramos, P., & Suelves, J.M.** (2009). Substance use among road traffic casualties admitted to emergency departments. *Injury Prevention* 15, 87-94.



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

study: free mail-based counselling treatment for cannabis use

Huon News: April 15, 2009

NCPIC's mail-based cannabis treatment study was featured in this article, along with the need for alternative delivery models such as this for those unable or unwilling to attend face-to-face counselling due to reasons such as work commitments or geographic isolation. The six module treatment study is free, confidential, and available for anyone who is over 18, English literate and wants to cut down or quit cannabis. For people interested in participating in the study or those wanting information about referral pathways, please contact Desiree Boughtwood at d.boughtwood@unsw.edu.au or (02) 9385 0449.

cheech and chong fans busted for marijuana possession

The Australian: April 17, 2009

A recent show in Sydney by "irreverent US comedians and hippie culture advocates" Cheech and Chong was searched by police and sniffer dogs. Approximately "50 people were searched and six people were caught in possession of small amounts of cannabis".

shock ad campaign warns of drug risks

Courier Mail: April 20, 2009

This article covers the Federal Government's new \$800 million "anti-drugs" advertising campaign. Cannabis is one of the drugs tackled by the campaign, with effects such as "psychosis, depression, risky sexual behaviours and chronic respiratory conditions" focussed on as consequences of use.

teen advice goes to pot

MX: April 20, 2009

According to this report, a British helpline named 'Frank' is said to be advising "young callers that cannabis is safer than alcohol and that ecstasy will not damage their health". Apparently alcohol was said to be "more powerful" than cannabis and if cannabis was smoked "recreationally [it] would not harm them because it did not get you that high".

drug amplifies lung disease

News Mail: April 22, 2009

Results from a Canadian study show that "tobacco smokers who smoke marijuana have an increased risk of developing chronic obstructive pulmonary disease (COPD)". People who use both cannabis and tobacco were almost "three times more likely than non-smokers to have COPD".

i made my own dope

MX Melbourne: April 22, 2009

Research published recently in the *Journal of the Federation of American Societies for Experimental Biology* has found that the human brain "manufactures proteins that act like marijuana at specific THC receptors in the brain". Senior researcher Lakshmi Devi said that "Ideally, this development will lead to drugs that bind to and activate the THC receptor, but are devoid of the side effects that limit the usefulness of marijuana".

workshop participants get it together

Koori Mail: April 22, 2009

NSW State Community Services Minister Linda Burney describes the "state's drug and alcohol program, Getting it Together Scheme (GITS)" in this article. A recent workshop that was part of the scheme

was held in Sydney and attended by 30 youth workers and counsellors from across NSW. Ms Burney described the workshop as having "been designed for psychologists, counsellors and youth workers to show them how they can help young cannabis users to change their thinking and from this, change their behaviour". Reflecting on statistics on young people and cannabis, she went on to say "Youth workers and counsellors involved in GITS are at the frontline...it's important that we equip them with up-to-date, evidence-based information on cannabis use so that they can continue to help our teens get their lives back on track". NCPIC's Training Team delivered this workshop as part of its key role in upskilling those working with people experiencing problems with their cannabis use.

q weekend

Courier Mail: April 25, 2009

This extract from a book 'Strange Places', written by Will Elliot, describes his cannabis-use while a student at university and its life-changing effect on his mental health. He dropped out of a law degree, consumed increasing amounts of cannabis and went on to develop schizophrenia. After struggling with side-effects of his anti-psychotic medication such as extreme fatigue, being hospitalised after an acute episode of psychosis, changing to a medication with less severe side-effects, going through a period of heavy alcohol use and struggling to come to terms with living with his condition, Elliot began writing and has rebuilt his life. His book is set to be published in late April.

boozing boomers ignored

Sunday Herald Sun: April 26, 2009

The most recent edition of the magazine *Of Substance* contains an article which analyses trends in drug-taking among baby boomers, including the concern that they are "drinking and taking drugs in record numbers, but are largely overlooked by the health system". Despite drinking and smoking at higher rates than teens and young adults, and using increasing numbers of illicit drugs, including cannabis, "drug treatment workers are concerned older generations are slipping through the cracks because they are more secretive in their drug-taking and don't have access to appropriate rehabilitation".

what do we know?

cannabis and 'greening out' what do we know?

'Greening out' is a phrase used when describing the situation where a person feels particularly unwell after smoking cannabis. This unpleasant experience can make the user go pale/green and feel sweaty, dizzy and nauseous. It can be seen as similar to an overdose, with some people even reporting passing out after using cannabis. Combining cannabis with alcohol appears to make the likelihood of someone 'greening out' greater.

Despite people once seeing cannabis as a 'safe' drug, it can in fact cause unpredictable effects and have serious consequences for vulnerable individuals. Cannabis is a drug which doesn't only cause problems for people who use it for prolonged periods or at high doses, and 'greening out' can occur in some individuals and not in others, even though they use the same amount of the drug.

'Greening out' can be a frightening experience, especially for young people who find themselves without the assistance of an adult or people who know how to take care of them. It is important for young people in particular

to know how to help a friend who is experiencing this uncomfortable effect of cannabis and get medical assistance if necessary. Taking the person to a quiet place with fresh air, sitting them in a comfortable position and giving them a glass of water or something sweet (such as juice or a piece of fruit) can help. If they start vomiting it is important for young people to be aware that leaving them alone is extremely dangerous, even for the shortest time as they could choke on their vomit. Encouraging young people to seek help for themselves or their friends if they experience problems with cannabis is a key strategy in keeping them as safe as possible.

'hydro' what do we know?

'Hydro' refers to cannabis that has been grown hydroponically, or indoors, using artificial light sources such as lamps. Although people believe 'hydro' to be significantly stronger than naturally-grown cannabis, studies have not found any convincing evidence to support this. It is possible that hydroponic growers choose cannabis varieties which are more potent anyway, or grow the plants to reach their full genetic potential which might make people think it is stronger.

It would appear that the strength of cannabis has increased to some extent over the last 25 years. It may appear stronger due to the fact that these days more people smoke the stronger parts of the plant such as the flowering heads or 'buds' rather than just the leaves as they used to. Also, using a bong is more popular now, whereas in the past, many people rolled the chopped and dried leaves up in cigarette paper

and smoked it as a joint. As opposed to joints, bongs allow the user to inhale more smoke and hold it in their lungs for longer, as the smoke is cooler coming out of a bong than it is from a joint. This is due to the smoke passing through the water inside the bong, which cools it down, making it easier to breathe in. This change in the preferred method of administration could increase the amount of cannabis and thus tetra-hydrocannabinol, that smokers are exposed to these days and may make the drug appear stronger than it was in the past.

Another issue to note about 'hydro' is that the people who cultivate it try to maximize their profits by growing as much as they can in the shortest time possible. A wide range of chemicals and fertilizers are used, many of which we know very little about, particularly in terms of what effect they will have on the smoker's health. Although rare, there have also been some cases where growers and sellers have added substances such as lead particles and glass beads to enhance the weight and appearance of the cannabis.

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

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