Article details: 2020-0187	
Title	Attitudes towards medical cannabis among family physicians practicing in Ontario, Canada: a qualitative research study
Authors	Jeremy Y. Ng MSc, Kevin Gilotra, Sana Usman, Yaping Chang PhD, Jason W. Busse DC PhD
Reviewer 1	Dr. Siavash Jafari
Institution	University of British Columbia, Vancouver, BC
General comments (author response in bold)	It was pleasure reading your article. You have selected a very important topic. Your study contributes to the knowledge base in this subject matter. **We thank this reviewer for providing their kind feedback on our manuscript.** 1. On page 6, under results, the total does not add up to 11. Please correct: Eight attended medical school in Canada, four abroad. **Thanks for catching this, we meant to write "Eight attended medical school in Canada and three abroad". We have reflected this change in our manuscript.**
Reviewer 2	Dr. Lynda Balneaves
Institution	University of British Columbia, Vancouver, BC
General comments (author response in bold)	An interesting paper on the attitudes towards medical cannabis among family physicians practicing in Ontario. The paper is well written and conforms to reporting standards for qualitative research. Given the upcoming review of the medical cannabis program in 2025 and the review of the Cannabis Act and Regulations scheduled for 2021, this research is timely and of importance. **We thank this reviewer for their kind feedback on our manuscript.** However, there are several issues that require attention: 1. Foremost, the sample was quite small for a qualitative study that did not involve in-depth interviews (limited to 30 minutes in length) and derived from snowball sampling, which can be prone to biases. It appears that few participants were actively authorizing medical cannabis and those against physicians authorizing medical cannabis appeared to be overly represented in the sample. It would have been appropriate to have utilized purposely sampling to ensure that physicians who were authorizing medical cannabis were better represented in the sample and their perspectives included. So, while theoretical saturation was achieved, this may have been possible simply because a group of physicians with similar attitudes towards medical cannabis were included. Overall, the sampling strategy may limit the applicability of the findings to the larger family medicine community in Ontario. [Editor's note: please ensure that you have addressed this in the Limitations subsection of the Interpretation.] **We acknowledge that this is a valid limitation to our study and have included this in our Limitations section of our manuscript as follows:** **"We used snowball sampling to recruit physicians, which is prone to sampling bias [59], and we only captured the views of physicians practicing in urban settings. Few of our participants authorized medical cannabis, and those against physicians authorizing medical cannabis may have been overly represented in our sample."** **We also wish to clarify that our interviews were not limited to 30 minutes – participants were welcome to spend more time to share their thoughts, it just so happened that most interviews did not exceed 30 minutes.**

	2. Page 3 - The references related to the medical cannabis program should be updated to reflect the Cannabis Act and Regulations and not the former ACMPR, as well as updated statistics on authorization, which have dramatically dropped in the past year (references 1-3). **We thank this reviewer for pointing this out. We have replaced citation #1, which indeed was last updated in 2016, with a Government of Canada website reflecting the Cannabis Act. We have also updated the number of Canadians authorized to use medical cannabis to June 2020:** **"The number of Canadians authorized to use medical cannabis increased from 23,930 in June 2015 to 303,221 by June 2020."** **Of possible interest to the reviewer, we have been following a cohort of adult cannabis users in Ontario before and after legalization of recreational cannabis. [e.g. 1-2] We found that after legalization for recreational purposes, almost 20% of individuals who had claimed medical use subsequentially advised that their use was completely recreational. Thus, it may be that at least some individuals authorized to use medical cannabis may have let their status lapse once recreational use became legal.** **1. Turna J, Balodis I, Van Ameringen M, Busse JW, MacKillop J. Attitudes and beliefs toward cannabis before recreational legalization: a cross-sectional study of community adults in Ontario, Cannabis and Cannabinoid Research. 2020 June 2. DOI: 10.1089/can.2019.0088. [Epub ahead of print]** **2. Turna J, Balodis I, Munn C, Van Ameringen M, Busse JW, MacKillop J. Overlapping patterns of recreational and medical cannabis use in a large community sample of cannabis users. Comprehensive Psychiatry. 2020 June 6. https://doi.org/10.1016/j.comppsych.2020.152188 [Epub ahead of print]** 3. Page 3 (lines 26-31) – Under the Cannabis Act and Regulations, marketing of cannabis is illegal. As such, the suggestion that there is "aggressive marketing" of medical cannabis is inaccurate. This assertion was also made by participants under Theme 2 (page 8, lines 42-28), which is again inaccurate given the specific regulations that make the marketing of cannabis (both medical and non-medical) to youth an illegal activity. Recommend that there needs to be some discussion about the inaccuracy of this belief among some family physicians in Ontario. **We have removed mention of "aggressive marketing". Note that this was in our Introduction section, as was not reflective of the belief of the family physicians we interviewed.** 4. Data analysis section – a. please briefly discuss how rigour was ensured, especially given member checking was not conducted and no mention of an audit trail was provided. b. Also, address how reflexivity was achieved and the researchers' own attitudes and biases towards medical cannabis were bracketed or accounted for as part of the data collection and analysis processes. **We have added the following material to our Limitations section to address these issues:** **"We did not implement member checking to verify our findings. To ensure trustworthiness and rigor of our study results, two members of our team who are familiar with qualitative research methods conducted open coding**

	and theme generalization independently and in duplicate. No members of our study team have used medical cannabis or have any financial or intellectual conflicts of interest in this area, and had no motivation to encourage positive or negative answers." 5. Results – Table 2 - It would have been helpful to have the age of participants as well as the year of their training given how medical cannabis regulations and attitudes have shifted over time in Canada. Year of training does not necessarily capture the age group of participants. **We have now included these details in our Table 1.** 6. Page 7 (line 10) – the use of the term "advised" suggests that the physicians' beliefs about the quality of clinical trials conducted on medical cannabis are true. Instead, verbs like "perceived" or "believed" would more accurately reflect that these are physicians' perceptions. **We have changed the word "advised" to "perceived".** 7. Results – it was very striking that no mention was made by participants about the current opioid crisis, nor a comparison made between the adverse effects of medical cannabis relative to other prescription medications. Instead, a very narrow perspective of medical cannabis and its risks was presented. The lack of discussion about medical cannabis in relation to pharmaceutical drugs demonstrates a potential lack of awareness on the part of physicians of the current literature and research that suggests many consumers are using cannabis as a substitute, or a way of reducing, the use of opioids and other potentially problematic medications (e.g., sleep medication, benzos, etc.). Some commentary on this absence would be helpful. It may also reflect how the interviews with participants was structured. As such, including the interview guide as an appendix would be helpful and provide perhaps some context regarding this finding. **We have included a statement acknowledging this issue in our Interpretation section:** **"Of note, some observational data has suggested cannabis may be substituted for prescription medication, including opioids, anxiolytics/benzodiazepines, sedatives, and antidepressants; however, this issue was not raised by our participants."** **Note to Editor: It appears that this reviewer did not have access to our interview guide which was included with our original submission.** 8. Overall, the results were presented in a very quantitative manner with each finding attributed to a specific number of physicians. While some researchers chose to present qualitative data in this way, I personally found this quite distracting and meaningless given the small number of overall participants. **Thank you for this comment. While we acknowledge that this may be distracting, we wanted to present our data as specifically as possible.** 9. Discussion (page 11, lines 29-36) – some discussion about whether medical cannabis in Canada does in fact adhere to higher quality standards re: insecticides/pesticides, mold/fungi, other contaminants is needed. **We are unaware of any formal study regarding the quality of medical cannabis in Canada. We have now clarified that physician's belief that medical cannabis will adhere to higher quality standards needs empirical**

	confirmation. 10. Discussion (page 12, lines 8-10) – Surprised that the Ziemianski et al. needs assessment study was not included as one of the "other surveys". Suggest including. **We thank this reviewer for providing us with this citation. We have included it.** 11. Discussion (page 12, lines 40-45) – A citation is needed for the assertion that cannabis clinics "may not always provide impartial advice". The references provided do not appear to provide empirical support for this statement. **We have now added a citation to support this statement.**