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*Commentaries on Wilkins & Rychert*

Cousijn, J.

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## Commentaries on Wilkins & Rychert

### LEGAL CANNABIS—WHAT'S IN IT?

*Current labelling and testing standards for legal cannabis are inadequate. Development of understandable labels including standard units and accessible and reliable testing services are required.*

New Zealand is on the verge of legalizing cannabis, with the public voting on the novel Cannabis Legislation and Control Bill (CLCB) in September 2020 [1]. From a public health perspective, product safety is crucial and the consumer should at all times know what is in the product. A legal cannabis market has prospects of better product control, including required product testing for cannabinoid profiles and pesticides and required product labels with active ingredients, such as  $\Delta^9$ -tetrahydrocannabinol (THC) and cannabidiol (CBD). In their discussion of the prospects and challenges of the CLCB, Wilkins & Rychert rightly point towards the paradox in the CLCB's objectives to reduce cannabis use and cannabis use-related harms through a largely commercial market [2]. They argue that a reduction in cannabis use is unlikely, but product safety could be improved by lowering the proposed 15% THC cap for cannabis plants. Moreover, there is more to cannabis product safety than THC, and significant regulatory challenges warrant a slow transition to a legal cannabis market. Expanding on these issues, the time has come to significantly invest in a transparent product with informative and reliable labels that will benefit public health and science, and New Zealand's route towards a legal cannabis market may present an excellent opportunity in this.

What is a safe cannabis product? There is, as yet, no simple answer to this question. While legal cannabis markets are emerging, the science behind it is troubled by unclear evidence regarding the long-term positive and negative effects on health [3]. This partly stems from difficulties in quantifying exposure history due to the variable routes of administration and cannabinoid profiles of cannabis products, methodological limitations of objective quantification methods, lack of standardized cannabis units and terminology and legislative research barriers [3]. Despite the underdeveloped evidence base and uncertainties concerning the public health impact of cannabis legalization, it is clear that THC dose and route of administration matter and harm reduction strategies should aim at discouraging the use of high THC dosages and combustion methods [4]. Moreover, although findings are mixed, there is initial evidence that CBD may reduce some of THC's negative health effects [5].

Informative and reliable product labels contribute to cannabis product safety and proper dose titration [6].

Current labelling requirements in legal cannabis markets include THC and often also CBD potency in milligrams, percentages and/or ratios. These quantitative labels are poorly understood, and symbols or simpler units of measurement are preferable [7]. Freeman & Lorenzetti's recently proposed standard unit of 5 mg THC [8] represents an excellent starting-point for improving labels, and while it is perhaps too early for a standard CBD unit, supplemental information about the THC and CBD ratio may be the closest alternative.

Besides the need for improved product labels and standardized units, an important barrier towards a transparent cannabis product is the questionable reliability of the dose on product labels. In a US study investigating edible cannabis products only 17% was correctly labelled for THC [9], and in a US study investigating CBD extracts sold on-line only 31% was correctly labelled [10]. High variability in cannabinoid profile between and within cannabis products [11], high variability in the test results from different testing services [12] and limited regulatory control may play an important role in this. Accessible and reliable testing services for commercial and non-commercial stakeholders should therefore be a key area of concern in further cannabis policy development.

A difficult road thus lies ahead, where close collaborations between science and society will hopefully lead to evidence-based labelling and reliable and accessible testing services for cannabis products. Further policy developments following a positive public vote for New Zealand's CLCB could be crucial in this.

### Declaration of interests

J.C. is senior editor of the journal *Addiction*.

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JANNA COUSIJN 

*Neuroscience of Addiction (NofA) Laboratory, Department of Psychology, University of Amsterdam, Amsterdam, the Netherlands*  
E-mail: j.cousijn@gmail.com

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