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### In Debate

# Should We Recriminalize Cannabis Use? The Case Against

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If cannabis is a contributory cause of psychosis does it follow that we should recriminalize its use in countries that have removed criminal penalties? Leading politicians in Australia and the United Kingdom think we should. We disagree. We accept it is more likely than not that cannabis is a contributory cause of psychosis but we doubt that recriminalizing its use will achieve the goal of reducing cannabis use or cannabis-related psychosis at an acceptable social and economic cost.

We accept that regular, especially daily, cannabis use probably is a contributory cause of psychosis for reasons spelt out in detail elsewhere. Briefly, these are:

- Regular cannabis use and psychotic symptoms and disorders are associated in population surveys and in clinical settings.
- Longitudinal studies of representative samples of young people have consistently found that cannabis use at baseline predicts an increased risk of psychotic symptoms or disorders.
- This association has persisted after controlling for plausible confounding variables such as personality traits and other drug use.<sup>2</sup>
- A causal relation is biologically plausible given evidence of interactions between the cannabinoid and dopaminergic neurotransmitter systems.<sup>1</sup>

Some leading researchers remain skeptical about this evidence. They argue that the modest size of the relation (relative risk, 2) and its attenuation after adjustment for confounders suggests that residual confounding provides the best

explanation of the association.<sup>3</sup> For the purposes of this article, we will assume that the relation is causal, in the sense that cannabis is a contributory cause that acts in concert with preexisting vulnerability and other unknown factors to increase the risk of psychotic symptoms. Under current patterns of cannabis use (and assuming the relation is causal), the attributable risk of psychosis from cannabis use is around 10%.

Epidemiologic modelling indicates that any effects of a causal relation of this size on the incidence or prevalence of psychosis may be difficult to detect. Cannabis use among young people is unlikely to produce an epidemic of schizophrenia, as is suggested in media stories, but any increase in such disorders would nonetheless be of public health and humanitarian concern because of the adverse effects that these disorders have on the life chances of the young people affected by them.

Concern about any psychotogenic effects of cannabis has been heightened by reported increases in the tetrahydrocannabinol (THC) content of cannabis products that are nowadays available to young people. Similar claims have been made for over 20 years with a lack of supportive evidence, but there is now evidence that THC content has increased in recent decades from 3% to 6% in the United States.<sup>5</sup> Such an increase reflects increased efficiency in the cultivation of high THC yield cultivars and hydroponic methods of cultivating sinsimella plants. It may also reflect increased demand for higher THC content cannabis products from regular users and increased regular use of cannabis beginning at an earlier age.5 It should be noted that, to the extent cannabis users titrate their doses, the result of higher THC cannabis may be a reduction in some adverse physical health effects for regular users.

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While accepting the likelihood that cannabis makes a modest contribution to psychosis risk, we nonetheless argue that policy-makers should avoid an unreflective leap to the policy conclusion that recriminalizing cannabis use is the obvious remedy. We do so for 5 main reasons.

First, there is no evidence that removing criminal penalties has had any effects on rates of cannabis use. In the mid-1970s in the United States, rates of cannabis use increased at the same rate in states that legislated to remove criminal penalties as it did in those that retained them. 6 The same was true in the Netherlands in the mid-1970s. Reimposition of criminal penalties in the United States in most states in the mid- to late-1980s did not prevent a renewed increase in cannabis use in the United States in the early 1990s. Similarly, in Australia, rates of cannabis use rose by the same amount in states that had decriminalized cannabis as in those that had not. More recently, rates of cannabis use in Australia appear to have fallen uniformly since the late-1990s in states with criminal and noncriminal penalties. Cannabis rates have also reportedly declined in the United Kingdom since the reclassification of cannabis in 2004.

Second, the most likely reason for the lack of any impact of criminal penalties against cannabis use is that these are not enforced, even in countries that profess to show zero tolerance for illicit drug use. This is no accident: if these laws were enforced, the criminal justice system would be swamped with minor cannabis offenders. As a consequence, these laws are only enforced in a discriminatory way against socially deprived and criminally involved cannabis users. Fewer than 2% of cannabis users are reported to be arrested in any year in Australia, Canada, and New Zealand, and those who are arrested come disproportionately from the socially disadvantaged. Even in the United States, fewer than 3% of cannabis users are arrested in any year.

Third, recriminalizing cannabis use is unlikely to be a cost-effective social policy. Even if we make the most optimistic assumptions about the effects of recriminalization on rates of cannabis use, these declines are achieved at a high economic cost. We think governments would be better advised to spend their money in other ways.

Fourth, criminal penalties for cannabis use will not affect cannabis potency or regulate young people's access to more potent forms of the drug. Indeed, illegality creates incentives for black market producers to manufacture and sell more potent cannabis products, and it ensures that vulnerable young people have easier access to these products and to other illicit drugs.<sup>7</sup>

Fifth, criminal penalties may have their own adverse effects on mental health, even if only on the minority of socially disadvantaged cannabis users unlucky enough to be prosecuted. This is true both for the person penalized (for example, see Bichescu et al<sup>10</sup>) and for their family members (for example, see Murray and Farrington<sup>11</sup>). Any proposal for recriminalizing cannabis, on the grounds of protecting mental health, needs to establish that it would not only reduce cannabis-related harm but also not cause greater adverse effects on the mental health of the minority who are prosecuted.

What should we do instead of recriminalizing cannabis? Educating young people about the mental health and other risks of cannabis use is a moral imperative. This is true even if there is uncertainty about the strength of evidence for the causal nature of the relation, and even if (as seems to be the case) health education is not a very effective way of discouraging drug use. <sup>12</sup> The best we can hope for may be to accelerate the decline in the popularity of cannabis use among young people by increasing the perceived risks of its regular use in the early teens and early adulthood.

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