Cannabis in New Zealand: smoking gun or medicalised smokescreen?

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Cannabis is an internationally restricted drug, although the level of restriction varies from minimal restraints, as found in countries such as the Netherlands, to a prohibitionist approach, such as occurs at a US federal level\(^1\) and in New Zealand.\(^2\) Ownership of even small amounts of cannabis can lead to criminal conviction, a situation leading to difficulty in clearly understanding cannabis use in New Zealand. Despite the criminal liability associated with cannabis, its use in New Zealand is widespread. The reported annual prevalence of use of 10.2% is high by international standards and cannabis remains the most widely-used illicit drug in New Zealand.\(^3\) The high level of cannabis use indicates a degree of acceptance in society, poorly reflected in New Zealand's current prohibitionist stance.

Recently there has been increased social pressure to review how cannabis is regulated in New Zealand, with calls for both decriminalisation and medicalisation of cannabis use. In this issue of the *New Zealand Medical Journal* (NZMJ), two papers explore these differing stances and provide valuable local evidence.

**Smoking out the users**

One of the significant difficulties in understanding cannabis and its use in New Zealand is the fact it is criminalised, making objective research difficult. Further, this status makes interpretation of the reasons for use for individuals and researchers challenging. Clearly, cannabinoids as a chemical class have novel neurological effects, and current treatments in psychiatry and neurology are far from fully effective at ameliorating symptoms. For this reason, investigating the possibility of cannabinoids as an alternate pharmacotherapy for many possible diagnoses is intuitively sensible. To date, such development has led to one cannabis derivative being brought to market in New Zealand, Nabiximols (marketed as Sativex), a spray containing 2.7mg of delta-9-tetrahydrocannabinol (THC) and 2.5mg cannabidiol (CBD) for the management of spasticity in multiple sclerosis. It is, however, heavily regulated and expensive, limiting its cost effectiveness.

Juxtaposing this is the clear evidence that cannabinoids are a drug class of abuse, leading to a variety of drug-use disorders. Increased rates of use associated with the availability of medicinal cannabis and more permissive attitudes may increase rates of cannabis-use disorders.\(^4\) Further, cannabis is well-evidenced to increase rates of psychosis\(^5\) and other psychosocial problems.\(^6\) Pledger and colleagues reflect that users of cannabis report use as problematic in this issue of the NZMJ, noting mental health concerns. These factors make identifying the prevalence of cannabis use in New Zealand difficult.

Pledger and colleagues identify a point prevalence of current cannabis use of greater than 11%, with a further greater than 30% of the examined population reporting use, but not in the last year. As they state, these are “admitted use” rates and will be an underreporting of actual use. This suggests two of every five New Zealand adults will report cannabis use if asked, and one in nine report current use. Interestingly, the population of users studied, representative of New Zealand, roughly divide themselves into “medicinal users” and “recreational users”, with rates of “medicinal use” increasing dramatically in middle adulthood. Notably, two thirds of “medicinal users” also endorse recreational
use of cannabis. It is much harder to estimate the use of synthetic cannabinoids; however, the paper by Glue and colleagues implies a significant reduction in use related to regulation. These prevalence figures cannot be ignored—it is clear the current prohibitionist approach does little to prevent cannabis use in New Zealand, although the regulatory measures related to synthetic cannabis suggest a harm reduction approaches have some impact.

A smoking gun?

As Pledger and colleagues point out, recently in New Zealand permission was granted for the use of cannabis to treat a medical condition. Alex Renton was admitted to hospital with a neurological condition in 2015. His family successfully advocated for access to cannabis products, a case widely reported and accompanied by considerable support from the public. Since then, media coverage has continued its focus on the use of cannabis in terminal or extreme conditions, often associated with public figures. This portrayal has led to the acceptance of the notion of “medical cannabis”, although this term is poorly defined and often left to the subjective view of the end user to decide upon, as is the case in Pledger’s study in this issue. This is in stark contrast to the use of other controlled drugs, where formal objective criteria are used to identify problematic use and medical use is closely monitored by medical practitioners who prescribe to manage symptoms or conditions. While cases like this are newsworthy, they do not reflect the majority of cases in the literature where cannabis is investigated for medical purposes.

It is notable that the medical evidence to support medicinal use of cannabis is weak. A systematic meta-analysis and review of cannabis and cannabinoid drugs was recently reported in the Journal of the American Medical Association. It concluded that there was moderate-quality evidence to support the use of cannabinoids for treatment of chronic pain and spasticity. There was low-quality evidence to support cannabinoids being useful in nausea and vomiting due to chemotherapy, weight gain in HIV infection, sleep disorders and Tourette syndrome. The American Academy of Neurology also undertook a systematic review of medical marijuana in selected disorders, concluding that medicinal cannabis showed promise in spasticity, central pain and spasms, and reducing bladder voids associated with multiple sclerosis. There was limited evidence in treating other neurological conditions, including levodopa-induced dyskinesia in patients with Parkinson’s disease, non-chorea-related symptoms of Huntington’s disease, Tourette syndrome, cervical dystonia, and epilepsy. A 2012 Cochrane Review into the use cannabinoids for epilepsy concluded, “No reliable conclusions can be drawn at present regarding the efficacy of cannabinoids as a treatment for epilepsy”. Similarly, a review published in The New England Journal of Medicine investigating cannabinoids in the treatment of epilepsy noted:

“...preclinical and preliminary data from studies in humans suggest that cannabidiol and ∆^9THC may be effective in in the treatment of some patients with epilepsy. However, current data from studies in humans is limited and no conclusions can be drawn”. Further, the study noted that the role of medical cannabis in epilepsy could follow similar enthusiasms for vitamins and nutritional supplements for which “the science never caught up with the hype”.

Unlike the medical evidence for the use of cannabis, there is good evidence of the harms associate with cannabis use. Population-based studies show increased rates of psychosis associated with cannabis use, and individuals identify mental and physical harms in the Pledger paper found in this issue. There is likely to be carciogenic effects related to the smoking of cannabis, and there are other weaker reports of physical harms. These reports, although not providing a face to put on the front of a news article, are important and recommend the need for caution in the use of cannabis for a loosely identified “medical reason”. It is notable that despite questions specifically asking “medicinal cannabis” users of the reasons for use, the majority described their reasons as not related to depression, anxiety or pain in the Pledger study.
The smoke screen of “medicinal cannabis”

Bearing in mind the weak evidence of effectiveness of cannabis as a medicine, the lack of regulation compared to other medical products and elsewhere, the uncertainty of active drug dose in botanical cannabis, and the significant risks associated with smoking, the most common mechanism of cannabis use, it is surprising there is the capacity to enable doctors to use botanical cannabis at all as a medicine in New Zealand. This is not to say that cannabinoids may not be valuable for some patients for some symptoms, nor that many of these problems cannot be overcome. There is also evidence in the paper by Glue and colleagues in this issue that legislation has a place in the regulation of cannabinoids and this can lead to a harm reduction approach. Regulation at law has been a common mechanism to manage the population-wide use of psychoactive substances. The success of broad smoking regulation to reduce rates of tobacco smoking is an example of this. The failure to implement the primary recommendations related to alcohol use and the lack of impact in relation to associated harms is the converse. Considering the evidence from the two papers related to cannabis in this issue, the broader literature, insights from regulation (or a lack thereof) of other psychoactive substances and public interest, the time to review the prohibition of cannabis appears appropriate.

On an individual level, the most common conditions for which patients are prescribed cannabis is pain, insomnia and anxiety. Patients are predominantly young and male. There is speculation that patients may use cannabis simply because it makes them feel better. The demographic outlined by Pledger and colleagues would mirror these findings. They reinforce the sense that the effects of cannabis across a range of disorders may be a non-specific anxiolytic effect. In many regards the aims of recreational users appear not dissimilar to those seeking cannabis for medical reasons. The increasing rate of identifying use as “medicinal cannabis” with increasing age found by Pledger may reflect changing motivations through the life course. Again, here at an individual level there appears to be a “smokescreen” of medicalisation that may not reflect the reasons for use. The lack of high quality qualitative data limits our understanding in this regard.

Notwithstanding this, chasing a medicalised access route to cannabis use seems premature in New Zealand. The high prevalence rates and demographic patterns of use found by Pledger identifies a need to change current policy. The regulative successes evidenced by Glue for synthetic cannabis suggests a path forward. While further work is undertaken to consider the most appropriate mechanism to use cannabinoids medically, a social discussion around the decriminalisation of cannabis can occur, without the distraction of “medical cannabis”. This pathway forward recognises the high use of cannabis in New Zealand, the social harms of a prohibitionist legislative approach, the needs for further regulatory development and medical evidence prior to cannabis becoming a prescription drug. This is a public debate the medical profession needs to be actively engaged in, bearing in mind the role of medicine in the public arena.

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