Cannabis use[1,2]

Revised July 2012

1. The New Zealand Medical Association (NZMA) supports the current New Zealand National Drug Policy 2007-2012 and its goal to prevent and reduce the health, social and economic harms that are linked to tobacco, alcohol, illegal and other drug use and looks forward to the development of a new National Drug Policy.

2. The NZMA supports the recommendations made by the New Zealand Law Commission in its review of the Misuse of Drugs Act 1975.

3. The NZMA does not condone the use of cannabis for non-medical purposes – it is a harmful drug that causes a range of health and social harms at the individual and community level.

4. The NZMA believes that cannabis use, as with all licit and illicit drug use, needs to be viewed in terms of social determinants and the social gradient, whereby people living further down the gradient are at greater risk of drug harms.

5. The NZMA considers cannabis use to be both a health and social issue.

6. The NZMA supports a harm reduction approach to cannabis use.

Harm from cannabis

7. The NZMA believes that the harms associated with cannabis use should be viewed along the continuum of harms caused by both licit and illicit drugs. The mental health and other harms to the individual cannabis user can be debilitating. The absolute risk of harm to users is small but there is a dose-response relationship with the more cannabis consumed the greater the risk of experiencing harm.

8. The NZMA believes the response to cannabis use should be one whereby cannabis users are diverted into education or treatment programmes. Law enforcement should target the suppliers of cannabis.

9. The NZMA supports the development and use of evidence based harm reduction programmes. Such programmes need to be thoroughly and prospectively evaluated.

10. The NZMA supports a public education campaign to demonstrate that 'soft' or 'recreational' drugs, as any drug, can have serious and harmful effects. This is particularly relevant for cannabis.

[1] This position statement is one of two position statements on illegal drugs. It should be read together with the statement on Illegal Drugs and Drug Addiction.

[2] In drafting this statement the NZMA has drawn deeply on the work of the Australian Medical Association (AMA) in preparing this position statement and in many instances has adopted (with some revision) the position prepared by the AMA. This is particularly so in the recommendations made.

11. The NZMA supports the widespread availability of appropriate evidence-based information and education on cannabis, particularly to young people.

12. The NZMA recognises that children can have significant neurological effects as a result of accidental ingestion of cannabis. Children should be protected from any exposure to cannabis.

Cannabis and mental health

13. The NZMA believes the current evidence supports cannabis being a component cause in the development of psychosis. The precise strength of this causal relationship is currently unknown. The NZMA recognises the role for further prospective population based cohort studies, particularly of young people, to examine the strength of this relationship. Cannabis use can aggravate mental illness in those who have a predisposition to it or have pre-existing mental illness.

14. The NZMA supports research, from both a genetic and socioeconomic perspective, to identify those young people most at risk of cannabis induced psychosis and the efforts that can be made to reduce that risk.

15. The NZMA calls for suitable treatment and support services for those who are affected by mental health consequences of cannabis use, and their families.

Response to cannabis use

16. The NZMA believes that doctors have an important role in educating people about cannabis and supporting those with problems associated with cannabis. The NZMA calls for better links between primary care and specialist mental health and drug and alcohol services. There is a need to reduce barriers and improve services for those seeking treatment for problems associated with cannabis.

17. The NZMA believes that responses to cannabis need to cover prevention, identification, diagnosis, treatment and rehabilitation.

Prevention

18. The NZMA believes that as younger people and those who use cannabis frequently are most at risk of harm, early intervention programmes and initiatives to avoid, delay, and reduce the frequency of cannabis use are essential.

19. The NZMA believes that school based life skills programmes that are evidence-based can assist in preventing or reducing substance use problems. No child should be denied access to such programmes.

20. The NZMA calls on government to undertake specific initiatives to reduce the social inequalities that increase the risk of harm from drug use to persons and communities who live further down the social gradient.

Identification

21. The NZMA encourages medical practitioners to be aware of dual diagnosis (psychiatric and alcohol and drug disorder) issues and multiple drug use problems when taking patient histories, especially of young people.

Diagnosis

22. The NZMA encourages medical practitioners to be aware of the diagnostic criteria for cannabis related disorders when assessing and diagnosing patients identified as having a cannabis use problem.

Treatment

23. The NZMA calls on government to fund research into the best treatment methods, including the development of possible suitable pharmacotherapies, for those who are dependent on cannabis or those who wish to reduce or cease their use.

24. The NZMA calls for psychological and pharmaceutical evidence-based treatments to be available for those who wish to decrease or cease their use of cannabis.

Rehabilitation

25. The NZMA believes that those with cannabis related disorders require appropriate rehabilitative services as they manage their disorder.

Medical uses of cannabis

26. The NZMA considers cannabis may be of medical benefit in:
    - HIV-related wasting and cancer-related wasting
    - nausea and vomiting in people with cancer, undergoing chemotherapy, which does not respond to conventional treatments.

27. The NZMA believes that more research needs to be undertaken to determine the medical benefit of cannabis in:
    - neurological disorders including (but not limited to) multiple sclerosis and motor neurone disease
    - pain unrelieved by conventional treatments.

28. The NZMA supports research to examine whether cannabinoids provide any greater benefit than the newer antiemetics.

29. The NZMA does not support the use of cannabis for medical purposes other than as stated in clause 26 above or in respect of clause 27 should further evidence support this use.

30. The NZMA considers that smoking or ingesting a crude plant product is a harmful way to deliver cannabinoids. The NZMA supports more research into other ways of delivering cannabinoids as well as their safety and efficacy in proven medical treatments.

31. The NZMA believes any promotion of the medical use of cannabinoids will require extensive education of the public and the profession on the harmful effects of non-medical use of cannabis.

Appendix 1

Background information in support of position statement

Cannabis is by far the most commonly used illicit recreational drug in New Zealand – as it is throughout the world. Nearly half this country's adult population has used it at some point in their lives and about one in seven, or the equivalent of 385,000 people, were classified as current users in 2006[3].

International comparisons compiled by the United Nations Office on Drugs and Crime (UNODC) suggest that at 13.3 per cent the annual prevalence (i.e. the percentage of the adult population who have used the drug in the past year) of cannabis use in New Zealand is among the highest in the world, behind Papua New Guinea (29.5 per cent), Micronesia (29.1 per cent), Ghana (21.5 per cent), Zambia (17.7 per cent), Canada (17 per cent), and Sierra Leone (16.1 per cent)[4].

A study on trends in population drug use in New Zealand using national household survey data found a significant decline in both the lifetime and last year use of cannabis in 2006 compared to the previous survey waves. However, it was noted that it was too early to state whether this was a one off decline or whether it would translate into a sustained trend toward lower levels of cannabis use in New Zealand. The authors also noted that the emergence of several 'new' synthetic stimulant drugs over the past five years—such as methamphetamine, ecstasy, and BZP pills—may have impacted negatively on levels of cannabis use[5].

General health effects of cannabis[6]
The effects of cannabis, as with all drugs, vary from one person to another based on the person's weight and health, degree of tolerance to the drug, what amount of the drug is taken, and its interaction with other drugs[7]. Other influencing factors include frequency of use, age of onset of use, past drug experiences, the circumstances in which the drug is taken, and the method used to absorb the drug.

The effects of using cannabis can be put into two separate groups:

- immediate/short-term effects
- long-term effects.

Immediate/short-term effects
Short-term effects of a single dose include:

- feelings of happiness and relaxation

[3] New Zealand Law Commission "Controlling and Regulating Drugs – A review of the Misuse of Drugs Act 1975", Report 122 April 2011, p 54.
[4] Above n3
[5] Sweetsur P, Wilkins C, "Trends in population drug use in New Zealand: findings from national household surveying of drug use in 1998, 2001, 2003 and 2006" NZMJ 23 May 2008 Vol 121, number 1274.
[6] Information on health effects taken from National Drug Policy NZ: http://ndp.govt.nz/moh.nsf/indexcm/ndp-publications-cannabisandyourhealth-htmlversion#whateffects
[7] Cannabis" AMA Position Statement 2006 Drug Facts – Cannabis. Drug Info Clearinghouse. www.druginfo.adf.org.au/article_print.asp?ContentID=cannabis

- changes in mood
- hunger
- time seeming to speed up or slow down
- paranoia, anxiety, or panic
- impaired concentration, short-term memory, and information processing that affects learning at school or work performance
- impaired reaction time and co-ordination that leads to a higher risk of accidents
- worsening symptoms of mental problems in those with a history of such problems
- increased heart rate and changes in blood pressure.

Long-term effects

Long-term effects include:

- breathing system problems - e.g., bronchitis, emphysema, wheeziness, shortness of breath
- dependency (particularly if a person starts using cannabis at an early age)
- subtle impairments to a person's thought processes - such as organising complex information, and attention and memory processes[8]
- increased risk of cancers of the lung, mouth, throat, and the canal from mouth to stomach
- impaired educational achievement in adolescents, and underachievement in adults'
- work performance if their work requires high-level thinking skills
- a risk of worsening symptoms for those with physical problems (such as breathing-system problems) or mental problems (such as schizophrenia)
- if a woman smokes while pregnant it can lead to the child having a low birth-weight)
- a possible increased risk for some young people using cannabis regularly (i.e. once a week or more) to progress to other drugs.

Cannabis and adolescents

Cannabis is the illicit drug most commonly used by New Zealand adolescents. Estimates suggest that by the age of 21 approximately 80% of young people will have used cannabis on at least one occasion with 10% developing a pattern of heavy dependent use. The average age of first use of cannabis is 17 years[9].

There is increasing evidence to suggest that the regular or heavy use of cannabis may have a number of adverse consequences including increased risks of:

- mental health problems
- other forms of illicit drug use
- school dropout and educational under-achievement
- motor vehicle collisions and injuries[10].

[8] It is unclear if such effects are reversible. Evidence suggests that long-term use does not cause severe damage to thinking processes, or cause permanent brain damage. Above n 5

[9] The 2007/8 Drug Use in New Zealand. Key Results of the 2007/08 New Zealand Alcohol and Drug Use Survey, Ministry of Health January 2010. http://www.health.govt.nz/publication/drug-use-new- zealand-key-results-2007-08-new-zealand-alcohol-and-drug-use-survey

[10] http://www.otago.ac.nz/christchurch/otago018744.pdf Fergusson D, Boden J. Cannabis Use in Adolescence. In: P. Gluckman & H. Hayne (Eds.). Improving the Transition: Reducing Social and Psychological Morbidity during Adolescence. Office of the Prime Minister's Science Advisory Committee, 2011; 257-271

Accidental ingestion by young children
Young children can go into a coma after accidental ingestion of cannabis. Confirmation of cannabis ingestion can be obtained by positive urine screening for cannabinoids.

Driving under the influence of cannabis
Cannabis increases the risk of having an accident due to slow reaction time, blurred vision, poor judgement and drowsiness. These effects can last several hours and vary according to the quantity and quality of THC content and are increased by alcohol.

Dependence and tolerance
Dependence on cannabis involves compulsive use but not usually physiological dependence. The 2007/8 Drug Use in New Zealand key results of the 2007/08 New Zealand Alcohol and Drug Use survey showed that one in seven New Zealanders (14.6%) had used cannabis in the last year, and that two in five of past-year users smoked cannabis at least once a week[11].

Data from New Zealand and other countries indicates increasing demand for professional help related to cannabis. In terms of tolerance, animal and human studies demonstrate that tolerance to many of the psychological and behavioural responses to cannabis occurs with repeated exposure to the drug. The withdrawal from cannabis appears similar to that associated with tobacco but is less severe than withdrawal from alcohol or opiates.

Synthetic cannabis[12]
Synthetic cannabinoids are smokable products containing varieties of plant matter that have been infused with synthetic cannabinomimetic substances. These products were intended to be a legal alternative to cannabis, but are now a banned substance for sale.

The evidence concerning the harms (including the toxicity, metabolism, psychiatric and respiratory effects) of these synthetic cannabinoids is not well understood and there is little information available about them because of their recent appearance on the market. Common side effects reported by emergency doctors include rapid heart rate and paranoia. In rare cases patients have to be given sedatives, and have suffered from anxiety, abdominal pain, nausea and vomiting. Presentations were more likely to be from young adult males. Patients usually came in within hours or minutes of smoking the product, but some came in the next day. There is limited evidence around the dependence, addiction and overdose risk from synthetic cannabinoid use. However one study found an increase in tolerance (in both effect and duration) after heavy use.

A 2009 report from the European Monitoring Centre for Drugs and Drug Addiction suggests tolerance to these synthetic cannabinoids may develop fairly fast. This is a concern because users may be at risk of developing dependence[13] .

In August 2011 the New Zealand Government passed legislation to ban synthetic cannabinoid products. The ban is an interim measure while the Government overhauls the Misuse of Drugs Act

[11] Above n 9.
[12] NZ Drug Foundation http://www.drugfoundation.org.nz/synthetic-cannabinoids
[13] European Monitoring Centre for Drugs and Drug Addiction, "Understanding the Spice Phenomenon" http://www.emcdda.europa.eu/attachements.cfm/att_80086_EN_Spice%20Thematic%20paper%20%E2%80%94%20final%20version.pdf

1975, which will ultimately require manufacturers to prove the safety of products before they can be sold.

Cannabis as a gateway drug

While there seems to be a general acceptance that cannabis may be a gateway drug that causes or encourages people to also try more dangerous drugs, there remains considerable debate around whether there is a causal link between the two[14,15].

Cannabis and mental health

Any use of cannabis by people who have had previous psychotic symptoms/illness is detrimental. When people are under the influence they can forget to take their medications. Cannabis can also worsen delusions, mood swings, hallucinations and especially feelings of paranoia. Cannabis can both trigger further episodes of psychosis and other psychiatric illnesses, and complicate treatment.

Cannabis use is associated with poor outcomes in existing schizophrenia and may precipitate psychosis in those with a predisposition[16]. It appears that using larger amounts of cannabis, at an earlier age and having a genetic predisposition increases the risk of developing schizophrenia[17].

Whether there is a causal link between cannabis use and psychosis remains the subject of some debate[18,19,20]. It seems to be accepted however, that cannabis can be a component cause in the development of psychosis. It is the strength of that causal link that continues to be debated.

a. **Cannabis and depression**

   Less research has been undertaken on links between cannabis and depression than those between cannabis and psychosis. Cross-sectional studies have mostly indicated that the relationship between cannabis use and depression is at least partly explained by family and personality factors, other drug use, and marital status. Longitudinal study design research has consistently concluded that depression does not predict cannabis use but that cannabis use imparts a moderate risk for later depression, particularly amongst adolescent girls[21].

   The research on cannabis use and suicide has produced mixed results although there is some evidence to support the view that heavy cannabis use can pose a small additional risk of suicide[22].

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[14] Above n 9

[15] NZ Drug Foundation http://www.drugfoundation.org.nz/cannabis/gateway-theory

[16] Above n 7, Henquet, C.; Murray, R.; Linszen, D. and van Os, J. The Environment and Schizophrenia: The role of cannabis use. Schizophrenia Bulletin 2005 Jul;31(3):608-12

[17]

[18] Above n 7, Harris, A. An Examination of the Links between Cannabis Use and Schizophrenia. Engage. Issue 6 May 2006. Mental Illness Fellowship of Australia.

[19] Above n 7 Arsenault, L. Cannon, M. Witton, J. and Murray R.M. Causal Association between Cannabis and Psychosis: Examination of the evidence. British Journal of Psychiatry (2004) 184, 110-117.

[20] Above n7, Henquet, C.; Murray, R.; Linszen, D. and van Os, J. The Environment andSchizophrenia: The role of cannabis use. Schizophrenia Bulletin 2005 Jul;31(3):608-12

[21] Above n 7, Copeland, J. Gerber, S. and Swift, W. (2006) Evidence-based Answers to Cannabis Questions: A review of the literature. Australian National Council on Drugs.

[22] Above n 7, Copeland, J. Gerber, S. and Swift, W. (2006) Evidence-based Answers to Cannabis Questions: A review of the literature. Australian National Council on Drugs.

b. Cannabis and anxiety

As with depression, there has been little research examining the links between cannabis use and anxiety; that available indicates that cannabis use and anxiety disorders occur at a greater rate than one would expect from chance. However these results seem to be largely moderated by other factors such as child and family issues, other drug use, and peer associations[23].

Medical uses of cannabis

In December 2005 the Royal College of Physicians of London released a report of a working party entitled *Cannabis and cannabis-based medicines: Potential benefits and risks to health*. It contends that the only two recognised medical indications for the main psychoactive ingredient of cannabis, THC are:

- the treatment of nausea and vomiting associated with chemotherapy
- counteracting the loss of appetite and cachexia associated with AIDS[24].

Other possible medical indications for cannabis are:

- as a pain reliever
- treating neurological disorders such as multiple sclerosis, spinal cord injury, and some movement disorders, particularly where there is muscle spasticity or tremor[25]
- reduction of intra-ocular pressure in glaucoma.

The New Zealand Law Commission in its 2011 Report on the Review of the Misuse of Drugs Act 1975 noted the significant differences of opinion on whether unprocessed cannabis should be available for therapeutic use and that this would not be resolved until randomised control trials were undertaken. It stated as a matter of principle, that cannabis should not be a special case, but should be treated in the same way as other controlled drugs that can be used medicinally. It should therefore be subject to the same evidence-based testing as other controlled drugs before being made available to the public as a medicine.

The law

Possession of cannabis for use or supply is currently illegal in New Zealand. There is a growing call for cannabis used for medicinal purposes to be legalised however as, noted above, cannabis has so far been shown to be of limited therapeutic value.

Treatment options

While the numbers of people seeking assistance for treatment of cannabis increases and research indicates that cannabis can be addictive there has been little research on the effectiveness of treatment options for cannabis misuse[26]. The research on pharmacological interventions for

[23] Above n 7 Copeland, J. Gerber, S. and Swift, W. (2006) Evidence-based Answers to Cannabis Questions: A review of the literature. Australian National Council on Drugs.
[24] Royal College of Physicians (2005) Cannabis and cannabis-based medicines: Potential benefits and risks to health. RCP, London.
[25] Above n 24 Copeland, J. Gerber, S. and Swift, W. (2006) Evidence-based Answers to Cannabis Questions: A review of the literature. Australian National Council on Drugs
[26] Above n7 Copeland, J. Gerber, S. and Swift, W. (2006) Evidence-based Answers to Cannabis Questions: A review of the literature. Australian National Council on Drugs

cannabis withdrawal and craving is in its infancy and there have been no randomised controlled trials in this area[27].

Treatment options for cannabis dependence are much fewer than for alcohol or opiate dependence. They generally include some form of psychological treatment such as Cognitive Behaviour Therapy or Motivational Interviewing. Australian and overseas studies provide some support for effectiveness for brief intervention programmes using these techniques. Several small studies with specific population groups show some effectiveness for vouchers for retail products as an incentive for cannabinoid free urine samples. Much of the literature focuses on interventions with young people[28].

It is important that doctors are aware of the harms that can occur from cannabis and to engage in continuing education as the evidence regarding cannabis continues to develop. Doctors, particularly general practitioners, are strategically placed to educate people regarding the use of cannabis and to assist those with problems associated with cannabis.

[27] Above n7 Copeland, J. Gerber, S. and Swift, W. (2006) Evidence-based Answers to Cannabis Questions: A review of the literature. Australian National Council on Drugs

[28] Above n7 Copeland, J. Gerber, S. and Swift, W. (2006) Evidence-based Answers to Cannabis Questions: A review of the literature. Australian National Council on Drugs