

**Submission
No 34**

INQUIRY INTO USE OF CANNABIS FOR MEDICAL PURPOSES

Organisation: Drug Free Australia

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To the Members of

On behalf of the Board and Management of Drug Free Australia, I have pleasure in submitting our research submission into the use of cannabis for medical purposes.

We trust that you will find the information helpful and look forward to hearing your response.

Kind regards

Jo Baxter

Executive Officer

Drug Free Australia



Promoting Illicit Drug Prevention Initiatives Nationally

General Purpose Standing Committee No. 4

Inquiry into the use of Cannabis for Medical Purposes

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1. INTRODUCTION

Drug Free Australia (DFA) is pleased to be able to make a significant contribution to the NSW Parliament's *Inquiry into the use of Cannabis for Medical Purposes*. This paper provides vitally important information and advice to the General Purpose Committee No. 4 and the Legislative Council NSW, politicians, decision-makers and researchers, to ensure that facts about cannabis for medical purposes are clarified and accurately portrayed. Research by Professor Wayne Hall and Professor Louisa Degenhardt, states that Australians are the 'highest' cannabis users in the world, only matched by USA and New Zealand. Professor Hall believes that young uptake of cannabis is a likely cause for lifetime adverse health issues. (1)

While it is expected that members of the General Purpose Committee No. 4 would be aware that the Australian Therapeutic Goods Administration does not endorse the use of marijuana for medical use, it is important to ensure that this fact is given **high priority** in the Committee's deliberations.

It also is important for the Committee to know **the origins of medical marijuana**, as well as the fact that **the Medical Profession was not involved**.

In 1979 Keith Stroup, an American lawyer and founder of NORML (National Organisation for Reform of Marijuana Laws) stated at Emory University, "*We will use the medical marijuana argument as a 'red herring' on the road to full legalisation*". His successor, Richie Cowan said, "*Medical marijuana is our strongest suit. It is our point of leverage which will move us towards the legalisation of marijuana for personal use*". However US Federal law held firm and continues to prohibit 'medical' marijuana, based on the Drug Enforcement Agency's judgment that was taken from the Federal Register, Vol. 54, No 249, December 29, 1989.

More people need to see 'medical' marijuana for what it is: a cruel hoax. Promoters of 'medical' marijuana are using the public's compassion for the suffering of sick people; it is emotional blackmail. There are important differences between modern scientific medicine that is administered as single chemicals (usually synthetic) by the oral route of administration and smoked herbal marijuana.(2)

ACKNOWLEDGEMENTS:

This paper will demonstrate these issues with current evidence from both Australian and international research. In so doing, Drug Free Australia wishes to acknowledge the expertise and scientific contribution made to this submission by Associate Professor Albert Stuart Reece and Ms Mary Brett trustee of CanSS and member of World Federation Against Drugs. In addition, DFA's Queensland Director, Mr Herschel Baker should be acknowledged for his vital role in coordinating the high volume of current research data that underpins this submission.

2. SUMMARY OF FACTS

2.1 'Medical' Marijuana: contains some 400 chemicals, rising to 2,000 when smoked. Quantities used are inconsistent, doses are uncontrollable and outcomes unpredictable. It uses smoke with its toxic substances and carcinogens as a delivery system.

2.2 Licensed medicines/Synthetic THC: use highly purified single chemicals (usually synthetic), which are administered in controlled doses with predictable outcomes and are taken orally leading to steady blood levels. Licensed medicines developed from marijuana are already available, but are not popular with doctors due to their side effects. **These include Nabilone (UK), Marinol (USA) and now Sativex (THC + CBD).**

2.3 The Drug Abuse Warning Network (DAWN), detected a measurable number of emergency department (ED) visits involving synthetic cannabinoids in 2010, and this report presents data related to these visits. Synthetic cannabinoids were reported to DAWN under the following names: Spice, K2, K2 Incense, K2 Joint, K2 Spice, K2 Spice Incense, K2 Summit, K2 Synthetic Marijuana, Black Mamba, Blaze Incense, Cloud 9, Damiana Leaf, JWH-018, JWH-250, Serenity Now Herbal Incense, Spike99 Ultra, Synthetic Cannabis, Synthetic Marijuana, and Wicked XXX Herbal Incense. DAWN is a public health surveillance system that monitors drug-related ED visits in the United States. (3)

2.4 Cannabis - increased potency: The damaging effects of cannabis are underplayed (or frequently omitted). For instance: Today's 'skunk' averages 18%THC in Holland. Sixties/seventies herbal cannabis averaged 1 to 2%. Hash (resin) THC has been constant at around 4 - 6%. The Dutch Commission has advised that THC above 15 per cent puts cannabis on a par with **heroin or cocaine** and also has a high risk of addiction to the user.

Coffee shops have stopped admitting tourists and many have been closed. (4)

2.5 Comparison of Cannabis and Tobacco:

Over 1,500 toxic chemicals have been identified in the smoke of cannabis, including carbon monoxide, carcinogens and irritants. These all greatly affect the body's respiratory and cardiovascular systems in a similar manner to the known effects of smoking tobacco. Moir et al's 2007 study of marijuana smoke found ammonia at levels up to 20-fold greater than that found in tobacco, hydrogen cyanide at concentrations 3-5 times those in tobacco smoke, and confirmed the presence of known carcinogens and other chemicals implicated in respiratory diseases. The Institute of Medicine of Washington DC produced the table on the next page, which shows a comprehensive comparison of the chemicals in cannabis and tobacco.

http://www.drugfree.org.au/fileadmin/Media/Reference/DFA_CannabisPaper.pdf page 9 (5)

Table 1 – Comparison of Chemicals – Cannabis and Tobacco

A. Cigarettes			
	Units	Marijuana	Tobacco
		(85mm)	(85mm)
Average Weight	(mg)	1115	1110
Moisture	(%)	10.3	11.1
Pressure Drop	cm	14.7	7.2
Static Burning rate	mg/s	0.88	0.80
Puff Number		10.7	11.1
B. Mainstream Smoke			
I. Gas Phase	Units	Marijuana	Tobacco
Carbon Monoxide	%	3.99	4.58
	mg	17.6	20.2
Carbon Dioxide	%	8.27	9.38
	mg	57.3	65.0
Ammonia	mcg	228	199
HCN	mcg	532	498
Cyanogen (CN) ₂	mcg	19	20
Isoprene	mcg	83	310
Acetaldehyde	mcg	1200	980
Acetone	mcg	443	578
Acrolein	mcg	92	85
Acetonitrilebenzene	mcg	132	123
Benzene	mcg	76	67
Toluene	mcg	112	108
Vinyl chloride	ng	5.4	12.4
Dimethylnitrosamine	ng	75	84
Methylethyl nitrosamine	ng	27	30
pH, third puff		6.56	6.14
fifth puff		6.57	6.15
seventh puff		6.58	6.14
ninth puff		6.56	6.10
tenth puff		6.58	6.02
II. Particulate phase			
	Units	Marijuana	Tobacco
Tl particulate - dry	mg	22.7	39.0
Phenol	mcg	76.8	138.5
o-Cresol	mcg	17.9	24
m- and p-Cresol	mcg	54.4	65
Dimethylphenol	mcg	6.8	14.4
Catechol	mcg	188	328
Cannbidiol	mcg	190	
D9 THC	mcg	820	
Cannabinol	mcg	400	
Nicotine	mcg		2850
N-Nitrosornicotine	ng		390
Naphthalene	mcg	3.0	1.2
1-Methylnaphthalene	mcg	6.1	3.65
2-Methylnaphthalene	mcg	3.6	1.4
Benz(a)anthracene	ng	75	43
Benzo(a)pyrene	ng	31	21.1

There is recent evidence to indicate that tobacco companies have considered the financial benefits of producing and marketing cannabis. For instance, a consultant's report to Brown and Williamson revealed in court, reads: "*The use of marijuana...has important implications for the tobacco industry in terms of an alternative product line. [We] have the land to grow it, the machines to roll it and package it, the distribution to market it.*" Big tobacco lied to America for 80 years about the dangers of smoking. They deliberately targeted kids. Why would we think it would be any different for marijuana? (6)

2.6 The 'Gateway' Theory

There is strong evidence for the 'Gateway theory' to other drugs. In one 2012 study a French nationwide retrospective cohort on drug use was reconstituted on 29,393 teenagers and confirmed the 'gateway' theory. A Markov multi-state model was fitted, modeling all possible pathways from initial abstinence to cannabis initiation, daily cannabis use and OID (Other Illicit Drug) initiation. The model was adjusted for tobacco and alcohol use. The risk for OID (Other Illicit Drug) initiation appeared 21 times higher among cannabis experimenters and 124 times higher among daily cannabis users than among non-users. Tobacco and alcohol use were associated with a greater risk of moving on to cannabis initiation (hazard ratio (HR)=1.2 for tobacco initiation, HR=2.6 for daily tobacco use and HR=2.8 for drunkenness initiation). The results of this study provide a confirmation of a stage process in drug use, mediated by cannabis and liable to lead to OID experiment. This is compatible with the literature on the gateway theory, but goes further by modelling the entire sequence of use. OID experiment could be a consequence of initial opportunity to use the more accessible illicit drug, cannabis. (7) <http://www.ncbi.nlm.nih.gov/pubmed/21983294>

Cigarette smoking and cannabis use overlap—over 90 percent of people who have used cannabis are cigarette smokers or have smoked at least once in their lives. This study points to the importance of viewing cannabis use within the context of tobacco use. These findings indicate that the well-known overlap in cannabis and cigarette smoking behaviors may evolve as early as opportunity to use and extend through the course of the substance use trajectory. (8)

<http://www.ncbi.nlm.nih.gov/pubmed/23010290>

In another study, Swift found that quitting cannabis in your twenties cuts progression to other drugs. Use of cannabis declines among Australians throughout their twenties but those who are still using are more likely to be weekly users or even more frequent. They have an increased risk compared with occasional users. Weekly users – risk of other illicit drugs – 2 to 3 times, daily – 6 times as likely to smoke tobacco and less likely to give up all others except cocaine. Nearly 2000 Victorian secondary school pupils followed for 13 years, from 1992. Six, six monthly intervals, then 20-21, 24-25, and 29. While overall decrease (age 20 – 58% to only 29% at 29) in cannabis use in young adults, number of those who use weekly/daily almost doubled. Among non-users, use of amphetamines, cocaine or ecstasy virtually non-existent. (9)

3. CANNABIS HARMS

3.1 Addiction, physical and psychological can occur.

Dr Stuart Reece (Medical faculty, University of Queensland) states in his paper '*Chronic Toxicology of cannabis*' that there is evidence for the implication of cannabis in various psychiatric, respiratory, cardiovascular, and bone pathologies. The reports of social disruption, disorganization, and deprivation consequent on widespread heavy cannabis use from a number of communities around the world are of substantial concern. The features associated with chronic cannabis use imply that a clear public health cautionary message is warranted along the lines employed for other environmental intoxicants such as tobacco, which should be targeted strategically to young and otherwise vulnerable populations. Chronic cannabis use also has oncogenic, teratogenic and mutagenic effects all of which depend upon dose and duration of use. (10)

<http://www.truecompassion.org/PDFS/Marijuana%20toxicity%20and%20potency/Chronic%20Toxicology%20of%20cannabis.pdf>

Recent research from Auckland University, New Zealand indicates that cannabis use may more than double the risk of stroke in young adults. The study of 160 stroke and mini-stroke victims, aged between 18 and 55, was presented to a conference in Hawaii in February 2013. It showed they were 2.3 times more likely than other patients to have cannabis detected in urine tests. (11)

http://www.couriermail.com.au/news/breaking-news/cannabis-now-a-stroke-risk/story-e6freoo6-1226570467745?from=public_rsshttp://inagist.com/all/298573791070654464/

Of importance is that the demand for treatment for cannabis dependence has grown dramatically and the majority of people who enter treatment have difficulty in achieving and maintaining abstinence from cannabis. (12)

Recent statistics from the Drug Abuse Warning Network (DAWN) in the United States, cast a startling light on the effects of marijuana abuse among the young. When the 2012 review of drug-related Emergency Department (ER) visits was issued, it revealed that marijuana sent more people aged 20 and under to the ER than any other drug.

According to this report, 144 young people per 100,000 population visited an ER in 2010 for help with adverse effects resulting from marijuana abuse. The next highest category was alcohol with 140 young people per 100,000. Prescription pain relievers only sent 36 per 100,000.

<http://www.samhsa.gov/data/2k12/DAWN105/SR105-synthetic-marijuana.pdf>

3.2 Cancers:

Cannabis has 60% more of the dangerous cancer causing hydrocarbons than tobacco and the latest research count suggested a total 116 carcinogens. On Apr. 3, 2009 a study titled "*Biologically Active Cannabinoids from High-Potency Cannabis Sativa*," published in journal of Natural Products. This discovery brings the total number of cannabinoids to about 80, according to an Apr. 12, 2009 bulletin published by the International Association for Cannabis as Medicine.

<http://www.ncbi.nlm.nih.gov/pubmed/19344127>

Cannabis and tobacco are both linked with Liver Cancer Induction. (13) A retrospective study suggested that daily cannabis smoking may be an independent predictor of fibrosis progression in (Chronic Hepatitis C) CHC.(14) This finding has recently been duplicated in a prospective cohort study.(15) Cannabis may have a profibrogenic effect via the cannabinoid 1 receptor, which may promote steatosis.(16) Pharmacologic antagonism of this receptor reduces fibrosis in experimental animal models.(17) However, regular cannabis use has been found to facilitate compliance thus decreasing relapse during antiviral therapy. On balance, it is wise to advise against use of cannabis in patients with CHC.

Health officials have seen a growing increase in the number of cases of a certain type of testicular cancer, one that is difficult to cure, and now a study has found that smoking marijuana has been linked to an increased risk of developing that subtype of cancer.

In fact, young men who have ever smoked marijuana are twice as likely to develop mixed germ cell tumors. (18) http://www.biomedexperts.com/Abstract.bme/22965656/Population-based_case-control_study_of_recreational_drug_use_and_testis_cancer_risk_confirms_an_association_between_mari Testicular cancer is the most common cancer diagnosed in young men ages 15 to 45 years. From the above results, combined with previous studies, the authors conclude that they can confirm "the epidemiological association of marijuana use with TGCT risk," specifically for nonseminomatous tumors. Broadly, the mechanism at play may be due to the fact that human cannabinoid receptors, (THC binds) are expressed in the pituitary, hypothalamus, and male reproductive system. Although far less research has been done on the subject, the authors also hypothesize that cocaine may kill germ cells, explaining the negative association that was found. (19)

3.3 Mental health problems:

The link between cannabis and mental health has been well documented and include research into the onset of psychosis and schizophrenia. Other mood disorders occur, they include depression, bi-polar disorder and amotivational syndrome. Research has also explored the links to suicide, especially in young people. For instance, Professor Jenny Williams states that the regular use of cannabis can trigger suicidal thoughts in some users, particularly young men, according to the results of a 30-year study that experts say strengthens the need for stronger warnings about the drug, particularly for adolescents and young adults. (20)

<http://www.theaustralian.com.au/news/health-science/regular-use-of-cannabis-can-lead-to-suicidal-thoughts/story-e6frg8y6-1226477629628>

<http://benews.unimelb.edu.au/2012/cannabis-use-can-lead-to-suicidal-thoughts/>

Further evidence is demonstrated by Fergusson et al who looked at The Christchurch Health and Development Study (1265 NZ children born in 1977 and studied at 4 months, 1 year, then yearly until age of 16, then at 18, 21, 25 and 30). These research findings were presented at The Second national Cannabis Conference in Brisbane on September 20th 2012. Not only did cannabis use precipitate suicidal thoughts but the higher the frequency of regular use, the faster susceptible individuals became suicidal.

If all males used cannabis less frequently than several times/week, suicidal ideation would be experienced by 15% of 18 year olds, 24% of 21 year olds and 30% of 30m year olds. If they had all started using cannabis several times a week from the age of 17, then all males would show an increase of 24% of 18s and 31% for 21s.(21) <http://ssm.com/abstract=2153485>

Manrique-Garcia re-assessed a study of 50,000 military conscripts in Sweden, who had reported their cannabis use since adolescence and over a 35 year period.

The study revealed that *'the individuals who used cannabis regularly were almost four times more likely to develop schizophrenia than those who never used cannabis'*. They were also more than twice likely to experience a brief psychosis episode.

Manrique-Garcia states that, *"Of the cases related to cannabis use, 60% occurred during the first decade compared with 45% among non-users of cannabis."* However, the findings also demonstrated a clear relationship between dose and risk. In particular, those who used the highest amounts of cannabis for the longest periods of time had the highest risk of schizophrenia. This risk was increased by early episodes of psychosis, regardless of whether they were cannabis induced or not. The individuals who experienced episodes of cannabis-induced psychosis and those who had non-cannabis-related psychotic episodes were equally at risk for schizophrenia. But Manrique-Garcia points out that *'the individuals with cannabis-related psychosis may not have experienced any psychotic episodes if they had not used cannabis. Further research is needed to determine if this would ultimately decrease their risk for the later development of schizophrenia'*. (22) <http://www.ncbi.nlm.nih.gov/pubmed/21999906>

Behan et al looked at adolescent cannabis use and its effects on the COMT gene, first written about in 2005 (Caspi). They used mice whose COMT gene had been 'knocked out'. Behan said, "This is the first study to show that the combined effects of the COMT gene with adolescent cannabis use cause physical changes in the brain regions associated with schizophrenia.

It demonstrates how genetic, developmental, and environmental factors interact to modulate brain function in schizophrenia and supports previous behavioural research which has shown the COMT gene to influence the effects of adolescent cannabis use on schizophrenia-related behaviours' The 3 areas of the brain assessed in this study were found to show changes in cell size, density and protein levels. (23)

<http://www.ncbi.nlm.nih.gov/pubmed/22434221>

3.4 Cannabis – adverse effect on the brain’s functioning:

Research shows that, because THC remains in cells for some weeks, learning and memory are badly affected. Academic performance plummets. A grade D student is 4 times more likely to use cannabis than one with A grades. Personalities change. Users have fixed answers, can't plan their day, they struggle to find words and are lonely, miserable and misunderstood. Driving is affected for at least 24 hours. A recent study of marijuana users who began using in adolescence revealed a profound deficit in connections between brain areas responsible for learning and memory. And a large prospective study (following individuals across time) showed that people who began smoking marijuana heavily in their teens lost as much as 8 points in IQ between age 13 and age 38; importantly, the lost cognitive abilities were not restored in those who quit smoking marijuana as adults. Individuals who started smoking marijuana in adulthood did not show significant IQ declines. (24) <http://www.sciencealert.com.au/news-nz/20122808-23693.html>

Nora D. Volkow, M.D., Director of the National Institute on Drug Abuse (NIDA) stated on Jan 16 2013 that: *'the message inherent in these and in multiple supporting studies is clear. Regular marijuana use in adolescence is known to be part of a cluster of behaviors that can produce enduring detrimental effects and alter the trajectory of a young person's life—thwarting his or her potential. Beyond potentially lowering IQ, teen marijuana use is linked to school dropout, other drug use, mental health problems, etc. Given the current number of regular marijuana users (about 1 in 15 high school seniors) and the possibility of this number increasing with marijuana legalization, we cannot afford to divert our focus from the central point: regular marijuana use stands to jeopardize a young person's chances of success—in school and in life'.*(25)

<http://www.drugabuse.gov/about-nida/directors-page/messages-director/2013/01/marijuanas-lasting-effects-brain>

In addition to mental illness, a recent international study found a link between “persistent cannabis use and neuropsychological decline.” In other words, marijuana causes damage to intelligence, memory and attention.

<http://www.pnas.org/content/early/2012/08/22/1206820109.abstract>

NMHS MH and Clinical Research Centre researchers Nikos Stefanis, Milan Dragovic and Vera Morgan recently collaborated on a new study which shows a temporal direct relationship between age at initiation of cannabis use and age at onset of psychotic illness was detected with a premorbid exposure to cannabis trend of 7–8 years, modifiable by higher severity of premorbid cannabis use and a diagnosis of SSD.

Cannabis may exert a cumulative toxic effect on individuals on the pathway to developing psychosis, the manifestation of which is delayed for approximately 7–8 years, regardless of age at which cannabis use was initiated. (26)

<http://schizophreniabulletin.oxfordjournals.org/content/early/2013/01/10/schbul.sbs188.abstract>

The system of the brain responsible for mediating the effects of cannabis, the endocannabinoid system, is most vulnerable to the drug during adolescence, according to new research by Dr. Long of Neuroscience Research Australia (NeuRA).

The endocannabinoid system is involved in appetite, pain-sensation, mood and memory, and affects the way neurons in the brain communicate with each other. Cannabis causes problems by attaching to proteins in the endocannabinoid system and interfering with this communication role.

“Disrupting endocannabinoid signaling through exposure to cannabis, is likely to have a higher impact if the exposure happens at a time of change and when achieving balance in communication between neurons is very important, such as during adolescence.” (27)

<http://www.neura.edu.au/print/2585>

3.5 Cannabis use in Pregnancy

Marijuana is up to 20 times more potent than it was 40 years ago and most pregnant women who use the drug are totally unaware that it could harm their unborn child, before they even know they are pregnant.

Writing in the journal *Drug Testing and Analysis*, American researchers state that ‘*the argument that marijuana is a harmless drug is no longer valid due to the emergence of 'high potency' marijuana and synthetic marijuana which pose a potential real threat for pregnant women*’. They also express concerns that marijuana's increased popularity among teenagers and young adults could put this group at higher risk.

"The emergence of bioengineered crops and novel, medicinal marijuana strains, means that marijuana is no longer what it used to be in the 1970's and early 1980's: some new, high potency strains, including some medicinal marijuana blends such as 'Connie Chung' and many others, contain up to 20 times more THC, the psychoactive constituent of marijuana, than did 'traditional' marijuana from the 1970's and early 1980's" explains co-author Dr. Delphine Psychoyos from the Center for Genetic and Environmental Medicine at Texas A&M University. *"Furthermore, with the emergence of dispensaries and Internet websites, high potency marijuana and Spice products are now readily available to the general population."*

Spice products, a prominent brand of 'synthetic marijuana', or 'fake weed' mixtures, contain extremely potent THC analogues, also called 'synthetic cannabinoids', such as AM694 (found in Euphoric Blends Big Band and others) and HU210 (found in Spice Gold), both of which are 500-600 times more potent than marijuana's THC.

"The THC contained in 'high potency' marijuana and the potent THC analogues contained in Spice products and other brands of 'synthetic marijuana', are potentially harmful to embryonic development, as early as two weeks after conception. This is because these psychoactive chemicals have the ability to interfere with the first stages in the formation of the brain of the fetus; this event occurs two weeks after conception, earlier than before signs of pregnancy appear. By the time a woman realizes she is pregnant and stops taking these substances it may already be too late for her unborn child."

*"Given that marijuana is the most widely used illicit drug by pregnant women worldwide -- one study estimates the rate is as high as 20 per cent -- **this is a major issue.**" (28)*

Psychoyos, in August 2012, found that new high-potency marijuana can interfere with early brain development in developing foetuses. *'Some new high-potency strains, including some medicinal cannabis blends , contain up to 20 times more THC than did 'traditional marijuana from decades past. Easy access to drugs via the internet or dispensaries makes the problem worse'. Harmful effects can begin as early as 2 weeks from conception. Exposure to today's marijuana in early pregnancy is associated with anencephaly, a devastating birth defect in which infants are born with large parts of the brain or skull missing.. Early pre-natal use was also tied up with ADHD, learning disabilities, memory problems in toddlers and 10 year olds as well as depression, aggression and anxiety in the teens.(29)*

<http://au.wiley.com/WileyCDA/PressRelease/pressReleaseId-104547.html>

3.6 Cannabis and Driving

There is increasing evidence to demonstrate that cannabis use impairs the ability to drive safely. Mark Asbridge's research entitled *"Acute cannabis consumption and motor vehicle collision risk: systematic review of observational studies and meta-analysis"* reached the following conclusions: *'Acute cannabis consumption is associated with an increased risk of a motor vehicle crash, especially for fatal collisions. Drivers who consume cannabis within three hours of driving are nearly twice as likely to cause a vehicle collision as those who are not under the influence of drugs or alcohol. This information could be used as the basis for campaigns against drug impaired driving, developing regional or national policies to control acute drug use while driving, and raising public awareness'.*(30) <http://www.bmj.com/content/344/bmj.e536>

Liberty Mutual Insurance and Students Against Destructive Decisions (SADD) commissioned a report into teens driving under the influence of marijuana. Nearly 1 in 5 said they had driven after smoking the drug. Almost 2,300 11th and 12th graders were studied. A growing percentage do not see marijuana as a distraction. More than a third of those who had driven after smoking failed to acknowledge their driving may have been impaired. The figure is higher than those who drove after drinking alcohol (13%) .(31)

<http://www.sadd.org/press/presspdfs/Marijuana%20Teen%20Release.pdf>

This points to the need for greater public awareness of the impact of cannabis and driving ability. To support this need, a recent report entitled *'For the Road'* January 2013 vol. 7 issue 1 pages 2-5 debunks the argument that Standardized Field Sobriety Tests (SFSTs) have only been validated for alcohol and are not accurate for cannabis.

Australian researchers in 2005, applied the SFSTs to THC users and to combined THC-Alcohol users. They broadly concluded the SFSTs, “appear to be an appropriate screening tool for authorities that wish to assess the driving capabilities of individuals suspected of being under the influence of a drug other than alcohol.”(32,33)

A further finding that: *'acute cannabis consumption is associated with an increased risk of a motor vehicle crash, especially for fatal collisions. This information could be used as the basis for campaigns against drug impaired driving, developing regional or national policies to control acute drug use while driving, and raising public awareness's.*(34) <http://www.bmj.com/content/344/bmj.e536>

4. EVIDENCE UPDATE

4.1 Violence is common, but is not widely publicized.

Research by Dr. Arsenault showed that young men who regularly smoke cannabis are five times more likely to be violent than those who avoid the drug. Using data from a study of 961 young adults in Dunedin, New Zealand, she discovered that one-third of those with a cannabis habit had a court conviction for violence by the time they hit 21 or had displayed violent behaviour. (35)

<http://news.bbc.co.uk/2/hi/health/1435974.stm>

“Teens Drugs and Violence”, a special report from the Office of National Drug Control Policy in the USA, in June 2007 concluded that *“Early use of marijuana – the drug most widely used by teens – is a warning sign for later gang involvement and teens who participate in gangs are more likely to be involved in violent acts and drug use. Teens who report current and regular marijuana use are 9 times more likely than non-users to experiment with other illegal drugs or alcohol, and five times more likely to steal....Children who use marijuana are nearly four times more likely to join gangs. Being a member of a gang dramatically increases a teen’s risk of being a victim of violence, not just a perpetrator”*. (36)

4.2 Cannabis issues in Aboriginal and Torres Strait Island Communities

A study being conducted by Professor Alan Clough PhD James Cook University Cairns Queensland titled *“Indigenous action to reduce harms associated with heavy cannabis use in Cape York”*. It is being conducted in parallel and in partnership with the Queensland Police Service *“Weed-it-out”* project, a supply control strategy which aims to reduce cannabis availability and to build greater crime prevention capacity across the Far North Queensland.(37)

4.3 What are the views of reputable Medical Organisations?

The **American Medical Association (AMA)** is of the opinion that *"cannabinoid-based medicines and alternate delivery methods" should be developed for the safe consumption of marijuana and discourages smoking or legalization of marijuana.*

The British Lung Foundation issued major statements in recent years acknowledging the known deleterious effects of cannabis on the lungs. Cannabis is smoked differently from tobacco. Users commonly inhale deeply to a maximal breath and then retain the smoke in the lungs, which generates higher pressures during breath holding and on expiration.

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2094280/>

None of the following authorities have advocated marijuana as medicine:

- American Academy of Child & Adolescent Psychiatry (AACAP) opposes medical marijuana dispensing to adolescents 2012 (38),
- American Society of Addiction Medicine (ASAM)2010 (39).
- The American Glaucoma Society (AGS)2010 (40).
- The American Cancer Society (ACS)2001 (41).
- The American Academy of Pediatrics (AAP)2004 (42).
- The National Multiple Sclerosis Society (NMSS)2008 (43).
- The British Medical Association (BMA)2005 (44).
- Dame Helena Shovelton, Chief Executive of The British Lung Foundation's survey of 1,000 adults the findings were alarming *"Young people in particular are smoking cannabis unaware that each cannabis cigarette they smoke increase their chances of developing lung cancer by as much as an entire packet of 20 tobacco cigarettes"* 6 June 2012 (45) <http://www.dailymail.co.uk/news/article-146853/Why-cannabis-greater-cancer-risk-tobacco.html>
- American Cancer Society (ACP) has not advocated for the long-term use of smoked marijuana; rather, the paper explicitly discusses the harm associated with chronic use of smoked marijuana and stresses the need for development of nonsmoked forms of cannabinoid delivery systems strictly for therapeutic purposes supported by the evidence. January 13 2012(46) http://www.acponline.org/advocacy/where_we_stand/other_issues/medmarijuana.pdf

- Community Anti-Drug Coalitions of America (CADCA)'s position statement on "Medical" marijuana and Marijuana Legalization states: "*There is a direct correlation between "medical" marijuana initiatives and decreases in perception of harm and social disapproval*"(47)

http://www.cadca.org/files/policy_priorities/MedicalMarijuanaLegalizationPositionStatement2.doc

- American College of Physicians supporting research into the therapeutic role of marijuana (Position paper, 2008) Accessed at www.acponline.org/advocacy/where_we_stand/other_issues/medmarijuana.pdf (48)

4.4 Drug Free Australia's Position Statement Against Illicit Drug Legalisation, Regulation and Decriminalisation is supported by more than 150 NGO's. We support a balanced and humane illicit drug policy that aims at primary prevention and recovery-based treatment and rehabilitation.

This can **never** be achieved if illicit drugs are condoned through their legalisation. Legalisation equates to 'regulation' in the illicit drug context. There is a maxim that remains constant - 'availability, accessibility and permissibility will increase consumption' (49)

<http://www.drugfree.org.au/about/position-statement/supporting-ngos/>

http://www.drugfree.org.au/fileadmin/Media/Global/NGO_Affiliates_20130102.pdf

4.5 The consequences of sanctioning medical marijuana use:

A study in the September 2011 issue of Annals of Epidemiology found that, among youths age 12 to 17, marijuana usage rates were higher in states with medical marijuana laws (8.6%) compared with those without such laws (6.9%). A similar study of people age 18 and older, published in the journal Drug and Alcohol Dependence, found the odds of marijuana abuse or dependence were almost twice as high in states with medical marijuana laws compared with those without such laws.

A further point of concern (which is emerging in the United States) is that of the integrity of doctors who prescribe 'medical marijuana'. This may be of relevance in Australia, given the following: 'Medical' Marijuana assumes integrity amongst doctors who prescribe it. A recent report on the regularly televised "A Current Affair" program has raised grave concerns about doctors' integrity. Producers of the show arranged for visits to 12 random doctors to ask them for a sick-leave certificate, while giving an obviously false excuse for not wanting to be at work. Despite some even telling the doctor up front that they were feeling well, only one doctor refused - the other 11 gave a certificate.(50) <http://aca.ninemsn.com.au/investigations/8297648/the-great-sickie-roat>

5 RECOMMENDATIONS

Drug Free Australia strongly recommends THAT:

Given the overwhelming evidence on the harms associated with cannabis, that the General Purpose Standing Committee No. 4:

1. Stands firmly against any change that would relax the law on the use of cannabis for medical purposes.
2. Supports a comprehensive, ongoing public education program to inform all sectors of the community of the well documented ill-effects to both physical and mental health of cannabis use, that impact on individuals, families and the community as a whole.
3. Acknowledges that modern epidemiological and scientific studies show a continually increasing case **AGAINST** increased cannabis use because of the high risk to users and their offspring and in the overall costs to the wider community. These are largely concurred with in the serious scientific literature. As such it is **NOT APPROPRIATE** to be having a public discussion about policies which may potentially increase its use, and therefore an exponential increase in harm and community cost.

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The following links give more information:

<http://www.ibtimes.co.uk/articles/407326/20121121/holland-ban-strong-marijuana-weed-pass-cafes.htm>

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Further reading and updates are available in ‘Cannabis – a general survey of its harmful effects’ - Mary Brett on the CanSS website www.cannabisskunksense.co.uk (Regularly updated with over 600 references).