**Differences in prescribed medicinal cannabis use by cannabinoid product composition: Findings from the cannabis as medicine survey 2020 (CAMS-20) Australia-wide study**

Benjamin T Trevitt[1,2], Sasha Bailey[3], Llewellyn Mills[1,4-5] , Thomas R Arkell[6], Anastasia Suraev[7-9], Iain S McGregor[7-9], Nicholas Lintzeris[1,4-5]

[1] Drug and Alcohol Services, South Eastern Sydney Local Health District, NSW, Australia, [2]School of Public Health and Community Medicine, UNSW Sydney, Sydney, Australia, [3]The Matilda Centre for Research in Mental Health and Substance Use, Faculty of Medicine and Health, The University of Sydney, [4]Speciality Addiction Medicine, Faculty Medicine and Health, University of Sydney, NSW, Australia, [5]Drug and Alcohol Clinical Research and Improvement Network, NSW, Australia, [6]Centre for Human Psychopharmacology, Swinburne University of Technology, Hawthorn, VIC, Australia, [7]The University of Sydney, Lambert Initiative for Cannabinoid Therapeutics, Sydney, NSW, Australia, [8]The University of Sydney, Faculty of Science, School of Psychology, Sydney, NSW, Australia, [9]The University of Sydney, Brain and Mind Centre, Sydney, NSW, Australia

Presenter's Email: benjamin.trevitt@health.nsw.gov.au

**Introduction:** Prescribed medicinal cannabis (MC) is becoming increasingly common in Australia for treating pain, anxiety, and sleep disorders. Prescribed MC products generally contain tetrahydrocannabinol (THC) and/or cannabidiol (CBD) in various dose levels and forms. It is unclear whether THC and CBD products are used by patients with different characteristics and for different conditions. We aimed to examine consumer experiences of using THC- and CBD-containing prescribed MC products to better understand how they are being used within the Australian context.

**Methods:** We utilised data collected from an online anonymous cross-sectional survey of individuals (CAMS-20 survey), consisting of Australian residents using cannabis for therapeutic reasons. We focused on a subgroup of participants (N=546) receiving prescribed MC products. We utilised linear, logistic, and multinomial regression modelling to analyse responses to survey questions based on the cannabinoid profile of the prescribed product.

**Results:** Participants prescribed THC-dominant MC products were statistically more likely to be younger, male, and prefer inhaled routes of administration than participants using CBD-dominant products who were older, female, and preferred oral routes of administration. Pain and mental health were the most common reasons for all types of prescribed MC, but were more likely to be treated with THC than CBD despite the higher risk of mild to severe drowsiness, dry mouth and eye irritation. Consumer reported effectiveness of prescribed MC was very positive, particularly for THC-containing products. Consumers on opioids and antipsychotics were statistically more likely to be prescribed THC-containing products than products containing CBD only, despite the greater risk of impairment.

**Discussions and Conclusions:** We found clear differences in consumer-reported experiences of prescribed THC- and CBD-containing products. Current prescriptions of these products do not always align with relevant clinical guidance. Educating prescribers around cannabinoid products is essential to ensure optimal prescribing practices and to prevent avoidable side effects and interactions.

**Disclosure of Interest Statement:**

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receiving grants from Lambert Initiative for Cannabinoid Therapeutics and from NHMRC during the study, but for unrelated projects. Professor Ian McGregor also has patents to WO2018107216A1, WO2017004674A1 and WO2011038451A1 issued and licensed, as well as patents to AU2020050941, AU2019903299, AU2017904438, AU2017904072 and AU2018901971 pending, and a patent WO2019227167 and WO2019071302 issued. Dr Thomas Arkell reports receiving grants from Swinburne University of Technology and the Victorian Department of Health for unrelated projects. No other authors report conflicts of interest. This does not alter our adherence to PLOS ONE policies on sharing data and materials.